ABBREVIATIONS

AC	ACOUSTIC
ACT	ACOUSTIC CEILING TILE
AFF	ABOVE FINISH FLOOR
AL	ALUMINUM
AP	ACCESS PANEL
ARGWB	ABUSE RESISTANT GYPSUM WALL BOARD
BD	BOARD
BLDG	BUILDING
BM	BENCH MARK
BRG	BEARING
CAB	CABINET
CB	CHALKBOARD
CH	CEILING HEIGHT
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CPT	CARPET
CR	COLD ROLLED
CT	CERAMIC TILE
DA	DISTURBED AREA
DBL	DOUBLE
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPENSER
DR	DOOR
DS	DOWNSPOUT
DW	DRYWALL
DWG	DRAWING
EA	EACH
EJ	EXPANSION JOINT
ELEC	ELECTRIC/ELECTRICAL
EP	EPOXY PAINT
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRICAL WATER COOLER
EXG	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FC	FIRE CODE
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FINF	FINISHED FLOOR
FON	FOUNDATION
FOS	FACE OF STUD
FRP	FIREGLASS REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FTG	FOOTING
FURR	FURRED (FURRING)
FV	FIELD VERIFY
FVC	FIRE VALVE CABINET
GA	GAUGE
GB	GRAB BAR
GWB	GYPSUM WALL BOARD
GYP	GYPSUM BOARD
HC	HANDICAPPED
HDW	HARDWARE
HM	HOLLOW METAL
HP	HIGH POINT
HR	HOUR
HT	HEIGHT
ID	INSIDE DIAMETER
INSUL	INSULATION
JAN	JANITOR
JST	JOIST
JT	JOINT
LAM	LAMINATE
LAV	LAVATORY SINK
LP	LOW POINT
M	MEN
MACH	MACHINE
MAINT	MAINTENANCE
MAS	MASONRY
MAT	MATERIALS
MAX	MAXIUMUM
MB	MARKER BOARD
MC	MEDICINE CABINET
MECH	MECHANICAL
MET	METAL
MFR	MANUFACTURER
MIN	MINIMUM
MO	MASONRY OPENING
MS	METAL SHELVING
MTD	MOUNTED
NC	NONCOMBUSTIBLE
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFF	OFFICE
OH	OPPOSITE HAND
OPG	OPENING
PART	PARTITION
PL	PLATE
PLAM	PLASTIC LAMINATE
PLY	PLYWOOD
PNL	PANEL
PRV	POWER ROOF VENTILATOR
PS	PROJECTOR SCREEN
PT	PAINTED
RD	ROOF DRAIN
REC	RECESSED
RECPT	RECEPTIONIST
REF	REFRIGERATOR
REQD	REQUIRED
RL	RAIN LEADER
RM	ROOM
RO	ROUGH OPENING
RUB	RUBBER (WALL BASE)
SD	SOAP DISPENSER
SECT	SECTION
SGFT	STRUCTURAL GLAZED FACING TILE
SH	SHOWERHEAD
SHT	SHEET
SIM	SIMILAR
SLS	STAINLESS STEEL
SM	SURFACE MOUNTED
SP	STAND PIPE
SS	SERVICE SINK
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPEND (SUSPENDED)
SYN	SYNTHETIC FLOOR
T&G	TONGUE & GROOVED
TB	TACKBOARD
TEL	TELEPHONE
THLD	THRESHOLD
TOB	TOP OF BEARING
TOM	TOP OF MASONRY PARAPET
TP	TOILET PAPER HOLDER
TS	TACK STRIP/ TEACHING STATION
TW	TEACHING WALL
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
USG	U.S. GYPSUM COMPANY
VAT	VINYL ABESTOS TILE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VRG	VINYL REDUCER STRIP
VTR	VENT THROUGH ROOF
W	WOMEN
W/	WITH
WAIN	WAINSCOT
WARD	WARDROBE
WC	WATER CLOSET
WD	WOOD
WDR	WARDROBE
WL	WALL
WM	WALL-MOUNTED
WWM	WELDED WIRE MESH

SYMBOLS OF MATERIALS

- ALL METALS-SMALL SCALE
- ACOUSTIC C.M.U. SMALL SCALE
- ACOUSTIC C.M.U. LARGE SCALE
- BATT INSULATION
- BRICK
- CAST STONE
- CONCRETE
- CONCRETE MASONRY UNITS
- EARTH
- GLASS-LARGE SCALE
- GLAZED C.M.U.
- PARTICLE BOARD
- RIGID INSULATION
- SHINGLES
- SOLID CONCRETE MASONRY UNITS
- STEEL-LARGE SCALE
- STUD PARTITION
- WOOD-FINISH
- WOOD BLOCKING

DRAWING KEYS

- 0 — STRUCTURAL GRID LINES
- 1 / A101 SIM — SECTION
- 1 / A101 SIM — ELEVATION
- 1 / A101 SIM — DETAILS IN PLAN, SECTION
- NEW WALL
- 1 — WALL TYPE, SEE A501
- EXISTING WALL TO REMAIN
- Name / 101 — ROOM NAME AND NUMBER
- EXISTING WALL TO BE REMOVED
- 11 — WINDOW TAG
- 101 — DOOR TAG

CAPE FEAR COMMUNITY COLLEGE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

BUILDING N
BUILDING A
BUILDING S



ISSUED FOR BID
8/14/2020

DESIGN TEAM

BECKER MORGAN GROUP	ARCHITECT
CBHF ENGINEERS	PLUMBING & MECHANICAL
MCFADYEN ENGINEERS	ELECTRICAL
LOVETT CONSULTANTS	FIRE PROTECTION
ARDURRA GROUP	CIVIL & STRUCTURAL

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY THE EXISTING SITE CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK AND REPORT ANY DISCREPANCIES, VARIATIONS, OR FIELD ALTERNATIONS TO THE ARCHITECT. ANY ITEMS NOT REPORTED BEFORE THE COMMENCING OF WORK SHALL NOT BE USED AS GROUNDS FOR ADDITIONAL EXPENSE CLAIMS BY THE CONTRACTOR TO ADEQUATELY COMPLETE THE WORK.
2. ANY ITEMS NOT SPECIFICALLY SHOWN ON THE DRAWINGS, BUT REASONABLY INCIDENTAL TO AND NECESSARY FOR THE SATISFACTORY COMPLETION OF THE PROJECT IN ACCORDANCE WITH INDUSTRY STANDARDS, ARE INCLUDED WITHIN THE INTENT OF THESE DESIGN DRAWINGS.
3. DIMENSIONS ARE FROM FACE OF MASONRY OR METAL STUD UNLESS NOTED OTHERWISE. ALL DIMENSIONS MARKED 'CLEAR' SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF ALL FINISHES INCLUDING FLOOR FINISH.
4. **CODES:** ALL WORK ON THIS PROJECT SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES, ORDINANCES, REGULATIONS AND ANY ADDITIONAL REQUIREMENT SO STATED IN ANY LAW, ORDINANCE OR REGULATION PERTAINING TO CONSTRUCTION WITHIN THE SAID LIMITS OF THE AUTHORITY HAVING JURISDICTION OVER THE PROPOSED WORK, ZONING, ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL ENERGY CONSERVATION AND FIRE. CONFORMITY TO ALL CODES APPLICABLE TO THIS PROJECT SHALL BE THE CONTRACTORS RESPONSIBILITY.
5. PROPER ASSEMBLY, INSTALLATION, AND OPERATION OF ALL MATERIALS, COMPONENTS, SYSTEMS AND FINISHES ARE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
6. COMPONENTS FOR CONSTRUCTION SAFETY ARE NOT INDICATED IN THESE DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT DURING ALL CONSTRUCTION.
7. ALL NEW CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, PLUMBING FIXTURES, LAVATORY ACCESSORIES, ACCESSIBLE PATHS, ETC. SHALL COMPLY WITH THE MOUNTING HEIGHTS AND NECESSARY FLOOR CLEARANCES SET FORTH BY NC ACCESSIBILITY CODE, ICC A117.1-2009, AND THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.

DRAWING LIST

SHEET No.	SHEET TITLE
GENERAL	
G001	COVER SHEET
G002	BUILDING CODE SUMMARY - A BULDING
G003	OVERALL FLOOR PLAN
G004	FIRST FLOOR LIFE SAFETY PLAN
G004.1	ALTERNATE 1 - FIRST FLOOR LIFE SAFETY PLAN
G005	SECOND FLOOR LIFE SAFETY PLAN
G005.1	ALTERNATE 2- SECOND FLOOR LIFE SAFETY PLAN
G006	THIRD FLOOR LIFE SAFETY PLAN
G007	FOURTH FLOOR LIFE SAFETY PLAN
G008	WALL TYPES
G009	U.L. DETAILS
G010	U.L. DETAILS
CIVIL	
C101	EXISTING CONDITIONS,DEMOLITION PLAN, AND PROPOSED PLAN
C102	CIVIL DETAILS
C103	CIVIL DETAILS
STRUCTURAL	
S001	SECTIONS AND DETAILS
S101	FIRST FLOOR PLAN ENLARGED STAIR PLANS, SECTIONS AND DETAILS
ARCHITECTURAL	
AD101	FIRST FLOOR DEMOLITION PLAN
AD101A	ALTERNATE 1 FIRST FLOOR DEMOLITION PLAN
AD102	SECOND FLOOR DEMOLITION PLAN AND PARTIAL ALTERNATE DEMOLITION PLAN
AD103	THIRD FLOOR DEMOLITION PLAN
AD104	FOURTH FLOOR DEMOLITION PLAN
AD201	FIRST FLOOR DEMOLITION REFLECTED CEILING PLAN
AD201A	ALTERNATE 1/1A FIRST FLOOR DEMOLITION REFLECTED CEILING PLAN
AD202	SECOND FLOOR DEMOLITION REFLECTED CEILING PLAN
AD203	THIRD FLOOR DEMOLITION REFLECTED CEILING PLAN
AD204	FOURTH FLOOR DEMOLITION REFLECTED CEILING PLAN
A101	FIRST FLOOR CONSTRUCTION PLAN
A101A	ALTERNATE 1 - FIRST FLOOR CONSTRUCTION PLAN
A102	SECOND FLOOR CONSTRUCTION PLAN AND ALTERNATE 2 PARTIAL FLOOR PLAN
A103	THIRD FLOOR CONSTRUCTION PLAN
A104	FOURTH FLOOR CONSTRUCTION PLAN
A105	ROOF PLAN AND DETAILS
A201	FIRST FLOOR REFLECTED CEILING PLAN
A201A	ALTERNATE 1 - FIRST FLOOR REFLECTED CEILING PLAN
A201B	ALTERNATE 1A - FIRST FLOOR REFLECTED CEILING PLAN
A202	SECOND FLOOR REFLECTED CEILING PLAN AND ALTERNATE 2 - PARTIAL REFLECTED CEILING PLAN
A203	THIRD FLOOR REFLECTED CEILING PLAN
A203A	ALTERNATE 3 - THIRD FLOOR REFLECTED CEILING PLAN
A204	FOURTH FLOOR REFLECTED CEILING PLAN
A204A	ALTERNATE 4 - FOURTH FLOOR REFLECTED CEILING PLAN
A301	FIRST FLOOR FINISH PLAN
A301A	ALTERNATE 1 - FIRST FLOOR FINISH PLAN
A302	SECOND FLOOR FINISH PLAN
A303	THIRD FLOOR FINISH PLAN
A304	FOURTH FLOOR FINISH PLAN
A401	ENLARGED TOILET PLANS
A402	TOILET ELEVATIONS
A403	INTERIOR ELEVATIONS AND CASEWORK
A501	ENLARGED STAIR PLANS AND SECTION
A502	STAIR DETAILS
A701	SECTIONS AND DETAILS
A801	DOOR AND HARDWARE SCHEDULES
A802	ALTERNATE DOOR AND FRAME SCHEDULE
A803	DOOR DETAILS
A901	SIGNAGE DETAILS
FIRE PROTECTION	
FP-001	FIRE PROTECTION - NOTES AND LEGEND
FP-101	FIRE PROTECTION - FIRST FLOOR PLAN
FP-102	FIRE PROTECTION - SECOND FLOOR PLAN
FP-103	FIRE PROTECTION - THIRD FLOOR PLAN
FP-104	FIRE PROTECTION - FOURTH FLOOR PLAN
FP-501	FIRE PROTECTION - DETAILS AND DIAGRAM
PLUMBING	
P-001	PLUMBING LEGEND, ABBREVIATIONS, LOADS, GENERAL NOTES, AND DEMOLITION NOTES
PD101	PLUMBING FIRST FLOOR WASTE-VENT DEMOLITION PLAN
PD102	PLUMBING SECOND FLOOR WASTE-VENT DEMOLITION PLAN
PD103	PLUMBING THIRD FLOOR WASTE-VENT DEMOLITION PLAN
PD104	PLUMBING FOURTH FLOOR WASTE-VENT DEMOLITION PLAN
PD201	PLUMBING FIRST FLOOR DOMESTIC WATER DEMOLITION PLAN
PD202	PLUMBING SECOND FLOOR DOMESTIC WATER DEMOLITION PLAN
PD203	PLUMBING THIRD FLOOR DOMESTIC WATER DEMOLITION PLAN
PD204	PLUMBING FOURTH FLOOR DOMESTIC WATER DEMOLITION PLAN
P-101	PLUMBING FIRST FLOOR WASTE-VENT PLAN
P-101A	PLUMBING FIRST FLOOR ALTERNATE 1/1A WASTE-VENT PLAN
P-102	PLUMBING SECOND FLOOR WASTE-VENT PLAN AND ALTERNATE 2 WASTE-VENT PARTIAL PLAN
P-103	PLUMBING THIRD FLOOR WASTE-VENT PLAN
P-104	PLUMBING FOURTH FLOOR WASTE-VENT PLAN
P-201	PLUMBING FIRST FLOOR DOMESTIC WATER PLAN
P-201A	PLUMBING FIRST FLOOR ALTERNATE 1/1A DOMESTIC WATER PLAN
P-202	PLUMBING SECOND FLOOR DOMESTIC WATER PLAN AND ALTERNATE 2 DOMESTIC WATER PARTIAL PLAN
P-203	PLUMBING THIRD FLOOR DOMESTIC WATER PLAN
P-204	PLUMBING FOURTH FLOOR DOMESTIC WATER PLAN
P-501	PLUMBING DETAILS
P-502	PLUMBING UL DETAILS
P-503	PLUMBING RISER DIAGRAMS
P-601	PLUMBING SCHEDULES

SHEET No.	SHEET TITLE
MECHANICAL	
M-001	MECHANICAL NOTES, SUMMARY, ABBREVIATIONS, LEGENDS, AND DIVISION OF LABOR
MD101	MECHANICAL DEMOLITION FIRST FLOOR PLAN
MD102	MECHANICAL DEMOLITION SECOND FLOOR PLAN
MD103	MECHANICAL DEMOLITION THIRD FLOOR PLAN
MD104	MECHANICAL DEMOLITION FOURTH FLOOR PLAN AND BUILDING S 5TH FLOOR PARTIAL PLAN
MD105	MECHANICAL DEMOLITION ROOF PLAN
M-101	MECHANICAL FIRST FLOOR AND MEZZANINE PLAN
M-101A	MECHANICAL FIRST FLOOR AND MEZZANINE ALTERNATE 1 PLAN
M-102	MECHANICAL SECOND FLOOR PLAN AND ALTERNATE BID 2 PARTIAL PLAN
M-103	MECHANICAL THIRD FLOOR PLAN
M-104	MECHANICAL FOURTH FLOOR PLAN
M-105	MECHANICAL ROOF PLAN
M-501	MECHANICAL VENTILATION SUMMARY
M-502	MECHANICAL CONTROLS
M-503	MECHANICAL DETAILS
M-504	UL DETAILS
M-601	MECHANICAL SCHEDULES
M-602	MECHANICAL SCHEDULES
M-603	MECHANICAL SCHEDULES
M-604	VRF PIPING / WIRING SCHEMATIC
M-605	VRF PIPING / WIRING SCHEMATIC
M-606	VRF PIPING / WIRING SCHEMATIC
ELECTRICAL	
E001	ELECTRICAL ABBREVIATIONS, AND LEGEND
E002	ELECTRICAL GENERAL NOTES
E003	BUILDING "A" DEMOLITION POWER RISER DIAGRAM
E003.1	BUILDING "A" DEMOLITION POWER RISER DIAGRAM AND NOTES
E004	BUILDING "A" NEW WORK POWER RISER DIAGRAM, SCHEDULES AND NOTES
E004.1	BUILDING "A" NEW WORK POWER EMERGENCY POWER RISER DIAGRAM AND ENGINE-GENERATOR DETAILS
E004.2	ALTERNATE 9 - BUILDING "S" POWER RISER DIAGRAMS AND DETAILS
E004.3	ALTERNATE 9 - BUILDING "S" PLANS, SWITCHBOARD SCHEDULE AND DETAILS
E005	ELECTRICAL DETAILS
E006	ELECTRICAL DETAILS
E007	ELECTRICAL DETAILS
E008	ELECTRICAL DETAILS
E009	ELECTRICAL PANEL SCHEDULES
E009.1	ELECTRICAL PANEL SCHEDULES
E009.2	ELECTRICAL PANEL SCHEDULES
E009.3	ELECTRICAL PANEL SCHEDULES
E010	ELECTRICAL DETAILS
E011	FUNCTIONAL TELECOMMUNICATIONS RISER DIAGRAM
E012	FIRE ALARM RISER DIAGRAM
E013	LIGHTING FIXTURE SCHEDULE
E101	BUILDING "A" FIRST FLOOR DEMOLITION PLANS
E102	BUILDING "A" SECOND FLOOR DEMOLITION PLANS
E103	BUILDING "A" THIRD FLOOR DEMOLITION PLANS
E104	BUILDING "A" FOURTH FLOOR DEMOLITION PLANS
E105	BUILDING "A" ROOF DEMOLITION PLAN
E106	BUILDING "A" FIRST FLOOR POWER PLAN
E106A	ALTERNATE 1 BUILDING "A" FIRST FLOOR POWER PLAN
E107	BUILDING "A" SECOND FLOOR POWER PLAN AND ALTERNATE 2 SECOND FLOOR POWER PLAN
E108	BUILDING "A" THIRD FLOOR POWER PLAN
E109	BUILDING "A" FOURTH FLOOR POWER PLAN
E110	BUILDING "A" ROOF POWER, LIGHTING AND SYSTEMS PLAN
E111	BUILDING "A" FIRST FLOOR MECHANICAL POWER PLAN AND ALTERNATE 1 FIRST FLOOR MEZZANINE MECHANICAL PLAN
E112	BUILDING "A" SECOND FLOOR MECHANICAL POWER PLAN AND ALTERNATE 2 SECOND FLOOR MECHANICAL PLAN
E113	BUILDING "A" THIRD FLOOR MECHANICAL POWER PLAN
E114	BUILDING "A" FOURTH FLOOR MECHANICAL POWER PLAN
E115	BUILDING "A" FIRST FLOOR LIGHTING PLAN AND SITE LIGHTING DETAILS
E115.1A	ALTERNATE 1A - BUILDING "A" FIRST FLOOR LIGHTING PLAN
E115A	ALTERNATE 1 - BUILDING "A" FIRST FLOOR LIGHTING PLAN AND FIRST FLOOR MEZZANINE LIGHTING PLAN
E116	BUILDING "A" SECOND FLOOR AND SITE LIGHTING PLANS AND ALTERNATE 2 - SECOND FLOOR LIGHTING PLAN
E117	BUILDING "A" THIRD FLOOR LIGHTING PLAN
E117A	ALTERNATE 3 - BUILDING "A" THIRD FLOOR LIGHTING PLAN
E118	BUILDING "A" FOURTH FLOOR LIGHTING PLAN
E118A	ALTERNATE 4 - BUILDING "A" FOURTH FLOOR LIGHTING PLAN
E119	BUILDING "A" FIRST FLOOR AND FIRST FLOOR MEZZANINE SYSTEMS PLANS
E119A	ALTERNATE 1 - BUILDING "A" FIRST FLOOR SYSTEM PLAN
E120	BUILDING "A" SECOND FLOOR SYSTEMS PLAN AND ALTERNATE 2 SECOND FLOOR SYSTEMS PLAN
E121	BUILDING "A" THIRD FLOOR SYSTEMS PLAN
E122	BUILDING "A" FOURTH FLOOR SYSTEMS PLAN

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS — Registered Architect — 16635 — North Carolina — WILMINGTON, NC — 8/14/20

BECKER MORGAN GROUP, INC. — Professional Architectural Corporation — 51922 — North Carolina — WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

COVER SHEET

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: 1" = 1'-0"
DRAWN BY: VSC | PROJ MGR: DCW

G001

COPYRIGHT © 2020

8/14/2020 3:54:07 PM C:\Users\abrown\Documents\2018023.00 CFCC ASN BASE BID_abrownSDEJ4.rvt

BUILDING CODE SUMMARY

NAME OF PROJECT: RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

ADDRESS: 411 N Front Street, Wilmington, NC 28401

OWNER OR AUTHORIZED AGENT: David Kanoy PHONE #:910.362.7695 E-Mail:dkanoy@cfcc.edu

OWNED BY: ☐ City ■ County ☐ State ☐ Private

CODE ENFORCEMENT JURISDICTION: ☐ City ■ County ☐ State

CONTACT: Ernest Olds

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	EMAIL ADDRESS
ARCHITECTURAL	Becker Morgan Group, Inc.	Ernest W. Olds	10595	910.341.7600	eolds@beckermorgan.com
CIVIL	Ardurra Group North Carolina	David E. Criser	11270	910.397.2929	dcriser@ardurra.com
ELECTRICAL	McFadyen Engineers, PLLC	Duncan McFadyen	8433	910.339.1505	dmcfadyen@mcfadyenengineers.com
FIRE ALARM	McFadyen Engineers, PLLC	Duncan McFadyen	8433	910.339.1505	dmcfadyen@mcfadyenengineers.com
PLUMBING	CBHF Engineers, PLLC	James R. Benson	10592	910.791.4000	jbenson@cbhfengineers.com
MECHANICAL	CBHF Engineers, PLLC	James R. Benson	10592	910.791.4000	jbenson@cbhfengineers.com
SPRINKLER-STANDPIPE	Lovett Consultants	Jennifer Lovett	40804	704.545.8383	jlovett@lovettc.com
STRUCTURAL	Ardurra Group North Carolina	Jeffrey R. Troutman	22567	910.397.2929	jtroutman@ardurra.com
RETAINING WALL >5' HIGH					
OTHER					

2018 NC BUILDING CODE:

☐ New Building ☐ Addition ☐ 1st Time Interior Completion

☐ Phased Construction - Shell/Core - Contact the local inspection jurisdiction for possible additional precedures and requirements ☐ Shell/Core - Contact the local inspection jurisdiction for possible additional precedures and requirements

2018 NC EXISTING BUILDING CODE:

☐ N/A	☐ Chapter 14	☐ Alteration Level I	■ N/A	■ N/A
☐ Prescriptive	☐ Historic Property	☐ Alteration Level II	☐ Repair	☐ Change of Use
☐ Repair	☐ Change of Use	■ Alteration Level III		☐ Historic Property

CONSTRUCTED: 1967 CURRENT OCCUPANCY(S) (Ch. 3) Business

RENOVATED: 2015 PROPOSED OCCUPANCY(S) (Ch. 3) ASSEMBLY / BUSINESS

OCCUPANCY CATEGORY (Table 1604.5):

CURRENT ☐ N/A ☐ I ☐ II ■ III ☐ IV

PROPOSED ☐ N/A ☐ I ☐ II ■ III ☐ IV

BASIC BUILDING DATA:

CONSTRUCTION TYPE: ☐ I-A ■ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B

SPRINKLERS: ☐ NO ■ YES ☐ PARTIAL ■ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

STANDPIPES: ☐ NO ■ YES ■ CLASS I ☐ CLASS II ☐ CLASS III ☐ WET ■ DRY

PRIMARY FIRE DISTRICT: ☐ NO ■ YES

FLOOD HAZARD AREA: ☐ NO ■ YES

SPECIAL INSPECTIONS: ■ NO ☐ YES (Contact the local inspection jurisdiction for additional procedures and requirements)

GROSS BUILDING AREA TABLE:

1ST FLOOR

1ST FLOOR	1ST FLOOR EXISTING	10126 SF
1ST FLOOR	1ST FLOOR NEW	0 SF
		10126 SF

2ND FLOOR

2ND FLOOR	2ND FLOOR EXISTING	10126 SF
2ND FLOOR	2ND FLOOR NEW	0 SF
		10126 SF

3RD FLOOR

3RD FLOOR	3RD FLOOR EXISTING	10126 SF
3RD FLOOR	3RD FLOOR NEW	0 SF
		10126 SF

4TH FLOOR

4TH FLOOR	4TH FLOOR EXISTING	10126 SF
4TH FLOOR	4TH FLOOR NEW	0 SF
		10126 SF

TOTAL BUILDING AREA 40504 SF

ALLOWABLE AREA:

PRIMARY OCCUPANCY CLASSIFICATION(S): ASSEMBLY / BUSINESS

ACCESSORY OCCUPANCY CLASSIFICATION(S): STORAGE

INCIDENTAL USES (Table 509):

SPECIAL USES (Chapter 4 - List Code Sections):

SPECIAL Provisions (Chapter 5 - List Code Sections):

MIXED OCCUPANCY: ☐ NO ■ YES SEPARATION: ____ HR. EXCEPTION:

■ Non-Separated Use (508.3)

☐ Separated Use (508.4) - See below for area calculations for each story, the area of the 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

$$\frac{\text{ACTUAL AREA OF OCCUPANCY A}}{\text{ALLOWABLE AREA OF OCCUPANCY A}} + \frac{\text{ACTUAL AREA OF OCCUPANCY B}}{\text{ALLOWABLE AREA OF OCCUPANCY B}} \leq 1$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA UNSPRINKLERED	(B) TABLE 506.2[4] AREA SPRINKLERED	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED
1	ASSEMBLY A-3	10126	0	UNLIMITED		UNLIMITED
2	ASSEMBLY A-3	10126	0	UNLIMITED		UNLIMITED
3	ASSEMBLY A-3	10126	0	UNLIMITED		UNLIMITED
4	ASSEMBLY A-3	10126	0	UNLIMITED		UNLIMITED

1. FRONTAGE AREA INCREASES FROM SECTION 506.2 ARE COMPUTED THUS:
   - A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FT MINIMUM WIDTH ___ (F)
   - B. TOTAL BUILDING PERIMETER = _____ (P)
   - C. RATIO (F/P) = (F/P)
   - D. W = MINIMUM WIDTH OF PUBLIC WAY = _____ (W) (do not exceed 30)
   - E. PERCENT OF FRONTAGE INCREASE I_f = 100 [F/P - 0.25] x W/30 = _____ (%)
2. UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
3. MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x D (MAXIMUM 3 STORIES) (506.2)
4. THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH 406.5.4. THE MAXIMUM AREA OF AIR TRAFFIC CONTROL TOWERS MUST COMPLY WITH 412.3.1
5. FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2

ALLOWABLE HEIGHT:

	ALLOWABLE (TABLES 504.3 & 504.4)	SHOWN ON PLANS	CODE REFERENCE
BUILDING HEIGHT IN FEET	180'	67'	EXISTING BUILDING
BUILDING HEIGHT IN STORIES	12	4	EXISTING BUILDING

Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS:

**** REFER TO 'FIRE PROTECTION OF EXISTING BUILDING COMPONENTS' ON THIS SHEET**

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED* (W/ REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame including columns, girders, trusses		2 HR	2 HR	EXST	**	N/A	N/A
Bearing Walls		N/A					
Exterior							
North							
East							
West							
South							
Interior		N/A					
Nonbearing Walls and Partitions							
Exterior							
North	0	1 HR	1 HR	EXST	UL# U 905	U 469	HW-D-0098
East	N/A	0	0	EXST	N/A	N/A	N/A
West	32	0	0	EXST	N/A	N/A	N/A
South	7	1 HR	1 HR	EXST	UL# U 905	U 469	
Interior walls and partitions		N/A					
Floor Construction, including supporting beams and joists		2 HR	2 HR	EXST	**	**	N/A
Floor Ceiling Assembly		N/A					
Columns Supporting Floors		N/A					
Roof Construction, including supporting beams and joists		1 HR	1 HR	EXST	**	**	
Roof Ceiling Assembly		N/A					
Columns Supporting Roof		N/A					
Shaft Enclosures - Exit		2 HR	2 HR	1E / G008	UL# U 905	N/A	UL#
Shaft Enclosures - Other		2 HR	2 HR	1E / G008	UL# U 905	N/A	HW-D-0098
Corridor Separation		N/A			N/A		
Occupancy / Fire Barrier Separation		N/A					
Party / Fire Wall Separation		N/A					
Smoke Barrier Separation		N/A					
Tenant / Dwelling Unit / Sleeping Separation		N/A					
Incidental Use Separation		N/A					

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS: N/A - EXISTING UNCHANGED

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)

LIFE SAFETY SYSTEM REQUIREMENTS:

EMERGENCY LIGHTING: ☐ NO ■ YES

EXIT SIGNS: ☐ NO ■ YES

FIRE ALARM: ☐ NO ■ YES

SMOKE DETECTION SYSTEMS: ☐ NO ■ YES ☐ PARTIAL

CARBON MONOXIDE DETECTION: ■ NO ☐ YES

LIFE SAFETY PLAN REQUIREMENTS:

LIFE SAFETY PLAN SHEET # G004, G004.1,G005, G005.1, G006, G007

- FIRE AND/OR SMOKE RATED WALL LOCATIONS (Chapter 7)
- ASSUMED AND REAL PROPERTY LINE LOCATIONS (if not on the site plan)
- EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8)
- OCCUPANCY TYPES FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
- OCCUPANT LOADS FOR EACH AREA
- EXIT ACCESS TRAVEL DISTANCES (1017)
- COMMON PATH OF TRAVEL DISTANCES (1006.2.1 & 1006.3.2(1))
- DEAD END LENGTHS (1020.4)
- CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
- MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
- 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 (1010.1.9.7)
- LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1010.1.9.9)
- LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES
- LOCATION OF EMERGENCY ESCAPE WINDOWS (1030)
- THE SQUARE FOOTAGE OF EACH FIRE AREA (202)
- THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT FOR OCCUPANCY CLASSIFICATION I-2 (407.5)
- NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

ACCESSIBLE DWELLING UNITS (SECTION 1107) N/A - EXISTING UNCHANGED

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

ACCESSIBLE PARKING (SECTION 1106) N/A

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
TOTAL						

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

	USE	WATERCLOSETS MALE	WATERCLOSETS FEMALE	WATERCLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SHOWERS / TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXIST'G	0	0	0	0	0	0	0	0	0	0
SPACE	NEW	8	16	2	8	13	13	2	0	8	8
SPACE	REQ'D	7	14	0	7	10	10	0	0	6	6

Special Approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

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.

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: ☐ YES (the remainder of this section is not applicable) ■ NO (UNKNOWN; EXTERIOR ENVELOPE EXISTING/UNCHANGED; LEVEL III ALTERATION)

EXEMPT BUILDING: ☐ YES Provide code or statutory reference: ☐ NO

CLIMATE ZONE:

METHOD OF COMPLIANCE:

■ PRESCRIPTIVE	(ENERGY CODE)
☐ PERFORMANCE	(ENERGY CODE)
☐ PRESCRIPTIVE	(ASHRAE 90.1)
☐ PERFORMANCE	(ASHRAE 90.1)
☐ PERFORMANCE	(OTHER)

If 'Other' specify source here:

THERMAL ENVELOPE (Prescriptive method only)

ROOF/CEILING ASSEMBLY (each assembly)
- DESCRIPTION OF ASSEMBLY: EXISTING/UNCHANGED
- U-VALUE OF TOTAL ASSEMBLY
- R-VALUE OF INSULATION
- SKYLIGHTS IN EACH ASSEMBLY
- U-VALUE OF SKYLIGHT
- TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY

EXTERIOR WALLS (each assembly)
- DESCRIPTION OF ASSEMBLY: EXISTING/UNCHANGED
- U-VALUE OF TOTAL ASSEMBLY
- R-VALUE OF INSULATION
- **OPENINGS** (windows or doors with glazing)
- U-VALUE OF ASSEMBLY
- SOLAR HEAT GAIN COEFFICIENT
- PROJECTION FACTOR
- DOOR R-VALUES

WALLS BELOW GRADE (each assembly)
- DESCRIPTION OF ASSEMBLY: EXISTING/UNCHANGED
- U-VALUE OF TOTAL ASSEMBLY
- R-VALUE OF INSULATION

FLOORS OVER UNCONDITIONED SPACE (each assembly)
- DESCRIPTION OF ASSEMBLY: EXISTING/UNCHANGED
- U-VALUE OF TOTAL ASSEMBLY
- R-VALUE OF INSULATION

FLOORS SLAB ON GRADE (each assembly)
- DESCRIPTION OF ASSEMBLY: EXISTING/UNCHANGED
- U-VALUE OF TOTAL ASSEMBLY
- R-VALUE OF INSULATION
- HORIZONTAL / VERTICAL REQUIREMENT
- SLAB HEATED

STRUCTURAL DESIGN N/A - EXISTING UNCHANGED

DESIGN LOADS:

IMPORTANCE FACTORS: WIND (Iw) N/A SNOW (Is) N/A SEISMIC (Ie) 1.25

LIVE LOADS: ROOF N/A PSF; MEZZANINE N/A PSF; FLOOR STAIRS & CORRIDORS: 100 PSF CLASSROOMS: 60 PSF TOILET: 60 PSF NEW LOBBY: 100 PSF (ORIGINALLY 150 PSF LIBRARY LOADING)

GROUND SNOW LOAD: N/A PSF

WIND LOAD: BASIC WIND SPEED N/A MPH (ASCE-7-98) EXPOSURE CATEGORY N/A

SEISMIC DESIGN CATEGORY: C

PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:

OCCUPANCY CATEGORY (TABLE 1604.5) III

SPECTRAL RESPONSE ACCELERATION S_s 22.0 %g S_1 9.2 %g

SITE CLASSIFICATION (ASCE 7) D

DATA SOURCE: ASSUMED

BASIC STRUCTURAL SYSTEM MOMENT-RESISTING FRAME SYSTEMS

ANALYSIS PROCEDURE: ☐ N/A ☐ SIMPLIFIED ■ EQUIVALENT LATERAL FORCE ☐ DYNAMIC

ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? ■ YES ☐ NO

LATERAL DESIGN CONTROL: ■ N/A ☐ EARTHQUAKE ☐ WIND

SOIL BEARING CAPACITIES:

■ N/A

☐ FIELD TEST (PROVIDE COPY OF TEST REPORT) _____ PSF

☐ PRESUMPTIVE BEARING CAPACITY _____ PSF

PILE SIZE, TYPE AND CAPACITY _____ PSF

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

THERMAL ZONE

WINTER DRY BULB 23°F

SUMMER DRY BULB 95°F

INTERIOR DESIGN CONDITIONS

WINTER DRY BULB 70°F

SUMMER DRY BULB 75°F

RELATIVE HUMIDITY 60°F RH DESIGN NOT CONTROLLED

BUILDING HEATING LOAD 785 MBH

BUILDING COOLING LOAD 1015 MBH

MECHANICAL SPACING CONDITIONING SYSTEM

UNITARY

DESCRIPTION OF UNIT REFER TO SHEETS M-601/M-602

HEATING EFFICIENCY REFER TO SHEETS M-601/M-602

COOLING EFFICIENCY REFER TO SHEETS M-601/M-602

SIZE CATEGORY OF UNIT REFER TO SHEETS M-601/M-602

BOILER

SIZE CATEGORY, IF OVERSIZED, STATE REASON N/A

CHILLER

SIZE CATEGORY, IF OVERSIZED, STATE REASON N/A

LIST EQUIPMENT EFFICIENCIES:

ELECTRICAL SUMMARY

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 THE FIXTURE
- TOTAL WATTAGE PER FIXTURE
- TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED (whole building or space by space)
- TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED

ADDITIONAL PRESCRIPTIVE COMPLIANCE
- C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE
- C406.3 REDUCED LIGHTING POWER DENSITY
- C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
- C406.5 ON-SITE RENEWABLE ENERGY
- C406.6 DEDICATED OUTDOOR AIR SYSTEM
- C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

Fire Protection of Existing Building Components

Per the original 1967 construction drawings, the original construction type of this building is 'Type II'. The same is true of the adjacent S and N buildings.

The 1967 NCBC defines the following minimum fire-resistance requirements for Type II Construction:

Structural Columns: 3 hours (2 hours at roof)
Trusses, Girders and Beams: 3 hours (1.5 hours at roof)
Floors: 2 hours
Roof Construction: 1.5 hours

The requirements of Type II Construction meet or exceed those of a current Type IB construction.

The following penetration details are used to accomplish the current scope of work:

P-502: C-AJ-5091 C-AJ-2169
M-504: C-AJ-2109 C-AJ-5090

FIRST FLOOR PLUMBING FIXTURE CALCULATIONS

FUNCTION OF SPACE CALCULATION = 151 OCCUPANTS (76 MALE, 76 FEMALE)

FIXTURES REQUIRED

TOILETS: 1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50
3 MALE, 3 FEMALE

LAVATORIES: 1PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 80
2 MALE, 2 FEMALE

DRINKING FOUNTAINS: 1 PER 100; 50% ADA COMPLIANT
1 STANDARD, 1 ADA

SECOND FLOOR PLUMBING FIXTURES CALCULATIONS

BUSINESS (GROSS) 7,470SF / 100 SF/PERSON = 75 OCCUPANTS (38 MALE, 38 FEMALE)
ASSEMBLY (NET) 2,656SF / 15 SF/PERSON = 178 OCCUPANTS (89 MALE, 89 FEMALE)

FIXTURES REQUIRED

TOILETS (BUSINESS): 1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50
1.52 MALE, 1.52 FEMALE
TOILETS (ASSEMBLY): 1 PER 125 MALE, 1 PER 65 FEMALE
0.712 MALE, 1.37 FEMALE
TOILETS (SUM OF OCCUPANCIES ROUNDED UP): 3 MALE, 3 FEMALE

LAVATORIES (BUSINESS): 1PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 80
0.95 MALE, 0.95 FEMALE
LAVATORIES (ASSEMBLY): 1PER 200
0.45 MALE, 0.45 FEMALE
LAVATORIES (SUM OF OCCUPANCIES ROUNDED UP): 2 MALE, 2 FEMALE

DRINKING FOUNTAINS (BUSINESS): 1 PER 100; 50% ADA COMPLIANT (0.75)
DRINKING FOUNTAINS (ASSEMBLY): 1 PER 500; 50% ADA COMPLIANT (0.356)
DRINKING FOUNTAINS (SUM OF OCCUPANCIES ROUNDED UP): 1 STANDARD, 1 ADA

THIRD FLOOR PLUMBING FIXTURE CALCULATIONS

FUNCTION OF SPACE CALCULATION = 277 OCCUPANTS (139 MALE, 139 FEMALE)

FIXTURES REQUIRED
TOILETS: 1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50
4 MALE, 4 FEMALE

LAVATORIES: 1PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 80
3 MALE, 3 FEMALE

DRINKING FOUNTAINS: 1 PER 100; 50% ADA COMPLIANT
2 STANDARD, 2 ADA

FOURTH FLOOR PLUMBING FIXTURE CALCULATIONS

FUNCTION OF SPACE CALCULATION = 298 OCCUPANTS (149 MALE, 149 FEMALE)

FIXTURES REQUIRED
TOILETS: 1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50
4 MALE, 4 FEMALE

LAVATORIES: 1PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 80
3 MALE, 3 FEMALE

DRINKING FOUNTAINS: 1 PER 100; 50% ADA COMPLIANT
2 STANDARD, 2 ADA

BECKER MORGAN GROUP

ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarkk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS — Registered Architect — 10595 — North Carolina — WILMINGTON, NC — 8/14/20

BECKER MORGAN GROUP, INC. — Professional Architectural Corporation — 51922 — North Carolina — WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING CODE SUMMARY - A BULDING

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00

DATE: 8/14/2020

SCALE:

DRAWN BY: VSC PROJ MGR: DCW

G002

COPYRIGHT © 2020

8/14/2020 9:28:10 AM C:\Users\abrown\Documents\2018023.00 CFCC ASN BASE BID_abrown9DE4.rvt

OVERALL FLOOR PLAN LEGEND

AREAS NOT IN CONTRACT

AREAS IN CONTRACT

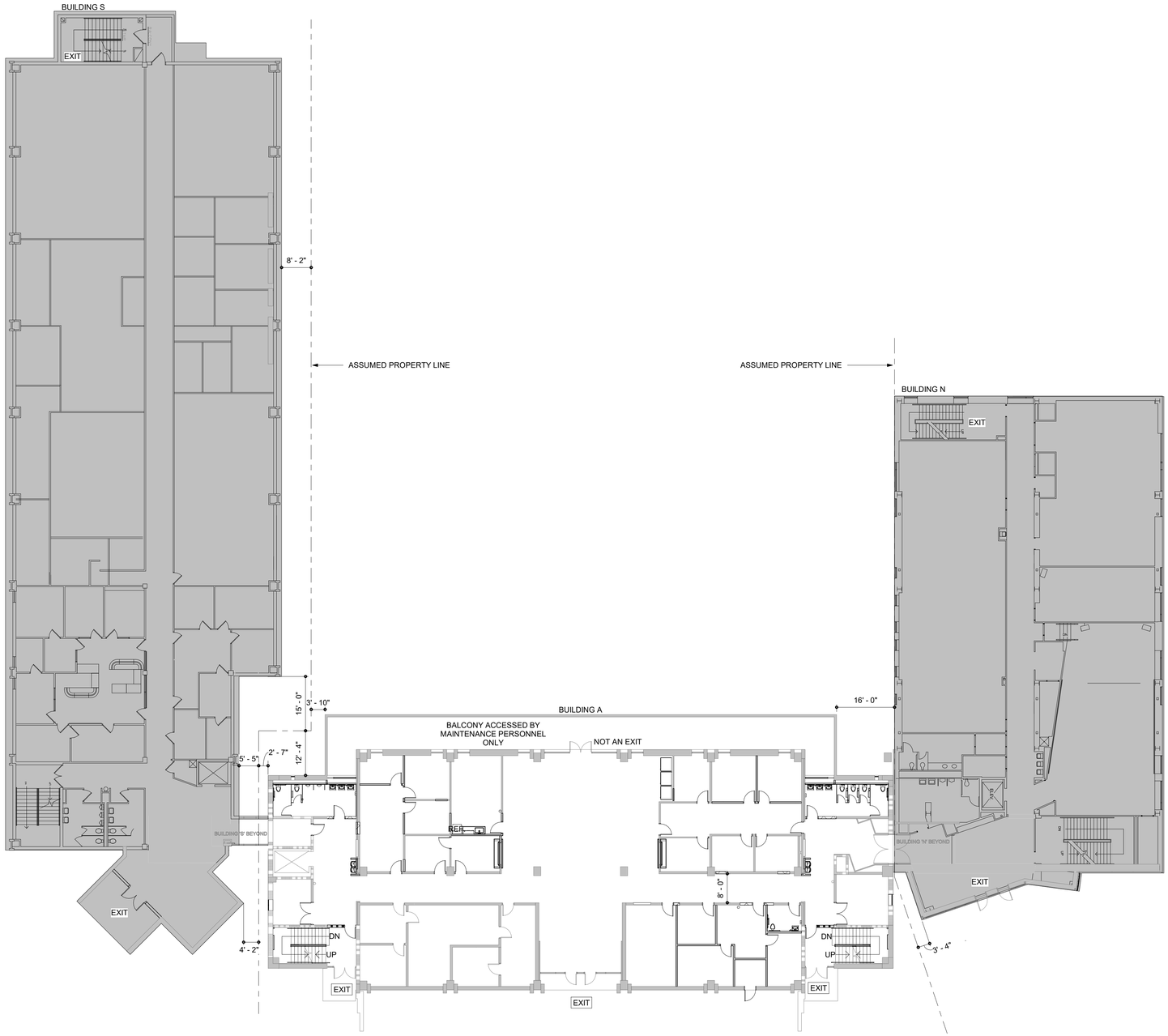
ADJACENT BUILDING INFORMATION

THE GALEHOUSE BUILDING (A) WAS THE FIRST OF THE THREE ADJACENT STRUCTES, CONSTRUCTED IN 1967. THE MCLEOD BUILDING (S) WAS CONSTRUCTED IN 1974 AND JOINS THE 'A' BUILDING TO THE SOUTH VIA A 12' LONG CONNECTOR. THE NATURAL SCIENCES BUILDING (N) WAS CONSTRUCTED IN 1997 AND ABUTS THE 'A' BUILDING TO THE NORTH.

THE 'S' BUILDING IS SEVEN STORIES AND CONSISTS OF 'TYPE 2' CONSTRUCTION, WHICH WOULD EQUATE TO A MODERN CONSTRUCTION TYPE OF IB. THE 'S' BUILDING HAS A TOTAL GROSS AREA OF 114,400 SF. EGRESS IS INDEPENDANT OF THE 'A' BUILDING. AT THE EAST SIDE OF THE BUILDING, OCCUPANTS EXIT DIRECTLY TO FRONT STREET. AT THE WEST SIDE OF THE BUILDING, OCCUPANTS EGRESS TO WATER STREET VIA AN EXIT STAIR. A 1-HR FIRE SEPARATION IS EXISTING BETWEEN THE 'A' BUILDING ANS THE 'S' BUILDING CONNECTOR.

THE N BUILDING IS FOUR STORIES (73') AND CONSISTS OF 'TYPE 2' CONSTRUCTION, WHICH WOULD EQUATE TO A MODERN CONSTRUCTION TYPE OF IB. THE N BUILDING HAS A TOTAL GROSS AREA OF 36,631 SF AND IS NON-SPRINKLERED. EGRESS IS INDEPENDANT OF THE 'A' BUILDING. AT THE EAST SIDE OF THE BUILDING, OCCUPANTS EXIT DIRECTLY TO FRONT STREET. AT THE WEST SIDE OF THE BUILDING, OCCUPANTS EGRESS TO WATER STREET VIA AN EXIT STAIR. A 4-HR FIRE SEPARATION EXISTS BETWEEN THE ABUTTING WALLS OF THE 'A' BUILDING AND 'N' BUILDING.

TYPE IB CONSTRUCTION ALLOWS FOR UNLIMITED AREA FOR ALL THREE BUILDINGS. THEREFORE, PER CURRENT CODE, THE A/S/N BUILDINGS CAN BE CLASSIFIED AS A SINGLE BUILDING AND DO NOT REQUIRE FIRE RATED SEPARATIONS BETWEEN BUILDINGS



2 OVERALL FLOOR PLAN

SCALE: 1/16" = 1'-0"

16' 8' 0' 16'

SCALE : 1/16" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16535 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

OVERALL FLOOR PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

G003

COPYRIGHT © 2020

8/14/2020 9:28:13 AM C:\Users\abrown\Documents\2018023000 CFCC-ASN BASE BID_abrown9DEJ4.rvt

OCCUPANCY TYPE

- ACCESSORY - MECH. STORAGE: 300 SF PER OCCUPANT
- ASSEMBLY - UNCONCENTRATED: 15 SF PER OCCUPANT
- EDUCATIONAL - CLASSROOM: 20 SF PER OCCUPANT
- EDUCATIONAL - SHOPS: 50 SF PER OCCUPANT
- BUSINESS: 100 SF PER OCCUPANT
- LOCKERS: 50 SF PER OCCUPANT
- CIRCULATION/ NOT OCCUPIED

OCCUPANT SUMMARY

FUNCTION OF SPACE CALCULATION: 151 OCCUPANTS
(AS SHOWN ON EGRESS PLAN)

SQUARE FOOTAGE CALCULATION: 102 OCCUPANTS
(BUSINESS: 10126 SF/ 100)

CODE LEGEND

- PATH OF EGRESS
- COMMON PATH
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- FE — FIRE EXTINGUISHER
- OCCUPANT LOAD / DOOR OPENING WIDTH / DOOR EGRESS CAPACITY (100 / 150 width)
- OCCUPANT LOAD / STAIR WIDTH / STAIR EGRESS CAPACITY (100 / 150 width)
- ROOM NAME / NUM / 150 SF / 100 = 15P — ROOM SQUARE FOOTAGE / NUMBER OF OCCUPANTS / CODE SQUARE FOOTAGE PER OCCUPANT
- NOT IN CONTRACT HATCH
- 45 MIN / FIRE RATING — DOOR
- EXIT SIGN

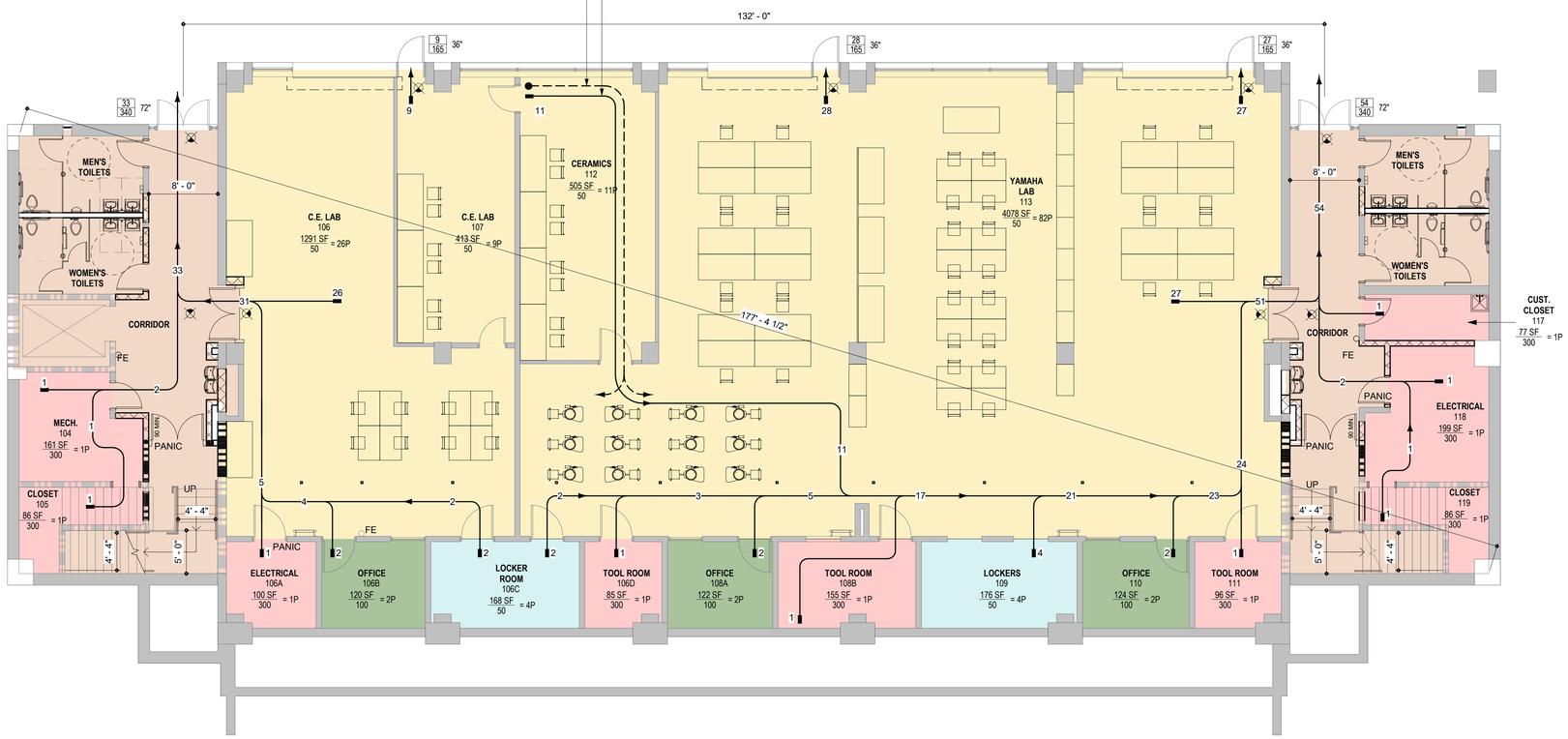
NOTES

1. PROVIDE NEW FIRE EXTINGUISHERS IN CABINETS (FEC) AND FIRE EXTINGUISHERS ON BRACKETS (FE) AS SHOWN ON FLOOR PLANS. PROVIDE NEW FIRE EXTINGUISHERS IN KITCHEN (TYPE K), MECHANICAL, ELECTRICAL (TYPE B-C), FIRE PUMP, AND ELEVATOR MACHINE ROOMS, AND AS INDICATED.
2. FIRE EXTINGUISHER SHALL BE MINIMUM 3A-40BC RATING.
3. MARK ALL RATED PARTITIONS AND WALLS IN ACCORDANCE WITH IBC (2018) 716.1, AND AS DETAILED.

BUILDING EXIT REMOTENESS (EXISTING)
OVERALL DIAGONAL OF BUILDING: 177' - 4 1/2"
MINIMUM ALLOWABLE DISTANCE BETWEEN EXITS: 59' - 0"
PROVIDED DISTANCE BETWEEN EXITS: 132' - 0"

180'-2" TRAVEL DISTANCE
250' MAX ALLOWABLE TRAVEL DISTANCE

43'-3" COMMON PATH OF TRAVEL
75' MAX ALLOWABLE COMMON PATH

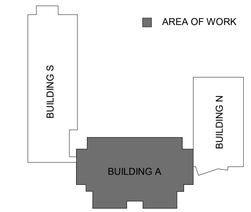


1 FIRST FLOOR LIFE SAFETY PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"



KEY PLAN

PLAN NORTH

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRST FLOOR LIFE SAFETY PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

G004

COPYRIGHT © 2020

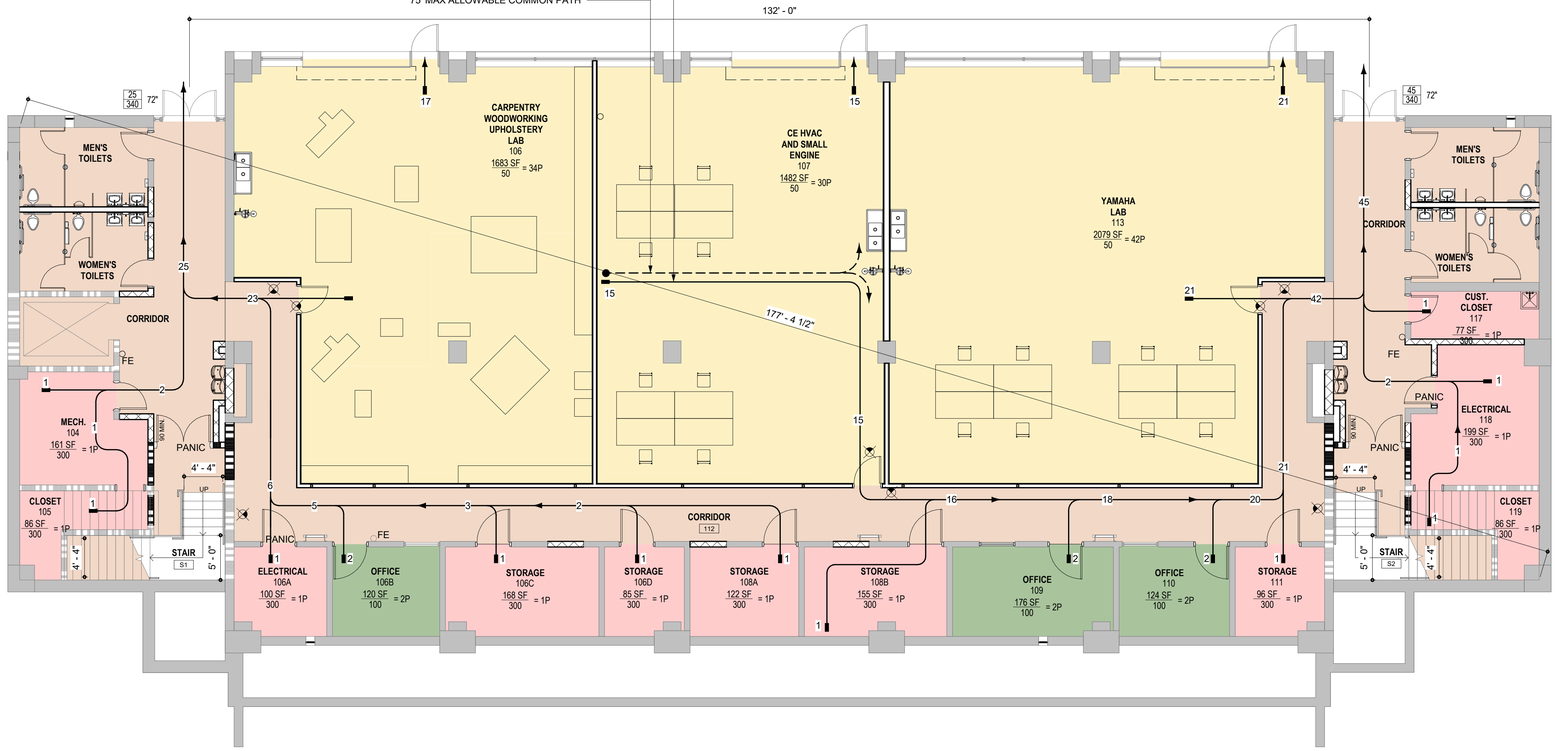
8/14/2020 9:28:17 AM C:\Users\abrown\Documents\2019022360 CFCC ASN BASE BID_abrownBDEJ4.rvt

BUILDING EXIT REMOTENESS (EXISTING)
OVERALL DIAGONAL OF BUILDING: 177' - 4 1/2"
MINIMUM ALLOWABLE DISTANCE BETWEEN EXITS: 59' - 0"
PROVIDED DISTANCE BETWEEN EXITS: 132' - 0"

151'-10" TRAVEL DISTANCE
250' MAX ALLOWABLE TRAVEL DISTANCE

28'-0" COMMON PATH OF TRAVEL
75' MAX ALLOWABLE COMMON PATH

132' - 0"



1 ALTERNATE 1: FIRST FLOOR CONSTRUCTION PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

OCCUPANCY TYPE

- ACCESSORY - MECH. STORAGE: 300 SF PER OCCUPANT
- ASSEMBLY - UNCONCENTRATED: 15 SF PER OCCUPANT
- EDUCATIONAL - CLASSROOM: 20 SF PER OCCUPANT
- EDUCATIONAL - SHOPS: 50 SF PER OCCUPANT
- BUSINESS: 100 SF PER OCCUPANT
- LOCKERS: 50 SF PER OCCUPANT
- CIRCULATION/ NOT OCCUPIED

OCCUPANT SUMMARY

FUNCTION OF SPACE CALCULATION: 123 OCCUPANTS
(AS SHOWN ON EGRESS PLAN)

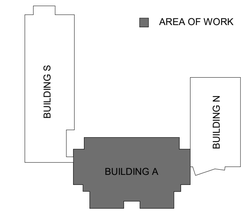
SQUARE FOOTAGE CALCULATION: 102 OCCUPANTS
(BUSINESS: 10126 SF/ 100)

CODE LEGEND

- PATH OF EGRESS
- COMMON PATH
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- FE — FIRE EXTINGUISHER
- 100 / 150 width — OCCUPANT LOAD / DOOR OPENING WIDTH / DOOR EGRESS CAPACITY
- 100 / 150 width — OCCUPANT LOAD / STAIR WIDTH / STAIR EGRESS CAPACITY
- ROOM NAME / NUM / 150 SF / 100 = 15P — ROOM SQUARE FOOTAGE / NUMBER OF OCCUPANTS / CODE SQUARE FOOTAGE PER OCCUPANT
- NOT IN CONTRACT HATCH
- 45 MIN / FIRE RATING — DOOR
- EXIT SIGN

NOTES

1. PROVIDE NEW FIRE EXTINGUISHERS IN CABINETS (FEC) AND FIRE EXTINGUISHERS ON BRACKETS (FE) AS SHOWN ON FLOOR PLANS. PROVIDE NEW FIRE EXTINGUISHERS IN KITCHEN (TYPE K), MECHANICAL, ELECTRICAL (TYPE B-C), FIRE PUMP, AND ELEVATOR MACHINE ROOMS, AND AS INDICATED.
2. FIRE EXTINGUISHER SHALL BE MINIMUM 3A-40BC RATING.
3. MARK ALL RATED PARTITIONS AND WALLS IN ACCORDANCE WITH IBC (2018) 716.1, AND AS DETAILED.



KEY PLAN

PLAN NORTH

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1 - FIRST FLOOR LIFE SAFETY PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

G004.1

COPYRIGHT © 2020

8/14/2020 9:28:20 AM C:\Users\abrown\Documents\2018023D0 CFCC ASN BASE BID_abrownBDE4.rvt

OCCUPANCY TYPE

- ACCESSORY - MECH. STORAGE: 300 SF PER OCCUPANT
- ASSEMBLY - UNCONCENTRATED: 15 SF PER OCCUPANT
- EDUCATIONAL - CLASSROOM: 20 SF PER OCCUPANT
- EDUCATIONAL - SHOPS: 50 SF PER OCCUPANT
- BUSINESS: 100 SF PER OCCUPANT
- LOCKERS: 50 SF PER OCCUPANT
- CIRCULATION/ NOT OCCUPIED

OCCUPANT SUMMARY

FUNCTION OF SPACE CALCULATION: 222 OCCUPANTS
(AS SHOWN ON EGRESS PLAN)

SQUARE FOOTAGE CALCULATION: 252 OCCUPANTS
(ASSEMBLY: 2656 SF /15; BUSINESS OCCUPANCY: 7470 SF / 100)

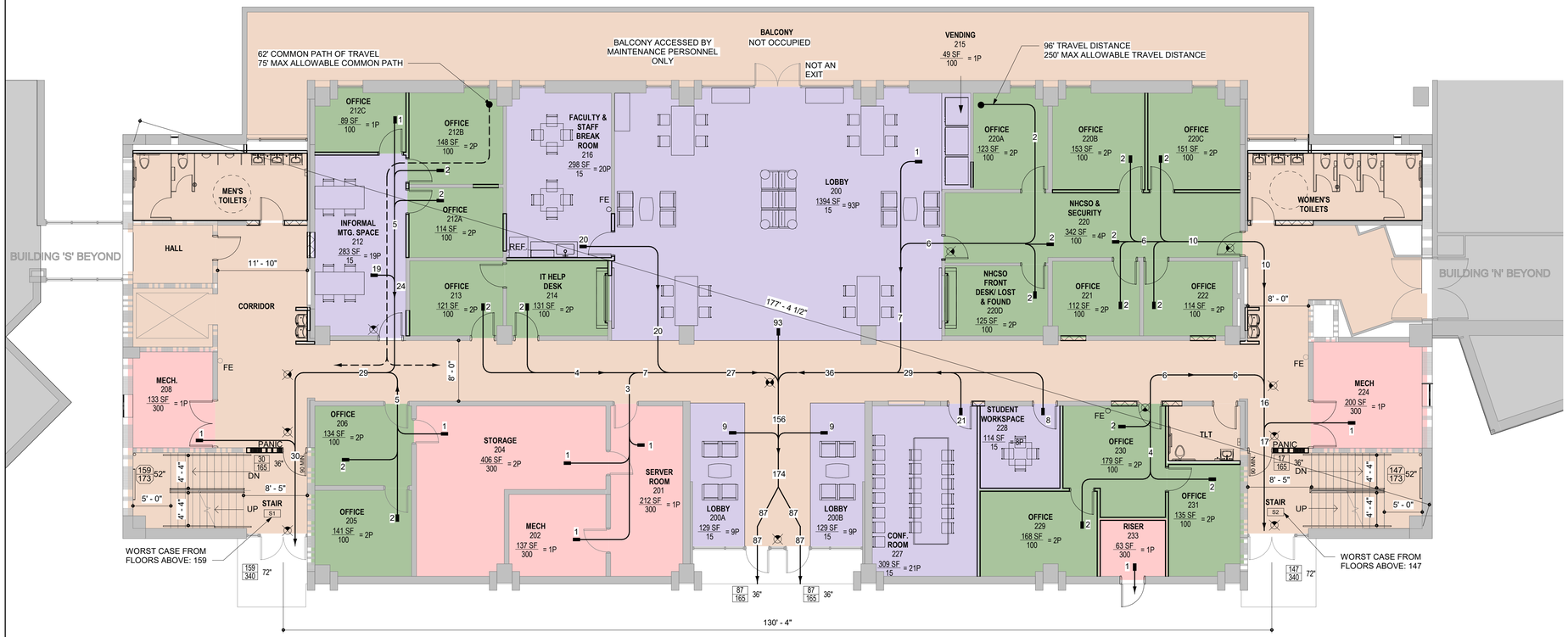
CODE LEGEND

- PATH OF EGRESS
- COMMON PATH
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- FE — FIRE EXTINGUISHER
- 100 / 150 width — OCCUPANT LOAD; DOOR OPENING WIDTH; DOOR EGRESS CAPACITY
- 100 / 150 width — OCCUPANT LOAD; STAIR WIDTH; STAIR EGRESS CAPACITY
- ROOM NAME / NUM / 150 SF / 100 = 15P — ROOM SQUARE FOOTAGE; NUMBER OF OCCUPANTS; CODE SQUARE FOOTAGE PER OCCUPANT
- NOT IN CONTRACT HATCH
- FIRE RATING / 45 MIN — DOOR
- EXIT SIGN

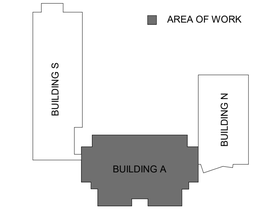
NOTES

1. PROVIDE NEW FIRE EXTINGUISHERS IN CABINETS (FEC) AND FIRE EXTINGUISHERS ON BRACKETS (FE) AS SHOWN ON FLOOR PLANS. PROVIDE NEW FIRE EXTINGUISHERS IN KITCHEN (TYPE K), MECHANICAL, ELECTRICAL (TYPE B-C), FIRE PUMP, AND ELEVATOR MACHINE ROOMS, AND AS INDICATED.
2. FIRE EXTINGUISHER SHALL BE MINIMUM 3A-40BC RATING.
3. MARK ALL RATED PARTITIONS AND WALLS IN ACCORDANCE WITH IBC (2018) 716.1, AND AS DETAILED.

BUILDING EXIT REMOTENESS (EXISTING)
OVERALL DIAGONAL OF BUILDING: 177' - 4 1/2"
MINIMUM ALLOWABLE DISTANCE BETWEEN EXITS: 59' - 0"
PROVIDED DISTANCE BETWEEN EXITS: 130' - 4"



1 2ND FLOOR LIFE SAFETY PLAN
SCALE: 1/8" = 1'-0"
SCALE : 1/8" = 1'-0"



KEY PLAN

PLAN NORTH

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16635 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

SECOND FLOOR LIFE SAFETY PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

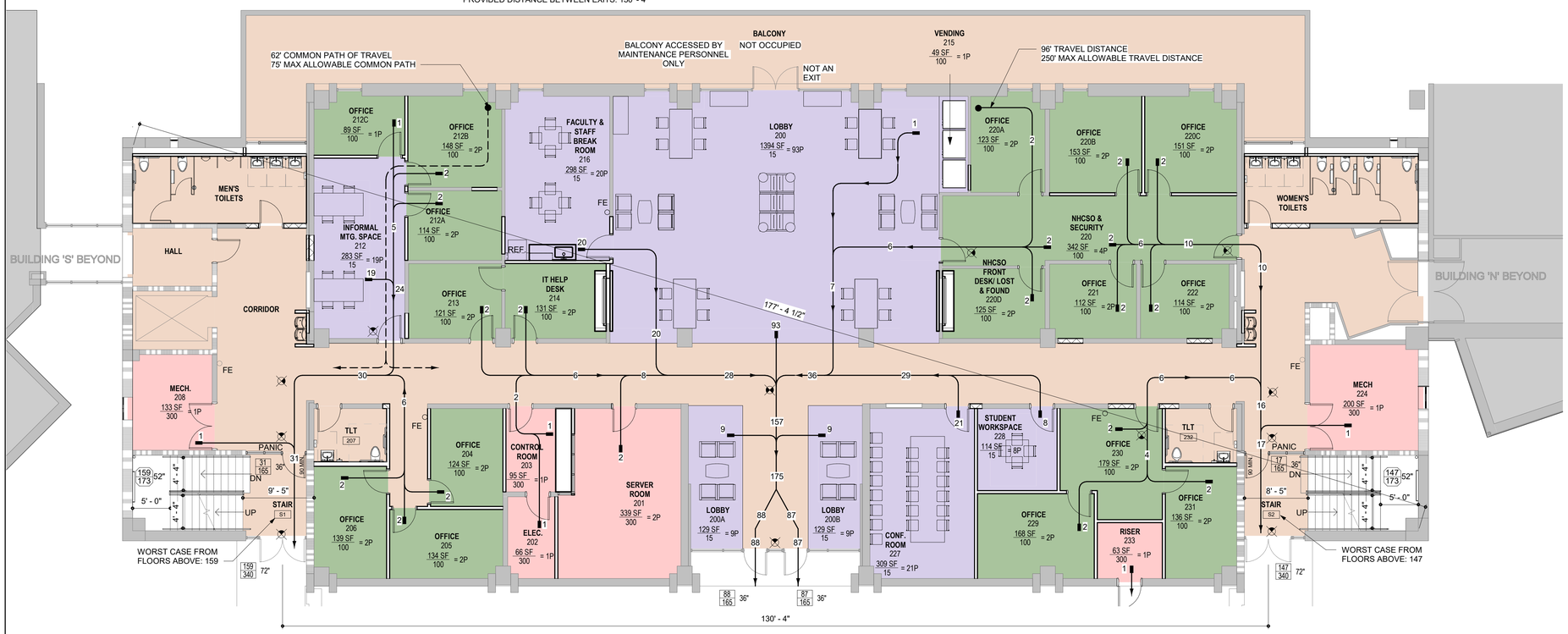
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

G005

COPYRIGHT © 2020

8/14/2020 9:28:24 AM C:\Users\abrown\Documents\2018023\00 CFCC ASN BASE BID_abrownBDE.rvt

BUILDING EXIT REMOTENESS (EXISTING)
OVERALL DIAGONAL OF BUILDING: 177' - 4 1/2"
MINIMUM ALLOWABLE DISTANCE BETWEEN EXITS: 59' - 0"
PROVIDED DISTANCE BETWEEN EXITS: 130' - 4"



1 ALTERNATE 2: PARTIAL 2ND FLOOR CONSTRUCTION PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

OCCUPANCY TYPE

- ACCESSORY - MECH. STORAGE: 300 SF PER OCCUPANT
- ASSEMBLY - UNCONCENTRATED: 15 SF PER OCCUPANT
- EDUCATIONAL - CLASSROOM: 20 SF PER OCCUPANT
- EDUCATIONAL - SHOPS: 50 SF PER OCCUPANT
- BUSINESS: 100 SF PER OCCUPANT
- LOCKERS: 50 SF PER OCCUPANT
- CIRCULATION/ NOT OCCUPIED

OCCUPANT SUMMARY

FUNCTION OF SPACE CALCULATION: 224 OCCUPANTS
(AS SHOWN ON EGRESS PLAN)

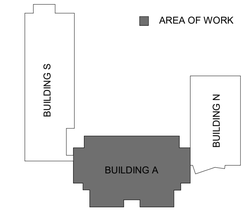
SQUARE FOOTAGE CALCULATION: 252 OCCUPANTS
(ASSEMBLY: 2656 SF /15; BUSINESS OCCUPANCY: 7470 SF / 100)

CODE LEGEND

- PATH OF EGRESS
- COMMON PATH
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- FE — FIRE EXTINGUISHER
- OCCUPANT LOAD / DOOR OPENING WIDTH (100 / 150 width) — DOOR EGRESS CAPACITY
- OCCUPANT LOAD / STAIR WIDTH (100 / 150 width) — STAIR EGRESS CAPACITY
- ROOM NAME / NUM / 150 SF / 100 = 15P — ROOM SQUARE FOOTAGE; NUMBER OF OCCUPANTS; CODE SQUARE FOOTAGE PER OCCUPANT
- NOT IN CONTRACT HATCH
- 45 MIN / FIRE RATING — DOOR
- EXIT SIGN

NOTES

1. PROVIDE NEW FIRE EXTINGUISHERS IN CABINETS (FEC) AND FIRE EXTINGUISHERS ON BRACKETS (FE) AS SHOWN ON FLOOR PLANS. PROVIDE NEW FIRE EXTINGUISHERS IN KITCHEN (TYPE K), MECHANICAL, ELECTRICAL (TYPE B-C), FIRE PUMP, AND ELEVATOR MACHINE ROOMS, AND AS INDICATED.
2. FIRE EXTINGUISHER SHALL BE MINIMUM 3A-40BC RATING.
3. MARK ALL RATED PARTITIONS AND WALLS IN ACCORDANCE WITH IBC (2018) 716.1, AND AS DETAILED.



KEY PLAN

PLAN NORTH

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 2- SECOND FLOOR LIFE SAFETY PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

G005.1

COPYRIGHT © 2020

8/14/2020 9:28:29 AM C:\Users\abrown\Documents\2018023000 CFCC ASN BASE BID_abrownBDE4.rvt

BUILDING EXIT REMOTENESS (EXISTING)
OVERALL DIAGONAL OF BUILDING: 177' - 4 1/2"
MINIMUM ALLOWABLE DISTANCE BETWEEN EXITS: 59' - 0"
PROVIDED DISTANCE BETWEEN EXITS: 127' - 4"



1 3RD FLOOR LIFE SAFETY PLAN
SCALE: 1/8" = 1'-0"
8' 4' 0' 8'
SCALE : 1/8" = 1'-0"

OCCUPANCY TYPE

- ACCESSORY - MECH. STORAGE: 300 SF PER OCCUPANT
- ASSEMBLY - UNCONCENTRATED: 15 SF PER OCCUPANT
- EDUCATIONAL - CLASSROOM: 20 SF PER OCCUPANT
- EDUCATIONAL - SHOPS: 50 SF PER OCCUPANT
- BUSINESS: 100 SF PER OCCUPANT
- LOCKERS: 50 SF PER OCCUPANT
- CIRCULATION/ NOT OCCUPIED

OCCUPANT SUMMARY

FUNCTION OF SPACE CALCULATION: 277 OCCUPANTS
(AS SHOWN ON EGRESS PLAN)

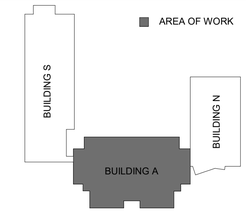
SQUARE FOOTAGE CALCULATION: 118 OCCUPANTS
(ASSEMBLY: 277 SF /15; BUSINESS OCCUPANCY: 9849 SF / 100)

CODE LEGEND

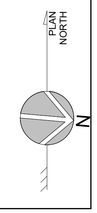
- PATH OF EGRESS
- COMMON PATH
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- FE — FIRE EXTINGUISHER
- 100 / 150 width — OCCUPANT LOAD / DOOR OPENING WIDTH / DOOR EGRESS CAPACITY
- 100 / 150 width — OCCUPANT LOAD / STAIR WIDTH / STAIR EGRESS CAPACITY
- ROOM NAME / NUM / 150 SF / 100 = 15P — ROOM SQUARE FOOTAGE / NUMBER OF OCCUPANTS / CODE SQUARE FOOTAGE PER OCCUPANT
- NOT IN CONTRACT HATCH
- 45 MIN / FIRE RATING — DOOR
- EXIT SIGN

NOTES

1. PROVIDE NEW FIRE EXTINGUISHERS IN CABINETS (FEC) AND FIRE EXTINGUISHERS ON BRACKETS (FE) AS SHOWN ON FLOOR PLANS. PROVIDE NEW FIRE EXTINGUISHERS IN KITCHEN (TYPE K), MECHANICAL, ELECTRICAL (TYPE B-C), FIRE PUMP, AND ELEVATOR MACHINE ROOMS, AND AS INDICATED.
2. FIRE EXTINGUISHER SHALL BE MINIMUM 3A-40BC RATING.
3. MARK ALL RATED PARTITIONS AND WALLS IN ACCORDANCE WITH IBC (2018) 716.1, AND AS DETAILED.



KEY PLAN



BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16035 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

THIRD FLOOR LIFE SAFETY PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

G006

COPYRIGHT © 2020

8/14/2020 9:28:32 AM C:\Users\abrown\Documents\2018023B0 CFCC ASN BASE BID_abrownSDEJ4.rvt

OCCUPANCY TYPE

- ACCESSORY - MECH. STORAGE: 300 SF PER OCCUPANT
- ASSEMBLY - UNCONCENTRATED: 15 SF PER OCCUPANT
- EDUCATIONAL - CLASSROOM: 20 SF PER OCCUPANT
- EDUCATIONAL - SHOPS: 50 SF PER OCCUPANT
- BUSINESS: 100 SF PER OCCUPANT
- LOCKERS: 50 SF PER OCCUPANT
- CIRCULATION/ NOT OCCUPIED

OCCUPANT SUMMARY

FUNCTION OF SPACE CALCULATION: 298 OCCUPANTS
(AS SHOWN ON EGRESS PLAN)

SQUARE FOOTAGE CALCULATION: 102 OCCUPANTS
(BUSINESS OCCUPANCY: 10126 SF / 100)

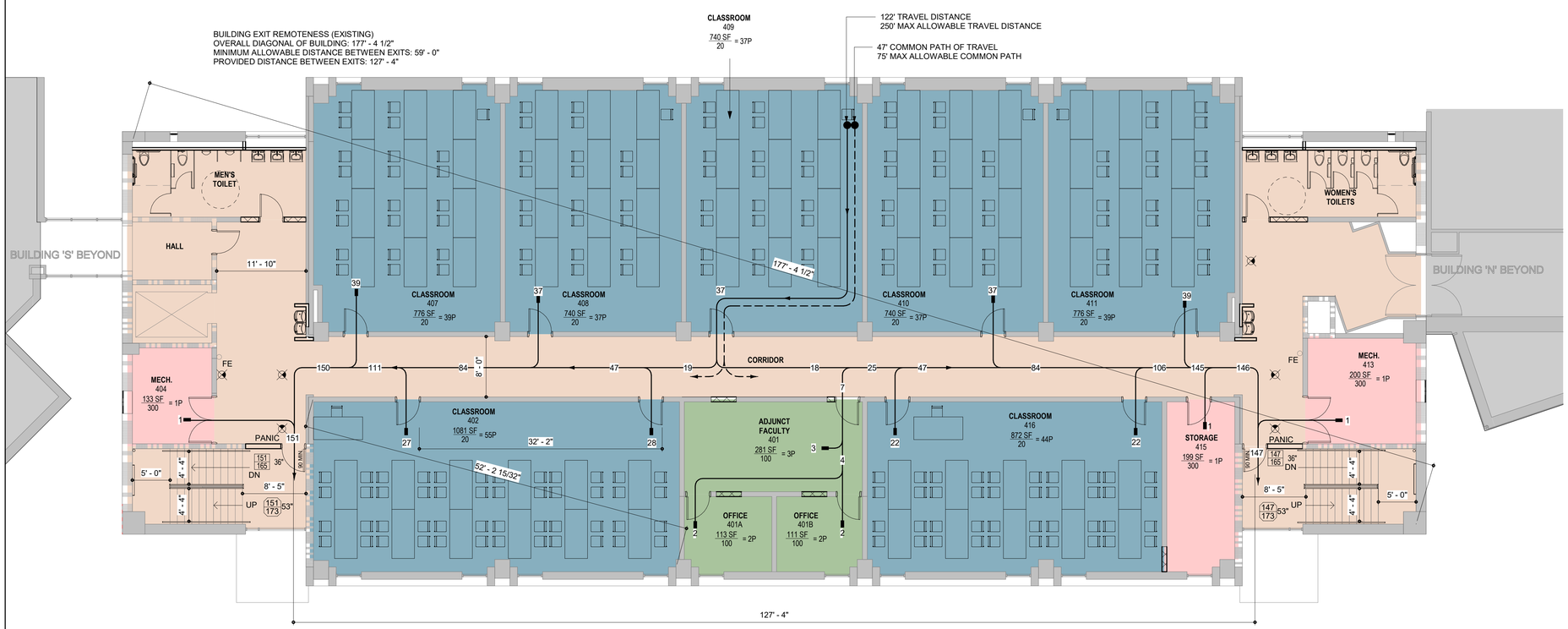
CODE LEGEND

- PATH OF EGRESS
- COMMON PATH
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- FE — FIRE EXTINGUISHER
- 100 / 150 width — OCCUPANT LOAD / DOOR OPENING WIDTH / DOOR EGRESS CAPACITY
- 100 / 150 width — OCCUPANT LOAD / STAIR WIDTH / STAIR EGRESS CAPACITY
- ROOM NAME / NUM / 150 SF / 100 = 15P — ROOM SQUARE FOOTAGE / NUMBER OF OCCUPANTS / CODE SQUARE FOOTAGE PER OCCUPANT
- NOT IN CONTRACT HATCH
- FIRE RATING / 45 MIN — DOOR
- EXIT SIGN

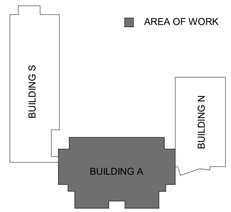
NOTES

1. PROVIDE NEW FIRE EXTINGUISHERS IN CABINETS (FEC) AND FIRE EXTINGUISHERS ON BRACKETS (FE) AS SHOWN ON FLOOR PLANS. PROVIDE NEW FIRE EXTINGUISHERS IN KITCHEN (TYPE K), MECHANICAL, ELECTRICAL (TYPE B-C), FIRE PUMP, AND ELEVATOR MACHINE ROOMS, AND AS INDICATED.
2. FIRE EXTINGUISHER SHALL BE MINIMUM 3A-40BC RATING.
3. MARK ALL RATED PARTITIONS AND WALLS IN ACCORDANCE WITH IBC (2018) 716.1, AND AS DETAILED.

BUILDING EXIT REMOTENESS (EXISTING)
OVERALL DIAGONAL OF BUILDING: 177' - 4 1/2"
MINIMUM ALLOWABLE DISTANCE BETWEEN EXITS: 59' - 0"
PROVIDED DISTANCE BETWEEN EXITS: 127' - 4"



1 4TH FLOOR LIFE SAFETY PLAN
SCALE: 1/8" = 1'-0"
SCALE : 1/8" = 1'-0"



KEY PLAN

PLAN NORTH

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, N.C. 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FOURTH FLOOR LIFE SAFETY PLAN

ISSUE BLOCK

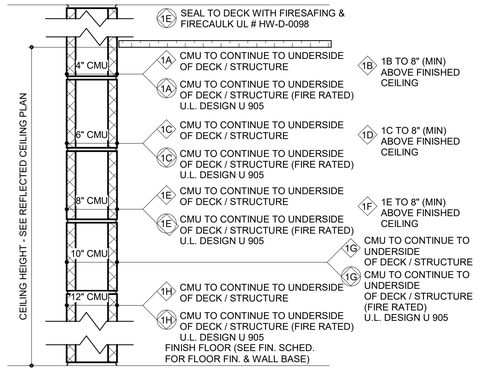
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

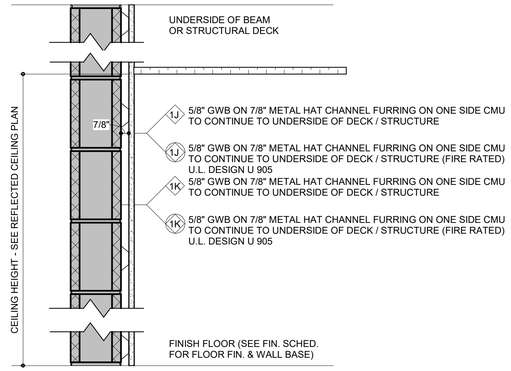
G007

COPYRIGHT © 2020

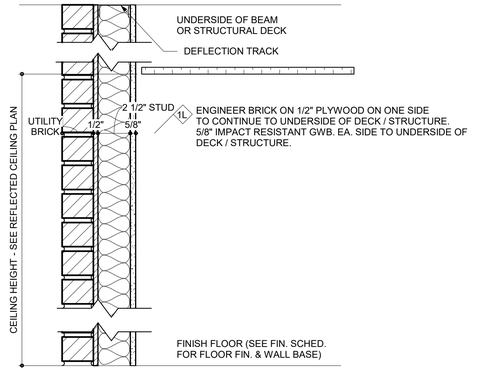
8/14/2020 9:28:36 AM C:\Users\abrown\Documents\2018023900 CFCC ASN BASE BID_abrown9DEJ4.rvt



WALL TYPES 1A 1A 1B 1C 1C 1D 1E 1E 1F 1G 1G 1H 1H



WALL TYPES 1J 1J 1K 1K



WALL TYPES 1L

WALL TYPE GENERAL NOTES

1. SEE CODE SHEETS, G100 AND G500 SERIES, FOR REQUIRED FIRE RATINGS OF ALL WALL ASSEMBLIES.
MULTIPLE LAYERS OF GWB MAY BE REQUIRED AT RATED PARTITIONS.

2. PROVIDE SOUND-ATTENUATING FIRE BATT INSULATION IN METAL STUD PARTITIONS, U.O.N.

3. PROVIDE MOLD AND MOISTURE RESISTANT GWB AT ALL METAL STUD FRAMED PARTITIONS AT WET LOCATIONS, INCLUDING TOILET ROOMS, AND AT SINKS AND LAVATORIES. EXTEND TO END OF CASEWORK RUN, INCLUDING SIDEWALLS WHERE ADJACENT TO SINKS. SEE SPECIFICATIONS.

4. BRACE METAL STUD PARTITIONS, WHERE REQUIRED. SEE SPECIFICATIONS AND STRUCTURAL DRAWINGS.

5. SEE STRUCTURAL FOR BRACING OF PART-HEIGHT MASONRY PARTITIONS, INCLUDING PARTITIONS WITH GWB AND METAL STUD CONTINUING ABOVE.

6. SEE SPECIFICATIONS AND STRUCTURAL FOR MASONRY TIES IN MULTIPLE WYTHE MASONRY WALLS AND PARTITIONS. CORRUGATED TIES ARE NOT ACCEPTABLE, U.O.N.

7. PROVIDE BULLNOSE MASONRY UNITS AT LOCATIONS NOTED IN SPECIFICATIONS.

8. PROVIDE SPECIAL-SHAPED MASONRY UNITS PER DETAILS AND SPECIFICATIONS.

9. FILL ALL CORES IN MASONRY UNITS AT THE FOLLOWING LOCATIONS: ALL MECHANICAL ROOMS AND MEZZANINES, AND ELEVATOR MACHINE ROOM. SEE SPECIFICATIONS.

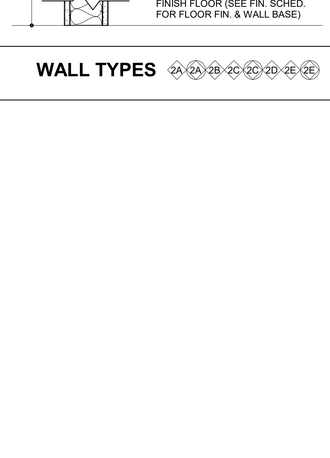
10. PROVIDE ACOUSTICAL SEALANT AT PARTITIONS IN THE FOLLOWING LOCATIONS: ALL MECHANICAL ROOMS AND MEZZANINES, AND ELEVATOR MACHINE ROOM. SEE SPECIFICATIONS.

11. PROVIDE CONTROL JOINTS IN MASONRY WALLS AS INDICATED ON PLANS, ELEVATIONS, AND DETAILS, AND AS SPECIFIED. WHERE JOINTS ARE NOT SHOWN, PROVIDE ACCORDING TO B.I.A AND N.C.M.A. TEK NOTES.

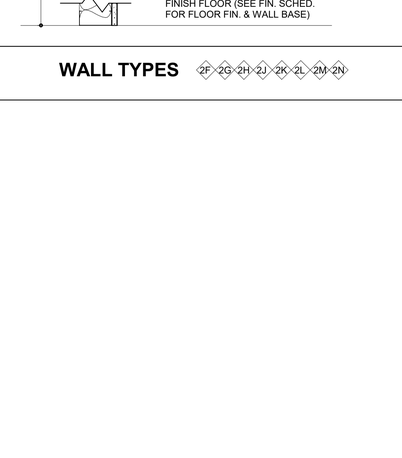
12. STUD PARTITIONS SLATED TO RECEIVE WALL TILE FINISH SHALL HAVE CEMENT BOARD IN LIEU OF GYPSUM WALL BOARD.

13. ALL WALL TYPES MAY NOT BE USED.

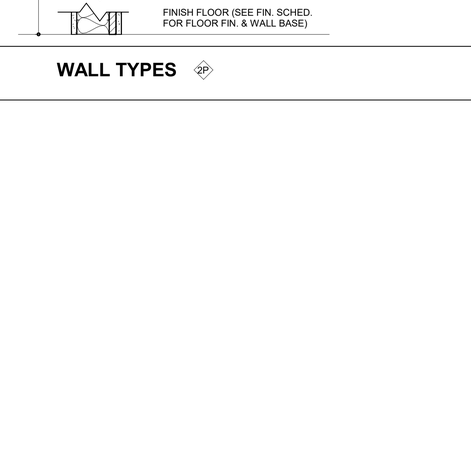
14. CONTRACTOR TO CONFIRM ALL PARTITION FRAMING IS CONSTRUCTED IN ACCORDANCE WITH ASTM C754 AND CONFORMS TO THE REQUIREMENTS OF SEISMIC DESIGN CATEGORY C.



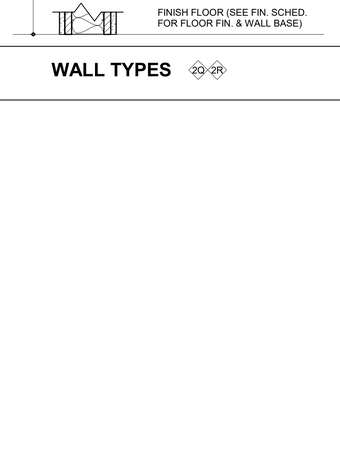
WALL TYPES 2A 2A 2B 2C 2C 2D 2E 2E



WALL TYPES 2F 2G 2H 2J 2K 2L 2M 2N



WALL TYPES 2P



WALL TYPES 2Q 2R

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 6635 North Carolina WILMINGTON, N.C. 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

WALL TYPES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	1 1/2" = 1'-0"
DRAWN BY: VSC	PROJ MGR: DCW

G008

COPYRIGHT © 2020

8/14/2020 9:28:37 AM C:\Users\abrown\Documents\2018023000 CFCC ASN BASE BID_abrownSDEJ4.rvt

UL Product iQ™

BXUV.U469 -

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

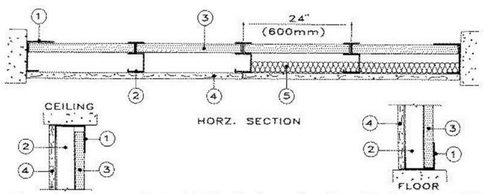
Design No. U469

March 12, 2020

Assembly Rating — 1 HR

Nonbearing Wall

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Floor and Ceiling Runners —** "J" - shaped, 2-1/2 in. wide with unequal legs of 1 in. and 2 in., fabricated from 24 MSG galv steel (min 20 MSG steel required when Item 4A, 4B, or 4C is used). Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.

2. **Steel Studs —** "C-H" shaped studs, 2-1/2 in. wide by 1-1/2 in. deep, fabricated from min 25 MSG galv steel (min 20 MSG steel required when Item 4A, 4B, or 4C is used), spaced 24 in. or 600 mm OC (max 16 in. OC when Item 4A, 4B, or 4C is used). Vertically restrained walls require studs to be cut 3/8 in. less than floor to ceiling height.

3. **Gypsum Board* —** 1 in. thick gypsum wallboard liner panels, supplied in nominal 24 in. or 600 mm widths. Vertical edges inserted in "H" shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" runners with 1-5/8 in. long Type S head steel screws spaced not greater than 12 in. OC.
CERTAINTEED GYPSUM INC — Types Shaftliner, EGRG Shaftliner or GlasRoc Shaftliner

CGC INC — Type SLX.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFCSL

GEORGIA-PACIFIC GYPSUM L L C — Types TP-6, DGUSL, and TRSL

UNITED STATES GYPSUM CO — Type SLX

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX.

4. **Gypsum Board* —** 5/8 in. thick, 4 ft or 1200 mm wide, applied vertically and attached to studs with 1 in. long Type S steel screws spaced 12 in. OC along the edges and in the field of the boards.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRoc.

CABOT MANUFACTURING ULC — 5/8 Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Type C, Type X, Type X-1.

CGC INC — Types C, IP-X1, IP-X2, IPC-AR, SCX, ULX, or WRC.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFC-C, LGFC-C/A, LGFC6A

GEORGIA-PACIFIC GYPSUM L L C — Types S, DAPC, Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type TG-C, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type- DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - Type LW2X, Water Rated - Type LW2X, Sheathing - Type LW2X, Soffit - Type LW2X, Type DGL2W, Water Rated - Type DGL2W, Sheathing - Type DGL2W, Type DGG, Type DAP, Type DS.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-11, PG-C, PGS-WRS.

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR ACTIV'Air, Gyproc FireStop M2TECH ACTIV'Air, Gyproc DuraLine, Gyproc DuraLine MR, Gyproc DuraLine M2TECH, Gyproc DuraLine ACTIV'Air, Gyproc DuraLine MR ACTIV'Air, Gyproc DuraLine M2TECH ACTIV'Air

THAI GYPSUM PRODUCTS PCL — Type C.

UNITED STATES GYPSUM CO — Types C, FRX-G, IP-X1, IP-X2, IPC-AR, SCX, ULX or WRC.

USG BORAL DRYWALL SFZ LLC — Types C, SCX

USG MEXICO S A DE C V — Types C, IP-X1, IP-X2, IPC-AR, SCX, ULX, or WRC.

4A. **Gypsum Board* —** Not Shown - As an Alternate to Item 4. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips (Item 6) required behind vertical joints
RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. **Gypsum Board* —** Not Shown - As an Alternate to Item 4. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints. To be used with Lead Batten Strips (see Item 6B) or Lead Discs (see Item 6C).
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4C. **Gypsum Board* —** (Not Shown - As an Alternate to Item 4.). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

4D. **Gypsum Board* —** For use with Item 5D, **Batts and Blankets***and minimum stud depth increased to 4 in. - 5/8 in. thick, 4 ft or 1200 mm wide, applied vertically and attached to studs with 1 in. long Type S steel screws spaced 12 in. OC along the edges and in the field of the boards.
UNITED STATES GYPSUM CO — Type ULIX

5. **Batts and Blankets* —** (Optional) — Mineral wool batts partially or completely filling stud cavity.
ROCKWOOL — Type AFB, min. density 1.8 pcf / 28.8 kg/m^3

THERMAFIBER INC — Type SAFB, SAFB FF

5A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) — (100% Borate Formulation) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product.
U S GREENFIBER L L C — INS735, INS745 and INS750LD for use with wet or dry application. INS765LD and INS773LD are to be used for dry application only.

5B. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation

5C. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

5D. **Batts and Blankets* —** For use with Item 4D. Placed in stud cavities, any min. 3-1/2 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts and Blankets (BKNV or BZJZ) Categories** for names of Classified companies.

5E. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) - Spray-applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft^3.
APPLEGATE HOLDINGS L L C — Applegate Advanced Stabilized Cellulose Insulation

6. **Lead Batten Strips —** For Use with Item 4A - (Not Shown) — Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

6A. **Lead Discs or Tabs —** (Not Shown) - Used in lieu of or in addition to the lead batten strips (Item 6) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

6B. **Lead Batten Strips —** (Not Shown, for use with Item 4B) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".

6C. **Lead Discs —** (Not Shown, for use with Item 4B) Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2020-03-12

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2020 UL LLC"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS
Registered Architect
18635
North Carolina
WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC.
Professional Architectural Corporation
51922
North Carolina
WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

U.L. DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE:
DRAWN BY: VSC | PROJ MGR: DCW

G009

COPYRIGHT © 2020

8/14/2020 9:33:14 AM C:\Users\abrown\Documents\2018023B0 CFCC ASN BASE BID_abrownBDEJ4.rvt

BXUV.U905 -

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. U905

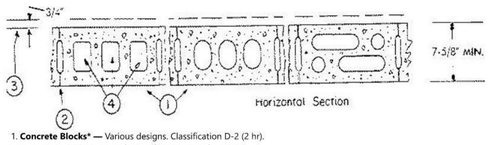
March 02, 2020

Bearing Wall Rating — 2 HR.

Nonbearing Wall Rating — 2 HR

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Concrete Blocks* —** Various designs. Classification D-2 (2 hr).
See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar —** Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. **Portland Cement Stucco or Gypsum Plaster —** Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. **Loose Masonry Fill —** If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

5. **Foamed Plastic* —** (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
ATLAS ROOFING CORP — "EnergyShield Pro Wall Insulation", "EnergyShield Pro 2 Wall Insulation", EnergyShield CGF Pro and EnergyShield Ply Pro

CARLISLE COATINGS & WATERPROOFING INC — Type R2+ SHEATHE

DUPONT DE NEMOURS, INC. — Types Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP), TUFF-R™ ci Insulation, Thermax Butler Stylwall Insulation Board and Thermax Morton Heavy Duty Insulation Board

FIRESTONE BUILDING PRODUCTS CO L L C — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Types "Xci-Class A", "Xci Foil (Class A)", "Xci 286"

RMAX OPERATING L L C — Types "TSX-8500", "ECOMAXci FR", "TSX-8510", "ECOMAX xi FR White", "ECOMAXci", "ECOMAXci FR Air Barrier", "Thermasheath-XP", "Thermasheath", "Durasheath", "Thermasheath-3", "Durasheath-3".

5A. **Building Units —** As an alternate to Items 5, min. 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in.
HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci NB", "Xci Ply"

RMAX OPERATING L L C — "Thermasheath-SI", "ECOBASEci", "ThermaBase-CI", "ECOMAXci FR Ply", "ECOMAXci Ply".

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),**

respectively.

Last Updated on 2020-03-02

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2020 UL LLC"

System No. HW-D-0098
XHBN.HW-D-0098
Joint Systems

June 04, 2010

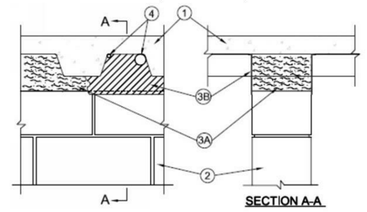
Assembly Rating — 1 and 2 Hr (See Item 4)

Nominal Joint Width - 1 in.

L Rating At Ambient — Less Than 1 CFM/Lin Ft (See Item 4)

L Rating At 400°F — Less Than 1 CFM/Lin Ft (See Item 4)

Class II and III Movement Capabilities - 12.5% Compression or Extension



1. **Floor Assembly —** The fire rated fluted steel unit/concrete floor assembly shall be constructed of the materials and in a manner described in the individual D700 or D900 Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Form Units* —** Max 3 in. (76 mm) deep galv steel fluted floor units.

B. **Concrete —** Min 2-1/2 in. (64 mm) thick reinforced concrete as measured from top plane of the floor units.

C. **Spray-Applied Fire Resistive Materials* —** (Optional)--(Not Shown)--Prior to the installation of the forming material and fill, void or cavity material (Items 3A, 3B) the steel floor units may be sprayed with a min 5/16 in. (8 mm) to max 1-3/4 in. (44 mm) thickness of fire resistive material.

1A. **Roof Assembly —** (Not Shown) — As an alternate to the floor assembly, a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. (76 mm) deep galv steel fluted roof deck.

B. **Roof Insulation —** Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the floor units.

1B. **Roof Assembly —** As an alternate to Items 1 and 1A, a fire rated protected fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. (76 mm) deep galv steel fluted roof deck.

B. **Spray—Applied Fire Resistive Materials* —** (Not Shown)—Prior to the installation of the steel ceiling runners, Forming Material and Fill, Void or Cavity Material (Items 2A, 3A, 3B), the roof assembly shall be sprayed with the type and thickness of fire resistive material indicated in the individual P700 Series design.

2. **Wall Assembly —** Min 6 in. (152 mm) thick steel-reinforced lightweight or normal weight (100-150 *pcf* or 1600-2400 kg/m^3) structural concrete. Wall may also be constructed of any UL Classified **Concrete Blocks*.**

3. **Joint System — Max separation between bottom of floor or roof and top of wall at time of installation of joint system is 1 in (25 mm) . The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width.** The joint system shall consist of the following:

A. **Forming Material —** Nom 4 *pcf* (64 kg/m^3) mineral wool batt insulation compressed and firmly packed to completely fill the flutes and the gap between the top of the wall and bottom of the floor or roof as a permanent form. Batt insulation cut to the shape of the fluted steel deck, approx 33 percent larger than the flutes. Pieces compressed and installed vertically into the flutes above the top of the wall. Additional pieces of batt insulation, min 6 in. wide, installed edge-first into joint opening between bottom of fluted steel deck and top of wall, parallel with joint direction, such that batt sections are compressed min 33 percent in thickness. Compressed batt sections are flush with both surfaces of wall. Adjoining lengths of batt to be tightly butted with butted seams spaced min 48 in. (1.22 m) apart along the length of the joint.

A1. **Forming Material*—Plugs —** (Optional-Not Shown) Performed mineral wool plugs, formed to the shape of the fluted floor units, friction fit to completely fill the flutes above the ceiling runner. The plugs shall be flush with both wall surfaces. Additional forming material, described in Item 3A, to be used in conjunction with the plugs to fill the gap between the top of the wall and the bottom of the steel floor units.

B. **Fill, Void or Cavity Material* —** Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.6mm dry thickness) of fill material sprayed or troweled on each side of the wall to completely cover mineral wool forming material and to overlap a min of 1/2 in. (13 mm) onto wall and steel deck on both sides of wall. When spray-applied fire resistive material* is applied to the steel deck, the fill material is to overlap the wall a min of 1/2 in. (14 mm) and to overlap the spray-applied fire resistive material a min of 2 in. (51 mm) on both sides of wall. When through-penetrants (Item 4) are installed within flute, the fill material shall overlap a min 1/2 in. (13 mm) onto the periphery of each penetrant, on both sides of wall.

4. **Through-Penetrants —** Max of two penetrants may be installed parallel with and within the flutes of the steel floor or roof deck. The annular space between penetrants and steel deck or spray-applied fire resistive material on steel deck shall be min 0 in. (point contact) and the annular space between penetrants within the flute shall be min 2 in. (51 mm). Penetrants to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of penetrants may be used:

A. **Polyvinyl Chloride (PVC) Pipe —** Nom 1-1/2 in. (38 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) piping systems.

B. **Rigid Nonmetallic Conduit+ —** Nom 1-1/2 in. (38 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA 70).

C. **Steel Conduit or Tubing —** Nom 1/2 in. (13 mm) diam rigid steel conduit or steel electrical metallic tubing (EMT) installed in accordance with the National Electrical Code (NFPA No. 70).

When Through-Penetrant(s) installed in flute of steel deck, the houriy rating of the joint system is 1 hr.

When Through-Penetrant(s) installed in flute of steel deck, L Ratings do not apply.

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS
Registered Architect
North Carolina
WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC.
Professional Architectural Corporation
North Carolina
WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

U.L. DETAILS

ISSUE BLOCK

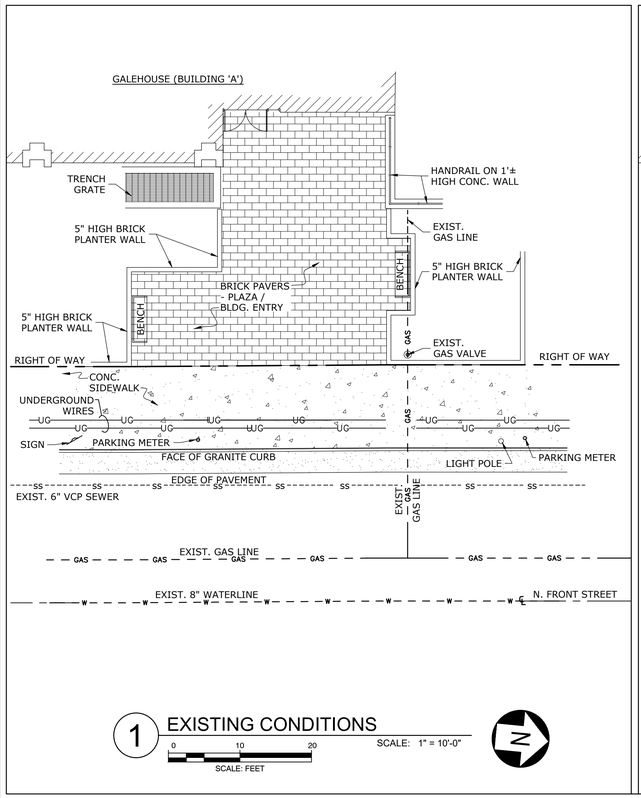
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE:
DRAWN BY: Author | PROJ MGR: Checker

G010

COPYRIGHT © 2020

8/14/2020 9:28:38 AM C:\Users\abrown\Documents\2018023.00 CFCC ASN BASE BID_abrown9DEJ4.rvt

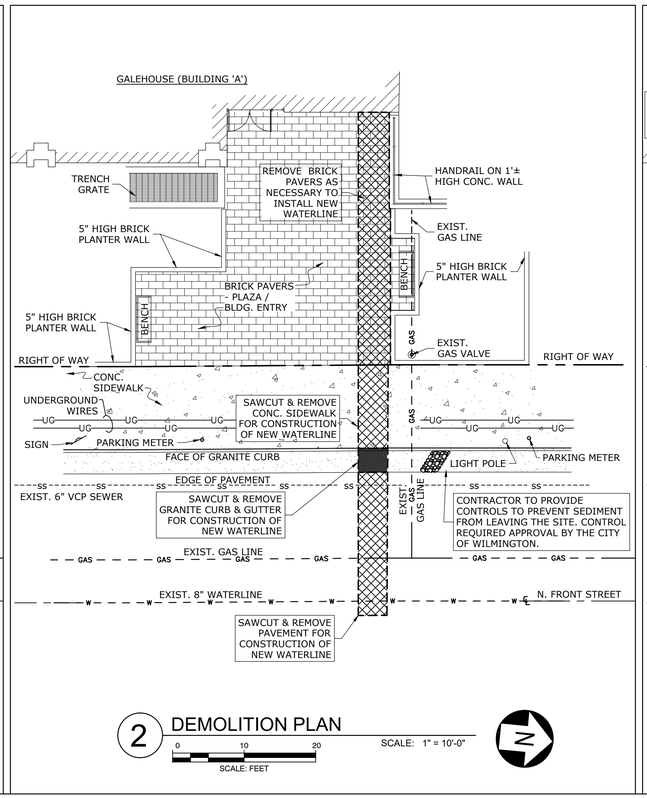


1 EXISTING CONDITIONS

SCALE: 1" = 10'-0"

0 10 20

SCALE: FEET

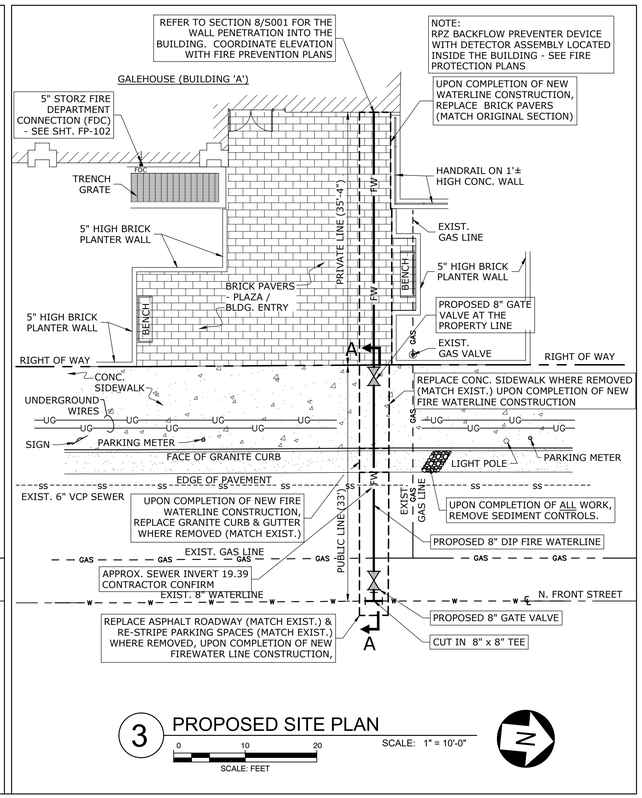


2 DEMOLITION PLAN

SCALE: 1" = 10'-0"

0 10 20

SCALE: FEET

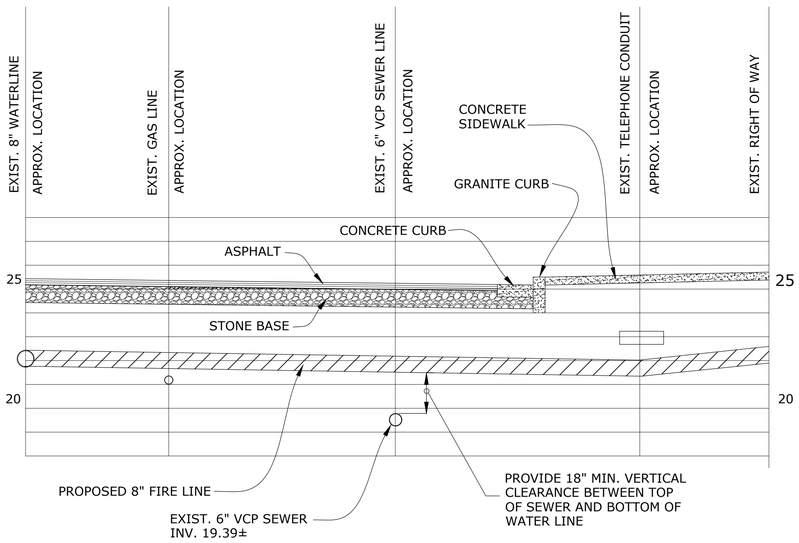


3 PROPOSED SITE PLAN

SCALE: 1" = 10'-0"

0 10 20

SCALE: FEET



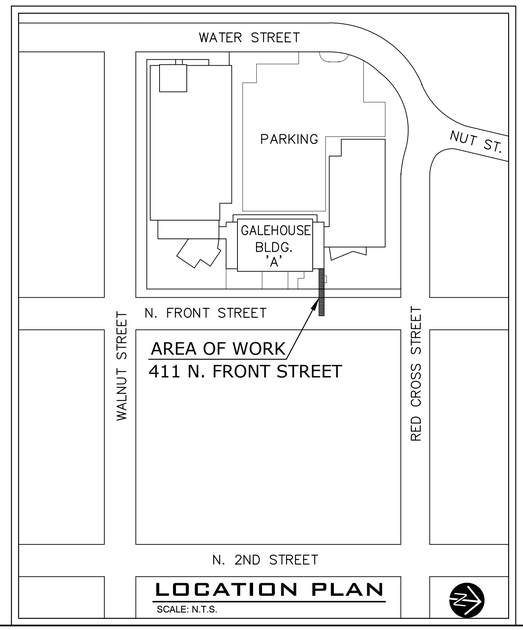
SECTION A-A

SCALE: 1" = 3'-0"

0 3 6

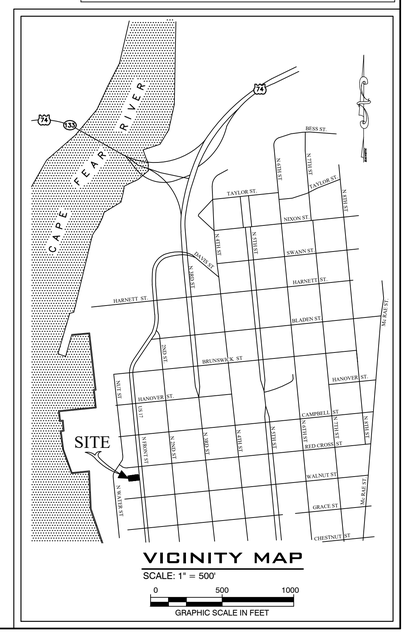
SCALE: FEET

NOTE: CONTRACTOR TO CONFIRM HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION



LOCATION PLAN

SCALE: N.T.S.



VICINITY MAP

SCALE: 1" = 500'

0 500 1000

GRAPHIC SCALE IN FEET

ARDURRA
ARDURRA GROUP NORTH CAROLINA

3809 Peachtree Avenue, Suite 102
Wilmington, North Carolina 28403
Phone: (910) 397-2929
www.Ardurra.com
NC FIRM LICENSE NUMBER F-0113
PROJECT 8247.00

NOTES:

1. CONTRACTOR TO CONFIRM ALL UNDERGROUND UTILITY LINE LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO COORDINATE WITH AND OBTAIN APPROVAL FROM THE CITY OF WILMINGTON AND EMERGENCY SERVICES ON ROAD CLOSURES REQUIRED FOR CONSTRUCTION.
3. CONTRACTOR TO PREPARE, SUBMIT AND GET APPROVED A CITY OF WILMINGTON RIGHT-OF-WAY (ROW) PERMIT.
4. CONTRACTOR TO PROVIDE A TRAFFIC CONTROL PLAN FOR BOTH VEHICULAR AND PEDESTRIAN TRAFFIC TO THE CITY OF WILMINGTON FOR APPROVAL.
5. CONTRACTOR TO COORDINATE WITH AND OBTAIN APPROVAL FROM THE CAPE FEAR PUBLIC UTILITY AUTHORITY FOR SCHEDULING THE TAPPING OF THE EXISTING 8-INCH WATER LINE.
6. ALL UTILITY WORK WILL BE IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS AND STANDARD DETAILS REQUIRED BY THE CAPE FEAR PUBLIC UTILITY AUTHORITY.
7. THE EXISTING GRANITE CURB WILL BE REMOVED AS NECESSARY FOR CONSTRUCTION AND STORED FOR REPLACEMENT. THE CONTRACTOR IS TO MATCH THE EXISTING INSTALLATION DETAIL BETWEEN THE CONCRETE GUTTER AND THE GRANITE CURB. THE GRANITE CURB MUST BE REMOVED AT THE EXISTING JOINTS.
8. ASPHALT ROADWAY REPAIR WILL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON STANDARD SPECIFICATIONS AND DETAILS. MINIMUM REQUIREMENT IS TO MATCH THE THICKNESS OF THE EXISTING ASPHALT. ROADWAY REPAIRS SHOULD FOLLOW CITY OF WILMINGTON STREET CUT POLICY INCLUDING SD 1-05.
9. THE SIDEWALK MUST BE REMOVED AND REPAIRED IN FULL PANEL SECTIONS. CONCRETE REMOVAL AND REPAIR WILL BE WIDER THAN THE TRENCH REQUIREMENTS.
10. CONTRACTOR TO REMOVE, STORE AND REPLACE BRICK PAVERS AS REQUIRED FOR CONSTRUCTION.
11. PROVIDE MINIMUM 3.0 FEET OF COVER OVER THE TOP OF NEW WATERLINE UNLESS NOTED OTHERWISE.
12. BACKFLOW PREVENTION LOCATED INSIDE THE BUILDING. REFER TO THE FIRE PROTECTION PLANS.
13. FIRE DEPARTMENT CONNECTION (FDC) BY OTHERS. REFER TO THE FIRE PROTECTION PLANS.

LEGEND

FW	PROPOSED FIRE WATER LINE
W	EXISTING WATER LINE
GAS	EXISTING GAS LINE
UG	EXISTING UNDERGROUND WIRES
PIV	PRESSURE INDICATOR VALVE
	STONE STORM WATER CONTROL
	AREA TO BE REMOVED FOR NEW FIRE WATER LINE
	CONCRETE SIDEWALK
	BRICK PAVERS

INDEX OF DRAWINGS

C101	EXISTING CONDITIONS, DEMOLITION PLAN, AND PROPOSED PLAN
C102	CIVIL DETAILS
C103	CIVIL DETAILS

BECKER MORGAN GROUP

ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027476 ENGINEER DAVID E. CRISER

08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

EXISTING CONDITIONS, DEMOLITION PLAN, AND PROPOSED PLAN

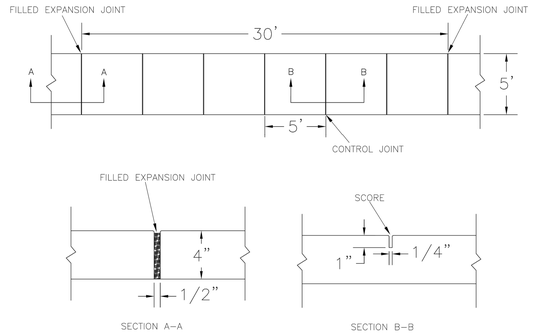
ISSUE BLOCK

Mark	Date	Description
4	8/14/2020	ISSUED FOR BID
3	7/2/2020	SCO RE-SUBMISSION
2	6/22/2020	COW REVIEW
1	5/13/2020	PERMIT REVIEW
0	4/8/2020	SCO CD REVIEW

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: HWL | PROJ MGR: DEC

C101

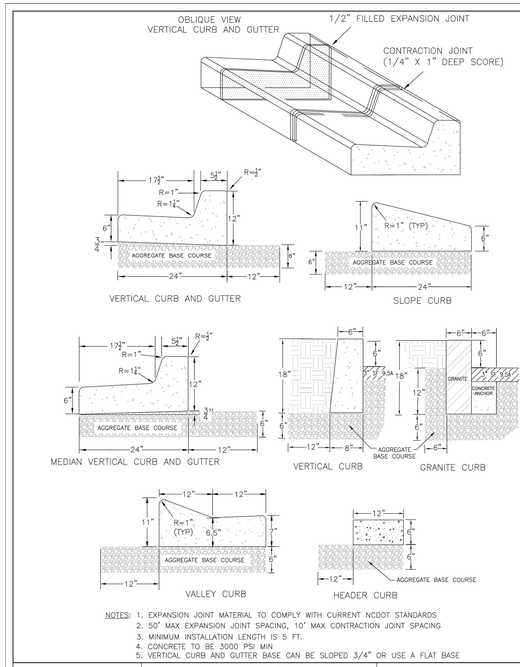
COPYRIGHT © 2020



NOTES:

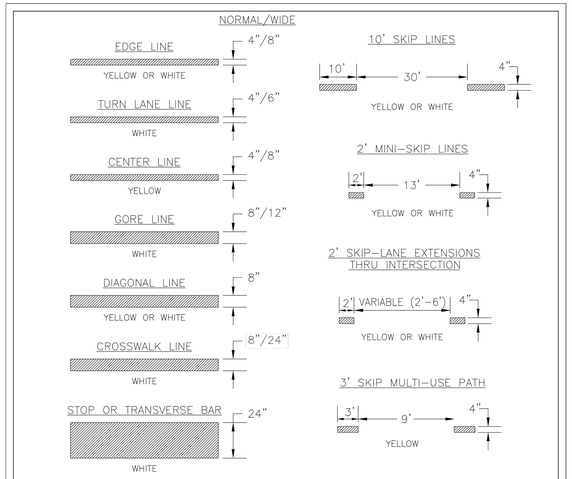
1. JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. SANITARY SEWER CLEAN–OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
3. MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
4. CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A DRIVEWAY APRON) SHALL BE CLASS "A" – 3,000 PSI.
5. MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL
6. 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS
7. MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
8. MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
9. MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 8.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DATE: OCTOBER, 2010	SIDEWALK	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON N.C. 28402 (910) 341–7807
DRAWN: PB/JSR		
CHECKED: DEC		
SCALE NOT TO SCALE		SD 3-10



NOTES:
1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS
2. 50' MAX EXPANSION JOINT SPACING, 10' MAX CONTRACTION JOINT SPACING
3. MINIMUM INSTALLATION LENGTH IS 5 FT.
4. CONCRETE TO BE 3000 PSI MIN
5. VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE

	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DATE: AUGUST, 2011	CURBING	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON N.C. 28402 (910) 341–7807
DRAWN: PB/JSR		
CHECKED: DEC		
SCALE NOT TO SCALE		SD 3-11



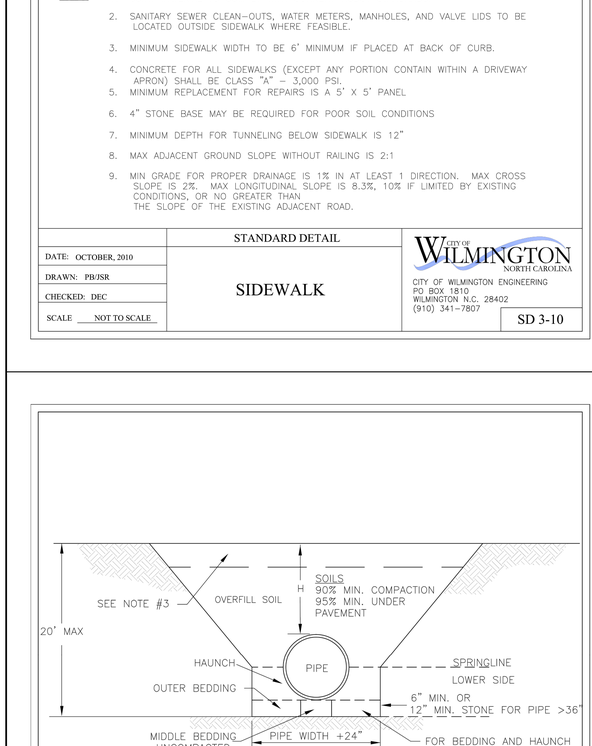
1–PAVEMENT MARKINGS AND SYMBOLS SHALL BE DESIGNED PER MUTCD WITH APPROVAL FROM CITY TRAFFIC ENGINEERING, AND INSTALLED IN ACCORDANCE WITH NCDOT DIVISION 12 SPECIFICATIONS.

2–GENERALLY, PERMANENT MARKINGS WILL BE UNIFORM AND SMOOTH AND WILL CONSIST OF 120MIL OF THERMOPLASTIC FOR ALL LINES AND SYMBOLS; TEMPORARY MARKINGS SHALL CONSISTS OF 15 MIL PAINT, EVERY 6 MONTHS.

3–DURING APPLICATION THE EXISTING PAVEMENT SHALL NOT SHOW SIGNS OF MOISTURE AND BE CLEAN, FREE OF DIRT AND OIL, ETC. THERMOPLASTIC SHALL ONLY BE INSTALLED WHERE PAVEMENT IS 50° F AND RISING. PAINT SHALL ONLY BE INSTALLED WHERE PAVEMENT IS 40° F AND RISING.

	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DATE: DECEMBER, 2011	PAVEMENT MARKINGS LINE TYPES	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, NC 28402 (910) 341–7807
DRAWN BY JSR		
CHECKED BY BDR, P.E.		
SCALE NOT TO SCALE		SD 11-01

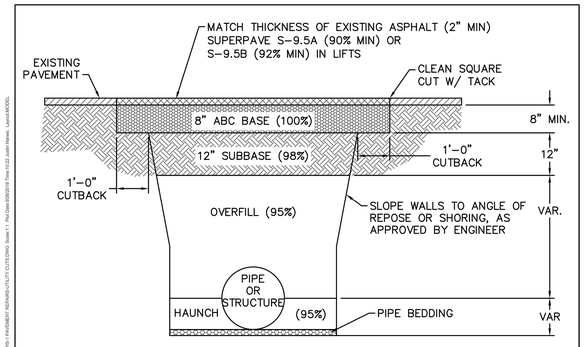
ARDURRA
ARDURRA GROUP NORTH CAROLINA
3809 Peachtree Avenue, Suite 102
Wilmington, North Carolina 28403
Phone: (910) 397-2929
www.Ardurra.com
NC FIRM LICENSE NUMBER F-0113
PROJECT 8247.00



NOTES:

1. CONTRACTOR SHALL ENSURE BOTTOM OF TRENCH IS SUITABLE FOR PIPE INSTALLATION AND DOES NOT REQUIRE FOUNDATION CONDITIONING STONE.
2. CONTRACTOR TO INSTALL BEDDING AND PIPE BEFORE INSTALLING HAUNCH AND THEN OVERFILL. SOILS SHALL BE INSTALLED IN 6"–8" LIFTS AND COMPACTED TO MIN. % DENSITY AS DETERMINED BY THE STANDARD PROCTOR ASTM D–698–A METHOD.
3. WHERE IN PAVEMENT, CONTRACTOR SHALL ADHERE TO CITY STREET CUT POLICY AND SD 1–04 OR SD 1–05 FOR ROAD AND PAVEMENT REBUILD.
4. SOIL SHALL BE COMPACTED BY A MECHANIZED TAMP (I.E. JUMPING JACK). HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
5. THIS DETAIL IS REPRESENTATIVE AND PIPE TRENCH DESIGN IS SUBJECT TO SPECIFIC SOIL CATEGORY (I, II, III), AND INSTALLATION TYPE (1, 2, 3, 4), AS DIRECTED BY THE ENGINEER AND SITE CONDITIONS.

	STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DATE: MAY, 2013	PIPE TRENCH TYPICAL	CITY OF WILMINGTON ENGINEERING OFFICE 212 OPERATIONS CENTER DRIVE WILMINGTON N.C. 28412 (910) 341–7807
DRAWN: JSR		
CHECKED: BDR, P.E.		
SCALE: NOT TO SCALE		SD 1-07

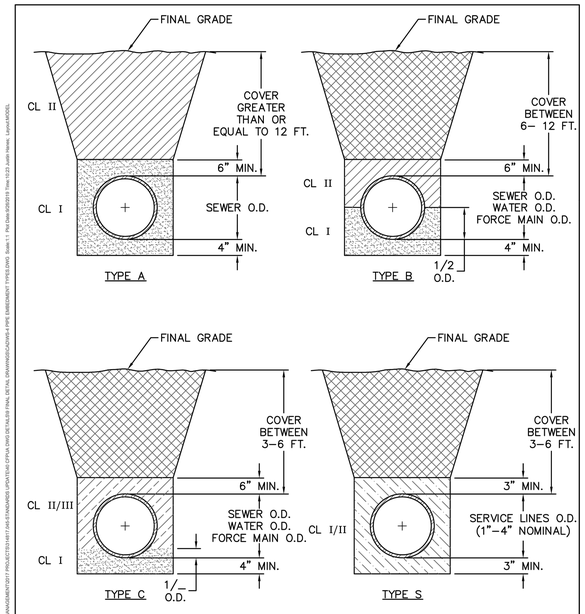


NOTES:

1. CONTRACTOR SHALL ENSURE BOTTOM OF TRENCH IS SUITABLE FOR INSTALLATION AND DOES NOT REQUIRE FOUNDATION CONDITIONING STONE.
2. FILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
3. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57 STONE, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
4. SOIL SHALL BE INSTALLED IN 6"–8" LIFTS AND COMPACTED BY A MECHANIZED TAMPER (I.E. JUMPING JACK). HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
5. ALL APPROVED CASTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF APPLICABLE.
6. COMPACT MATERIALS TO MINIMUM % DENSITY SHOWN IN DIAGRAM AS DETERMINED BY THE STANDARD PROCTOR METHOD ASTM D–698–A FOR SOILS, AND ASTM D–698–C FOR ABC STONE, AND BY NUCLEAR GAGE OR CORE SAMPLE FOR ASPHALT.
7. CUTBACKS OF ASPHALT SHALL BE PREPARED ON EDGE OF EXCAVATION OVER TOP OF UNDISTURBED SOIL.

(FOR PRIVATE ROADS AND PAVED AREAS; CONTRACTOR TO MEET MINIMUM REQUIREMENTS AS DEFINED BY RIGHT-OF-WAY OWNER FOR PUBLIC ROAD REPAIRS)

DETAIL: CITY OF WILMINGTON PAVEMENT REPAIRS-UTILITY CUTS		CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship. Sustainability. Service.	DETAIL NO: WS-1
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/20		SHEET NO: -
CFPUA REV. No: 2			



COMPACTION NOTES:

1. ALL ZONES: 95% STD EFFORT PER ASTM D698, EXCEPT AS STATED IN COMPACTION NOTE 2.
2. 12" SUBGRADE UNDER PAVEMENT: 98% STD EFFORT PER ASTM D698.

DETAIL: PIPE EMBEDMENT TYPES		CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship. Sustainability. Service.	DETAIL NO: WS-4
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/20		SHEET NO: -
CFPUA REV. No: 2			

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040210 DAVID E. CRISER
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

CIVIL DETAILS

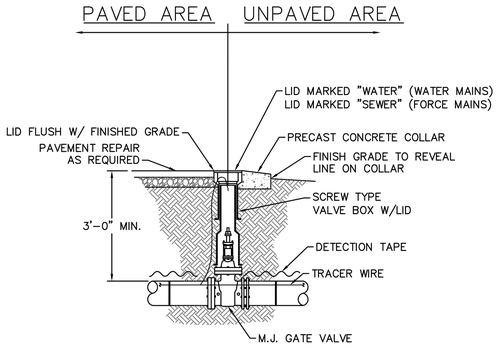
ISSUE BLOCK

Mark	Date	Description
4	8/14/2020	ISSUED FOR BID
3	7/2/2020	SCO RE-SUBMISSION
2	6/22/2020	COW REVIEW
1	5/13/2020	PERMIT REVIEW
0	4/8/2020	SCO CD REVIEW

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: HWL	PROJ MGR: DEC

C102

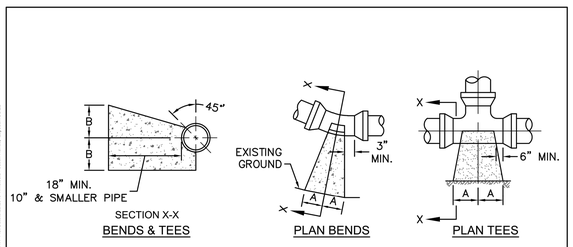
COPYRIGHT © 2020



NOTES:

1. TRACER WIRE SHALL PENETRATE VALVE BOX THROUGH DRILLED HOLE APPROX. 6" BELOW GRADE WITH MINIMUM 2-FEET EXTRA LENGTH COILED IN THE VALVE BOX. SEE WS-6.

DETAIL: VALVE DETAIL		CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560	DETAIL NO: WS-5
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/20	Stewardship. Sustainability. Service.	SHEET NO: -
CFPUA REV. No: 2			

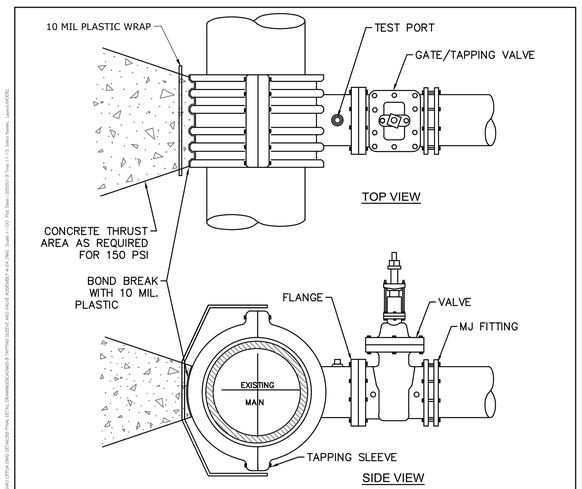


SIZE	90 BENDS A	90 BENDS B	45 BENDS A	45 BENDS B	22-1/2 BENDS A	22-1/2 BENDS B	TEES/PLUGS A	TEES/PLUGS B	45 VERT. BENDS
3"	8"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	8"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"	26"	29"	21"	19"	18"	18"	26"	20"	72"
16"	33"	29"	25"	21"	20"	21"	32"	21"	83"
18"	40"	30"	28"	24"	22"	23"	36"	24"	88"

NOTES:

1. THRUST BLOCKING IS NOT PERMITTED EXCEPT IN SPECIAL INSTALLATIONS WHERE DESIGNED BY ENGINEER AND APPROVED BY CFPUA.
2. ALLOW 7-DAY MINIMUM CONCRETE CURE TIME BEFORE PLACING LOAD ON THRUST BLOCK
3. BASED ON 160 PSI TEST PRESSURE AND 2,000 PSF SOIL BEARING CAPACITY.
4. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
5. PIPE & FITTINGS TO BE WRAPPED IN 10 MIL PLASTIC PRIOR TO THRUST BLOCK BEING POURED.

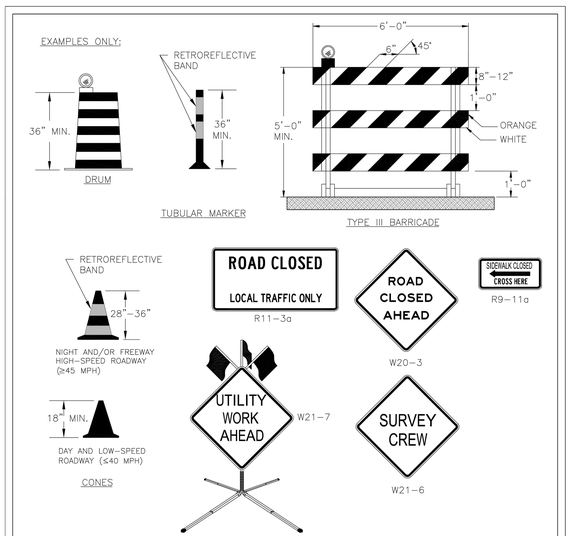
DETAIL: THRUST BLOCK		CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560	DETAIL NO: WS-13
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/20	Stewardship. Sustainability. Service.	SHEET NO: -
CFPUA REV. No: 2			



NOTES:

1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
2. PIPE & FITTING TO BE WRAPPED IN 10 MIL. PLASTIC PRIOR TO THRUST BLOCK BEING POURED.
3. TEST PRESSURE SHALL NOT BE APPLIED FOR A MINIMUM OF 7 DAYS AFTER THRUST BLOCK PLACEMENT.
4. BRANCH SHALL NOT EQUAL RUN DIAMETER UNLESS APPROVED BY CFPUA ENGINEERING.

DETAIL: TAPPING SLEEVE AND VALVE ASSEMBLY (4"-24")		CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560	DETAIL NO: WS-9
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/20	Stewardship. Sustainability. Service.	SHEET NO: -
CFPUA REV. No: 2			

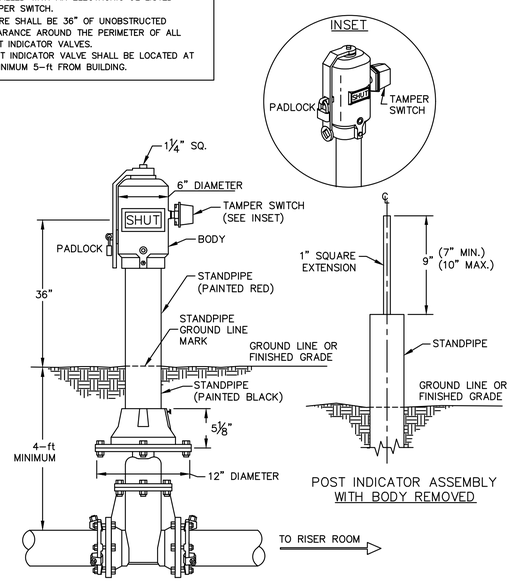


1-ALL CONSTRUCTION, MAINTENANCE AND UTILITY WORK IN THE RIGHT OF WAY SHALL BE PERMITTED AND FOLLOW MUTCD (PART 6) AND/OR NCDOT GUIDELINES FOR TEMPORARY TRAFFIC CONTROL (TTC).
2-A TTC PLAN SHALL CONSIDER SAFETY AND ACCESSIBILITY OF ALL MOTORISTS, BICYCLISTS AND PEDESTRIANS AND BE PERMITTED BY THE CITY PRIOR TO PLACING SIGNS, ETC.

STANDARD DETAIL	CITY OF WILMINGTON NORTH CAROLINA
DATE: DECEMBER, 2011	GUIDELINES FOR TEMPORARY TRAFFIC CONTROL
DRAWN BY JSR	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, NC 28402 (910) 341-7807
CHECKED BY BDR., P.E.	SD 15-07
SCALE NOT TO SCALE	

FIELD ADJUSTMENT INSTRUCTIONS

1. REMOVE THE BODY FROM THE TOP OF THE INDICATOR POST ASSEMBLY.
2. CUT THE REQUIRED LENGTH OFF THE BOTTOM OF THE STANDPIPE FOR THE GROUND LINE TO MATCH UP WITH STANDPIPE GROUND LINE MARK.
3. CUT THE 1" SQ. EXTENSION AT A DISTANCE OF 9" ABOVE THE TOP OF THE STANDPIPE.
4. SET THE "OPEN" AND "SHUT" TARGETS FOR THE APPROPRIATE VALVE SIZE.
5. RE-ATTACH THE BODY TO THE TOP OF THE INDICATOR POST ASSEMBLY.
6. ALL POST INDICATOR VALVES SHALL BE INSTALLED WITH AN ELECTRONIC UL LISTED TAMPER SWITCH.
7. THERE SHALL BE 36" OF UNOBSTRUCTED CLEARANCE AROUND THE PERIMETER OF ALL POST INDICATOR VALVES.
8. POST INDICATOR VALVE SHALL BE LOCATED AT A MINIMUM 5-ft FROM BUILDING.



POST INDICATOR VALVE
SCALE: N.T.S.

ARDURRA
ARDURRA GROUP NORTH CAROLINA
3809 Peachtree Avenue, Suite 102
Wilmington, North Carolina 28403
Phone: (910) 397-2929
www.Ardurra.com
NC FIRM LICENSE NUMBER F-0113
PROJECT 8247.00

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027... DAVID E. CRISSY
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

CIVIL DETAILS

ISSUE BLOCK

Mark	Date	Description
4	8/14/2020	ISSUED FOR BID
3	7/2/2020	SCO RE-SUBMISSION
2	6/22/2020	COW REVIEW
1	5/13/2020	PERMIT REVIEW
0	4/8/2020	SCO CD REVIEW

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: HWL | PROJ MGR: DEC

C103

COPYRIGHT © 2020

GENERAL

1. CODE: 2018 NORTH CAROLINA STATE BUILDING CODE:
   ASCE/SEI 7-10

2. FLOOR LIVE LOADS:

STAIRS & CORRIDORS:	100 PSF
NEW LOBBY:	100 PSF (ORIGINALLY 150 PSF LIBRARY LOADING)
TOILET	60 PSF
CLASSROOMS:	60 PSF

3. WIND: N/A

4. SEISMIC:
   A. RISK CATEGORY: III
   B. SEISMIC IMPORTANCE FACTOR: 1.25
   C. SITE CLASS: D (ASSUMED)
   D. MCE_R GROUND MOTION (PERIOD = 0.2s & 1.0s): S_S=22.0%g; S_1=9.2%
   E. NUMERIC SEISMIC DESIGN VALUES: S_{DS}=23.5%g; S_{D1}=14.8%g
   F. SEISMIC DESIGN CATEGORY: C
   G. COMPONENT AMPLIFICATION FACTOR: R_P = 6
   H. SEISMIC RESPONSE COEFFICIENT: F_P = 0.11
   I. COMPONENT IMPORTANCE FACTOR: I_P = 1.5
   J. EQUIVALENT LATERAL FORCE PROCEDURE

CONCRETE

1. REINFORCED CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF ACI CODE 318.

2. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS: 4,000 PSI

3. REINFORCING STEEL: ASTM A615, GRADE 60.

4. MINIMUM CLEAR CONCRETE COVER ON REINFORCING:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER:	2 INCHES (UNO)
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
SLABS, WALLS, JOISTS:	3/4 INCH (UNO)
BEAMS, COLUMNS:	1-1/2 INCHES

5. DOWELS AND CONTINUOUS REINFORCING SHALL HAVE A MINIMUM LAP OF 42 BAR DIAMETERS, BUT SHALL NOT BE LESS THAN 12 INCHES.

6. PROVIDE AIR ENTRAINMENT OF 4 TO 6 PERCENT.

7. CONCRETE FINISH: STEEL TROWEL

8. NON-SHRINK, NON-METALLIC GROUT: FACTORY-PACKAGED, NON-STAINING, NON-CORROSIVE NON-GASEOUS GROUT COMPLYING WITH ASTM C 1107/C 1107M. PROVIDE GROUT SPECIFICALLY RECOMMENDED BY MANUFACTURER FOR INTERIOR AND EXTERIOR APPLICATIONS.
   1. MINIMUM 28-DAY COMPRESSIVE STRENGTH:
      A. DRY PACK: 10,000 PSI
      B. PLASTIC: 8,200 PSI
      C. FLOWABLE: 8,000 PSI

9. INSTALLATION AND INSPECTION OF ALL POST-INSTALLED ANCHORS SHALL CONFORM TO THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.

10. A MANUFACTURER'S TECHNICAL REPRESENTATIVE (NOT A DISTRIBUTOR OR AGENT) SHALL TRAIN INSTALLERS ON THE PROPER INSTALLATION PROCEDURES AND SHALL OBSERVE INITIAL INSTALLATION OF THE ANCHORS.

11. ADHESIVE ANCHORING SYSTEMS IN CONCRETE SHALL BE AS FOLLOWS:
    HIT-RE 500-SD BY HILTI, INC. (ICC-ES ESR-2322)
    HIT-HY 200 SAFE SET BY HILTI, INC. (ICC-ES ESR-3187)
    SET-XP BY SIMPSON STRONG-TIE ANCHOR SYSTEMS (ICC-ES ESR-2508)

12. ADHESIVE ANCHORING SYSTEMS IN MASONRY SHALL BE AS FOLLOWS:
    HIT-HY 270 BY HILTI, INC. (ICC-ESR-4144)
    ADHESIVE ANCHORS SHALL USE MESH SCREEN TUBES AT UNFILLED MASONRY CELL LOCATIONS. MESH SCREEN TUBES SHALL BE TESTED AND QUALIFIED IN ACCORDANCE WITH ICC-ES-AC58 OR AC60, AS APPROPRIATE. THE APPROPRIATE MESH SCREEN TUBE SHALL BE USED AS RECOMMENDED BY THE ADHESIVE ANCHOR MANUFACTURER.

STRUCTURAL STEEL

1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE STEEL CONSTRUCTION MANUAL OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, NINTH EDITION, UNLESS OTHERWISE MODIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS.

2. STRUCTURAL STEEL: A36 PLATES, CHANNELS, & ANGLES; A500, GR. C HSS TUBES.

3. BOLTS: A325 3/4" DIAMETER H.S. BOLTS, U.N.O.
   THREADED ROD: F1554 GR. 36, U.N.O.

4. WELDING ELECTRODES: E-70XX SERIES.

5. STRUCTURAL STEEL CLEANING: STEEL STRUCTURES PAINTING COUNCIL, SP3 - LATEST EDITION (POWER TOOL). ALL FABRICATIONS SHALL BE SHOP WELDED & HOT DIP GALVANIZED AFTER FABRICATION.

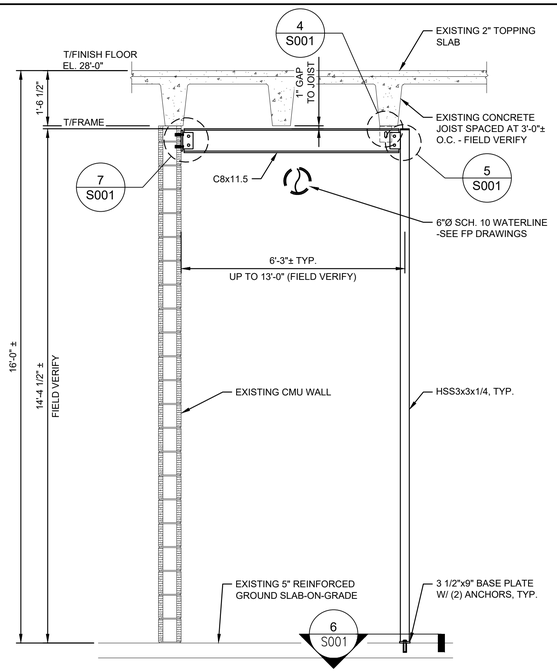
6. OIL OR GREASE REMOVAL: SSPC-SPI-LATEST EDITION.

7. NO SHOP PAINTING ALLOWED WITHIN 3 INCHES OF FIELD WELDS.

8. ALL ERECTION WORK FOR STRUCTURAL STEEL SHALL BE CARRIED OUT IN STRICT ACCORDANCE WITH LATEST OSHA REQUIREMENTS.

9. CLEAN AND PRIME ALL STEEL WITH MANUFACTURER'S STANDARD ZINC-RICH PRIMER. SEE ARCH. FOR FINISH COATING.

10. TOUCH-UP PAINT SHALL BE ZINC-RICH PRIMER.

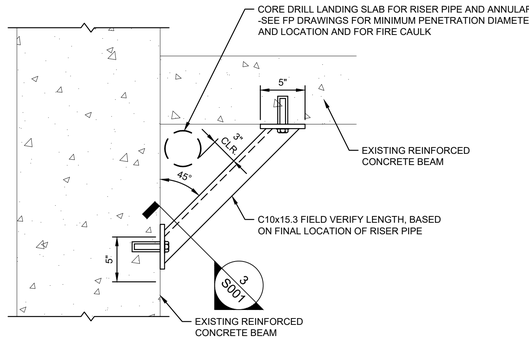


MAX. FRAME SPACING: 13'-6" O.C.
INSTALL UP AGAINST CORRIDOR WALLS

1 TYPICAL SECTION - SUPPORT FRAME

SCALE: 1/2" = 1'-0"

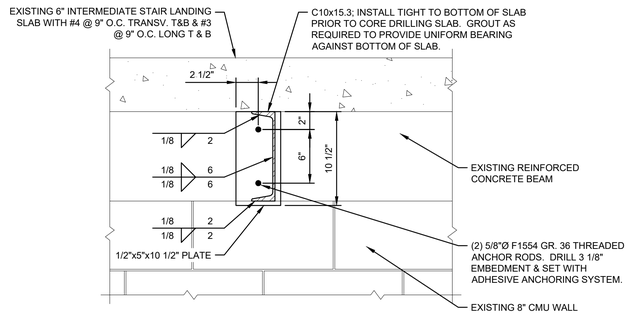
SCALE : 1/2" = 1'-0"



2 SLAB REINFORCEMENT DETAIL @ STAIR LANDING CORED PENETRATION

SCALE: 1 1/2" = 1'-0"

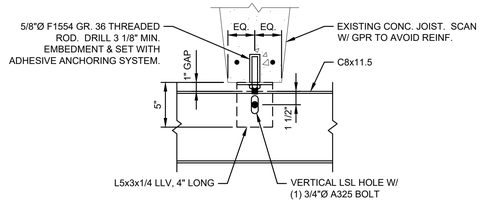
SCALE : 1 1/2" = 1'-0"



3 DETAIL

SCALE: 1 1/2" = 1'-0"

SCALE : 1 1/2" = 1'-0"

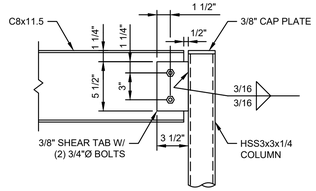


TYPICAL 1 ANCHORS PER FRAME (INSTALLED AT JOIST CLOSEST TO POST-SUPPORTED END)
PROVIDE 2 ANCHORS AT FRAME SPANS GREATER THAN 6'

4 SECTION - FRAME LATERAL ANCHORAGE

SCALE: 1 1/2" = 1'-0"

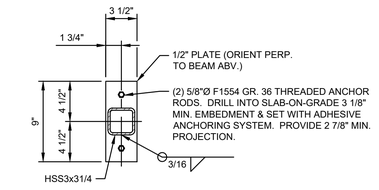
SCALE : 1 1/2" = 1'-0"



5 SECTION - FRAME BEAM TO POST CONNECTION

SCALE: 1 1/2" = 1'-0"

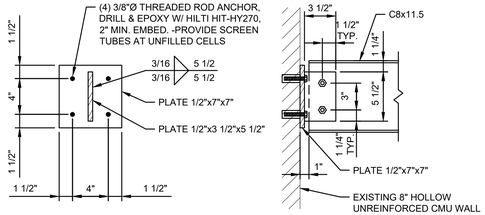
SCALE : 1 1/2" = 1'-0"



6 SECTION - FRAME BASE PLATE ANCHORS

SCALE: 1 1/2" = 1'-0"

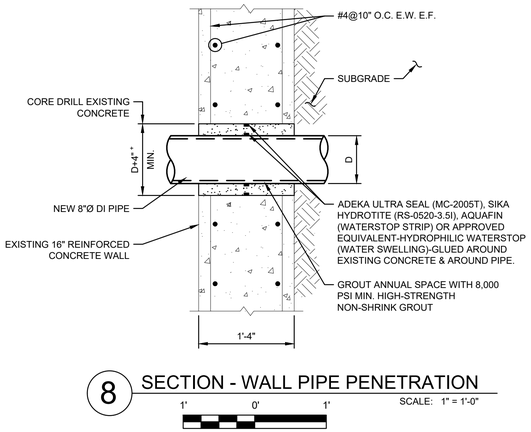
SCALE : 1 1/2" = 1'-0"



7 DETAIL - C8 TO WALL CONNECTION

SCALE: 1 1/2" = 1'-0"

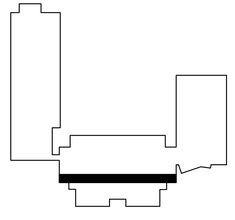
SCALE : 1 1/2" = 1'-0"



8 SECTION - WALL PIPE PENETRATION

SCALE: 1" = 1'-0"

SCALE : 1" = 1'-0"



KEY PLAN

ARDURRA
ARDURRA GROUP NORTH CAROLINA
3809 Peachtree Avenue, Suite 102
Wilmington, North Carolina 28403
Phone: (910) 397-2929
www.Ardurra.com
NC FIRM LICENSE NUMBER F-0113
PROJECT 8247.00

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025451 JOHN R. TROUTMAN 8/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

SECTIONS AND DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: LMN | PROJ MGR: JRT

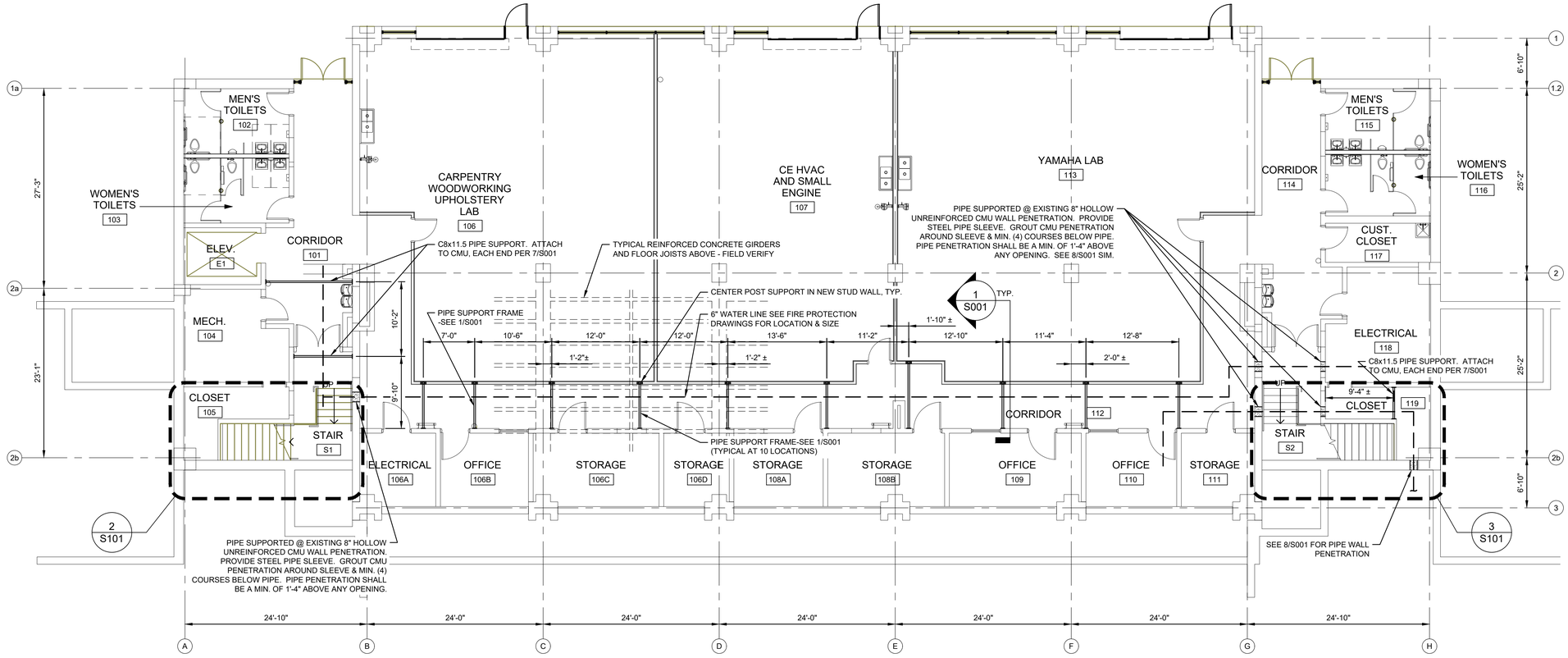
S001

COPYRIGHT © 2020

1/21/2020 4:07:42 PM P:\8247 BMG - CFCC Bldgs A, S & N Renovations\Structural\Current Working Drawings\2020-02-19 NFC_8247_S-101.dwg

ARDURRA
ARDURRA GROUP NORTH CAROLINA

3809 Peachtree Avenue, Suite 102
Wilmington, North Carolina 28403
Phone: (910) 397-2929
www.Ardurra.com
NC FIRM LICENSE NUMBER F-0113
PROJECT 8247.00



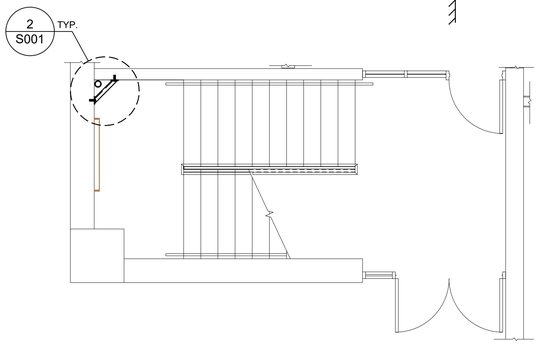
PLAN NORTH

1 FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

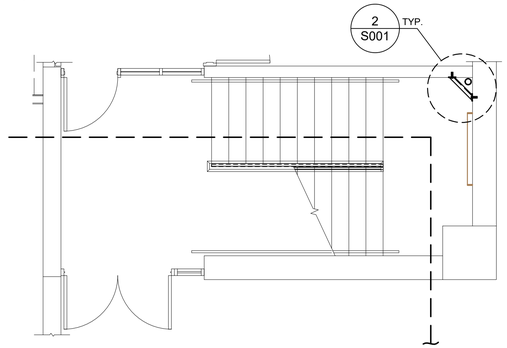


2 ENLARGED STAIR PLAN WEST FLOORS 2-4 TYPICAL

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

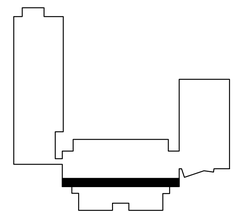


3 ENLARGED STAIR PLAN EAST FLOORS 2-4 TYPICAL

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"



KEY PLAN

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com



CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRST FLOOR PLAN ENLARGED STAIR PLANS, SECTIONS AND DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: LMN	PROJ MGR: JRT

S101

COPYRIGHT © 2020

1/21/2020 4:07:42 PM P:\8247 BMG - CFCC Bldgs A, S & N Renovations\Structural\Current Working Drawings\2020-02-19 NFC_8247_S-101.dwg

DEMOLITION LEGEND

- AREAS NOT IN CONTRACT
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- Name / 101 — ROOM NAME AND NUMBER
- 01 — DEMOLITION KEYNOTE
- EXISTING DOOR TO BE REMOVED

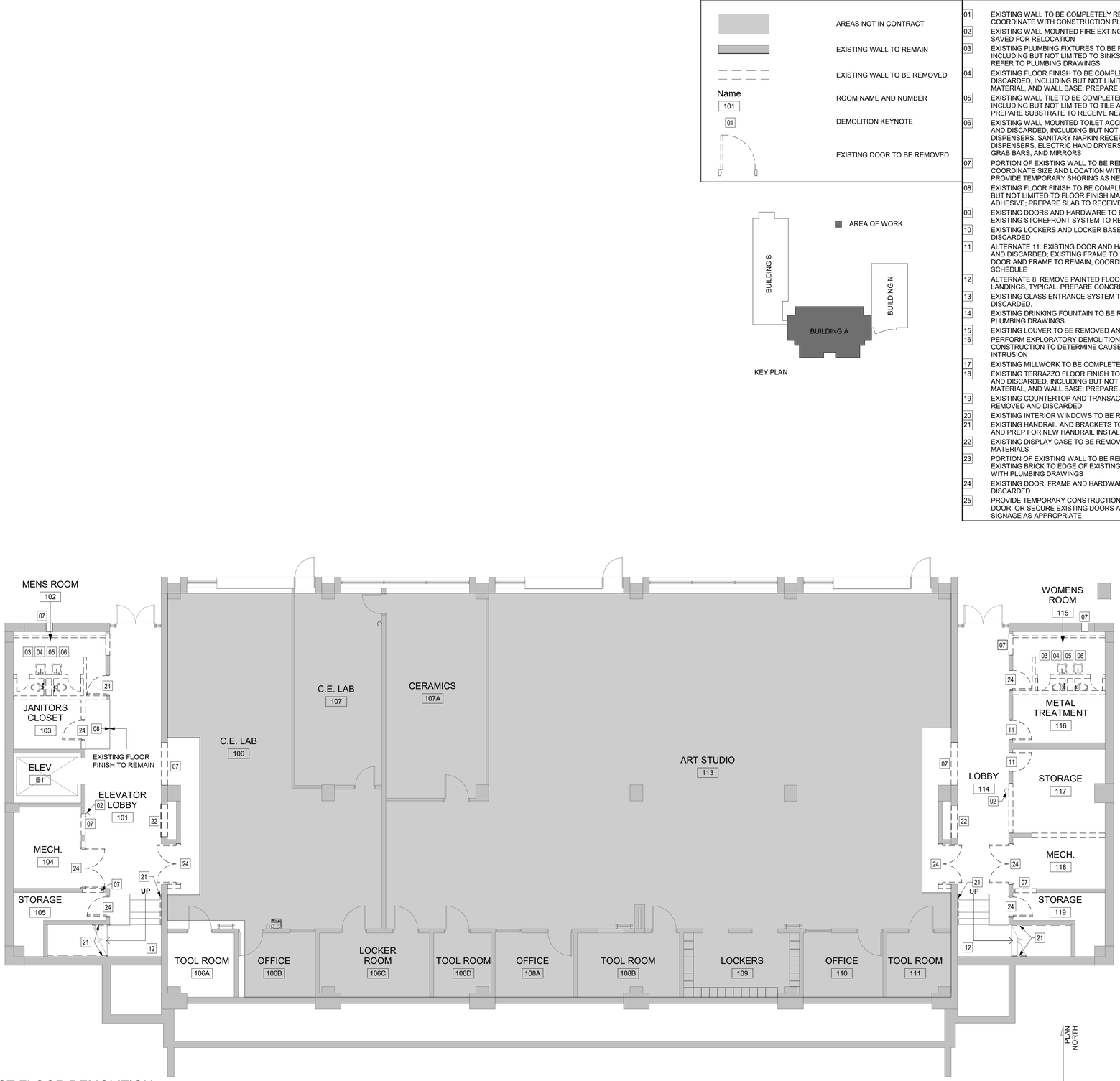
KEY PLAN

DEMOLITION KEYNOTES

01 EXISTING WALL TO BE COMPLETELY REMOVED AND DISCARDED; COORDINATE WITH CONSTRUCTION PLAN
02 EXISTING WALL MOUNTED FIRE EXTINGUISHER TO BE REMOVED AND SAVED FOR RELOCATION
03 EXISTING PLUMBING FIXTURES TO BE REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO SINKS, TOILETS, AND URINALS; REFER TO PLUMBING DRAWINGS
04 EXISTING FLOOR FINISH TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO FLOOR TILE, SETTING MATERIAL, AND WALL BASE; PREPARE SLAB TO RECEIVE NEW FINISH
05 EXISTING WALL TILE TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO TILE AND SETTING MATERIAL; PREPARE SUBSTRATE TO RECEIVE NEW FINISH
06 EXISTING WALL MOUNTED TOILET ACCESSORIES TO BE REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO TOILET PAPER DISPENSERS, SANITARY NAPKIN RECEPTACLES, PAPER TOWEL DISPENSERS, ELECTRIC HAND DRYERS, SOAP DISPENSERS, ADA GRAB BARS, AND MIRRORS
07 PORTION OF EXISTING WALL TO BE REMOVED FOR NEW OPENING; COORDINATE SIZE AND LOCATION WITH CONSTRUCTION PLAN. PROVIDE TEMPORARY SHORING AS NEEDED.
08 EXISTING FLOOR FINISH TO BE COMPLETELY REMOVED, INCLUDING BUT NOT LIMITED TO FLOOR FINISH MATERIAL, WALL BASE, AND ADHESIVE; PREPARE SLAB TO RECEIVE NEW FINISH
09 EXISTING DOORS AND HARDWARE TO BE REMOVED AND DISCARDED; EXISTING STOREFRONT SYSTEM TO REMAIN
10 EXISTING LOCKERS AND LOCKER BASE TO BE REMOVED AND DISCARDED
11 ALTERNATE 11: EXISTING DOOR AND HARDWARE TO BE REMOVED AND DISCARDED; EXISTING FRAME TO REMAIN. BASE BID: EXISTING DOOR AND FRAME TO REMAIN; COORDINATE HARDWARE WITH DOOR SCHEDULE
12 ALTERNATE 8: REMOVE PAINTED FLOOR FINISH AT STAIRS AND LANDINGS, TYPICAL. PREPARE CONCRETE TO RECEIVE NEW FINISH
13 EXISTING GLASS ENTRANCE SYSTEM TO BE REMOVED AND DISCARDED.
14 EXISTING DRINKING FOUNTAIN TO BE REMOVED, REFER TO PLUMBING DRAWINGS
15 EXISTING LOUVER TO BE REMOVED AND DISCARDED
16 PERFORM EXPLORATORY DEMOLITION AND/OR X-RAY EXISTING CONSTRUCTION TO DETERMINE CAUSES OF KNOWN WATER INTRUSION
17 EXISTING MILLWORK TO BE COMPLETELY REMOVED AND DISCARDED
18 EXISTING TERRAZZO FLOOR FINISH TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO SETTING MATERIAL, AND WALL BASE; PREPARE SLAB TO RECEIVE NEW FINISH
19 EXISTING COUNTERTOP AND TRANSACTION WINDOW TO BE REMOVED AND DISCARDED
20 EXISTING INTERIOR WINDOWS TO BE REMOVED AND DISCARDED
21 EXISTING HANDRAIL AND BRACKETS TO BE REMOVED. PATCH WALL AND PREP FOR NEW HANDRAIL INSTALLATION
22 EXISTING DISPLAY CASE TO BE REMOVED, INFILL WALL WITH LIKE MATERIALS
23 PORTION OF EXISTING WALL TO BE REMOVED FROM EDGE OF EXISTING BRICK TO EDGE OF EXISTING WALL TILE. COORDINATE WITH PLUMBING DRAWINGS
24 EXISTING DOOR, FRAME AND HARDWARE TO BE REMOVED AND DISCARDED
25 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE

GENERAL DEMOLITION NOTES

1. THE DEMOLITION SHOWN ON THIS PLAN IS DIAGRAMMATIC AND INTENDED TO SHOW THE GENERAL EXTENT OF THE WORK ONLY. CONTRACTOR SHALL INCLUDE ALL DEMOLITION, WHETHER CALLED FOR OR NOT, THAT IS NECESSARY TO ACCOMPLISH THE INTENT OF THE PLANS & SPECIFICATIONS.
2. BEFORE CONSTRUCTION COMMENCES, TESTING FOR THE PRESENCE OF HAZARDOUS MATERIALS SHALL BE PERFORMED BY AN ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. THE FINDINGS OF THIS TEST SHALL BE KEPT ON SITE DURING CONSTRUCTION AT ALL TIMES. BECKER MORGAN GROUP AND ITS CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE IDENTIFICATION, DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE. A LICENSED ABATEMENT COMPANY SHALL PERFORM WORK RELATED TO REMOVAL OF ANY HAZARDOUS MATERIALS.
3. ALL DEMOLITION WORK SHALL BE PERFORMED WITH MINIMUM DAMAGE TO EXISTING WORK TO REMAIN. EFFECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ALL 'EXISTING TO REMAIN ELEMENTS', INCLUDING BUT NOT LIMITED TO, EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS, AND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE INCURRED DURING DEMOLITION AND/OR CONSTRUCTION.
4. PROVISIONS SHALL BE MADE TO ALLEVIATE THE SPREAD OF DEBRIS AND DUST TO ADJACENT PROPERTY OWNERS. THE PROPERTY SHALL BE KEPT AS CLEAN AS POSSIBLE AT ALL TIMES. SWEEP THE PROJECT SITE BROOM CLEAN AND CHANGE FILTERS ON AIR-HANDLING EQUIPMENT UPON COMPLETION OF DEMOLITION.
5. ALL DEBRIS AND MATERIALS REMOVED FROM THE BUILDING SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER. NO RECLAIMED LUMBER OR MATERIALS SHALL BE RE-USED EXCEPT AS SPECIFICALLY APPROVED BY THE ARCHITECT OR OWNER. BURNING OF MATERIALS ON SITE IS NOT PERMITTED.
6. WHERE DEMOLITION AND CUTTING WORK HAS OCCURRED OR WHERE EXISTING SURFACES, MATERIALS OR OTHER ITEMS HAVE BEEN DAMAGED OR DISTURBED, THE SAID SURFACES AND AREAS SHALL BE CAREFULLY CLOSED UP, PATCHED AND FINISHED, AND OR RESTORED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR.
7. DO NOT CUT AND PATCH WORK EXPOSED ON THE BUILDING'S EXTERIOR OR ITS OCCUPIED SPACES IN A MANNER WHICH WOULD, IN THE ARCHITECT'S OPINION, RESULT IN LESSENING THE BUILDING'S AESTHETIC QUALITIES. DO NOT CUT AND PATCH WORK IN A MANNER THAT WOULD RESULT IN SUBSTANTIAL VISUAL EVIDENCE OF CUT AND PATCH WORK. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.
8. WHERE EXISTING FINISHES ARE SLATED FOR REMOVAL, PREPARE ALL SURFACES TO RECEIVE NEW FINISHES. ALL 'EXISTING TO REMAIN' PARTITIONS WITHIN THE PROJECT SCOPE SHALL BE REPAIRED TO 'LIKE NEW' CONDITION, OR AS NECESSARY TO PREPARE SURFACE TO RECEIVE NEW FINISH.
9. DO NOT REMOVE ANY STRUCTURAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, COLUMNS, BEAMS, JOISTS, LOAD-BEARING WALLS OR SUPPORTS. CAREFULLY REMOVE INTERIOR PARTITIONS ONLY. PROVIDE AND MAINTAIN INTERIOR SHORING, BRACING OR STRUCTURAL SUPPORT TO PRESERVE STABILITY AND PREVENT MOVEMENT, SETTLEMENT OR COLLAPSE OF ITEMS TO BE SELECTIVELY DEMOLISHED AND ITEMS WHICH ARE IMMEDIATELY ADJACENT TO THOSE BEING REMOVED.
10. WHERE EXISTING ELECTRICAL WORK NEEDS TO BE ABANDONED, REMOVE WIRE FROM OUTLET BACK TO ELECTRICAL PANEL OR SOURCE AND MAKE SAFE. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN; REFER TO ELECTRICAL DRAWINGS IF APPLICABLE.
11. WHERE EXISTING PLUMBING WORK NEEDS TO BE ABANDONED, REMOVE ALL VENT STACK PIPING AND REPAIR ROOF PENETRATIONS. REMOVE ALL OVERHEAD WATER LINES AND CAP AT SOURCE. PRIOR TO DEMOLITION, CAREFULLY VERIFY IF LINES CAN BE REUSED AS PART OF THE NEW BUILD-OUT. ALL UNDERFLOOR SANITARY AND WATER LINES SHALL BE CAPPED BELOW FLOOR. VERIFY ALL WATER LINES HAVE BEEN TURNED OFF PRIOR TO WORK. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBER; REFER TO PLUMBING DRAWINGS IF APPLICABLE.
12. WHERE EXISTING VENTILATION OR AIR CONDITIONING NEEDS TO BE ABANDONED, REMOVE ALL EXHAUST AND OUTSIDE AIR DUCTS AS REQUIRED. ROOF-TOP EQUIPMENT SHALL BE REMOVED AND ROOF OPENINGS DRIED IN TO PREVENT WATER PENETRATION INTO THE SPACE. ALL WORK SHALL BE PERFORMED BY A LICENSED MECHANICAL CONTRACTOR; REFER TO MECHANICAL DRAWINGS IF APPLICABLE.
13. WHERE EXISTING GAS LINES OR SERVICE NEEDS TO BE ABANDONED, CAREFULLY REMOVE ALL PIPING, SHUT-OFF VALVES AND FITTINGS AS REQUIRED. GAS METER AND REGULATOR SHALL BE REMOVED BY UTILITY AUTHORITY. ALL WORK SHALL BE PERFORMED BY A LICENSED SUB-CONTRACTOR.
14. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS. EXIT LIGHTING, FIRE PROTECTION DEVICES, AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.
15. LIMIT USE OF THE PREMISES TO CONSTRUCTION ACTIVITIES IN AREAS INDICATED IN SCOPE OF PROJECT. ALLOW OWNER OCCUPANCY AND USE BY BUILDING'S MAINTENANCE AND SERVICE PERSONNEL AT ALL TIMES.
16. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, PLUMBING OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OF DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE THE NATURE AND EXTENT OF THE CONFLICT. PROMPTLY SUBMIT A WRITTEN REPORT TO THE ARCHITECT BEFORE PROCEEDING WITH DEMOLITION ACTIVITIES.
17. PROVIDE THE OWNER WITH ADVANCE NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDINGS/ FACILITIES.. DO NOT START DEMOLITION UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING. REFER TO THE PROJECT MANUAL AND COORDINATE WITH THE OWNER TO DETERMINE THEIR SPECIFIC ADVANCE NOTIFICATION REQUIREMENTS.
18. PROVIDE RECORD DRAWINGS CONSISTING OF REDLINED PLANS AT PROJECT CLOSE-OUT WHICH IDENTIFY AND ACCURATELY LOCATE CAPPED UTILITIES AND OTHER STRUCTURAL, ELECTRICAL, PLUMBING OR MECHANICAL CONDITIONS.
19. ALL FLOOR FINISHES ARE EXISTING TO REMAIN; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
20. ALL CEILINGS ARE EXISTING TO REMAIN, EXCEPT IN AREAS SPECIFICALLY NOTED ON THE DRAWINGS; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
21. ALL EXISTING DOORS, HARDWARE, AND FRAMES ARE EXISTING TO REMAIN; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
22. GC TO REMOVE ALL WALL-MOUNTED ACCESSORIES PRIOR TO PAINTING, INCLUDING BUT NOT LIMITED TO CHALKBOARDS, WHITEBOARDS, TACKBOARDS, PROJECTION SCREENS, ETC. CHALKBOARDS TO BE DISCARDED, ALL OTHER ACCESSORIES TO BE SALVAGED FOR RE-INSTALLATION. PATCH HOLES AND PREPARE WALL SURFACES TO RECEIVE NEW FINISH. COORDINATE RE-INSTALLATION OF SALVAGED ACCESSORIES WITH CONSTRUCTION PLAN.
23. GC TO REMOVE AND DISCARD ALL EXISTING ROOM SIGNAGE.



1 FIRST FLOOR DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16635 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRST FLOOR DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC PROJ MGR: DCW

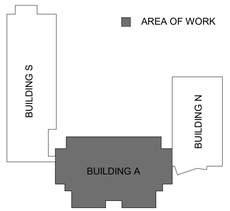
AD101

COPYRIGHT © 2020

8/14/2020 9:44:55 AM C:\Users\abrown\Documents\2018023.00 CFCC ASN BASE BID_abrown9DEJ4.rvt

DEMOLITION LEGEND

- AREAS NOT IN CONTRACT
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- Name / 101 — ROOM NAME AND NUMBER
- 01 — DEMOLITION KEYNOTE
- EXISTING DOOR TO BE REMOVED



KEY PLAN

DEMOLITION KEYNOTES

01 EXISTING WALL TO BE COMPLETELY REMOVED AND DISCARDED; COORDINATE WITH CONSTRUCTION PLAN

02 EXISTING WALL MOUNTED FIRE EXTINGUISHER TO BE REMOVED AND SAVED FOR RELOCATION

03 EXISTING PLUMBING FIXTURES TO BE REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO SINKS, TOILETS, AND URINALS; REFER TO PLUMBING DRAWINGS

04 EXISTING FLOOR FINISH TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO FLOOR TILE, SETTING MATERIAL, AND WALL BASE; PREPARE SLAB TO RECEIVE NEW FINISH

05 EXISTING WALL TILE TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO TILE AND SETTING MATERIAL; PREPARE SUBSTRATE TO RECEIVE NEW FINISH

06 EXISTING WALL MOUNTED TOILET ACCESSORIES TO BE REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO TOILET PAPER DISPENSERS, SANITARY NAPKIN RECEPTACLES, PAPER TOWEL DISPENSERS, ELECTRIC HAND DRYERS, SOAP DISPENSERS, ADA GRAB BARS, AND MIRRORS

07 PORTION OF EXISTING WALL TO BE REMOVED FOR NEW OPENING; COORDINATE SIZE AND LOCATION WITH CONSTRUCTION PLAN. PROVIDE TEMPORARY SHORING AS NEEDED.

08 EXISTING FLOOR FINISH TO BE COMPLETELY REMOVED, INCLUDING BUT NOT LIMITED TO FLOOR FINISH MATERIAL, WALL BASE, AND ADHESIVE; PREPARE SLAB TO RECEIVE NEW FINISH

09 EXISTING DOORS AND HARDWARE TO BE REMOVED AND DISCARDED; EXISTING STOREFRONT SYSTEM TO REMAIN

10 EXISTING LOCKERS AND LOCKER BASE TO BE REMOVED AND DISCARDED

11 ALTERNATE 11: EXISTING DOOR AND HARDWARE TO BE REMOVED AND DISCARDED; EXISTING FRAME TO REMAIN. BASE BID: EXISTING DOOR AND FRAME TO REMAIN; COORDINATE HARDWARE WITH DOOR SCHEDULE

12 ALTERNATE 8: REMOVE PAINTED FLOOR FINISH AT STAIRS AND LANDINGS, TYPICAL. PREPARE CONCRETE TO RECEIVE NEW FINISH

13 EXISTING GLASS ENTRANCE SYSTEM TO BE REMOVED AND DISCARDED.

14 EXISTING DRINKING FOUNTAIN TO BE REMOVED, REFER TO PLUMBING DRAWINGS

15 EXISTING LOUVER TO BE REMOVED AND DISCARDED

16 PERFORM EXPLORATORY DEMOLITION AND/OR X-RAY EXISTING CONSTRUCTION TO DETERMINE CAUSES OF KNOWN WATER INTRUSION

17 EXISTING MILLWORK TO BE COMPLETELY REMOVED AND DISCARDED

18 EXISTING TERRAZZO FLOOR FINISH TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO SETTING MATERIAL, AND WALL BASE; PREPARE SLAB TO RECEIVE NEW FINISH

19 EXISTING COUNTERTOP AND TRANSACTION WINDOW TO BE REMOVED AND DISCARDED

20 EXISTING INTERIOR WINDOWS TO BE REMOVED AND DISCARDED

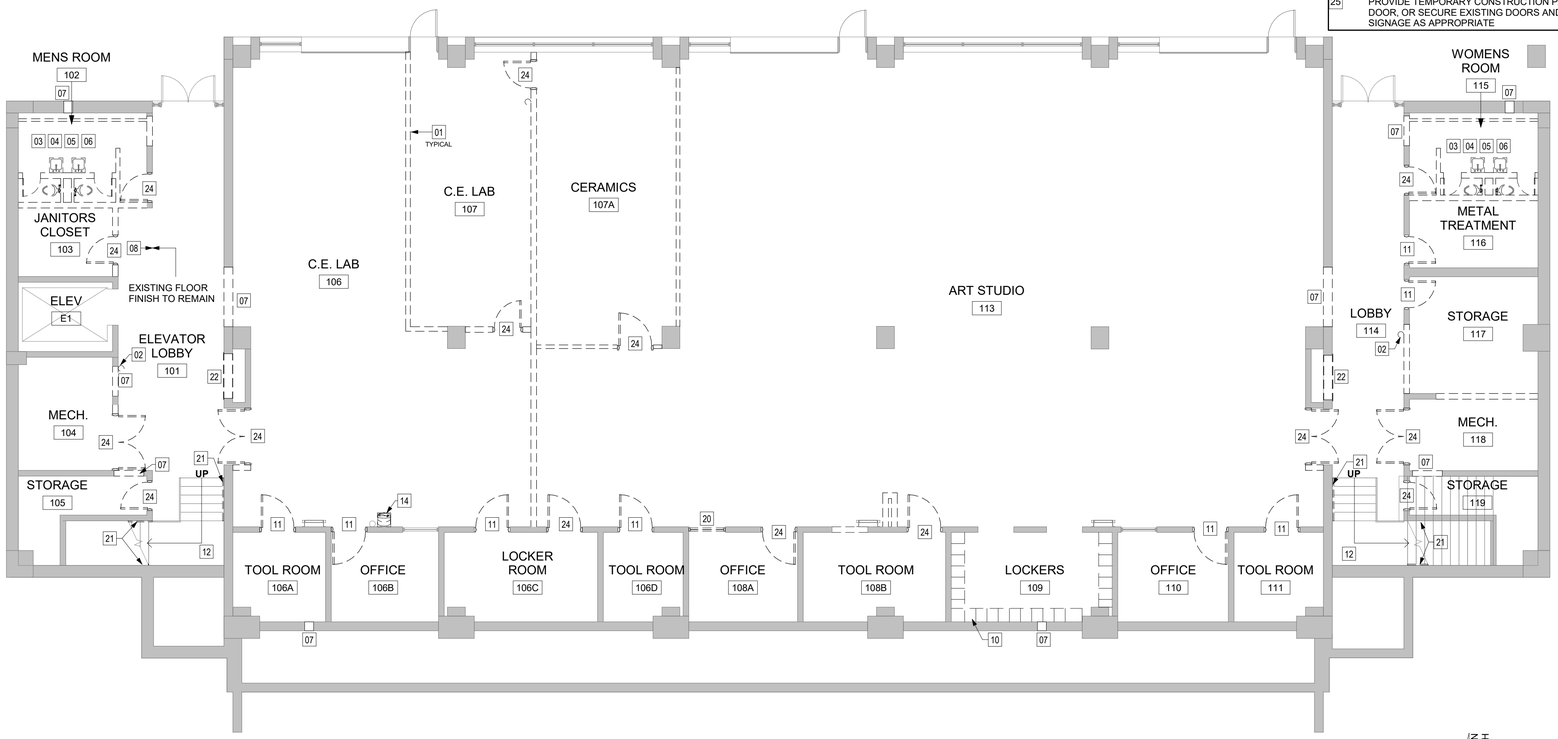
21 EXISTING HANDRAIL AND BRACKETS TO BE REMOVED. PATCH WALL AND PREP FOR NEW HANDRAIL INSTALLATION

22 EXISTING DISPLAY CASE TO BE REMOVED, INFILL WALL WITH LIKE MATERIALS

23 PORTION OF EXISTING WALL TO BE REMOVED FROM EDGE OF EXISTING BRICK TO EDGE OF EXISTING WALL TILE. COORDINATE WITH PLUMBING DRAWINGS

24 EXISTING DOOR, FRAME AND HARDWARE TO BE REMOVED AND DISCARDED

25 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE



1 ALTERNATE 1 FIRST FLOOR DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

GENERAL DEMOLITION NOTES

1. THE DEMOLITION SHOWN ON THIS PLAN IS DIAGRAMMATIC AND INTENDED TO SHOW THE GENERAL EXTENT OF THE WORK ONLY. CONTRACTOR SHALL INCLUDE ALL DEMOLITION, WHETHER CALLED FOR OR NOT, THAT IS NECESSARY TO ACCOMPLISH THE INTENT OF THE PLANS & SPECIFICATIONS.

2. BEFORE CONSTRUCTION COMMENCES, TESTING FOR THE PRESENCE OF HAZARDOUS MATERIALS SHALL BE PERFORMED BY AN ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. THE FINDINGS OF THIS TEST SHALL BE KEPT ON SITE DURING CONSTRUCTION AT ALL TIMES. BECKER MORGAN GROUP AND ITS CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE IDENTIFICATION, DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE. A LICENSED ABATEMENT COMPANY SHALL PERFORM WORK RELATED TO REMOVAL OF ANY HAZARDOUS MATERIALS.

3. ALL DEMOLITION WORK SHALL BE PERFORMED WITH MINIMUM DAMAGE TO EXISTING WORK TO REMAIN. EFFECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ALL 'EXISTING TO REMAIN ELEMENTS', INCLUDING BUT NOT LIMITED TO, EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS, AND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE INCURRED DURING DEMOLITION AND/OR CONSTRUCTION.

4. PROVISIONS SHALL BE MADE TO ALLEVIATE THE SPREAD OF DEBRIS AND DUST TO ADJACENT PROPERTY OWNERS. THE PROPERTY SHALL BE KEPT AS CLEAN AS POSSIBLE AT ALL TIMES. SWEEP THE PROJECT SITE BROOM CLEAN AND CHANGE FILTERS ON AIR-HANDLING EQUIPMENT UPON COMPLETION OF DEMOLITION.

5. ALL DEBRIS AND MATERIALS REMOVED FROM THE BUILDING SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER. NO RECLAIMED LUMBER OR MATERIALS SHALL BE RE-USED EXCEPT AS SPECIFICALLY APPROVED BY THE ARCHITECT OR OWNER. BURNING OF MATERIALS ON SITE IS NOT PERMITTED.

6. WHERE DEMOLITION AND CUTTING WORK HAS OCCURRED OR WHERE EXISTING SURFACES, MATERIALS OR OTHER ITEMS HAVE BEEN DAMAGED OR DISTURBED, THE SAID SURFACES AND AREAS SHALL BE CAREFULLY CLOSED UP, PATCHED AND FINISHED, AND OR RESTORED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR.

7. DO NOT CUT AND PATCH WORK EXPOSED ON THE BUILDING'S EXTERIOR OR ITS OCCUPIED SPACES IN A MANNER WHICH WOULD, IN THE ARCHITECT'S OPINION, RESULT IN LESSENING THE BUILDING'S AESTHETIC QUALITIES. DO NOT CUT AND PATCH WORK IN A MANNER THAT WOULD RESULT IN SUBSTANTIAL VISUAL EVIDENCE OF CUT AND PATCH WORK. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.

8. WHERE EXISTING FINISHES ARE SLATED FOR REMOVAL, PREPARE ALL SURFACES TO RECEIVE NEW FINISHES. ALL 'EXISTING TO REMAIN' PARTITIONS WITHIN THE PROJECT SCOPE SHALL BE REPAIRED TO 'LIKE NEW' CONDITION, OR AS NECESSARY TO PREPARE SURFACE TO RECEIVE NEW FINISH.

9. DO NOT REMOVE ANY STRUCTURAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, COLUMNS, BEAMS, JOISTS, LOAD-BEARING WALLS OR SUPPORTS. CAREFULLY REMOVE INTERIOR PARTITIONS ONLY. PROVIDE AND MAINTAIN INTERIOR SHORING, BRACING OR STRUCTURAL SUPPORT TO PRESERVE STABILITY AND PREVENT MOVEMENT, SETTLEMENT OR COLLAPSE OF ITEMS TO BE SELECTIVELY DEMOLISHED AND ITEMS WHICH ARE IMMEDIATELY ADJACENT TO THOSE BEING REMOVED.

10. WHERE EXISTING ELECTRICAL WORK NEEDS TO BE ABANDONED, REMOVE WIRE FROM OUTLET BACK TO ELECTRICAL PANEL OR SOURCE AND MAKE SAFE. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN; REFER TO ELECTRICAL DRAWINGS IF APPLICABLE.

11. WHERE EXISTING PLUMBING WORK NEEDS TO BE ABANDONED, REMOVE ALL VENT STACK PIPING AND REPAIR ROOF PENETRATIONS. REMOVE ALL OVERHEAD WATER LINES AND CAP AT SOURCE. PRIOR TO DEMOLITION, CAREFULLY VERIFY IF LINES CAN BE REUSED AS PART OF THE NEW BUILD-OUT. ALL UNDERFLOOR SANITARY AND WATER LINES SHALL BE CAPPED BELOW FLOOR. VERIFY ALL WATER LINES HAVE BEEN TURNED OFF PRIOR TO WORK. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBER; REFER TO PLUMBING DRAWINGS IF APPLICABLE.

12. WHERE EXISTING VENTILATION OR AIR CONDITIONING NEEDS TO BE ABANDONED, REMOVE ALL EXHAUST AND OUTSIDE AIR DUCTS AS REQUIRED. ROOF-TOP EQUIPMENT SHALL BE REMOVED AND ROOF OPENINGS DRIED IN TO PREVENT WATER PENETRATION INTO THE SPACE. ALL WORK SHALL BE PERFORMED BY A LICENSED MECHANICAL CONTRACTOR; REFER TO MECHANICAL DRAWINGS IF APPLICABLE.

13. WHERE EXISTING GAS LINES OR SERVICE NEEDS TO BE ABANDONED, CAREFULLY REMOVE ALL PIPING, SHUT-OFF VALVES AND FITTINGS AS REQUIRED. GAS METER AND REGULATOR SHALL BE REMOVED BY UTILITY AUTHORITY. ALL WORK SHALL BE PERFORMED BY A LICENSED SUB-CONTRACTOR.

14. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS. EXIT LIGHTING, FIRE PROTECTION DEVICES, AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.

15. LIMIT USE OF THE PREMISES TO CONSTRUCTION ACTIVITIES IN AREAS INDICATED IN SCOPE OF PROJECT. ALLOW OWNER OCCUPANCY AND USE BY BUILDING'S MAINTENANCE AND SERVICE PERSONNEL AT ALL TIMES.

16. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, PLUMBING OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OF DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE THE NATURE AND EXTENT OF THE CONFLICT. PROMPTLY SUBMIT A WRITTEN REPORT TO THE ARCHITECT BEFORE PROCEEDING WITH DEMOLITION ACTIVITIES.

17. PROVIDE THE OWNER WITH ADVANCE NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDINGS/ FACILITIES. DO NOT START DEMOLITION UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING. REFER TO THE PROJECT MANUAL AND COORDINATE WITH THE OWNER TO DETERMINE THEIR SPECIFIC ADVANCE NOTIFICATION REQUIREMENTS.

18. PROVIDE RECORD DRAWINGS CONSISTING OF REDLINED PLANS AT PROJECT CLOSE-OUT WHICH IDENTIFY AND ACCURATELY LOCATE CAPPED UTILITIES AND OTHER STRUCTURAL, ELECTRICAL, PLUMBING OR MECHANICAL CONDITIONS.

19. ALL FLOOR FINISHES ARE EXISTING TO REMAIN; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.

20. ALL CEILINGS ARE EXISTING TO REMAIN, EXCEPT IN AREAS SPECIFICALLY NOTED ON THE DRAWINGS; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.

21. ALL EXISTING DOORS, HARDWARE, AND FRAMES ARE EXISTING TO REMAIN; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.

22. GC TO REMOVE ALL WALL-MOUNTED ACCESSORIES PRIOR TO PAINTING, INCLUDING BUT NOT LIMITED TO CHALKBOARDS, WHITEBOARDS, TACKBOARDS, PROJECTION SCREENS, ETC. CHALKBOARDS TO BE DISCARDED, ALL OTHER ACCESSORIES TO BE SALVAGED FOR RE-INSTALLATION. PATCH HOLES AND PREPARE WALL SURFACES TO RECEIVE NEW FINISH. COORDINATE RE-INSTALLATION OF SALVAGED ACCESSORIES WITH CONSTRUCTION PLAN.

23. GC TO REMOVE AND DISCARD ALL EXISTING ROOM SIGNAGE.

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16635 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1 FIRST FLOOR DEMOLITION PLAN

ISSUE BLOCK

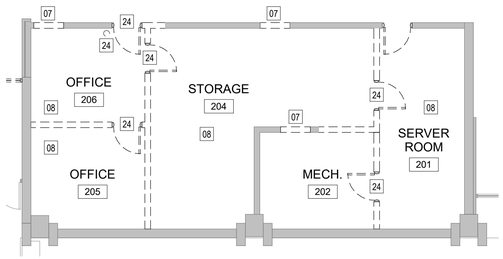
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

AD101A

COPYRIGHT © 2020

8/14/2020 9:44:56 AM C:\Users\abrown\Documents\2018023R0 CFCC ASN BASE BID_abrownBDE4.rvt

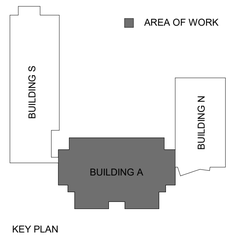


2 ALTERNATE 2 PARTIAL 2ND FLOOR DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

DEMOLITION LEGEND

- AREAS NOT IN CONTRACT
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- Name / 101 — ROOM NAME AND NUMBER
- 01 — DEMOLITION KEYNOTE
- EXISTING DOOR TO BE REMOVED



KEY PLAN

DEMOLITION KEYNOTES

01 EXISTING WALL TO BE COMPLETELY REMOVED AND DISCARDED; COORDINATE WITH CONSTRUCTION PLAN

02 EXISTING WALL MOUNTED FIRE EXTINGUISHER TO BE REMOVED AND SAVED FOR RELOCATION

03 EXISTING PLUMBING FIXTURES TO BE REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO SINKS, TOILETS, AND URINALS; REFER TO PLUMBING DRAWINGS

04 EXISTING FLOOR FINISH TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO FLOOR TILE, SETTING MATERIAL, AND WALL BASE; PREPARE SLAB TO RECEIVE NEW FINISH

05 EXISTING WALL TILE TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO TILE AND SETTING MATERIAL; PREPARE SUBSTRATE TO RECEIVE NEW FINISH

06 EXISTING WALL MOUNTED TOILET ACCESSORIES TO BE REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO TOILET PAPER DISPENSERS, SANITARY NAPKIN RECEPTACLES, PAPER TOWEL DISPENSERS, ELECTRIC HAND DRYERS, SOAP DISPENSERS, ADA GRAB BARS, AND MIRRORS

07 PORTION OF EXISTING WALL TO BE REMOVED FOR NEW OPENING; COORDINATE SIZE AND LOCATION WITH CONSTRUCTION PLAN. PROVIDE TEMPORARY SHORING AS NEEDED.

08 EXISTING FLOOR FINISH TO BE COMPLETELY REMOVED, INCLUDING BUT NOT LIMITED TO FLOOR FINISH MATERIAL, WALL BASE, AND ADHESIVE; PREPARE SLAB TO RECEIVE NEW FINISH

09 EXISTING DOORS AND HARDWARE TO BE REMOVED AND DISCARDED; EXISTING STOREFRONT SYSTEM TO REMAIN

10 EXISTING LOCKERS AND LOCKER BASE TO BE REMOVED AND DISCARDED

11 ALTERNATE 11: EXISTING DOOR AND HARDWARE TO BE REMOVED AND DISCARDED; EXISTING FRAME TO REMAIN. BASE BID: EXISTING DOOR AND FRAME TO REMAIN; COORDINATE HARDWARE WITH DOOR SCHEDULE

12 ALTERNATE 8: REMOVE PAINTED FLOOR FINISH AT STAIRS AND LANDINGS, TYPICAL. PREPARE CONCRETE TO RECEIVE NEW FINISH

13 EXISTING GLASS ENTRANCE SYSTEM TO BE REMOVED AND DISCARDED.

14 EXISTING DRINKING FOUNTAIN TO BE REMOVED, REFER TO PLUMBING DRAWINGS

15 EXISTING LOUVER TO BE REMOVED AND DISCARDED

16 PERFORM EXPLORATORY DEMOLITION AND/OR X-RAY EXISTING CONSTRUCTION TO DETERMINE CAUSES OF KNOWN WATER INTRUSION

17 EXISTING MILLWORK TO BE COMPLETELY REMOVED AND DISCARDED

18 EXISTING TERRAZZO FLOOR FINISH TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO SETTING MATERIAL, AND WALL BASE; PREPARE SLAB TO RECEIVE NEW FINISH

19 EXISTING COUNTERTOP AND TRANSACTION WINDOW TO BE REMOVED AND DISCARDED

20 EXISTING INTERIOR WINDOWS TO BE REMOVED AND DISCARDED

21 EXISTING HANDRAIL AND BRACKETS TO BE REMOVED. PATCH WALL AND PREP FOR NEW HANDRAIL INSTALLATION

22 EXISTING DISPLAY CASE TO BE REMOVED, INFILL WALL WITH LIKE MATERIALS

23 PORTION OF EXISTING WALL TO BE REMOVED FROM EDGE OF EXISTING BRICK TO EDGE OF EXISTING WALL TILE. COORDINATE WITH PLUMBING DRAWINGS

24 EXISTING DOOR, FRAME AND HARDWARE TO BE REMOVED AND DISCARDED

25 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE

GENERAL DEMOLITION NOTES

1. THE DEMOLITION SHOWN ON THIS PLAN IS DIAGRAMMATIC AND INTENDED TO SHOW THE GENERAL EXTENT OF THE WORK ONLY. CONTRACTOR SHALL INCLUDE ALL DEMOLITION, WHETHER CALLED FOR OR NOT, THAT IS NECESSARY TO ACCOMPLISH THE INTENT OF THE PLANS & SPECIFICATIONS.

2. BEFORE CONSTRUCTION COMMENCES, TESTING FOR THE PRESENCE OF HAZARDOUS MATERIALS SHALL BE PERFORMED BY AN ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. THE FINDINGS OF THIS TEST SHALL BE KEPT ON SITE DURING CONSTRUCTION AT ALL TIMES. BECKER MORGAN GROUP AND ITS CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE IDENTIFICATION, DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE. A LICENSED ABATEMENT COMPANY SHALL PERFORM WORK RELATED TO REMOVAL OF ANY HAZARDOUS MATERIALS.

3. ALL DEMOLITION WORK SHALL BE PERFORMED WITH MINIMUM DAMAGE TO EXISTING WORK TO REMAIN. EFFECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ALL 'EXISTING TO REMAIN ELEMENTS', INCLUDING BUT NOT LIMITED TO, EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS, AND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE INCURRED DURING DEMOLITION AND/OR CONSTRUCTION.

4. PROVISIONS SHALL BE MADE TO ALLEVIATE THE SPREAD OF DEBRIS AND DUST TO ADJACENT PROPERTY OWNERS. THE PROPERTY SHALL BE KEPT AS CLEAN AS POSSIBLE AT ALL TIMES. SWEEP THE PROJECT SITE BROOM CLEAN AND CHANGE FILTERS ON AIR-HANDLING EQUIPMENT UPON COMPLETION OF DEMOLITION.

5. ALL DEBRIS AND MATERIALS REMOVED FROM THE BUILDING SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER. NO RECLAIMED LUMBER OR MATERIALS SHALL BE RE-USED EXCEPT AS SPECIFICALLY APPROVED BY THE ARCHITECT OR OWNER. BURNING OF MATERIALS ON SITE IS NOT PERMITTED.

6. WHERE DEMOLITION AND CUTTING WORK HAS OCCURRED OR WHERE EXISTING SURFACES, MATERIALS OR OTHER ITEMS HAVE BEEN DAMAGED OR DISTURBED, THE SAID SURFACES AND AREAS SHALL BE CAREFULLY CLOSED UP, PATCHED AND FINISHED, AND OR RESTORED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR.

7. DO NOT CUT AND PATCH WORK EXPOSED ON THE BUILDING'S EXTERIOR OR ITS OCCUPIED SPACES IN A MANNER WHICH WOULD, IN THE ARCHITECT'S OPINION, RESULT IN LESSENING THE BUILDING'S AESTHETIC QUALITIES. DO NOT CUT AND PATCH WORK IN A MANNER THAT WOULD RESULT IN SUBSTANTIAL VISUAL EVIDENCE OF CUT AND PATCH WORK. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.

8. WHERE EXISTING FINISHES ARE SLATED FOR REMOVAL, PREPARE ALL SURFACES TO RECEIVE NEW FINISHES. ALL 'EXISTING TO REMAIN' PARTITIONS WITHIN THE PROJECT SCOPE SHALL BE REPAIRED TO 'LIKE NEW' CONDITION, OR AS NECESSARY TO PREPARE SURFACE TO RECEIVE NEW FINISH.

9. DO NOT REMOVE ANY STRUCTURAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, COLUMNS, BEAMS, JOISTS, LOAD-BEARING WALLS OR SUPPORTS. CAREFULLY REMOVE INTERIOR PARTITIONS ONLY. PROVIDE AND MAINTAIN INTERIOR SHORING, BRACING OR STRUCTURAL SUPPORT TO PRESERVE STABILITY AND PREVENT MOVEMENT, SETTLEMENT OR COLLAPSE OF ITEMS TO BE SELECTIVELY DEMOLISHED AND ITEMS WHICH ARE IMMEDIATELY ADJACENT TO THOSE BEING REMOVED.

10. WHERE EXISTING ELECTRICAL WORK NEEDS TO BE ABANDONED, REMOVE WIRE FROM OUTLET BACK TO ELECTRICAL PANEL OR SOURCE AND MAKE SAFE. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN; REFER TO ELECTRICAL DRAWINGS IF APPLICABLE.

11. WHERE EXISTING PLUMBING WORK NEEDS TO BE ABANDONED, REMOVE ALL VENT STACK PIPING AND REPAIR ROOF PENETRATIONS. REMOVE ALL OVERHEAD WATER LINES AND CAP AT SOURCE. PRIOR TO DEMOLITION, CAREFULLY VERIFY IF LINES CAN BE REUSED AS PART OF THE NEW BUILD-OUT. ALL UNDERFLOOR SANITARY AND WATER LINES SHALL BE CAPPED BELOW FLOOR. VERIFY ALL WATER LINES HAVE BEEN TURNED OFF PRIOR TO WORK. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBER; REFER TO PLUMBING DRAWINGS IF APPLICABLE.

12. WHERE EXISTING VENTILATION OR AIR CONDITIONING NEEDS TO BE ABANDONED, REMOVE ALL EXHAUST AND OUTSIDE AIR DUCTS AS REQUIRED. ROOF-TOP EQUIPMENT SHALL BE REMOVED AND ROOF OPENINGS DRIED IN TO PREVENT WATER PENETRATION INTO THE SPACE. ALL WORK SHALL BE PERFORMED BY A LICENSED MECHANICAL CONTRACTOR; REFER TO MECHANICAL DRAWINGS IF APPLICABLE.

13. WHERE EXISTING GAS LINES OR SERVICE NEEDS TO BE ABANDONED, CAREFULLY REMOVE ALL PIPING, SHUT-OFF VALVES AND FITTINGS AS REQUIRED. GAS METER AND REGULATOR SHALL BE REMOVED BY UTILITY AUTHORITY. ALL WORK SHALL BE PERFORMED BY A LICENSED SUB-CONTRACTOR.

14. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS. EXIT LIGHTING, FIRE PROTECTION DEVICES, AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.

15. LIMIT USE OF THE PREMISES TO CONSTRUCTION ACTIVITIES IN AREAS INDICATED IN SCOPE OF PROJECT. ALLOW OWNER OCCUPANCY AND USE BY BUILDING'S MAINTENANCE AND SERVICE PERSONNEL AT ALL TIMES.

16. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, PLUMBING OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OF DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE THE NATURE AND EXTENT OF THE CONFLICT. PROMPTLY SUBMIT A WRITTEN REPORT TO THE ARCHITECT BEFORE PROCEEDING WITH DEMOLITION ACTIVITIES.

17. PROVIDE THE OWNER WITH ADVANCE NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDINGS/ FACILITIES.. DO NOT START DEMOLITION UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING. REFER TO THE PROJECT MANUAL AND COORDINATE WITH THE OWNER TO DETERMINE THEIR SPECIFIC ADVANCE NOTIFICATION REQUIREMENTS.

18. PROVIDE RECORD DRAWINGS CONSISTING OF REDLINED PLANS AT PROJECT CLOSE-OUT WHICH IDENTIFY AND ACCURATELY LOCATE CAPPED UTILITIES AND OTHER STRUCTURAL, ELECTRICAL, PLUMBING OR MECHANICAL CONDITIONS.

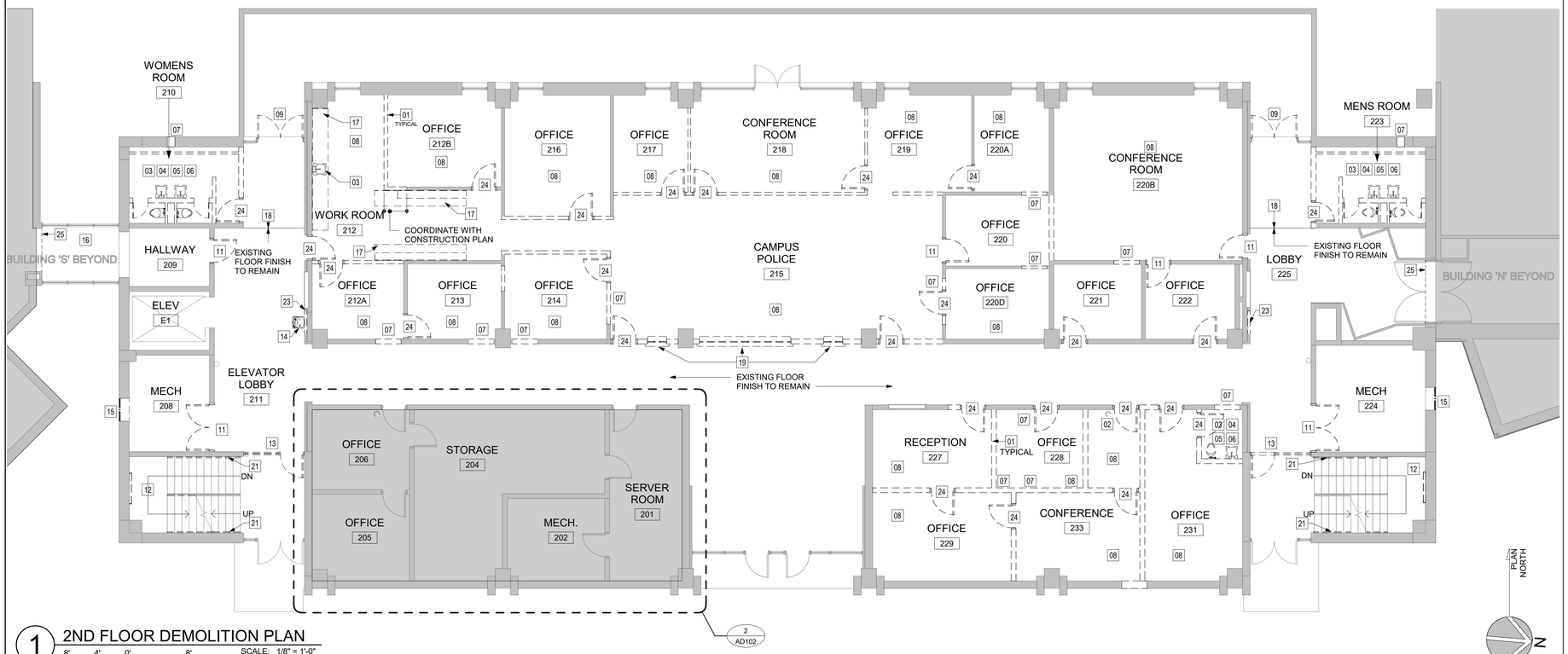
19. ALL FLOOR FINISHES ARE EXISTING TO REMAIN; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.

20. ALL CEILINGS ARE EXISTING TO REMAIN, EXCEPT IN AREAS SPECIFICALLY NOTED ON THE DRAWINGS; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.

21. ALL EXISTING DOORS, HARDWARE, AND FRAMES ARE EXISTING TO REMAIN; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.

22. GC TO REMOVE ALL WALL-MOUNTED ACCESSORIES PRIOR TO PAINTING, INCLUDING BUT NOT LIMITED TO CHALKBOARDS, WHITEBOARDS, TACKBOARDS, PROJECTION SCREENS, ETC. CHALKBOARDS TO BE DISCARDED, ALL OTHER ACCESSORIES TO BE SALVAGED FOR RE-INSTALLATION. PATCH HOLES AND PREPARE WALL SURFACES TO RECEIVE NEW FINISH. COORDINATE RE-INSTALLATION OF SALVAGED ACCESSORIES WITH CONSTRUCTION PLAN.

23. GC TO REMOVE AND DISCARD ALL EXISTING ROOM SIGNAGE.

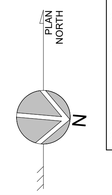


1 2ND FLOOR DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"



BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS — Registered Architect — 16635 — North Carolina — WILMINGTON, NC — 8/14/20

BECKER MORGAN GROUP, INC. — Professional Architectural Corporation — 51922 — North Carolina — WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

SECOND FLOOR DEMOLITION PLAN AND PARTIAL ALTERNATE DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

AD102

COPYRIGHT © 2020

8/14/2020 9:44:59 AM C:\Users\altbrown\Documents\2018023300 CFCC ASN BASE BID_altbrown9DEJ4.rvt

DEMOLITION LEGEND

AREAS NOT IN CONTRACT

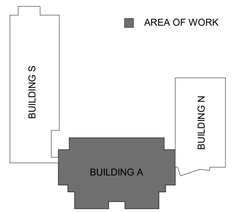
EXISTING WALL TO REMAIN

EXISTING WALL TO BE REMOVED

Name
101
ROOM NAME AND NUMBER

01
DEMOLITION KEYNOTE

EXISTING DOOR TO BE REMOVED



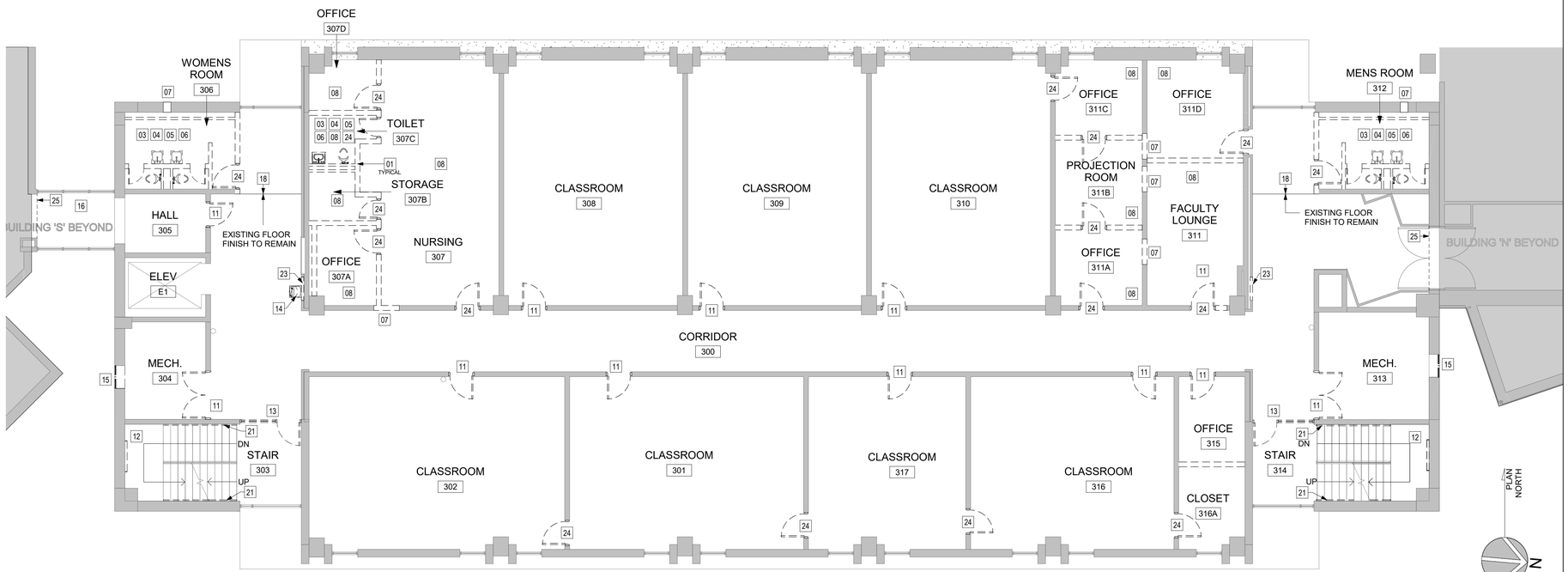
KEY PLAN

DEMOLITION KEYNOTES

01 EXISTING WALL TO BE COMPLETELY REMOVED AND DISCARDED; COORDINATE WITH CONSTRUCTION PLAN
02 EXISTING WALL MOUNTED FIRE EXTINGUISHER TO BE REMOVED AND SAVED FOR RELOCATION
03 EXISTING PLUMBING FIXTURES TO BE REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO SINKS, TOILETS, AND URINALS; REFER TO PLUMBING DRAWINGS
04 EXISTING FLOOR FINISH TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO FLOOR TILE, SETTING MATERIAL, AND WALL BASE; PREPARE SLAB TO RECEIVE NEW FINISH
05 EXISTING WALL TILE TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO TILE AND SETTING MATERIAL; PREPARE SUBSTRATE TO RECEIVE NEW FINISH
06 EXISTING WALL MOUNTED TOILET ACCESSORIES TO BE REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO TOILET PAPER DISPENSERS, SANITARY NAPKIN RECEPTACLES, PAPER TOWEL DISPENSERS, ELECTRIC HAND DRYERS, SOAP DISPENSERS, ADA GRAB BARS, AND MIRRORS
07 PORTION OF EXISTING WALL TO BE REMOVED FOR NEW OPENING; COORDINATE SIZE AND LOCATION WITH CONSTRUCTION PLAN. PROVIDE TEMPORARY SHORING AS NEEDED.
08 EXISTING FLOOR FINISH TO BE COMPLETELY REMOVED, INCLUDING BUT NOT LIMITED TO FLOOR FINISH MATERIAL, WALL BASE, AND ADHESIVE; PREPARE SLAB TO RECEIVE NEW FINISH
09 EXISTING DOORS AND HARDWARE TO BE REMOVED AND DISCARDED; EXISTING STOREFRONT SYSTEM TO REMAIN
10 EXISTING LOCKERS AND LOCKER BASE TO BE REMOVED AND DISCARDED
11 ALTERNATE 11: EXISTING DOOR AND HARDWARE TO BE REMOVED AND DISCARDED; EXISTING FRAME TO REMAIN. BASE BID: EXISTING DOOR AND FRAME TO REMAIN; COORDINATE HARDWARE WITH DOOR SCHEDULE
12 ALTERNATE 8: REMOVE PAINTED FLOOR FINISH AT STAIRS AND LANDINGS, TYPICAL. PREPARE CONCRETE TO RECEIVE NEW FINISH
13 EXISTING GLASS ENTRANCE SYSTEM TO BE REMOVED AND DISCARDED.
14 EXISTING DRINKING FOUNTAIN TO BE REMOVED, REFER TO PLUMBING DRAWINGS
15 EXISTING LOUVER TO BE REMOVED AND DISCARDED
16 PERFORM EXPLORATORY DEMOLITION AND/OR X-RAY EXISTING CONSTRUCTION TO DETERMINE CAUSES OF KNOWN WATER INTRUSION
17 EXISTING MILLWORK TO BE COMPLETELY REMOVED AND DISCARDED
18 EXISTING TERRAZZO FLOOR FINISH TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO SETTING MATERIAL, AND WALL BASE; PREPARE SLAB TO RECEIVE NEW FINISH
19 EXISTING COUNTERTOP AND TRANSACTION WINDOW TO BE REMOVED AND DISCARDED
20 EXISTING INTERIOR WINDOWS TO BE REMOVED AND DISCARDED
21 EXISTING HANDRAIL AND BRACKETS TO BE REMOVED. PATCH WALL AND PREP FOR NEW HANDRAIL INSTALLATION
22 EXISTING DISPLAY CASE TO BE REMOVED, INFILL WALL WITH LIKE MATERIALS
23 PORTION OF EXISTING WALL TO BE REMOVED FROM EDGE OF EXISTING BRICK TO EDGE OF EXISTING WALL TILE. COORDINATE WITH PLUMBING DRAWINGS
24 EXISTING DOOR, FRAME AND HARDWARE TO BE REMOVED AND DISCARDED
25 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE

GENERAL DEMOLITION NOTES

1. THE DEMOLITION SHOWN ON THIS PLAN IS DIAGRAMMATIC AND INTENDED TO SHOW THE GENERAL EXTENT OF THE WORK ONLY. CONTRACTOR SHALL INCLUDE ALL DEMOLITION, WHETHER CALLED FOR OR NOT, THAT IS NECESSARY TO ACCOMPLISH THE INTENT OF THE PLANS & SPECIFICATIONS.
2. BEFORE CONSTRUCTION COMMENCES, TESTING FOR THE PRESENCE OF HAZARDOUS MATERIALS SHALL BE PERFORMED BY AN ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. THE FINDINGS OF THIS TEST SHALL BE KEPT ON SITE DURING CONSTRUCTION AT ALL TIMES. BECKER MORGAN GROUP AND ITS CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE IDENTIFICATION, DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE. A LICENSED ABATEMENT COMPANY SHALL PERFORM WORK RELATED TO REMOVAL OF ANY HAZARDOUS MATERIALS.
3. ALL DEMOLITION WORK SHALL BE PERFORMED WITH MINIMUM DAMAGE TO EXISTING WORK TO REMAIN. EFFECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ALL 'EXISTING TO REMAIN ELEMENTS', INCLUDING BUT NOT LIMITED TO, EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS, AND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE INCURRED DURING DEMOLITION AND/OR CONSTRUCTION.
4. PROVISIONS SHALL BE MADE TO ALLEVIATE THE SPREAD OF DEBRIS AND DUST TO ADJACENT PROPERTY OWNERS. THE PROPERTY SHALL BE KEPT AS CLEAN AS POSSIBLE AT ALL TIMES. SWEEP THE PROJECT SITE BROOM CLEAN AND CHANGE FILTERS ON AIR-HANDLING EQUIPMENT UPON COMPLETION OF DEMOLITION.
5. ALL DEBRIS AND MATERIALS REMOVED FROM THE BUILDING SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER. NO RECLAIMED LUMBER OR MATERIALS SHALL BE RE-USED EXCEPT AS SPECIFICALLY APPROVED BY THE ARCHITECT OR OWNER. BURNING OF MATERIALS ON SITE IS NOT PERMITTED.
6. WHERE DEMOLITION AND CUTTING WORK HAS OCCURRED OR WHERE EXISTING SURFACES, MATERIALS OR OTHER ITEMS HAVE BEEN DAMAGED OR DISTURBED, THE SAID SURFACES AND AREAS SHALL BE CAREFULLY CLOSED UP, PATCHED AND FINISHED, AND OR RESTORED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR.
7. DO NOT CUT AND PATCH WORK EXPOSED ON THE BUILDING'S EXTERIOR OR ITS OCCUPIED SPACES IN A MANNER WHICH WOULD, IN THE ARCHITECT'S OPINION, RESULT IN LESSENING THE BUILDING'S AESTHETIC QUALITIES. DO NOT CUT AND PATCH WORK IN A MANNER THAT WOULD RESULT IN SUBSTANTIAL VISUAL EVIDENCE OF CUT AND PATCH WORK. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.
8. WHERE EXISTING FINISHES ARE SLATED FOR REMOVAL, PREPARE ALL SURFACES TO RECEIVE NEW FINISHES. ALL 'EXISTING TO REMAIN' PARTITIONS WITHIN THE PROJECT SCOPE SHALL BE REPAIRED TO 'LIKE NEW' CONDITION, OR AS NECESSARY TO PREPARE SURFACE TO RECEIVE NEW FINISH.
9. DO NOT REMOVE ANY STRUCTURAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, COLUMNS, BEAMS, JOISTS, LOAD-BEARING WALLS OR SUPPORTS. CAREFULLY REMOVE INTERIOR PARTITIONS ONLY. PROVIDE AND MAINTAIN INTERIOR SHORING, BRACING OR STRUCTURAL SUPPORT TO PRESERVE STABILITY AND PREVENT MOVEMENT, SETTLEMENT OR COLLAPSE OF ITEMS TO BE SELECTIVELY DEMOLISHED AND ITEMS WHICH ARE IMMEDIATELY ADJACENT TO THOSE BEING REMOVED.
10. WHERE EXISTING ELECTRICAL WORK NEEDS TO BE ABANDONED, REMOVE WIRE FROM OUTLET BACK TO ELECTRICAL PANEL OR SOURCE AND MAKE SAFE. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN; REFER TO ELECTRICAL DRAWINGS IF APPLICABLE.
11. WHERE EXISTING PLUMBING WORK NEEDS TO BE ABANDONED, REMOVE ALL VENT STACK PIPING AND REPAIR ROOF PENETRATIONS. REMOVE ALL OVERHEAD WATER LINES AND CAP AT SOURCE. PRIOR TO DEMOLITION, CAREFULLY VERIFY IF LINES CAN BE REUSED AS PART OF THE NEW BUILD-OUT. ALL UNDERFLOOR SANITARY AND WATER LINES SHALL BE CAPPED BELOW FLOOR. VERIFY ALL WATER LINES HAVE BEEN TURNED OFF PRIOR TO WORK. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBER; REFER TO PLUMBING DRAWINGS IF APPLICABLE.
12. WHERE EXISTING VENTILATION OR AIR CONDITIONING NEEDS TO BE ABANDONED, REMOVE ALL EXHAUST AND OUTSIDE AIR DUCTS AS REQUIRED. ROOF-TOP EQUIPMENT SHALL BE REMOVED AND ROOF OPENINGS DRIED IN TO PREVENT WATER PENETRATION INTO THE SPACE. ALL WORK SHALL BE PERFORMED BY A LICENSED MECHANICAL CONTRACTOR; REFER TO MECHANICAL DRAWINGS IF APPLICABLE.
13. WHERE EXISTING GAS LINES OR SERVICE NEEDS TO BE ABANDONED, CAREFULLY REMOVE ALL PIPING, SHUT-OFF VALVES AND FITTINGS AS REQUIRED. GAS METER AND REGULATOR SHALL BE REMOVED BY UTILITY AUTHORITY. ALL WORK SHALL BE PERFORMED BY A LICENSED SUB-CONTRACTOR.
14. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS. EXIT LIGHTING, FIRE PROTECTION DEVICES, AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.
15. LIMIT USE OF THE PREMISES TO CONSTRUCTION ACTIVITIES IN AREAS INDICATED IN SCOPE OF PROJECT. ALLOW OWNER OCCUPANCY AND USE BY BUILDING'S MAINTENANCE AND SERVICE PERSONNEL AT ALL TIMES.
16. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, PLUMBING OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OF DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE THE NATURE AND EXTENT OF THE CONFLICT. PROMPTLY SUBMIT A WRITTEN REPORT TO THE ARCHITECT BEFORE PROCEEDING WITH DEMOLITION ACTIVITIES.
17. PROVIDE THE OWNER WITH ADVANCE NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDINGS/ FACILITIES.. DO NOT START DEMOLITION UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING. REFER TO THE PROJECT MANUAL AND COORDINATE WITH THE OWNER TO DETERMINE THEIR SPECIFIC ADVANCE NOTIFICATION REQUIREMENTS.
18. PROVIDE RECORD DRAWINGS CONSISTING OF REDLINED PLANS AT PROJECT CLOSE-OUT WHICH IDENTIFY AND ACCURATELY LOCATE CAPPED UTILITIES AND OTHER STRUCTURAL, ELECTRICAL, PLUMBING OR MECHANICAL CONDITIONS.
19. ALL FLOOR FINISHES ARE EXISTING TO REMAIN; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
20. ALL CEILINGS ARE EXISTING TO REMAIN, EXCEPT IN AREAS SPECIFICALLY NOTED ON THE DRAWINGS; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
21. ALL EXISTING DOORS, HARDWARE, AND FRAMES ARE EXISTING TO REMAIN; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
22. GC TO REMOVE ALL WALL-MOUNTED ACCESSORIES PRIOR TO PAINTING, INCLUDING BUT NOT LIMITED TO CHALKBOARDS, WHITEBOARDS, TACKBOARDS, PROJECTION SCREENS, ETC. CHALKBOARDS TO BE DISCARDED, ALL OTHER ACCESSORIES TO BE SALVAGED FOR RE-INSTALLATION. PATCH HOLES AND PREPARE WALL SURFACES TO RECEIVE NEW FINISH. COORDINATE RE-INSTALLATION OF SALVAGED ACCESSORIES WITH CONSTRUCTION PLAN.
23. GC TO REMOVE AND DISCARD ALL EXISTING ROOM SIGNAGE.



1 3RD FLOOR DEMOLITION PLAN

8' 4' 0' 8'

SCALE: 1/8" = 1'-0"

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS
Registered Architect
6635
North Carolina
WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC.
Professional Architectural Corporation
51922
North Carolina
WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

THIRD FLOOR DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

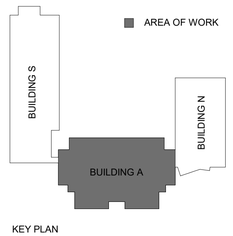
AD103

COPYRIGHT © 2020

8/14/2020 9:45:01 AM C:\Users\altbrown\Documents\2018023300 CFCC ASN BASE BID_altbrown9DEJ4.rvt

DEMOLITION LEGEND

- AREAS NOT IN CONTRACT
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- Name / 101 — ROOM NAME AND NUMBER
- 01 — DEMOLITION KEYNOTE
- EXISTING DOOR TO BE REMOVED



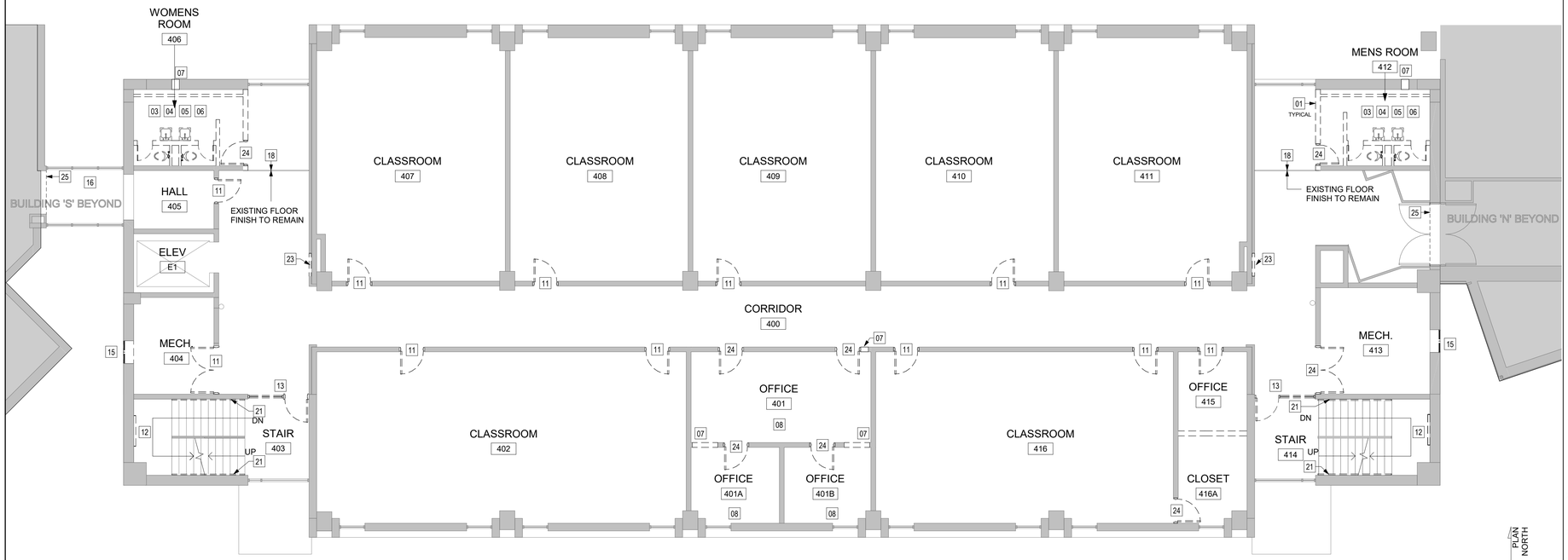
KEY PLAN

DEMOLITION KEYNOTES

01 EXISTING WALL TO BE COMPLETELY REMOVED AND DISCARDED; COORDINATE WITH CONSTRUCTION PLAN
02 EXISTING WALL MOUNTED FIRE EXTINGUISHER TO BE REMOVED AND SAVED FOR RELOCATION
03 EXISTING PLUMBING FIXTURES TO BE REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO SINKS, TOILETS, AND URINALS; REFER TO PLUMBING DRAWINGS
04 EXISTING FLOOR FINISH TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO FLOOR TILE, SETTING MATERIAL, AND WALL BASE; PREPARE SLAB TO RECEIVE NEW FINISH
05 EXISTING WALL TILE TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO TILE AND SETTING MATERIAL; PREPARE SUBSTRATE TO RECEIVE NEW FINISH
06 EXISTING WALL MOUNTED TOILET ACCESSORIES TO BE REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO TOILET PAPER DISPENSERS, SANITARY NAPKIN RECEPTACLES, PAPER TOWEL DISPENSERS, ELECTRIC HAND DRYERS, SOAP DISPENSERS, ADA GRAB BARS, AND MIRRORS
07 PORTION OF EXISTING WALL TO BE REMOVED FOR NEW OPENING; COORDINATE SIZE AND LOCATION WITH CONSTRUCTION PLAN. PROVIDE TEMPORARY SHORING AS NEEDED.
08 EXISTING FLOOR FINISH TO BE COMPLETELY REMOVED, INCLUDING BUT NOT LIMITED TO FLOOR FINISH MATERIAL, WALL BASE, AND ADHESIVE; PREPARE SLAB TO RECEIVE NEW FINISH
09 EXISTING DOORS AND HARDWARE TO BE REMOVED AND DISCARDED; EXISTING STOREFRONT SYSTEM TO REMAIN
10 EXISTING LOCKERS AND LOCKER BASE TO BE REMOVED AND DISCARDED
11 ALTERNATE 11: EXISTING DOOR AND HARDWARE TO BE REMOVED AND DISCARDED; EXISTING FRAME TO REMAIN. BASE BID: EXISTING DOOR AND FRAME TO REMAIN; COORDINATE HARDWARE WITH DOOR SCHEDULE
12 ALTERNATE 8: REMOVE PAINTED FLOOR FINISH AT STAIRS AND LANDINGS, TYPICAL. PREPARE CONCRETE TO RECEIVE NEW FINISH
13 EXISTING GLASS ENTRANCE SYSTEM TO BE REMOVED AND DISCARDED.
14 EXISTING DRINKING FOUNTAIN TO BE REMOVED, REFER TO PLUMBING DRAWINGS
15 EXISTING LOUVER TO BE REMOVED AND DISCARDED
16 PERFORM EXPLORATORY DEMOLITION AND/OR X-RAY EXISTING CONSTRUCTION TO DETERMINE CAUSES OF KNOWN WATER INTRUSION
17 EXISTING MILLWORK TO BE COMPLETELY REMOVED AND DISCARDED
18 EXISTING TERRAZZO FLOOR FINISH TO BE COMPLETELY REMOVED AND DISCARDED, INCLUDING BUT NOT LIMITED TO SETTING MATERIAL, AND WALL BASE; PREPARE SLAB TO RECEIVE NEW FINISH
19 EXISTING COUNTERTOP AND TRANSACTION WINDOW TO BE REMOVED AND DISCARDED
20 EXISTING INTERIOR WINDOWS TO BE REMOVED AND DISCARDED
21 EXISTING HANDRAIL AND BRACKETS TO BE REMOVED. PATCH WALL AND PREP FOR NEW HANDRAIL INSTALLATION
22 EXISTING DISPLAY CASE TO BE REMOVED, INFILL WALL WITH LIKE MATERIALS
23 PORTION OF EXISTING WALL TO BE REMOVED FROM EDGE OF EXISTING BRICK TO EDGE OF EXISTING WALL TILE. COORDINATE WITH PLUMBING DRAWINGS
24 EXISTING DOOR, FRAME AND HARDWARE TO BE REMOVED AND DISCARDED
25 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE

GENERAL DEMOLITION NOTES

1. THE DEMOLITION SHOWN ON THIS PLAN IS DIAGRAMMATIC AND INTENDED TO SHOW THE GENERAL EXTENT OF THE WORK ONLY. CONTRACTOR SHALL INCLUDE ALL DEMOLITION, WHETHER CALLED FOR OR NOT, THAT IS NECESSARY TO ACCOMPLISH THE INTENT OF THE PLANS & SPECIFICATIONS.
2. BEFORE CONSTRUCTION COMMENCES, TESTING FOR THE PRESENCE OF HAZARDOUS MATERIALS SHALL BE PERFORMED BY AN ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. THE FINDINGS OF THIS TEST SHALL BE KEPT ON SITE DURING CONSTRUCTION AT ALL TIMES. BECKER MORGAN GROUP AND ITS CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE IDENTIFICATION, DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE. A LICENSED ABATEMENT COMPANY SHALL PERFORM WORK RELATED TO REMOVAL OF ANY HAZARDOUS MATERIALS.
3. ALL DEMOLITION WORK SHALL BE PERFORMED WITH MINIMUM DAMAGE TO EXISTING WORK TO REMAIN. EFFECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ALL 'EXISTING TO REMAIN ELEMENTS', INCLUDING BUT NOT LIMITED TO, EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS, AND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE INCURRED DURING DEMOLITION AND/OR CONSTRUCTION.
4. PROVISIONS SHALL BE MADE TO ALLEVIATE THE SPREAD OF DEBRIS AND DUST TO ADJACENT PROPERTY OWNERS. THE PROPERTY SHALL BE KEPT AS CLEAN AS POSSIBLE AT ALL TIMES. SWEEP THE PROJECT SITE BROOM CLEAN AND CHANGE FILTERS ON AIR-HANDLING EQUIPMENT UPON COMPLETION OF DEMOLITION.
5. ALL DEBRIS AND MATERIALS REMOVED FROM THE BUILDING SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER. NO RECLAIMED LUMBER OR MATERIALS SHALL BE RE-USED EXCEPT AS SPECIFICALLY APPROVED BY THE ARCHITECT OR OWNER. BURNING OF MATERIALS ON SITE IS NOT PERMITTED.
6. WHERE DEMOLITION AND CUTTING WORK HAS OCCURRED OR WHERE EXISTING SURFACES, MATERIALS OR OTHER ITEMS HAVE BEEN DAMAGED OR DISTURBED, THE SAID SURFACES AND AREAS SHALL BE CAREFULLY CLOSED UP, PATCHED AND FINISHED, AND OR RESTORED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR.
7. DO NOT CUT AND PATCH WORK EXPOSED ON THE BUILDING'S EXTERIOR OR ITS OCCUPIED SPACES IN A MANNER WHICH WOULD, IN THE ARCHITECT'S OPINION, RESULT IN LESSENING THE BUILDING'S AESTHETIC QUALITIES. DO NOT CUT AND PATCH WORK IN A MANNER THAT WOULD RESULT IN SUBSTANTIAL VISUAL EVIDENCE OF CUT AND PATCH WORK. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.
8. WHERE EXISTING FINISHES ARE SLATED FOR REMOVAL, PREPARE ALL SURFACES TO RECEIVE NEW FINISHES. ALL 'EXISTING TO REMAIN' PARTITIONS WITHIN THE PROJECT SCOPE SHALL BE REPAIRED TO 'LIKE NEW' CONDITION, OR AS NECESSARY TO PREPARE SURFACE TO RECEIVE NEW FINISH.
9. DO NOT REMOVE ANY STRUCTURAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, COLUMNS, BEAMS, JOISTS, LOAD-BEARING WALLS OR SUPPORTS. CAREFULLY REMOVE INTERIOR PARTITIONS ONLY. PROVIDE AND MAINTAIN INTERIOR SHORING, BRACING OR STRUCTURAL SUPPORT TO PRESERVE STABILITY AND PREVENT MOVEMENT, SETTLEMENT OR COLLAPSE OF ITEMS TO BE SELECTIVELY DEMOLISHED AND ITEMS WHICH ARE IMMEDIATELY ADJACENT TO THOSE BEING REMOVED.
10. WHERE EXISTING ELECTRICAL WORK NEEDS TO BE ABANDONED, REMOVE WIRE FROM OUTLET BACK TO ELECTRICAL PANEL OR SOURCE AND MAKE SAFE. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN; REFER TO ELECTRICAL DRAWINGS IF APPLICABLE.
11. WHERE EXISTING PLUMBING WORK NEEDS TO BE ABANDONED, REMOVE ALL VENT STACK PIPING AND REPAIR ROOF PENETRATIONS. REMOVE ALL OVERHEAD WATER LINES AND CAP AT SOURCE. PRIOR TO DEMOLITION, CAREFULLY VERIFY IF LINES CAN BE REUSED AS PART OF THE NEW BUILD-OUT. ALL UNDERFLOOR SANITARY AND WATER LINES SHALL BE CAPPED BELOW FLOOR. VERIFY ALL WATER LINES HAVE BEEN TURNED OFF PRIOR TO WORK. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBER; REFER TO PLUMBING DRAWINGS IF APPLICABLE.
12. WHERE EXISTING VENTILATION OR AIR CONDITIONING NEEDS TO BE ABANDONED, REMOVE ALL EXHAUST AND OUTSIDE AIR DUCTS AS REQUIRED. ROOF-TOP EQUIPMENT SHALL BE REMOVED AND ROOF OPENINGS DRIED IN TO PREVENT WATER PENETRATION INTO THE SPACE. ALL WORK SHALL BE PERFORMED BY A LICENSED MECHANICAL CONTRACTOR; REFER TO MECHANICAL DRAWINGS IF APPLICABLE.
13. WHERE EXISTING GAS LINES OR SERVICE NEEDS TO BE ABANDONED, CAREFULLY REMOVE ALL PIPING, SHUT-OFF VALVES AND FITTINGS AS REQUIRED. GAS METER AND REGULATOR SHALL BE REMOVED BY UTILITY AUTHORITY. ALL WORK SHALL BE PERFORMED BY A LICENSED SUB-CONTRACTOR.
14. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS. EXIT LIGHTING, FIRE PROTECTION DEVICES, AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.
15. LIMIT USE OF THE PREMISES TO CONSTRUCTION ACTIVITIES IN AREAS INDICATED IN SCOPE OF PROJECT. ALLOW OWNER OCCUPANCY AND USE BY BUILDING'S MAINTENANCE AND SERVICE PERSONNEL AT ALL TIMES.
16. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, PLUMBING OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OF DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE THE NATURE AND EXTENT OF THE CONFLICT. PROMPTLY SUBMIT A WRITTEN REPORT TO THE ARCHITECT BEFORE PROCEEDING WITH DEMOLITION ACTIVITIES.
17. PROVIDE THE OWNER WITH ADVANCE NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDINGS/ FACILITIES.. DO NOT START DEMOLITION UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING. REFER TO THE PROJECT MANUAL AND COORDINATE WITH THE OWNER TO DETERMINE THEIR SPECIFIC ADVANCE NOTIFICATION REQUIREMENTS.
18. PROVIDE RECORD DRAWINGS CONSISTING OF REDLINED PLANS AT PROJECT CLOSE-OUT WHICH IDENTIFY AND ACCURATELY LOCATE CAPPED UTILITIES AND OTHER STRUCTURAL, ELECTRICAL, PLUMBING OR MECHANICAL CONDITIONS.
19. ALL FLOOR FINISHES ARE EXISTING TO REMAIN; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
20. ALL CEILINGS ARE EXISTING TO REMAIN, EXCEPT IN AREAS SPECIFICALLY NOTED ON THE DRAWINGS; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
21. ALL EXISTING DOORS, HARDWARE, AND FRAMES ARE EXISTING TO REMAIN; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
22. GC TO REMOVE ALL WALL-MOUNTED ACCESSORIES PRIOR TO PAINTING, INCLUDING BUT NOT LIMITED TO CHALKBOARDS, WHITEBOARDS, TACKBOARDS, PROJECTION SCREENS, ETC. CHALKBOARDS TO BE DISCARDED, ALL OTHER ACCESSORIES TO BE SALVAGED FOR RE-INSTALLATION. PATCH HOLES AND PREPARE WALL SURFACES TO RECEIVE NEW FINISH. COORDINATE RE-INSTALLATION OF SALVAGED ACCESSORIES WITH CONSTRUCTION PLAN.
23. GC TO REMOVE AND DISCARD ALL EXISTING ROOM SIGNAGE.



1 4TH FLOOR DEMOLITION PLAN
SCALE: 1/8" = 1'-0"
8' 4' 0' 8'
SCALE : 1/8" = 1'-0"

PLAN NORTH

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16635 North Carolina WILMINGTON, N.C. 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FOURTH FLOOR DEMOLITION PLAN

ISSUE BLOCK

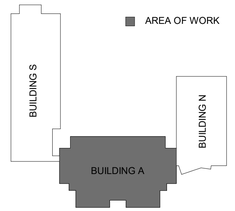
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

AD104

COPYRIGHT © 2020

8/14/2020 9:45:03 AM C:\Users\atbrown\Documents\2018023300 CFCC ASN BASE BID_atbrown9DEJ4.rvt



KEY PLAN

RCP DEMOLITION LEGEND

- AREAS NOT IN CONTRACT
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- Name 101 — ROOM NAME AND NUMBER
- 1t — DEMOLITION KEYNOTE
- EXISTING 2X2 ACOUSTIC CEILING TILE AND GRID TO REMAIN
- EXISTING ACOUSTIC CEILING TILE AND GRID TO BE REMOVED; GRID TO BE DISCARDED. CEILING TILE IN GOOD CONDITION TO BE SALVAGED FOR POSSIBLE RE-USE; DAMAGED OR SOILED TILES TO BE DISCARDED
- EXISTING GYPSUM BOARD CEILING TO REMAIN
- EXISTING GYPSUM BOARD CEILING TO BE REMOVED
- EXISTING 2x4 FLUSH MOUNTED LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING 2X4 FLUSH MOUNTED LIGHTING TO REMAIN
- EXISTING SURFACE MOUNTED LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING SURFACE MOUNTED LIGHTING TO REMAIN
- EXISTING PENDANT LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING PENDANT LIGHTING TO REMAIN
- EXISTING RECESSED CAN LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE

GENERAL DEMOLITION NOTES

1. EXISTING LIGHT FIXTURES TO BE REMOVED AND SALVAGED FOR RE-USE; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
2. ALTERNATE 1: EXISTING LIGHT FIXTURES TO BE REMOVED AND SALVAGED FOR RE-USE; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
3. ALTERNATE 1A: EXISTING LIGHT FIXTURES TO BE REMOVED AND DISCARDED; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
4. CEILING MOUNTED ACCESSORIES LOCATED AT CEILINGS SLATED FOR DEMOLITION TO BE CAREFULLY REMOVED AND SAVED FOR RE-INSTALLATION INTO NEW CEILING.



1 1ST FLOOR DEMOLITION RCP

8' 4' 0' 8' SCALE: 1/8" = 1'-0"

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16535 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRST FLOOR DEMOLITION REFLECTED CEILING PLAN

ISSUE BLOCK

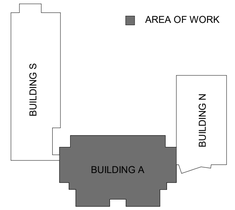
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

AD201

COPYRIGHT © 2020

8/14/2020 9:45:04 AM C:\Users\abrown\Documents\2018023.00 CFCC ASN BASE BID_abrown9DEJ4.rvt



KEY PLAN

1 ALTERNATE 1/1A 1ST FLOOR DEMOLITION RCP

8' 4' 0' 8' SCALE: 1/8" = 1'-0"

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

RCP DEMOLITION LEGEND

- AREAS NOT IN CONTRACT
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- Name 101 — ROOM NAME AND NUMBER
- 1t — DEMOLITION KEYNOTE
- EXISTING 2X2 ACOUSTIC CEILING TILE AND GRID TO REMAIN
- EXISTING ACOUSTIC CEILING TILE AND GRID TO BE REMOVED; GRID TO BE DISCARDED. CEILING TILE IN GOOD CONDITION TO BE SALVAGED FOR POSSIBLE RE-USE; DAMAGED OR SOILED TILES TO BE DISCARDED
- EXISTING GYPSUM BOARD CEILING TO REMAIN
- EXISTING GYPSUM BOARD CEILING TO BE REMOVED
- EXISTING 2x4 FLUSH MOUNTED LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING 2X4 FLUSH MOUNTED LIGHTING TO REMAIN
- EXISTING SURFACE MOUNTED LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING SURFACE MOUNTED LIGHTING TO REMAIN
- EXISTING PENDANT LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING PENDANT LIGHTING TO REMAIN
- EXISTING RECESSED CAN LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE

GENERAL DEMOLITION NOTES

1. EXISTING LIGHT FIXTURES TO BE REMOVED AND SALVAGED FOR RE-USE; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
2. ALTERNATE 1: EXISTING LIGHT FIXTURES TO BE REMOVED AND SALVAGED FOR RE-USE; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
3. ALTERNATE 1A: EXISTING LIGHT FIXTURES TO BE REMOVED AND DISCARDED; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
4. CEILING MOUNTED ACCESSORIES LOCATED AT CEILINGS SLATED FOR DEMOLITION TO BE CAREFULLY REMOVED AND SAVED FOR RE-INSTALLATION INTO NEW CEILING.

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700
www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16535 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1/1A FIRST FLOOR DEMOLITION REFLECTED CEILING PLAN

ISSUE BLOCK

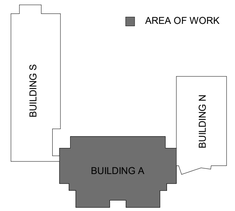
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC PROJ MGR: DCW

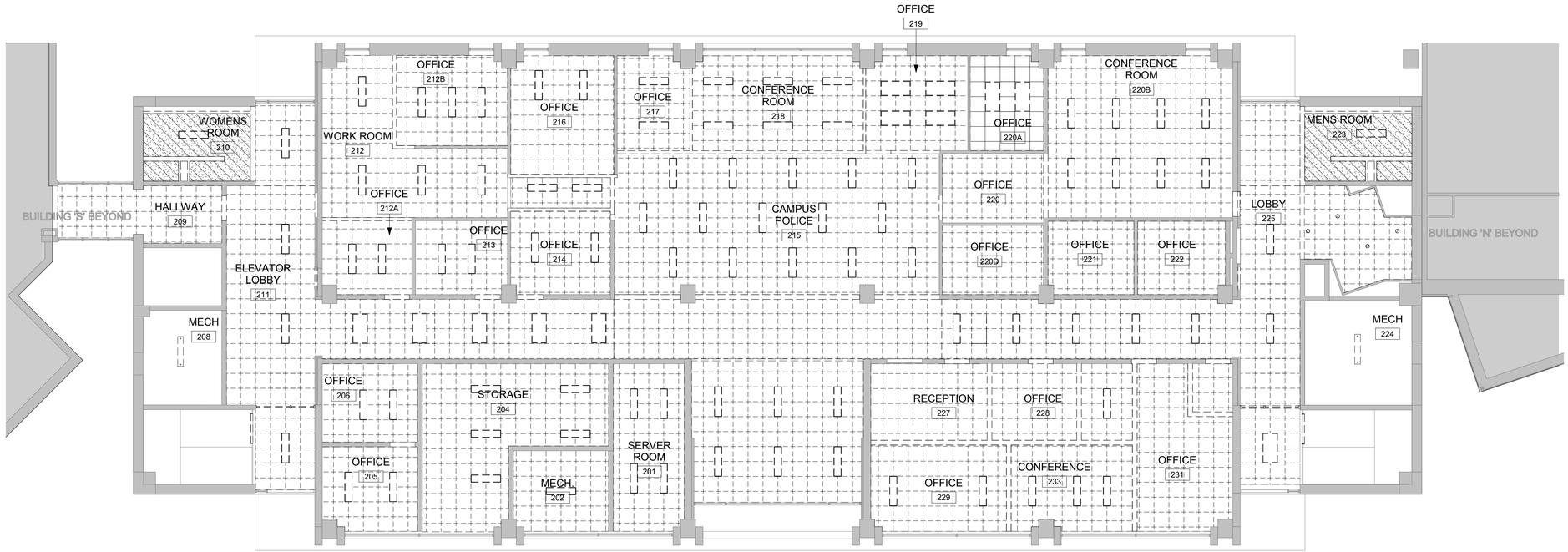
AD201A

COPYRIGHT © 2020

8/14/2020 9:45:05 AM C:\Users\abrown\Documents\2018023\00 CFCC-ASN BASE BID_abrown9DEJ4.rvt



KEY PLAN



1 2ND FLOOR DEMOLITION RCP

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

RCP DEMOLITION LEGEND

- AREAS NOT IN CONTRACT
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- Name 101 — ROOM NAME AND NUMBER
- 1t — DEMOLITION KEYNOTE
- EXISTING 2X2 ACOUSTIC CEILING TILE AND GRID TO REMAIN
- EXISTING ACOUSTIC CEILING TILE AND GRID TO BE REMOVED; GRID TO BE DISCARDED. CEILING TILE IN GOOD CONDITION TO BE SALVAGED FOR POSSIBLE RE-USE; DAMAGED OR SOILED TILES TO BE DISCARDED
- EXISTING GYPSUM BOARD CEILING TO REMAIN
- EXISTING GYPSUM BOARD CEILING TO BE REMOVED
- EXISTING 2x4 FLUSH MOUNTED LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING 2X4 FLUSH MOUNTED LIGHTING TO REMAIN
- EXISTING SURFACE MOUNTED LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING SURFACE MOUNTED LIGHTING TO REMAIN
- EXISTING PENDANT LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING PENDANT LIGHTING TO REMAIN
- EXISTING RECESSED CAN LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE

GENERAL DEMOLITION NOTES

1. EXISTING LIGHT FIXTURES TO BE REMOVED AND SALVAGED FOR RE-USE; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
2. ALTERNATE 1: EXISTING LIGHT FIXTURES TO BE REMOVED AND SALVAGED FOR RE-USE; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
3. ALTERNATE 1A: EXISTING LIGHT FIXTURES TO BE REMOVED AND DISCARDED; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
4. CEILING MOUNTED ACCESSORIES LOCATED AT CEILINGS SLATED FOR DEMOLITION TO BE CAREFULLY REMOVED AND SAVED FOR RE-INSTALLATION INTO NEW CEILING.

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700
www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16595 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

SECOND FLOOR DEMOLITION REFLECTED CEILING PLAN

ISSUE BLOCK

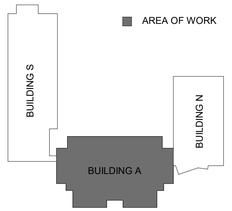
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

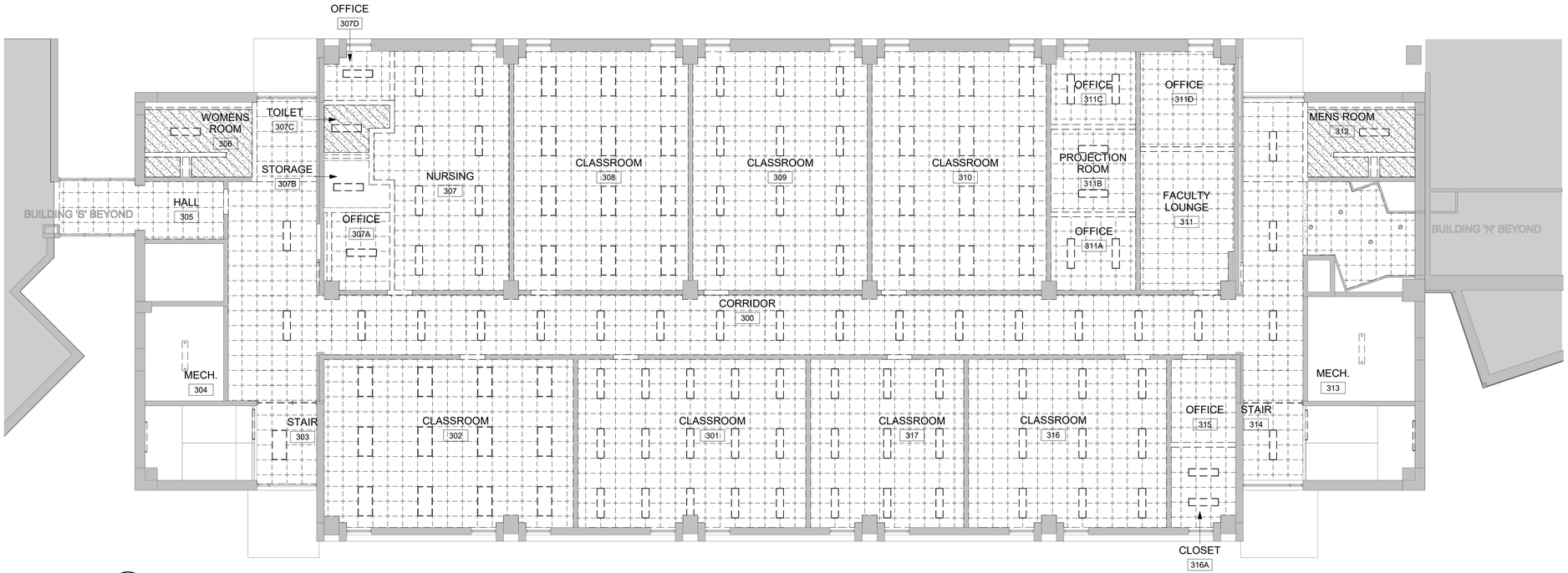
AD202

COPYRIGHT © 2020

8/14/2020 9:45:06 AM C:\Users\abrown\Documents\2018023900 CFCC ASN BASE BID_abrown9DEJ4.rvt



KEY PLAN



1 3RD FLOOR DEMOLITION RCP

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

RCP DEMOLITION LEGEND

- AREAS NOT IN CONTRACT
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- Name 101 — ROOM NAME AND NUMBER
- 1t — DEMOLITION KEYNOTE
- EXISTING 2X2 ACOUSTIC CEILING TILE AND GRID TO REMAIN
- EXISTING ACOUSTIC CEILING TILE AND GRID TO BE REMOVED; GRID TO BE DISCARDED. CEILING TILE IN GOOD CONDITION TO BE SALVAGED FOR POSSIBLE RE-USE; DAMAGED OR SOILED TILES TO BE DISCARDED
- EXISTING GYPSUM BOARD CEILING TO REMAIN
- EXISTING GYPSUM BOARD CEILING TO BE REMOVED
- EXISTING 2x4 FLUSH MOUNTED LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING 2X4 FLUSH MOUNTED LIGHTING TO REMAIN
- EXISTING SURFACE MOUNTED LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING SURFACE MOUNTED LIGHTING TO REMAIN
- EXISTING PENDANT LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING PENDANT LIGHTING TO REMAIN
- EXISTING RECESSED CAN LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE

GENERAL DEMOLITION NOTES

1. EXISTING LIGHT FIXTURES TO BE REMOVED AND SALVAGED FOR RE-USE; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
2. ALTERNATE 1: EXISTING LIGHT FIXTURES TO BE REMOVED AND SALVAGED FOR RE-USE; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
3. ALTERNATE 1A: EXISTING LIGHT FIXTURES TO BE REMOVED AND DISCARDED; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
4. CEILING MOUNTED ACCESSORIES LOCATED AT CEILINGS SLATED FOR DEMOLITION TO BE CAREFULLY REMOVED AND SAVED FOR RE-INSTALLATION INTO NEW CEILING.

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16595 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

THIRD FLOOR DEMOLITION REFLECTED CEILING PLAN

ISSUE BLOCK

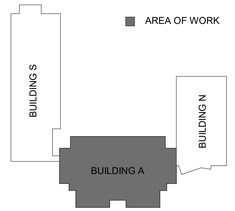
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

AD203

COPYRIGHT © 2020

8/14/2020 9:45:08 AM C:\Users\abrown\Documents\2018023900 CFCC ASN BASE BID_abrown9DEJ4.rvt



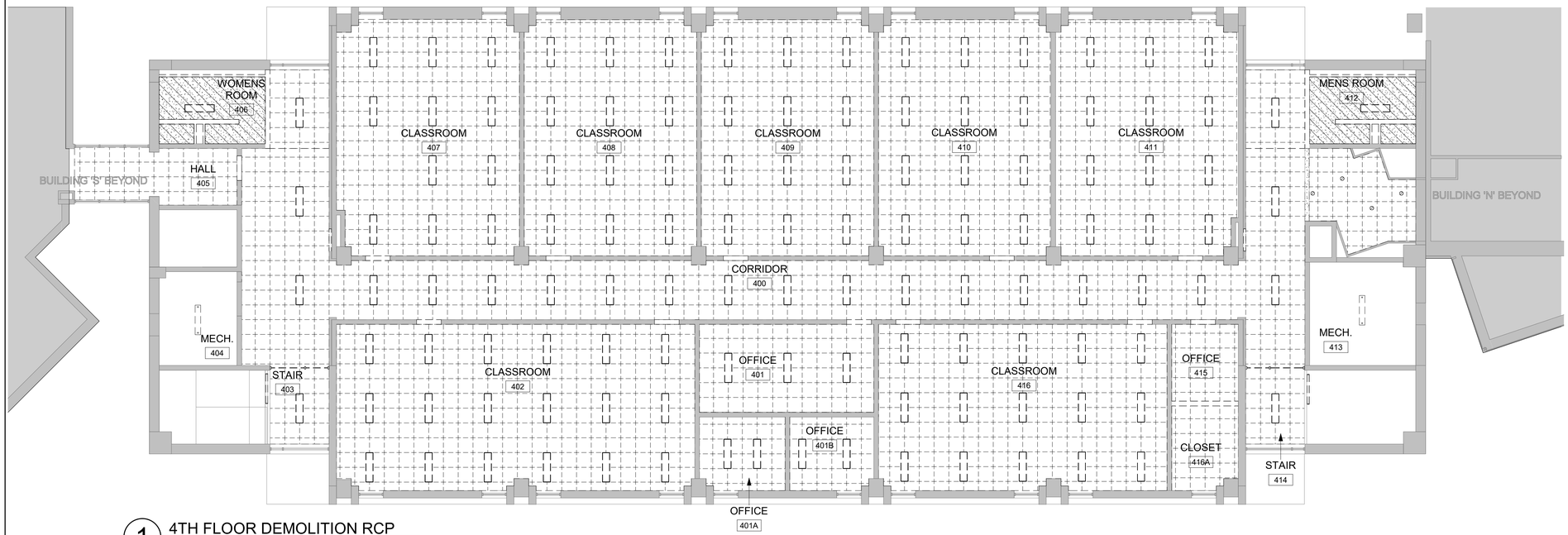
KEY PLAN

RCP DEMOLITION LEGEND

- AREAS NOT IN CONTRACT
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- Name / 101 — ROOM NAME AND NUMBER
- 1t — DEMOLITION KEYNOTE
- EXISTING 2X2 ACOUSTIC CEILING TILE AND GRID TO REMAIN
- EXISTING ACOUSTIC CEILING TILE AND GRID TO BE REMOVED; GRID TO BE DISCARDED. CEILING TILE IN GOOD CONDITION TO BE SALVAGED FOR POSSIBLE RE-USE; DAMAGED OR SOILED TILES TO BE DISCARDED
- EXISTING GYPSUM BOARD CEILING TO REMAIN
- EXISTING GYPSUM BOARD CEILING TO BE REMOVED
- EXISTING 2x4 FLUSH MOUNTED LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING 2X4 FLUSH MOUNTED LIGHTING TO REMAIN
- EXISTING SURFACE MOUNTED LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING SURFACE MOUNTED LIGHTING TO REMAIN
- EXISTING PENDANT LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE
- EXISTING PENDANT LIGHTING TO REMAIN
- EXISTING RECESSED CAN LIGHTING TO BE REMOVED AND SALVAGED FOR POSSIBLE RE-USE

GENERAL DEMOLITION NOTES

1. EXISTING LIGHT FIXTURES TO BE REMOVED AND SALVAGED FOR RE-USE; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
2. ALTERNATE 1: EXISTING LIGHT FIXTURES TO BE REMOVED AND SALVAGED FOR RE-USE; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
3. ALTERNATE 1A: EXISTING LIGHT FIXTURES TO BE REMOVED AND DISCARDED; TYPICAL THROUGHOUT, UNLESS OTHERWISE NOTED.
4. CEILING MOUNTED ACCESSORIES LOCATED AT CEILINGS SLATED FOR DEMOLITION TO BE CAREFULLY REMOVED AND SAVED FOR RE-INSTALLATION INTO NEW CEILING.



1 4TH FLOOR DEMOLITION RCP

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16535 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FOURTH FLOOR DEMOLITION REFLECTED CEILING PLAN

ISSUE BLOCK

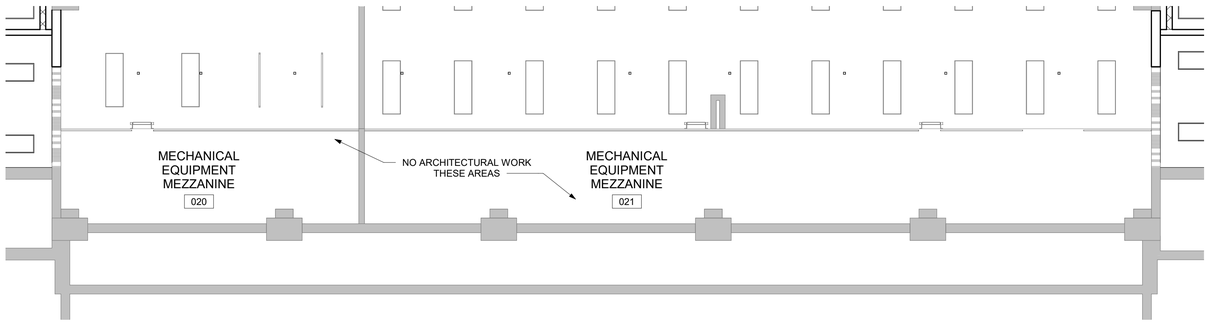
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

AD204

COPYRIGHT © 2020

8/14/2020 9:45:09 AM C:\Users\abrown\Documents\2018023800 CFCC ASN BASE BID_abrown9DEJ4.rvt

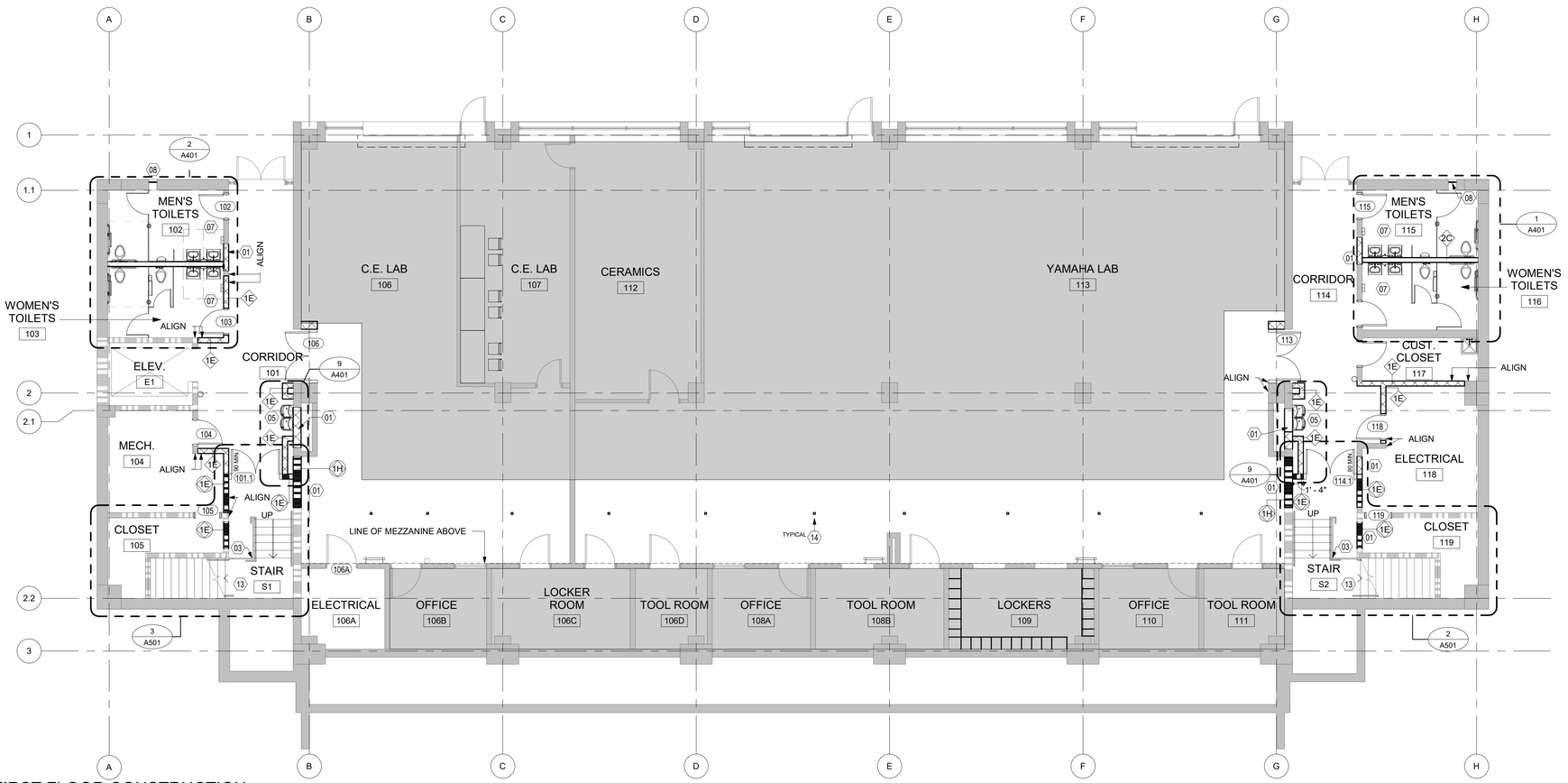


2 MEZZ. CONSTRUCTION PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"



1 FIRST FLOOR CONSTRUCTION PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

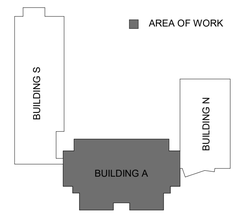
CONSTRUCTION KEYNOTES

01 INFILL WALL AT REMOVED OPENING; MATCH EXISTING ADJACENT CONSTRUCTION
02 REMOVE AND REPLACE WATERPROOFING AT EXISTING BUILDING CONNECTOR
03 FURNISH AND INSTALL NEW PANELIZED WIRE MESH GUARDRAIL SECURED TO EXISTING CONCRETE TREADS AND VERTICAL HANDRAIL STANCHIONS
04 ALTERNATE 5: FURNISH AND INSTALL FIRE RATED GLASS ENTRANCE SYSTEM AT STAIRS
05 FURNISH AND INSTALL NEW HI-LO DRINKING FOUNTAIN, REFER TO PLUMBING DRAWINGS
06 FURNISH AND INSTALL NEW LOCKABLE LADDER DEVICE
07 PROVIDE CEMENTITIOUS SLAB INFILL MATERIAL AT AREA OF REMOVED TERRAZZO AS REQUIRED TO ACHIEVE A LEVEL TRANSITION FROM EXISTING TERRAZZO TO NEW FLOOR TILE; PITCH SLAB TO FLOOR DRAIN, 1/8" PER FT
08 FURNISH AND INSTALL NEW LOUVER
09 FURNISH AND INSTALL HOLLOW METAL FRAME AND GLASS ABOVE COUNTERTOP
10 PATCH AND REPAIR AREA AFFECTED BY DEMOLITION FOR SMOOTH "LIKE NEW" FINISH
11 TOOTH-IN NEW BLOCK
12 FURNISH AND INSTALL ROLL-UP COUNTER SECURITY DOOR
13 FURNISH AND INSTALL NEW HANDRAILS
14 FURNISH AND INSTALL NEW PAINTED STEEL FRAME TO SUPPORT OVERHEAD FIRE PROTECTION PIPING; REFER TO STRUCTURAL DRAWINGS
15 PATCH AND REPAIR SHAFT CONSTRUCTION AS REQUIRED TO 2 HR FIRE RATING, COORDINATE WITH MECHANICAL DRAWINGS
16 NEW ROOF PENETRATION; REFER TO DETAIL 2/A105
17 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE
18 NEW EQUIPMENT RAIL PENETRATION; REFER TO DETAIL 3/A105

NOTE: REFER TO ALTERNATE 1: DOOR SCHEDULE ON A802

CONSTRUCTION LEGEND

- AREAS NOT IN CONTRACT
- NEW WALL
- EXISTING WALL TO REMAIN
- 1 — WALL TYPE, SEE A101
- Name / 101 — ROOM NAME AND NUMBER
- 01 — CONSTRUCTION KEYNOTE
- 101 — DOOR TAG
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- 45 MIN FIRE RATING — DOOR



KEY PLAN

GENERAL CONSTRUCTION NOTES

1. GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (STANDARD AIA DOCUMENT A201, 2007 EDITION) APPLIES TO ALL WORK UNDER THIS CONSTRUCTION CONTRACT.
2. THE CONTRACTOR SHALL REVIEW AND COORDINATE THE SCHEDULING OF ALL CONSTRUCTION WITH THE BUILDING OWNER, SUBMIT DETAILED CONSTRUCTION SCHEDULE PRIOR TO DOING WORK INCLUDING PHASED CONSTRUCTION AND AFTER HOURS WORK.
3. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT BUILDING OCCUPANTS, MATERIALS AND EXISTING FINISHES THROUGHOUT ALL PHASES OF CONSTRUCTION. NOISE, SECURITY AND DUST BARRIERS BETWEEN CONSTRUCTION AREA AND AREAS WHICH ARE PUBLIC OR OTHERWISE OCCUPIED SHALL BE MAINTAINED BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS, EXIT LIGHTING, FIRE PROTECTION DEVICES AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.
4. THE CONTRACTOR SHALL MAINTAIN THE RATING OF ALL REQUIRED RATED WALLS AT ALL INTERSECTIONS, CONNECTIONS, AND PENETRATIONS
5. FIRE RATED PARTITIONS INDICATED ON THE FLOOR PLANS ARE COMPONENTS OF CONTINUOUS RATED ASSEMBLIES CONSISTING OF BUT NOT LIMITED TO, WALLS, FLOOR, DOORS, INTERIOR BORROWED LIGHTS, MECHANICAL PENETRATIONS AND CEILINGS. REFER TO PLANS AND SPECIFICATIONS FOR METHODS OR ACHIEVING THE NECESSARY RATINGS. WHERE THE SPECIFIC METHOD OF ACHIEVING THE RATING IS NOT INDICATED, OBTAIN CLARIFICATION FROM ARCHITECT PRIOR TO CONSTRUCTION.
6. FIRE-RATED PARTITIONS SHALL BE IDENTIFIED AS SUCH IN LARGE RED STENCIL ABOVE FINISHED CEILING.
7. REVIEW WALL EXIT SIGNS AND FIRE EXTINGUISHER LOCATIONS WITH LOCAL CODE OFFICIALS PRIOR TO END OF PRIMARY CONSTRUCTION PHASE. COORDINATE ANY VARIATIONS FROM CONSTRUCTION DOCUMENTS WITH ARCHITECT. RELOCATE EXISTING FIRE EXTINGUISHERS PER FIRE MARSHAL'S DIRECTION.
8. CHASE WALLS SHALL MATCH ADJACENT CONSTRUCTION; TYPICAL, UNLESS OTHERWISE NOTED.
9. NEW GYPSUM BOARD CONSTRUCTION MEETING EXISTING CONSTRUCTION IN SAME PLANE SHALL BE FLUSH WITH NO VISIBLE JOINT.
10. PROVIDE WATER RESISTANT GYPSUM BOARD OR APPROVED EQUAL AT ALL NEW PLUMBING WALLS.
11. IN LIEU OF GYPSUM WALL BOARD, PROVIDE CEMENT BOARD AT ALL STUD WALLS SLATED TO RECEIVE A TILE FINISH.
12. PROVIDE GYPSUM BOARD ASSEMBLIES IN ACCORDANCE WITH ASTM C840, LEVEL 4 FINISH, UNLESS OTHERWISE NOTED.
13. PROVIDE CONCEALED WOOD BLOCKING (FIRE RETARDANT WHERE REQUIRED BY CODE) INSIDE PARTITIONS FOR SECURING WALL-HUNG CABINETS PROVIDED BY FURNITURE VENDOR, SHELVING, TRIM, MILLWORK AND OTHER ELEMENTS ATTACHED TO PARTITIONS AS REQUIRED TO ENSURE FLUSH, STRAIGHT, WELL-SECURED CONDITIONS. PROVIDE CORROSIVE RESISTANT FASTENERS FOR FIRE-RETARDANT TREATED WOOD.
14. THE CONTRACTOR SHALL COORDINATE ALL KEYING REQUIREMENTS, INCLUDING MASTER AND SUB-MASTER SETS, WITH THE OWNER.
15. ALL CODE REQUIRED LABELS SUCH AS 'UL', FACTORY MUTUAL, OR ANY EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, NAME OR NOMENCLATURE PLATES SHALL REMAIN READABLE AND NOT PAINTED.
16. TRANSITIONS OF FLOOR MATERIALS TO BE LOCATED AT CENTERLINE OF DOORS IN CLOSED POSITION; TYPICAL, UNLESS OTHERWISE NOTED.
17. PAINT BACK SIDES OF REMOVABLE ACCESS PANELS AND HINGED COVERS TO MATCH EXPOSED SURFACE.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND FOLLOWING THE BUILDING OWNER'S CONSTRUCTION RULES AND REGULATIONS.
19. WHERE THE DRAWINGS AND SPECIFICATIONS CONFLICT THE MOST STRINGENT, GREATEST QUANTITY AND OR BEST QUALITY SHALL BE USED.
20. PATCH, REPAIR AND REFINISH ALL SURFACES EXPOSED BY DEMOLITION WORK OR CUTTING TO ALIGN WITH EXISTING SURFACES SCHEDULED TO REMAIN, OR NEW FINISHES SPECIFIED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.
21. ALL EXISTING FINISHES REMAINING IN PLACE (CARPET, VCT, CEILINGS, ETC.) SHALL BE CLEANED UTILIZING EFFECTIVE CLEANING METHODS WHICH WILL PRODUCE THE MOST DESIRABLE RESULTS POSSIBLE.
22. WHERE DOORS IN METAL STUD PARTITIONS ARE NOT SPECIFICALLY LOCATED ON THE PLANS WITH DIMENSION STRINGS, PROVIDE A HINGE SIDE JAMB DIMENSION OF 6". WHERE DOORS APPEAR TO BE CENTERED WITHIN PARTITIONS, LOCATE THE DOOR IN THE CENTER OF THE PARTITION.
23. CAULK ALL JOINT OR CRACKS WHICH OCCUR WHERE DISSIMILAR MATERIALS INTERSECT PERPENDICULAR TO EACH OTHER AND THE INTERSECTION IS EXPOSED TO VIEW UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
24. EXISTING FIRE RATED CONSTRUCTION NOTED ON LIFE SAFETY PLANS, CONTRACTOR TO CONFIRM INTEGRITY OF RATED ASSEMBLIES, REPAIR AS REQUIRED.
25. GC TO RE-INSTALL SALVAGED WALL-MOUNTED ACCESSORIES AFTER FINAL COAT OF PAINT HAS BEEN APPLIED. EXISTING CHALKBOARDS TO BE REPLACED WITH OWNER FURNISHED, CONTRACTOR INSTALLED WHITEBOARDS. COORDINATE FINAL LOCATIONS OF ACCESSORIES WITH OWNER.
26. GC TO FURNISH AND INSTALL NEW ROOM SIGNAGE THROUGHOUT.
27. ALL SITE ELEMENTS (FLAT WORK, LANDSCAPING, CONCRETE STAIRS, ETC.) ARE SHOWN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR DESIGN AND CONSTRUCTION METHODS.

PLAN NORTH

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16635 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRST FLOOR CONSTRUCTION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

A101

COPYRIGHT © 2020

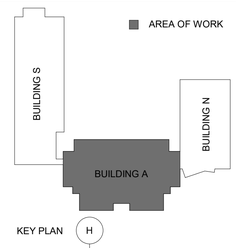
8/14/2020 9:44:29 AM C:\Users\abrown\Documents\2018023D0 CFCC ASN BASE BID_abrownBDEJ4.rvt

CONSTRUCTION KEYNOTES

01 INFILL WALL AT REMOVED OPENING; MATCH EXISTING ADJACENT CONSTRUCTION
02 REMOVE AND REPLACE WATERPROOFING AT EXISTING BUILDING CONNECTOR
03 FURNISH AND INSTALL NEW PANELIZED WIRE MESH GUARDRAIL SECURED TO EXISTING CONCRETE TREADS AND VERTICAL HANDRAIL STANCHIONS
04 ALTERNATE 5: FURNISH AND INSTALL FIRE RATED GLASS ENTRANCE SYSTEM AT STAIRS
05 FURNISH AND INSTALL NEW HI-LO DRINKING FOUNTAIN, REFER TO PLUMBING DRAWINGS
06 FURNISH AND INSTALL NEW LOCKABLE LADDER DEVICE
07 PROVIDE CEMENTITIOUS SLAB INFILL MATERIAL AT AREA OF REMOVED TERRAZZO AS REQUIRED TO ACHIEVE A LEVEL TRANSITION FROM EXISTING TERRAZZO TO NEW FLOOR TILE; PITCH SLAB TO FLOOR DRAIN, 1/8" PER FT
08 FURNISH AND INSTALL NEW LOUVER
09 FURNISH AND INSTALL HOLLOW METAL FRAME AND GLASS ABOVE COUNTERTOP
10 PATCH AND REPAIR AREA AFFECTED BY DEMOLITION FOR SMOOTH "LIKE NEW" FINISH
11 TOOTH-IN NEW BLOCK
12 FURNISH AND INSTALL ROLL-UP COUNTER SECURITY DOOR
13 FURNISH AND INSTALL NEW HANDRAILS
14 FURNISH AND INSTALL NEW PAINTED STEEL FRAME TO SUPPORT OVERHEAD FIRE PROTECTION PIPING; REFER TO STRUCTURAL DRAWINGS
15 PATCH AND REPAIR SHAFT CONSTRUCTION AS REQUIRED TO 2 HR FIRE RATING, COORDINATE WITH MECHANICAL DRAWINGS
16 NEW ROOF PENETRATION; REFER TO DETAIL 2/A105
17 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE
18 NEW EQUIPMENT RAIL PENETRATION; REFER TO DETAIL 3/A105

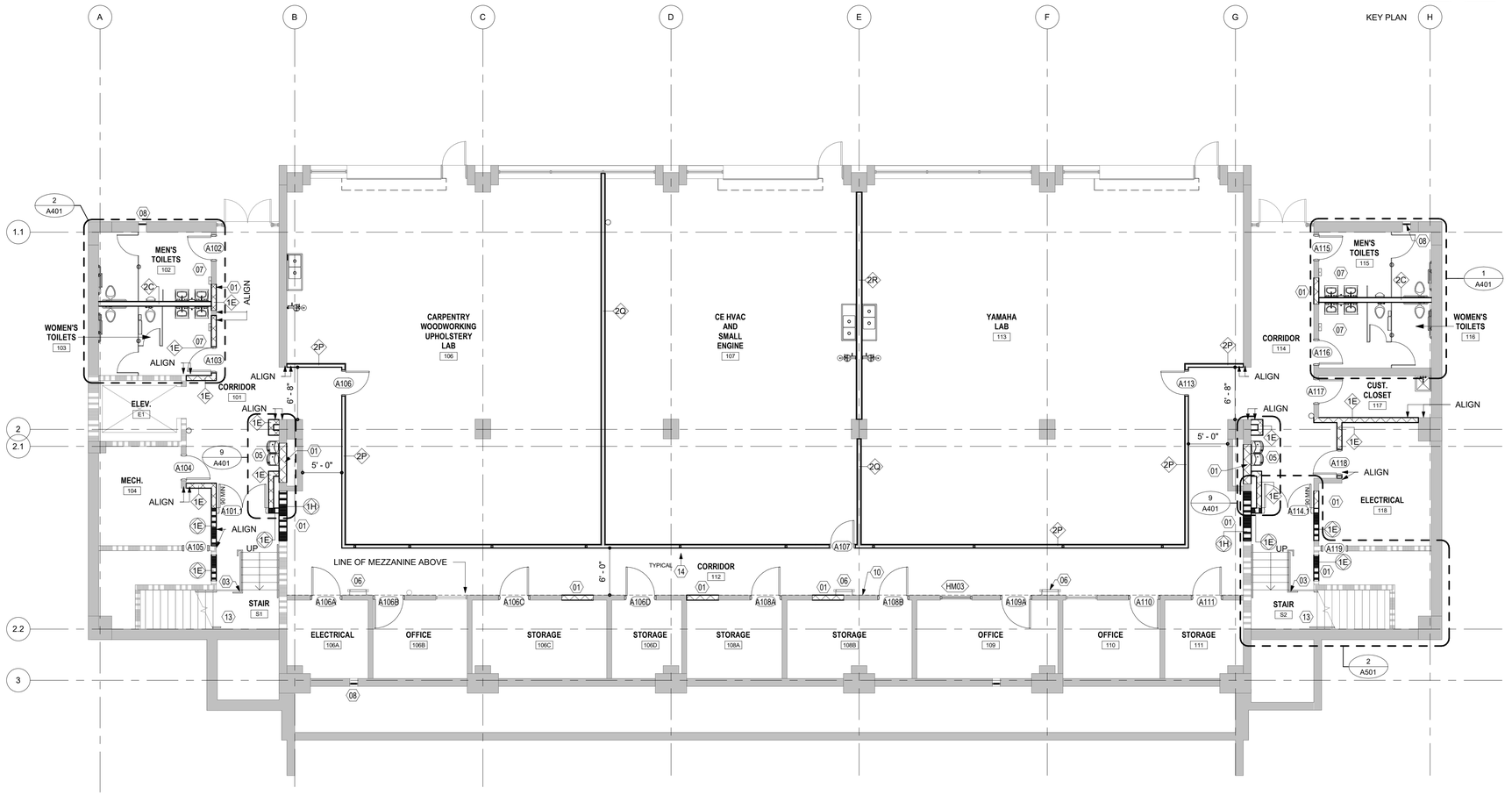
CONSTRUCTION LEGEND

- AREAS NOT IN CONTRACT
- NEW WALL
- EXISTING WALL TO REMAIN
- 1 — WALL TYPE, SEE A101
- Name / 101 — ROOM NAME AND NUMBER
- 01 — CONSTRUCTION KEYNOTE
- 101 — DOOR TAG
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- 45 MIN FIRE RATING — DOOR

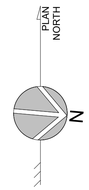


GENERAL CONSTRUCTION NOTES

1. GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (STANDARD AIA DOCUMENT A201, 2007 EDITION) APPLIES TO ALL WORK UNDER THIS CONSTRUCTION CONTRACT.
2. THE CONTRACTOR SHALL REVIEW AND COORDINATE THE SCHEDULING OF ALL CONSTRUCTION WITH THE BUILDING OWNER, SUBMIT DETAILED CONSTRUCTION SCHEDULE PRIOR TO DOING WORK INCLUDING PHASED CONSTRUCTION AND AFTER HOURS WORK.
3. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT BUILDING OCCUPANTS, MATERIALS AND EXISTING FINISHES THROUGHOUT ALL PHASES OF CONSTRUCTION. NOISE, SECURITY AND DUST BARRIERS BETWEEN CONSTRUCTION AREA AND AREAS WHICH ARE PUBLIC OR OTHERWISE OCCUPIED SHALL BE MAINTAINED BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS, EXIT LIGHTING, FIRE PROTECTION DEVICES AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.
4. THE CONTRACTOR SHALL MAINTAIN THE RATING OF ALL REQUIRED RATED WALLS AT ALL INTERSECTIONS, CONNECTIONS, AND PENETRATIONS
5. FIRE RATED PARTITIONS INDICATED ON THE FLOOR PLANS ARE COMPONENTS OF CONTINUOUS RATED ASSEMBLIES CONSISTING OF BUT NOT LIMITED TO, WALLS, FLOOR, DOORS, INTERIOR BORROWED LIGHTS, MECHANICAL PENETRATIONS AND CEILINGS. REFER TO PLANS AND SPECIFICATIONS FOR METHODS OR ACHIEVING THE NECESSARY RATINGS. WHERE THE SPECIFIC METHOD OF ACHIEVING THE RATING IS NOT INDICATED, OBTAIN CLARIFICATION FROM ARCHITECT PRIOR TO CONSTRUCTION.
6. FIRE-RATED PARTITIONS SHALL BE IDENTIFIED AS SUCH IN LARGE RED STENCIL ABOVE FINISHED CEILING.
7. REVIEW WALL EXIT SIGNS AND FIRE EXTINGUISHER LOCATIONS WITH LOCAL CODE OFFICIALS PRIOR TO END OF PRIMARY CONSTRUCTION PHASE. COORDINATE ANY VARIATIONS FROM CONSTRUCTION DOCUMENTS WITH ARCHITECT. RELOCATE EXISTING FIRE EXTINGUISHERS PER FIRE MARSHAL'S DIRECTION.
8. CHASE WALLS SHALL MATCH ADJACENT CONSTRUCTION; TYPICAL, UNLESS OTHERWISE NOTED.
9. NEW GYPSUM BOARD CONSTRUCTION MEETING EXISTING CONSTRUCTION IN SAME PLANE SHALL BE FLUSH WITH NO VISIBLE JOINT.
10. PROVIDE WATER RESISTANT GYPSUM BOARD OR APPROVED EQUAL AT ALL NEW PLUMBING WALLS.
11. IN LIEU OF GYPSUM WALL BOARD, PROVIDE CEMENT BOARD AT ALL STUD WALLS SLATED TO RECEIVE A TILE FINISH.
12. PROVIDE GYPSUM BOARD ASSEMBLIES IN ACCORDANCE WITH ASTM C840, LEVEL 4 FINISH, UNLESS OTHERWISE NOTED.
13. PROVIDE CONCEALED WOOD BLOCKING (FIRE RETARDANT WHERE REQUIRED BY CODE) INSIDE PARTITIONS FOR SECURING WALL-HUNG CABINETS PROVIDED BY FURNITURE VENDOR, SHELVING, TRIM, MILLWORK AND OTHER ELEMENTS ATTACHED TO PARTITIONS AS REQUIRED TO ENSURE FLUSH, STRAIGHT, WELL-SECURED CONDITIONS. PROVIDE CORROSIVE RESISTANT FASTENERS FOR FIRE-RETARDANT TREATED WOOD.
14. THE CONTRACTOR SHALL COORDINATE ALL KEYING REQUIREMENTS, INCLUDING MASTER AND SUB-MASTER SETS, WITH THE OWNER.
15. ALL CODE REQUIRED LABELS SUCH AS 'UL' FACTORY MUTUAL, OR ANY EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, NAME OR NOMENCLATURE PLATES SHALL REMAIN READABLE AND NOT PAINTED.
16. TRANSITIONS OF FLOOR MATERIALS TO BE LOCATED AT CENTERLINE OF DOORS IN CLOSED POSITION; TYPICAL, UNLESS OTHERWISE NOTED.
17. PAINT BACK SIDES OF REMOVABLE ACCESS PANELS AND HINGED COVERS TO MATCH EXPOSED SURFACE.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND FOLLOWING THE BUILDING OWNER'S CONSTRUCTION RULES AND REGULATIONS.
19. WHERE THE DRAWINGS AND SPECIFICATIONS CONFLICT THE MOST STRINGENT, GREATEST QUANTITY AND OR BEST QUALITY SHALL BE USED.
20. PATCH, REPAIR AND REFINISH ALL SURFACES EXPOSED BY DEMOLITION WORK OR CUTTING TO ALIGN WITH EXISTING SURFACES SCHEDULED TO REMAIN, OR NEW FINISHES SPECIFIED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.
21. ALL EXISTING FINISHES REMAINING IN PLACE (CARPET, VCT, CEILINGS, ETC.) SHALL BE CLEANED UTILIZING EFFECTIVE CLEANING METHODS WHICH WILL PRODUCE THE MOST DESIRABLE RESULTS POSSIBLE.
22. WHERE DOORS IN METAL STUD PARTITIONS ARE NOT SPECIFICALLY LOCATED ON THE PLANS WITH DIMENSION STRINGS, PROVIDE A HINGE SIDE JAMB DIMENSION OF 6". WHERE DOORS APPEAR TO BE CENTERED WITHIN PARTITIONS, LOCATE THE DOOR IN THE CENTER OF THE PARTITION.
23. CAULK ALL JOINT OR CRACKS WHICH OCCUR WHERE DISSIMILAR MATERIALS INTERSECT PERPENDICULAR TO EACH OTHER AND THE INTERSECTION IS EXPOSED TO VIEW UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
24. EXISTING FIRE RATED CONSTRUCTION NOTED ON LIFE SAFETY PLANS, CONTRACTOR TO CONFIRM INTEGRITY OF RATED ASSEMBLIES, REPAIR AS REQUIRED.
25. GC TO RE-INSTALL SALVAGED WALL-MOUNTED ACCESSORIES AFTER FINAL COAT OF PAINT HAS BEEN APPLIED. EXISTING CHALKBOARDS TO BE REPLACED WITH OWNER FURNISHED, CONTRACTOR INSTALLED WHITEBOARDS. COORDINATE FINAL LOCATIONS OF ACCESSORIES WITH OWNER.
26. GC TO FURNISH AND INSTALL NEW ROOM SIGNAGE THROUGHOUT.
27. ALL SITE ELEMENTS (FLAT WORK, LANDSCAPING, CONCRETE STAIRS, ETC.) ARE SHOWN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR DESIGN AND CONSTRUCTION METHODS.



1 ALTERNATE 1: FIRST FLOOR CONSTRUCTION PLAN
SCALE: 1/8" = 1'-0"
8' 4' 0' 8'
SCALE : 1/8" = 1'-0"



BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16635 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1 - FIRST FLOOR CONSTRUCTION PLAN

ISSUE BLOCK

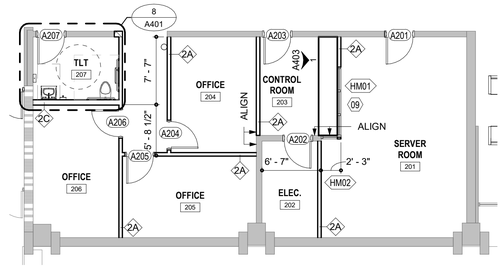
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

A101A

COPYRIGHT © 2020

8/14/2020 9:44:30 AM C:\Users\abrown\Documents\2018023300 CFCC ASN BASE BID_abrownSDEJ4.rvt

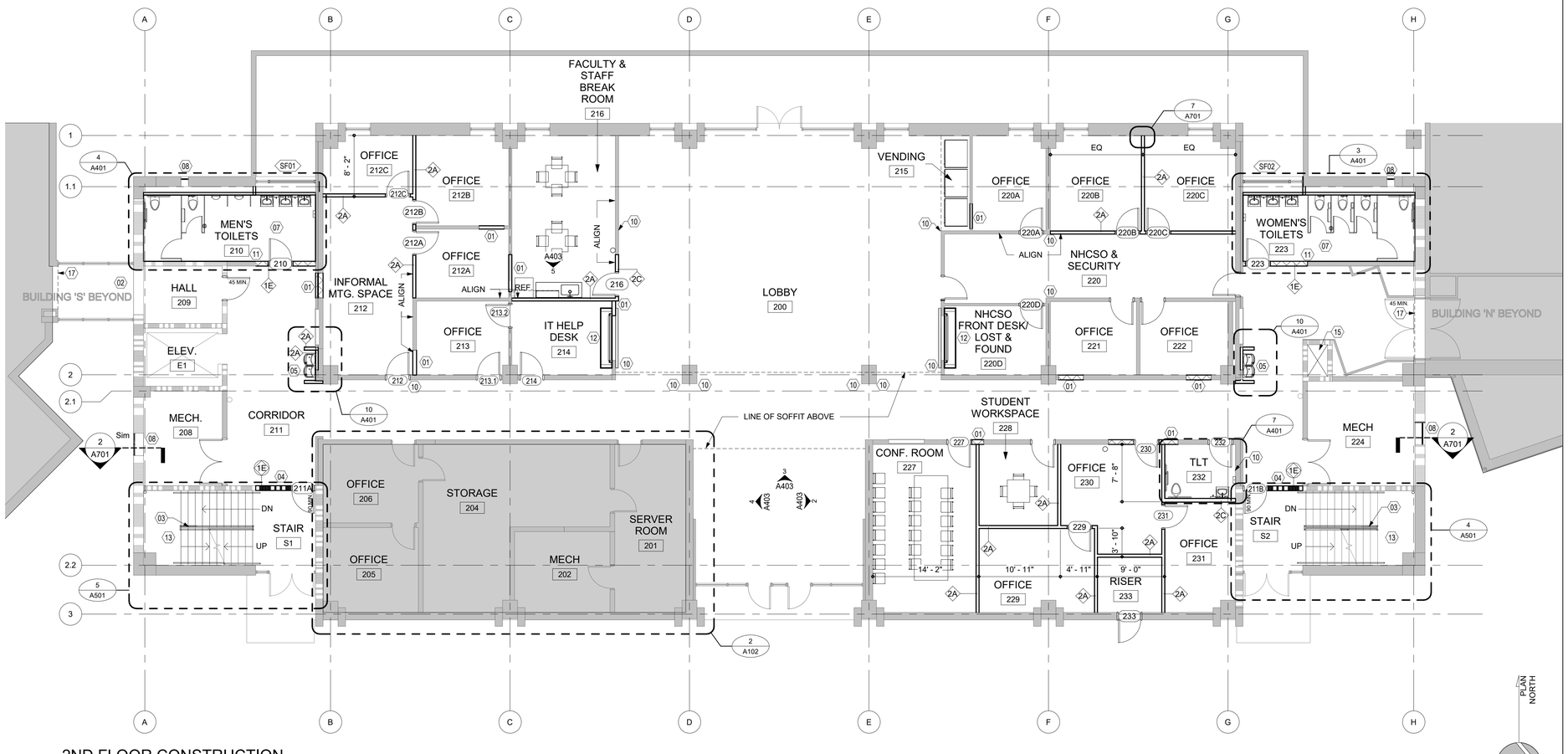


NOTE: REFER TO ALTERNATE 2: DOOR SCHEDULE ON A802

2 ALTERNATE 2 PARTIAL 2ND FLOOR CONSTRUCTION PLAN

8' 4' 0' 8' SCALE: 1/8" = 1'-0"

SCALE : 1/8" = 1'-0"



1 2ND FLOOR CONSTRUCTION PLAN

8' 4' 0' 8' SCALE: 1/8" = 1'-0"

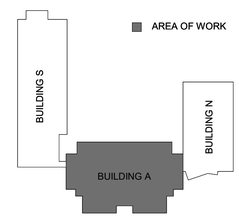
SCALE : 1/8" = 1'-0"

CONSTRUCTION KEYNOTES

01 INFILL WALL AT REMOVED OPENING; MATCH EXISTING ADJACENT CONSTRUCTION
02 REMOVE AND REPLACE WATERPROOFING AT EXISTING BUILDING CONNECTOR
03 FURNISH AND INSTALL NEW PANELIZED WIRE MESH GUARDRAIL SECURED TO EXISTING CONCRETE TREADS AND VERTICAL HANDRAIL STANCHIONS
04 ALTERNATE 5: FURNISH AND INSTALL FIRE RATED GLASS ENTRANCE SYSTEM AT STAIRS
05 FURNISH AND INSTALL NEW HI-LO DRINKING FOUNTAIN, REFER TO PLUMBING DRAWINGS
06 FURNISH AND INSTALL NEW LOCKABLE LADDER DEVICE
07 PROVIDE CEMENTITIOUS SLAB INFILL MATERIAL AT AREA OF REMOVED TERRAZZO AS REQUIRED TO ACHIEVE A LEVEL TRANSITION FROM EXISTING TERRAZZO TO NEW FLOOR TILE; PITCH SLAB TO FLOOR DRAIN, 1/8" PER FT
08 FURNISH AND INSTALL NEW LOUVER
09 FURNISH AND INSTALL HOLLOW METAL FRAME AND GLASS ABOVE COUNTERTOP
10 PATCH AND REPAIR AREA AFFECTED BY DEMOLITION FOR SMOOTH "LIKE NEW" FINISH
11 TOOTH-IN NEW BLOCK
12 FURNISH AND INSTALL ROLL-UP COUNTER SECURITY DOOR
13 FURNISH AND INSTALL NEW HANDRAILS
14 FURNISH AND INSTALL NEW PAINTED STEEL FRAME TO SUPPORT OVERHEAD FIRE PROTECTION PIPING; REFER TO STRUCTURAL DRAWINGS
15 PATCH AND REPAIR SHAFT CONSTRUCTION AS REQUIRED TO 2 HR FIRE RATING, COORDINATE WITH MECHANICAL DRAWINGS
16 NEW ROOF PENETRATION; REFER TO DETAIL 2/A105
17 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE
18 NEW EQUIPMENT RAIL PENETRATION; REFER TO DETAIL 3/A105

CONSTRUCTION LEGEND

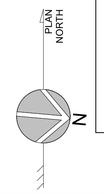
- AREAS NOT IN CONTRACT
- NEW WALL
- EXISTING WALL TO REMAIN
- 1 — WALL TYPE, SEE A101
- Name / 101 — ROOM NAME AND NUMBER
- 01 — CONSTRUCTION KEYNOTE
- 101 — DOOR TAG
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- 45 MIN FIRE RATING — DOOR



KEY PLAN

GENERAL CONSTRUCTION NOTES

1. GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (STANDARD AIA DOCUMENT A201, 2007 EDITION) APPLIES TO ALL WORK UNDER THIS CONSTRUCTION CONTRACT.
2. THE CONTRACTOR SHALL REVIEW AND COORDINATE THE SCHEDULING OF ALL CONSTRUCTION WITH THE BUILDING OWNER, SUBMIT DETAILED CONSTRUCTION SCHEDULE PRIOR TO DOING WORK INCLUDING PHASED CONSTRUCTION AND AFTER HOURS WORK.
3. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT BUILDING OCCUPANTS, MATERIALS AND EXISTING FINISHES THROUGHOUT ALL PHASES OF CONSTRUCTION. NOISE, SECURITY AND DUST BARRIERS BETWEEN CONSTRUCTION AREA AND AREAS WHICH ARE PUBLIC OR OTHERWISE OCCUPIED SHALL BE MAINTAINED BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS, EXIT LIGHTING, FIRE PROTECTION DEVICES AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.
4. THE CONTRACTOR SHALL MAINTAIN THE RATING OF ALL REQUIRED RATED WALLS AT ALL INTERSECTIONS, CONNECTIONS, AND PENETRATIONS
5. FIRE RATED PARTITIONS INDICATED ON THE FLOOR PLANS ARE COMPONENTS OF CONTINUOUS RATED ASSEMBLIES CONSISTING OF BUT NOT LIMITED TO, WALLS, FLOOR, DOORS, INTERIOR BORROWED LIGHTS, MECHANICAL PENETRATIONS AND CEILINGS. REFER TO PLANS AND SPECIFICATIONS FOR METHODS OR ACHIEVING THE NECESSARY RATINGS. WHERE THE SPECIFIC METHOD OF ACHIEVING THE RATING IS NOT INDICATED, OBTAIN CLARIFICATION FROM ARCHITECT PRIOR TO CONSTRUCTION.
6. FIRE-RATED PARTITIONS SHALL BE IDENTIFIED AS SUCH IN LARGE RED STENCIL ABOVE FINISHED CEILING.
7. REVIEW WALL EXIT SIGNS AND FIRE EXTINGUISHER LOCATIONS WITH LOCAL CODE OFFICIALS PRIOR TO END OF PRIMARY CONSTRUCTION PHASE. COORDINATE ANY VARIATIONS FROM CONSTRUCTION DOCUMENTS WITH ARCHITECT. RELOCATE EXISTING FIRE EXTINGUISHERS PER FIRE MARSHAL'S DIRECTION.
8. CHASE WALLS SHALL MATCH ADJACENT CONSTRUCTION; TYPICAL, UNLESS OTHERWISE NOTED.
9. NEW GYPSUM BOARD CONSTRUCTION MEETING EXISTING CONSTRUCTION IN SAME PLANE SHALL BE FLUSH WITH NO VISIBLE JOINT.
10. PROVIDE WATER RESISTANT GYPSUM BOARD OR APPROVED EQUAL AT ALL NEW PLUMBING WALLS.
11. IN LIEU OF GYPSUM WALL BOARD, PROVIDE CEMENT BOARD AT ALL STUD WALLS SLATED TO RECEIVE A TILE FINISH.
12. PROVIDE GYPSUM BOARD ASSEMBLIES IN ACCORDANCE WITH ASTM C840, LEVEL 4 FINISH, UNLESS OTHERWISE NOTED.
13. PROVIDE CONCEALED WOOD BLOCKING (FIRE RETARDANT WHERE REQUIRED BY CODE) INSIDE PARTITIONS FOR SECURING WALL-HUNG CABINETS PROVIDED BY FURNITURE VENDOR, SHELVING, TRIM, MILLWORK AND OTHER ELEMENTS ATTACHED TO PARTITIONS AS REQUIRED TO ENSURE FLUSH, STRAIGHT, WELL-SECURED CONDITIONS. PROVIDE CORROSIVE RESISTANT FASTENERS FOR FIRE-RETARDANT TREATED WOOD.
14. THE CONTRACTOR SHALL COORDINATE ALL KEYING REQUIREMENTS, INCLUDING MASTER AND SUB-MASTER SETS, WITH THE OWNER.
15. ALL CODE REQUIRED LABELS SUCH AS 'UL', FACTORY MUTUAL, OR ANY EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, NAME OR NOMENCLATURE PLATES SHALL REMAIN READABLE AND NOT PAINTED.
16. TRANSITIONS OF FLOOR MATERIALS TO BE LOCATED AT CENTERLINE OF DOORS IN CLOSED POSITION; TYPICAL, UNLESS OTHERWISE NOTED.
17. PAINT BACK SIDES OF REMOVABLE ACCESS PANELS AND HINGED COVERS TO MATCH EXPOSED SURFACE.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND FOLLOWING THE BUILDING OWNER'S CONSTRUCTION RULES AND REGULATIONS.
19. WHERE THE DRAWINGS AND SPECIFICATIONS CONFLICT THE MOST STRINGENT, GREATEST QUANTITY AND OR BEST QUALITY SHALL BE USED.
20. PATCH, REPAIR AND REFINISH ALL SURFACES EXPOSED BY DEMOLITION WORK OR CUTTING TO ALIGN WITH EXISTING SURFACES SCHEDULED TO REMAIN, OR NEW FINISHES SPECIFIED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.
21. ALL EXISTING FINISHES REMAINING IN PLACE (CARPET, VCT, CEILINGS, ETC.) SHALL BE CLEANED UTILIZING EFFECTIVE CLEANING METHODS WHICH WILL PRODUCE THE MOST DESIRABLE RESULTS POSSIBLE.
22. WHERE DOORS IN METAL STUD PARTITIONS ARE NOT SPECIFICALLY LOCATED ON THE PLANS WITH DIMENSION STRINGS, PROVIDE A HINGE SIDE JAMB DIMENSION OF 6". WHERE DOORS APPEAR TO BE CENTERED WITHIN PARTITIONS, LOCATE THE DOOR IN THE CENTER OF THE PARTITION.
23. CAULK ALL JOINT OR CRACKS WHICH OCCUR WHERE DISSIMILAR MATERIALS INTERSECT PERPENDICULAR TO EACH OTHER AND THE INTERSECTION IS EXPOSED TO VIEW UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
24. EXISTING FIRE RATED CONSTRUCTION NOTED ON LIFE SAFETY PLANS, CONTRACTOR TO CONFIRM INTEGRITY OF RATED ASSEMBLIES, REPAIR AS REQUIRED.
25. GC TO RE-INSTALL SALVAGED WALL-MOUNTED ACCESSORIES AFTER FINAL COAT OF PAINT HAS BEEN APPLIED. EXISTING CHALKBOARDS TO BE REPLACED WITH OWNER FURNISHED, CONTRACTOR INSTALLED WHITEBOARDS. COORDINATE FINAL LOCATIONS OF ACCESSORIES WITH OWNER.
26. GC TO FURNISH AND INSTALL NEW ROOM SIGNAGE THROUGHOUT.
27. ALL SITE ELEMENTS (FLAT WORK, LANDSCAPING, CONCRETE STAIRS, ETC.) ARE SHOWN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR DESIGN AND CONSTRUCTION METHODS.



BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarkr, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16635 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

SECOND FLOOR CONSTRUCTION PLAN AND ALTERNATE 2 PARTIAL FLOOR PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A102

COPYRIGHT © 2020

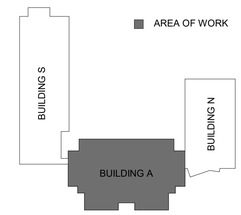
8/14/2020 9:44:32 AM C:\Users\abrown\Documents\2018023000 CFCC ASN BASE BID_abrown9DEJ4.rvt

CONSTRUCTION KEYNOTES

01 INFILL WALL AT REMOVED OPENING; MATCH EXISTING ADJACENT CONSTRUCTION
02 REMOVE AND REPLACE WATERPROOFING AT EXISTING BUILDING CONNECTOR
03 FURNISH AND INSTALL NEW PANELIZED WIRE MESH GUARDRAIL SECURED TO EXISTING CONCRETE TREADS AND VERTICAL HANDRAIL STANCHIONS
04 ALTERNATE 5: FURNISH AND INSTALL FIRE RATED GLASS ENTRANCE SYSTEM AT STAIRS
05 FURNISH AND INSTALL NEW HI-LO DRINKING FOUNTAIN, REFER TO PLUMBING DRAWINGS
06 FURNISH AND INSTALL NEW LOCKABLE LADDER DEVICE
07 PROVIDE CEMENTITIOUS SLAB INFILL MATERIAL AT AREA OF REMOVED TERRAZZO AS REQUIRED TO ACHIEVE A LEVEL TRANSITION FROM EXISTING TERRAZZO TO NEW FLOOR TILE; PITCH SLAB TO FLOOR DRAIN, 1/8" PER FT
08 FURNISH AND INSTALL NEW LOUVER
09 FURNISH AND INSTALL HOLLOW METAL FRAME AND GLASS ABOVE COUNTERTOP
10 PATCH AND REPAIR AREA AFFECTED BY DEMOLITION FOR SMOOTH "LIKE NEW" FINISH
11 TOOTH-IN NEW BLOCK
12 FURNISH AND INSTALL ROLL-UP COUNTER SECURITY DOOR
13 FURNISH AND INSTALL NEW HANDRAILS
14 FURNISH AND INSTALL NEW PAINTED STEEL FRAME TO SUPPORT OVERHEAD FIRE PROTECTION PIPING; REFER TO STRUCTURAL DRAWINGS
15 PATCH AND REPAIR SHAFT CONSTRUCTION AS REQUIRED TO 2 HR FIRE RATING, COORDINATE WITH MECHANICAL DRAWINGS
16 NEW ROOF PENETRATION; REFER TO DETAIL 2/A105
17 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE
18 NEW EQUIPMENT RAIL PENETRATION; REFER TO DETAIL 3/A105

CONSTRUCTION LEGEND

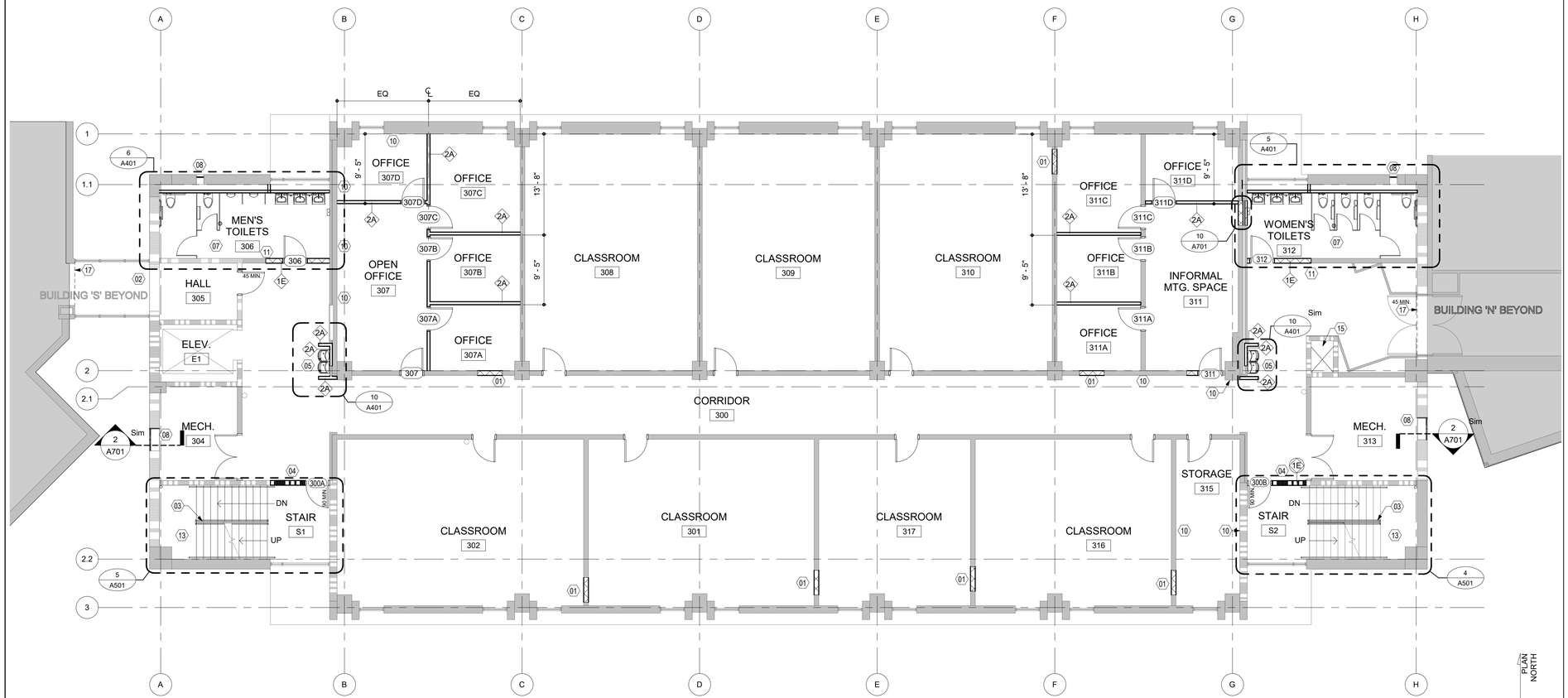
- AREAS NOT IN CONTRACT
- NEW WALL
- EXISTING WALL TO REMAIN
- 1i — WALL TYPE, SEE A101
- Name / 101 — ROOM NAME AND NUMBER
- 01 — CONSTRUCTION KEYNOTE
- 101 — DOOR TAG
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- 45 MIN FIRE RATING — DOOR



KEY PLAN

GENERAL CONSTRUCTION NOTES

1. GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (STANDARD AIA DOCUMENT A201, 2007 EDITION) APPLIES TO ALL WORK UNDER THIS CONSTRUCTION CONTRACT.
2. THE CONTRACTOR SHALL REVIEW AND COORDINATE THE SCHEDULING OF ALL CONSTRUCTION WITH THE BUILDING OWNER, SUBMIT DETAILED CONSTRUCTION SCHEDULE PRIOR TO DOING WORK INCLUDING PHASED CONSTRUCTION AND AFTER HOURS WORK.
3. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT BUILDING OCCUPANTS, MATERIALS AND EXISTING FINISHES THROUGHOUT ALL PHASES OF CONSTRUCTION. NOISE, SECURITY AND DUST BARRIERS BETWEEN CONSTRUCTION AREA AND AREAS WHICH ARE PUBLIC OR OTHERWISE OCCUPIED SHALL BE MAINTAINED BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS, EXIT LIGHTING, FIRE PROTECTION DEVICES AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.
4. THE CONTRACTOR SHALL MAINTAIN THE RATING OF ALL REQUIRED RATED WALLS AT ALL INTERSECTIONS, CONNECTIONS, AND PENETRATIONS
5. FIRE RATED PARTITIONS INDICATED ON THE FLOOR PLANS ARE COMPONENTS OF CONTINUOUS RATED ASSEMBLIES CONSISTING OF BUT NOT LIMITED TO, WALLS, FLOOR, DOORS, INTERIOR BORROWED LIGHTS, MECHANICAL PENETRATIONS AND CEILINGS. REFER TO PLANS AND SPECIFICATIONS FOR METHODS OR ACHIEVING THE NECESSARY RATINGS. WHERE THE SPECIFIC METHOD OF ACHIEVING THE RATING IS NOT INDICATED, OBTAIN CLARIFICATION FROM ARCHITECT PRIOR TO CONSTRUCTION.
6. FIRE-RATED PARTITIONS SHALL BE IDENTIFIED AS SUCH IN LARGE RED STENCIL ABOVE FINISHED CEILING.
7. REVIEW WALL EXIT SIGNS AND FIRE EXTINGUISHER LOCATIONS WITH LOCAL CODE OFFICIALS PRIOR TO END OF PRIMARY CONSTRUCTION PHASE. COORDINATE ANY VARIATIONS FROM CONSTRUCTION DOCUMENTS WITH ARCHITECT. RELOCATE EXISTING FIRE EXTINGUISHERS PER FIRE MARSHAL'S DIRECTION.
8. CHASE WALLS SHALL MATCH ADJACENT CONSTRUCTION; TYPICAL, UNLESS OTHERWISE NOTED.
9. NEW GYPSUM BOARD CONSTRUCTION MEETING EXISTING CONSTRUCTION IN SAME PLANE SHALL BE FLUSH WITH NO VISIBLE JOINT.
10. PROVIDE WATER RESISTANT GYPSUM BOARD OR APPROVED EQUAL AT ALL NEW PLUMBING WALLS.
11. IN LIEU OF GYPSUM WALL BOARD, PROVIDE CEMENT BOARD AT ALL STUD WALLS SLATED TO RECEIVE A TILE FINISH.
12. PROVIDE GYPSUM BOARD ASSEMBLIES IN ACCORDANCE WITH ASTM C840, LEVEL 4 FINISH, UNLESS OTHERWISE NOTED.
13. PROVIDE CONCEALED WOOD BLOCKING (FIRE RETARDANT WHERE REQUIRED BY CODE) INSIDE PARTITIONS FOR SECURING WALL-HUNG CABINETS PROVIDED BY FURNITURE VENDOR, SHELVING, TRIM, MILLWORK AND OTHER ELEMENTS ATTACHED TO PARTITIONS AS REQUIRED TO ENSURE FLUSH, STRAIGHT, WELL-SECURED CONDITIONS. PROVIDE CORROSIVE RESISTANT FASTENERS FOR FIRE-RETARDANT TREATED WOOD.
14. THE CONTRACTOR SHALL COORDINATE ALL KEYING REQUIREMENTS, INCLUDING MASTER AND SUB-MASTER SETS, WITH THE OWNER.
15. ALL CODE REQUIRED LABELS SUCH AS 'UL', FACTORY MUTUAL, OR ANY EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, NAME OR NOMENCLATURE PLATES SHALL REMAIN READABLE AND NOT PAINTED.
16. TRANSITIONS OF FLOOR MATERIALS TO BE LOCATED AT CENTERLINE OF DOORS IN CLOSED POSITION; TYPICAL, UNLESS OTHERWISE NOTED.
17. PAINT BACK SIDES OF REMOVABLE ACCESS PANELS AND HINGED COVERS TO MATCH EXPOSED SURFACE.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND FOLLOWING THE BUILDING OWNER'S CONSTRUCTION RULES AND REGULATIONS.
19. WHERE THE DRAWINGS AND SPECIFICATIONS CONFLICT THE MOST STRINGENT, GREATEST QUANTITY AND OR BEST QUALITY SHALL BE USED.
20. PATCH, REPAIR AND REFINISH ALL SURFACES EXPOSED BY DEMOLITION WORK OR CUTTING TO ALIGN WITH EXISTING SURFACES SCHEDULED TO REMAIN, OR NEW FINISHES SPECIFIED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.
21. ALL EXISTING FINISHES REMAINING IN PLACE (CARPET, VCT, CEILINGS, ETC.) SHALL BE CLEANED UTILIZING EFFECTIVE CLEANING METHODS WHICH WILL PRODUCE THE MOST DESIRABLE RESULTS POSSIBLE.
22. WHERE DOORS IN METAL STUD PARTITIONS ARE NOT SPECIFICALLY LOCATED ON THE PLANS WITH DIMENSION STRINGS, PROVIDE A HINGE SIDE JAMB DIMENSION OF 6". WHERE DOORS APPEAR TO BE CENTERED WITHIN PARTITIONS, LOCATE THE DOOR IN THE CENTER OF THE PARTITION.
23. CAULK ALL JOINT OR CRACKS WHICH OCCUR WHERE DISSIMILAR MATERIALS INTERSECT PERPENDICULAR TO EACH OTHER AND THE INTERSECTION IS EXPOSED TO VIEW UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
24. EXISTING FIRE RATED CONSTRUCTION NOTED ON LIFE SAFETY PLANS, CONTRACTOR TO CONFIRM INTEGRITY OF RATED ASSEMBLIES, REPAIR AS REQUIRED.
25. GC TO RE-INSTALL SALVAGED WALL-MOUNTED ACCESSORIES AFTER FINAL COAT OF PAINT HAS BEEN APPLIED. EXISTING CHALKBOARDS TO BE REPLACED WITH OWNER FURNISHED, CONTRACTOR INSTALLED WHITEBOARDS. COORDINATE FINAL LOCATIONS OF ACCESSORIES WITH OWNER.
26. GC TO FURNISH AND INSTALL NEW ROOM SIGNAGE THROUGHOUT.
27. ALL SITE ELEMENTS (FLAT WORK, LANDSCAPING, CONCRETE STAIRS, ETC.) ARE SHOWN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR DESIGN AND CONSTRUCTION METHODS.



1 3RD FLOOR CONSTRUCTION PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16635 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

THIRD FLOOR CONSTRUCTION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A103

COPYRIGHT © 2020

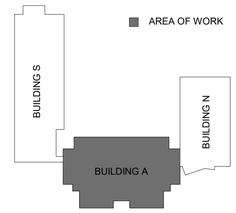
8/14/2020 9:44:34 AM C:\Users\abrown\Documents\2018023900 CFCC ASN BASE BID_abrown9DEJ4.rvt

CONSTRUCTION KEYNOTES

01 INFILL WALL AT REMOVED OPENING; MATCH EXISTING ADJACENT CONSTRUCTION
02 REMOVE AND REPLACE WATERPROOFING AT EXISTING BUILDING CONNECTOR
03 FURNISH AND INSTALL NEW PANELIZED WIRE MESH GUARDRAIL SECURED TO EXISTING CONCRETE TREADS AND VERTICAL HANDRAIL STANCHIONS
04 ALTERNATE 5: FURNISH AND INSTALL FIRE RATED GLASS ENTRANCE SYSTEM AT STAIRS
05 FURNISH AND INSTALL NEW HI-LO DRINKING FOUNTAIN, REFER TO PLUMBING DRAWINGS
06 FURNISH AND INSTALL NEW LOCKABLE LADDER DEVICE
07 PROVIDE CEMENTITIOUS SLAB INFILL MATERIAL AT AREA OF REMOVED TERRAZZO AS REQUIRED TO ACHIEVE A LEVEL TRANSITION FROM EXISTING TERRAZZO TO NEW FLOOR TILE; PITCH SLAB TO FLOOR DRAIN, 1/8" PER FT
08 FURNISH AND INSTALL NEW LOUVER
09 FURNISH AND INSTALL HOLLOW METAL FRAME AND GLASS ABOVE COUNTERTOP
10 PATCH AND REPAIR AREA AFFECTED BY DEMOLITION FOR SMOOTH "LIKE NEW" FINISH
11 TOOTH-IN NEW BLOCK
12 FURNISH AND INSTALL ROLL-UP COUNTER SECURITY DOOR
13 FURNISH AND INSTALL NEW HANDRAILS
14 FURNISH AND INSTALL NEW PAINTED STEEL FRAME TO SUPPORT OVERHEAD FIRE PROTECTION PIPING; REFER TO STRUCTURAL DRAWINGS
15 PATCH AND REPAIR SHAFT CONSTRUCTION AS REQUIRED TO 2 HR FIRE RATING, COORDINATE WITH MECHANICAL DRAWINGS
16 NEW ROOF PENETRATION; REFER TO DETAIL 2/A105
17 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE
18 NEW EQUIPMENT RAIL PENETRATION; REFER TO DETAIL 3/A105

CONSTRUCTION LEGEND

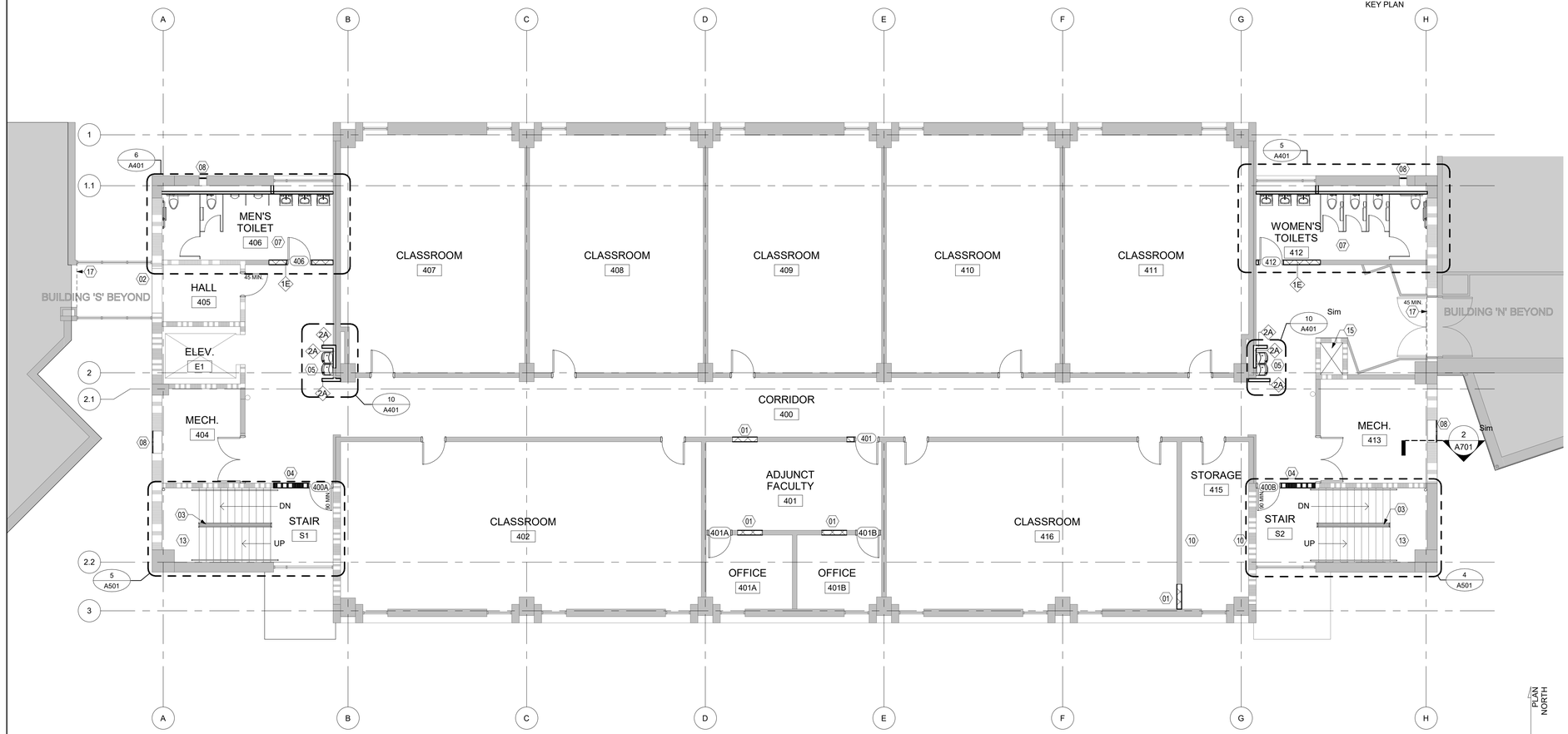
- AREAS NOT IN CONTRACT
- NEW WALL
- EXISTING WALL TO REMAIN
- 1 — WALL TYPE, SEE A101
- Name 101 — ROOM NAME AND NUMBER
- 01 — CONSTRUCTION KEYNOTE
- 101 — DOOR TAG
- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER
- 45 MIN FIRE RATING — DOOR



KEY PLAN

GENERAL CONSTRUCTION NOTES

1. GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (STANDARD AIA DOCUMENT A201, 2007 EDITION) APPLIES TO ALL WORK UNDER THIS CONSTRUCTION CONTRACT.
2. THE CONTRACTOR SHALL REVIEW AND COORDINATE THE SCHEDULING OF ALL CONSTRUCTION WITH THE BUILDING OWNER, SUBMIT DETAILED CONSTRUCTION SCHEDULE PRIOR TO DOING WORK INCLUDING PHASED CONSTRUCTION AND AFTER HOURS WORK.
3. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT BUILDING OCCUPANTS, MATERIALS AND EXISTING FINISHES THROUGHOUT ALL PHASES OF CONSTRUCTION. NOISE, SECURITY AND DUST BARRIERS BETWEEN CONSTRUCTION AREA AND AREAS WHICH ARE PUBLIC OR OTHERWISE OCCUPIED SHALL BE MAINTAINED BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS, EXIT LIGHTING, FIRE PROTECTION DEVICES AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.
4. THE CONTRACTOR SHALL MAINTAIN THE RATING OF ALL REQUIRED RATED WALLS AT ALL INTERSECTIONS, CONNECTIONS, AND PENETRATIONS
5. FIRE RATED PARTITIONS INDICATED ON THE FLOOR PLANS ARE COMPONENTS OF CONTINUOUS RATED ASSEMBLIES CONSISTING OF BUT NOT LIMITED TO, WALLS, FLOOR, DOORS, INTERIOR BORROWED LIGHTS, MECHANICAL PENETRATIONS AND CEILINGS. REFER TO PLANS AND SPECIFICATIONS FOR METHODS OR ACHIEVING THE NECESSARY RATINGS. WHERE THE SPECIFIC METHOD OF ACHIEVING THE RATING IS NOT INDICATED, OBTAIN CLARIFICATION FROM ARCHITECT PRIOR TO CONSTRUCTION.
6. FIRE-RATED PARTITIONS SHALL BE IDENTIFIED AS SUCH IN LARGE RED STENCIL ABOVE FINISHED CEILING.
7. REVIEW WALL EXIT SIGNS AND FIRE EXTINGUISHER LOCATIONS WITH LOCAL CODE OFFICIALS PRIOR TO END OF PRIMARY CONSTRUCTION PHASE. COORDINATE ANY VARIATIONS FROM CONSTRUCTION DOCUMENTS WITH ARCHITECT. RELOCATE EXISTING FIRE EXTINGUISHERS PER FIRE MARSHAL'S DIRECTION.
8. CHASE WALLS SHALL MATCH ADJACENT CONSTRUCTION; TYPICAL, UNLESS OTHERWISE NOTED.
9. NEW GYPSUM BOARD CONSTRUCTION MEETING EXISTING CONSTRUCTION IN SAME PLANE SHALL BE FLUSH WITH NO VISIBLE JOINT.
10. PROVIDE WATER RESISTANT GYPSUM BOARD OR APPROVED EQUAL AT ALL NEW PLUMBING WALLS.
11. IN LIEU OF GYPSUM WALL BOARD, PROVIDE CEMENT BOARD AT ALL STUD WALLS SLATED TO RECEIVE A TILE FINISH.
12. PROVIDE GYPSUM BOARD ASSEMBLIES IN ACCORDANCE WITH ASTM C840, LEVEL 4 FINISH, UNLESS OTHERWISE NOTED.
13. PROVIDE CONCEALED WOOD BLOCKING (FIRE RETARDANT WHERE REQUIRED BY CODE) INSIDE PARTITIONS FOR SECURING WALL-HUNG CABINETS PROVIDED BY FURNITURE VENDOR, SHELVING, TRIM, MILLWORK AND OTHER ELEMENTS ATTACHED TO PARTITIONS AS REQUIRED TO ENSURE FLUSH, STRAIGHT, WELL-SECURED CONDITIONS. PROVIDE CORROSIVE RESISTANT FASTENERS FOR FIRE-RETARDANT TREATED WOOD.
14. THE CONTRACTOR SHALL COORDINATE ALL KEYING REQUIREMENTS, INCLUDING MASTER AND SUB-MASTER SETS, WITH THE OWNER.
15. ALL CODE REQUIRED LABELS SUCH AS 'UL', FACTORY MUTUAL, OR ANY EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, NAME OR NOMENCLATURE PLATES SHALL REMAIN READABLE AND NOT PAINTED.
16. TRANSITIONS OF FLOOR MATERIALS TO BE LOCATED AT CENTERLINE OF DOORS IN CLOSED POSITION; TYPICAL, UNLESS OTHERWISE NOTED.
17. PAINT BACK SIDES OF REMOVABLE ACCESS PANELS AND HINGED COVERS TO MATCH EXPOSED SURFACE.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND FOLLOWING THE BUILDING OWNER'S CONSTRUCTION RULES AND REGULATIONS.
19. WHERE THE DRAWINGS AND SPECIFICATIONS CONFLICT THE MOST STRINGENT, GREATEST QUANTITY AND OR BEST QUALITY SHALL BE USED.
20. PATCH, REPAIR AND REFINISH ALL SURFACES EXPOSED BY DEMOLITION WORK OR CUTTING TO ALIGN WITH EXISTING SURFACES SCHEDULED TO REMAIN, OR NEW FINISHES SPECIFIED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.
21. ALL EXISTING FINISHES REMAINING IN PLACE (CARPET, VCT, CEILINGS, ETC.) SHALL BE CLEANED UTILIZING EFFECTIVE CLEANING METHODS WHICH WILL PRODUCE THE MOST DESIRABLE RESULTS POSSIBLE.
22. WHERE DOORS IN METAL STUD PARTITIONS ARE NOT SPECIFICALLY LOCATED ON THE PLANS WITH DIMENSION STRINGS, PROVIDE A HINGE SIDE JAMB DIMENSION OF 6". WHERE DOORS APPEAR TO BE CENTERED WITHIN PARTITIONS, LOCATE THE DOOR IN THE CENTER OF THE PARTITION.
23. CAULK ALL JOINT OR CRACKS WHICH OCCUR WHERE DISSIMILAR MATERIALS INTERSECT PERPENDICULAR TO EACH OTHER AND THE INTERSECTION IS EXPOSED TO VIEW UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
24. EXISTING FIRE RATED CONSTRUCTION NOTED ON LIFE SAFETY PLANS, CONTRACTOR TO CONFIRM INTEGRITY OF RATED ASSEMBLIES, REPAIR AS REQUIRED.
25. GC TO RE-INSTALL SALVAGED WALL-MOUNTED ACCESSORIES AFTER FINAL COAT OF PAINT HAS BEEN APPLIED. EXISTING CHALKBOARDS TO BE REPLACED WITH OWNER FURNISHED, CONTRACTOR INSTALLED WHITEBOARDS. COORDINATE FINAL LOCATIONS OF ACCESSORIES WITH OWNER.
26. GC TO FURNISH AND INSTALL NEW ROOM SIGNAGE THROUGHOUT.
27. ALL SITE ELEMENTS (FLAT WORK, LANDSCAPING, CONCRETE STAIRS, ETC.) ARE SHOWN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR DESIGN AND CONSTRUCTION METHODS.



1 4TH FLOOR CONSTRUCTION PLAN
SCALE: 1/8" = 1'-0"
8' 4' 0' 8'
SCALE : 1/8" = 1'-0"

PLAN NORTH

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16635 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FOURTH FLOOR CONSTRUCTION PLAN

ISSUE BLOCK

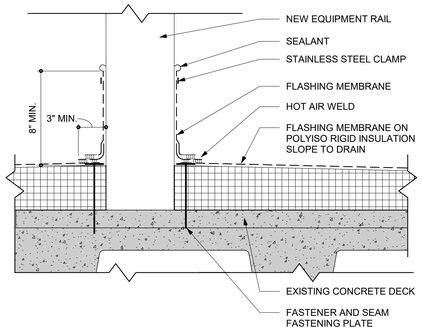
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A104

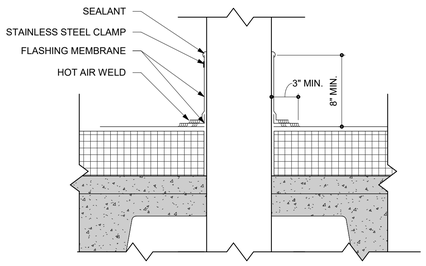
COPYRIGHT © 2020

8/14/2020 9:44:35 AM C:\Users\abrown\Documents\2018023000 CFCC ASN BASE BID_abrown9DEJ4.rvt



3 EQUIPMENT RAIL FLASHING DETAIL - TYP.

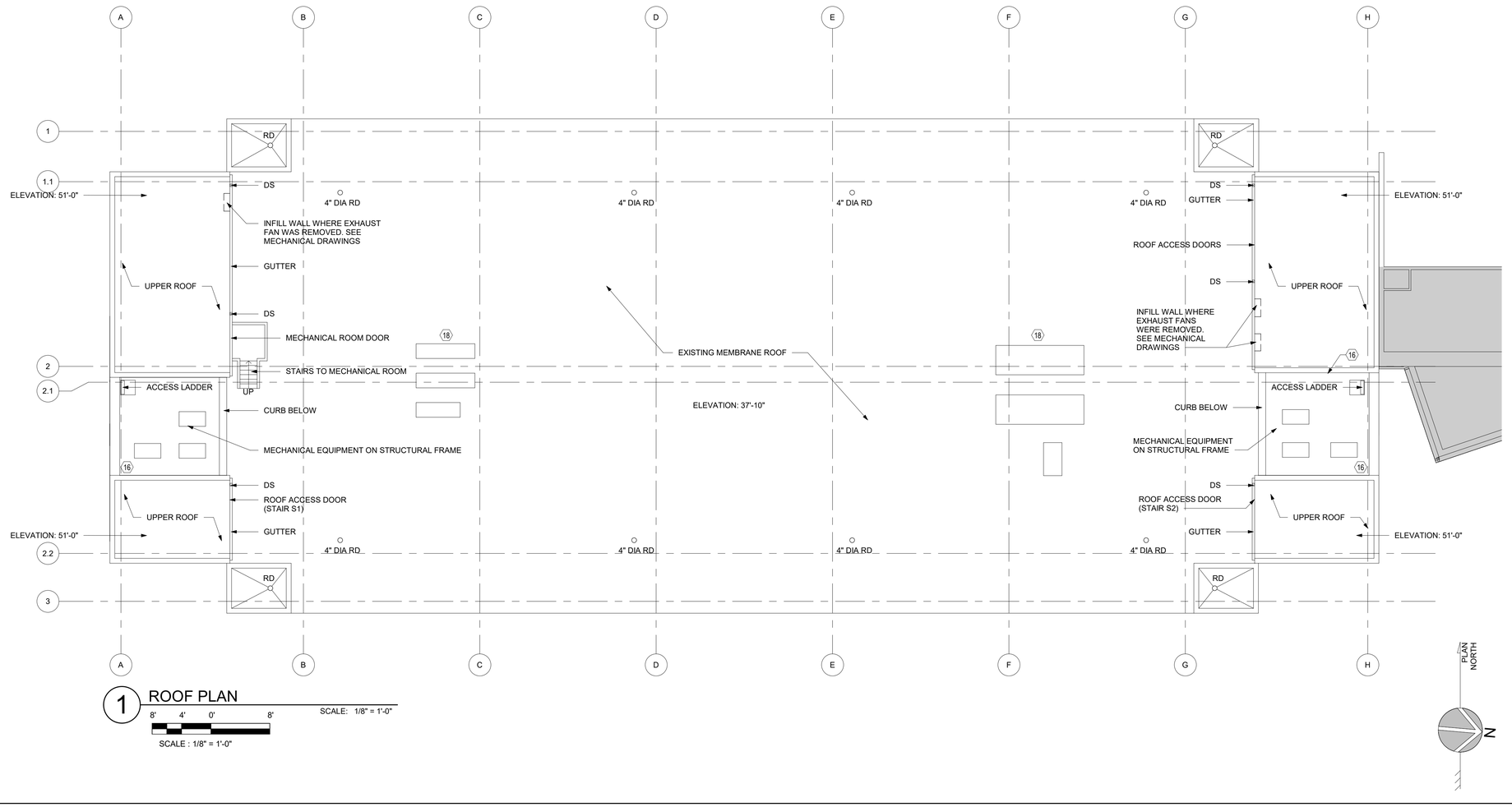
SCALE: 1 1/2" = 1'-0"



2 ROOF PENETRATION DETAIL - TYP

SCALE: 1 1/2" = 1'-0"

NOTE: ALL ROOF PENETRATIONS, TERMINATIONS, TRANSITIONS, ETC SHALL BE DETAILED AND INSTALLED IN ACCORDANCE w/ THE ROOF MEMBRANE MANUFACTURERS STANDARD DETAILS AND INSTALLATION INSTRUCTIONS



1 ROOF PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

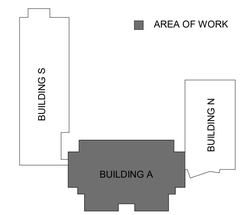
N

CONSTRUCTION KEYNOTES

01 INFILL WALL AT REMOVED OPENING; MATCH EXISTING ADJACENT CONSTRUCTION
02 REMOVE AND REPLACE WATERPROOFING AT EXISTING BUILDING CONNECTOR
03 FURNISH AND INSTALL NEW PANELIZED WIRE MESH GUARDRAIL SECURED TO EXISTING CONCRETE TREADS AND VERTICAL HANDRAIL STANCHIONS
04 ALTERNATE 5: FURNISH AND INSTALL FIRE RATED GLASS ENTRANCE SYSTEM AT STAIRS
05 FURNISH AND INSTALL NEW HI-LO DRINKING FOUNTAIN, REFER TO PLUMBING DRAWINGS
06 FURNISH AND INSTALL NEW LOCKABLE LADDER DEVICE
07 PROVIDE CEMENTITIOUS SLAB INFILL MATERIAL AT AREA OF REMOVED TERRAZZO AS REQUIRED TO ACHIEVE A LEVEL TRANSITION FROM EXISTING TERRAZZO TO NEW FLOOR TILE; PITCH SLAB TO FLOOR DRAIN, 1/8" PER FT
08 FURNISH AND INSTALL NEW LOUVER
09 FURNISH AND INSTALL HOLLOW METAL FRAME AND GLASS ABOVE COUNTERTOP
10 PATCH AND REPAIR AREA AFFECTED BY DEMOLITION FOR SMOOTH "LIKE NEW" FINISH
11 TOOTH-IN NEW BLOCK
12 FURNISH AND INSTALL ROLL-UP COUNTER SECURITY DOOR
13 FURNISH AND INSTALL NEW HANDRAILS
14 FURNISH AND INSTALL NEW PAINTED STEEL FRAME TO SUPPORT OVERHEAD FIRE PROTECTION PIPING; REFER TO STRUCTURAL DRAWINGS
15 PATCH AND REPAIR SHAFT CONSTRUCTION AS REQUIRED TO 2 HR FIRE RATING, COORDINATE WITH MECHANICAL DRAWINGS
16 NEW ROOF PENETRATION; REFER TO DETAIL 2/A105
17 PROVIDE TEMPORARY CONSTRUCTION PARTITION WITH ACCESS DOOR, OR SECURE EXISTING DOORS AND PROVIDE CONSTRUCTION SIGNAGE AS APPROPRIATE
18 NEW EQUIPMENT RAIL PENETRATION; REFER TO DETAIL 3/A105

CONSTRUCTION LEGEND

AREAS NOT IN CONTRACT
NEW WALL
EXISTING WALL TO REMAIN
1 — WALL TYPE, SEE A101
Name / 101 — ROOM NAME AND NUMBER
01 — CONSTRUCTION KEYNOTE
101 — DOOR TAG
2 HR RATED FIRE PARTITION / FIRE BARRIER
1 HR RATED FIRE PARTITION / FIRE BARRIER
45 MIN FIRE RATING — DOOR



KEY PLAN

GENERAL CONSTRUCTION NOTES

1. GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (STANDARD AIA DOCUMENT A201, 2007 EDITION) APPLIES TO ALL WORK UNDER THIS CONSTRUCTION CONTRACT.
2. THE CONTRACTOR SHALL REVIEW AND COORDINATE THE SCHEDULING OF ALL CONSTRUCTION WITH THE BUILDING OWNER, SUBMIT DETAILED CONSTRUCTION SCHEDULE PRIOR TO DOING WORK INCLUDING PHASED CONSTRUCTION AND AFTER HOURS WORK.
3. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT BUILDING OCCUPANTS, MATERIALS AND EXISTING FINISHES THROUGHOUT ALL PHASES OF CONSTRUCTION. NOISE, SECURITY AND DUST BARRIERS BETWEEN CONSTRUCTION AREA AND AREAS WHICH ARE PUBLIC OR OTHERWISE OCCUPIED SHALL BE MAINTAINED BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EXITS, EXIT LIGHTING, FIRE PROTECTION DEVICES AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS.
4. THE CONTRACTOR SHALL MAINTAIN THE RATING OF ALL REQUIRED RATED WALLS AT ALL INTERSECTIONS, CONNECTIONS, AND PENETRATIONS
5. FIRE RATED PARTITIONS INDICATED ON THE FLOOR PLANS ARE COMPONENTS OF CONTINUOUS RATED ASSEMBLIES CONSISTING OF BUT NOT LIMITED TO, WALLS, FLOOR, DOORS, INTERIOR BORROWED LIGHTS, MECHANICAL PENETRATIONS AND CEILINGS. REFER TO PLANS AND SPECIFICATIONS FOR METHODS OR ACHIEVING THE NECESSARY RATINGS. WHERE THE SPECIFIC METHOD OF ACHIEVING THE RATING IS NOT INDICATED, OBTAIN CLARIFICATION FROM ARCHITECT PRIOR TO CONSTRUCTION.
6. FIRE-RATED PARTITIONS SHALL BE IDENTIFIED AS SUCH IN LARGE RED STENCIL ABOVE FINISHED CEILING.
7. REVIEW WALL EXIT SIGNS AND FIRE EXTINGUISHER LOCATIONS WITH LOCAL CODE OFFICIALS PRIOR TO END OF PRIMARY CONSTRUCTION PHASE. COORDINATE ANY VARIATIONS FROM CONSTRUCTION DOCUMENTS WITH ARCHITECT. RELOCATE EXISTING FIRE EXTINGUISHERS PER FIRE MARSHAL'S DIRECTION.
8. CHASE WALLS SHALL MATCH ADJACENT CONSTRUCTION; TYPICAL, UNLESS OTHERWISE NOTED.
9. NEW GYPSUM BOARD CONSTRUCTION MEETING EXISTING CONSTRUCTION IN SAME PLANE SHALL BE FLUSH WITH NO VISIBLE JOINT.
10. PROVIDE WATER RESISTANT GYPSUM BOARD OR APPROVED EQUAL AT ALL NEW PLUMBING WALLS.
11. IN LIEU OF GYPSUM WALL BOARD, PROVIDE CEMENT BOARD AT ALL STUD WALLS SLATED TO RECEIVE A TILE FINISH.
12. PROVIDE GYPSUM BOARD ASSEMBLIES IN ACCORDANCE WITH ASTM C840, LEVEL 4 FINISH, UNLESS OTHERWISE NOTED.
13. PROVIDE CONCEALED WOOD BLOCKING (FIRE RETARDANT WHERE REQUIRED BY CODE) INSIDE PARTITIONS FOR SECURING WALL-HUNG CABINETS PROVIDED BY FURNITURE VENDOR, SHELVING, TRIM, MILLWORK AND OTHER ELEMENTS ATTACHED TO PARTITIONS AS REQUIRED TO ENSURE FLUSH, STRAIGHT, WELL-SECURED CONDITIONS. PROVIDE CORROSIVE RESISTANT FASTENERS FOR FIRE-RETARDANT TREATED WOOD.
14. THE CONTRACTOR SHALL COORDINATE ALL KEYING REQUIREMENTS, INCLUDING MASTER AND SUB-MASTER SETS, WITH THE OWNER.
15. ALL CODE REQUIRED LABELS SUCH AS 'UL' FACTORY MUTUAL, OR ANY EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, NAME OR NOMENCLATURE PLATES SHALL REMAIN READABLE AND NOT PAINTED.
16. TRANSITIONS OF FLOOR MATERIALS TO BE LOCATED AT CENTERLINE OF DOORS IN CLOSED POSITION; TYPICAL, UNLESS OTHERWISE NOTED.
17. PAINT BACK SIDES OF REMOVABLE ACCESS PANELS AND HINGED COVERS TO MATCH EXPOSED SURFACE.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND FOLLOWING THE BUILDING OWNER'S CONSTRUCTION RULES AND REGULATIONS.
19. WHERE THE DRAWINGS AND SPECIFICATIONS CONFLICT THE MOST STRINGENT, GREATEST QUANTITY AND OR BEST QUALITY SHALL BE USED.
20. PATCH, REPAIR AND REFINISH ALL SURFACES EXPOSED BY DEMOLITION WORK OR CUTTING TO ALIGN WITH EXISTING SURFACES SCHEDULED TO REMAIN, OR NEW FINISHES SPECIFIED AS REQUIRED TO ACHIEVE A 'LIKE NEW' CONDITION, CONTIGUOUS TO EXISTING SURROUNDING SURFACES, WITH NO VISIBLE EVIDENCE OF PATCHING OR REPAIR. REMOVE AND REPLACE WORK JUDGED BY THE ARCHITECT TO BE CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER WITHOUT EXTRA CHARGE.
21. ALL EXISTING FINISHES REMAINING IN PLACE (CARPET, VCT, CEILINGS, ETC.) SHALL BE CLEANED UTILIZING EFFECTIVE CLEANING METHODS WHICH WILL PRODUCE THE MOST DESIRABLE RESULTS POSSIBLE.
22. WHERE DOORS IN METAL STUD PARTITIONS ARE NOT SPECIFICALLY LOCATED ON THE PLANS WITH DIMENSION STRINGS, PROVIDE A HINGE SIDE JAMB DIMENSION OF 6". WHERE DOORS APPEAR TO BE CENTERED WITHIN PARTITIONS, LOCATE THE DOOR IN THE CENTER OF THE PARTITION.
23. CAULK ALL JOINT OR CRACKS WHICH OCCUR WHERE DISSIMILAR MATERIALS INTERSECT PERPENDICULAR TO EACH OTHER AND THE INTERSECTION IS EXPOSED TO VIEW UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
24. EXISTING FIRE RATED CONSTRUCTION NOTED ON LIFE SAFETY PLANS, CONTRACTOR TO CONFIRM INTEGRITY OF RATED ASSEMBLIES, REPAIR AS REQUIRED.
25. GC TO RE-INSTALL SALVAGED WALL-MOUNTED ACCESSORIES AFTER FINAL COAT OF PAINT HAS BEEN APPLIED. EXISTING CHALKBOARDS TO BE REPLACED WITH OWNER FURNISHED, CONTRACTOR INSTALLED WHITEBOARDS. COORDINATE FINAL LOCATIONS OF ACCESSORIES WITH OWNER.
26. GC TO FURNISH AND INSTALL NEW ROOM SIGNAGE THROUGHOUT.
27. ALL SITE ELEMENTS (FLAT WORK, LANDSCAPING, CONCRETE STAIRS, ETC.) ARE SHOWN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR DESIGN AND CONSTRUCTION METHODS.

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16635 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ROOF PLAN AND DETAILS

ISSUE BLOCK

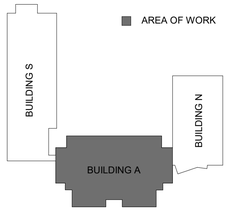
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

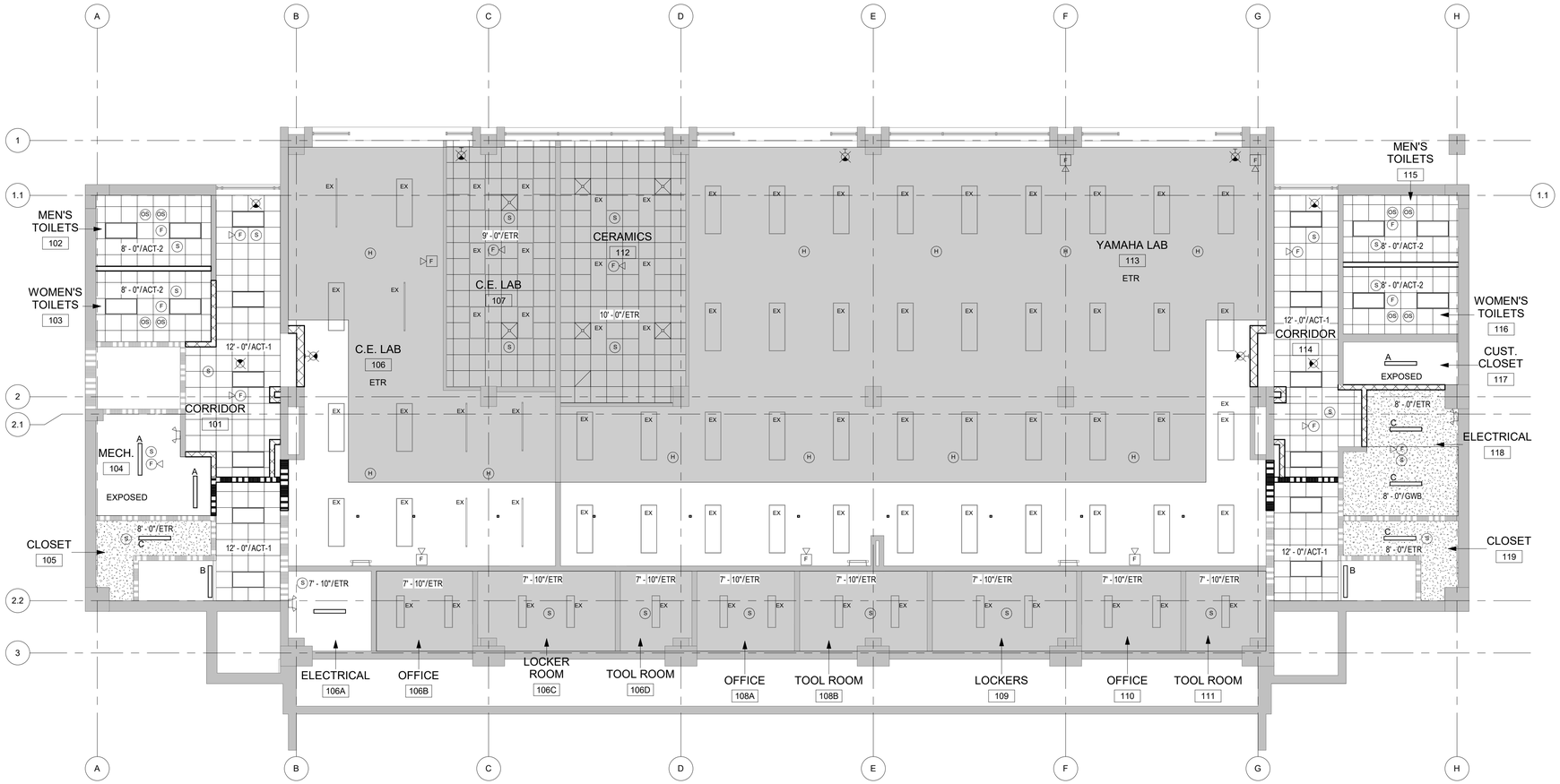
A105

COPYRIGHT © 2020

8/14/2020 9:44:36 AM C:\Users\abrown\Documents\2018023300 CFCC ASN BASE BID_abrownSDEJ4.rvt



KEY PLAN



1 1ST FLOOR REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

CEILING LEGEND

- AREAS NOT IN CONTRACT
- 2x2 ACT-1 CEILING
- 2x2 ACT-2 MOISTURE RESISTANT CEILING
- 2x2 ACT-3 NEW CEILING GRID; SALVAGE AND REUSE CEILING TILES
- INTERIOR - GWB CEILINGS /BULKHEADS PAINTED PT-2
- EXPOSED — EXPOSED PAINTED PT-2
- NEW 6IN INCANDESCENT LIGHTING
- A — NEW PENDANT LIGHTING
- B — NEW WALL MOUNTED LIGHTING
- C — NEW 6"x4' LINEAR BOX LIGHTING
- NEW 1'x4' LINEAR BOX LIGHTING
- NEW 2'x4' LINEAR BOX LIGHTING
- NEW 2'x2' LINEAR BOX LIGHTING
- EX — EXISTING 2'x6' LINEAR BOX LIGHTING
- RL — RELOCATED 2'x6' LINEAR BOX LIGHTING
- EX — EXISTING PENDANT LIGHTING
- CEILING EXHAUST AIR GRILLE
- CEILING SUPPLY AIR DIFFUSER
- CEILING RETURN AIR GRILLE
- CEILING MOUNTED EXIT LIGHT
- WALL MOUNTED EXIT LIGHT
- EMERGENCY LIGHT
- OS — OCCUPANCY SENSOR
- F — FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED
- F — FIRE ALARM AURAL/VISUAL DEVICE, WALL MOUNTED
- F — FIRE ALARM VISUAL (ONLY), CEILING MOUNTED
- S — SMOKE DETECTOR
- H — HEAT DETECTOR

CEILING NOTES

1. SEE FINISH LEGEND FOR ACT TYPES.
2. SEE MECHANICAL DRAWINGS FOR G.R.D. TYPES, LOCATIONS, AND ADDITIONAL WORK.
3. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND LOCATIONS
4. CEILING HEIGHTS INDICATED ARE FROM FINISH FLOOR. CEILINGS AT LANDINGS, RAMPS ETC., REFER TO NEAREST FLOOR LEVEL. COORDINATE WITH EXG. WINDOW MULLION LOCATIONS.
5. ALL EXPOSED LINTELS SHALL BE PAINTED.
6. BASE BID: RE-USE AS MUCH LIGHTING AS POSSIBLE
7. SPRINKLER HEADS TO BE LOCATED IN ACCORDANCE WITH FIRE PROTECTION DRAWINGS. PLACE HEADS AT CENTER OF ACOUSTIC CEILING TILES.

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRST FLOOR REFLECTED CEILING PLAN

ISSUE BLOCK

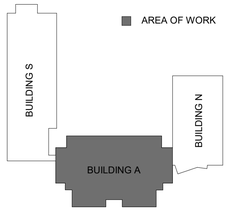
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

A201

COPYRIGHT © 2020

8/14/2020 9:44:36 AM C:\Users\labrown\Documents\2018023000 CFCC ASN BASE BID_abrownBDE.M.rvt



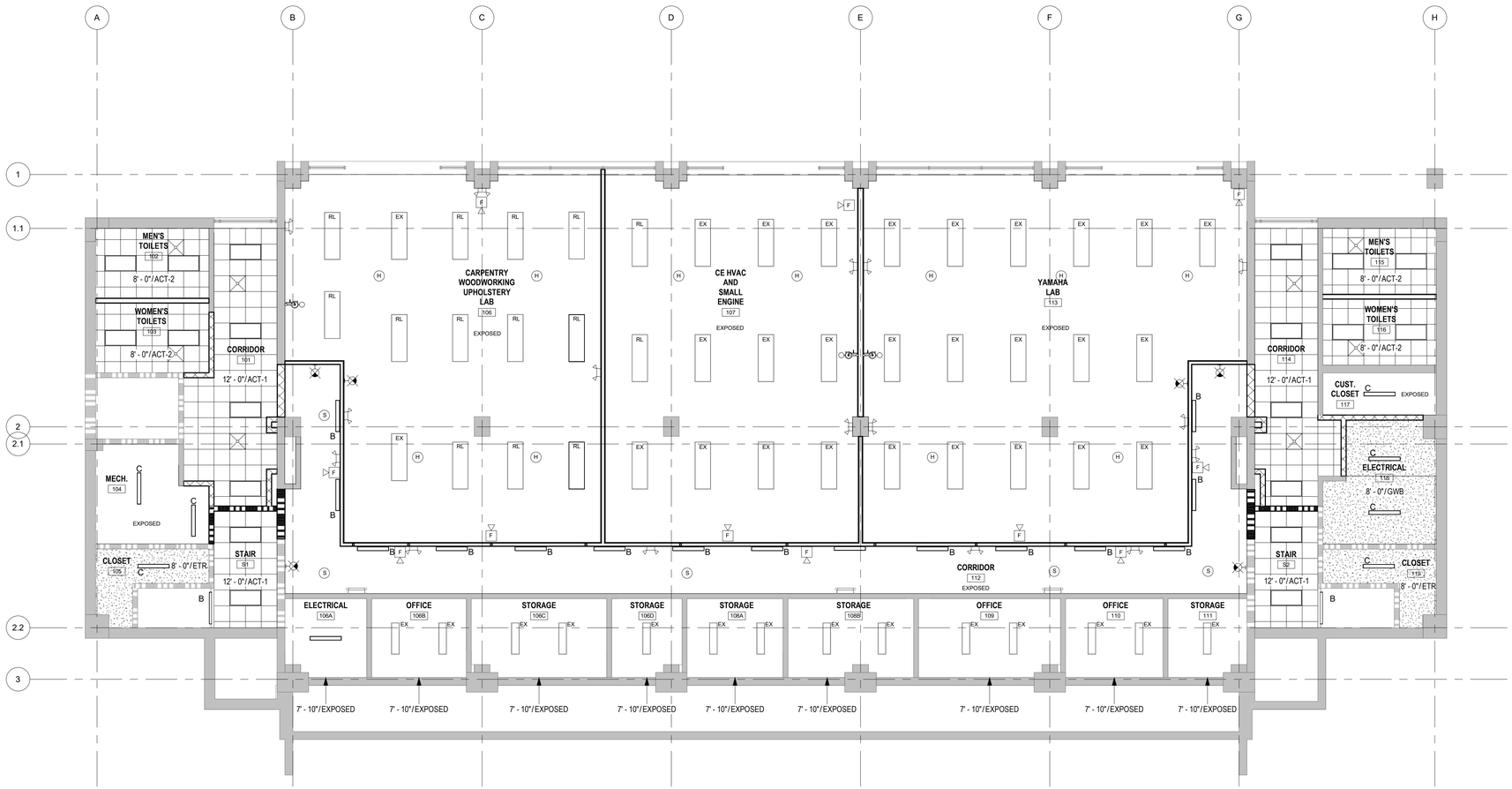
KEY PLAN

CEILING LEGEND

- AREAS NOT IN CONTRACT
- 2x2 ACT-1 CEILING
- 2x2 ACT-2 MOISTURE RESISTANT CEILING
- 2x2 ACT-3 NEW CEILING GRID; SALVAGE AND REUSE CEILING TILES
- INTERIOR - GWB CEILINGS /BULKHEADS PAINTED PT-2
- EXPOSED — EXPOSED PAINTED PT-2
- NEW 6IN INCANDESCENT LIGHTING
- A — NEW PENDANT LIGHTING
- B — NEW WALL MOUNTED LIGHTING
- C — NEW 6"x4' LINEAR BOX LIGHTING
- NEW 1'x4' LINEAR BOX LIGHTING
- NEW 2'x4' LINEAR BOX LIGHTING
- NEW 2'x2' LINEAR BOX LIGHTING
- EX — EXISTING 2'x6' LINEAR BOX LIGHTING
- RL — RELOCATED 2'x6' LINEAR BOX LIGHTING
- EX — EXISTING PENDANT LIGHTING
- CEILING EXHAUST AIR GRILLE
- CEILING SUPPLY AIR DIFFUSER
- CEILING RETURN AIR GRILLE
- CEILING MOUNTED EXIT LIGHT
- WALL MOUNTED EXIT LIGHT
- EMERGENCY LIGHT
- OS — OCCUPANCY SENSOR
- F — FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED
- F — FIRE ALARM AURAL/VISUAL DEVICE, WALL MOUNTED
- F — FIRE ALARM VISUAL (ONLY), CEILING MOUNTED
- S — SMOKE DETECTOR
- H — HEAT DETECTOR

CEILING NOTES

1. SEE FINISH LEGEND FOR ACT TYPES.
2. SEE MECHANICAL DRAWINGS FOR G.R.D. TYPES, LOCATIONS, AND ADDITIONAL WORK.
3. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND LOCATIONS
4. CEILING HEIGHTS INDICATED ARE FROM FINISH FLOOR. CEILINGS AT LANDINGS, RAMPS ETC., REFER TO NEAREST FLOOR LEVEL. COORDINATE WITH EXG. WINDOW MULLION LOCATIONS.
5. ALL EXPOSED LINTELS SHALL BE PAINTED.
6. BASE BID: RE-USE AS MUCH LIGHTING AS POSSIBLE
7. SPRINKLER HEADS TO BE LOCATED IN ACCORDANCE WITH FIRE PROTECTION DRAWINGS. PLACE HEADS AT CENTER OF ACOUSTIC CEILING TILES.



1 ALTERNATE 1: 1ST FLOOR REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16595 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1 - FIRST FLOOR REFLECTED CEILING PLAN

ISSUE BLOCK

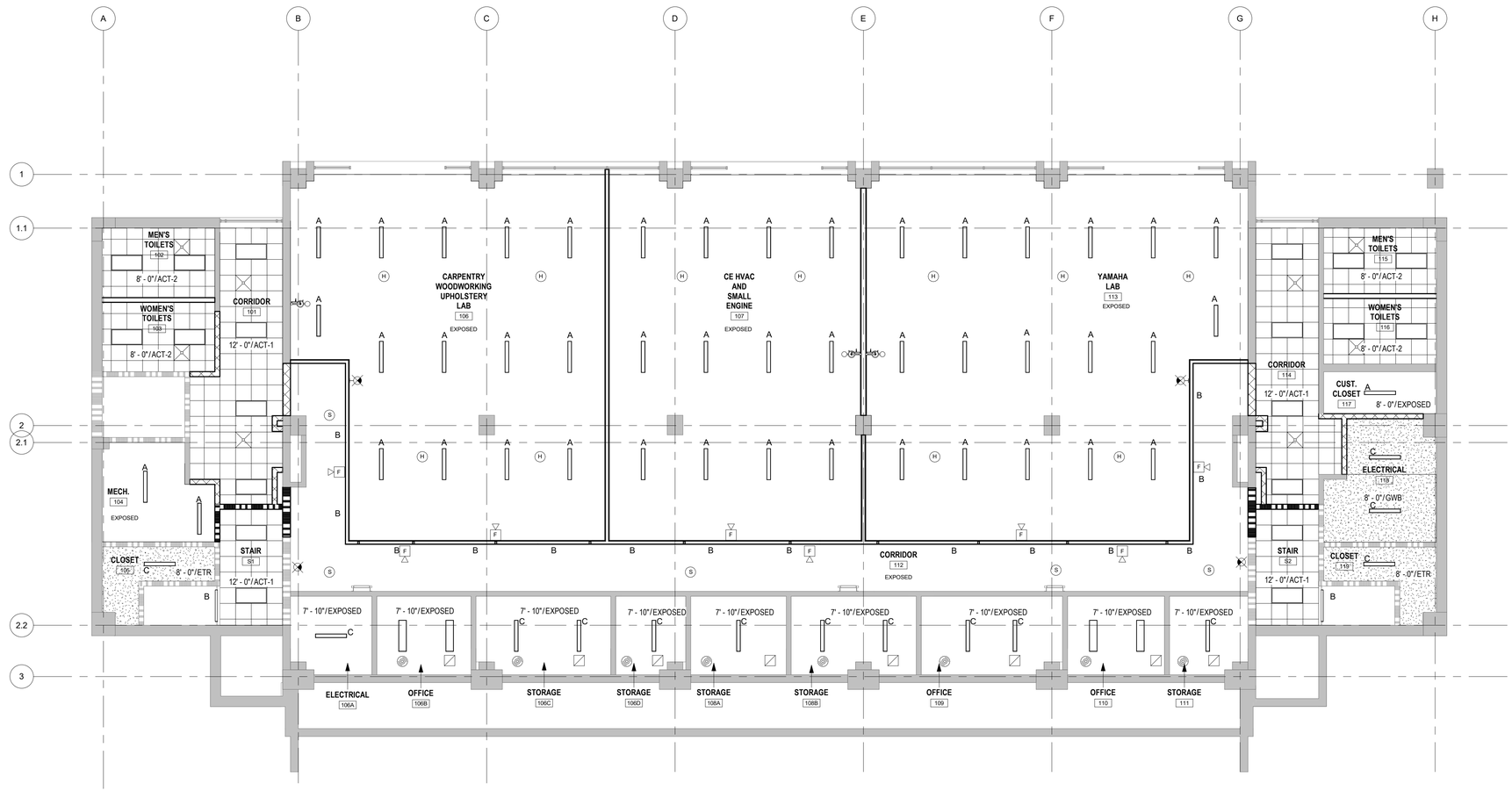
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A201A

COPYRIGHT © 2020

8/14/2020 9:44:37 AM C:\Users\abrown\Documents\2018023DC CFCC ASN BASE BID_abrownBDEJ4.rvt

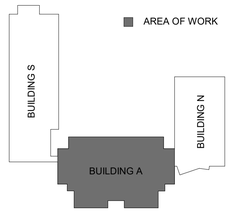


1 ALTERNATE 1A: 1ST FLOOR REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"



KEY PLAN

CEILING LEGEND

- AREAS NOT IN CONTRACT
- 2x2 ACT-1 CEILING
- 2x2 ACT-2 MOISTURE RESISTANT CEILING
- 2x2 ACT-3 NEW CEILING GRID; SALVAGE AND REUSE CEILING TILES
- INTERIOR - GWB CEILINGS /BULKHEADS PAINTED PT-2
- EXPOSED — EXPOSED PAINTED PT-2
- NEW 6IN INCANDESCENT LIGHTING
- A — NEW PENDANT LIGHTING
- B — NEW WALL MOUNTED LIGHTING
- C — NEW 6"x4' LINEAR BOX LIGHTING
- NEW 1'x4' LINEAR BOX LIGHTING
- NEW 2'x4' LINEAR BOX LIGHTING
- NEW 2'x2' LINEAR BOX LIGHTING
- EX — EXISTING 2'x6' LINEAR BOX LIGHTING
- RL — RELOCATED 2'x6' LINEAR BOX LIGHTING
- EX — EXISTING PENDANT LIGHTING
- CEILING EXHAUST AIR GRILLE
- CEILING SUPPLY AIR DIFFUSER
- CEILING RETURN AIR GRILLE
- CEILING MOUNTED EXIT LIGHT
- WALL MOUNTED EXIT LIGHT
- EMERGENCY LIGHT
- OS — OCCUPANCY SENSOR
- F — FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED
- F — FIRE ALARM AURAL/VISUAL DEVICE, WALL MOUNTED
- F — FIRE ALARM VISUAL (ONLY), CEILING MOUNTED
- S — SMOKE DETECTOR
- H — HEAT DETECTOR

CEILING NOTES

1. SEE FINISH LEGEND FOR ACT TYPES.
2. SEE MECHANICAL DRAWINGS FOR G.R.D. TYPES, LOCATIONS, AND ADDITIONAL WORK.
3. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND LOCATIONS
4. CEILING HEIGHTS INDICATED ARE FROM FINISH FLOOR. CEILINGS AT LANDINGS, RAMPS ETC., REFER TO NEAREST FLOOR LEVEL. COORDINATE WITH EXG. WINDOW MULLION LOCATIONS.
5. ALL EXPOSED LINTELS SHALL BE PAINTED.
6. BASE BID: RE-USE AS MUCH LIGHTING AS POSSIBLE
7. SPRINKLER HEADS TO BE LOCATED IN ACCORDANCE WITH FIRE PROTECTION DRAWINGS. PLACE HEADS AT CENTER OF ACOUSTIC CEILING TILES.

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1A - FIRST FLOOR REFLECTED CEILING PLAN

ISSUE BLOCK

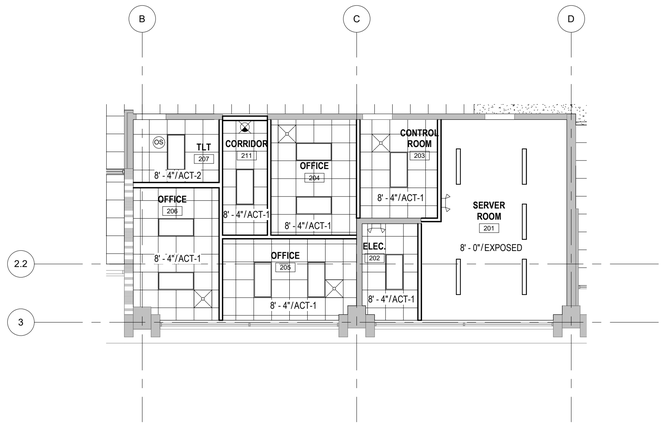
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

A201B

COPYRIGHT © 2020

8/14/2020 9:44:37 AM C:\Users\abrown\Documents\2018023.00 CFCC ASN BASE BID_abrown9DEJ4.rvt



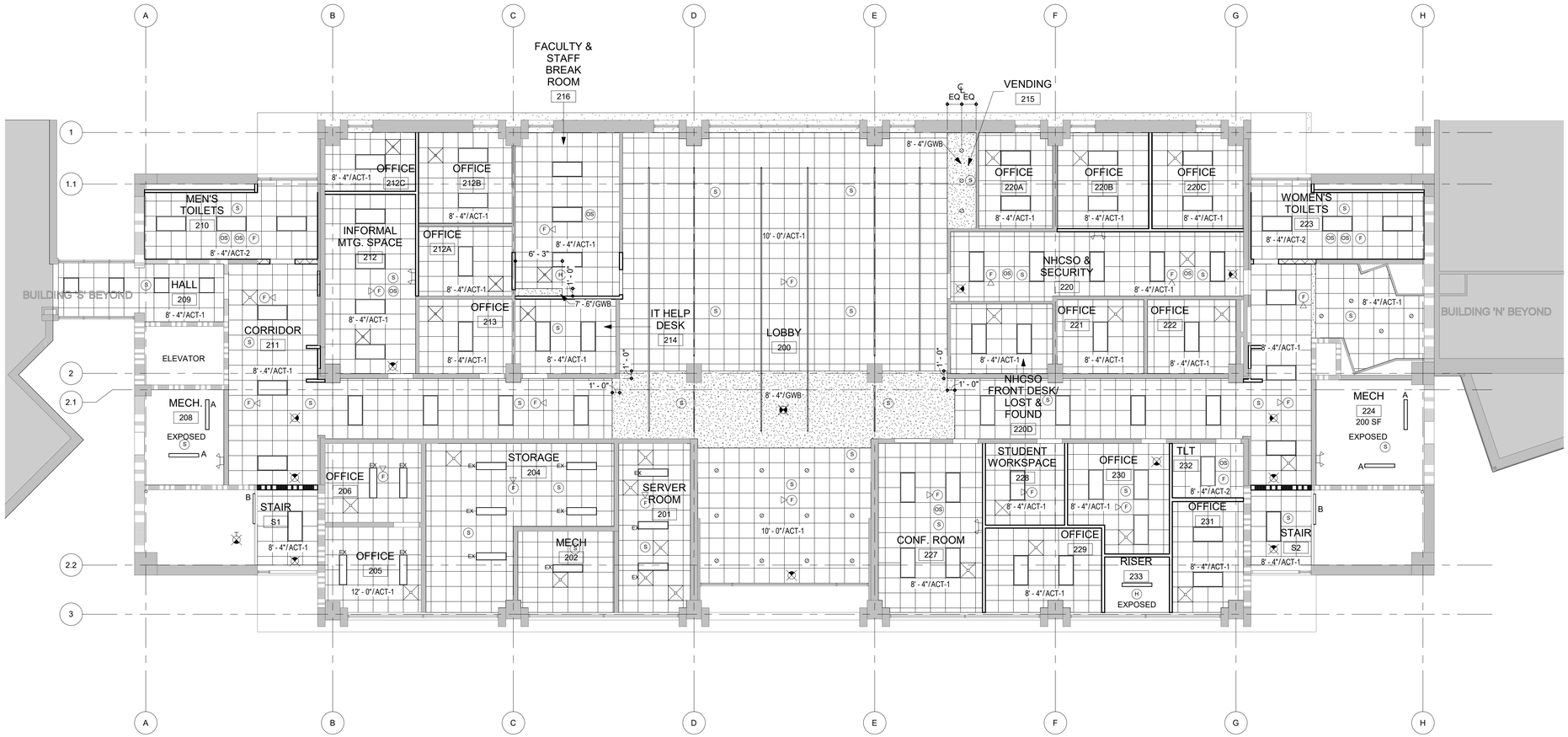
ALTERNATE 2: PARTIAL 2ND FLOOR REFLECTED CEILING PLAN

2

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"



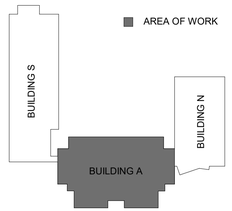
2ND FLOOR REFLECTED CEILING PLAN

1

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"



KEY PLAN

CEILING LEGEND

- AREAS NOT IN CONTRACT
- 2x2 ACT-1 CEILING
- 2x2 ACT-2 MOISTURE RESISTANT CEILING
- 2x2 ACT-3 NEW CEILING GRID; SALVAGE AND REUSE CEILING TILES
- INTERIOR - GWB CEILINGS /BULKHEADS PAINTED PT-2
- EXPOSED — EXPOSED PAINTED PT-2
- NEW 6IN INCANDESCENT LIGHTING
- A — NEW PENDANT LIGHTING
- B — NEW WALL MOUNTED LIGHTING
- C — NEW 6"x4' LINEAR BOX LIGHTING
- NEW 1'x4' LINEAR BOX LIGHTING
- NEW 2'x4' LINEAR BOX LIGHTING
- NEW 2'x2' LINEAR BOX LIGHTING
- EX — EXISTING 2'x6' LINEAR BOX LIGHTING
- RL — RELOCATED 2'x6' LINEAR BOX LIGHTING
- EX — EXISTING PENDANT LIGHTING
- CEILING EXHAUST AIR GRILLE
- CEILING SUPPLY AIR DIFFUSER
- CEILING RETURN AIR GRILLE
- CEILING MOUNTED EXIT LIGHT
- WALL MOUNTED EXIT LIGHT
- EMERGENCY LIGHT
- OS — OCCUPANCY SENSOR
- F — FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED
- F — FIRE ALARM AURAL/VISUAL DEVICE, WALL MOUNTED
- F — FIRE ALARM VISUAL (ONLY), CEILING MOUNTED
- S — SMOKE DETECTOR
- H — HEAT DETECTOR

CEILING NOTES

1. SEE FINISH LEGEND FOR ACT TYPES.
2. SEE MECHANICAL DRAWINGS FOR G.R.D. TYPES, LOCATIONS, AND ADDITIONAL WORK.
3. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND LOCATIONS
4. CEILING HEIGHTS INDICATED ARE FROM FINISH FLOOR. CEILINGS AT LANDINGS, RAMPS ETC., REFER TO NEAREST FLOOR LEVEL. COORDINATE WITH EXG. WINDOW MULLION LOCATIONS.
5. ALL EXPOSED LINTELS SHALL BE PAINTED.
6. BASE BID: RE-USE AS MUCH LIGHTING AS POSSIBLE
7. SPRINKLER HEADS TO BE LOCATED IN ACCORDANCE WITH FIRE PROTECTION DRAWINGS. PLACE HEADS AT CENTER OF ACOUSTIC CEILING TILES.

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS
Registered Architect
North Carolina
WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC.
Professional Architectural Corporation
North Carolina
WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

SECOND FLOOR REFLECTED CEILING PLAN AND ALTERNATE 2 - PARTIAL REFLECTED CEILING PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

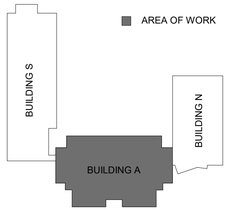
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A202

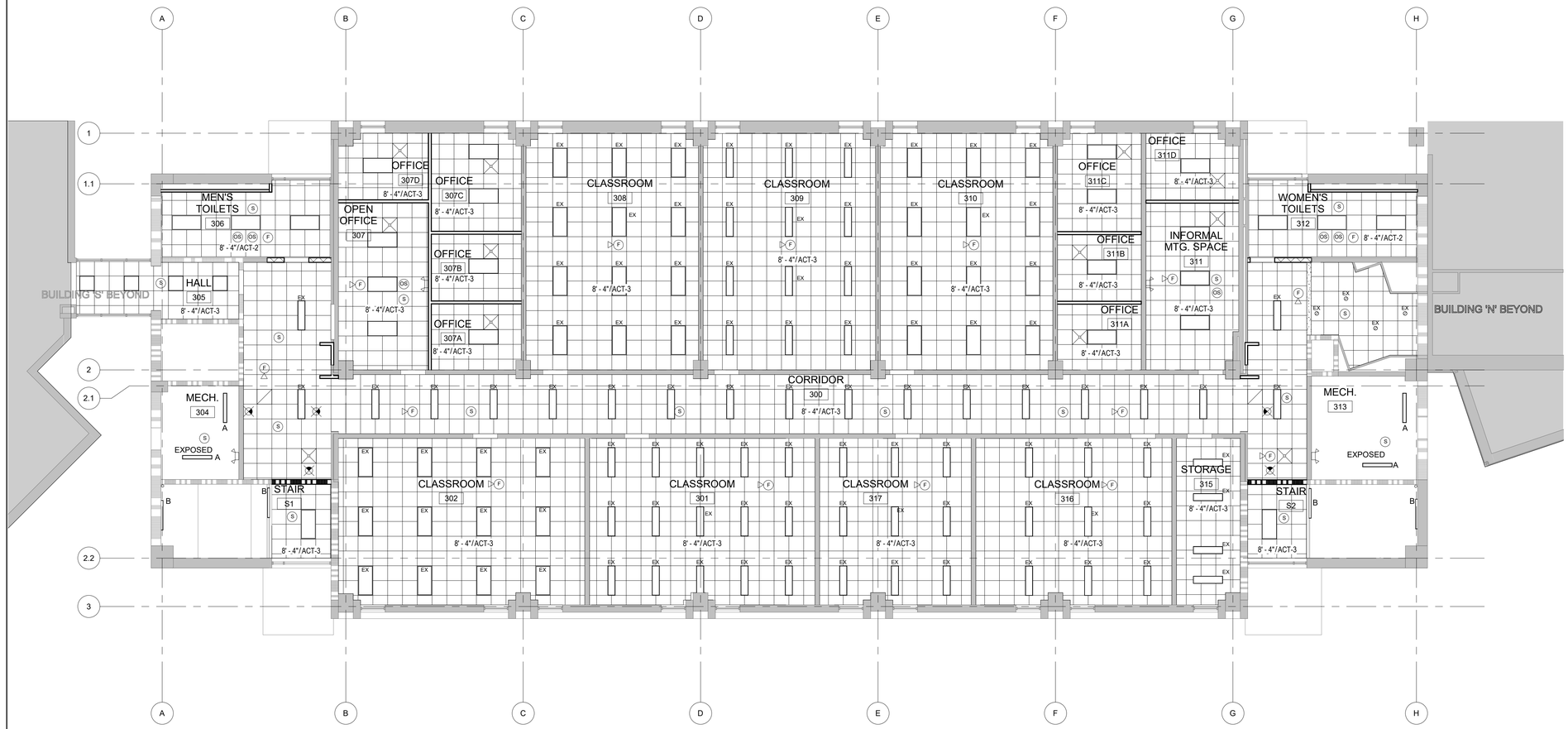
COPYRIGHT © 2020

PLAN NORTH

8/14/2020 9:44:38 AM C:\Users\abrown\Documents\2018023000 CFCC ASN BASE BID_abrownBDEJ4.rvt



KEY PLAN



3RD FLOOR REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

CEILING LEGEND

- AREAS NOT IN CONTRACT
- 2x2 ACT-1 CEILING
- 2x2 ACT-2 MOISTURE RESISTANT CEILING
- 2x2 ACT-3 NEW CEILING GRID; SALVAGE AND REUSE CEILING TILES
- INTERIOR - GWB CEILINGS /BULKHEADS PAINTED PT-2
- EXPOSED — EXPOSED PAINTED PT-2
- NEW 6IN INCANDESCENT LIGHTING
- A — NEW PENDANT LIGHTING
- B — NEW WALL MOUNTED LIGHTING
- C — NEW 6"x4' LINEAR BOX LIGHTING
- NEW 1'x4' LINEAR BOX LIGHTING
- NEW 2'x4' LINEAR BOX LIGHTING
- NEW 2'x2' LINEAR BOX LIGHTING
- EX — EXISTING 2'x6' LINEAR BOX LIGHTING
- RL — RELOCATED 2'x6' LINEAR BOX LIGHTING
- EX — EXISTING PENDANT LIGHTING
- CEILING EXHAUST AIR GRILLE
- CEILING SUPPLY AIR DIFFUSER
- CEILING RETURN AIR GRILLE
- CEILING MOUNTED EXIT LIGHT
- WALL MOUNTED EXIT LIGHT
- EMERGENCY LIGHT
- OS — OCCUPANCY SENSOR
- F — FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED
- F — FIRE ALARM AURAL/VISUAL DEVICE, WALL MOUNTED
- F — FIRE ALARM VISUAL (ONLY), CEILING MOUNTED
- S — SMOKE DETECTOR
- H — HEAT DETECTOR

CEILING NOTES

1. SEE FINISH LEGEND FOR ACT TYPES.
2. SEE MECHANICAL DRAWINGS FOR G.R.D. TYPES, LOCATIONS, AND ADDITIONAL WORK.
3. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND LOCATIONS
4. CEILING HEIGHTS INDICATED ARE FROM FINISH FLOOR. CEILINGS AT LANDINGS, RAMPS ETC., REFER TO NEAREST FLOOR LEVEL. COORDINATE WITH EXG. WINDOW MULLION LOCATIONS.
5. ALL EXPOSED LINTELS SHALL BE PAINTED.
6. BASE BID: RE-USE AS MUCH LIGHTING AS POSSIBLE
7. SPRINKLER HEADS TO BE LOCATED IN ACCORDANCE WITH FIRE PROTECTION DRAWINGS. PLACE HEADS AT CENTER OF ACOUSTIC CEILING TILES.

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 10695 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

THIRD FLOOR REFLECTED CEILING PLAN

ISSUE BLOCK

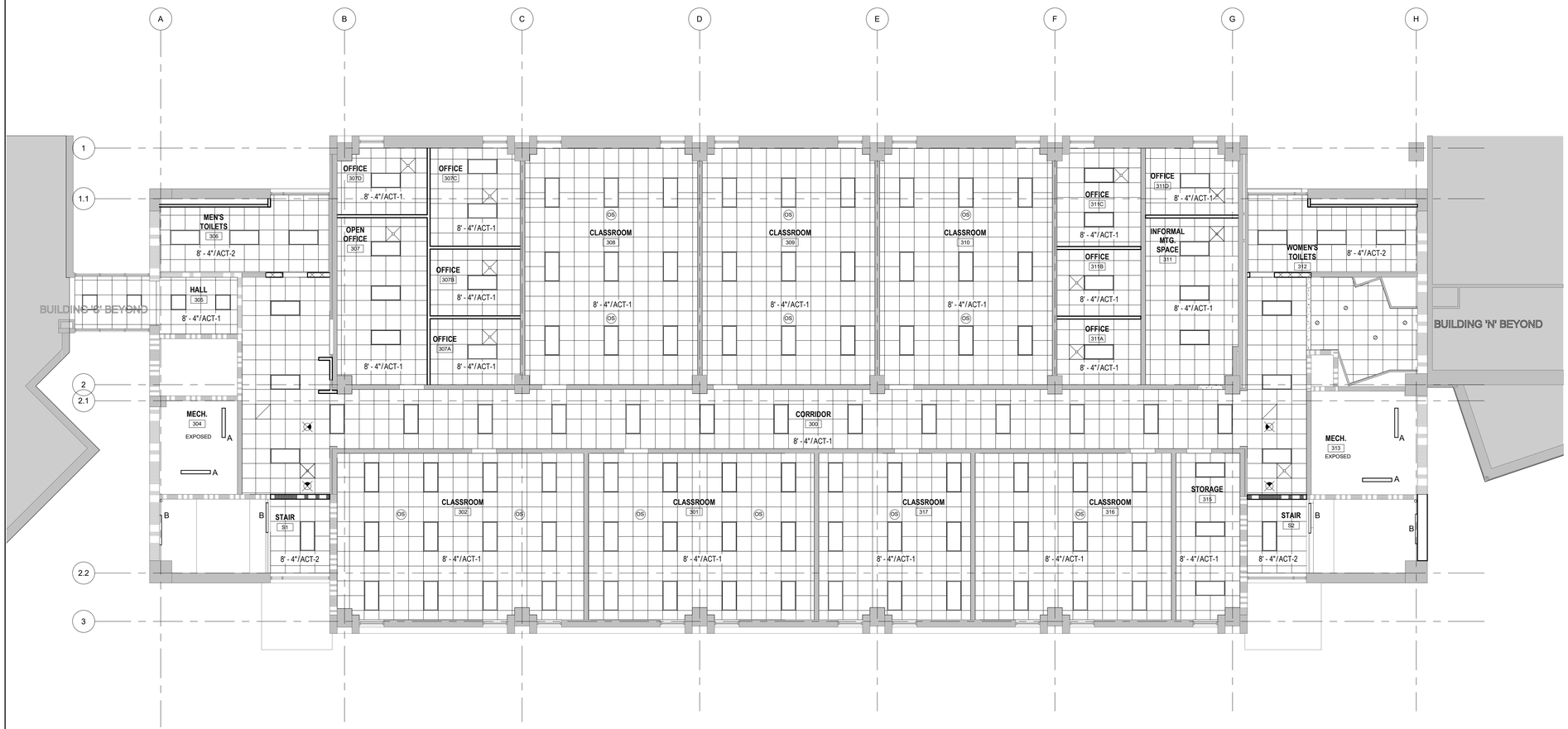
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A203

COPYRIGHT © 2020

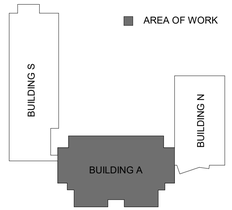
8/14/2020 9:44:38 AM C:\Users\abrown\Documents\2018023900 CFCC ASN BASE BID_abrown9DEJ4.rvt



1 ALTERNATE 3: 3RD FLOOR REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

SCALE : 1/8" = 1'-0"



KEY PLAN

CEILING LEGEND

- AREAS NOT IN CONTRACT
- 2x2 ACT-1 CEILING
- 2x2 ACT-2 MOISTURE RESISTANT CEILING
- 2x2 ACT-3 NEW CEILING GRID; SALVAGE AND REUSE CEILING TILES
- INTERIOR - GWB CEILINGS /BULKHEADS PAINTED PT-2
- EXPOSED — EXPOSED PAINTED PT-2
- NEW 6IN INCANDESCENT LIGHTING
- A — NEW PENDANT LIGHTING
- B — NEW WALL MOUNTED LIGHTING
- C — NEW 6"x4' LINEAR BOX LIGHTING
- NEW 1'x4' LINEAR BOX LIGHTING
- NEW 2'x4' LINEAR BOX LIGHTING
- NEW 2'x2' LINEAR BOX LIGHTING
- EX — EXISTING 2'x6' LINEAR BOX LIGHTING
- RL — RELOCATED 2'x6' LINEAR BOX LIGHTING
- EX — EXISTING PENDANT LIGHTING
- CEILING EXHAUST AIR GRILLE
- CEILING SUPPLY AIR DIFFUSER
- CEILING RETURN AIR GRILLE
- CEILING MOUNTED EXIT LIGHT
- WALL MOUNTED EXIT LIGHT
- EMERGENCY LIGHT
- OS — OCCUPANCY SENSOR
- F — FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED
- F — FIRE ALARM AURAL/VISUAL DEVICE, WALL MOUNTED
- F — FIRE ALARM VISUAL (ONLY), CEILING MOUNTED
- S — SMOKE DETECTOR
- H — HEAT DETECTOR

CEILING NOTES

1. SEE FINISH LEGEND FOR ACT TYPES.
2. SEE MECHANICAL DRAWINGS FOR G.R.D. TYPES, LOCATIONS, AND ADDITIONAL WORK.
3. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND LOCATIONS
4. CEILING HEIGHTS INDICATED ARE FROM FINISH FLOOR. CEILINGS AT LANDINGS, RAMPS ETC., REFER TO NEAREST FLOOR LEVEL. COORDINATE WITH EXG. WINDOW MULLION LOCATIONS.
5. ALL EXPOSED LINTELS SHALL BE PAINTED.
6. BASE BID: RE-USE AS MUCH LIGHTING AS POSSIBLE
7. SPRINKLER HEADS TO BE LOCATED IN ACCORDANCE WITH FIRE PROTECTION DRAWINGS. PLACE HEADS AT CENTER OF ACOUSTIC CEILING TILES.

NOTE:
ALTERNATE 3: ALL NEW LIGHTING FIXTURES

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 3 - THIRD FLOOR REFLECTED CEILING PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

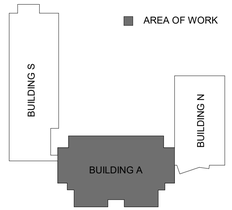
A203A

COPYRIGHT © 2020

PLAN NORTH

N

8/14/2020 9:44:39 AM C:\Users\abrown\Documents\2018023B0 CFCC ASN BASE BID_abrownSDEJ4.rvt



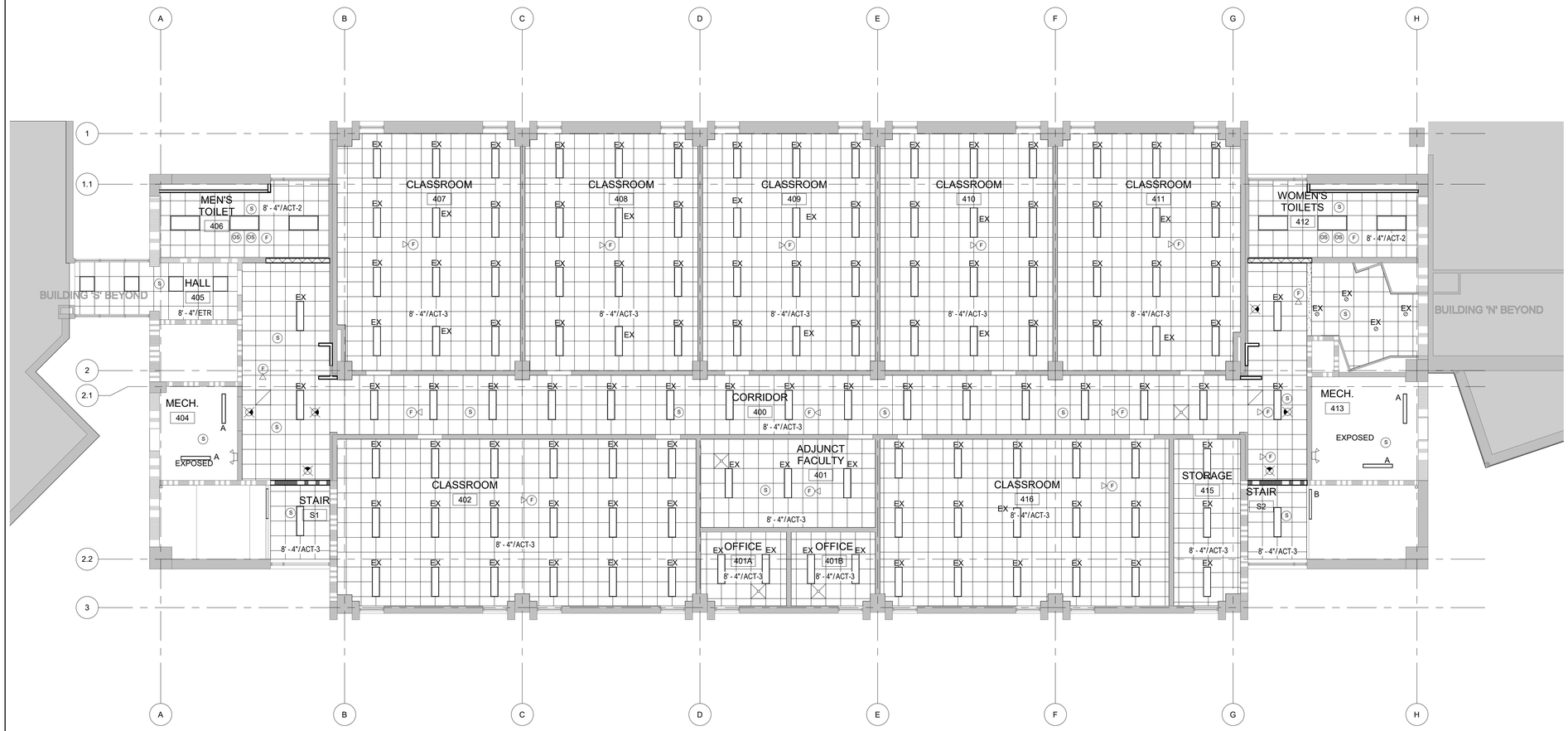
KEY PLAN

CEILING LEGEND

- AREAS NOT IN CONTRACT
- 2x2 ACT-1 CEILING
- 2x2 ACT-2 MOISTURE RESISTANT CEILING
- 2x2 ACT-3 NEW CEILING GRID; SALVAGE AND REUSE CEILING TILES
- INTERIOR - GWB CEILINGS /BULKHEADS PAINTED PT-2
- EXPOSED — EXPOSED PAINTED PT-2
- NEW 6IN INCANDESCENT LIGHTING
- A — NEW PENDANT LIGHTING
- B — NEW WALL MOUNTED LIGHTING
- C — NEW 6"x4' LINEAR BOX LIGHTING
- NEW 1'x4' LINEAR BOX LIGHTING
- NEW 2'x4' LINEAR BOX LIGHTING
- NEW 2'x2' LINEAR BOX LIGHTING
- EX — EXISTING 2'x6' LINEAR BOX LIGHTING
- RL — RELOCATED 2'x6' LINEAR BOX LIGHTING
- EX — EXISTING PENDANT LIGHTING
- CEILING EXHAUST AIR GRILLE
- CEILING SUPPLY AIR DIFFUSER
- CEILING RETURN AIR GRILLE
- CEILING MOUNTED EXIT LIGHT
- WALL MOUNTED EXIT LIGHT
- EMERGENCY LIGHT
- OS — OCCUPANCY SENSOR
- F — FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED
- F — FIRE ALARM AURAL/VISUAL DEVICE, WALL MOUNTED
- F — FIRE ALARM VISUAL (ONLY), CEILING MOUNTED
- S — SMOKE DETECTOR
- H — HEAT DETECTOR

CEILING NOTES

1. SEE FINISH LEGEND FOR ACT TYPES.
2. SEE MECHANICAL DRAWINGS FOR G.R.D. TYPES, LOCATIONS, AND ADDITIONAL WORK.
3. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND LOCATIONS
4. CEILING HEIGHTS INDICATED ARE FROM FINISH FLOOR. CEILINGS AT LANDINGS, RAMPS ETC., REFER TO NEAREST FLOOR LEVEL. COORDINATE WITH EXG. WINDOW MULLION LOCATIONS.
5. ALL EXPOSED LINTELS SHALL BE PAINTED.
6. BASE BID: RE-USE AS MUCH LIGHTING AS POSSIBLE
7. SPRINKLER HEADS TO BE LOCATED IN ACCORDANCE WITH FIRE PROTECTION DRAWINGS. PLACE HEADS AT CENTER OF ACOUSTIC CEILING TILES.



1 4TH FLOOR REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FOURTH FLOOR REFLECTED CEILING PLAN

ISSUE BLOCK

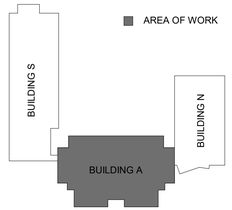
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

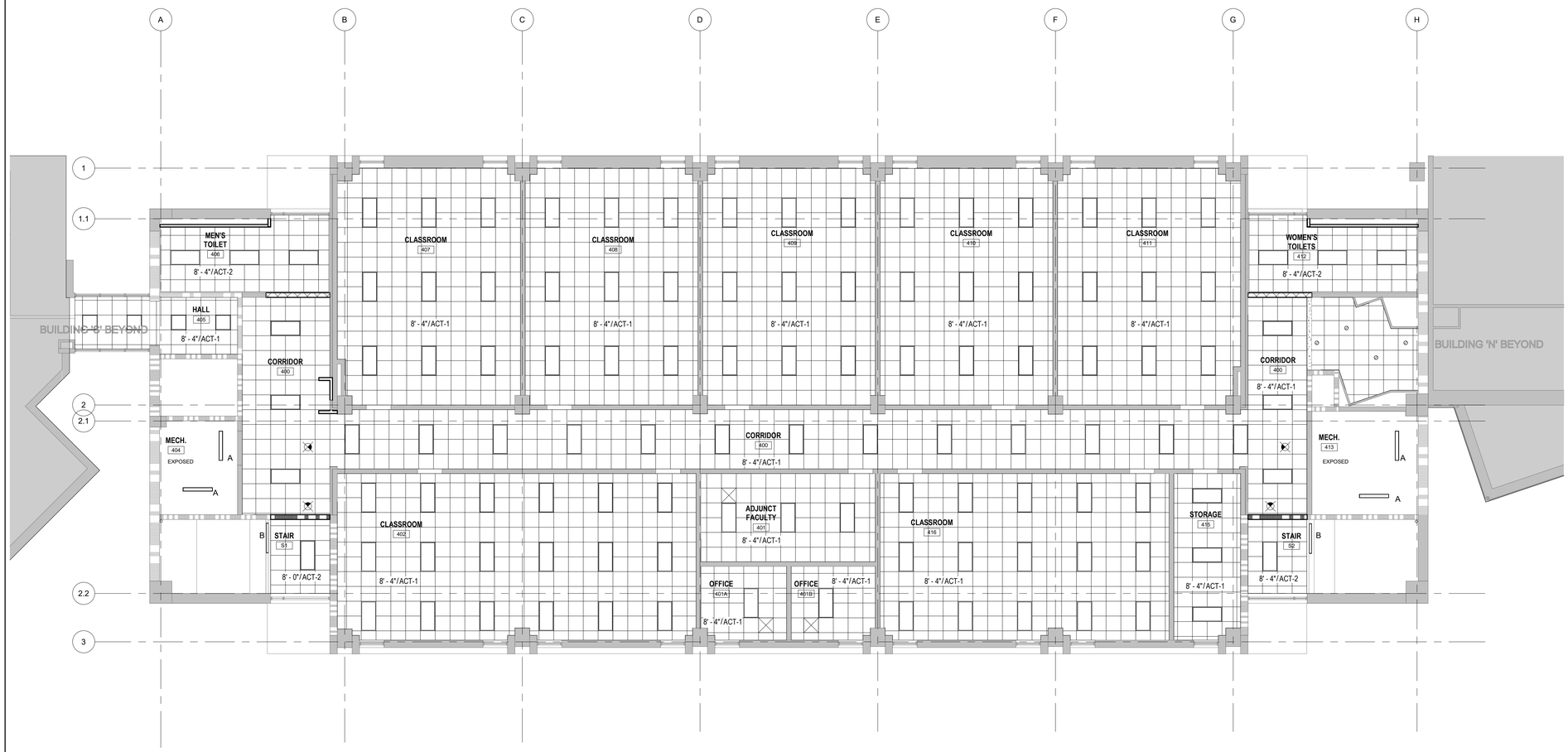
A204

COPYRIGHT © 2020

8/14/2020 9:44:40 AM C:\Users\abrown\Documents\2018023300 CFCC ASN BASE BID_abrownSDEJ4.rvt



KEY PLAN



1 ALTERNATE 4: 4TH FLOOR REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

CEILING LEGEND

- AREAS NOT IN CONTRACT
- 2x2 ACT-1 CEILING
- 2x2 ACT-2 MOISTURE RESISTANT CEILING
- 2x2 ACT-3 NEW CEILING GRID; SALVAGE AND REUSE CEILING TILES
- INTERIOR - GWB CEILINGS /BULKHEADS PAINTED PT-2
- EXPOSED — EXPOSED PAINTED PT-2
- NEW 6IN INCANDESCENT LIGHTING
- A — NEW PENDANT LIGHTING
- B — NEW WALL MOUNTED LIGHTING
- C — NEW 6"x4' LINEAR BOX LIGHTING
- NEW 1'x4' LINEAR BOX LIGHTING
- NEW 2'x4' LINEAR BOX LIGHTING
- NEW 2'x2' LINEAR BOX LIGHTING
- EX — EXISTING 2'x6' LINEAR BOX LIGHTING
- RL — RELOCATED 2'x6' LINEAR BOX LIGHTING
- EX — EXISTING PENDANT LIGHTING
- CEILING EXHAUST AIR GRILLE
- CEILING SUPPLY AIR DIFFUSER
- CEILING RETURN AIR GRILLE
- CEILING MOUNTED EXIT LIGHT
- WALL MOUNTED EXIT LIGHT
- EMERGENCY LIGHT
- OS — OCCUPANCY SENSOR
- F — FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED
- F — FIRE ALARM AURAL/VISUAL DEVICE, WALL MOUNTED
- F — FIRE ALARM VISUAL (ONLY), CEILING MOUNTED
- S — SMOKE DETECTOR
- H — HEAT DETECTOR

CEILING NOTES

1. SEE FINISH LEGEND FOR ACT TYPES.
2. SEE MECHANICAL DRAWINGS FOR G.R.D. TYPES, LOCATIONS, AND ADDITIONAL WORK.
3. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND LOCATIONS
4. CEILING HEIGHTS INDICATED ARE FROM FINISH FLOOR. CEILINGS AT LANDINGS, RAMPS ETC., REFER TO NEAREST FLOOR LEVEL. COORDINATE WITH EXG. WINDOW MULLION LOCATIONS.
5. ALL EXPOSED LINTELS SHALL BE PAINTED.
6. BASE BID: RE-USE AS MUCH LIGHTING AS POSSIBLE
7. SPRINKLER HEADS TO BE LOCATED IN ACCORDANCE WITH FIRE PROTECTION DRAWINGS. PLACE HEADS AT CENTER OF ACOUSTIC CEILING TILES.

NOTE:
ALTERNATE 4: ALL NEW LIGHTING FIXTURES

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 4 - FOURTH FLOOR REFLECTED CEILING PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

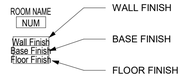
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A204A

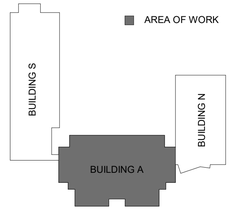
COPYRIGHT © 2020

8/14/2020 9:44:40 AM C:\Users\abrown\Documents\2018023900 CFCC ASN BASE BID_abrown@DEJ4.rvt

FINISH LEGEND



NOTES



KEY PLAN

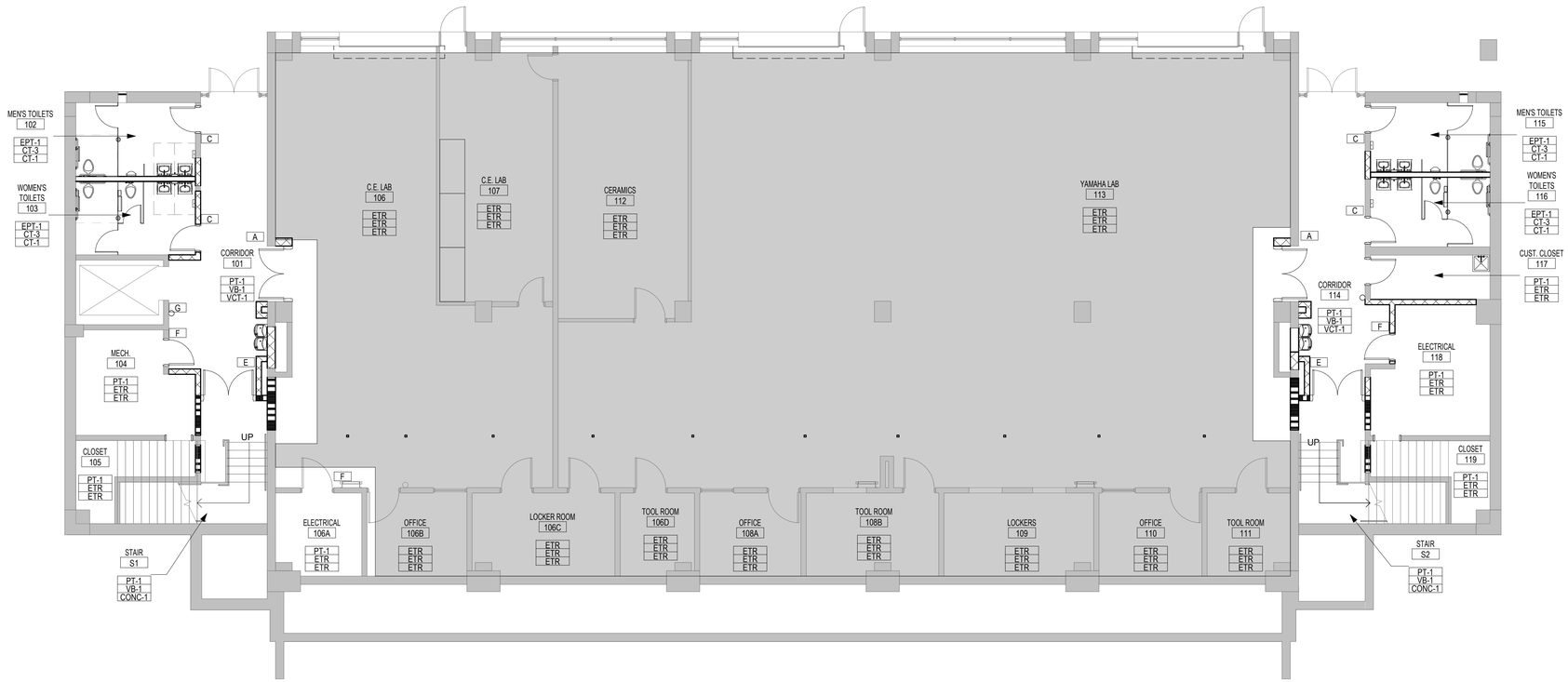
FINISH SCHEDULE LEGEND

KEY NAME	DESCRIPTION
FLOOR	
CONC-1	ALTERNATE 8: CONCRETE WITH SEALER/HARDENER
CPT-1	CARPET
CPT-2	CARPET
CT-1	CERAMIC TILE FLOORING
ETR	EXISTING TO REMAIN
LVT-1	LUXURY VINYL TILE
PFT-1	18x18 PORCELAIN FLOOR TILE
SDT-1	STATIC DISSIPATIVE TILE
BASE	
CT-3	CERAMIC TILE BASE
ETR	EXISTING TO REMAIN
VB-1	VINYL BASE
WALL	
CT-2	CERAMIC TILE WALL
EPT-1	EPOXY PAINT
ETR	EXISTING TO REMAIN
GWB	GYPSUM WALL BOARD
PT-1	PAINT
PT-3	ACCENT (BLUE)
PT-4	ACCENT (TBD)
GENERAL NOTES	
1	WALLS AND CEILINGS MAY CONTAIN MORE THAN ONE MATERIAL OR FINISH AS INDICATED. COORDINATE WITH CONSTRUCTION TYPE AND FINISH SIMILAR TO ADJACENT MATERIALS
2	SEE REFLECTED CEILING PLANS & CEILING NOTES FOR CEILING HEIGHTS, MATERIAL EXTENTS, LOCATIONS AND HEIGHTS OF BULKHEADS, SOFFITS, ETC.
3	PLAN WALL TYPES TAKE PRECEDENCE OVER SCHEDULED WALL FINISH. PROVIDE APPROPRIATE WALL FINISH TO CORRESPOND TO WALL TYPES.
4	MOLD AND MOISTURE RESISTANT GYPSUM BOARD SHALL BE USED AT ALL KITCHEN AREAS, TOILET ROOMS AND CUSTODIAN SERVICE CLOSETS SCHEDULED TO HAVE GYPSUM BOARD FINISHES
5	WALL AND CEILING FINISHES SHALL INCLUDE ALL PROJECTIONS, BEAM ENCLOSURES, RECESSES, BULKHEADS, MATERIAL CHANGES, OR OTHER ENCLOSURES. REFER TO REFLECTED CEILING PLANS
6	PROVIDE SEALANT/CAULK AT INTERSECTIONS OF DISSIMILAR MATERIALS AND AS RECOMMENDED BY MANUFACTURERS' GUIDELINES.
7	ALL NEW PARTITIONS AND WALLS AND EXISTING INTERIOR SHALL BE PAINTED. UNLESS OTHERWISE NOTED.
8	FURNISH AND INSTALL NEW WALL BASE TO MATCH EXISTING AT INFILLED OPENINGS, TYPICAL
9	BASE BID FOR ALL RESTROOM WALL FINISHES TO BE EPOXY PAINT. PRICE WALL TILE AS SHOWN AS ALTERNATE 7. BREAK OUT PRICE FOR WALL TILE AT RESTROOM 207 AS ALTERNATE 7A.
10	EXISTING TERRAZZO FLOOR FINISH TO BE PROTECTED AND POLISHED
11	REMOVE DAMAGED PORTIONS OF QUARRY TILE WALL BASE AND REPLACE WITH NEW TILE TO MATCH EXISTING

SIGNAGE LEGEND

TYPE	DESCRIPTION
A	CLASSROOM
B	OFFICE
C	RESTROOMS
D	UNISEX RESTROOM
E	STAIRS
F	GENERAL SIGN
F1	GENERAL SIGN
G	FIRE

SEE A901 FOR SIGNAGE DETAILS



1 FIRST FLOOR FINISH PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16535 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRST FLOOR FINISH PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

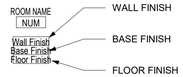
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A301

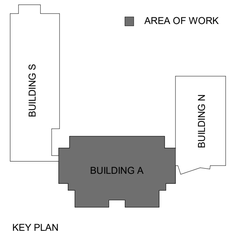
COPYRIGHT © 2020

8/14/2020 9:44:42 AM C:\Users\abrown\Documents\2018023\00 CFCC ASN BASE BID_abrown9DEJ4.rvt

FINISH LEGEND



NOTES



KEY PLAN

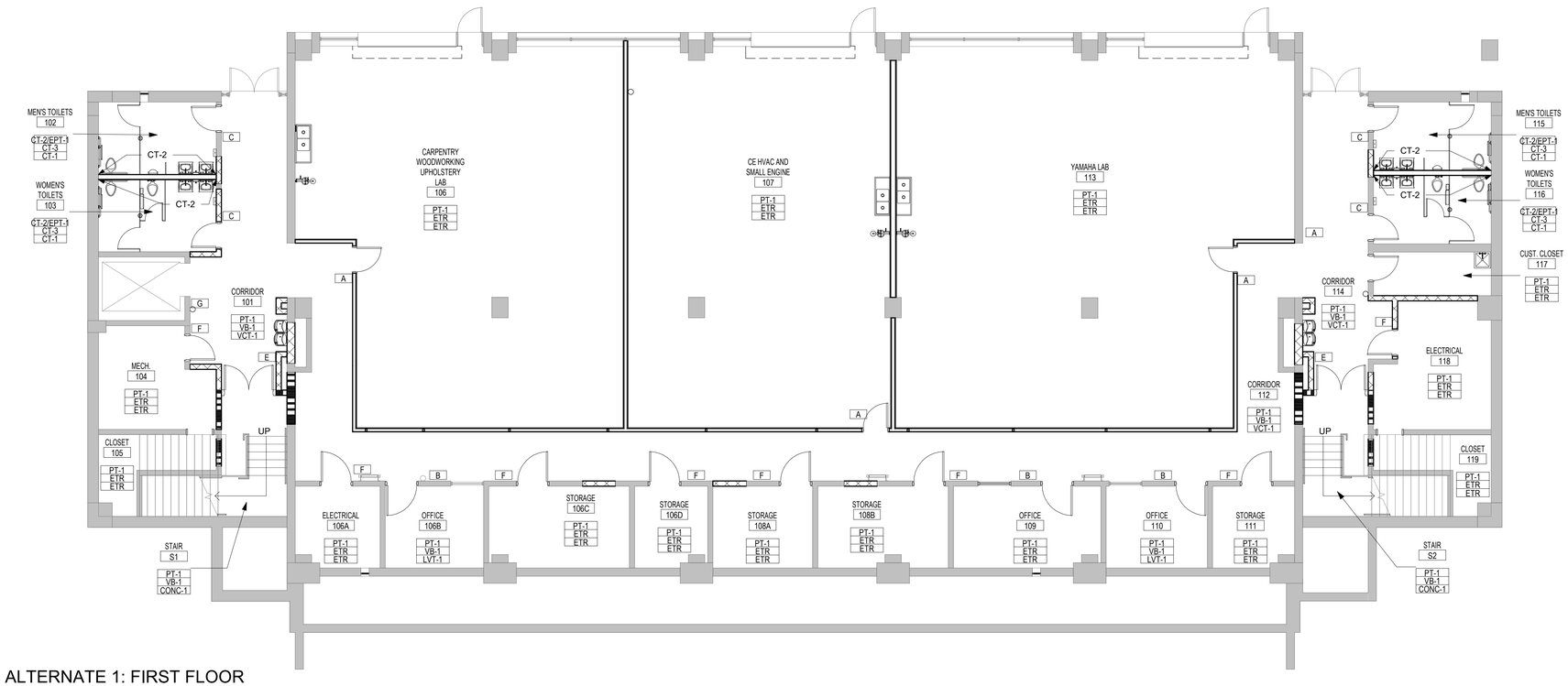
FINISH SCHEDULE LEGEND

KEY NAME	DESCRIPTION
FLOOR	
CONC-1	ALTERNATE 8: CONCRETE WITH SEALER/HARDENER
CPT-1	CARPET
CPT-2	CARPET
CT-1	CERAMIC TILE FLOORING
ETR	EXISTING TO REMAIN
LVT-1	LUXURY VINYL TILE
PFT-1	18x18 PORCELAIN FLOOR TILE
SDT-1	STATIC DISSIPATIVE TILE
BASE	
CT-3	CERAMIC TILE BASE
ETR	EXISTING TO REMAIN
VB-1	VINYL BASE
WALL	
CT-2	CERAMIC TILE WALL
EPT-1	EPOXY PAINT
ETR	EXISTING TO REMAIN
GWB	GYPSUM WALL BOARD
PT-1	PAINT
PT-3	ACCENT (BLUE)
PT-4	ACCENT (TBD)
GENERAL NOTES	
1	WALLS AND CEILINGS MAY CONTAIN MORE THAN ONE MATERIAL OR FINISH AS INDICATED. COORDINATE WITH CONSTRUCTION TYPE AND FINISH SIMILAR TO ADJACENT MATERIALS
2	SEE REFLECTED CEILING PLANS & CEILING NOTES FOR CEILING HEIGHTS, MATERIAL EXTENTS, LOCATIONS AND HEIGHTS OF BULKHEADS, SOFFITS, ETC.
3	PLAN WALL TYPES TAKE PRECEDENCE OVER SCHEDULED WALL FINISH. PROVIDE APPROPRIATE WALL FINISH TO CORRESPOND TO WALL TYPES.
4	MOLD AND MOISTURE RESISTANT GYPSUM BOARD SHALL BE USED AT ALL KITCHEN AREAS, TOILET ROOMS AND CUSTODIAN SERVICE CLOSETS SCHEDULED TO HAVE GYPSUM BOARD FINISHES
5	WALL AND CEILING FINISHES SHALL INCLUDE ALL PROJECTIONS, BEAM ENCLOSURES, RECESSES, BULKHEADS, MATERIAL CHANGES, OR OTHER ENCLOSURES. REFER TO REFLECTED CEILING PLANS
6	PROVIDE SEALANT/CAULK AT INTERSECTIONS OF DISSIMILAR MATERIALS AND AS RECOMMENDED BY MANUFACTURERS' GUIDELINES.
7	ALL NEW PARTITIONS AND WALLS AND EXISTING INTERIOR SHALL BE PAINTED. UNLESS OTHERWISE NOTED.
8	FURNISH AND INSTALL NEW WALL BASE TO MATCH EXISTING AT INFILLED OPENINGS, TYPICAL
9	BASE BID FOR ALL RESTROOM WALL FINISHES TO BE EPOXY PAINT. PRICE WALL TILE AS SHOWN AS ALTERNATE 7. BREAK OUT PRICE FOR WALL TILE AT RESTROOM 207 AS ALTERNATE 7A
10	EXISTING TERRAZZO FLOOR FINISH TO BE PROTECTED AND POLISHED
11	REMOVE DAMAGED PORTIONS OF QUARRY TILE WALL BASE AND REPLACE WITH NEW TILE TO MATCH EXISTING

SIGNAGE LEGEND

TYPE	DESCRIPTION
A	CLASSROOM
B	OFFICE
C	RESTROOMS
D	UNISEX RESTROOM
E	STAIRS
F	GENERAL SIGN
F1	GENERAL SIGN
G	FIRE

SEE A901 FOR SIGNAGE DETAILS



1 ALTERNATE 1: FIRST FLOOR FINISH PLAN

8' 4' 0' 8' SCALE: 1/8" = 1'-0"

SCALE : 1/8" = 1'-0"

PLAN NORTH

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16595 North Carolina WILMINGTON, N.C.
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1 - FIRST FLOOR FINISH PLAN

ISSUE BLOCK

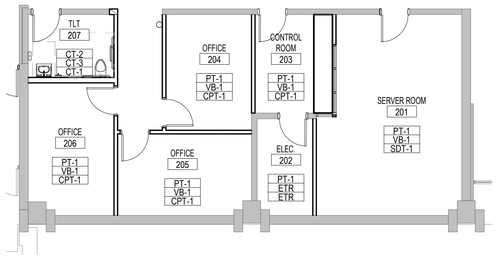
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A301A

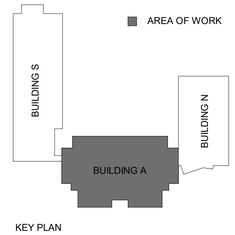
COPYRIGHT © 2020

8/14/2020 9:44:42 AM C:\Users\abrown\Documents\2018023D0 CFCC ASN BASE BID_abrown9DEJ4.rvt

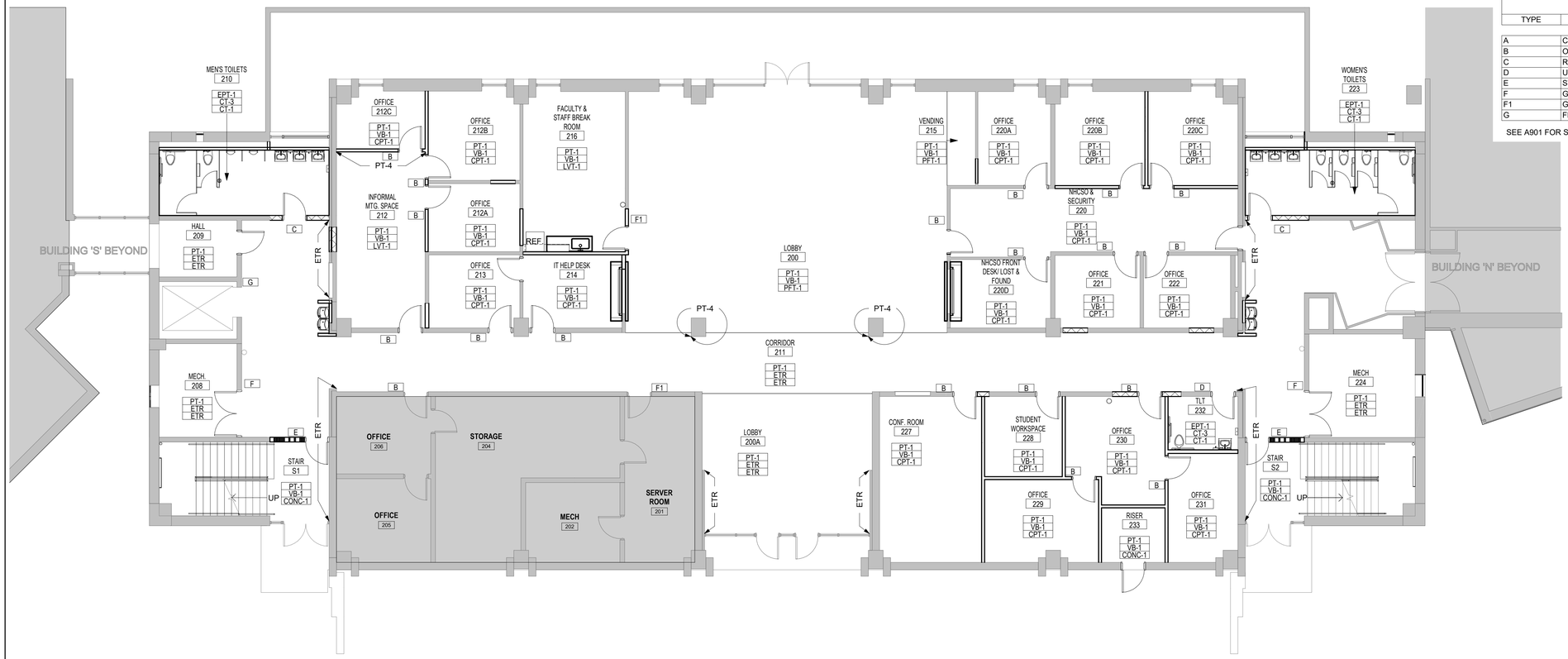


2 ALTERNATE 2 PARTIAL 2ND FLOOR FINISH PLAN

SCALE: 1/8" = 1'-0"



KEY PLAN



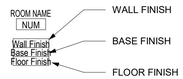
1 2ND FLOOR FINISH PLAN

8' 4' 0' 8'

SCALE: 1/8" = 1'-0"

SCALE : 1/8" = 1'-0"

FINISH LEGEND



NOTES

FINISH SCHEDULE LEGEND

KEY NAME	DESCRIPTION
FLOOR	
CONC-1	ALTERNATE 8: CONCRETE WITH SEALER/HARDENER
CPT-1	CARPET
CPT-2	CARPET
CT-1	CERAMIC TILE FLOORING
ETR	EXISTING TO REMAIN
LVT-1	LUXURY VINYL TILE
PFT-1	18x18 PORCELAIN FLOOR TILE
SDT-1	STATIC DISSIPATIVE TILE
BASE	
CT-3	CERAMIC TILE BASE
ETR	EXISTING TO REMAIN
VB-1	VINYL BASE
WALL	
CT-2	CERAMIC TILE WALL
EPT-1	EPOXY PAINT
ETR	EXISTING TO REMAIN
GWB	GYPSUM WALL BOARD
PT-1	PAINT
PT-3	ACCENT (BLUE)
PT-4	ACCENT (TBD)
GENERAL NOTES	
1	WALLS AND CEILINGS MAY CONTAIN MORE THAN ONE MATERIAL OR FINISH AS INDICATED. COORDINATE WITH CONSTRUCTION TYPE AND FINISH SIMILAR TO ADJACENT MATERIALS
2	SEE REFLECTED CEILING PLANS & CEILING NOTES FOR CEILING HEIGHTS, MATERIAL EXTENTS, LOCATIONS AND HEIGHTS OF BULKHEADS, SOFFITS, ETC.
3	PLAN WALL TYPES TAKE PRECEDENCE OVER SCHEDULED WALL FINISH. PROVIDE APPROPRIATE WALL FINISH TO CORRESPOND TO WALL TYPES.
4	MOLD AND MOISTURE RESISTANT GYPSUM BOARD SHALL BE USED AT ALL KITCHEN AREAS, TOILET ROOMS AND CUSTODIAN SERVICE CLOSETS SCHEDULED TO HAVE GYPSUM BOARD FINISHES
5	WALL AND CEILING FINISHES SHALL INCLUDE ALL PROJECTIONS, BEAM ENCLOSURES, RECESSES, BULKHEADS, MATERIAL CHANGES, OR OTHER ENCLOSURES. REFER TO REFLECTED CEILING PLANS
6	PROVIDE SEALANT/CAULK AT INTERSECTIONS OF DISSIMILAR MATERIALS AND AS RECOMMENDED BY MANUFACTURERS' GUIDELINES.
7	ALL NEW PARTITIONS AND WALLS AND EXISTING INTERIOR SHALL BE PAINTED. UNLESS OTHERWISE NOTED.
8	FURNISH AND INSTALL NEW WALL BASE TO MATCH EXISTING AT INFILLED OPENINGS, TYPICAL
9	BASE BID FOR ALL RESTROOM WALL FINISHES TO BE EPOXY PAINT. PRICE WALL TILE AS SHOWN AS ALTERNATE 7. BREAK OUT PRICE FOR WALL TILE AT RESTROOM 207 AS ALTERNATE 7A.
10	EXISTING TERRAZZO FLOOR FINISH TO BE PROTECTED AND POLISHED
11	REMOVE DAMAGED PORTIONS OF QUARRY TILE WALL BASE AND REPLACE WITH NEW TILE TO MATCH EXISTING

SIGNAGE LEGEND

TYPE	DESCRIPTION
A	CLASSROOM
B	OFFICE
C	RESTROOMS
D	UNISEX RESTROOM
E	STAIRS
F	GENERAL SIGN
F1	GENERAL SIGN
G	FIRE

SEE A901 FOR SIGNAGE DETAILS

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 18535 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

SECOND FLOOR FINISH PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

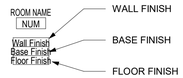
PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

A302

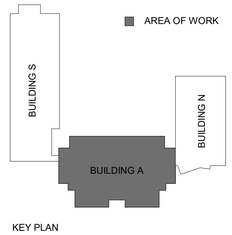
COPYRIGHT © 2020

8/14/2020 9:44:44 AM C:\Users\abrown\Documents\2018023300 CFCC ASN BASE BID_abrownSDEJ4.rvt

FINISH LEGEND



NOTES



KEY PLAN

FINISH SCHEDULE LEGEND

KEY NAME	DESCRIPTION
FLOOR	
CONC-1	ALTERNATE 8: CONCRETE WITH SEALER/HARDENER
CPT-1	CARPET
CPT-2	CARPET
CT-1	CERAMIC TILE FLOORING
ETR	EXISTING TO REMAIN
LVT-1	LUXURY VINYL TILE
PFT-1	18x18 PORCELAIN FLOOR TILE
SDT-1	STATIC DISSIPATIVE TILE
BASE	
CT-3	CERAMIC TILE BASE
ETR	EXISTING TO REMAIN
VB-1	VINYL BASE
WALL	
CT-2	CERAMIC TILE WALL
EPT-1	EPOXY PAINT
ETR	EXISTING TO REMAIN
GWB	GYPSUM WALL BOARD
PT-1	PAINT
PT-3	ACCENT (BLUE)
PT-4	ACCENT (TBD)
GENERAL NOTES	
1	WALLS AND CEILINGS MAY CONTAIN MORE THAN ONE MATERIAL OR FINISH AS INDICATED. COORDINATE WITH CONSTRUCTION TYPE AND FINISH SIMILAR TO ADJACENT MATERIALS
2	SEE REFLECTED CEILING PLANS & CEILING NOTES FOR CEILING HEIGHTS, MATERIAL EXTENTS, LOCATIONS AND HEIGHTS OF BULKHEADS, SOFFITS, ETC.
3	PLAN WALL TYPES TAKE PRECEDENCE OVER SCHEDULED WALL FINISH. PROVIDE APPROPRIATE WALL FINISH TO CORRESPOND TO WALL TYPES.
4	MOLD AND MOISTURE RESISTANT GYPSUM BOARD SHALL BE USED AT ALL KITCHEN AREAS, TOILET ROOMS AND CUSTODIAN SERVICE CLOSETS SCHEDULED TO HAVE GYPSUM BOARD FINISHES
5	WALL AND CEILING FINISHES SHALL INCLUDE ALL PROJECTIONS, BEAM ENCLOSURES, RECESSES, BULKHEADS, MATERIAL CHANGES, OR OTHER ENCLOSURES. REFER TO REFLECTED CEILING PLANS
6	PROVIDE SEALANT/CAULK AT INTERSECTIONS OF DISSIMILAR MATERIALS AND AS RECOMMENDED BY MANUFACTURERS' GUIDELINES.
7	ALL NEW PARTITIONS AND WALLS AND EXISTING INTERIOR SHALL BE PAINTED. UNLESS OTHERWISE NOTED.
8	FURNISH AND INSTALL NEW WALL BASE TO MATCH EXISTING AT INFILLED OPENINGS, TYPICAL
9	BASE BID FOR ALL RESTROOM WALL FINISHES TO BE EPOXY PAINT. PRICE WALL TILE AS SHOWN AS ALTERNATE 7. BREAK OUT PRICE FOR WALL TILE AT RESTROOM 207 AS ALTERNATE 7A.
10	EXISTING TERRAZZO FLOOR FINISH TO BE PROTECTED AND POLISHED
11	REMOVE DAMAGED PORTIONS OF QUARRY TILE WALL BASE AND REPLACE WITH NEW TILE TO MATCH EXISTING

SIGNAGE LEGEND

TYPE	DESCRIPTION
A	CLASSROOM
B	OFFICE
C	RESTROOMS
D	UNISEX RESTROOM
E	STAIRS
F	GENERAL SIGN
F1	GENERAL SIGN
G	FIRE

SEE A901 FOR SIGNAGE DETAILS

1 3RD FLOOR FINISH PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16595 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

THIRD FLOOR FINISH PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

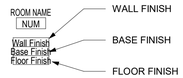
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A303

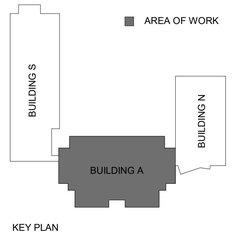
COPYRIGHT © 2020

8/14/2020 9:44:45 AM C:\Users\altbrown\Documents\2018023000 CFCC ASN BASE BID_altbrownBDEJ4.rvt

FINISH LEGEND



NOTES



KEY PLAN

FINISH SCHEDULE LEGEND

KEY NAME	DESCRIPTION
FLOOR	
CONC-1	ALTERNATE 8: CONCRETE WITH SEALER/HARDENER
CPT-1	CARPET
CPT-2	CARPET
CT-1	CERAMIC TILE FLOORING
ETR	EXISTING TO REMAIN
LVT-1	LUXURY VINYL TILE
PFT-1	18x18 PORCELAIN FLOOR TILE
SDT-1	STATIC DISSIPATIVE TILE
BASE	
CT-3	CERAMIC TILE BASE
ETR	EXISTING TO REMAIN
VB-1	VINYL BASE
WALL	
CT-2	CERAMIC TILE WALL
EPT-1	EPOXY PAINT
ETR	EXISTING TO REMAIN
GWB	GYPSUM WALL BOARD
PT-1	PAINT
PT-3	ACCENT (BLUE)
PT-4	ACCENT (TBD)
GENERAL NOTES	
1	WALLS AND CEILINGS MAY CONTAIN MORE THAN ONE MATERIAL OR FINISH AS INDICATED. COORDINATE WITH CONSTRUCTION TYPE AND FINISH SIMILAR TO ADJACENT MATERIALS
2	SEE REFLECTED CEILING PLANS & CEILING NOTES FOR CEILING HEIGHTS, MATERIAL EXTENTS, LOCATIONS AND HEIGHTS OF BULKHEADS, SOFFITS, ETC.
3	PLAN WALL TYPES TAKE PRECEDENCE OVER SCHEDULED WALL FINISH. PROVIDE APPROPRIATE WALL FINISH TO CORRESPOND TO WALL TYPES.
4	MOLD AND MOISTURE RESISTANT GYPSUM BOARD SHALL BE USED AT ALL KITCHEN AREAS, TOILET ROOMS AND CUSTODIAN SERVICE CLOSETS SCHEDULED TO HAVE GYPSUM BOARD FINISHES
5	WALL AND CEILING FINISHES SHALL INCLUDE ALL PROJECTIONS, BEAM ENCLOSURES, RECESSES, BULKHEADS, MATERIAL CHANGES, OR OTHER ENCLOSURES. REFER TO REFLECTED CEILING PLANS
6	PROVIDE SEALANT/CAULK AT INTERSECTIONS OF DISSIMILAR MATERIALS AND AS RECOMMENDED BY MANUFACTURERS' GUIDELINES.
7	ALL NEW PARTITIONS AND WALLS AND EXISTING INTERIOR SHALL BE PAINTED. UNLESS OTHERWISE NOTED.
8	FURNISH AND INSTALL NEW WALL BASE TO MATCH EXISTING AT INFILLED OPENINGS, TYPICAL
9	BASE BID FOR ALL RESTROOM WALL FINISHES TO BE EPOXY PAINT. PRICE WALL TILE AS SHOWN AS ALTERNATE 7. BREAK OUT PRICE FOR WALL TILE AT RESTROOM 207 AS ALTERNATE 7A
10	EXISTING TERRAZZO FLOOR FINISH TO BE PROTECTED AND POLISHED
11	REMOVE DAMAGED PORTIONS OF QUARRY TILE WALL BASE AND REPLACE WITH NEW TILE TO MATCH EXISTING

SIGNAGE LEGEND

TYPE	DESCRIPTION
A	CLASSROOM
B	OFFICE
C	RESTROOMS
D	UNISEX RESTROOM
E	STAIRS
F	GENERAL SIGN
F1	GENERAL SIGN
G	FIRE

SEE A901 FOR SIGNAGE DETAILS

1 4TH FLOOR FINISH PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16595 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FOURTH FLOOR FINISH PLAN

ISSUE BLOCK

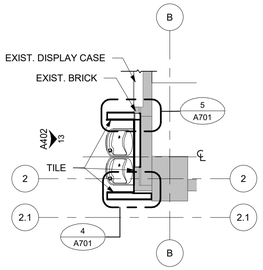
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY:Author	PROJ MGR:Checker

A304

COPYRIGHT © 2020

8/14/2020 9:44:45 AM C:\Users\atbrown\Documents\2018023.00_CFCC ASN BASE BID_atbrown9DEJ4.rvt

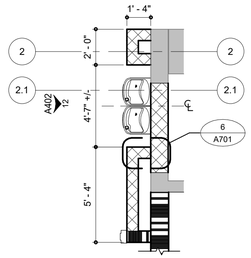


10 ENLARGED DRINKING FOUNTAIN TYPICAL FLOORS 2-4

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

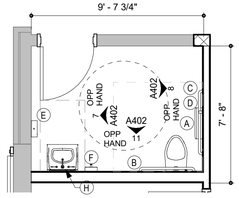


9 ENLARGED DRINKING FOUNTAIN FIRST FLOOR

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

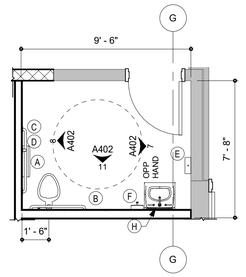


8 ALTERNATE 2: ENLARGED SECOND FLOOR TOILET 207

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

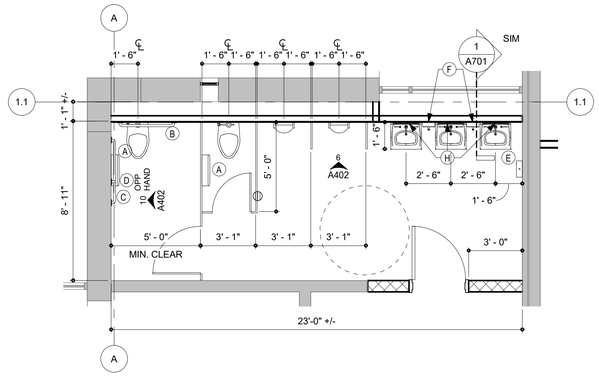


7 ENLARGED SECOND FLOOR TOILET EAST

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

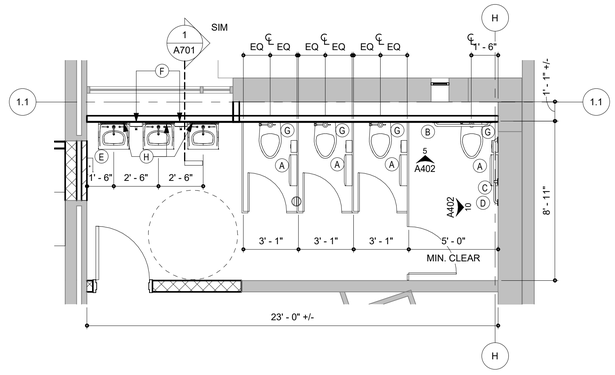


6 ENLARGED MEN'S TOILETS TYPICAL FLOORS 3-4

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

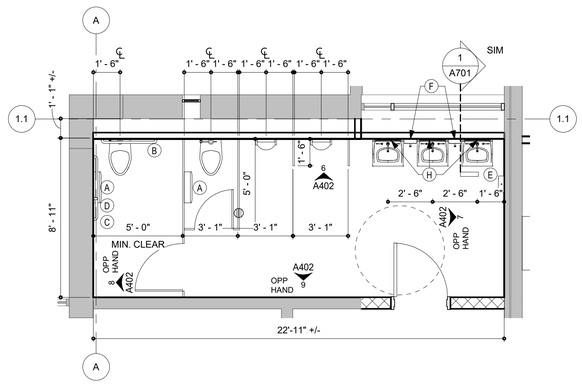


5 ENLARGED WOMEN'S TOILETS TYPICAL FLOORS 3-4

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

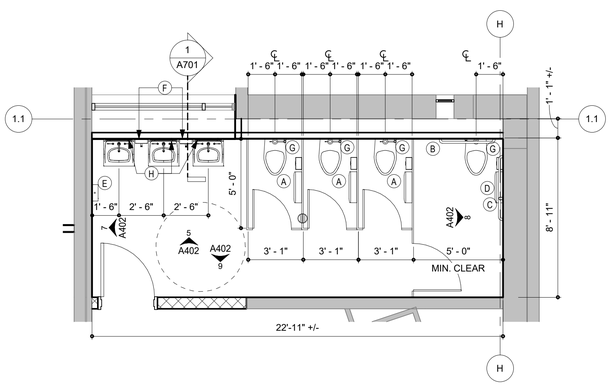


4 ENLARGED MEN'S TOILET SECOND FLOOR

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

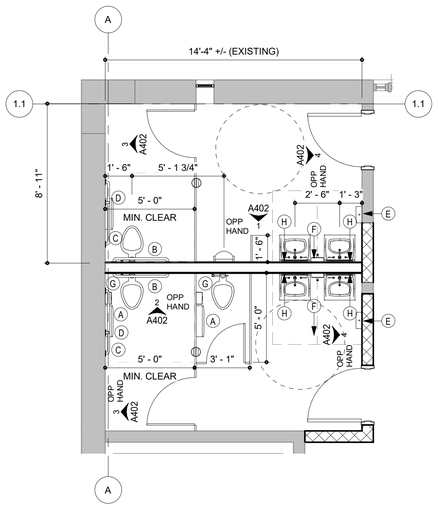


3 ENLARGED WOMEN'S TOILET SECOND FLOOR

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

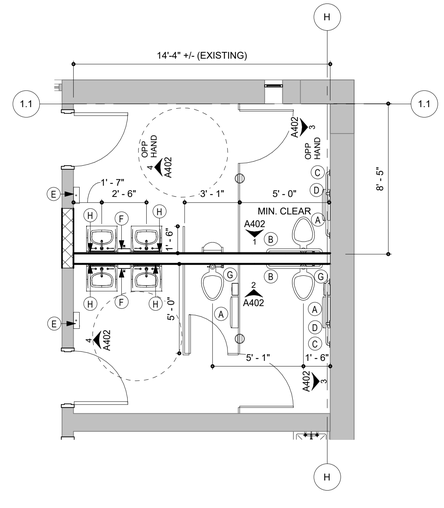


2 ENLARGED FIRST FLOOR TOILETS WEST

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"



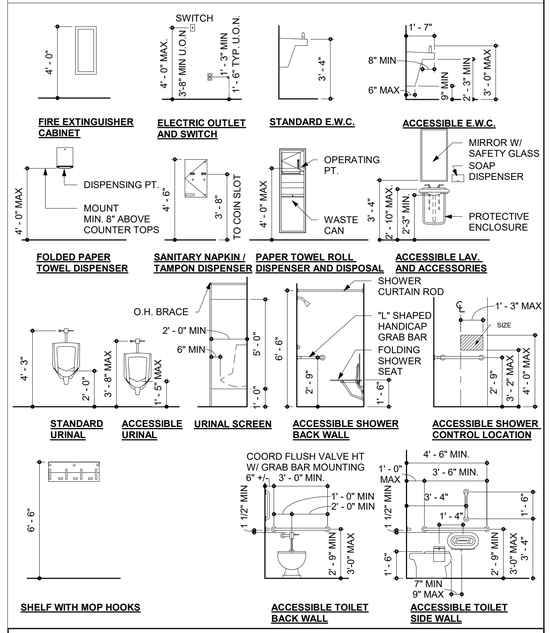
1 ENLARGED FIRST FLOOR TOILETS EAST

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

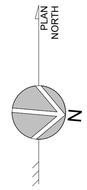
SCALE : 1/4" = 1'-0"

STANDARD MOUNTING HEIGHTS



KEYNOTES - TOILET ACCESSORIES

A	TOILET PAPER DISPENSER (OWNER FURNISHED, CONTRACTOR INSTALLED
B	36" GRAB BAR
C	42" GRAB BAR
D	18" VERTICAL GRAB BAR
E	PAPER TOWEL DISPENSER (OWNER FURNISHED, CONTRACTOR INSTALLED
F	SOAP DISPENSER (OWNER FURNISHED, CONTRACTOR INSTALLED
G	SANITARY NAPKIN RECEPTACLE (OWNER FURNISHED, CONTRACTOR INSTALLED
H	MIRROR WITH FRAME



BECKER MORGAN GROUP

ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS REGISTERED ARCHITECT 16595 NORTH CAROLINA WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ENLARGED TOILET PLANS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

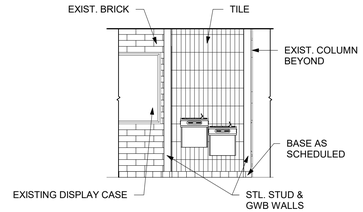
PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: 1/4" = 1'-0"
DRAWN BY: VSC PROJ MGR: DCW

A401

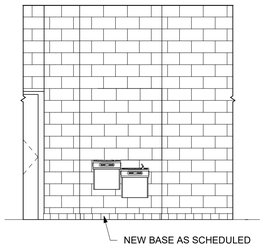
COPYRIGHT © 2020

8/14/2020 9:44:47 AM C:\Users\abrown\Documents\2018023300 CFCC-ASN BASE BID_abrown9DEJ4.rvt

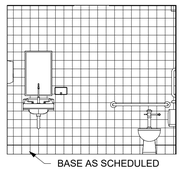
NOTE:
BASE BID FOR ALL RESTROOM WALL FINISHES TO BE EPOXY PAINT. PRICE WALL TILE AS SHOWN AS ALTERNATE 7.
BREAKOUT PRICE FOR WALL TILE AT RESTROOM 207 AS ALTERNATE 7A.



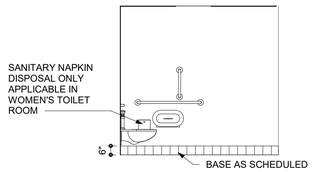
13 TYPICAL DRINKING FOUNTAIN ELEVATION FLOORS 2-4
SCALE: 1/4" = 1'-0"



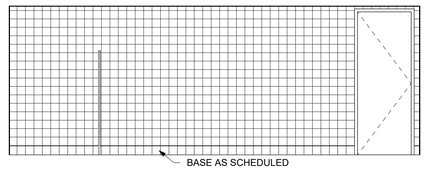
12 FIRST FLOOR DRINKING FOUNTAIN ELEVATION
SCALE: 1/4" = 1'-0"



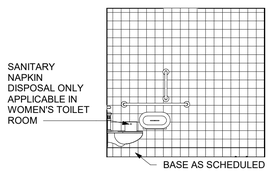
11 SECOND FLOOR TOILETS ELEVATION
SCALE: 1/4" = 1'-0"



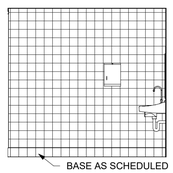
10 TYPICAL TOILET ROOM ELEVATION FLOORS 3-4
SCALE: 1/4" = 1'-0"



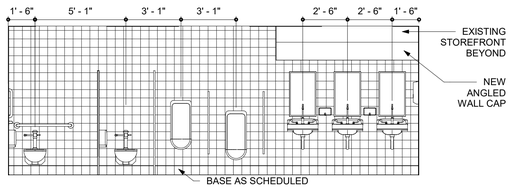
9 TYPICAL TOILET ROOM ELEVATION SECOND FLOOR
SCALE: 1/4" = 1'-0"



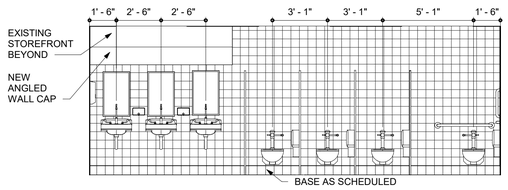
8 TYPICAL TOILET ROOM ELEVATION SECOND FLOOR
SCALE: 1/4" = 1'-0"



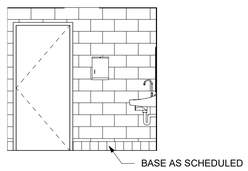
7 TYPICAL TOILET ROOM ELEVATION SECOND FLOOR
SCALE: 1/4" = 1'-0"



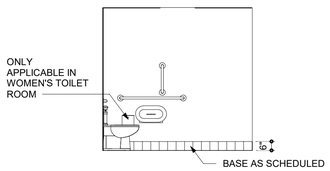
6 TYPICAL MEN'S TOILET ROOM ELEVATION FLOORS 2-4
SCALE: 1/4" = 1'-0"



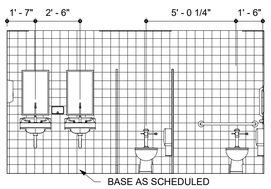
5 TYPICAL WOMEN'S TOILET ROOM ELEVATION FLOORS 2-4
SCALE: 1/4" = 1'-0"



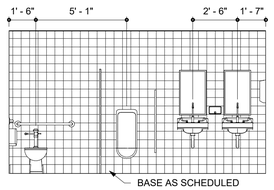
4 TYPICAL TOILET ROOM ELEVATION FIRST FLOOR
SCALE: 1/4" = 1'-0"



3 TYPICAL TOILET ROOM ELEVATION FIRST FLOOR
SCALE: 1/4" = 1'-0"



2 TYPICAL WOMEN'S TOILET ROOM ELEVATION FIRST FLOOR
SCALE: 1/4" = 1'-0"



1 TYPICAL MEN'S TOILET ROOM ELEVATION FIRST FLOOR
SCALE: 1/4" = 1'-0"

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS
Registered Architect
North Carolina
6695
WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC.
Professional Architectural Corporation
North Carolina
51922
WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

TOILET ELEVATIONS

ISSUE BLOCK

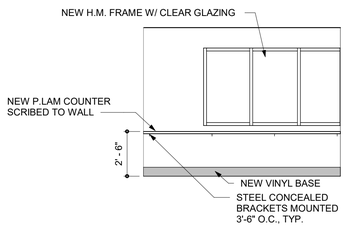
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	1/4" = 1'-0"
DRAWN BY: VSC	PROJ MGR: DCW

A402

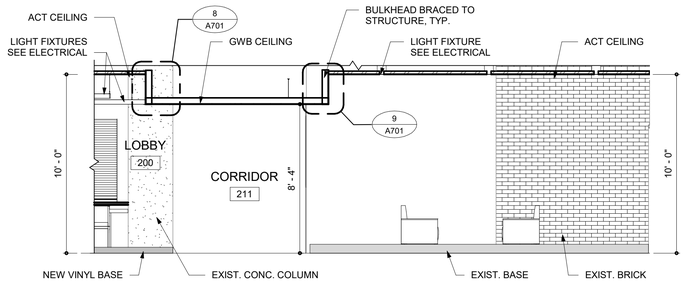
COPYRIGHT © 2020

8/14/2020 9:44:49 AM C:\Users\abrown\Documents\2019022300 CFCC ASN BASE BID_abrown5DEJ4.rvt



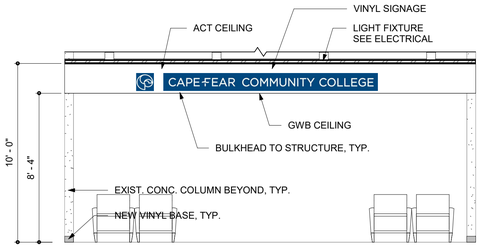
1 CONTROL ROOM 203 ELEVATION

SCALE: 1/4" = 1'-0"



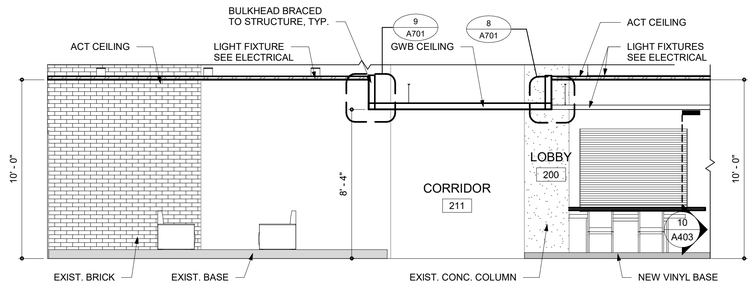
2 LOBBY EAST WALL ELEVATION

SCALE: 1/4" = 1'-0"



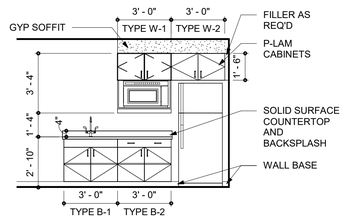
3 LOBBY 200A NORTH ELEVATION

SCALE: 1/4" = 1'-0"



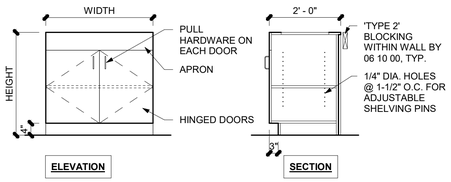
4 LOBBY WEST WALL ELEVATION

SCALE: 1/4" = 1'-0"



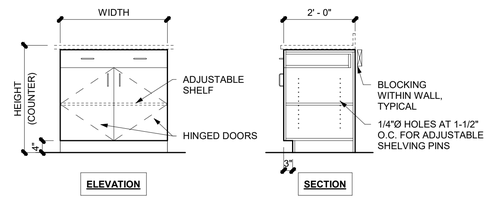
5 BREAK ROOM 216 ELEVATION

SCALE: 1/4" = 1'-0"



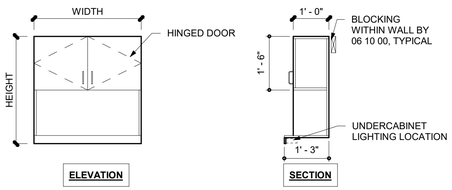
6 CABINET TYPE B-1

SCALE: 1/2" = 1'-0"



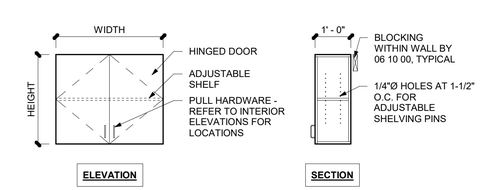
7 CABINET TYPE B-2

SCALE: 1/2" = 1'-0"



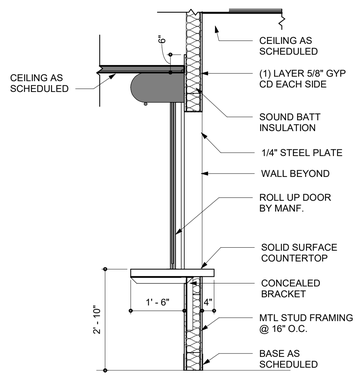
8 CABINET TYPE W-1

SCALE: 1/2" = 1'-0"



9 CABINET TYPE W-2

SCALE: 1/2" = 1'-0"



10 ROLL UP DOOR COUNTER SECTION

SCALE: 1/2" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

INTERIOR ELEVATIONS AND CASEWORK

ISSUE BLOCK

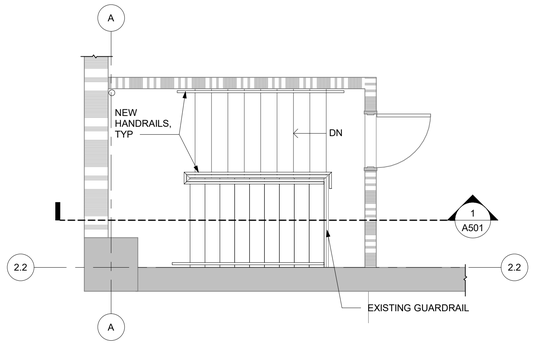
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JDF	PROJ MGR: DCW

A403

COPYRIGHT © 2020

8/14/2020 4:41:35 PM C:\Users\abrown\Documents\2018023000 CFCC ASN BASE BID_abrown9DEJ4.rvt

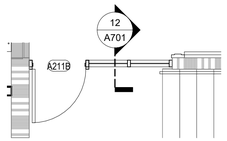


7 WEST ROOF LANDING (EAST SIM)

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"



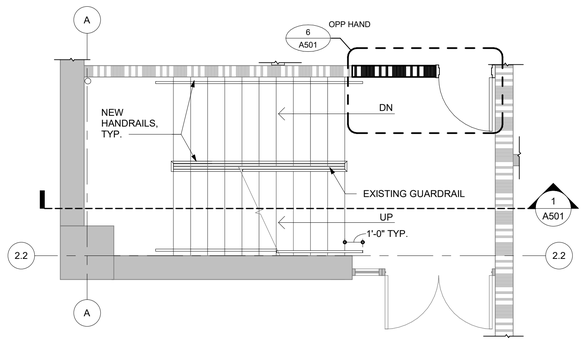
LIST OF ALTERNATE DOORS
2ND FLOOR S1: A211A
2ND FLOOR S2: A211B
3RD FLOOR S1: A300A
3RD FLOOR S2: A300B
4TH FLOOR S1: A400A
4TH FLOOR S2: A400B

6 ALTERNATE 5 FIRE RATED GLAZING

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

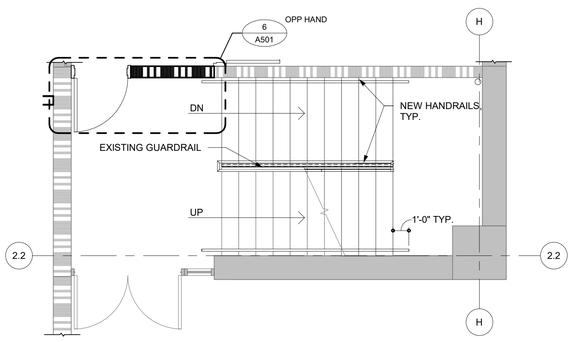


5 ENLARGED STAIRS PLAN WEST FLOORS 2-4 TYPICAL

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

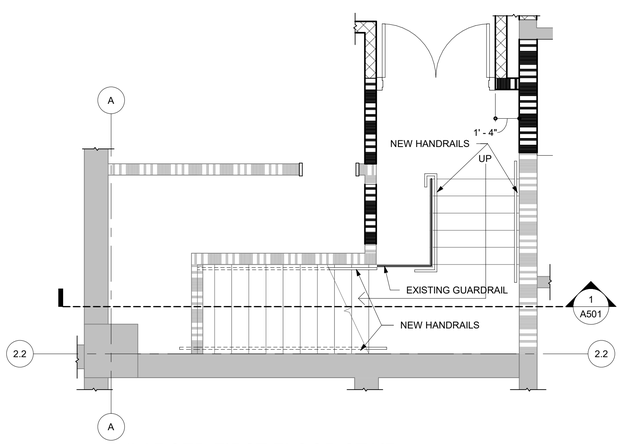


4 ENLARGED STAIRS PLAN EAST FLOORS 2-4 TYPICAL

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

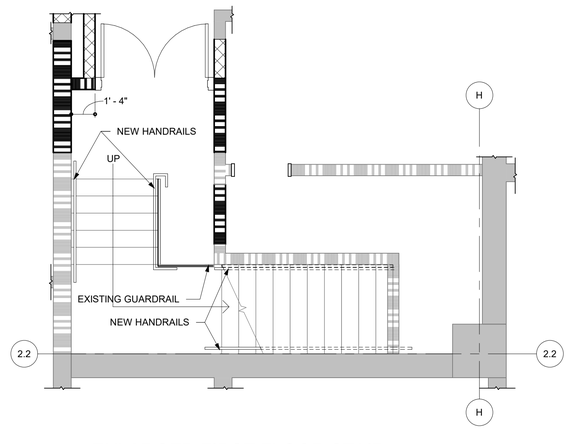


3 ENLARGED FIRST FLOOR STAIR PLAN WEST

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

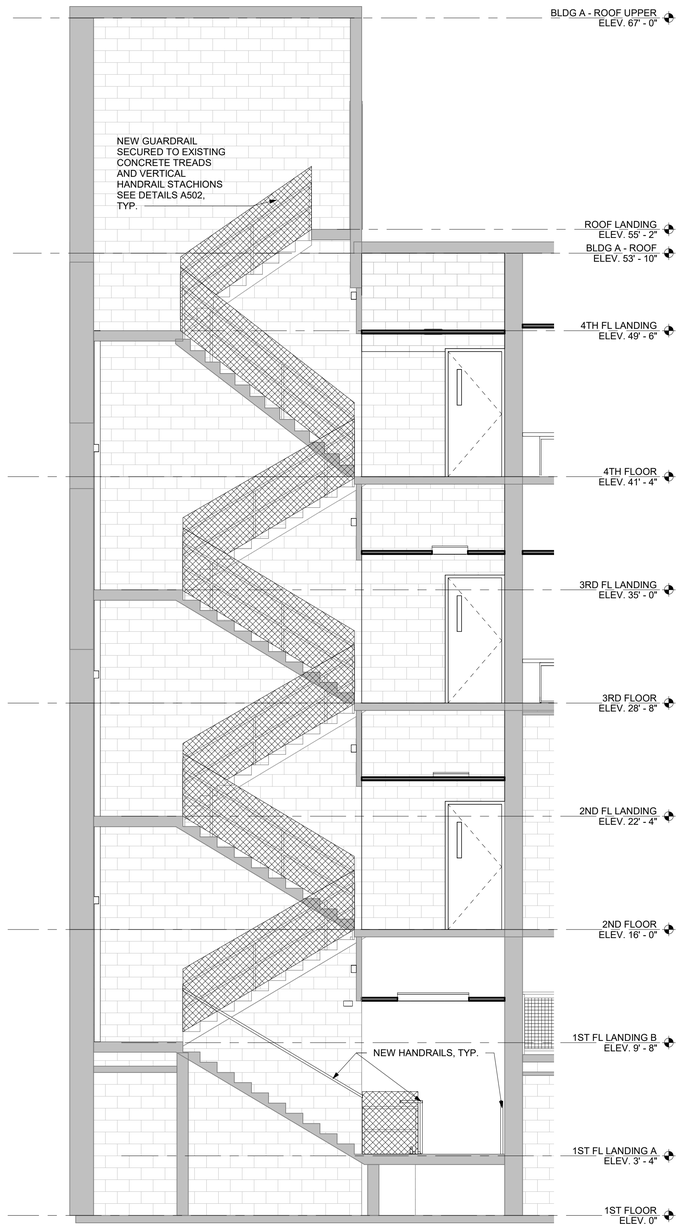


2 ENLARGED FIRST FLOOR STAIR PLAN EAST

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"



1 STAIR TOWER SECTION

SCALE: 1/4" = 1'-0"

4' 2' 0' 4'

SCALE : 1/4" = 1'-0"

PLAN NORTH

N

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16695 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ENLARGED STAIR PLANS AND SECTION

ISSUE BLOCK

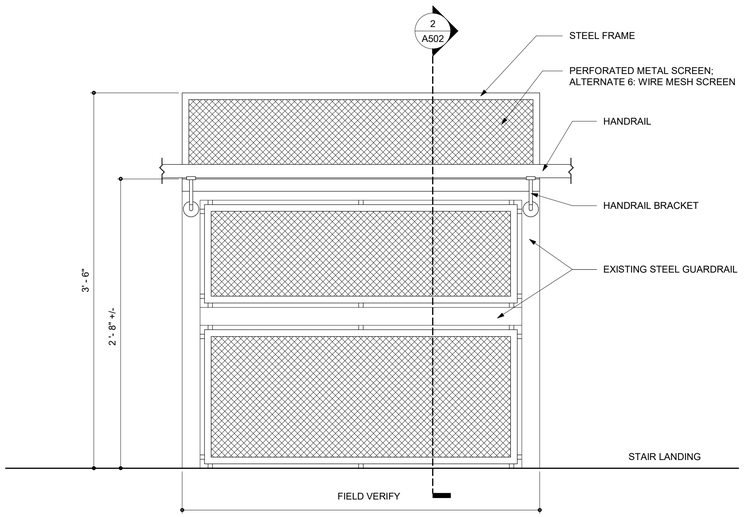
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	1/4" = 1'-0"
DRAWN BY: LJR	PROJ MGR: DCW

A501

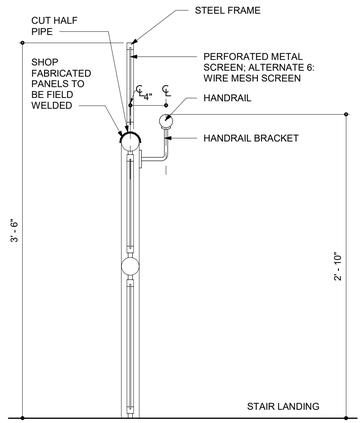
COPYRIGHT © 2020

8/14/2020 9:44:51 AM C:\Users\abrown\Documents\2018023300 CFCC-ASN BASE BID_abrown9DEJ4.rvt



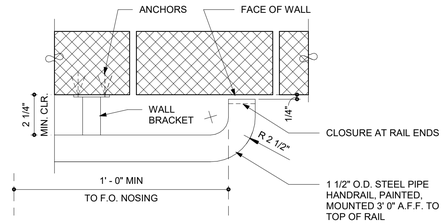
1 GUARDRAIL ELEVATION

SCALE: 1 1/2" = 1'-0"



2 GUARDRAIL SECTION

SCALE: 1 1/2" = 1'-0"



3 WALL-MOUNTED HANDRAIL DETAIL

SCALE: 3" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS
Registered Architect
4695
North Carolina
WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC.
Professional Architectural Corporation
51922
North Carolina
WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

STAIR DETAILS

ISSUE BLOCK

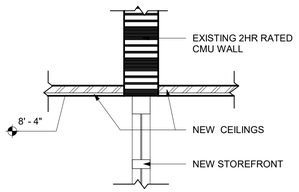
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: LJR	PROJ MGR: DCW

A502

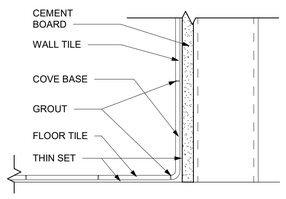
COPYRIGHT © 2020

8/14/2020 9:44:51 AM C:\Users\abrown\Documents\2018023000 CFCC ASN BASE BID_abrown5DEJ4.rvt



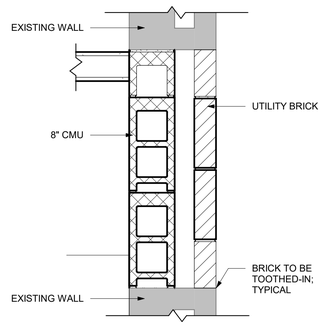
12 TYPICAL STAIR CEILING DETAIL

SCALE: 3/4" = 1'-0"



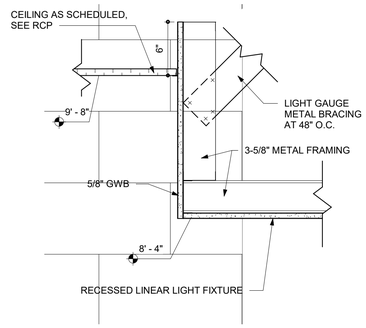
11 TILE COVE BASE DETAIL

SCALE: 3" = 1'-0"



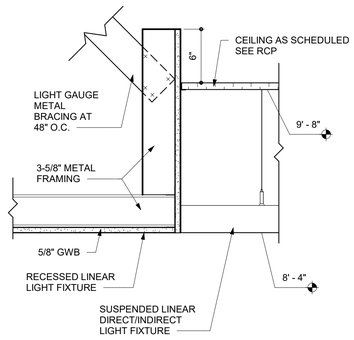
10 WALL INFILL PLAN DETAIL

SCALE: 1" = 1'-0"



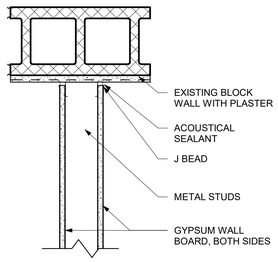
9 BULKHEAD DETAIL 2

SCALE: 1 1/2" = 1'-0"



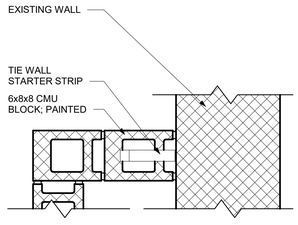
8 BULKHEAD DETAIL 1

SCALE: 1 1/2" = 1'-0"



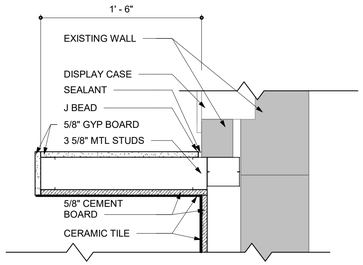
7 GYP TO PLASTER DETAIL

SCALE: 1 1/2" = 1'-0"



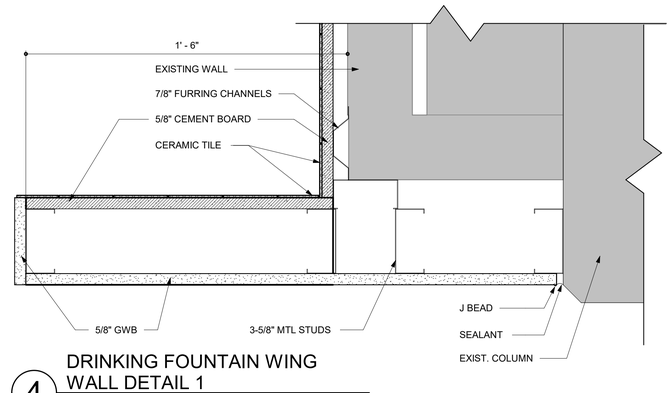
6 DRINKING FOUNTAIN WALL CONNECTION DETAIL

SCALE: 1 1/2" = 1'-0"



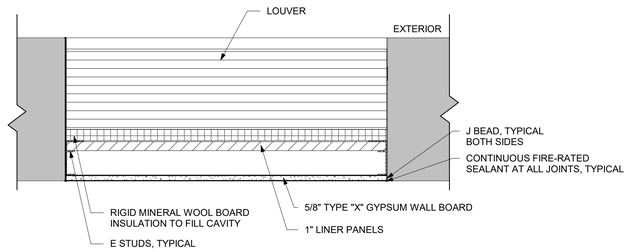
5 DRINKING FOUNTAIN WING WALL DETAIL 2

SCALE: 1 1/2" = 1'-0"



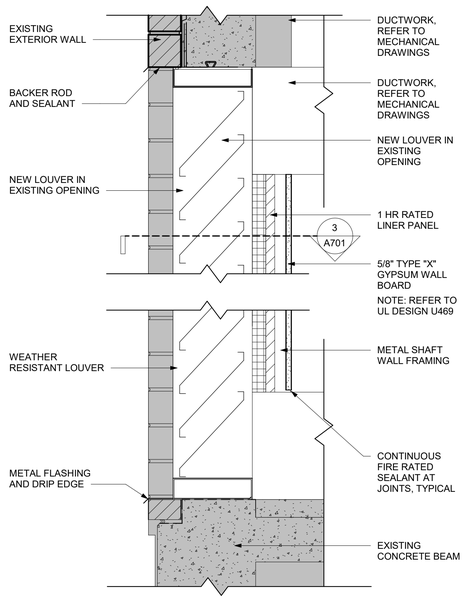
4 DRINKING FOUNTAIN WING WALL DETAIL 1

SCALE: 3" = 1'-0"



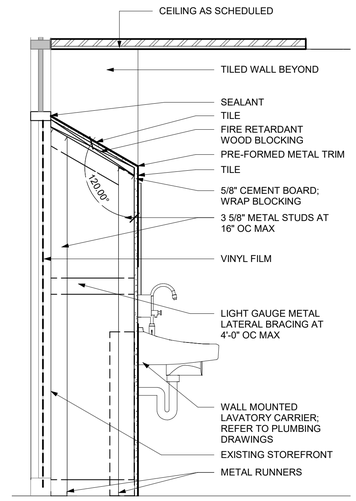
3 LOUVER SECTION PLAN DETAIL

SCALE: 1 1/2" = 1'-0"



2 LOUVER SECTION DETAIL

SCALE: 1 1/2" = 1'-0"



1 TYPICAL BATHROOM STOREFRONT SECTION

SCALE: 3/4" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS
Registered Architect
North Carolina
WILMINGTON, NC
8695
8/14/20

BECKER MORGAN GROUP, INC.
Professional Architectural Corporation
North Carolina
WILMINGTON, NC
51922

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

SECTIONS AND DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: VSC	PROJ MGR: DCW

A701

COPYRIGHT © 2020

8/14/2020 9:44:52 AM C:\Users\abrown\Documents\2018023300 CFCC ASN BASE BID_abrownSDEJ4.rvt

HARDWARE SCHEDULE

HARDWARE SET 1

3 HINGES (HEAVY WEIGHT)
1 EXIT DEVICE (CLASSROOM)
1 INTERCHANGEABLE CORE
1 SURFACE CLOSER
1 KICK PLATE
1 ELECTROMAGNETIC HOLDER
1 GASKETING

HARDWARE SET 2

3 HINGES
1 SECURITY STOREROOM LOCK
1 INTERCHANGEABLE CORE
1 SURFACE CLOSER
1 THRESHOLD
1 GASKETING
1 SWEEP

HARDWARE SET 3

3 HINGES (HEAVY WEIGHT)
1 EXIT DEVICE (PASSAGE)
1 SURFACE CLOSER
1 KICK PLATE
1 WALL STOP
1 GASKETING
3 SILENCER

HARDWARE SET 4

3 HINGES (HEAVY WEIGHT)
1 EXIT DEVICE (PASSAGE)
1 SURFACE CLOSER
1 KICK PLATE
1 ELECTROMAGNETIC HOLDER
1 GASKETING

HARDWARE SET 5

6 HINGES (HEAVY WEIGHT)
1 REMOVABLE MULLION
1 EXIT DEVICE (EXIT ONLY)
1 EXIT DEVICE (PASSAGE)
1 INTERCHANGEABLE CORE
1 CYLINDER HOUSING
1 CONIC OVERHEAD STOP
2 SURFACE CLOSER
1 WALL STOP
2 ELECTROMAGNETIC HOLDER
1 GASKETING
1 MULLION GASKETING

HARDWARE SET 6

3 HINGES, FULL MORTISE
1 EXIT DEVICE (STOREROOM)
1 INTERCHANGEABLE CORE
1 SURFACE CLOSER
1 GASKETING

HARDWARE SET 7

4 HINGES
1 CLASSROOM LOCK
1 INTERCHANGEABLE CORE
1 WALL STOP
3 SILENCER

HARDWARE SET 8

4 HINGES
1 CLASSROOM LOCK
1 INTERCHANGEABLE CORE
1 SURF OVERHEAD STOP
3 SILENCER

HARDWARE SET 9

3 HINGES (HEAVY WEIGHT)
1 CLASSROOM LOCK
1 INTERCHANGEABLE CORE
1 SURF OVERHEAD STOP
1 SURFACE CLOSER
1 KICK PLATE
1 GASKETING

HARDWARE SET 9.1

4 HINGES
1 CLASSROOM LOCK
1 INTERCHANGEABLE CORE
1 SURFACE CLOSER
1 KICK PLATE
1 WALL STOP
3 SILENCER

HARDWARE SET 10

3 HINGES (HEAVY WEIGHT)
1 CLASSROOM LOCK
1 INTERCHANGEABLE CORE
1 SURFACE CLOSER
1 KICK PLATE
1 WALL STOP
1 GASKETING

HARDWARE SET 10.1

6 HINGES (HEAVY WEIGHT)
1 FLUSH BOLT (AUTO SET)
1 DUST PROOF STRIKE
1 CLASSROOM LOCK
1 INTERCHANGEABLE CORE
1 COORDINATOR
2 MOUNTING BRACKET
2 SURFACE CLOSER
2 KICK PLATE
2 WALL STOP
1 ASTRAGAL
2 SILENCER

HARDWARE SET 11

3 HINGES
1 OFFICE LOCK
1 INTERCHANGEABLE CORE
1 WALL STOP
3 SILENCER

HARDWARE SET 12

3 HINGES
1 OFFICE LOCK
1 INTERCHANGEABLE CORE
1 SURFACE CLOSER
1 KICK PLATE
1 WALL STOP
1 GASKETING

HARDWARE SET 13

3 HINGES
1 OFFICE LOCK
1 INTERCHANGEABLE CORE
1 SURF OVERHEAD CLOSER
1 SURFACE CLOSER
1 KICK PLATE
1 GASKETING

HARDWARE SET 14

3 HINGES
1 PRIVACY LOCK
1 SURFACE CLOSER
1 KICK PLATE
1 WALL STOP
1 GASKETING

HARDWARE SET 15

3 HINGES (HEAVY WEIGHT)
1 PUSH PLATE
1 PULL PLATE
1 SURFACE CLOSER
1 KICK PLATE
1 WALL STOP
3 SILENCER

HARDWARE SET 16

3 HINGES, FULL MORTISE
1 STOREROOM LOCK
1 INTERCHANGEABLE CORE
1 WALL STOP
3 SILENCER

HARDWARE SET 17

3 HINGES, FULL MORTISE
1 STOREROOM LOCK
1 INTERCHANGEABLE CORE
1 SURF OVERHEAD HOLD OPEN
3 SILENCER

HARDWARE SET 18

3 HINGES
1 STOREROOM LOCK
1 INTERCHANGEABLE CORE
1 SURFACE CLOSER
1 KICK PLATE
1 WALL STOP
3 SILENCER

HARDWARE SET 19

6 HINGES
2 FLUSH BOLTS
1 DUST PROOF STRIKE
1 STOREROOM LOCK
1 INTERCHANGEABLE CORE
1 SURFACE CLOSER
2 KICK PLATE
2 WALL STOP
1 GASKETING
1 ASTRAGAL SEAL
1 ASTRAGAL

HARDWARE SET 20

3 HINGES
1 STOREROOM LOCK
1 INTERCHANGEABLE CORE
1 SURFACE CLOSER
1 KICK PLATE
1 WALL STOP
1 GASKETING

HARDWARE SET 21

3 HINGES
1 STOREROOM LOCK
1 INTERCHANGEABLE CORE
1 SURFACE CLOSER
1 WALL STOP
1 GASKETING

HARDWARE SET 22

1 INTERCHANGEABLE CORE
1 CYLINER HOUSING

HARDWARE SET 23

1 CASED OPENING

DOOR AND FRAME SCHEDULE

ROOM NAME	DOOR NUMBER	FIRE RATING	DOOR SIZE OPENING WIDTH	DOOR SIZE HEIGHT	DOOR DESCRIPTION TYPE	DOOR DESCRIPTION MATERIAL	DOOR DESCRIPTION FINISH	FRAME DESCRIPTION TYPE	FRAME DESCRIPTION MATERIAL	FRAME DESCRIPTION FINISH	FRAME DETAILS HEAD	FRAME DETAILS JAMB	HARDWARE SET	REMARKS
1ST FLOOR														
STAIR	101.1	90 MIN	6' - 0"	7' - 0"	N2	SCWD	PT	B	HM	PT	H4	J4	5.0	MAGNETIC HOLD OPEN
MEN'S TOILETS	102	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H3	J4	15.0	
WOMEN'S TOILETS	103	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H2	J3	15.0	
MECH.	104	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H3	J4	21.0	
CLOSET	105	-	3' - 0"	7' - 0"	CO	SCWD	PT	A	HM	PT	H5	J5	23.0	CASED OPENING
C.E. LAB	106		6' - 0"	7' - 0"	N2	SCWD	PT	A	HM	PT	H4	J4	10.1	
C.E. LAB	106A		3' - 8"	7' - 0"	F								6.0	
YAMAHA LAB	113		6' - 0"	7' - 0"	N2	SCWD	PT	A	HM	PT	H4	J4	10.1	
STAIR	114.1	90 MIN	6' - 0"	7' - 0"	N2	SCWD	PT	B	HM	PT	H4	J4	5.0	MAGNETIC HOLD OPEN
MEN'S TOILETS	115	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H3	J4	15.0	
ELECTRICAL	118	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H2	J3	6.0	
CLOSET	119	-	3' - 0"	7' - 0"	CO	SCWD	PT	A	HM	PT	H5	J5	23.0	CASED OPENING
WOMEN'S TOILETS	X116	-	3' - 0"	7' - 0"	F	SCWD	PT	ETR	HM	PT	ETR	ETR	15.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CUST. CLOSET	X117	-	3' - 0"	7' - 0"	F	SCWD	PT	ETR	HM	PT	ETR	ETR	16.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
2ND FLOOR														
MEN'S TOILETS	210	-	3' - 0"	8' - 0"	FP	SCWD	ST	A	HM	PT	H1	J3	15.0	
STAIR	211A	90 MIN	3' - 0"	7' - 0"	N	SCWD	ST	A	HM	PT	H4	J4	1.0	MAGNETIC HOLD OPEN; EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
STAIR	211B	90 MIN	3' - 0"	7' - 0"	N	SCWD	ST	A	HM	PT	H4	J4	1.0	MAGNETIC HOLD OPEN; EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
INFORMAL MTG. SPACE	212	-	3' - 0"	8' - 2"	GP	SCWD	ST	C	HM	PT	H5	J5	10.0	
OFFICE	212A	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	12.0	
OFFICE	212B	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	12.0	
OFFICE	212C	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	12.0	
OFFICE	213.1	-	3' - 0"	8' - 2"	GP	SCWD	ST	C	HM	PT	H5	J5	13.0	
OFFICE	213.2	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	11.0	
IT HELP DESK	214	-	3' - 0"	8' - 2"	GP	SCWD	ST	C	HM	PT	H5	J5	13.0	
FACULTY & STAFF BREAK ROOM	216	-	3' - 0"	8' - 2"	NP	SCWD	ST	C	HM	PT	H5	J5	15.0	
OFFICE	220A	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	11.0	
OFFICE	220B	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	11.0	
OFFICE	220C	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	11.0	
NHCSO FRONT DESK/ LOST & FOUND	220D	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	11.0	
WOMEN'S TOILETS	223	-	3' - 0"	8' - 0"	FP	SCWD	ST	A	HM	PT	H1	J3	15.0	
CONF. ROOM	227	-	3' - 0"	8' - 2"	GP	SCWD	ST	C	HM	PT	H5	J5	7.0	
OFFICE	229	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	11.0	
OFFICE	230	-	3' - 0"	8' - 2"	GP	SCWD	ST	C	ETR	PT	ETR	ETR	12.0	
OFFICE	231	-	3' - 0"	7' - 0"	GP	SCWD	ST	C	ETR	PT	ETR	ETR	11.0	
TLT	232	-	3' - 0"	8' - 2"	FP	SCWD	ST	C	HM	PT	H5	J5	14.0	CARD ACCESS
RISER	233	-	3' - 0"	7' - 0"	F	SCWD	ST	C	HM	PT	H5	J5	2.0	
MECH.	X208	-	6' - 0"	7' - 0"	F2	SCWD	ST	ETR	ETR	PT	ETR	ETR	19.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
HALL	X209	90 MIN	3' - 0"	7' - 6"	N	SCWD	ST	ETR	ETR	PT	ETR	ETR	3.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
NHCSO & SECURITY	X220.1	-	3' - 0"	8' - 2"	NP	SCWD	ST	ETR	HM	PT	ETR	ETR	10.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
NHCSO & SECURITY	X220.2	-	3' - 0"	8' - 2"	NP	SCWD	ST	ETR	ETR	PT	ETR	ETR	10.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
OFFICE	X221	-	3' - 0"	7' - 0"	G	SCWD	ST	C	ETR	PT	ETR	ETR	11.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
OFFICE	X222	-	3' - 0"	7' - 0"	G	SCWD	ST	ETR	ETR	PT	ETR	ETR	11.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
MECH.	X224	-	6' - 0"	7' - 0"	F2	SCWD	ST	ETR	ETR	PT	ETR	ETR	19.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
STUDENT WORKSPACE	X228	-	3' - 0"	8' - 2"	GP	SCWD	ST	C	HM	PT	H5	J5	7.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
3RD FLOOR														
STAIR	300A	90 MIN	3' - 0"	7' - 0"	N	SCWD	H	A	HM	PT	H4	J4	4.0	MAGNETIC HOLD OPEN; EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
STAIR	300B	90 MIN	3' - 0"	7' - 0"	N	SCWD	PT	A	HM	PT	H4	J4	4.0	MAGNETIC HOLD OPEN; EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
MEN'S TOILETS	306	-	3' - 0"	8' - 0"	F	SCWD	PT	A	HM	PT	H1	J3	15.0	
OPEN OFFICE	307	-	3' - 0"	8' - 2"	NP	SCWD	PT	C	HM	PT	H5	J5	10.0	
OFFICE	307A	-	3' - 0"	7' - 0"	G	SCWD	PT	C	HM	PT	H5	J5	11.0	
OFFICE	307B	-	3' - 0"	7' - 0"	G	SCWD	PT	C	HM	PT	H5	J5	11.0	
OFFICE	307C	-	3' - 0"	7' - 0"	G	SCWD	PT	C	HM	PT	H5	J5	11.0	
OFFICE	307D	-	3' - 0"	7' - 0"	G	SCWD	PT	C	HM	PT	H5	J5	11.0	
INFORMAL MTG. SPACE	311		3' - 0"	8' - 2"	NP	SCWD	PT	C	HM	PT	H5	J5	9.0	
OFFICE	311A	-	3' - 0"	7' - 0"	G	SCWD	PT	C	HM	PT	H5	J5	11.0	
OFFICE	311B	-	3' - 0"	7' - 0"	G	SCWD	PT	C	HM	PT	H5	J5	11.0	
OFFICE	311C	-	3' - 0"	7' - 0"	G	SCWD	PT	C	HM	PT	H5	J5	11.0	
OFFICE	311D	-	3' - 0"	7' - 0"	G	SCWD	PT	C	HM	PT	H5	J5	11.0	
WOMEN'S TOILETS	312	-	3' - 0"	8' - 0"	F	SCWD	PT	A	HM	PT	H1	J3	15.0	
CLASSROOM	X301	-	3' - 0"	8' - 2"	NP	SCWD	PT	ETR	ETR	PT	ETR	ETR	7.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X302	-	3' - 0"	8' - 2"	NP	SCWD	PT	ETR	ETR	PT	ETR	ETR	7.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
MECH.	X304	-	6' - 0"	7' - 0"	F2	SCWD	PT	ETR	ETR	PT	ETR	ETR	19.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
HALL	X305	90 MIN	3' - 0"	7' - 6"	N	SCWD	PT	ETR	ETR	PT	ETR	ETR	3.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X308	-	3' - 0"	8' - 2"	NP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X309	-	3' - 0"	8' - 2"	NP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X310	-	3' - 0"	8' - 2"	NP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
MECH.	X313	-	6' - 0"	7' - 0"	F2	SCWD	PT	ETR	ETR	PT	ETR	ETR	19.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
STORAGE	X315	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	17.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X316	-	3' - 0"	8' - 2"	NP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X317	-	3' - 0"	8' - 2"	NP	SCWD	PT	ETR	ETR	PT	ETR	ETR	7.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
4TH FLOOR														
STAIR	400A	90 MIN	3' - 0"	7' - 0"	N	SCWD	PT	A	HM	PT	H4	J4	4.0	MAGNETIC HOLD OPEN; EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
STAIR	400B	90 MIN	3' - 0"	7' - 0"	N	SWCD	PT	A	HM	PT	H4	J4	4.0	MAGNETIC HOLD OPEN; EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
ADJUNCT FACULTY	401	-	3' - 0"	8' - 2"	FP	SCWD	PT	C	HM	PT	H5	J5	9.1	
OFFICE	401A	-	3' - 0"	7' - 0"	G	SCWD	PT	C	HM	PT	H5	J5	11.0	
OFFICE	401B	-	3' - 0"	7' - 0"	G	SCWD	PT	C	HM	PT	H5	J5	11.0	
MEN'S TOILET	406	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H1	J3	15.0	
WOMEN'S TOILETS	412	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H1	J3	15.0	
CLASSROOM	X402	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X402.1	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	7.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
MECH.	X404	-	6' - 0"	7' - 0"	F2	SCWD	PT	ETR	ETR	PT	ETR	ETR	19.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
HALL	X405	90 MIN	3' - 0"	7' - 6"	N	SCWD	PT	ETR	ETR	PT	ETR	ETR	3.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X407	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X408	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X409	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X410	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	7.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X411	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
MECH.	X413	-	6' - 0"	7' - 0"	F2	SCWD	PT	ETR	ETR	PT	ETR	ETR	19.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
STORAGE	X415	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	17.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X416	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CLASSROOM	X416.1	-	3' - 0"	8' - 2"	FP	SCWD	PT	ETR	ETR	PT	ETR	ETR	8.0	ALTERNATE 11: EXISTING OPENING, VERIFY DIMENSIONS IN FIELD

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 16535 North Carolina WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

DOOR AND HARDWARE SCHEDULES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: 1/4" = 1'-0"
DRAWN BY: VSC | PROJ MGR: LML

A801

COPYRIGHT © 2020

8/14/2020 9:44:52 AM C:\Users\abrown\Documents\a2018023900 CFCC ASN BASE BID_abrownSDEJ4.rvt

ALTERNATE 1 - FIRST FLOOR DOOR SCHEDULE

ROOM NAME	DOOR NUMBER	FIRE RATING	DOOR					FRAME					HARDWARE SET	REMARKS
			SIZE		DESCRIPTION			DESCRIPTION			DETAILS			
			OPENING WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB		
1ST FLOOR														
STAIR	A101.1	90 MIN	6' - 0"	7' - 0"	N2	SCWD	PT	B	HM	PT	H4	J4	5.0	MAGNETIC HOLD OPEN
MEN'S TOILETS	A102	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H3	J4	15.0	
WOMEN'S TOILETS	A103	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H2	J3	15.0	
MECH.	A104	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H3	J4	21.0	
CLOSET	A105	-	3' - 0"	7' - 0"	CO	SCWD	PT	A	HM	PT	H5	J5	23.0	CASED OPENING
CARPENTRY WOODWORKING UPHOLSTERY LAB	A106	-	3' - 0"	7' - 0"	N	SCWD	PT	A	HM	PT	H6	J6	9.0	
ELECTRICAL	A106A	-	3' - 8"	7' - 0"	F	SCWD	PT	ETR	HM	PT	ETR	ETR	6.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
OFFICE	A106B	-	3' - 8"	7' - 0"	G	SCWD	PT	ETR	HM	PT	ETR	ETR	11.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CORRIDOR	A106C	-	3' - 8"	7' - 0"	F	SCWD	PT	ETR	HM	PT	ETR	ETR	16.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
STORAGE	A106D	-	3' - 8"	7' - 0"	F	SCWD	PT	ETR	HM	PT	ETR	ETR	16.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CE HVAC AND SMALL ENGINE	A107	-	3' - 0"	7' - 0"	N	SCWD	PT	A	HM	PT	H6	J6	9.1	
STORAGE	A108A	-	3' - 8"	7' - 0"	F	SCWD	PT	A	HM	PT	ETR	ETR	16.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
STORAGE	A108B	-	3' - 8"	7' - 0"	F	SCWD	PT	A	HM	PT	ETR	ETR	16.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
OFFICE	A109A	-	3' - 8"	7' - 0"	G	SCWD	PT	A	HM	PT	H3	J4	11.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
OFFICE	A110	-	3' - 8"	7' - 0"	G	SCWD	PT	ETR	HM	PT	ETR	ETR	11.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
STORAGE	A111	-	3' - 8"	7' - 0"	F	SCWD	PT	ETR	HM	PT	ETR	ETR	17.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
YAMAHA LAB	A113	-	3' - 0"	7' - 0"	N	SCWD	PT	A	HM	PT	H6	J6	9.0	
STAIR	A114.1	90 MIN	6' - 0"	7' - 0"	N2	SCWD	PT	B	HM	PT	H4	J4	5.0	MAGNETIC HOLD OPEN
MEN'S TOILETS	A115	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H3	J4	15.0	
WOMEN'S TOILETS	A116	-	3' - 0"	7' - 0"	F	SCWD	PT	ETR	HM	PT	ETR	ETR	15.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
CUST. CLOSET	A117	-	3' - 0"	7' - 0"	F	SCWD	PT	ETR	HM	PT	ETR	ETR	16.0	EXISTING OPENING, VERIFY DIMENSIONS IN FIELD
ELECTRICAL	A118	-	3' - 0"	7' - 0"	F	SCWD	PT	A	HM	PT	H2	J3	6.0	
CLOSET	A119	-	3' - 0"	7' - 0"	CO	SCWD	PT	A	HM	PT	H5	J5	23.0	CASED OPENING

ALTERNATE 2 - SECOND FLOOR DOOR SCHEDULE

ROOM NAME	DOOR NUMBER	FIRE RATING	DOOR					FRAME					HARDWARE SET	REMARKS
			SIZE		DESCRIPTION			DESCRIPTION			DETAILS			
			OPENING WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB		
2ND FLOOR														
SERVER ROOM	A201	-	3' - 0"	8' - 2"	FP	SCWD	ST	ETR	ETR	PT	ETR	ETR	18.0	
ELEC.	A202	-	3' - 0"	7' - 0"	F	SCWD	ST	C	HM	PT	H5	J5	18.0	
CONTROL ROOM	A203	-	3' - 0"	8' - 2"	NP	SCWD	ST	C	HM	PT	H5	J5	18.0	
OFFICE	A204	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	11.0	
OFFICE	A205	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	11.0	
OFFICE	A206	-	3' - 0"	7' - 0"	G	SCWD	ST	C	HM	PT	H5	J5	11.0	
TLT	A207	-	3' - 0"	8' - 2"	FP	SCWD	ST	C	HM	PT	H5	J5	14.0	CARD ACCESS

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS
Registered Architect
16635
North Carolina
WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC.
Professional Architectural Corporation
51922
North Carolina
WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE DOOR AND FRAME SCHEDULE

ISSUE BLOCK

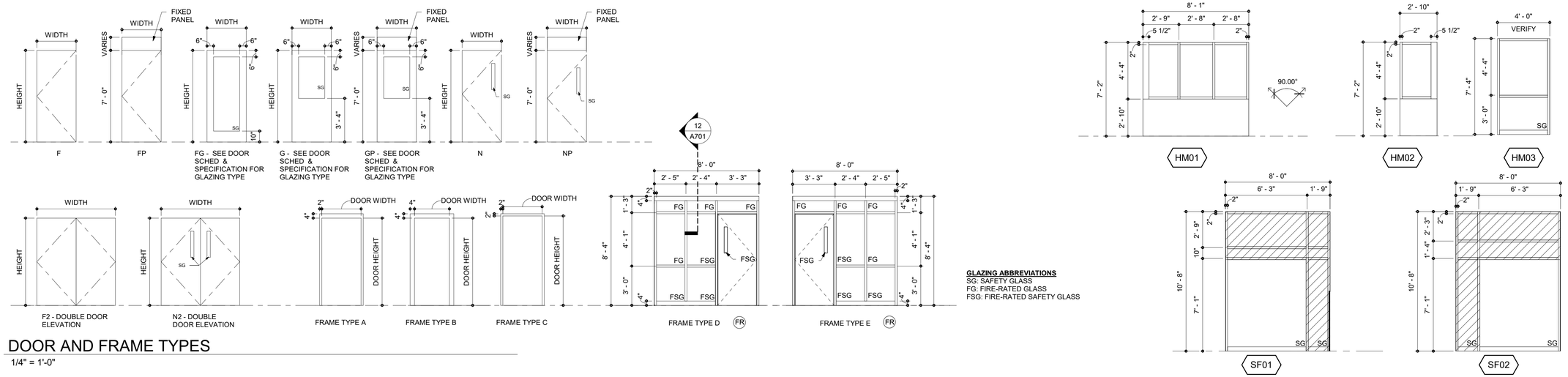
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE:
DRAWN BY: VSC | PROJ MGR: DCW

A802

COPYRIGHT © 2020

8/14/2020 9:44:52 AM C:\Users\abrown\Documents\2018023300 CFCC ASN BASE BID_abrown9DEJ4.rvt



DOOR AND FRAME TYPES

1/4" = 1'-0"

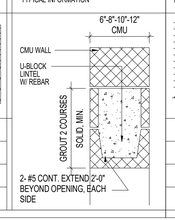
EXISTING PORTION OF STOREFRONT TO REMAIN

LINTEL SCHEDULE - NEW CONSTRUCTION

1. PROVIDE LINTELS, WHETHER INDICATED OR NOT OVER ALL NEW OPENINGS, OR EXISTING OPENINGS THAT HAVE BEEN MODIFIED, IN EXISTING MASONRY WALLS AS REQUIRED BY STRUCTURAL, ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS. COMBINE VARIOUS WYTHES OF MASONRY AS REQUIRED TO SUIT PROJECT. ALL CONDITIONS MAY NOT OCCUR.
2. ALL LINTELS ARE TO HAVE 8" MINIMUM BEARING AT EACH END.
3. ALL EXTERIOR LINTELS ARE TO BE GALVANIZED.
4. ALL EXTERIOR ANGLES TO BE LOCATED 1/2" BACK FROM FACE OF FINISHED WALL.
5. SEE STRUCTURAL DRAWINGS FOR ALL OPENINGS OVER 8'-4"

MASONRY OPENING	4" MASONRY	6" MASONRY	8" MASONRY	10" MASONRY	12" MASONRY	4/4/STUD	4/4/8 CAVITY	4/4/10 CAVITY	4/4/12 CAVITY
M.O.						STUD WALL SEE WALL SECTIONS	8" CMU WALL 8" U-BLOCK LINTEL W/ REBAR	10" CMU WALL 10" U-BLOCK LINTEL W/ REBAR	12" CMU WALL 12" U-BLOCK LINTEL W/ REBAR
UP TO 5'-0"	1L - 3 1/2" X 3 1/2" X 5/16"	BOND BEAM	BOND BEAM	BOND BEAM	BOND BEAM	1L - 5 X 5 X 5/16"	1L - 5 X 5 X 5/16" 8" BOND BEAM W/ 2-#5 REBAR	1L - 5 X 5 X 5/16" 10" BOND BEAM W/ 2-#5 REBAR	1L - 5 X 5 X 5/16" 12" BOND BEAM W/ 2-#5 REBAR
5'-0" TO 6'-0"	1L - 6" X 3 1/2" X 5/16"	BOND BEAM	BOND BEAM	BOND BEAM	BOND BEAM	1L - 5 X 5 X 5/16"	1L - 5 X 5 X 5/16" 8" BOND BEAM W/ 2-#5 REBAR	1L - 5 X 5 X 5/16" 10" BOND BEAM W/ 2-#5 REBAR	1L - 5 X 5 X 5/16" 12" BOND BEAM W/ 2-#5 REBAR
6'-0" TO 7'-4"	1L - 6" X 3 1/2" X 5/16"	BOND BEAM	BOND BEAM	BOND BEAM	BOND BEAM	1L - 5 X 5 X 3/8"	1L - 5 X 5 X 5/16" 8" BOND BEAM W/ 2-#5 REBAR	1L - 5 X 5 X 5/16" 10" BOND BEAM W/ 2-#5 REBAR	1L - 5 X 5 X 5/16" 12" BOND BEAM W/ 2-#5 REBAR
7'-4" TO 8'-4"	1L - 6" X 3 1/2" X 3/8"	BOND BEAM	BOND BEAM	BOND BEAM	BOND BEAM	1L - 5 X 5 X 3/8"	1L - 5 X 5 X 5/16" 8" BOND BEAM W/ 2-#5 REBAR	1L - 5 X 5 X 5/16" 10" BOND BEAM W/ 2-#5 REBAR	1L - 5 X 5 X 5/16" 12" BOND BEAM W/ 2-#5 REBAR

TYPICAL INFORMATION



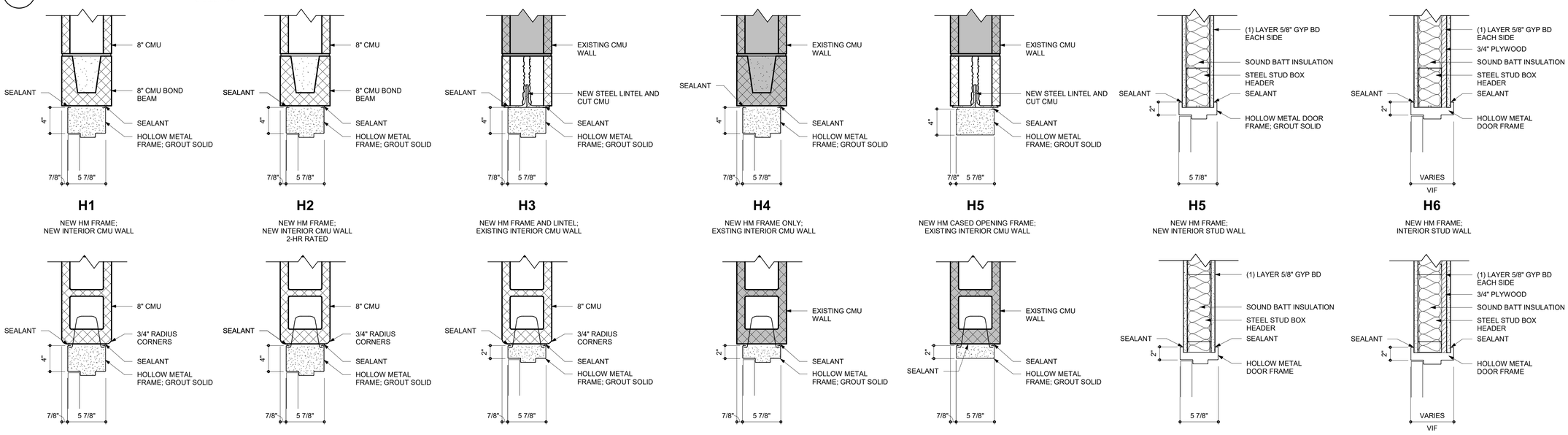
LINTEL SCHEDULE - EXISTING CONSTRUCTION

1. PROVIDE LINTELS, WHETHER INDICATED OR NOT OVER ALL NEW OPENINGS, OR EXISTING OPENINGS THAT HAVE BEEN MODIFIED, IN EXISTING MASONRY WALLS AS REQUIRED BY STRUCTURAL, ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS. COMBINE VARIOUS WYTHES OF MASONRY AS REQUIRED TO SUIT PROJECT. ALL CONDITIONS MAY NOT OCCUR.
2. ALL LINTELS ARE TO HAVE 8" MINIMUM BEARING AT EACH END.
3. ALL EXTERIOR LINTELS ARE TO BE GALVANIZED.
4. ALL EXTERIOR ANGLES TO BE LOCATED 1/2" BACK FROM FACE OF FINISHED WALL.
5. SEE STRUCTURAL DRAWINGS FOR ALL OPENINGS OVER 8'-4"

MASONRY OPENING	4" MASONRY	6" MASONRY	8" MASONRY	10" MASONRY	12" MASONRY
M.O.					
UP TO 5'-0"	1L - 3 1/2" X 3 1/2" X 5/16"	WT 7 X 11	2L - 4" X 3 1/2" X 5/16"	2L - 4" X 4" X 5/16"	2L- 5" X 5" X 5/16"
5'-0" TO 6'-0"	1L - 6" X 3 1/2" X 5/16"	WT 7 X 11	2L - 5" X 3 1/2" X 5/16"	2L - 4" X 4" X 3/8"	2L- 5" X 5" X 3/8"
6'-0" TO 7'-4"	1L - 6" X 3 1/2" X 5/16"	WT 7 X 11	2L - 5" X 3 1/2" X 5/16"	2L - 4" X 4" X 3/8"	2L- 5" X 5" X 3/8"
7'-4" TO 8'-4"	1L - 6" X 3 1/2" X 3/8"	WT 7 X 11	2L - 6" X 3 1/2" X 5/16"	2L - 4" X 4" X 3/8"	2L- 5" X 5" X 3/8"

2 LINTEL SCHEDULE

SCALE: 1/4" = 1'-0"



1 DOOR HEAD AND JAMB DETAILS

SCALE: 1 1/2" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

ERNEST W. OLDS Registered Architect 6695 North Carolina WILMINGTON, NC 8/14/20

BECKER MORGAN GROUP, INC. Professional Architectural Corporation 51922 North Carolina WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

DOOR DETAILS

ISSUE BLOCK

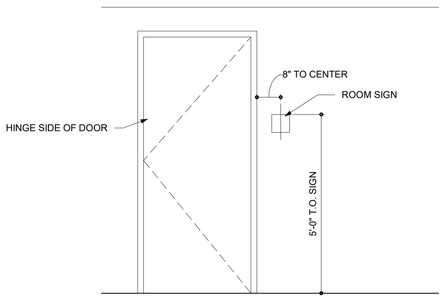
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: VSC | PROJ MGR: DCW

A803

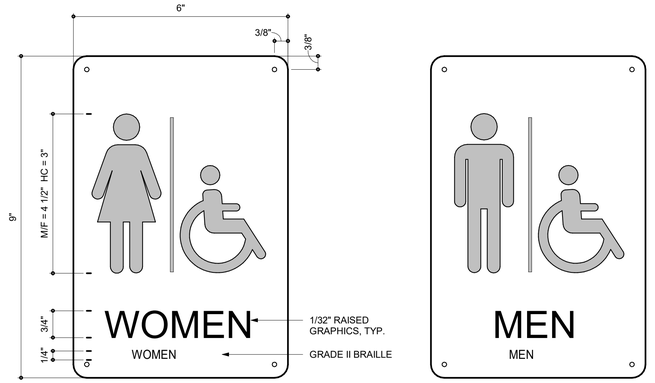
COPYRIGHT © 2020

8/14/2020 9:44:53 AM C:\Users\abrown\Documents\2018023D0 CFCC ASN BASE BID_abrown9DEJ4.rvt



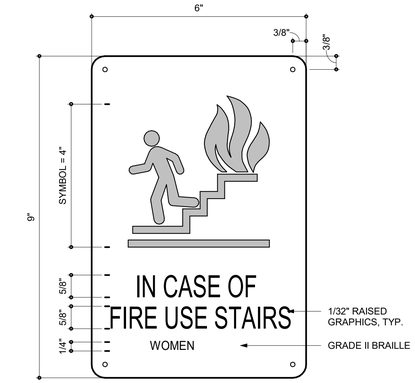
1 TYPICAL SIGN MOUNTING HEIGHT

SCALE : 3" = 1' 0"



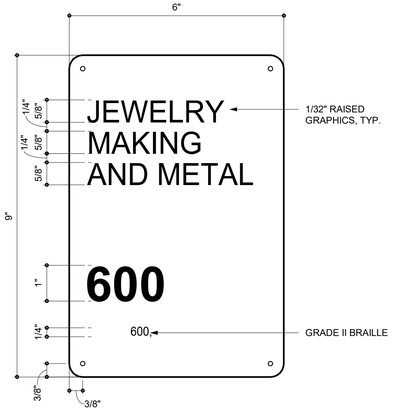
4 SIGN TYPE C - RESTROOMS

SCALE : 6" = 1' 0"



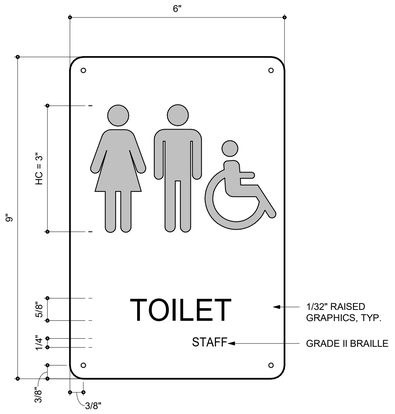
9 SIGN TYPE G - FIRE

SCALE : 6" = 1' 0"



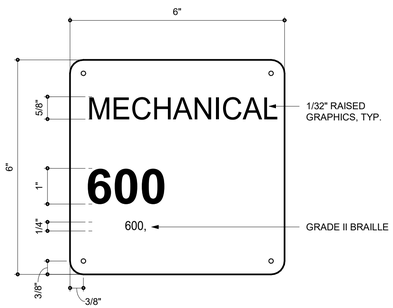
2 SIGN TYPE A - CLASSROOMS

SCALE : 6" = 1' 0"



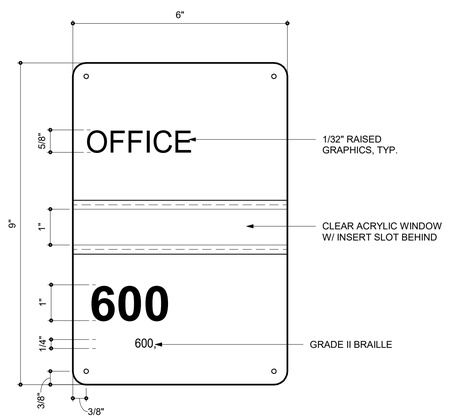
5 SIGN TYPE D - UNISEX RESTROOM

SCALE : 6" = 1' 0"



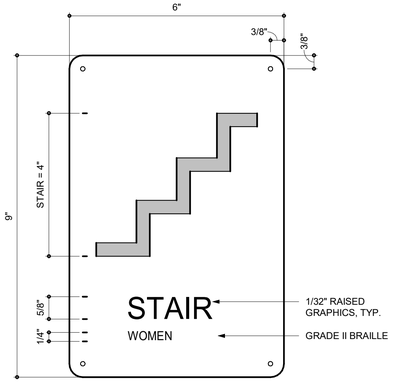
7 SIGN TYPE F - GENERAL SIGN

SCALE : 6" = 1' 0"



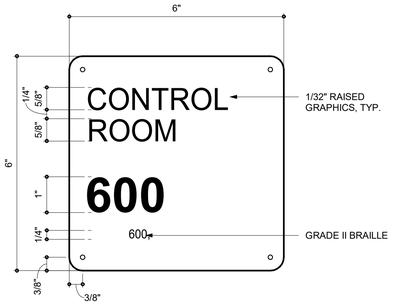
3 SIGN TYPE B - OFFICES

SCALE : 6" = 1' 0"



6 SIGN TYPE E - STAIR

SCALE : 6" = 1' 0"



8 SIGN TYPE F1 - GENERAL SIGN

SCALE : 6" = 1' 0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700
www.beckermorgan.com

ERNEST W. OLDS
Registered Architect
North Carolina
10695
WILMINGTON, NC
8/14/20

BECKER MORGAN GROUP, INC.
Professional Architectural Corporation
North Carolina
51922
WILMINGTON, NC

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

SIGNAGE DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: JDF | PROJ MGR: DCW

A901

COPYRIGHT © 2020

8/14/2020 9:44:53 AM C:\Users\abrown\Documents\2018023\00 CFCC ASN BASE BID_abrown90DEJ4.rvt

GENERAL

1. CONTRACTOR SHALL INSTALL WET-PIPE, FIRE-SUPPRESSION SPRINKLERS INCLUDING PIPING, VALVES, SPECIALTIES, AUTOMATIC SPRINKLERS, AND ACCESSORIES AS NECESSARY FOR COMPLETE INSTALLATION. CONTRACTOR WORK SHALL BEGIN 1 FOOT ABOVE FINISHED FLOOR INSIDE THE BUILDING. WET PIPE SPRINKLER SYSTEM SHALL BE PROVIDED IN AREAS INDICATED ON THE DRAWINGS AND AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. THE SPRINKLER SYSTEM SHALL PROVIDE FIRE SPRINKLER PROTECTION FOR THE ENTIRE AREA. THE SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13 - 2013. COMPLIANCE WITH REFERENCED NFPA STANDARDS IS MANDATORY. PIPE SIZES WHICH ARE NOT INDICATED ON DRAWINGS SHALL BE DETERMINED BY HYDRAULIC CALCULATION. THE CONTRACTOR SHALL DESIGN ANY PORTIONS OF THE SPRINKLER SYSTEM INCLUDING LOCATING SPRINKLERS, PIPING AND EQUIPMENT, AND SIZE PIPING AND EQUIPMENT WHEN THIS INFORMATION IS NOT INDICATED ON THE DRAWINGS OR IS NOT SPECIFIED HEREIN. THE DESIGN OF THE SPRINKLER SYSTEM SHALL BE BASED ON HYDRAULIC CALCULATIONS, AND THE OTHER PROVISIONS SPECIFIED HEREIN. PIPE ROUTING SHOWN IS SUGGESTIVE AND FINAL ROUTING TO BE APPROVED THROUGH SHOP DRAWINGS.
2. THE SPRINKLER CONTRACTOR SHALL OBTAIN DATA FROM LOCAL AUTHORITIES OR PERFORM TESTS REQUIRED FOR WATER FLOW DATA TO PERFORM HYDRAULIC CALCULATIONS. HYDRAULIC CALCULATIONS SHALL BE AS OUTLINED IN NFPA 13 - 2013 EXCEPT THAT CALCULATIONS SHALL BE PERFORMED BY COMPUTER USING SOFTWARE INTENDED SPECIFICALLY FOR FIRE PROTECTION SYSTEM DESIGN USING THE DESIGN DATA SHOWN ON THE DRAWINGS. UNLESS REQUIRED OTHERWISE, HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH THE AREA/DENSITY METHOD OF NFPA 13 - 2013.
3. PIPING OFFSETS, FITTINGS, AND ANY OTHER ACCESSORIES REQUIRED SHALL BE FURNISHED AS REQUIRED TO PROVIDE A COMPLETE INSTALLATION, AND TO ELIMINATE INTERFERENCE WITH OTHER CONSTRUCTION. SPRINKLER SHALL BE INSTALLED OVER AND UNDER DUCTS, PIPING AND PLATFORMS WHEN SUCH EQUIPMENT CAN NEGATIVELY EFFECT OR DISRUPT THE SPRINKLER DISCHARGE PATTERN AND COVERAGE.
4. ALL EQUIPMENT DELIVERED AND PLACED IN STORAGE SHALL BE HOUSED IN A MANNER TO PRECLUDE ANY DAMAGE FROM THE WEATHER, HUMIDITY AND TEMPERATURE VARIATIONS, DIRT AND DUST, OR OTHER CONTAMINANTS. ADDITIONALLY, ALL PIPES SHALL EITHER BE CAPPED OR PLUGGED UNTIL INSTALLED.
5. THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL DETAILS OF THE WORK, VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL ADVISE THE GENERAL CONTRACTOR OF ANY DISCREPANCY BEFORE PERFORMING THE WORK.
6. THE SPRINKLER CONTRACTOR SHALL PROVIDE, TO AUTHORITIES HAVING JURISDICTION, SPRINKLER SYSTEM SHOP DRAWINGS THAT CONFORM TO THE REQUIREMENTS ESTABLISHED FOR WORKING PLANS AS PRESCRIBED IN NFPA 13 - 2013.
7. WORK SPECIFIED SHALL BE PERFORMED UNDER THE SUPERVISION OF, AND CERTIFIED BY THE FIRE PROTECTION SPECIALIST. THE FIRE PROTECTION SPECIALIST SHALL BE AN INDIVIDUAL WHO IS A REGISTERED PROFESSIONAL ENGINEER, AND A FULL MEMBER OF THE SOCIETY OF FIRE PROTECTION ENGINEERS OR WHO IS CERTIFIED AS A LEVEL III TECHNICIAN BY NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET), IN THE AUTOMATIC SPRINKLER SYSTEM LAYOUT SUBFIELD OF FIRE PROTECTION ENGINEERING TECHNOLOGY IN ACCORDANCE WITH NICET 1014-7. THE FIRE PROTECTION SPECIALIST SHALL BE REGULARLY ENGAGED IN THE DESIGN AND INSTALLATION OF THE TYPE AND COMPLEXITY OF SYSTEM SPECIFIED IN THESE NOTES AND DRAWINGS.
8. WORK SPECIFIED SHALL BE PERFORMED BY THE SPRINKLER SYSTEM INSTALLER. THE SPRINKLER SYSTEM INSTALLER SHALL BE REGULARLY ENGAGED IN THE INSTALLATION OF THE TYPE AND COMPLEXITY OF SYSTEM SPECIFIED IN THESE NOTES AND DRAWINGS.
9. FLUSH, TEST AND INSPECT SPRINKLER PIPING ACCORDING TO NFPA 13 - 2013, "SYSTEM ACCEPTANCE" CHAPTER. REPLACE PIPING SYSTEM COMPONENTS THAT DO NOT PASS TEST PROCEDURES, AND RETEST TO DEMONSTRATE COMPLIANCE. REPEAT PROCEDURE UNTIL SATISFACTORY RESULTS ARE OBTAINED.
10. MATERIALS AND EQUIPMENT SHALL BE STANDARD PRODUCTS OF A MANUFACTURER REGULARLY ENGAGED IN THE MANUFACTURE OF SUCH PRODUCTS, AND SHALL ESSENTIALLY DUPLICATE ITEMS THAT HAVE BEEN IN SATISFACTORY USE FOR AT LEAST 2 YEARS. ALL EQUIPMENT SHALL HAVE A NAMEPLATE THAT IDENTIFIES THE MANUFACTURER'S NAME, ADDRESS, TYPE OR STYLE, MODEL OR SERIAL NUMBER, AND CATALOG NUMBER.
11. REFER TO NFPA 13-2013 AND NCBC 2018 FOR ELEVATOR HOISTWAYS AND MACHINE ROOMS. SPRINKLERS ARE NOT REQUIRED AT THE TOP OR THE BOTTOM OF THE SHAFT ELEVATOR HOISTWAY, UNLESS THE BELT IS POLYURETHANE-COATED.
12. PROVIDE SPRINKLER PROTECTION IN ACCORDANCE WITH NFPA 13 FOR THE ROOFTOP PENTHOUSES.
13. REFER TO DIVISION 21 SPECIFICATIONS FOR FURTHER REQUIREMENTS.
14. FLEXIBLE SPRINKLER PIPING IS NOT PERMITTED.
15. THE WATER SUPPLY IS ABLE TO PROVIDE 1,000 GPM FOR 2 HRS. PER 2018 NCFC SECTION 507 AND APPENDIX B. THE WATER SUPPLY DATA RESULTS IN A CALCULATED FLOW OF 1,220 GPM AT 65 PSI AND 6,710 GPM AT 20 PSI. THE SUPPLY IS CONNECTED TO THE MUNICIPAL WATER SUPPLY SYSTEM AND HAS THE ABILITY TO PROVIDE ADEQUATE FLOW FOR THE 2 HOUR DURATION.

PIPE HANGAR NOTES:

1. SIZE, LOCATE, AND ATTACH PIPE HANGERS IN ACCORDANCE WITH NFPA 13 AND MANUFACTURERS RECOMMENDATIONS.
2. COORDINATE HANGER TYPES AND LOCATIONS WITH THE STRUCTURAL ENGINEER OF RECORD.
3. HANG PIPES LARGER THAN 4 IN. RUNNING PARALLEL TO BAR JOISTS FROM TRAPEZE HANGERS SUPPORTED NEARLY EQUALLY BY JOISTS.
4. SUPPORT ONE PIPE PER TRAPEZE HANGER UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.
5. ATTACH HANGERS WITH MORE THAN 150 POUNDS OF LOAD TO THE BAR JOIST AT A PANEL POINT.
6. PROVIDE SEISMIC BRACING IN ACCORDANCE WITH NFPA 13, THE SEISMIC DESIGN CATEGORY IS A "C" OR HIGHER. REFERENCE STRUCTURAL DESIGN

SPRINKLERS

1. THE FIRE PROTECTION CONTRACTOR SHALL DESIGN AND INSTALL AN AUTOMATIC WET PIPE SPRINKLER SYSTEM FOR THE ENTIRE BUILDING IN ACCORDANCE WITH THE 2013 EDITION OF NFPA 13.
2. PIPE TO BE RUN CONCEALED ABOVE THE FINISHED CEILING AND AND ALL VALVES SHALL BE READILY ACCESSIBLE FOR OPERATION.
3. THE DESIGN DENSITY FOR THE REMAINDER OF THE FACILITY SHALL BE 0.10 GPM PER SQUARE FOOT FOR THE HYDRAULICALLY MOST REMOTE 1,500 SQ. FT UNLESS OTHERWISE NOTED ON THE FLOOR PLANS.
4. THE HYDRAULIC CALCULATIONS SHALL INCLUDE A 250 GPM ALLOWANCE FOR HOSE STREAMS; A 10% FLOW SAFETY FACTOR, A 10 PSI STATIC PRESSURE SAFETY FACTOR AND 10 PSI RESIDUAL PRESSURE SAFETY FACTOR SHALL BE INCLUDED FOR FUTURE WATER DETERIORATION.
5. COORDINATE FINAL SPRINKLER PLACEMENT, PIPE ROUTING, AND QUANTITY BETWEEN SPRINKLER CONTRACTOR AND GENERAL CONTRACTOR. PIPE ROUTING SHOWN IS SUGGESTED. FINAL ROUTING MUST BE SHOWN AND APPROVED THROUGH THE SHOP DRAWINGS
6. WATER FLOW DATA: SEE WATER FLOW TEST REPORT BELOW. THE FIRE PROTECTION CONTRACTOR SHALL FIELD VERIFY ALL WATER FLOW DATA PRIOR TO DESIGNING OR INSTALLING THE SPRINKLER SYSTEM.
7. SYSTEM CONTROL VALVE TAMPER SWITCHES AND ELECTRICAL DEVICES, PRESSURE AND ALARM SWITCHES, TO BE WIRED INTO THE FIRE ALARM PANEL. PROVIDE ELECTRICAL CONDUIT, WIRING AND CONNECTIONS. UPGRADE OF POWER CIRCUITS OR FIRE ALARM PANELS TO BE PROVIDED BY OWNER.

TOTAL BUILDING HEIGHT: 51 FT.

THE WET-PIPE SYSTEM SHALL COMPLY WITH NFPA 13

RESTROOMS, CORRIDORS, OFFICES, CLASSROOMS, etc. (LIGHT HAZARD WET PIPE FIRE SPRINKLER SYSTEMS):
DENSITY: 0.10 GPM/SQ. FT.
OPERATING AREA: 1,500 SQ. FT.
MAXIMUM SPRINKLER COVERAGE: 225 SQ. FT.
HOSE STREAM ALLOWANCE: 100 GPM

STORAGE ROOMS, MECHANICAL ROOMS, etc. (ORDINARY HAZARD GROUP I WET PIPE FIRE SPRINKLER SYSTEMS):
DENSITY: 0.15 GPM/SQ. FT.
OPERATING AREA: 1,500 SQ. FT.
MAXIMUM SPRINKLER COVERAGE: 130 SQ. FT.
HOSE STREAM ALLOWANCE: 250 GPM

STORAGE ROOMS, MECHANICAL ROOMS, etc. (ORDINARY HAZARD GROUP II WET PIPE FIRE SPRINKLER SYSTEMS):
DENSITY: 0.20 GPM/SQ. FT.
OPERATING AREA: 1,500 SQ. FT.
MAXIMUM SPRINKLER COVERAGE: 130 SQ. FT.
HOSE STREAM ALLOWANCE: 250 GPM

STANDPIPE SYSTEM: CLASS I MANUAL DRY STANDPIPE
MIN FLOW: 500 GPM
FLOW/OUTLET: 250 GPM
MIN. PRESSURES: 100 PSI
FLOW OUTLETS: 4 REMOTE ON ONE RISER
OUTLET SIZE: 2-1/2" W/ HOSE CONNECTION
DESIGN STANDPIPES IN ACCORDANCE WITH NFPA 14 AND LOCAL CODES.

WATER FLOW TEST
DATE: 12-04-2019 AT 4:20
STATIC: 67 PSI
RESIDUAL: 65 PSI
FLOWING: 1,220 GAL/MIN
LOCATION: FLOW HYDRANT 176499
GAUGE HYDRANT 175957
PREFORMED BY: BFPE INTERNATIONAL

PERFORM AN INDEPENDENT WATER FLOW TEST IN ACCORDANCE WITH NFPA 291, ON WHICH TO BASE THE FINAL SHOP DRAWING DESIGN, AND VERIFY CONSISTENCY OF SYSTEM.

PENDANTS: SEMI-RECESSED & CONCEALED
FINISH: CHROME/WHITE
TEMP: ORDINARY
K: 5.6(LIGHT HAZARD) & 8.0(ORDINARY HAZARD)

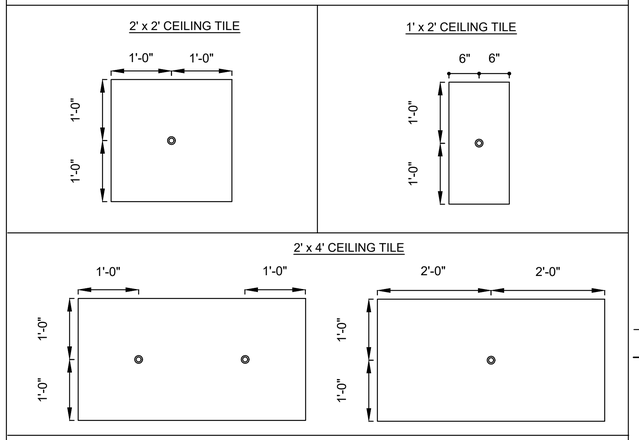
UPRIGHTS: FINISH - BRONZE
TEMP - ORDINARY
K: 5.6(LIGHT HAZARD) & 8.0(ORDINARY HAZARD)

SIDEWALL: HORIZONTAL
FINISH - CHROME/WHITE
TEMP - ORDINARY
K: 5.6

ESCUTCHEON: 2 PIECE METAL - LISTED W/SPRINKLER
FINISH: TO MATCH SPRINKLER
PROTRUSION FROM SURFACE: ½" MAX.

SPRINKLERS NEAR A HEAT SOURCE (UNIT HEATER, DIFFUSER, STEAM MAINS, SKYLIGHT, ETC) MUST HAVE TEMPERATURE RATING IN ACCORDANCE WITH NFPA 13.

SPRINKLER LOCATIONS



NOTE:
1. SUSPENDED CEILINGS: POSITION SPRINKLERS AS SHOWN WITH A 3" TOLERANCE. HOWEVER, SHOULD THE TOLERANCE BE USED, THEN SPRINKLERS IN THE ROW MUST BE OFFSET BY THE SAME DISTANCE IN THE SAME DIRECTION.
2. HARD CEILINGS: L0CATE SPRINKLERS IN ACCORDANCE WITH THE ENGINEERING DRAWINGS WHEN INDICATED. ALIGN SPRINKLERS WITH LIGHT FIXTURES, HVAC GRILLS, AND OTHER SPRINKLERS. COORDINATE CLOSELY WITH THE ELECTRICAL AND MECHANICAL CONTRACTOR.
3. UNFINISHED AREAS: LOCATE SPRINKLERS AS SHOWN ON THE ENGINEERING DRAWINGS, WHEN INDICATED.

SEISMIC NOTES:

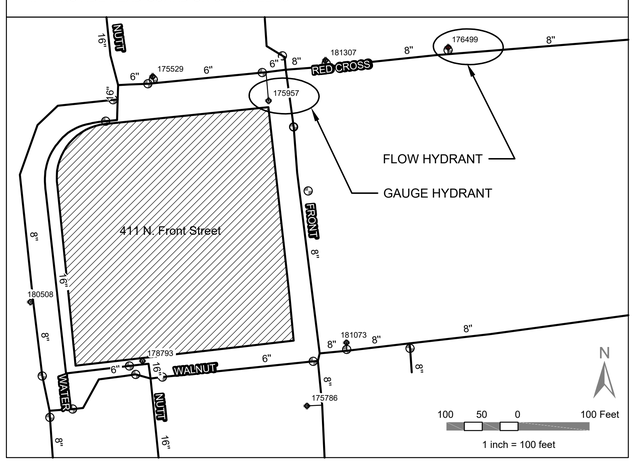
PROVIDE SEISMIC BRACING IN ACCORDANCE WITH NFPA 13, THE SEISMIC DESIGN CATEGORY IS A "C" OR HIGHER. REFERENCE STRUCTURAL DESIGN

PROTECT PIPING AGAINST DAMAGE DUE TO EARTHQUAKE IN ACCORDANCE WITH NFPA 13, TO INCLUDE THE FOLLOWING:

1. FLEXIBLE COUPLINGS, MINIMUM CLEARANCES, LATERAL AND LONGITUDINAL BRACING, FOUR-WAY BRACING AND RETAINING STRAPS.
2. PROVIDE VERTICAL AND LATERAL RESTRAINT ON ALL BRANCH LINES, INCLUDING END OF LINE, PER NFPA 13. EXCEPTION: BRANCH LINES SUPPORTED BY RODS LESS THAN 6 IN. LONG MEASURED BETWEEN THE TOP OF THE PIPE AND THE POINT OF ATTACHMENT TO THE BUILDING STRUCTURE, AS DEFINED BY NFPA 13, REQUIRE VERTICAL RESTRAINT ONLY.
3. LOCATE WIRE USED FOR RESTRAINT WITHIN 24 IN. OF A HANGAR. HANGAR MUST BE OF A TYPE/CONFIGURATION THAT RESISTS UPWARD MOVEMENT OF THE BRANCH LINE.
4. RESTRAIN SPRIGS 4 FT OR LONGER AGAINST LATERAL MOVEMENT.

TELECOM, I.T., AND ELECTRICAL ROOM NOTES:

1. DO NOT RUN SPRINKLER PIPING THROUGH TELECOM, I.T., OR ELECTRICAL ROOMS.
2. DO NOT RUN SPRINKLER PIPING DIRECTLY ABOVE ELECTRICAL PANELS, TRANSFORMERS OR SWITCHGEAR.
3. UTILIZE SIDEWALL SPRINKLERS ABOVE ENTRY DOORS WHERE PRACTICAL.
4. PROVIDE HEAD GUARD ON SPRINKLERS.



LEGEND

- 2½" ANGLE VALVE
- SPRINKLER RISER ASSEMBLY
- OS&Y VALVE W/TAMPER SWITCH
- PRESSURE GAUGE
- CHECK VALVE
- WET PIPE ALARM VALVE
- BALL VALVE
- AUTOMATIC AIR VENTING VALVE
- DRY STANDPIPE HOSE OUTLET
- FW (U) — 8" FIRE WATER MAIN
- S — 4"–6" SPRINKLER PIPE
- PIPING CONTINUES
- WATER PIPE SECTION
- TEST HEADER OUTLETS
- 5" STORZ FIRE DEPARTMENT CONNECTION
- 1–HOUR FIRE RATED WALL
- 2–HOUR FIRE RATED WALL

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 038064 JENNIFER L. LOVET
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRE PROTECTION - NOTES AND LEGEND

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	AS NOTED
DRAWN BY: GMM	PROJ MGR: JLL

FP-001

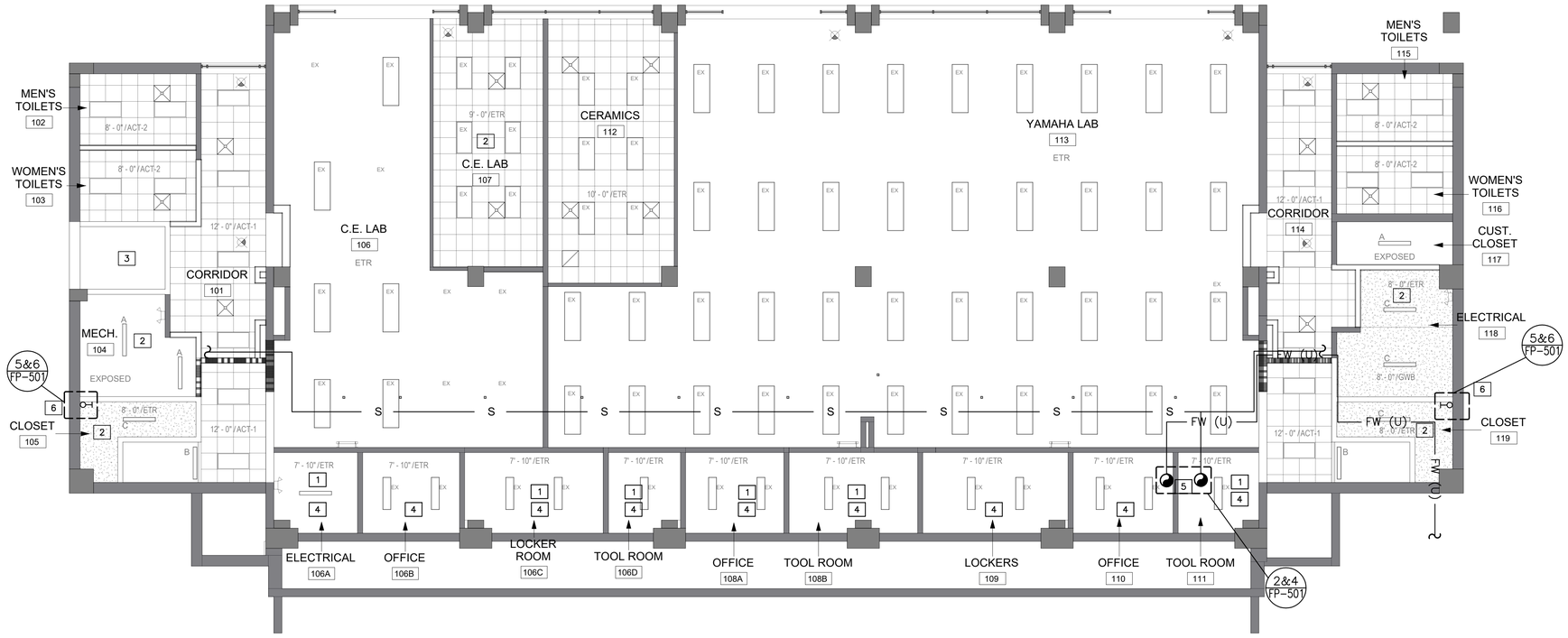
COPYRIGHT © 2020

SHEET NOTES:

1. REFERENCE FP-001 FOR NOTES AND LEGEND.
2. REFERENCE FP-501 DIAGRAMS AND DETAILS
3. REFERENCE FP-102 FOR SECOND FLOOR PLAN.
4. REFERENCE FP-103 FOR THIRD FLOOR PLAN.
5. REFERENCE FP-104 FOR FOURTH FLOOR PLAN.
6. REFERENCE ARCHITECTURAL PLANS FOR ALTERNATE FLOOR PLAN.

KEY NOTES:

1. DESIGN SPRINKLER PROTECTION AS ORDINARY HAZARD GROUP 1 IN THIS AREA.
2. DESIGN SPRINKLER PROTECTION AS ORDINARY HAZARD GROUP 2 IN THIS AREA.
3. SPRINKLER PROTECTION NOT REQUIRED PER NFPA 13 2013 § 8.15.5.
4. MEZZANINE ABOVE TO BE DESIGNED WITH SPRINKLER PROTECTION AS ORDINARY HAZARD GROUP 2 IN THIS AREA.
5. ALL DRAINS FROM FLOOR CONTROL VALVES AND RELIEF VALVE DRAIN TO BE ROUTED TO EXTERIOR
6. LOCATE STANDPIPE ON THE INTERMEDIATE LANDING LOCATED DIRECTLY ABOVE THE CLOSET.



1 FIRE PROTECTION PLAN AT FIRST FLOOR LEVEL
SCALE: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 040884 ENGINEER JENNIFER L. LOVETT
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRE PROTECTION - FIRST FLOOR PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	AS NOTED
DRAWN BY: GMM	PROJ MGR: JLL

FP-101

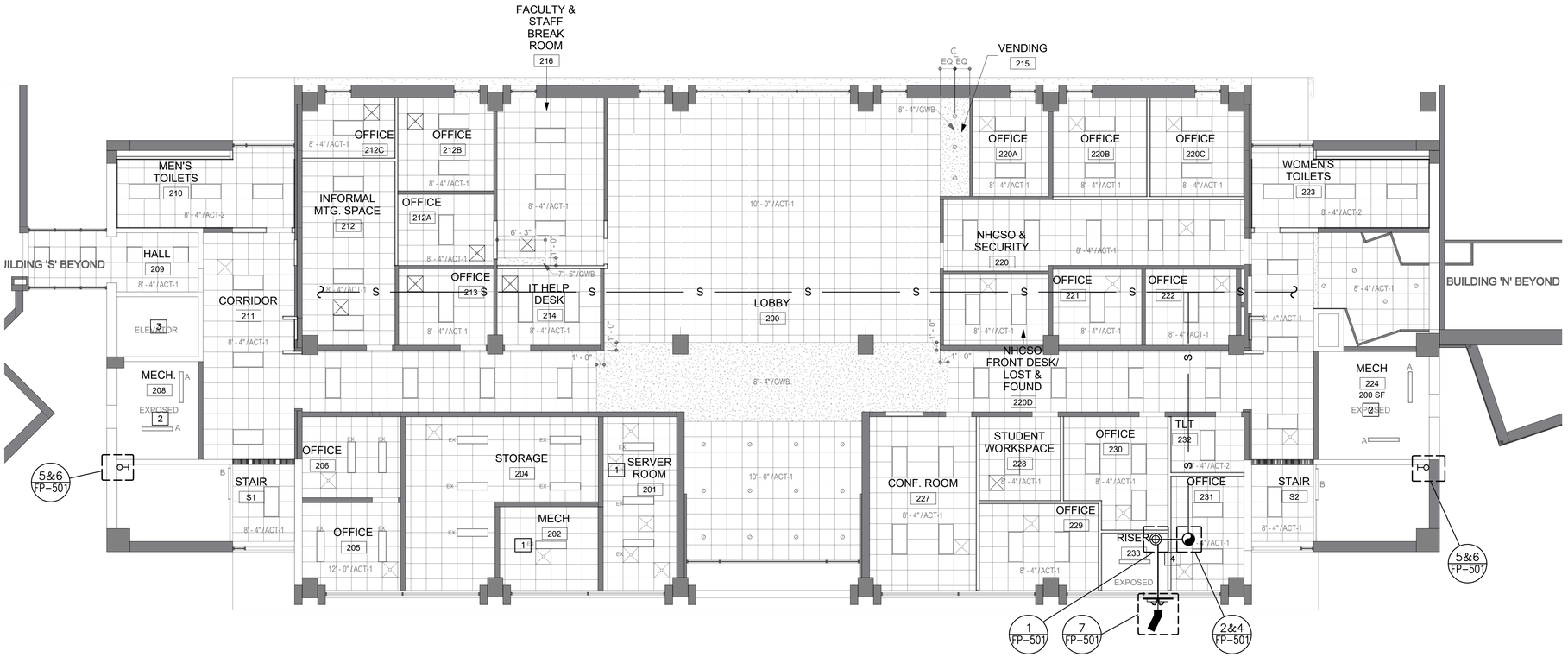
COPYRIGHT © 2020

SHEET NOTES:

1. REFERENCE FP-001 FOR NOTES AND LEGEND.
2. REFERENCE FP-501 DIAGRAMS AND DETAILS
3. REFERENCE FP-101 FOR FIRST FLOOR PLAN.
4. REFERENCE FP-103 FOR THIRD FLOOR PLAN.
5. REFERENCE FP-104 FOR FOURTH FLOOR PLAN.
6. REFERENCE ARCHITECTURAL PLANS FOR ALTERNATE FLOOR PLAN.

KEY NOTES:

1. DESIGN SPRINKLER PROTECTION AS ORDINARY HAZARD GROUP 1 IN THIS AREA.
2. DESIGN SPRINKLER PROTECTION AS ORDINARY HAZARD GROUP 2 IN THIS AREA.
3. SPRINKLER PROTECTION NOT REQUIRED PER NFPA 13 2013 § 8.15.5.
4. ALL DRAINS FROM FLOOR CONTROL VALVES AND RELIEF VALVE DRAIN TO BE ROUTED TO EXTERIOR



1 FIRE PROTECTION PLAN AT SECOND FLOOR LEVEL

SCALE: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 048804 JENNIFER L. LOVETT

08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRE PROTECTION - SECOND FLOOR PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	AS NOTED
DRAWN BY:GMM	PROJ MGR: JLL

FP-102

COPYRIGHT © 2020

SHEET NOTES:

1. REFERENCE FP-001 FOR NOTES AND LEGEND.
2. REFERENCE FP-501 DIAGRAMS AND DETAILS
3. REFERENCE FP-101 FOR FIRST FLOOR PLAN.
4. REFERENCE FP-102 FOR SECOND FLOOR PLAN.
5. REFERENCE FP-104 FOR FOURTH FLOOR PLAN.
6. REFERENCE ARCHITECTURAL PLANS FOR ALTERNATE FLOOR PLAN.

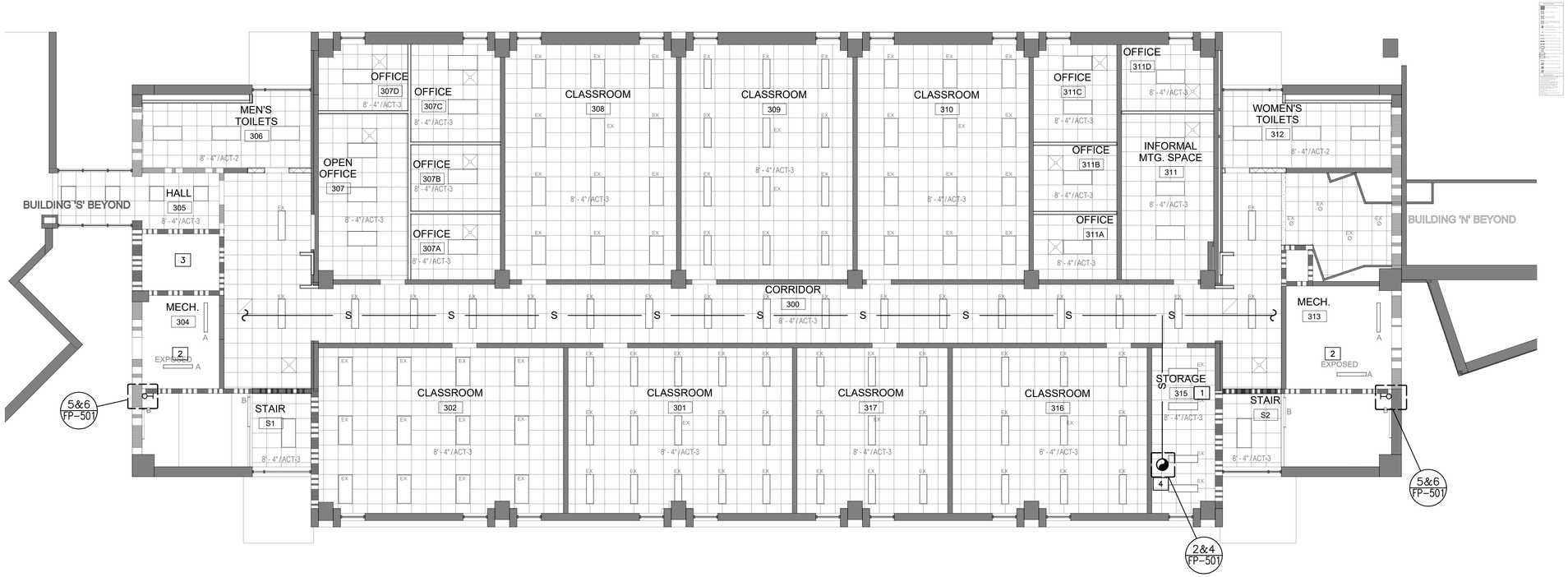
KEY NOTES:

[1] DESIGN SPRINKLER PROTECTION AS ORDINARY HAZARD GROUP 1 IN THIS AREA.

[2] DESIGN SPRINKLER PROTECTION AS ORDINARY HAZARD GROUP 2 IN THIS AREA.

[3] SPRINKLER PROTECTION NOT REQUIRED PER NFPA 13 2013 § 8.15.5.

[4] ALL DRAINS FROM FLOOR CONTROL VALVES AND RELIEF VALVE DRAIN TO BE ROUTED TO EXTERIOR



1 FIRE PROTECTION PLAN AT THIRD FLOOR LEVEL
SCALE: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 040604 ENGINEER JENNIFER L LOVELL

08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRE PROTECTION - THIRD FLOOR PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	AS NOTED
DRAWN BY:GMM	PROJ MGR: JLL

FP-103

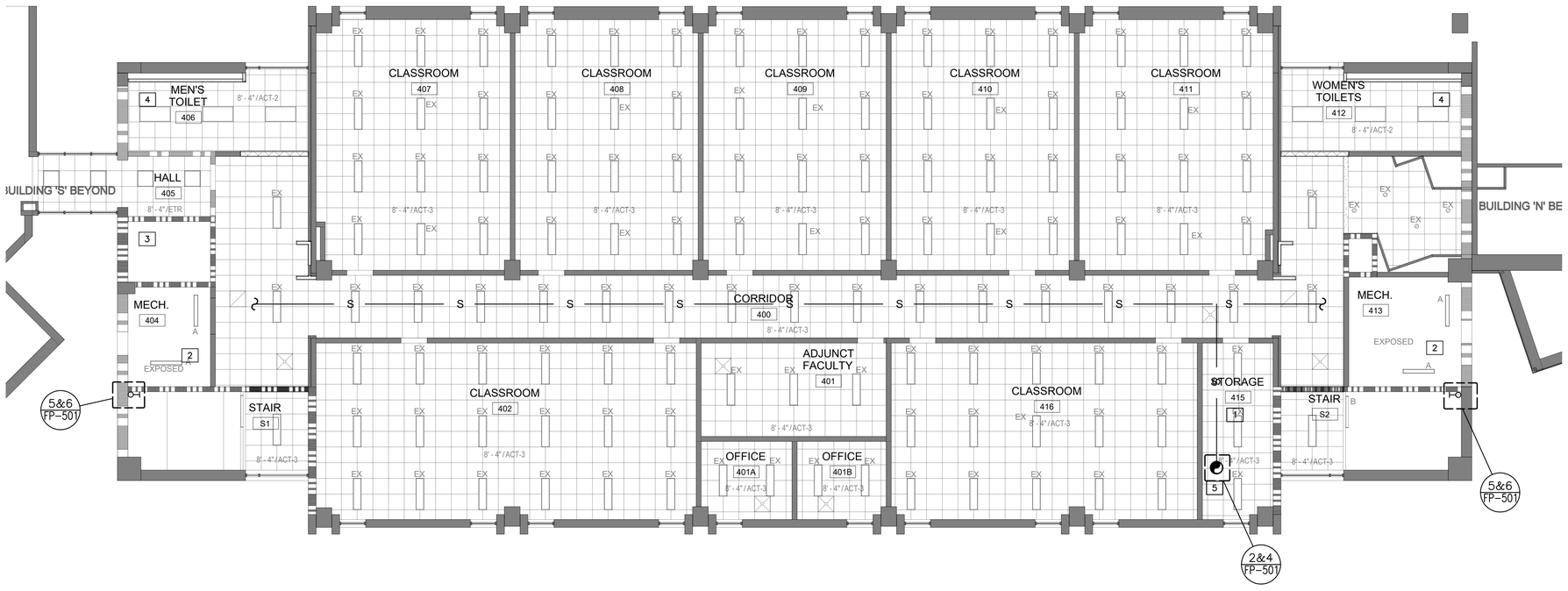
COPYRIGHT © 2020

SHEET NOTES:

1. REFERENCE FP-001 FOR NOTES AND LEGEND.
2. REFERENCE FP-501 DIAGRAMS AND DETAILS
3. REFERENCE FP-101 FOR FIRST FLOOR PLAN.
4. REFERENCE FP-102 FOR SECOND FLOOR PLAN.
5. REFERENCE FP-103 FOR THIRD FLOOR PLAN.
6. REFERENCE ARCHITECTURAL PLANS FOR ALTERNATE FLOOR PLAN.

KEY NOTES:

1. DESIGN SPRINKLER PROTECTION AS ORDINARY HAZARD GROUP 1 IN THIS AREA.
2. DESIGN SPRINKLER PROTECTION AS ORDINARY HAZARD GROUP 2 IN THIS AREA.
3. SPRINKLER PROTECTION NOT REQUIRED PER NFPA 13 2013 § 8.15.5.
4. PROVIDED SPRINKLER PROTECTION IN ACCORDANCE WITH NFPA 13 TO THE PENTHOUSE ABOVE
5. ALL DRAINS FROM FLOOR CONTROL VALVES AND RELIEF VALVE DRAIN TO BE ROUTED TO EXTERIOR



1 FIRE PROTECTION PLAN AT FOURTH FLOOR LEVEL

SCALE: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 040604 ENGINEER JENNIFER L. LOVETT

08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRE PROTECTION - FOURTH FLOOR PLAN

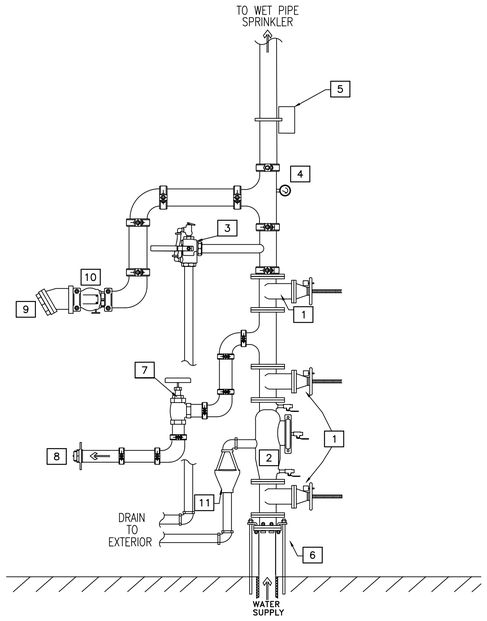
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

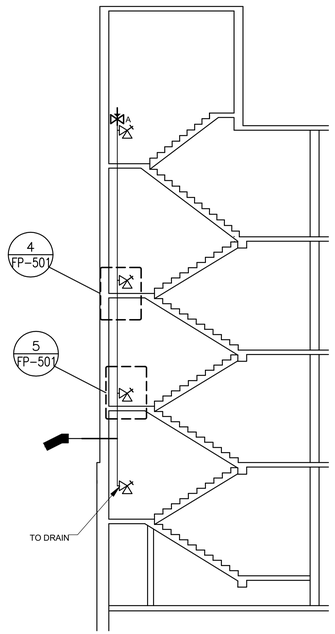
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	AS NOTED
DRAWN BY:GMM	PROJ MGR: JLL

FP-104

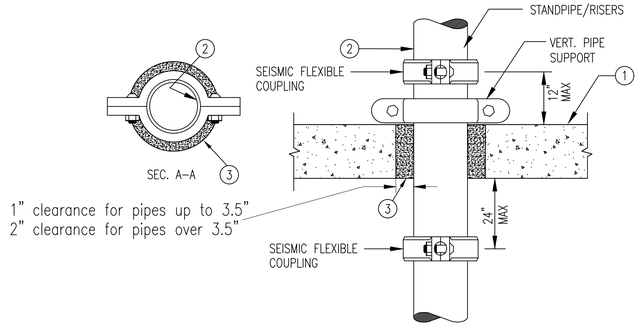
COPYRIGHT © 2020



1 RISER DIAGRAM



3 MANUAL DRY STANDPIPE ELEVATION DETAIL



(1) MIN. 4 1/2 INCH THICK REINFORCED CONCRETE FLOOR

(2) NOM 10 INCH DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE

(3) MIN. 1/2 THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL. AT THE POINT OF CONTACT LOCATION BETWEEN PIPE AND CONCRETE, A MIN. 1/2 INCH DIAMETER BEAD OF FILL MATERIALS SHALL BE APPLIED AT THE CONCRETE/PIPE INTERFACE ON THE TOP SURFACE OF FLOOR AND ON BOTH SURFACES OF WALL.

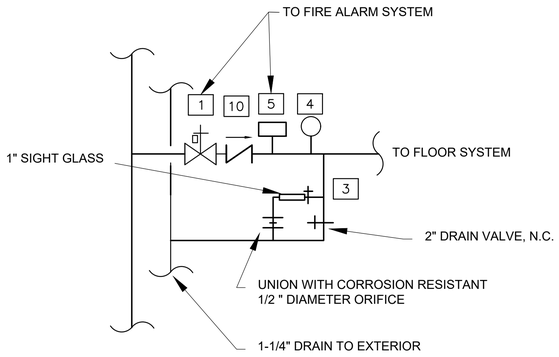
4 TYPICAL 2-HOUR RATED FLOOR PENETRATION

SHEET NOTES:

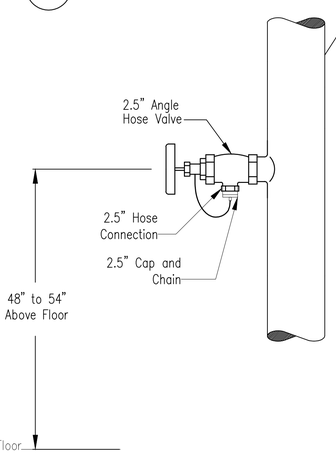
1. REFERENCE FP-001 FOR NOTES AND LEGEND.
2. REFERENCE FP-101, FP-102, FP-103, & FP-104 FOR RENOVATED FLOOR PLAN.

KEY NOTES: (DIAGRAM 1&2)

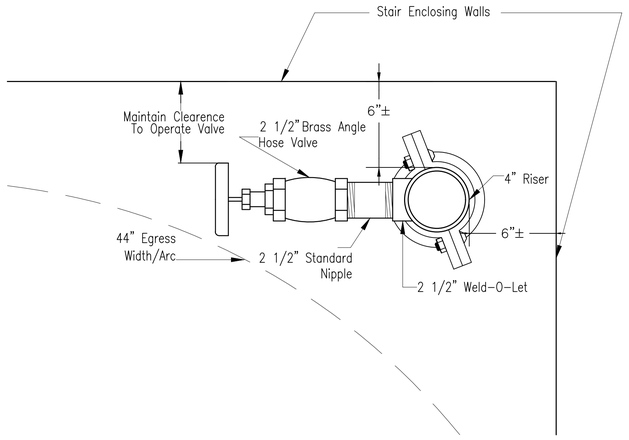
1	OS&Y VALVE W/TAMPER SWITCH
2	RPZ BACKFLOW PREVENTER ASSEMBLY
3	TEST AND DRAIN ASSEMBLY W/ RELIEF VALVE
4	PRESSURE GAUGE
5	WATER FLOW SWITCH
6	8" DUCTILE IRON FLANGED FEEDER PIPE
7	2-1/2" ANGLE VALVE
8	TEST HEADER OUTLETS W/ CAP & CHAIN
9	30 DEGREE 5" STORZ FIRE DEPARTMENT CONNECTION
10	CHECK VALVE WITH BALL DRIP
11	AIR GAP TO EMERGENCY RELIEF DRAIN



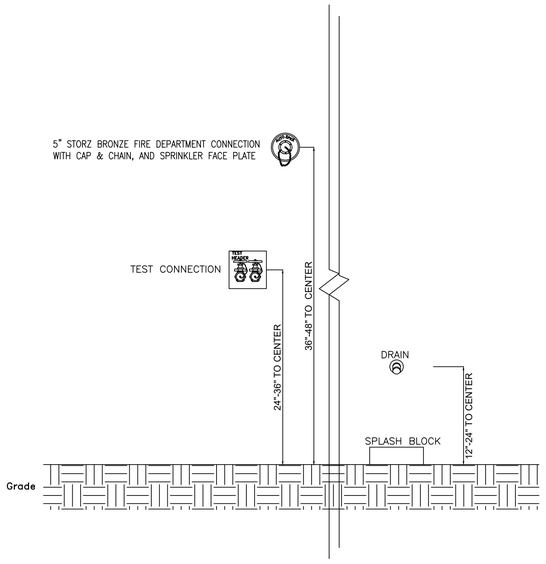
2 TYPICAL FLOOR VALVE PLAN LAYOUT



5 TYPICAL STANDPIPE WITH ANGLE HOSE VALVE DIAGRAM



6 ANGLE HOSE VALVE DIAGRAM



7 MOUNTING HEIGHT DIAGRAM

BECKER MORGAN GROUP

ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 040804 ENGINEER JENNIFER L. LOVELL

08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRE PROTECTION - DETAILS AND DIAGRAM

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	AS NOTED
DRAWN BY: GMM	PROJ MGR: JLL

FP-501

COPYRIGHT © 2020

PLUMBING DEMOLITION NOTES:

1. THE PLUMBING CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL FIXTURES, EQUIPMENT, PIPING, SUPPORTS, ACCESSORIES, ETC. MADE OBSOLETE BY THESE ALTERATIONS AS SHOWN IN THE PLUMBING DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN, HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY PLUMBING WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE OWNER OR THE ENGINEER. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID.

2. ALL EXISTING PLUMBING FIXTURES, EQUIPMENT AND PIPING SHALL REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED.

3. THESE DRAWINGS ARE COMPILED BY THE ENGINEER FROM THE OWNER'S AS-BUILT RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE PLUMBING CONTRACTOR SHALL VERIFY ALL PIPING, FIXTURE LOCATIONS, DIMENSIONS, MATERIALS AND ALL FIELD CONDITIONS AFFECTING HIS WORK.

4. WHERE PLUMBING SYSTEMS PASS THROUGH THE DEMOLITION AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, THEY SHALL REMAIN OR BE SUITABLY RELOCATED AND THE SYSTEM RESTORED TO NORMAL OPERATION. ADVISE THE ARCHITECT/ENGINEER IMMEDIATELY IF SUCH CONDITIONS ARE UNCOVERED BEFORE PROCEEDING WITH ADDITIONAL WORK.

5. PROTECT ALL EXISTING LIFE SAFETY SYSTEMS, FIRE ALARM AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ARCHITECT/ENGINEER IN WRITING WHEN SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.

6. SURVEY THE EFFECTED AREAS BEFORE SUBMITTING A BID AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS MAY EXIST.

PLUMBING GENERAL NOTES:

1. SCOPE OF WORK: THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS DESCRIBE SCOPE OF WORK REQUIRED FOR PLUMBING SYSTEMS. LABOR AND MATERIAL SHALL BE PROVIDED AS REQUIRED FOR A COMPLETE, WORKMANLIKE INSTALLATION OF ALL SYSTEMS SHOWN ON DIAGRAMMATIC DRAWINGS AND/OR AS SPECIFIED HEREIN.

2. CONTRACTOR: THE WORD "CONTRACTOR", "PLUMBING CONTRACTOR", AND "P.C." AS USED HEREIN SHALL MEAN THE PLUMBING INSTALLER UNLESS OTHERWISE QUALIFIED.

3. DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND MAY NOT COMPLETELY DESCRIBE EVERY DETAIL OF THE INSTALLATION. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR FURNISHING COMPLETE SYSTEMS INCLUDING ALL REQUIRED EQUIPMENT AND ACCESSORIES TO OBTAIN FULLY FUNCTIONING PLUMBING SYSTEMS.

4. CODE COMPLIANCE: COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AND CODES, INSOFAR AS THEY APPLY:

   NORTH CAROLINA STATE BUILDING CODE (CODE), LATEST EDITION AND REVISIONS.

   LOCAL JURISDICTION REQUIREMENTS.

5. PERMITS AND INSPECTIONS: OBTAIN ALL PERMITS, LICENSES, INSPECTIONS, ETC., REQUIRED FOR THE WORK AND PAY FOR SAME. FURNISH A FINAL CERTIFICATE OF INSPECTION AND APPROVAL FROM THE AUTHORITY HAVING JURISDICTION PRIOR TO ACCEPTANCE OF THE WORK.

6. SUPERVISION: PROVIDE SKILLED SUPERINTENDENTS TO SUPERVISE THE WORK FROM THE BEGINNING TO COMPLETION AND FINAL INSPECTION.

7. PROGRESS OF WORK: PERFORM WORK IN ACCORDANCE WITH SCHEDULE AND REQUIREMENTS OF THE GENERAL CONTRACTOR. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR DELAY THE OVERALL PROJECT SCHEDULE.

8. COORDINATION: COORDINATE PLUMBING WORK WITH THE WORK OF OTHER TRADES. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. ARRANGE PLUMBING SO AS NOT TO INTERFERE WITH THE WORK OF OTHER TRADES. VERIFY ACTUAL BUILDING STRUCTURE PRIOR TO DUCT FABRICATION AND ADJUST LAYOUT AS REQUIRED. INCLUDE ALL OFFSETS IN DUCTS, FITTINGS, PIPING, ETC. AS REQUIRED TO PROPERLY INSTALL EQUIPMENT.

9. EQUIPMENT LOCATIONS: DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT.

10. LISTING AND LABELING: ALL EQUIPMENT SHALL BE LABELED OR LISTED BY UL OR OTHER APPROVED TESTING AGENCY WHERE REQUIRED.

11. FIRE RATED CONTRUCTION: ALL PLUMBING PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL BE SUITABLY PROTECTED TO MAINTAIN LISTING. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND REQUIREMENTS OF RATED ASSEMBLIES.

12. STORAGE SPACE: CONSULT WITH THE GENERAL CONTRACTOR REGARDING JOB SITE STORAGE FOR PLUMBING MATERIALS TO BE INSTALLED UNDER THIS PROJECT. STORAGE SPACE MUST BE SECURED AND CONTRACTOR'S REPRESENTATIVE MUST BE ON JOB BEFORE ANY MATERIAL MAY BE RECEIVED.

13. CLEANUP: REMOVE ALL DEBRIS GENERATED IN THE ACCOMPLISHMENT OF WORK UNDER THIS PROJECT. CLEAN, REPLACE OR REPAIR ALL SURFACES SOILED OR DAMAGED DURING THE COURSE OF THE WORK. REMOVE DEBRIS DAILY SO TO MAINTAIN SAFE WORKING CONDITIONS.

14. RECORD DRAWINGS: MAINTAIN ONE SET OF "RED-LINED" RECORD DRAWINGS ON SITE AT ALL TIMES AND PROVIDE DRAWINGS TO ENGINEER PRIOR TO FINAL INSPECTION.

A. EXISTING BUILDINGS AND CONSTRUCTION:

B. WORK UNDER THIS CONTRACT IS TO BE PERFORMED IN AN EXISTING BUILDING. BUILDING LAYOUT INDICATED IS DEVELOPED FROM EXISTING RECORD DOCUMENTS AND LIMITED FIELD VERIFICATION FOR THE PURPOSES OF DESCRIBING THE WORK. VERIFY ALL EXISTING CONDITIONS AND ADJUST WORK AS REQUIRED TO SUIT ACTUAL FIELD CONDITIONS.

C. PERFORM ALL WORK IN ACCORDANCE WITH SAFETY REGULATIONS.

D. DO NOT CUT ANY STRUCTURAL MEMBERS WITHOUT EXPRESS WRITTEN INSTRUCTIONS FROM ARCHITECT. PROVIDE CUTTING AND PATCHING FOR EXISTING FINISHES AS REQUIRED.

E. COORDINATE INSTALLATION OF NEW PLUMBING SYSTEMS WITH EXISTING BUILDING SYSTEMS. ADJUST ARRANGEMENTS AS REQUIRED TO ACCOMMODATE INTERFERENCES.

PLUMBING LEGEND

CA	COMPRESSED AIR PIPING
C C	CONDENSATE PIPING
140°F 140°F	DOMESTIC 140°F WATER PIPING
140R	DOMESTIC 140°F RETURN WATER PIPING
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER CIRCULATION PIPING
	DOMESTIC HOT WATER PIPING
F F	FILTERED WATER PIPING
SP	FIRE SPRINKLER PIPING
FM	FORCE MAIN PIPING
NG	GAS PIPING (NAT. OR LP)
GW	GREASE WASTE PIPING
N2	NITROUS OXIDE PIPING
O2	O2 (OXYGEN) PIPING
OD	OVERFLOW ROOF DRAIN PIPING
RD	ROOF DRAIN PIPING
	SANITARY VENT PIPING
	SANITARY WASTE PIPING
T T	TEPID WATER PIPING
VAC	VACUUM PIPING
	BACKFLOW PREVENTION DEVICE
	BALL VALVE
	CHECK VALVE
	CIRCUIT SETTER (BALANCING VALVE)
P	CIRCULATION PUMP
	CONTROL VALVE
	EXTENT OF DEMOLITION
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FS	FLOOR SINK
	GAS-REGULATOR VALVE
	GATE VALVE
	GATE VALVE IN RISER
GCO	GRADE CLEANOUT
HB	HOSE BIBB
	PIPE CAP
	PIPE ELBOW
	PIPE ELBOW DOWN
	PIPE ELBOW UP
	PIPE TEE
	PIPE TEE DOWN
	PIPE TEE UP
SP P FM	SUMP PUMP
1	DEMOLITION KEYED NOTE TAG
1	NEW WORK KEYED NOTE
	POINT OF CONNECTION - NEW TO EXISTING
	PRESSURE REDUCING VALVE
	SOLENOID VALVE
M 140°F	THERMOSTATIC MIXING VALVE
WCO	WALL CLEANOUT
WH	WALL HYDRANT
	WASHING MACHINE BOX
SA	WATER HAMMER ARRESTOR

NOTE: ALL ITEMS LISTED IN THIS SCHEDULE MAY NOT BE USED IN PROJECT

PLUMBING LOADS

WASTE (DRAINAGE FIXTURE UNITS)	164
WATER	120 GPM

BASE BID
(x)4" WATER SERVICE IS ADEQUATE.
(2) (X)4" SEWER CONNECTIONS ARE ADEQUATE.

PLUMBING LOADS

WASTE (DRAINAGE FIXTURE UNITS)	166
WATER	125 GPM

ALTERNATE BID
(x)4" WATER SERVICE IS ADEQUATE.
(2) (X)4" SEWER CONNECTIONS ARE ADEQUATE.

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BOWEN III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING LEGEND, ABBREVIATIONS, LOADS, GENERAL NOTES AND DEMOLITION NOTES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

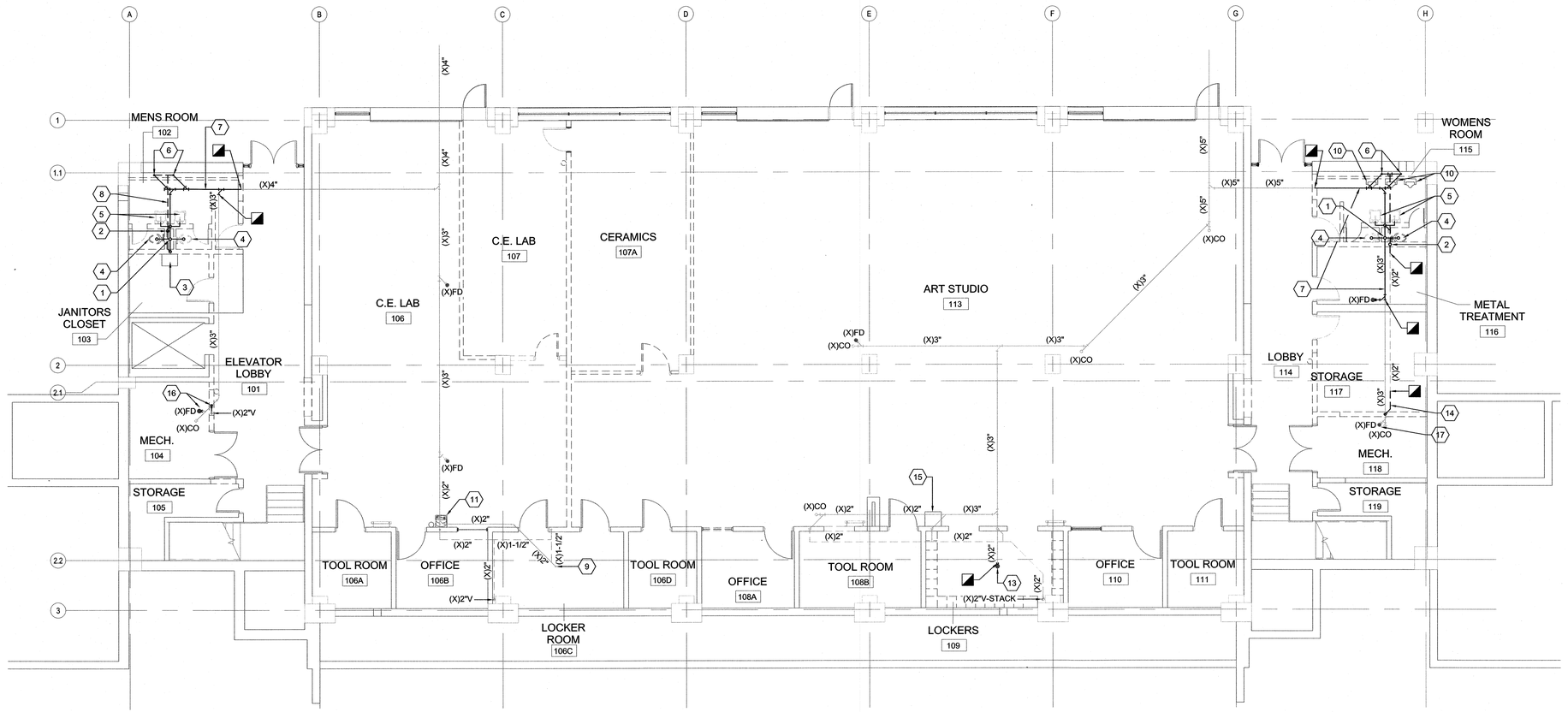
PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: JBS PROJ MGR: JRB

P-001

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. REMOVE (X) WASTE STACK COMPLETE.
2. REMOVE (X) VENT STACK COMPLETE.
3. REMOVE (X) JANITORS SINK COMPLETE INCLUDING FAUCET, TRIM, PIPING, ETC. AND DISPOSE OF PROPERLY.
4. REMOVE (X) WATER CLOSET COMPLETE INCLUDING FLUSH VALVE, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
5. REMOVE (X) LAVATORY COMPLETE INCLUDING FAUCET, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
6. REMOVE (X) WASTE-VENT PIPING INSIDE OF CHASE WALL AND DISPOSE OF PROPERLY.
7. REMOVE (X) WASTE PIPING BELOW FLOOR BACK TO POINT OF DEMOLITION AS INDICATED ON DRAWINGS. PREPARE REMAINING PIPING FOR CONNECTION TO NEW PIPING. SEE NEW WORK PLANS.
8. REMOVE (X) VENT PIPING ABOVE CEILING.
9. (BASE BID) NO WORK.
   (ALT. 1/1A) REMOVE (X) LAUNDRY SINK COMPLETE. PREPARE (X) WASTE PIPE TO INSTALL NEW FLOOR CLEANOUT.
10. REMOVE (X) URINAL COMPLETE INCLUDING FLUSH VALVE, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
11. (BASE BID) NO WORK.
    (ALT. 1/1A) REMOVE (X) DRINKING FOUNTAIN. CAP WASTE ARM AT STACK. INSTALL WALL CLEANOUT IF NONE EXIST.
12. NOT USED.
13. (BASE BID) NO WORK.
    (ALT. 1/1A) REMOVE (X) DRAIN PIPE AND PREPARE TO INSTALL NEW FLOOR CLEANOUT. SEE NEW WORK PLAN FOR FURTHER INFORMATION.
14. REMOVE (X) VENT RISER TO POINT OF DEMOLITION AS INDICATED ON PLAN. PREPARE REMAINING VENT PIPING FOR CONNECTION TO NEW VENT PIPING. SEE NEW WORK PLANS.
15. (BASE BID) NO WORK.
    (ALT. 1/1A) REMOVE (X) JANITORS SINK COMPLETE INCLUDING FAUCET, TRIM, PIPING, ETC. AND DISPOSE OF PROPERLY.
16. CAP (X)FD , WASTE PIPE UNDERFLOOR.
17. CAP (X)FD FLUSH WITH FLOOR



1 **FIRST FLOOR DEMOLITION PLAN**
1/8" = 1'-0"

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSHOOF
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
FIRST FLOOR
WASTE-VENT
DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

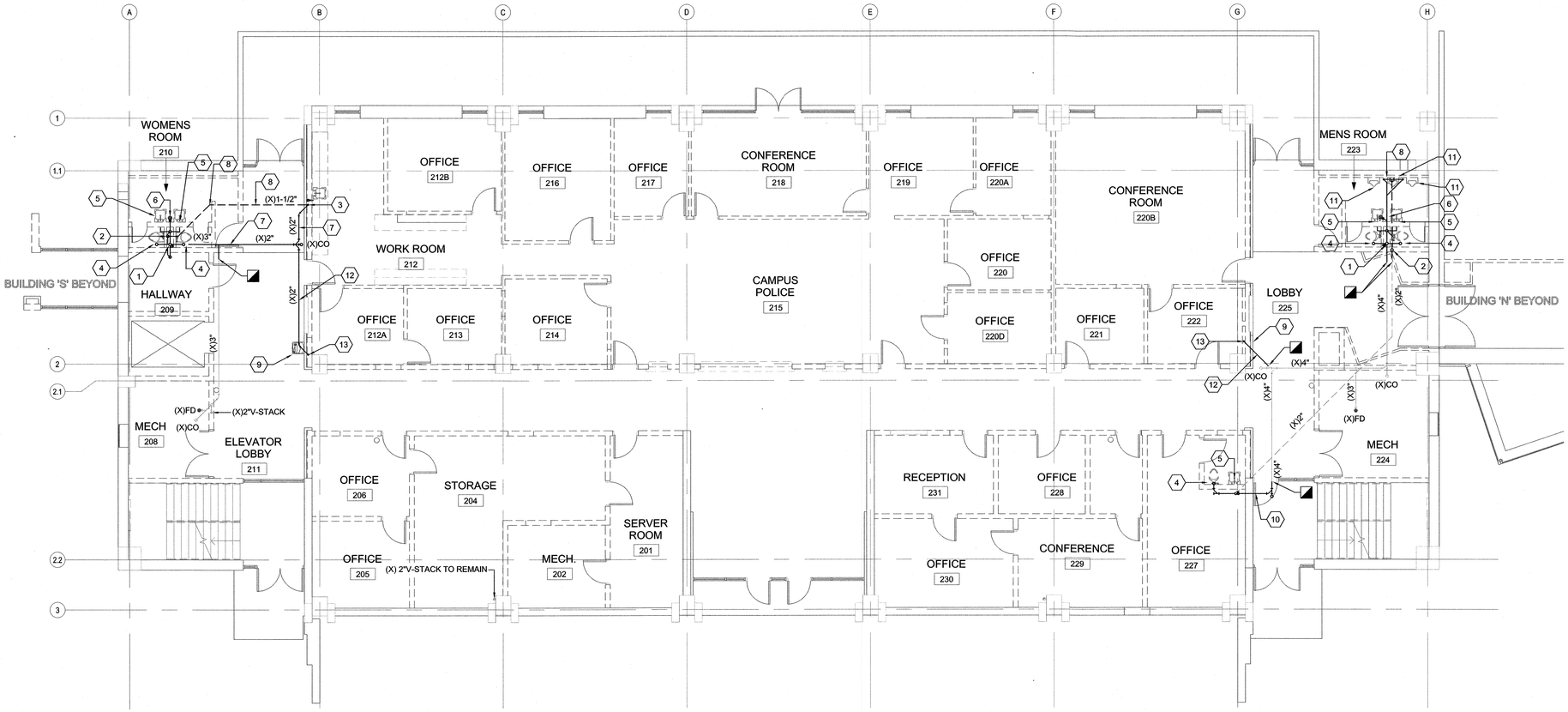
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

PD101

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. REMOVE (X) WASTE STACK COMPLETE.
2. REMOVE (X) VENT STACK COMPLETE.
3. REMOVE (X) SINK AND ABANDON (X) WASTE AND VENT RISER IN WALL. CAP PIPING ON ANY REMAINING OPEN ENDS OF PIPE.
4. REMOVE (X) WATER CLOSET COMPLETE INCLUDING FLUSH VALVE, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
5. REMOVE (X) LAVATORY COMPLETE INCLUDING FAUCET, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
6. REMOVE (X) FLOOR DRAIN AND ASSOCIATED PIPING BACK TO WASTE STACK.
7. REMOVE (X) WASTE PIPING BELOW FLOOR BACK TO POINT OF DEMOLITION AS INDICATED ON DRAWINGS. PREPARE REMAINING PIPING FOR CONNECTION TO NEW PIPING. SEE NEW WORK PLANS.
8. REMOVE (X) WASTE-VENT PIPING INSIDE OF CHASE WALL AND DISPOSE OF PROPERLY.
9. REMOVE (X) WATER COOLER COMPLETE INCLUDING FAUCET, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
10. REMOVE (X) WASTE PIPING BELOW FLOOR BACK BRANCH MAIN AS SHOWN. PREPARE PIPE FOR NEW PIPE CONNECTION. SEE NEW WORK PLAN.
11. REMOVE (X) URINAL COMPLETE INCLUDING FLUSH VALVE, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
12. REMOVE (X) 2"W BRANCH AND CAP AT CONNECTION TO INTERSECTING BRANCH.
13. ABANDON (X) WASTE AND VENT STACK SERVING WATER COOLERS. CAP PIPING BELOW FLOOR AND ANY REMAINING OPEN ENDS.



1 **SECOND FLOOR DEMOLITION PLAN**
1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10596 ENGINEER JASON R. BENSON III 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
SECOND FLOOR
WASTE-VENT
DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

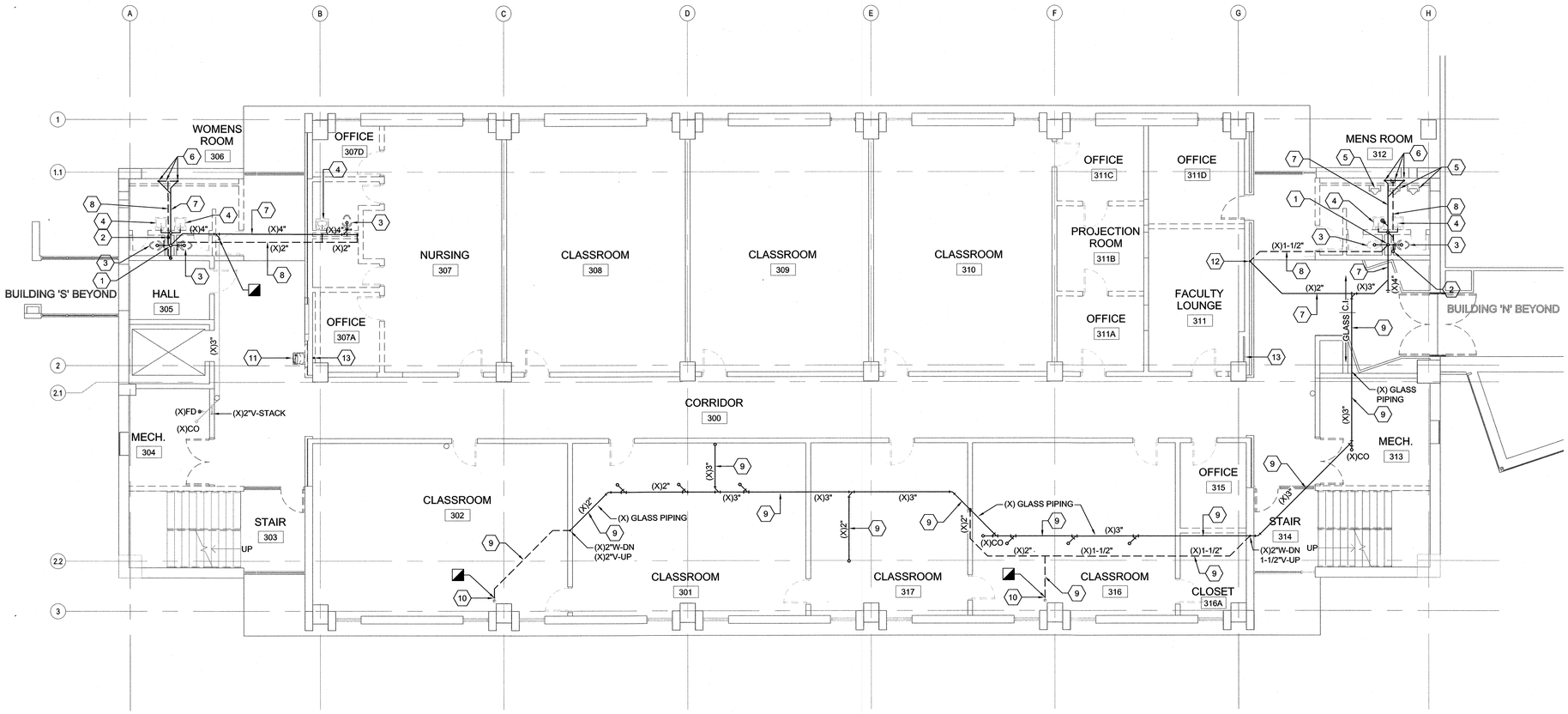
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

PD102

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. REMOVE (X) WASTE STACK COMPLETE.
2. REMOVE (X) VENT STACK COMPLETE.
3. REMOVE (X) WATER CLOSET COMPLETE INCLUDING FLUSH VALVE, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
4. REMOVE (X) LAVATORY COMPLETE INCLUDING FAUCET, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
5. REMOVE (X) URINAL COMPLETE INCLUDING FLUSH VALVE, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
6. REMOVE (X) WASTE-VENT PIPING INSIDE OF CHASE WALL AND DISPOSE OF PROPERLY.
7. REMOVE (X) WASTE PIPING BELOW FLOOR BACK TO POINT OF DEMOLITION AS INDICATED ON DRAWINGS. PREPARE REMAINING PIPING FOR CONNECTION TO NEW PIPING. SEE NEW WORK PLANS.
8. REMOVE (X) VENT PIPING ABOVE CEILING.
9. REMOVE (X) ABANDONED LAB-WASTE AND VENT PIPING.
10. CAP (X) VENT BRANCH AT STACK.
11. REMOVE (X) WATER COOLER COMPLETE INCLUDING FAUCET, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
12. REMOVE (X) WASTE AND VENT STACK FROM WALL.
13. REMOVE (X) WASTE-VENT STACK



1 THIRD FLOOR DEMOLITION PLAN

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER CHRISTOPHER B. BENSON, III 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
THIRD FLOOR
WASTE-VENT
DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

PD103

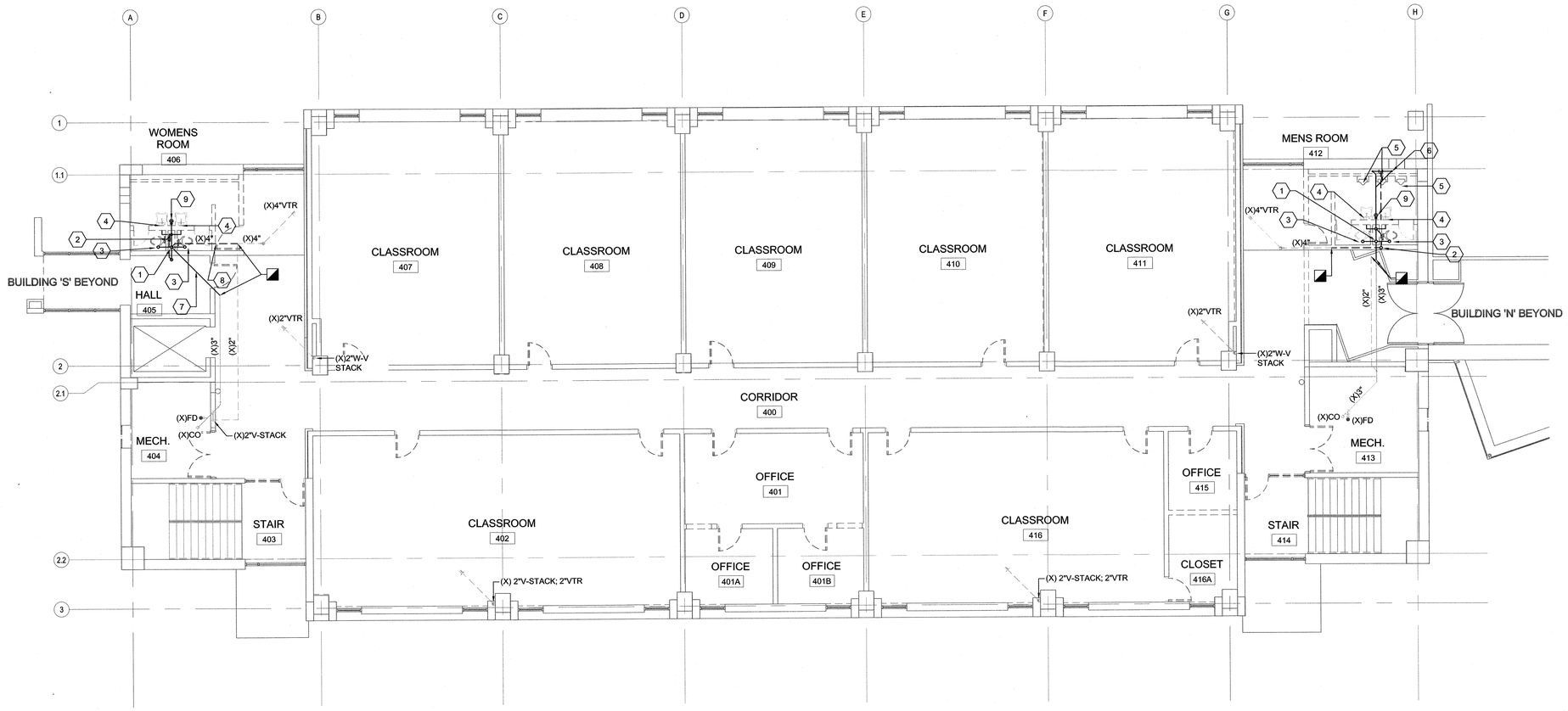
CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC NC# P-0506

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. REMOVE (X) 4" WASTE STACK COMPLETE.
2. REMOVE (X) 3" VENT STACK COMPLETE.
3. REMOVE (X) WATER CLOSET COMPLETE INCLUDING FLUSH VALVE, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
4. REMOVE (X) LAVATORY COMPLETE INCLUDING FAUCET, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
5. REMOVE (X) URINAL COMPLETE INCLUDING FLUSH VALVE, TRIM, PIPING, ETC AND DISPOSE OF PROPERLY.
6. REMOVE (X) WASTE-VENT PIPING INSIDE OF CHASE WALL AND DISPOSE OF PROPERLY.
7. REMOVE (X) WASTE PIPING BELOW FLOOR BACK TO POINT OF DEMOLITION AS INDICATED ON DRAWINGS. PREPARE REMAINING PIPING FOR CONNECTION TO NEW PIPING. SEE NEW WORK PLANS.
8. REMOVE (X) VENT PIPING ABOVE CEILING.
9. REMOVE (X) FLOOR DRAIN



1 **FOURTH FLOOR DEMOLITION PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
FOURTH FLOOR
WASTE-VENT
DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

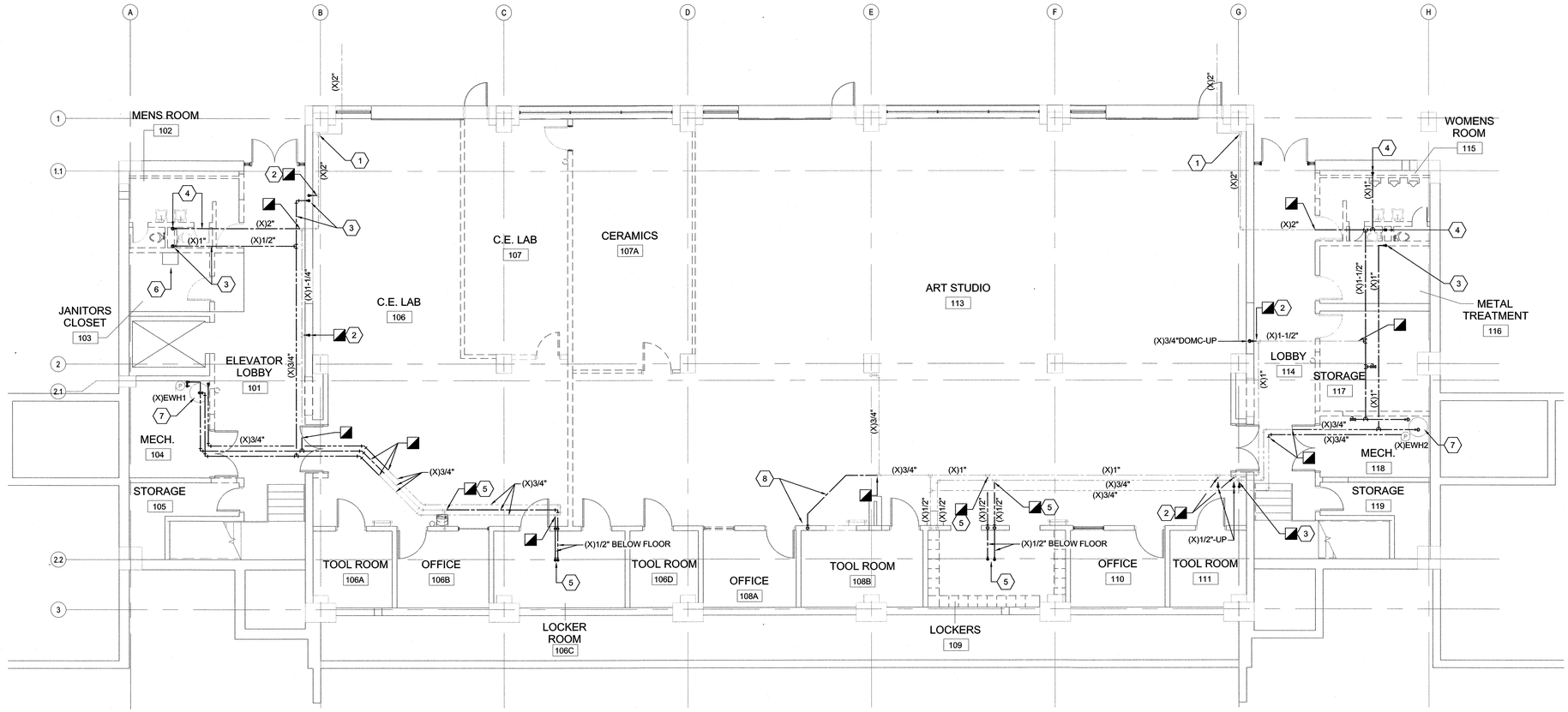
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

PD104

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. REMOVE (X) GATE VALVE IN RISER AND REPLACE WITH NEW BALL VALVE.
2. REMOVE (X) DCW RISER AND CAP BRANCH AT MAIN
3. REMOVE (X) DHW RISER AND ASSOCIATED BRANCH PIPING BACK TO POINT OF END OF DEMOLITION AS INDICATED ON DRAWING
4. REMOVE (X) DCW RISER AND ASSOCIATED BRANCH PIPING BACK TO POINT OF END OF DEMOLITION AS INDICATED ON DRAWING
5. (BASE BID) NO WORK.
   (ALT. 1/1A) REMOVE (X) DCW & DHW PIPING FROM BELOW FLOOR, WALL TO BE DEMOLISHED AND BACK TO POINT OF END OF DEMOLITION AS INDICATED ON DRAWING.
6. REMOVE (X) SERVICE SINK AND RETURN TO OWNER. REMOVE (X) DCW PIPING BACK TO POINT OF END OF DEMOLITION AS INDICATED ON DRAWING.
7. RELOCATE (X) EWH AND RECIRC PUMP AS INDICATED ON RENOVATION PLAN.
8. (BASE BID) NO WORK.
   (ALT. 1/1A) REMOVE (X) SERVICE SINK AND RETURN TO OWNER. REMOVE (X) DCW PIPING BACK TO POINT OF END OF DEMOLITION AS INDICATED ON DRAWING.



1 FIRST FLOOR DEMOLITION PLAN

1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BEACHAM III 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
FIRST FLOOR
DOMESTIC WATER
DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

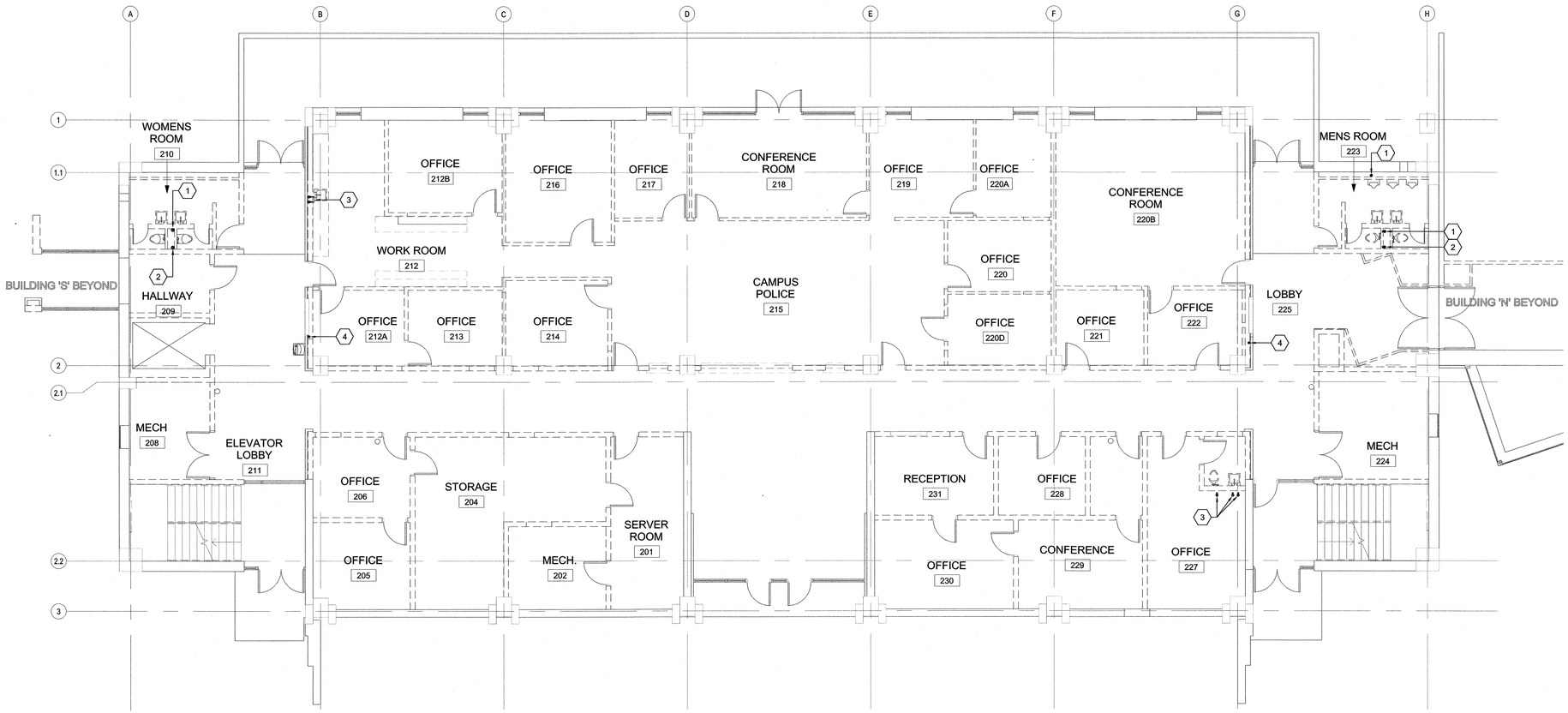
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

PD201

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. REMOVE (X) DCW RISER AND ASSOCIATED DCW PIPING SERVING DEMOLISHED FIXTURES.
2. REMOVE (X) DHW RISER AND ASSOCIATED DHW PIPING SERVING DEMOLISHED FIXTURES.
3. REMOVE (X) DCW AND DHW PIPING SERVING DEMOLISHED FIXTURES
4. ABANDON (X) DCW RISER IN PLACE. CAP BRANCHES FEEDING DEMOLISHED WATER COOLERS.



1 SECOND FLOOR DEMOLITION PLAN
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON, III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
SECOND FLOOR
DOMESTIC WATER
DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

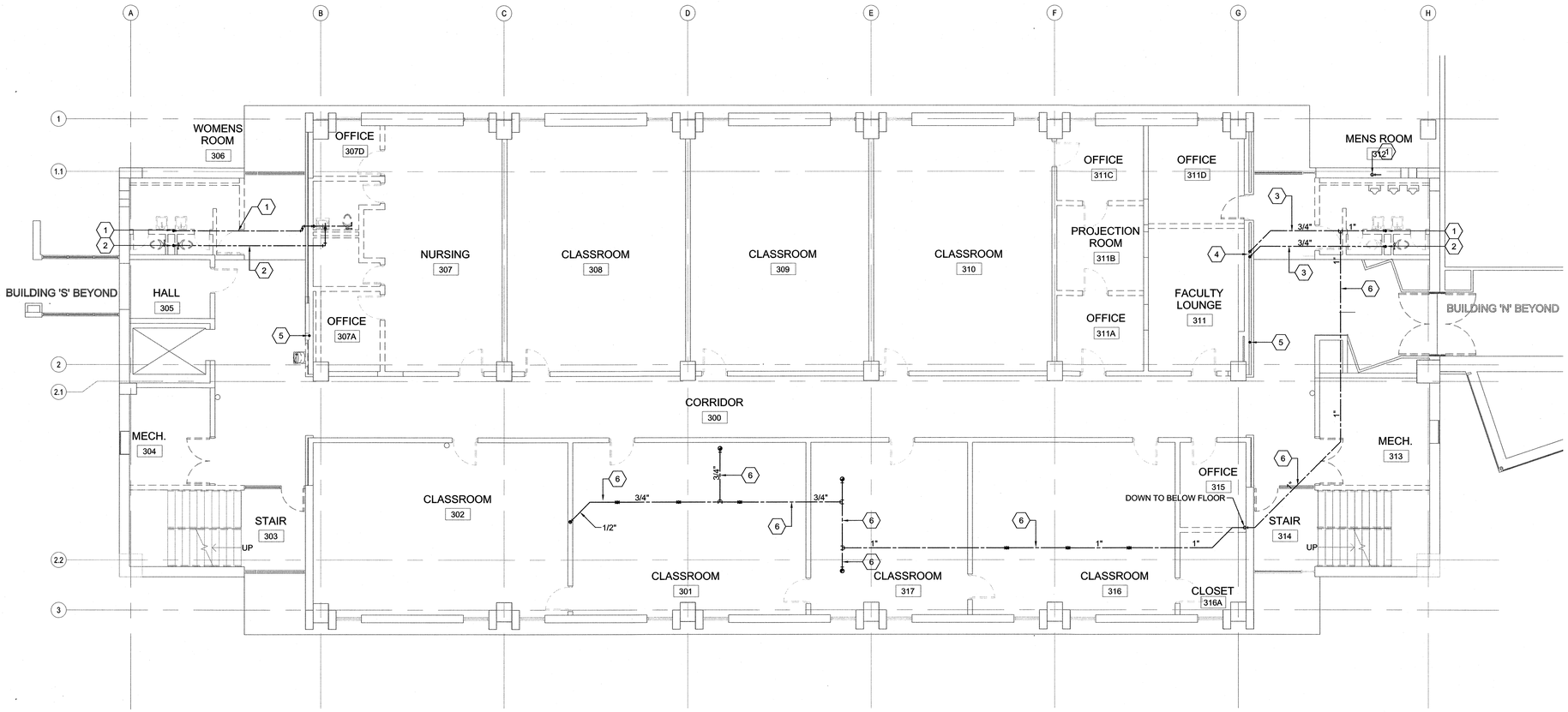
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

PD202

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. REMOVE (X) DCW RISER AND ASSOCIATED DCW PIPING SERVING DEMOLISHED FIXTURES.
2. REMOVE (X) DHW RISER AND ASSOCIATED DHW PIPING SERVING DEMOLISHED FIXTURES.
3. REMOVE (X) DCW AND DHW PIPING BACK TO POINT OF END OF DEMOLITION AS INDICATED ON DRAWING
4. ABANDON (X) DCW AND DHW RISER IN PLACE. CAP ABOVE CEILING AT INDICATION OF POINT OF END OF DEMOLITION.
5. ABANDON (X) DCW RISER IN PLACE. CAP BRANCHES FEEDING DEMOLISHED WATER COOLERS.
6. REMOVE (X) ABANDONED DCW PIPING SERVING OLD LAB ROOMS.



1 **THIRD FLOOR DEMOLITION PLAN**
1/8" = 1'-0"

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10592 JAMES R. BENSHEIT
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
THIRD FLOOR
DOMESTIC WATER
DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

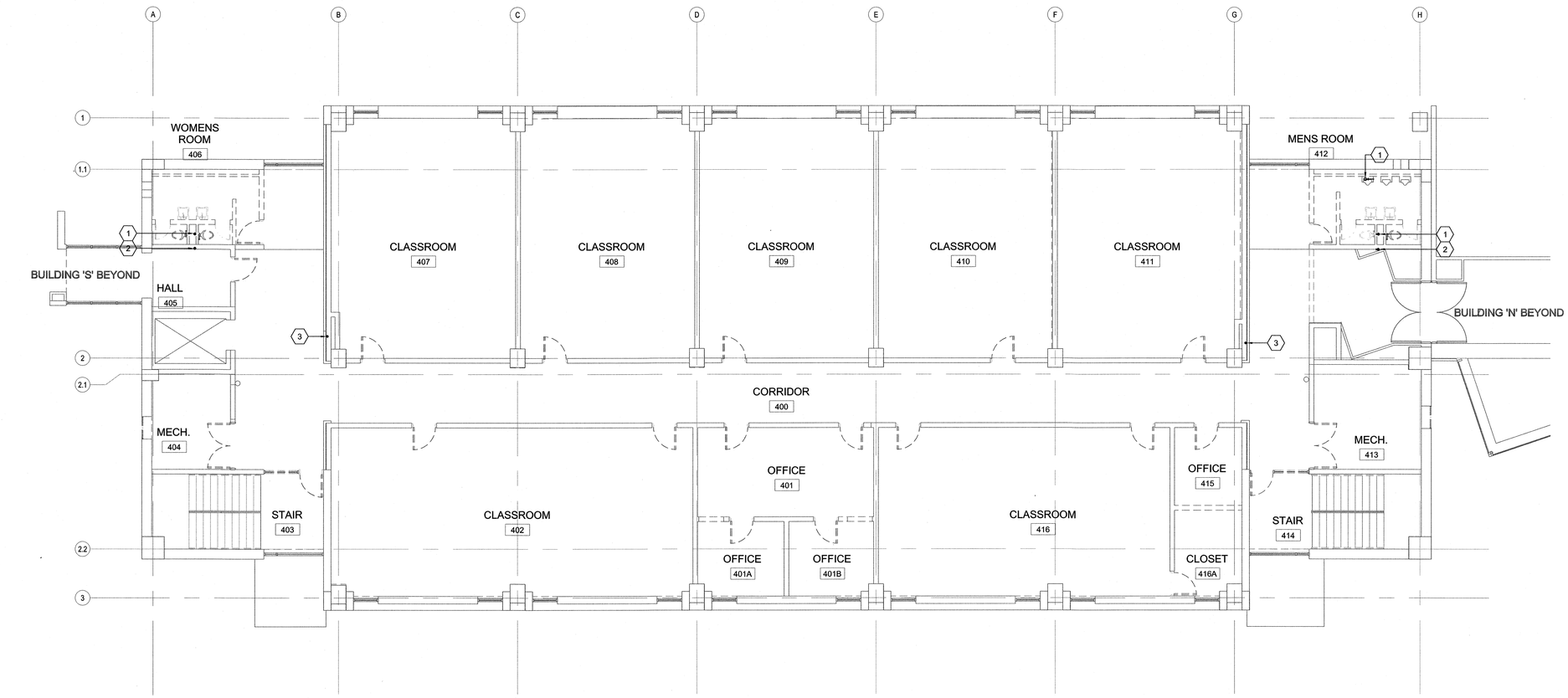
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

PD203

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. REMOVE (X) DCW RISER AND ASSOCIATED DCW PIPING SERVING DEMOLISHED FIXTURES.
2. REMOVE (X) DHW RISER AND ASSOCIATED DHW PIPING SERVING DEMOLISHED FIXTURES.
3. ABANDON (X) DCW RISER IN PLACE. CAP BRANCHES FEEDING DEMOLISHED WATER COOLERS.



1 **FOURTH FLOOR DEMOLITION PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JOHN R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
FOURTH FLOOR
DOMESTIC WATER
DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

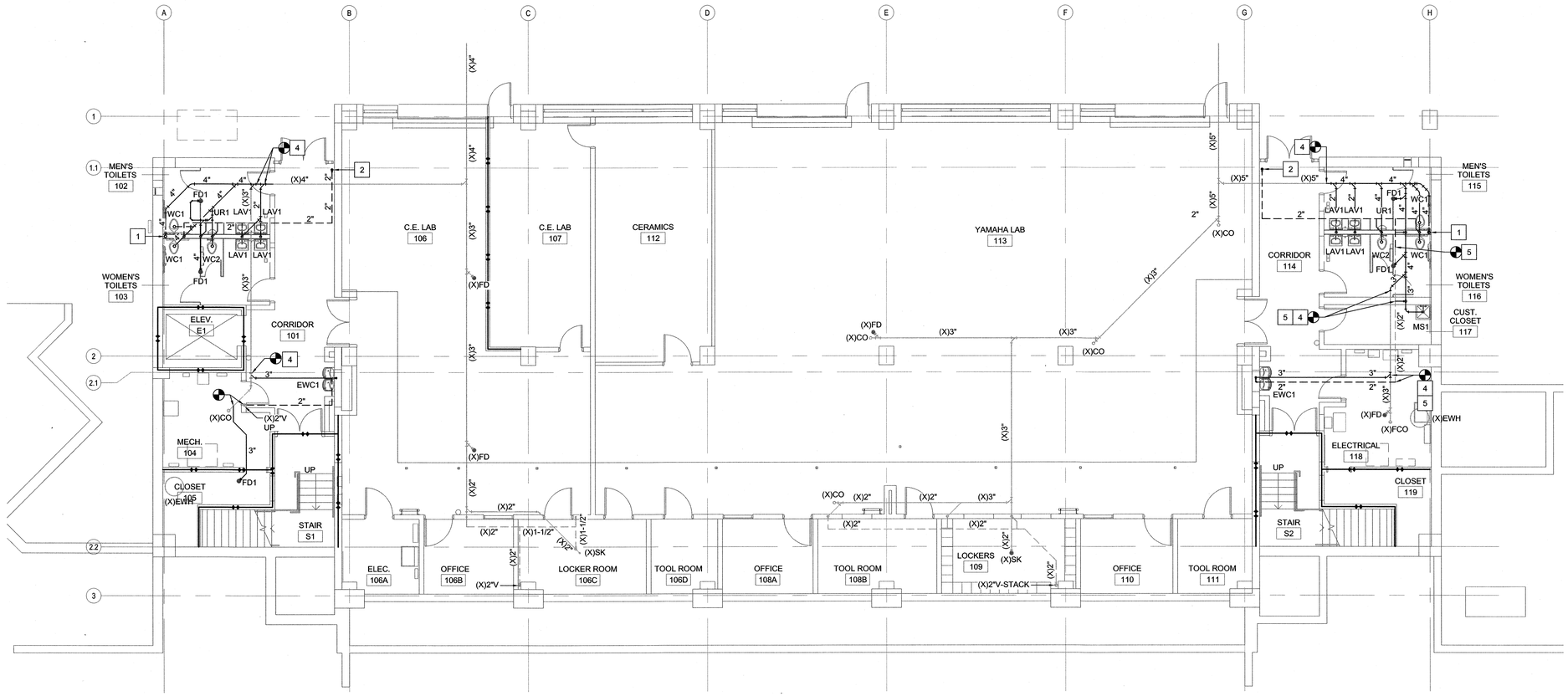
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

PD204

COPYRIGHT © 2020

KEYED NOTES

1. 4" WASTE STACK, WCO
2. 3" VENT STACK
3. NOT USED.
4. CONNECT NEW WASTE TO (X) WASTE BELOW SLAB. TRENCH AS REQUIRED. COORDINATE WITH G.C. FOR CUT/PATCH.
5. CONNECT NEW VENT PIPING TO (X) VENT PIPING.



1 **FIRST FLOOR PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
FIRST FLOOR
WASTE-VENT PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

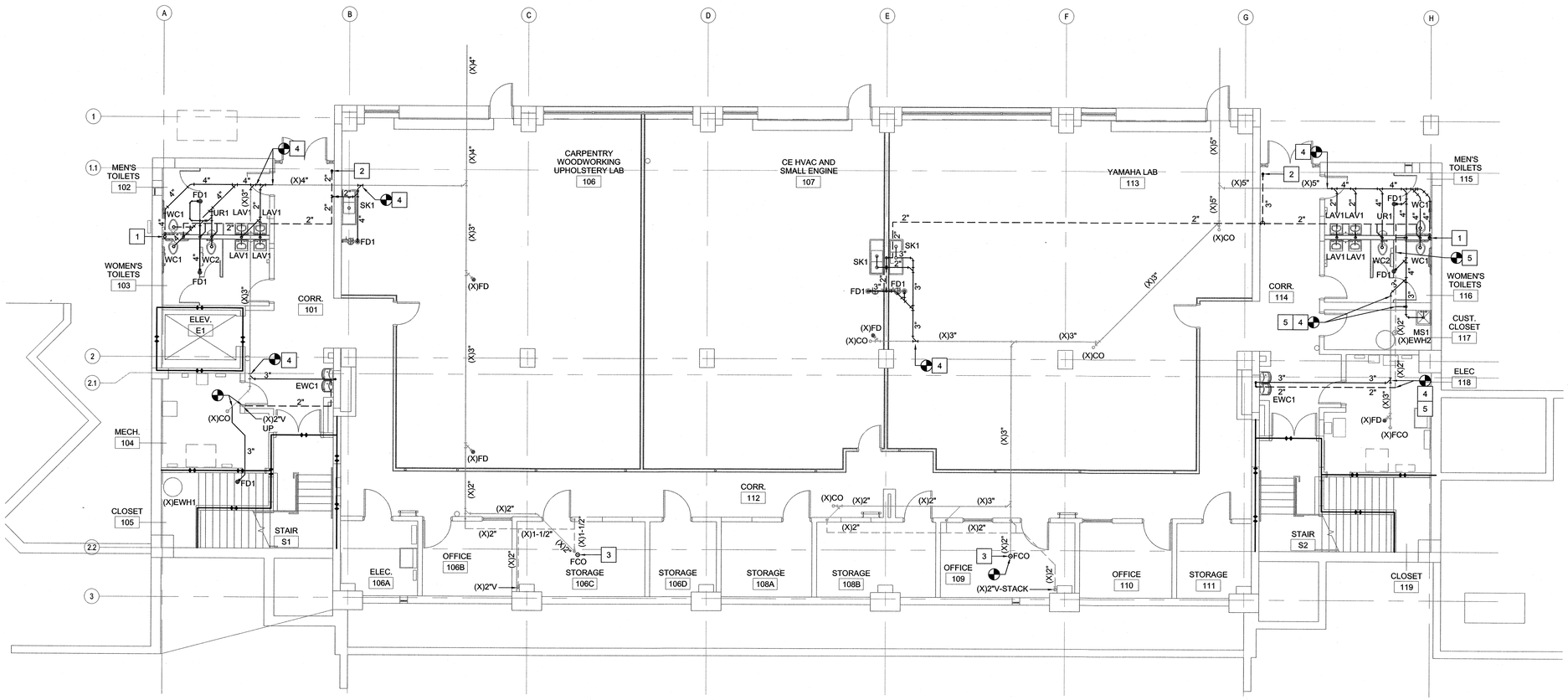
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-101

COPYRIGHT © 2020

KEYED NOTES

1. 4" WASTE STACK, WCO
2. 3" VENT STACK
3. INSTALL NEW FCO
4. CONNECT NEW WASTE TO (X) WASTE BELOW SLAB. TRENCH AS REQUIRED. COORDINATE WITH G.C. FOR CUT/PATCH.
5. CONNECT NEW VENT PIPING TO (X) VENT PIPING.



1 **ALTERNATE 1/1A FIRST FLOOR PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10592 JAMES B. SEAGRAVE III 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
FIRST FLOOR
ALTERNATE 1/1A
WASTE-VENT PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

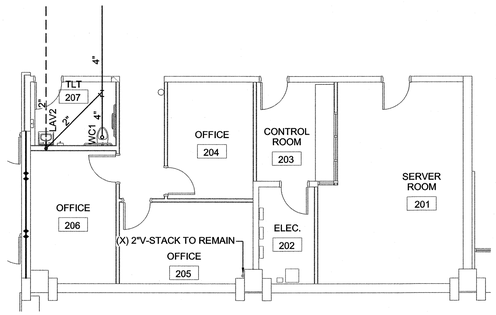
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-101A

COPYRIGHT © 2020

KEYED NOTES

1. 4" WASTE DOWN TO FLOOR BELOW
2. 4" WASTE STACK. INSTALL WCO
3. 3" VENT STACK
4. 2" WASTE DOWN TO BELOW FLOOR. 2" VENT UP TO ABOVE CEILING
5. 2" WASTE-VENT STACK
6. (ALT. 2 ONLY). 4" WASTE PIPING CONTINUES AFTER FITTING. SEE ALTERNATE BID 2 PLAN FOR CONTINUATION.
7. (ALT. 2 ONLY) 2" VENT PIPING. SEE ALTERNATE 2 BID PLAN FOR CONTINUATION.

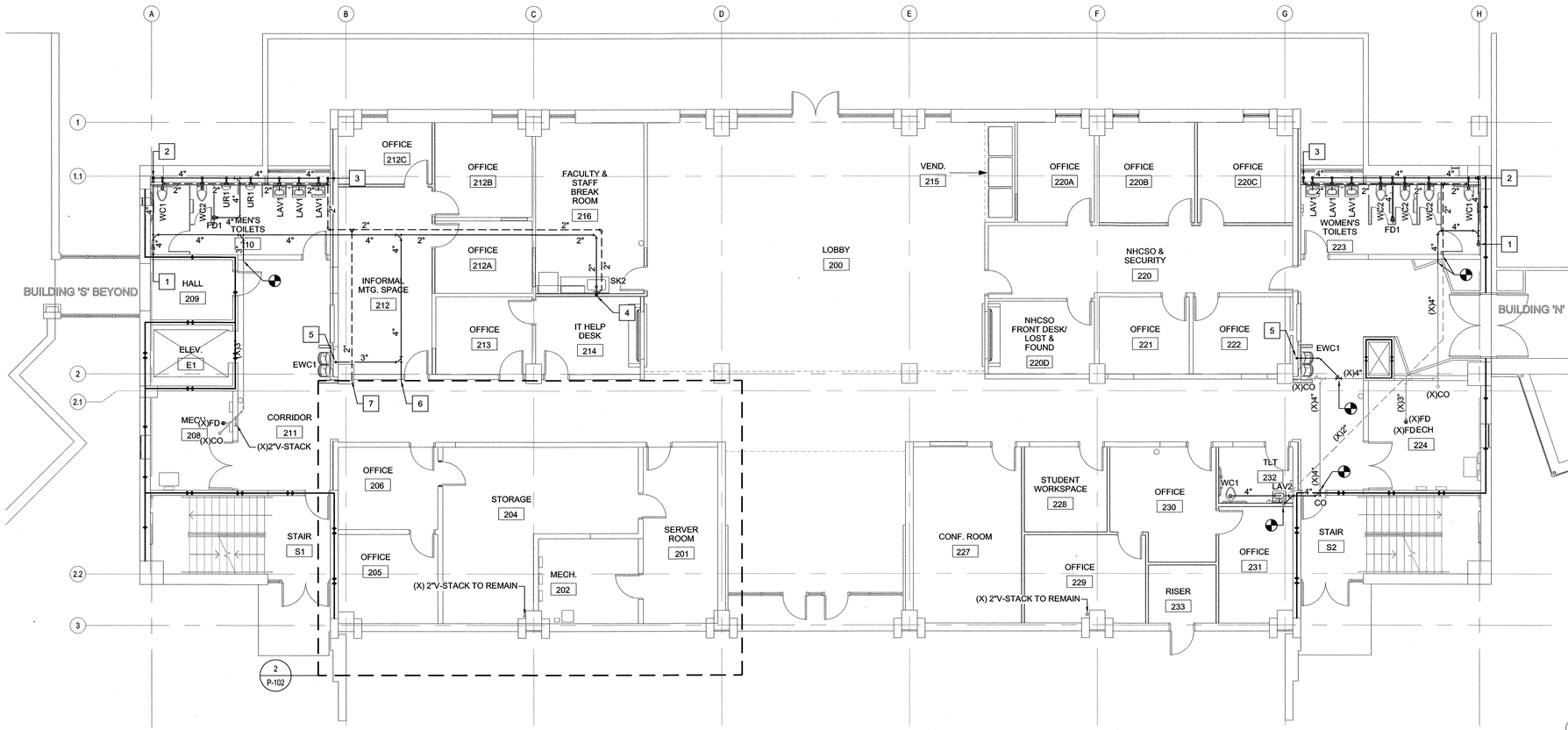


PLAN NORTH

2 ALTERNATE 2 SECOND FLOOR PARTIAL PLAN

1/8" = 1'-0"

0 4' 8' 16'



PLAN NORTH

1 SECOND FLOOR PLAN

1/8" = 1'-0"

0 4' 8' 16'

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BEASLEY III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
SECOND FLOOR
WASTE-VENT PLAN
AND ALTERNATE 2
WASTE-VENT
PARTIAL PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

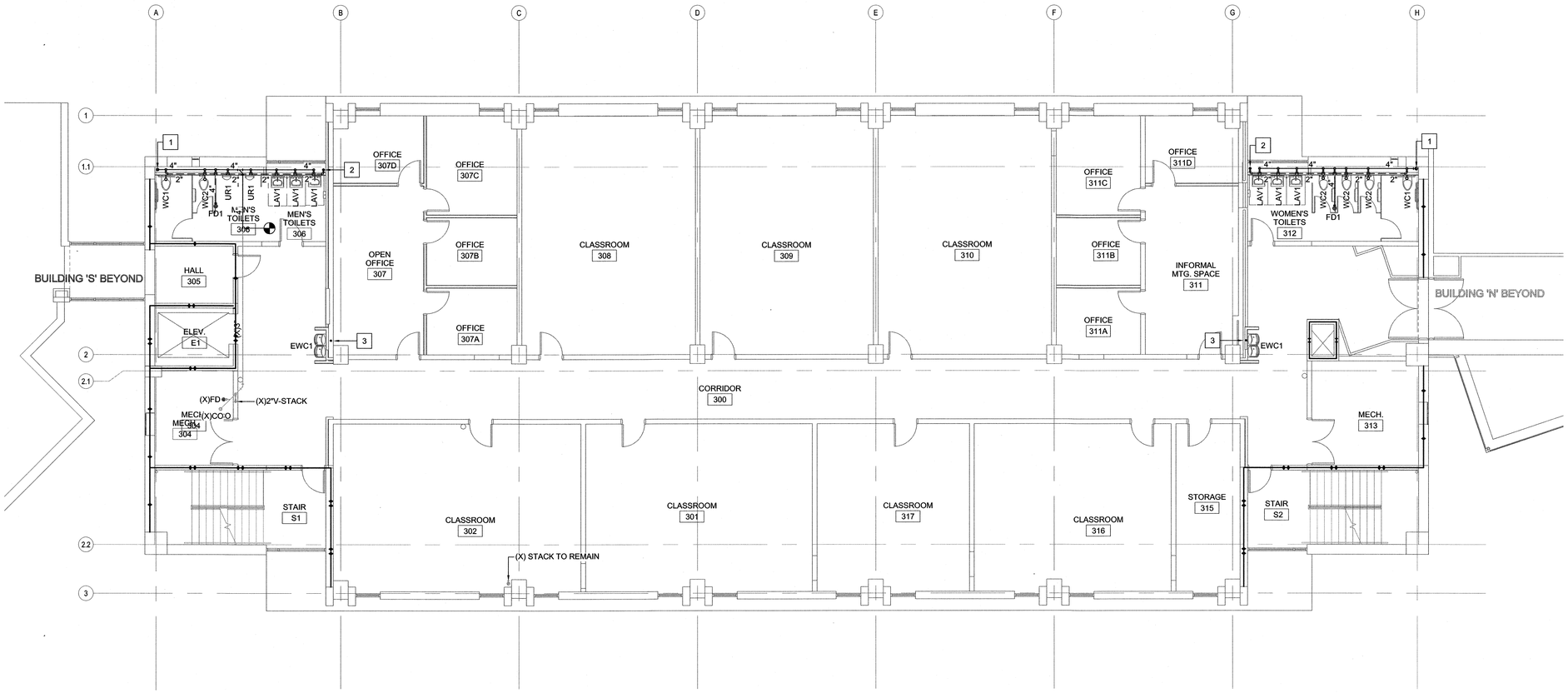
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-102

COPYRIGHT © 2020

KEYED NOTES

1. 4" WASTE STACK
2. 3" VENT STACK
3. 2" WASTE-VENT STACK



1 **THIRD FLOOR PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BOGGS III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
THIRD FLOOR
WASTE-VENT PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

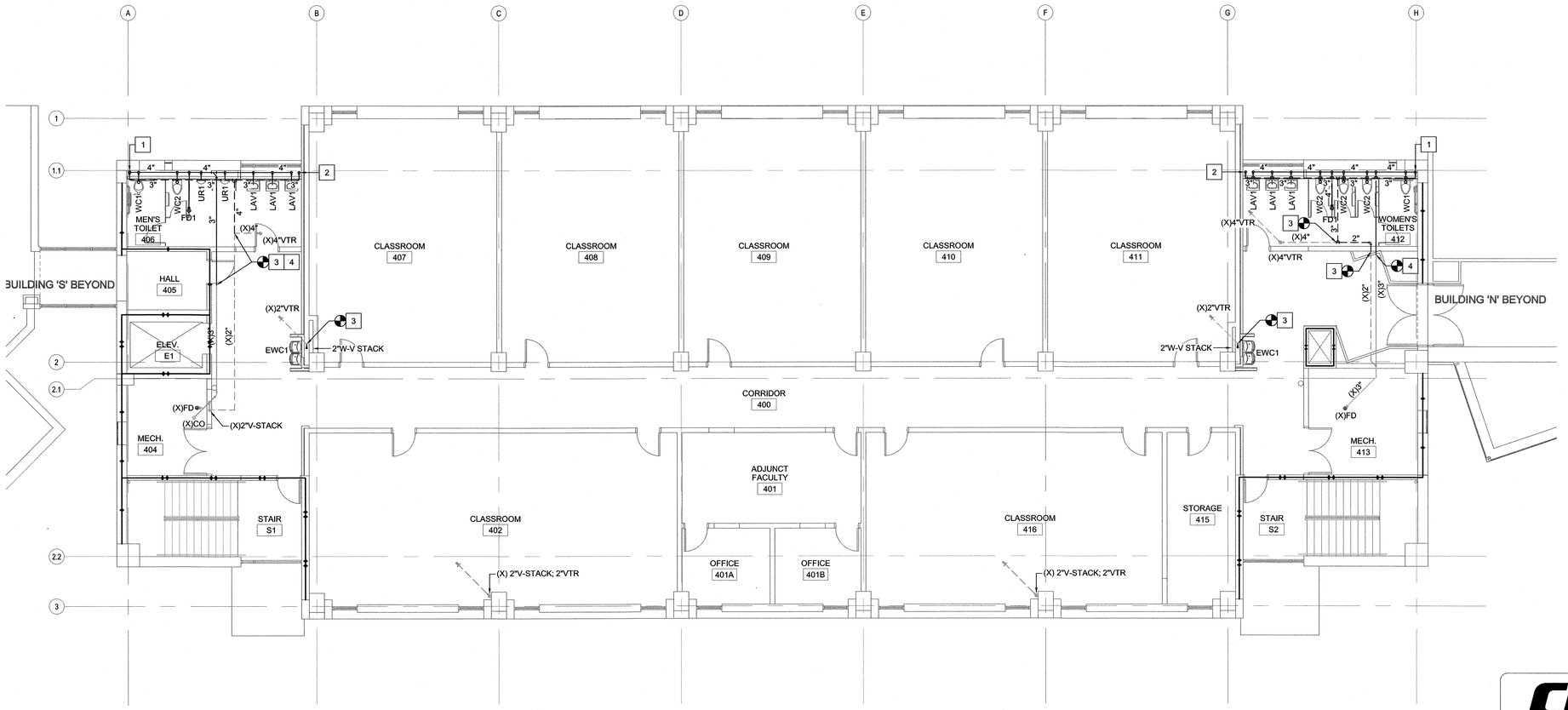
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-103

COPYRIGHT © 2020

KEYED NOTES

1. 4" WASTE STACK, 4" STACK VENT
2. 3" VENT STACK
3. CONNECT NEW VENT PIPING TO (X) VENT PIPING
4. CONNECT NEW WASTE PIPING TO (X) WASTE PIPING.



PLAN NORTH

1 **FOURTH FLOOR PLAN**

1/8" = 1'-0" 0 4' 8' 16'

FIRE WALL LEGEND

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENDERSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
FOURTH FLOOR
WASTE-VENT PLAN

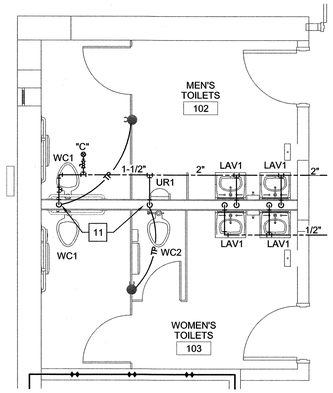
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

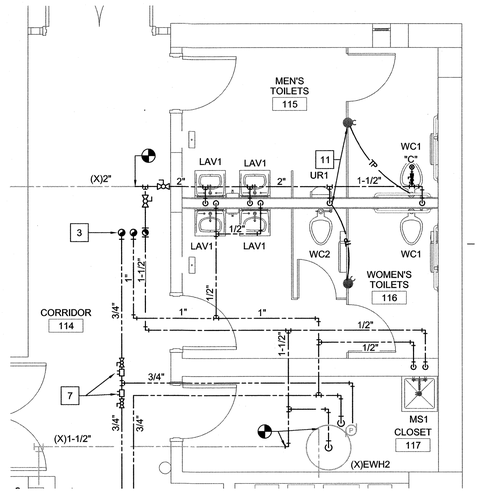
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-104

COPYRIGHT © 2020



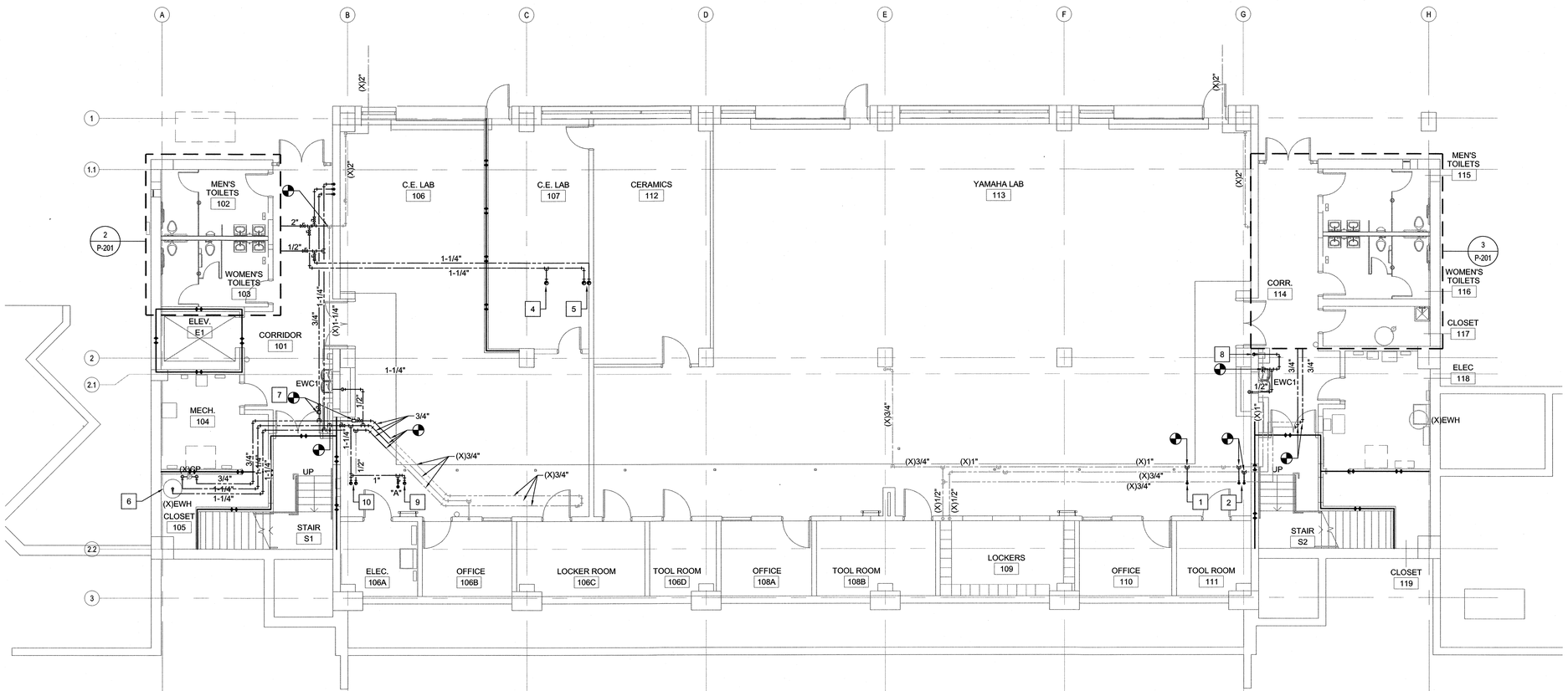
2 ENLARGED TOILET PLAN
1/4" = 1'-0"
PLAN NORTH



3 ENLARGED TOILET PLAN
1/4" = 1'-0"
PLAN NORTH

KEYED NOTES

1	1" DCW UP TO WC1 ABOVE
2	1/2" DCW AND DHW UP TO LAV2 ABOVE.
3	2" DCW STACK; 1" DHW STACK; 3/4" DHWR STACK
4	1/2" DCW UP TO OB1 ABOVE.
5	1/2" DCW AND DHW UP TO SINK SK2 ABOVE
6	RELOCATE (X) WATER HEATER TO LOCATION SHOWN. SEE DETAIL 4/P-501.
7	INSTALL NEW CIRCUIT SETTER BALANCING VALVES WITH ISOLATION VALVES.
8	1/2" DCW UP TO EWC1 ON FLOOR ABOVE.
9	(ALTERNATE 2 BID ONLY) 1" DCW UP TO WC1 ABOVE
10	(ALTERNATE 2 BID ONLY) 1/2" DCW AND DHW UP TO LAV2 ABOVE.
11	FLOOR DRAIN TRAP PRIMER. SEE DETAIL 2/M-501.



1 FIRST FLOOR PLAN
1/8" = 1'-0"
PLAN NORTH

FIRE WALL LEGEND

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 16532 ENGINEER JAMES R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
FIRST FLOOR
DOMESTIC WATER PLAN

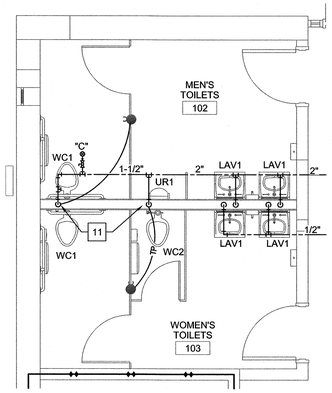
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

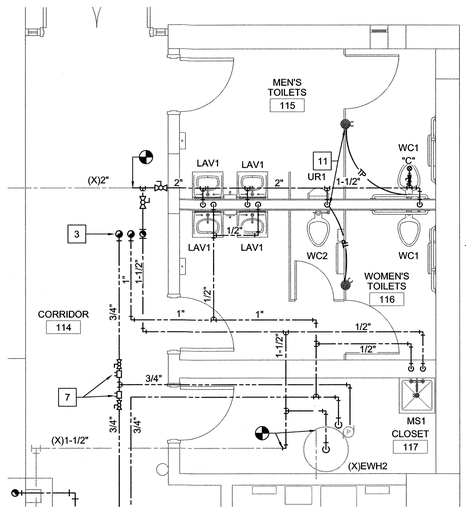
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-201

COPYRIGHT © 2020

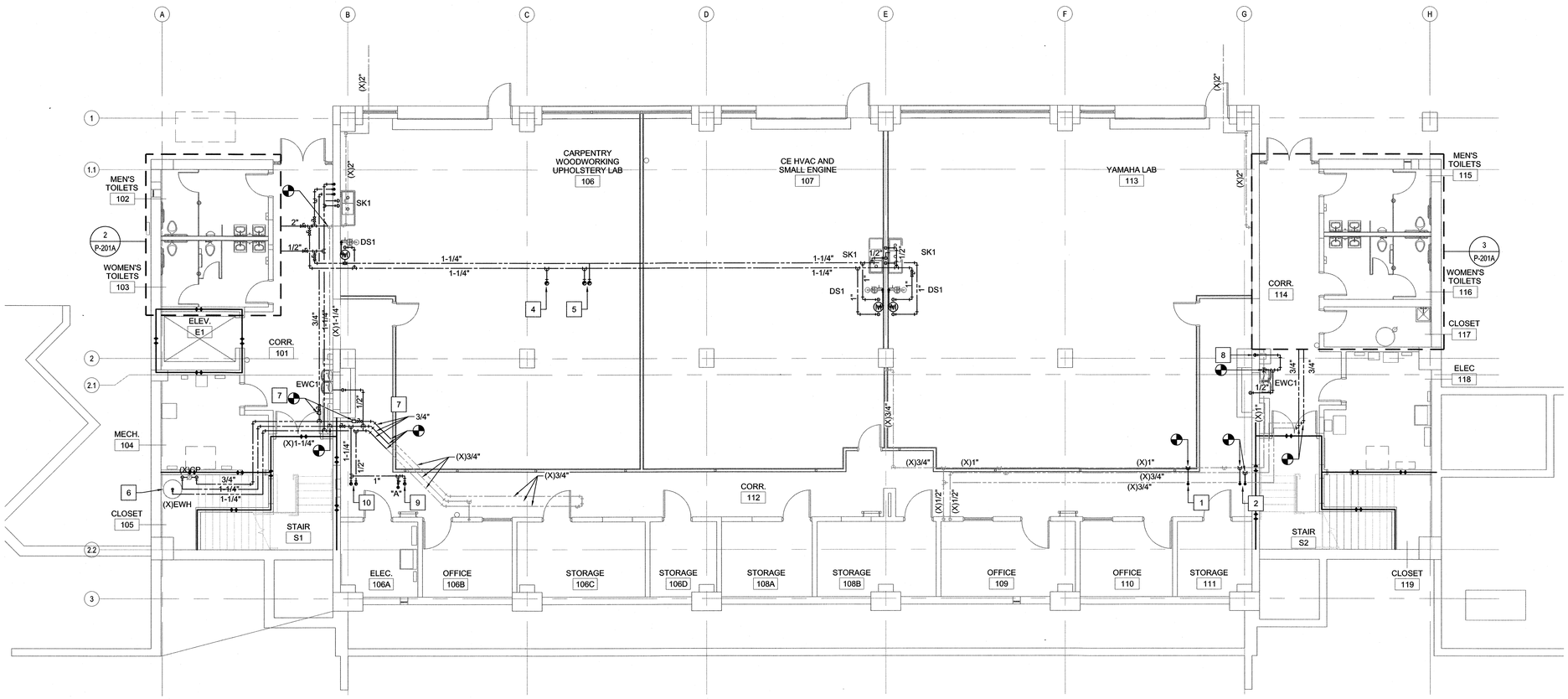


2 **ALTERNATE 1/1A ENLARGED TOILET PLAN**
1/4" = 1'-0"



3 **ALTERNATE 1/1A ENLARGED TOILET PLAN**
1/4" = 1'-0"

PLAN NORTH



1 **ALTERNATE 1/1A FIRST FLOOR PLAN**
1/8" = 1'-0"

PLAN NORTH

KEYED NOTES

1	1" DCW UP TO WC1 ABOVE
2	1/2" DCW AND DHW UP TO LAV2 ABOVE.
3	2" DCW STACK; 1" DHW STACK; 3/4" DHWR STACK
4	1/2" DCW UP TO OB1 ABOVE.
5	1/2" DCW AND DHW UP TO SINK SK2 ABOVE
6	RELOCATE (X) WATER HEATER TO LOCATION SHOWN. SEE DETAIL 4/P-501.
7	INSTALL NEW CIRCUIT SETTER BALANCING VALVES WITH ISOLATION VALVES.
8	1/2" DCW UP TO EWC1 ON FLOOR ABOVE.
9	(ALT. 2 BID ONLY) 1" DCW UP TO WC1 ABOVE
10	(ALT. 2 BID ONLY) 1/2" DCW AND DHW UP TO LAV2 ABOVE.

FIRE WALL LEGEND

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10598 ENGINEER JAMES R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
FIRST FLOOR
ALTERNATE 1/1A
DOMESTIC WATER PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

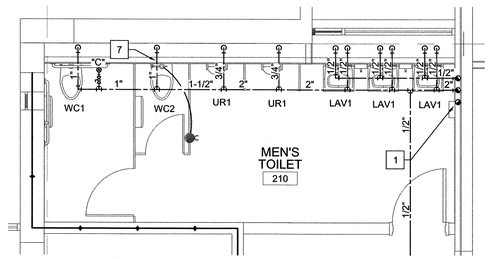
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-201A

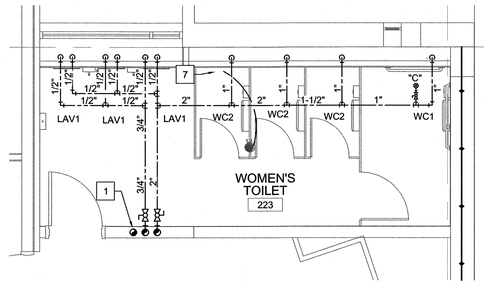
COPYRIGHT © 2020

KEYED NOTES

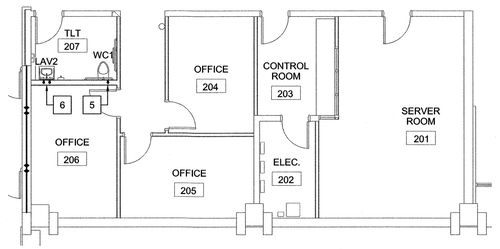
1. 2" DCW STACK, 1" DHW STACK, 3/4" DHWR STACK
2. 1" DCW FROM BELOW.
3. 1/2" DCW & DHW FROM BELOW.
4. 1/2" DCW FROM BELOW.
5. (ALT. 2 ONLY) 1" DCW FROM BELOW.
6. (ALT. 2 ONLY) 1/2" DCW & DHW FROM BELOW.
7. FLOOR DRAIN TRAP PRIMER. SEE DETAIL 2/M-501.



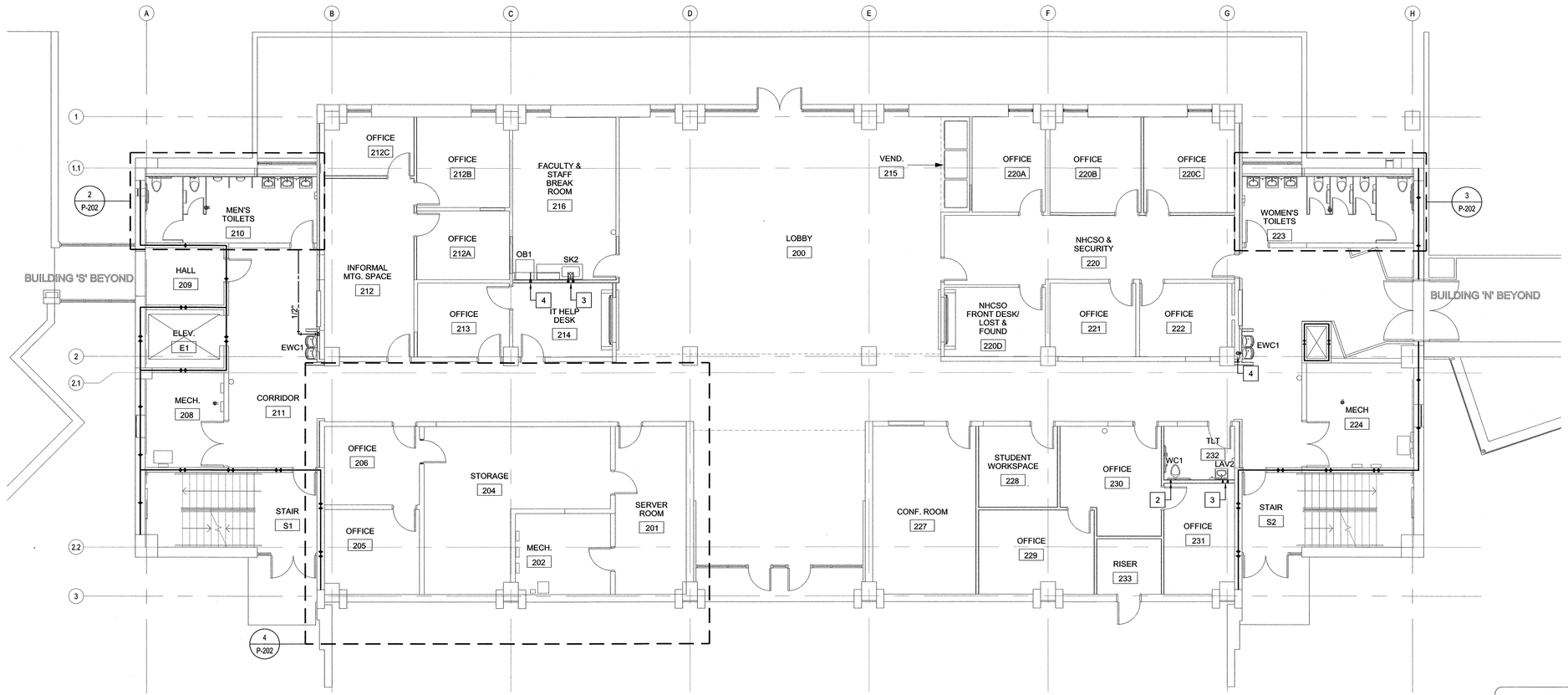
2 ENLARGED TOILET PLAN — 1/4" = 1'-0" — PLAN NORTH



3 ENLARGED TOILET PLAN — 1/4" = 1'-0" — PLAN NORTH



4 ALTERNATE 2 SECOND FLOOR PARTIAL PLAN — 1/8" = 1'-0" — PLAN NORTH



1 SECOND FLOOR PLAN — 1/8" = 1'-0" — PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENGE III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
SECOND FLOOR
DOMESTIC WATER PLAN
AND ALTERNATE 2
DOMESTIC WATER
PARTIAL PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

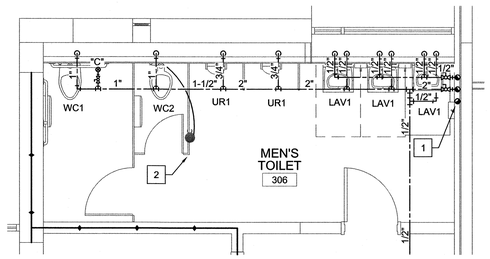
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-202

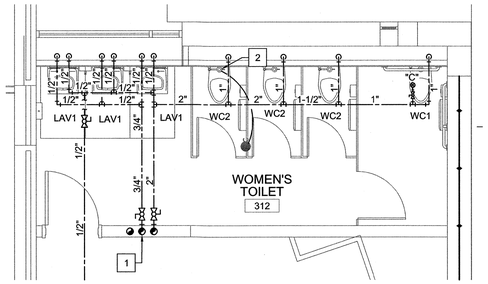
COPYRIGHT © 2020

KEYED NOTES

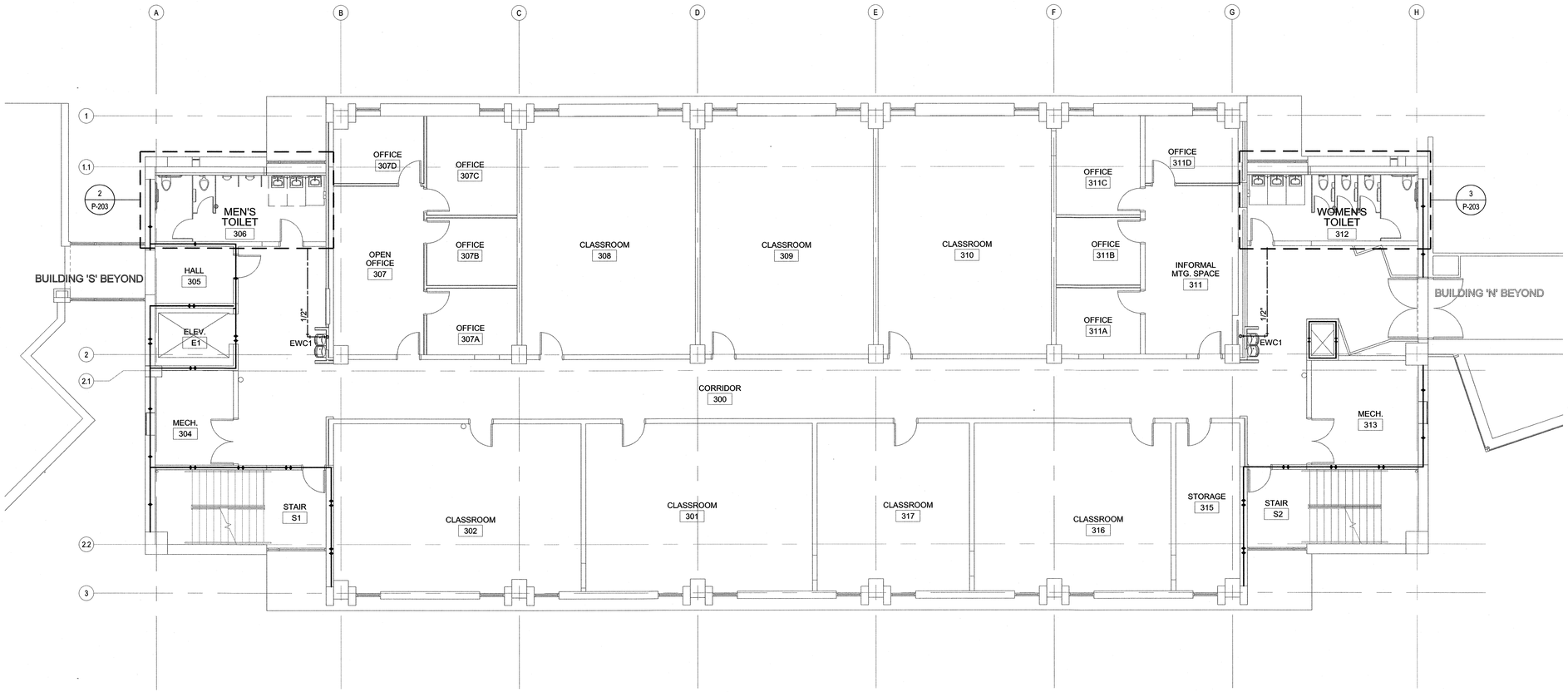
1. 2" DCW STACK, 1" DHW STACK, 3/4" DHWR STACK
2. FLOOR DRAIN TRAP PRIMER. SEE DETAIL 2/M-501.



2 ENLARGED TOILET PLAN
1/4" = 1'-0"
PLAN NORTH



3 ENLARGED TOILET PLAN
1/4" = 1'-0"
PLAN NORTH



1 THIRD FLOOR PLAN
1/8" = 1'-0"
PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BERGEN, III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
THIRD FLOOR
DOMESTIC WATER PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

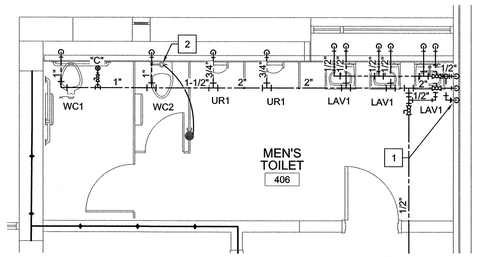
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-203

COPYRIGHT © 2020

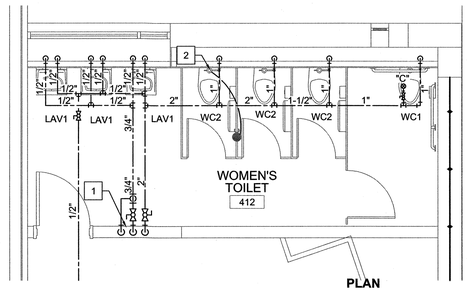
KEYED NOTES

1. 2" DCW STACK, 1" DHW STACK, 3/4" DHWR STACK
2. FLOOR DRAIN TRAP PRIMER. SEE DETAIL 2/M-501.



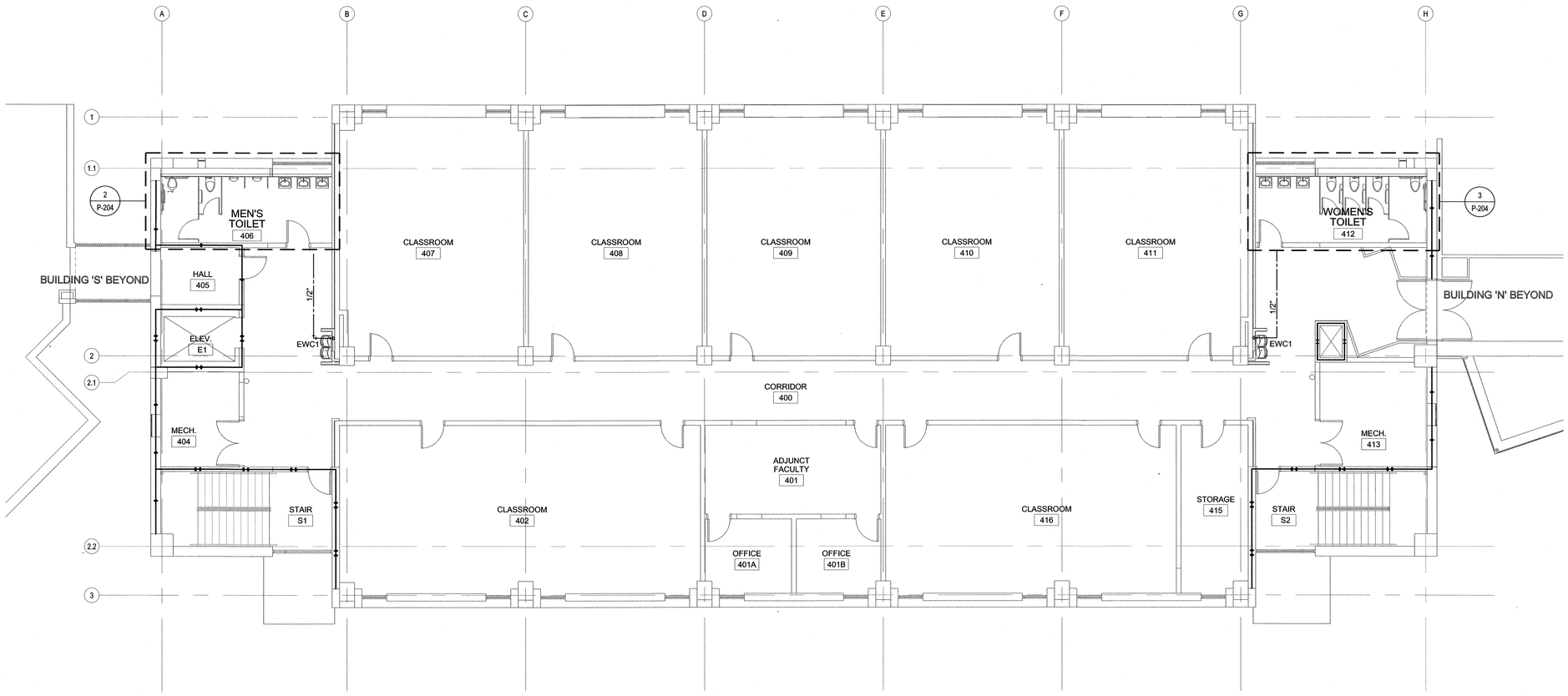
2 ENLARGED TOILET PLAN
1/4" = 1'-0"

PLAN NORTH



3 ENLARGED TOILET PLAN
1/4" = 1'-0"

PLAN NORTH



1 FOURTH FLOOR PLAN
1/8" = 1'-0"

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
FOURTH FLOOR
DOMESTIC WATER PLAN

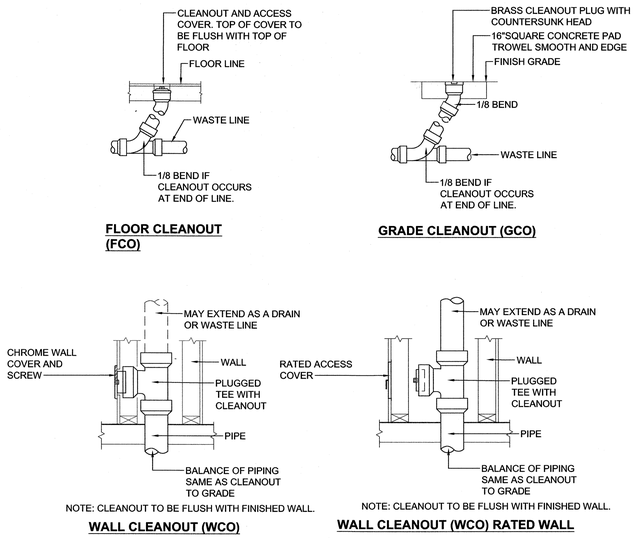
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

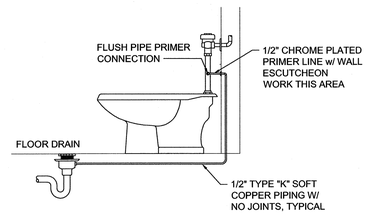
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-204

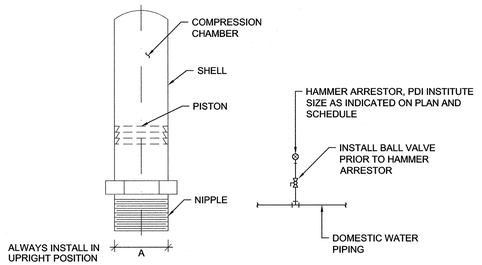
COPYRIGHT © 2020



1 CLEANOUT DETAILS
NOT TO SCALE

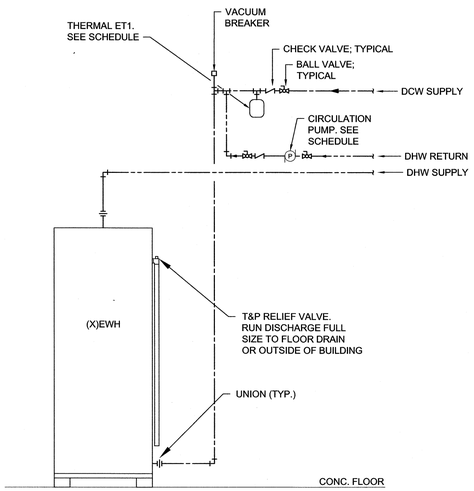


2 TRAP PRIMER DETAIL FLUSH VALVE
NOT TO SCALE

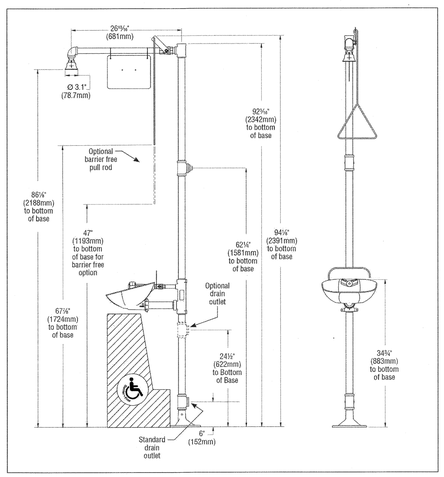


P.D.I. SYMBOL	FIXTURE UNIT RATING	A SIZE
A	1-11	1/2
B	12-32	3/4
C	33-60	1
D	61-113	1 1/4
E	114-154	1 1/2
F	155-330	2

3 HAMMER ARRESTOR DETAIL
NOT TO SCALE



4 WATER HEATER DETAIL
NOT TO SCALE



5 SAFETY SHOWER DETAIL
NOT TO SCALE

FIRE WALL LEGEND

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENNETT
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-501

COPYRIGHT © 2020

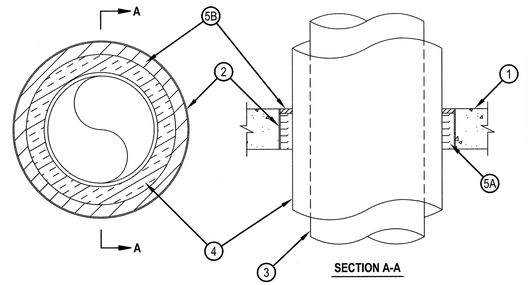
CLASSIFIED C UL US

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. C-AJ-5091

CAJ 5091

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Ratings — 0 and 1 Hr (See Items 2 and 4)	FT Ratings — 0 and 1 Hr (See Items 2 and 4)
L Rating At Ambient — 4 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F — Less Than 1 CFM/sq ft	FTH Ratings — 0 and 1 Hr (See Items 2 and 4)
	L Rating At Ambient —4 CFM/sq ft
	L Rating At 400 F —Less Than 1 CFM/sq ft



SECTION A-A

1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 29 in. (737 mm).
   See Concrete Blocks (CAZT) category in the Fire Resistance directory for names of manufacturers.
2. Metallic Sleeve — (Optional) — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces or extending a max of 3 in. (76 mm) above floor or beyond both surfaces of wall. If the steel sleeve extends beyond the top surface of the floor or both surfaces of the wall, the T Rating of the firestop system is 0 hr.

2A. Sheet Metal Sleeve — (Optional) - Max 6 in. (152 mm) diam, min 26 ga galv steel provided with a 26 ga galv steel square flange spot welded to the sleeve at approximately mid- height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place flush with bottom surface of floor and may extend a max of 1 in. (25 mm) above the top surface of the floor.

2B. Sheet Metal Sleeve — (Optional) - Max 12 in. (305 mm) diam, min 24 ga galv steel provided with a 24 ga galv steel square flange spot welded to the sleeve at approximately mid- height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place flush with bottom surface of floor and may extend a max of 1 in. (25 mm) above the top surface of the floor.

HILTI Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 13, 2015

System No. C-AJ-5091

CAJ 5091

3. Through Penetrants — One metallic pipe or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubing may be used:
   A. Steel Pipe — Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe.
   C. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
   D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
4. Pipe Covering — Min 1/2 in. (13 mm) to max 2 in. (51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m³) glass fiber units jacketed on the outside with an all-service jacket. Longitudinal joints sealed with metal fasteners or factory-applied, self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space between the insulated pipe and the edge of the periphery of the opening shall be min 1/2 in. (13 mm) to max 12 in. (305 mm). When thickness of pipe covering is less than 2 in. (51 mm), the T Rating for the firestop system is 0 hr.
   See Pipe Equipment Covering — Materials — (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

4A. Pipe Covering — (Not Shown) — As an alternate to Item 4, max 2 in. (51 mm) thick cylindrical calcium silicate (min 14 pcf or 224 kg/m³) units sized to the outside diam of the pipe or tube may be used. Pipe insulation secured with stainless steel bands or min 18 AWG stainless steel wire spaced max 12 in. (305 mm) OC. The annular space shall be min 1/2 in. (13 mm) to max 12 in. (305 mm).

5. Firestop System — The firestop system shall consist of the following:
   A. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material* — Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 13, 2015

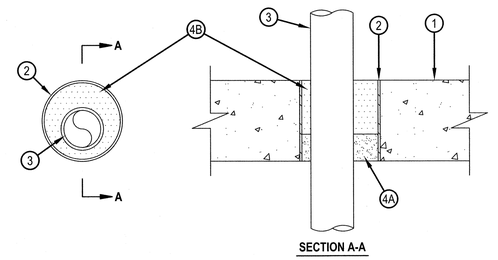
CLASSIFIED UL

Classified by Underwriters Laboratories, Inc. to UL 1479

System No. C-AJ-2169

F Rating — 2 Hr
T Rating — 0 Hr

CAJ 2169



SECTION A-A

1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete floor. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 4 in. (102mm).
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Metallic Sleeve — (Optional) — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces.
3. Through Penetrants — One nonmetallic pipe or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe or conduit and the periphery of the opening shall be a min of 1/2 in. (13 mm) to max 1-3/8 in. (35 mm). Pipe or conduit to be rigidly supported on both sides of floor or wall. The following types and sizes of pipes or conduits may be used:
   A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste, or vent) piping systems.
   B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) SDR 17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   C. Rigid Nonmetallic Conduit+ — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code, (NFPA No. 70).
4. Firestop System — The firestop system shall consist of the following:
   A. Forming Material* — Min 1-1/2 in. (38 mm) thickness foamed into opening as a permanent form. Forming material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CF812 or CF-AS-CJP Foam Sealant
   B. Fill, Void or Cavity Material* — Sealant — Min 3 in. (76 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant\

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 09, 2015

NOTE: PENETRATION DETAILS INDICATED ARE FOR GENERAL REFERENCE ONLY. ALTERNATE LISTED PROTECTION METHODS SUITABLE FOR REQUIRED RATINGS ARE ACCEPATABLE.

FIRE WALL LEGEND

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
© Copyright 2020 CBHF Engineers, PLLC NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 16592 ENGINEER JAMES R. BENSON III 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING
U.L. DETAILS

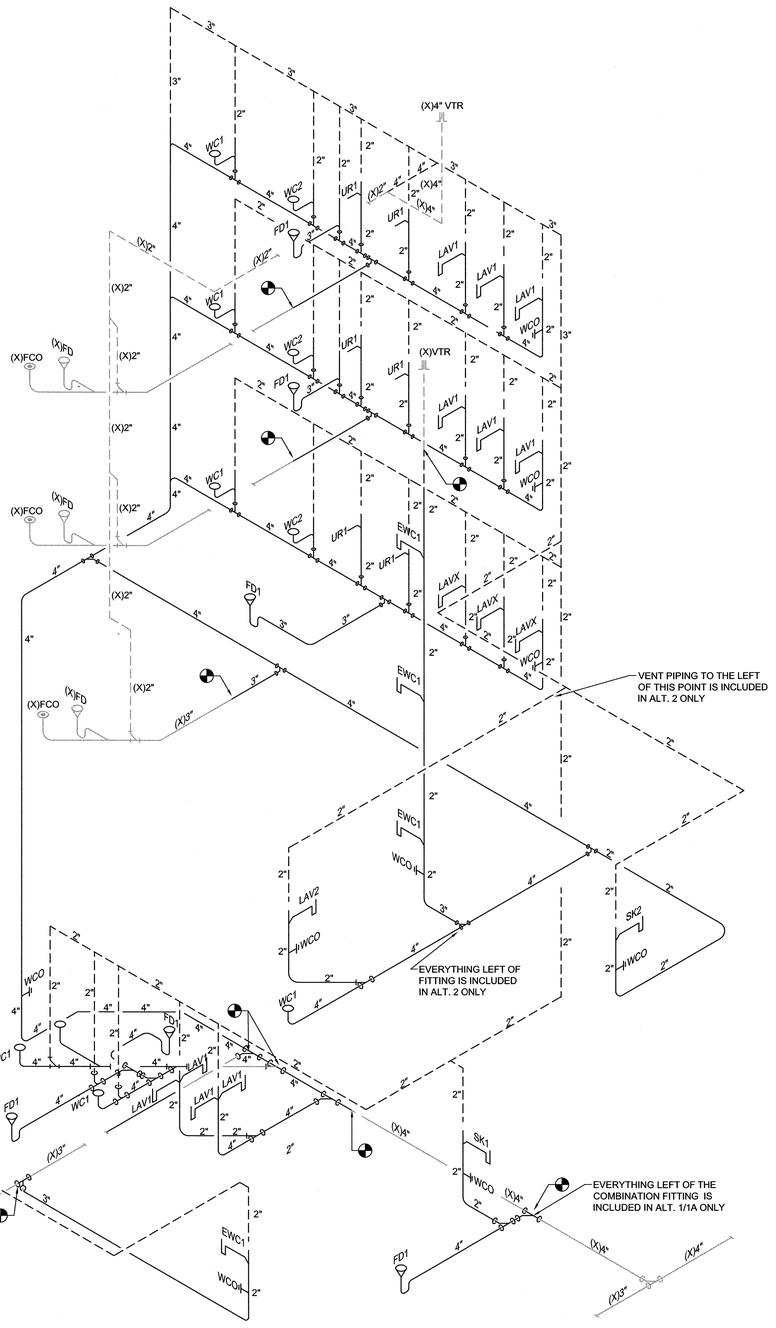
ISSUE BLOCK

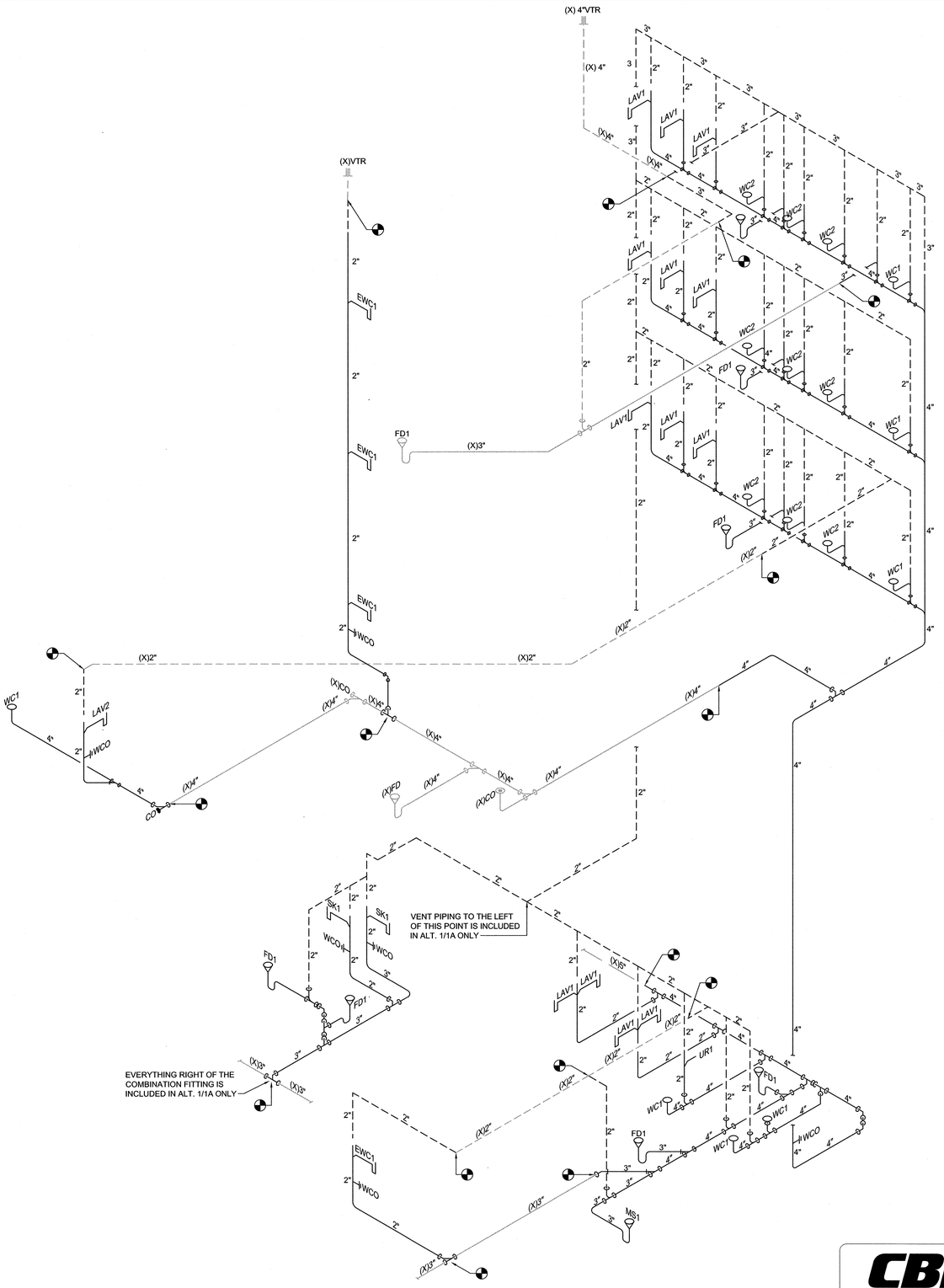
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-502

COPYRIGHT © 2020





FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER CHRISTOPHER R. BENSON
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING RISER DIAGRAMS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-503

COPYRIGHT © 2020

PLUMBING FIXTURE SCHEDULE

DRAWING CODE	FIXTURE		DESCRIPTION	MANUFACTURER	MODEL	ALTERNATE APPROVED MANUFACTURERS	NOTES	PIPE SIZE			
								DCW	DHW	WASTE	VENT
WC1	FLUSH VALVE WATER CLOSET, FLOOR MTD., 1.28GPF, ADA	BOWL	16.5" HIGH BOWL, ELONGATED, V.C., 2-1/8" TRAPWAY; TOP SPUD; MADERA	AMERICAN STANDARD	3043.001	ZURN, SLOAN	6	1"	-	4"	2"
		FLUSH VALVE	11.5" HIGH, 1.28GPF, TRAP PRIMER CONNECTION WHERE REQUIRED	SLOAN	111-1.28 YBYC	ZURN, MOEN					
		SEAT	OFLC w/ SELF-SUSTAINING S.S. CHECK HINGE; HEIGHT 17-19" AFF	OLSONITE	95C	BEMIS, CHURCH					
WC2	FLUSH VALVE WATER CLOSET, FLOOR MTD, 1.28GPF	BOWL	15" HIGH BOWL, ELONGATED, V.C., 2-1/8" TRAPWAY; TOP SPUD; MADERA	AMERICAN STANDARD	2234.001	ZURN, SLOAN		1"	-	4"	2"
		FLUSH VALVE	16" HIGH, 1.28GPF, TRAP PRIMER CONNECTION WHERE REQUIRED	SLOAN	113-1.28 YBYC	ZURN, MOEN					
		SEAT	OFLC w/ SELF-SUSTAINING S.S. CHECK HINGE	OLSONITE	95C	BEMIS, CHURCH					
UR1	URINAL WALL HUNG, 0.125GPF, ADA	BOWL	VITREOUS CHINA, WASHOUT, ELONGATED RIM MTD. 17 A.F.F. MAX., 3/4"TOP SPUD	AMERICAN STANDARD	6590.001	ZURN, SLOAN	1	3/4"	-	2"	2"
		FLUSH VALVE	11.5 HIGH	SLOAN	186-0.125-YBYC	ZURN, TEC					
LAV1	LAVATORY WALL HUNG, METERING, ADA	BOWL	20x18 VITREOUS CHINA, RIM 34" AFF MAX.	AMERICAN STANDARD	0355.012	ZURN, CRANE	1,2,3,9,	1/2"	1/2"	2"	2"
		FAUCET	4" CENTERSET, HOT-COLD, METERING, VANDAL RESISTANT	MOEN	8886	SYMMONS, DELTA					
		DRAIN	GRID STRAINER	MCGUIRE	155A	DEARBORN, DELTA					
		MIXING VALVE	LEAD FREE THERMOSTATIC MIXING VALVE - SETPOINT = 90°F INSTALL ON HOT WATER SUPPLY, ASSE 1070	CASH ACME	HG-135	LEONARD, WATTS					
LAV2	LAVATORY WALL HUNG, ADA	BOWL	20x18 VITREOUS CHINA, RIM 34" AFF MAX.	AMERICAN STANDARD	0355.012	ZURN, CRANE	1,2,3,9,	1/2"	1/2"	2"	2"
		FAUCET	4" CENTERSET, SINGLE LEVER HANDLE, SOLID BRASS CONSTRUCTION, CERAMIC CARTRIDGE, HIGH TEMP LIMIT STOP	MOEN	8413F05	ZURN, DELTA					
		DRAIN	GRID STRAINER	MCGUIRE	155A	DEARBORN, DELTA					
		MIXING VALVE	LEAD FREE THERMOSTATIC MIXING VALVE - SETPOINT = 90°F INSTALL ON HOT WATER SUPPLY, ASSE 1070	CASH ACME	HG-135	LEONARD, WATTS					
ET1	THERMAL EXPANSION TANK	ACCESS.	10 GALLON BUTYL DIAPHRAGM EXPANSION TANK	STATE	ETC-10X	AMTROL, AO SMITH		3/4"	-	-	-
EWC1	WALL HUNG WATER COOLER, ADA	FIXT	SPLIT LEVEL, S.S. TOP, LIGHT GREY BODY, BOTTLE FILLING STATION, 8 GPH @ 50/80/90, 120V/1PH, NON-FILTERED	ELKAY	EEZSTL8WSLK	HALSEY TAYLOR, OASIS	1,11	1/2"	-	2"	2"
FCO	FLOOR CLEANOUT	FIXT	C.I. BODY, 6-1/2"TOPS, ADJUSTABLE, SCORIATED, NICKEL BRONZE TOP	SIOUX CHIEF	834	ZURN, SMITH		-	-	MATCH	-
WCO	WALL CLEANOUT	FIXT	ROUND S/S ACCESS COVER & SCREW, RECESS BRONZE THRD. PLUG	SIOUX CHIEF	870	ZURN, SMITH		-	-	MATCH	-
FD1	FLOOR DRAIN	FIXT	FINISHLINE ADJUSTABLE, SCH. 40 HUB CONNECTION, ABS/PVC BASE ADAPTOR, ROUND NICKLE BRONZE STRAINER,TRAP PRIMER CONNECTION	SIOUX CHIEF	832	ZURN, SMITH	7	-	-	MATCH	-
SK1	2-COMPARTMENT SINK	BOWL	16 GA. STAINLESS, 14" DEEP TUB, DRAINBOARD, 9" BACKSPLASH, BASKET STRAINER	ELKAY	14-2C16X20-R-18X	ADVANCE TABCO, REGENCY	2,9	1/2"	1/2"	2"	2"
		FAUCET	WALL MOUNT, 180° SWING SPOUT, TWO LEVER, SOLID BRASS CONSTRUCTION, ROUGH CHROME FINISH	MOEN	8119	DELTA, ZURN					
SK2	1-COMPARTMENT COUNTERTOP SINK, 8" DEEP	BOWL	25x22x8, 18 GA S.S.	ELKAY	LR2522	JUST, ACORN	2,4,5,9,	1/2"	1/2"	2"	2"
		FAUCET	180° SWING SPOUT, SINGLE LEVER HANDLE, 3 HOLE, 1.5GPM, SOLID BRASS CONSTRUCTION, CHROME FINISH	MOEN	8701	DELTA, ZURN					
		DRAIN	GRID STRAINER	ELKAY	LK18	ZURN, MOEN					
DS1	COMBINATION EYE/FACE WASH DRENCH SHOWER	FIXT	GALVANIZED STEEL PIPE WITH SAFETY YELLOW COATING, STAY OPEN BALL VALVE, SHOWER MIN. 20GPM@30PSI; EYE/FACE WASH MIN. 3.0GPM@30PSI; PLASTIC SHOWER HEAD, STAINLESS BOWL W/ DUST COVER, BARRIER FREE	BRADLEY	S19314DCBF	GUARDIAN, ACORN	8	1/2"	1/2"	-	-
EW1	WALL MOUNT EYEWASH	FIXT	WALL MOUNT, PLASTIC BOWL, BARRIER FREE	BRADLEY	S19224EW	GUARDIAN, ACORN	10				
(X)EWH1	(X) ELECTRIC WATER HEATER	FIXT	120 GALLON, 18 KW, 480V/3/60	RHEEM/RUUD	ES120-18-G	-					
(X)EWH2	(X) ELECTRIC WATER HEATER	FIXT	80 GALLON, 6 KW, 480V/3/60	RHEEM/RUUD	ELD80-B	-					
OB1	ICE MAKER BOX	FIXT	ABS HOUSING, 1/4 TURN BALL VALVE, CHROME PLATED BRASS, SHOCK ARRESTORS	SIOUX CHIEF	696	OATEY, IPS		1/2"	-	-	-

NOTES
1. PROVIDE MATCHING CAST IRON AND STEEL FLOOR SUPPORT CARRIER WITH BEARING PLATE AND WALL HANGER.
2. PROVIDE BRASS 1-1/2" TAILPIECE, CAST BRASS SLIP JOINT P-TRAP WITH CLEANOUT; PROVIDE ADA OFFSET ARRANGEMENT WHERE REQUIRED.
3. PROVIDE ADA INSULATION KIT
4. COORDINATE WITH MILLWORK.
5. COORDINATE ADA MILLWORK ENCLOSURE FOR WATER AND DRAIN PIPING UNDER SINK.
6. TRIP LEVER OR FLUSH HANDLE TO BE LOCATED ON WIDE SIDE OF STALL OR TOILET ROOM.
7. PROVIDE TRAP PRIMER
8. PROVIDE AND INSTALL WITH S19-22150 EMERGENCY THERMOSTATIC MIXING VALVE OR EQUAL.
9. PROVIDE 1/2" IPS X 3/8" OD ANGLE BRASS STOP(S) WITH RIGID COPPER RISERS. ALL EXPOSED PIPING SHALL BE CHROME PLATED.
10. PROVIDE AND INSTALL WITH S19-2000 EMERGENCY THERMOSTATIC MIXING VALVE OR EQUAL.

FIRE WALL LEGEND

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

PLUMBING SCHEDULES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: JBS	PROJ MGR: JRB

P-601

COPYRIGHT © 2020

GENERAL NOTES

1. SCOPE OF WORK: THESE DRAWINGS AND SPECIFICATIONS DESCRIBE THE SCOPE OF WORK REQUIRED FOR PROJECT MECHANICAL HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL REQUIRED FOR COMPLETE, FULLY FUNCTIONING MECHANICAL SYSTEMS COMPLYING WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
2. CONTRACTOR: THE WORD "CONTRACTOR" AS USED HEREIN SHALL MEAN THE HVAC INSTALLER UNLESS OTHERWISE QUALIFIED.
3. DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND MAY NOT COMPLETELY DESCRIBE EVERY DETAIL OF THE INSTALLATION. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR FURNISHING COMPLETE SYSTEMS INCLUDING ALL REQUIRED EQUIPMENT AND ACCESSORIES TO OBTAIN FULLY FUNCTIONING HVAC SYSTEMS.
4. CODE COMPLIANCE: COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AND CODES, INSOFAR AS THEY APPLY:
   A. NORTH CAROLINA STATE BUILDING CODE, LATEST EDITION AND REVISIONS
   B. LOCAL JURISDICTION REQUIREMENTS

   INCLUDE ALL WORK TO COMPLY WITH CODES WHETHER INDICATED ON DRAWINGS OR NOT. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND CODES PRIOR TO BEGINNING WORK.
5. PERMITS AND INSPECTIONS: OBTAIN ALL PERMITS, LICENSES, INSPECTIONS, ETC., REQUIRED FOR THE WORK AND PAY FOR SAME. FURNISH A FINAL CERTIFICATE OF INSPECTION AND APPROVAL FROM THE AUTHORITY HAVING JURISDICTION PRIOR TO ACCEPTANCE OF THE WORK.
6. MANUFACTURER'S RECOMMENDATIONS: INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. WORKMANSHIP: UTILIZE SKILLED MECHANICS TO OBTAIN A HIGH QUALITY PROFESSIONAL FINISH INSTALLATION WHEN COMPLETED. WORK OF UNACCEPTABLE QUALITY SHALL BE REMOVED AND REWORKED AT NO ADDITIONAL COST. ENGINEER SHALL BE THE JUDGE OF WORKMANSHIP AND THEIR OPINION WILL BE FINAL. IN ADDITION, ANY EXISTING CONSTRUCTION DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER BY THE CONTRACTOR AT NO ADDITIONAL COST.
8. SUPERVISION: PROVIDE SKILLED SUPERINTENDENTS TO SUPERVISE THE WORK FROM THE BEGINNING TO COMPLETION AND FINAL INSPECTION.
9. PROGRESS OF WORK: PERFORM WORK IN ACCORDANCE WITH SCHEDULE AND REQUIREMENTS OF THE OWNER. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR DELAY THE OVERALL PROJECT SCHEDULE.
10. COORDINATION: COORDINATE MECHANICAL WORK WITH THE WORK OF OTHER TRADES. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. LAYOUT MECHANICAL WORK SO AS NOT TO INTERFERE WITH THE WORK OF OTHER TRADES. VERIFY ACTUAL BUILDING STRUCTURE PRIOR TO DUCT FABRICATION AND ADJUST ARRANGEMENT AS REQUIRED. INCLUDE ALL OFFSETS IN DUCTS, FITTINGS, PIPING, ETC. AS REQUIRED TO PROPERLY INSTALL EQUIPMENT.
11. EQUIPMENT LOCATIONS: DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT.
12. LISTING AND LABELING: ALL EQUIPMENT SHALL BE LABELED OR LISTED BY UL OR OTHER APPROVED TESTING AGENCY WHERE REQUIRED.
13. FIRE RATED CONTRUCTION: ALL MECHANICAL PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL BE SUITABLY PROTECTED TO MAINTAIN LISTING. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND REQUIREMENTS OF RATED ASSEMBLIES.
14. STORAGE SPACE: CONSULT WITH THE OWNER REGARDING JOB SITE STORAGE FOR MECHANICAL MATERIALS TO BE INSTALLED UNDER THIS PROJECT. STORAGE SPACE MUST BE SECURED AND CONTRACTOR'S REPRESENTATIVE MUST BE ON JOB BEFORE ANY MATERIAL MAY BE RECEIVED.
15. CLEANUP: REMOVE ALL DEBRIS GENERATED IN THE ACCOMPLISHMENT OF WORK UNDER THIS PROJECT. CLEAN, REPLACE OR REPAIR ALL SURFACES SOILED OR DAMAGED DURING THE COURSE OF THE WORK. REMOVE DEBRIS DAILY SO TO MAINTAIN SAFE WORKING CONDITIONS.
16. ELECTRICAL WORK:
   A. PERFORM ELECTRICAL WORK FOR MECHANICAL EQUIPMENT IN COMPLIANCE WITH PROJECT ELECTRICAL REQUIREMENTS. ELECTRICAL WORK FOR MECHANICAL EQUIPMENT NOT SPECIFICALLY INDICATED TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR IN THE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AS PART OF HIS WORK.
   B. ELECTRICAL DRAWINGS ARE BASED ON ELECTRICAL CHARACTERISTICS INDICATED IN DRAWING MECHANICAL EQUIPMENT SCHEDULES. ANY EQUIPMENT FURNISHED BY THE MECHANICAL CONTRACTOR WHICH DOES NOT MATCH THE ELECTRICAL CHARACTERISTICS INDICATED IN THE DRAWING SCHEDULES SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR. ANY ADDITIONAL COSTS FOR ELECTRICAL INSTALLATION REQUIRED FOR EQUIPMENT NOT MATCHING THE DRAWING SCHEDULES SHALL BE BORNE BY THE MECHANICAL CONTRACTOR.
   C. LOW VOLTAGE CONTROL WIRING FOR MECHANICAL SYSTEMS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR.
17. SUBMITTALS: SUBMIT FOUR (4) COPIES OF DESCRIPTIVE DATA FOR MECHANICAL EQUIPMENT AND MATERIALS INCLUDING GRILLES AND DAMPERS FOR APPROVAL BY THE ENGINEER. CLEARLY IDENTIFY ALL ITEMS.
18. OPERATING AND MAINTENANCE MANUALS: SUBMIT TWO COPIES OF COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT, INCLUDING NECESSARY CUT SHEETS, CHARTS, WRITTEN INSTRUCTIONS, WIRING DIAGRAMS, FINAL AS-BUILT DRAWINGS WITH BALANCED AIRFLOWS INDICATED, ETC. BIND IN SUITABLE HARD BACK RING BINDERS, PROPERLY INDEXED, AND DELIVER TO THE OWNER PRIOR TO BUILDING OCCUPANCY. IN ADDITION, AFFIX A FOLDER WITH TYPICAL "OWNER'S INSTRUCTIONS" AND "MAINTENANCE INFORMATION" INSIDE THE MECHANICAL EQUIPMENT AS APPLICABLE. THE FOLDER SHALL ALSO INCLUDE A COMPLETE STARTUP LOG FOR THE EQUIPMENT.
19. RECORD DRAWINGS: MAINTAIN ONE SET OF "RED-LINED" RECORD DRAWINGS ON SITE AT ALL TIMES AND PROVIDE DRAWINGS TO ENGINEER PRIOR TO FINAL INSPECTION.
20. WARRANTY: WARRANTY THE MATERIALS AND WORKMANSHIP COVERED BY THESE DRAWINGS AND SPECIFICATIONS FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. REPAIR AND/OR REPLACE ANY PARTS OF ANY SYSTEM THAT MAY PROVE TO BE DEFECTIVE AT NO ADDITIONAL COST TO THE OWNER WITHIN THE WARRANTY PERIOD. PROVIDE 5 YEAR WARRANTY FOR ALL AIR CONDITIONING COMPRESSORS. FURNISH WARRANTY CERTIFICATES FOR ALL MECHANICAL EQUIPMENT. WARRANTY TO COMMENCE UPON DATE OF ACCEPTANCE OF WORK BY OWNER.
21. EXISTING BUILDINGS AND CONSTRUCTION:
   A. WORK UNDER THIS CONTRACT IS TO BE PERFORMED IN AN EXISTING BUILDING. BUILDING LAYOUT INDICATED IS DEVELOPED FROM EXISTING RECORD DOCUMENTS AND LIMITED FIELD VERIFICATION FOR THE PURPOSES OF DESCRIBING THE WORK. VERIFY ALL EXISTING CONDITIONS AND ADJUST WORK AS REQUIRED TO SUIT ACTUAL FIELD CONDITIONS.
   B. PERFORM ALL WORK IN ACCORDANCE WITH SAFETY REGULATIONS.
   C. DO NOT CUT ANY STRUCTURAL MEMBERS WITHOUT EXPRESS WRITTEN INSTRUCTIONS FROM ENGINEER. PROVIDE CUTTING AND PATCHING FOR EXISTING FINISHES AS REQUIRED.
   D. COORDINATE INSTALLATION OF NEW MECHANICAL SYSTEMS WITH EXISTING BUILDING SYSTEMS. ADJUST ARRANGEMENTS AS REQUIRED TO ACCOMMODATE INTERFERENCES.

DEMOLITION NOTES

1. THE MECHANICAL CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL EQUIPMENT, DUCTWORK, SUPPORTS, CONTROLS, ACCESSORIES, ETC..., AND MECHANICAL ITEMS MADE OBSOLETE BY THESE ALTERATIONS AS SHOWN IN THE MECHANICAL DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN, HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY MECHANICAL WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE OWNER OR THE ENGINEER. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID.
2. SCHEDULING OF DEMOLITION - COORDINATE SCHEDULING OF MECHANICAL DEMOLITION WORK WITH THE OWNER AND GENERAL CONTRACTOR SO AS TO MINIMIZE DISRUPTION OF THE OWNER'S USE OF THE FACILITIES AND MAINTAIN THE CONSTRUCTION SEQUENCE OF THE GENERAL CONTRACTOR. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INSTRUCTIONS CONCERNING PHASING AND SEQUENCE OF WORK.
3. EXISTING MECHANICAL SYSTEMS - VERIFY CONDITION OF EXISTING MECHANICAL SYSTEMS TO BE REUSED SO THAT COMPLETE, FULLY OPERATIONAL AND RELIABLE SYSTEMS ARE OBTAINED AT THE COMPLETION OF THE WORK. NOTIFY ARCHITECT/ENGINEER OF ANY SYSTEMS FOUND TO BE OF QUESTIONABLE CONDITION.
4. ALL EXISTING MECHANICAL EQUIPMENT AND DEVICES SHALL REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED.
5. DEMOLISHED MATERIALS - UNLESS SPECIFICALLY REQUESTED BY THE OWNER, ALL DEMOLISHED MECHANICAL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
6. CUTTING AND PATCHING - PERFORM CUTTING AND PATCHING FOR MECHANICAL WORK SO AS TO MINIMIZE DAMAGE TO CEILINGS, FLOORS AND WALLS. REFER TO ARCHITECTURAL DRAWINGS AND GENERAL SPECIFICATIONS SECTIONS FOR SPECIFIC RESPONSIBILITIES REGARDING CUTTING AND PATCHING.
7. THESE DRAWINGS ARE COMPILED BY THE ARCHITECT/ENGINEER FROM THE OWNER'S AS-BUILT RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DUCTWORK, EQUIPMENT LOCATIONS, DIMENSIONS AND ALL FIELD CONDITIONS AFFECTING HIS WORK.
8. WHERE MECHANICAL SYSTEMS PASS THROUGH THE DEMOLITION AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, THEY SHALL REMAIN OR BE SUITABLY RELOCATED AND THE SYSTEM RESTORED TO NORMAL OPERATION. ADVISE THE ARCHITECT/ENGINEER IMMEDIATELY IF SUCH CONDITIONS ARE UNCOVERED BEFORE PROCEEDING WITH ADDITIONAL WORK.
9. PROTECT ALL EXISTING LIFE SAFETY SYSTEMS, FIRE ALARM AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ARCHITECT/ENGINEER IN WRITING OF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED MAINTAINING SERVICE.
10. SURVEY THE EFFECTED AREAS BEFORE SUBMITTING A BID AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS EXIST.
11. IF ANY UNUSUAL STRUCTURAL OR ARCHITECTURAL CONDITIONS ARE ENCOUNTERED DURING DEMOLITION, CONTACT THE ARCHITECT/ENGINEER.
12. REMOVE AIR CONDITIONING, REFRIGERATION, AND OTHER EQUIPMENT CONTAINING REFRIGERANTS WITHOUT RELEASING CHLOROFLUOROCARBON REFRIGERANTS TO THE ATMOSPHERE IN ACCORDANCE WITH THE CLEAN AIR ACT AMENDMENT OF 1990. RECOVER ALL REFRIGERANTS PRIOR TO REMOVING AIR CONDITIONING, REFRIGERATION, AND OTHER EQUIPMENT CONTAINING REFRIGERANTS AND DISPOSE OF IN ACCORDANCE WITH THE PARAGRAPH ENTITLED "DISPOSAL OF OZONE DEPLETING SUBSTANCE (ODS)." TURN IN SALVAGED CLASS I ODS REFRIGERANTS AS SPECIFIED IN PARAGRAPH, "SALVAGED MATERIALS AND EQUIPMENT."

MECHANICAL LEGEND

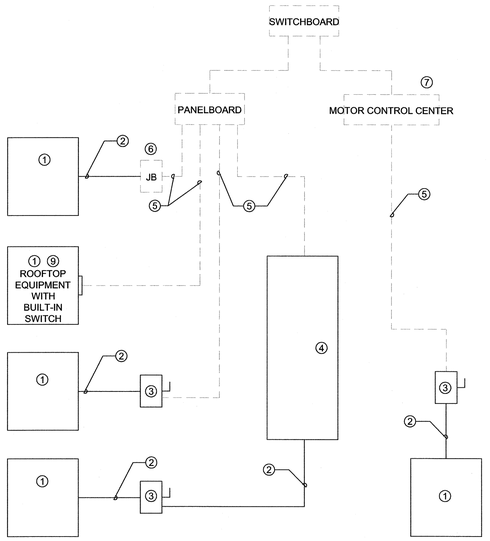
- DUCTWORK/DUCT BRANCH w/ MANUAL DAMPER
- DIFFUSER, GRILLE, AND LOUVER TAG (MARK/CFM) - SEE SCHEDULE
- INDICATES TO BE DEMOLISHED
- EXTENT OF DEMOLITION
- CONNECTION POINT - NEW TO EXISTING
- (T) THERMOSTAT
- (TH) THERMOSTAT/HUMIDISTAT
- (S) REMOTE SENSOR
- (OS) OCCUPANCY SENSOR
- (D) DUCT SMOKE DETECTOR
- CEILING EXHAUST AIR GRILLE
- CEILING SUPPLY AIR DIFFUSER
- CEILING RETURN AIR GRILLE
- FIRE DAMPER
- MANUAL VOLUME DAMPER
- (M) MOTORIZED VOLUME DAMPER
- OR ELBOW SIDE
- OR ELBOW UP
- OR ELBOW DOWN
- OR 45 DEGREE ELBOW SIDE
- OR 45 DEGREE ELBOW DOWN
- OR 45 DEGREE ELBOW UP
- OR TEE SIDE
- OR TEE BRANCH DOWN
- OR TEE BRANCH UP
- / SUPPLY UP / SUPPLY DOWN
- / RETURN UP / RETURN DOWN
- / EXHAUST UP / EXHAUST DOWN
- R REFRIGERANT PIPING
- C CONDENSATE PIPING

NOTE: ALL ITEMS LISTED MAY NOT BE USED IN PROJECT.

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

CLIMATE ZONE	3A - WARM/HUMID
WINTER DRY BULB:	23°F
SUMMER DRY BULB	95°F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	70°F
SUMMER DRY BULB	75°F
RELATIVE HUMIDITY	60% RH*
	*DESIGN- NOT CONTROLLED
BUILDING HEATING LOAD:	532.1 MBH
BUILDING COOLING LOAD:	871.7 MBH
MECHANICAL SPACING CONDITIONING SYSTEM	SEE SCHEDULES
UNITARY	
DESCRIPTION OF UNIT:	SEE SCHEDULES
HEATING EFFICIENCY:	SEE SCHEDULES
COOLING EFFICIENCY:	SEE SCHEDULES
SIZE CATEGORY OF UNIT:	SEE SCHEDULES
BOILER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
CHILLER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
LIST EQUIPMENT EFFICIENCIES:	SEE SCHEDULES



DIVISION OF LABOR 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 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. FEEDER CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE PANELBOARD SCHEDULES FOR WIRE AND BREAKER 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 WILL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
7. PROJECTS UTILIZING AN MCC, THE STARTER CB, OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.
8. IN ALL CASES THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP AND TEST EQUIPMENT.
9. IF THE ROOF TOP FAN IS NOT PROVIDED WITH BUILT IN SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.
10. IN A SINGLE PRIME CONTRACT, IT IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR TO COORDINATE BETWEEN THE ELECTRICAL AND OTHER TRADES.

1 HVAC DIVISION OF LABOR DETAIL
NOT TO SCALE

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BOWER III 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL NOTES, SUMMARY, ABBREVIATIONS, LEGENDS, AND DIVISION OF LABOR

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

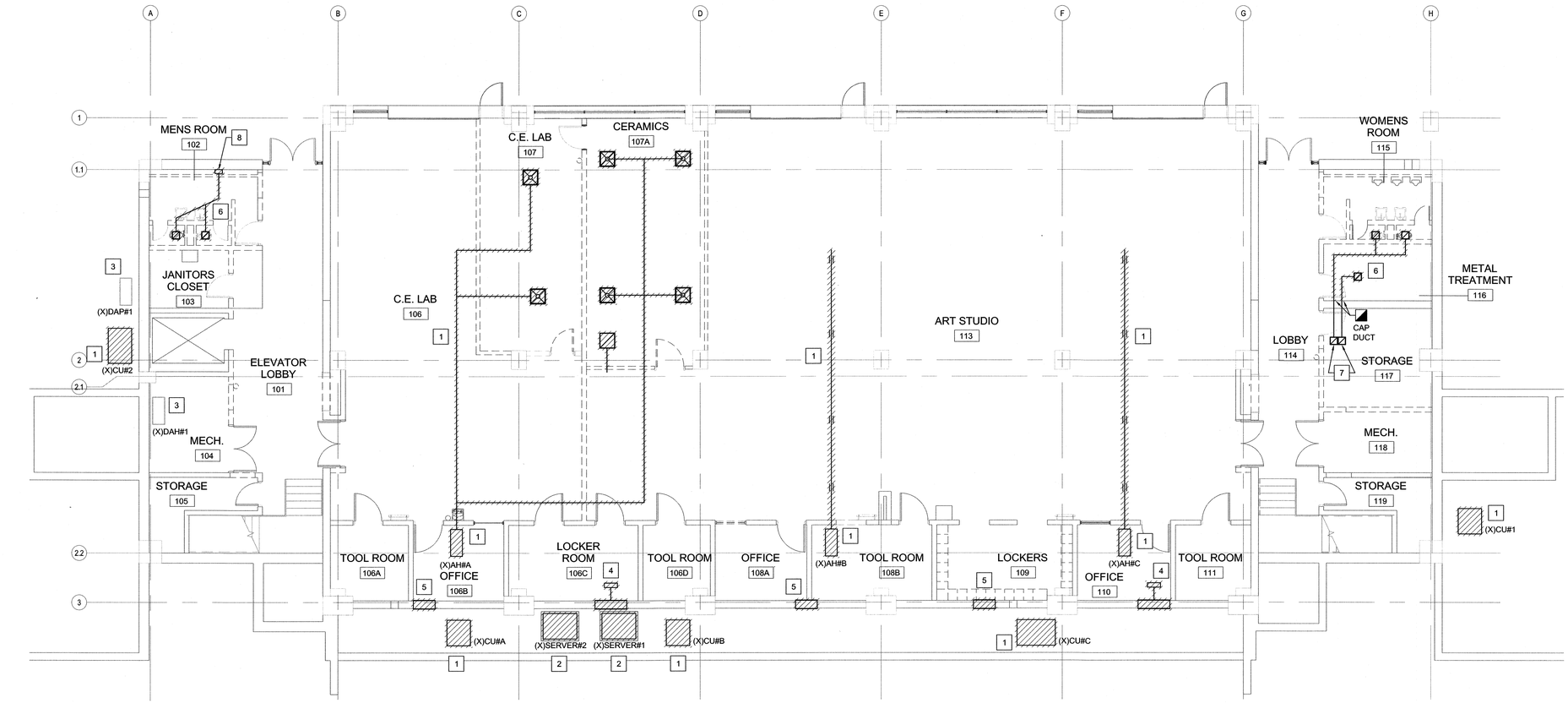
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

M-001

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. (BASE BID) TO REMAIN.
   (ALTERNATE BID 1 & 1A) DEMOLISH EXISTING SPLIT SYSTEM A/C SYSTEM IN ENTIRETY. INCLUDING AIR DISTRIBUTION, PIPING, WIRING AND CONTROLS.
2. DEMOLISH EXISTING SERVER ROOM A/C UNIT IN ENTIRETY, INCLUDING PIPING, WIRING AND CONTROLS. COORDINATE PHASING WITH CFCC IT.
3. EXISTING DUCTLESS SPLIT A/C TO REMAIN.
4. (BASE BID) NO WORK.
   (ALTERNATE BID 1 & 1A) DEMOLISH EXISTING EXHAUST FAN IN ENTIRETY. REUSE OPENING FOR O/A. SEE NEW WORK.
5. EXISTING FAN LOCATION. (BASE BID) PATCH OPENING.
   (ALTERNATE BID 1 & 1A) PATCH AND REUSE OPENING FOR O/A AS INDICATED. SEE NEW WORK.
6. DEMOLISH EXISTING EXHAUST DUCTWORK AS INDICATED. PATCH WALL/FLOOR OPENINGS AT DUCT PENETRATIONS UNLESS USED FOR NEW WORK
7. ABANDON IN PLACE EXISTING DUCTS IN CHASE ABOVE. SEAL OPENING THRU FLOOR.
8. DEMOLISH EXISTING EXHAUST DUCT UP.



1 **FIRST FLOOR DEMOLITION PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 16592 ENGINEER JAMES R. BENSON, III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL DEMOLITION FIRST FLOOR PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

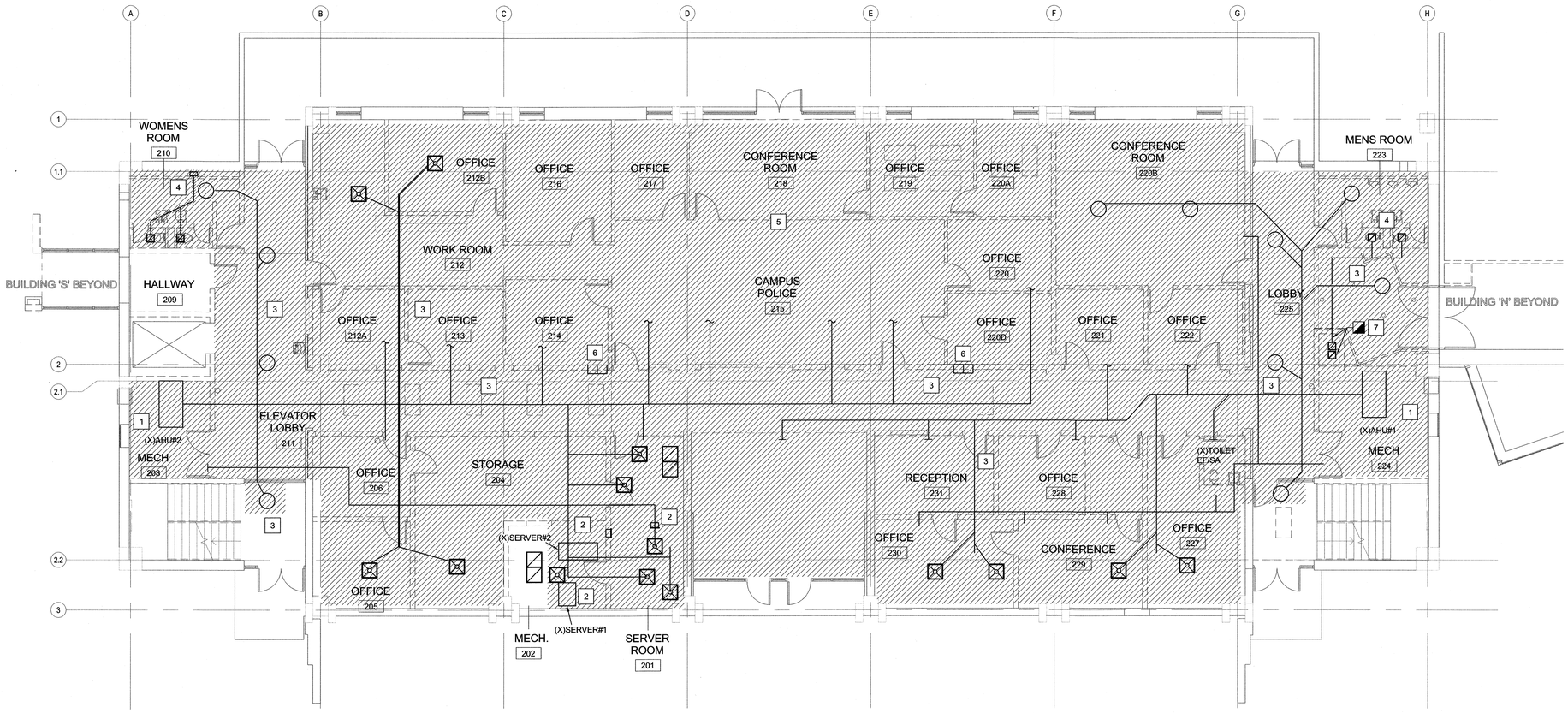
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

MD101

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. DEMOLISH EXISTING SPLIT SYSTEM A/C SYSTEM IN ENTIRETY. INCLUDING PIPING, WIRING, CONTROLS, ETC.
2. (BASE BID) DEMOLISH (X)SERVER#1, (X)SERVER#2. EXISTING SERVER ROOM DUCTWORK AND AIR DISTRIBUTION TO REMAIN FOR CONNECTION TO NEW AIR HANDING EQUIPMENT.
   (ALTERNATE BID 2)DEMOLISH SERVER ROOM A/C IN ENTIRETY INCLUDING AIR DISTRIBUTION, PIPING, WIRING, CONTROLS, ETC. COORDINATE PHASING WITH CFCC IT.
3. DEMOLISH EXISTING DUCTWORK AND AIR DISTRIBUTION IN ENTIRETY. PATCH WALL OPENINGS AT DUCT PENETRATIONS UNLESS USED FOR NEW WORK.
4. DEMOLISH EXISTING EXHAUST DUCT AS INDICATED. PATCH WALL/FLOOR OPENINGS AT DUCT PENETRATIONS UNLESS USED FOR NEW WORK.
5. DEMOLISH ALL EXISTING HVAC IN ADMIN / CAMPUS POLICE AREA. (NOTE: ALL DUCTWORK IS NOT SHOWN)
6. PATCH EXISTING R/A WALL OPENING.
7. ABANDON IN PLACE EXISTING EXHAUST DUCTS IN CHASE. SEAL/PATCH OPENING IN CHASE WALL.



1 **SECOND FLOOR CONSTRUCTION DEMOLITION PLAN**
1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL DEMOLITION SECOND FLOOR PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

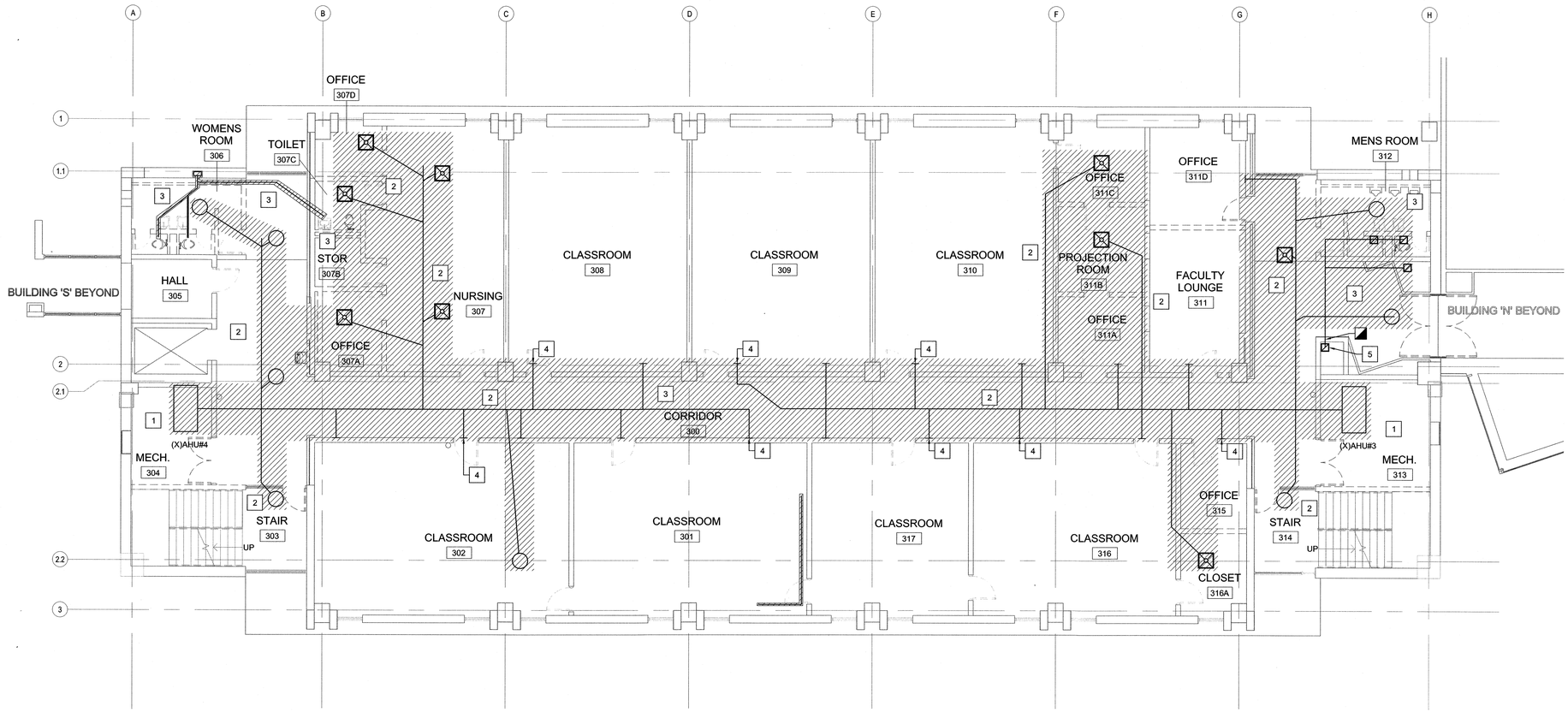
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

MD102

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. DEMOLISH EXISTING SPLIT SYSTEM A/C SYSTEM IN ENTIRETY. INCLUDING PIPING, WIRING, CONTROLS, ETC.
2. DEMOLISH EXISTING DUCTWORK AND AIR DISTRIBUTION IN ENTIRETY.PATCH WALL OPENINGS AT DUCT PENETRATIONS UNLESS USED FOR NEW WORK
3. DEMOLISH EXISTING EXHAUST DUCT IN ENTIRETY. PATCH WALL/FLOOR OPENINGS AT DUCT PENETRATIONS UNLESS USED FOR NEW WORK
4. REUSE EXISTING SIDEWALL OPENING FOR NEW O/A SUPPLY. PATCH/REPAIR TO SUIT NEW DUCT SIZES.
5. ABANDON IN PLACE EXISTING EXHAUST DUCTS IN CHASE. SEAL/PATCH OPENING IN CHASE WALL.



1 **THIRD FLOOR CONSTRUCTION DEMOLITION PLAN**
1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

FIRE WALL LEGEND

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER CHARLES R. JENSEN III 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL DEMOLITION THIRD FLOOR PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

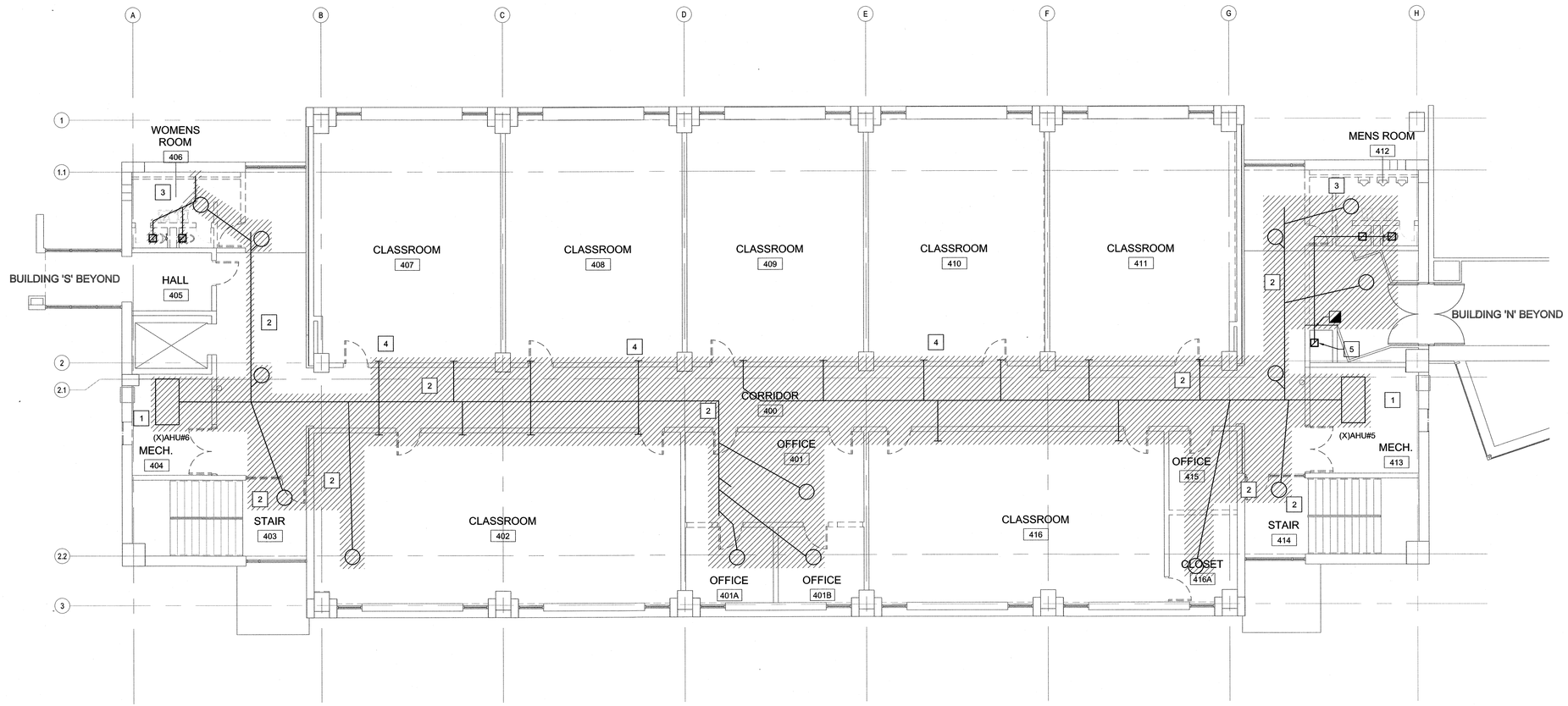
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

MD103

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. DEMOLISH EXISTING SPLIT SYSTEM A/C SYSTEM IN ENTIRETY. INCLUDING PIPING, WIRING, CONTROLS, ETC.
2. DEMOLISH EXISTING DUCTWORK AND AIR DISTRIBUTION IN ENTIRETY. PATCH WALL OPENINGS AT DUCT PENETRATIONS UNLESS USED FOR NEW WORK.
3. DEMOLISH EXISTING EXHAUST DUCT IN ENTIRETY. PATCH WALL/FLOOR OPENINGS AT DUCT PENETRATIONS UNLESS USED FOR NEW WORK.
4. REUSE EXISTING SIDEWALL OPENING FOR NEW O/A SUPPLY. PATCH/REPAIR TO SUIT NEW DUCT SIZES.
5. ABANDON IN PLACE EXISTING EXHAUST DUCTS IN CHASE. SEAL/PATCH OPENING IN CHASE WALL.



1 **FOURTH FLOOR CONSTRUCTION DEMOLITION PLAN**
1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

FIRE WALL LEGEND

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL DEMOLITION FOURTH FLOOR PLAN AND BUILDING S 5TH FLOOR PARTIAL PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

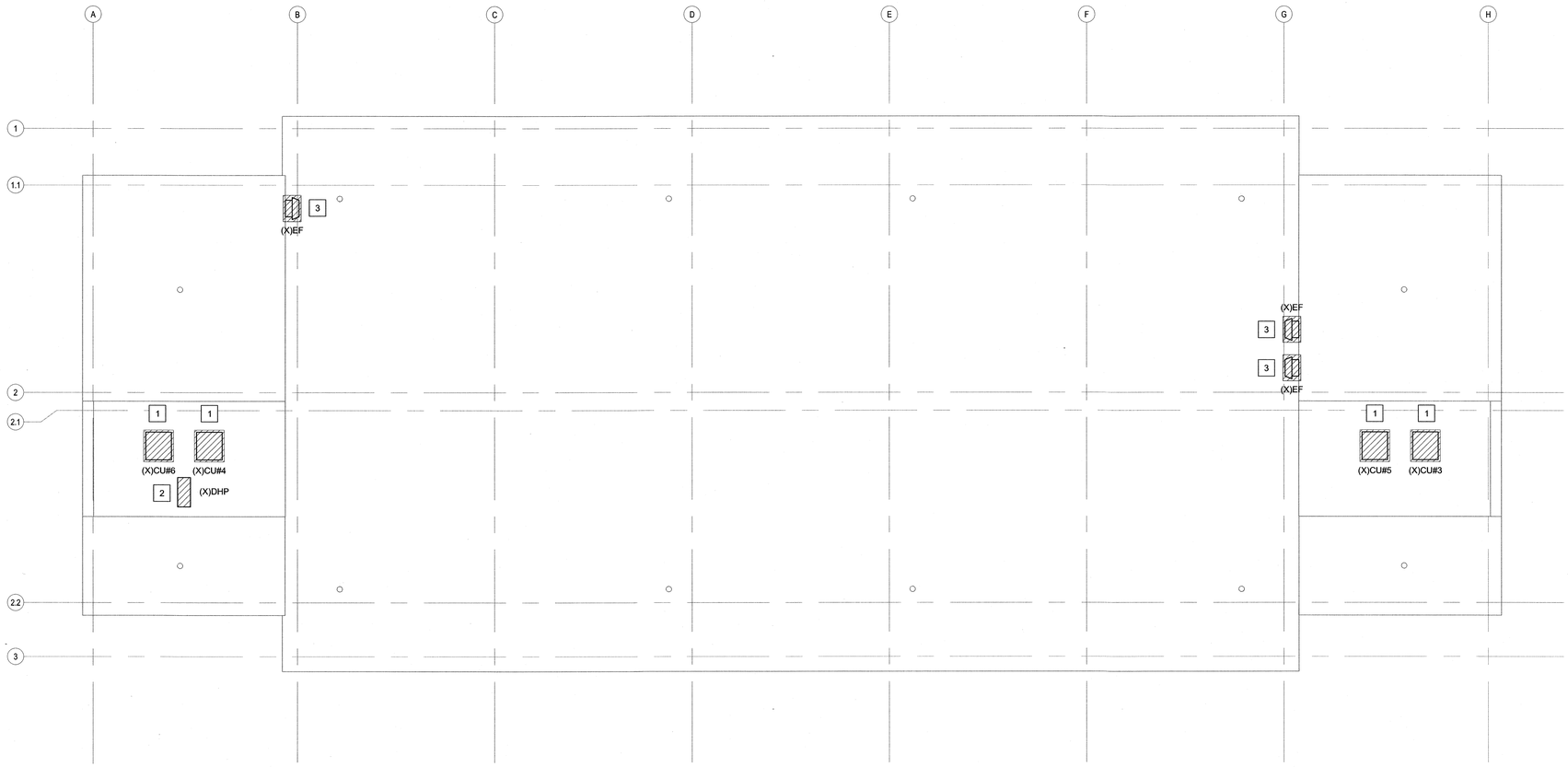
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

MD104

COPYRIGHT © 2020

DEMOLITION KEYED NOTES

1. DEMOLISH EXISTING SPLIT SYSTEM A/C INCLUDING PIPING, WIRING, CONTROLS, AND ASSOCIATED HARDWARE.
2. DEMOLISH EXISTING DUCTLESS HEAT PUMP.
3. DEMOLISH EXISTING EXHAUST FAN. ABANDON IN PLACE DUCT IN CHASE AND SEAL/PATCH WALL.



PLAN NORTH

1 ROOF DEMOLITION PLAN

1/8" = 1'-0"

0 4' 8' 16'

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BRADSHAW III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL DEMOLITION ROOF PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

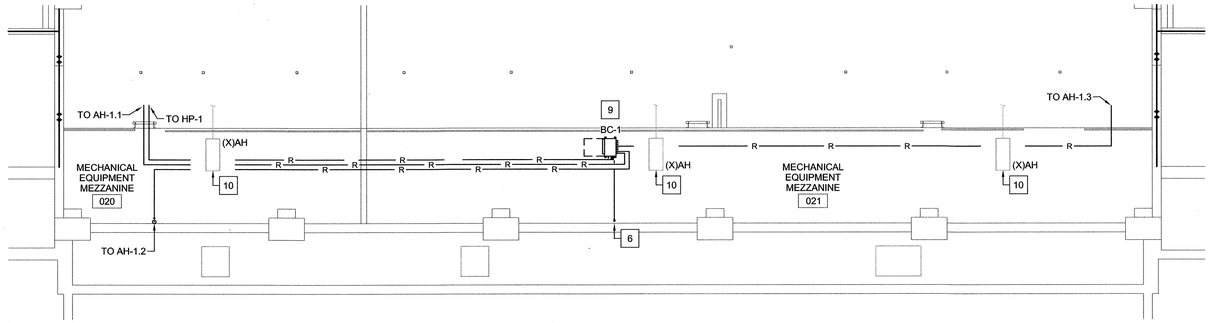
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

MD105

COPYRIGHT © 2020

KEYED NOTES

1	NOT USED.
2	NOT USED.
3	NOT USED.
4	INSTALL NEW EXHAUST LOUVER. REFER TO ARCHITECTURAL SHEETS FOR WALL PENETRATION DETAILS.
5	NOT USED.
6	NEW CONDENSATE DRAIN. SPILL IN (X) AREA DRAIN.
7	NOT USED.
8	DO NOT ROUTE PIPING OR DUCTWORK OVER ELECTRICAL PANELS.
9	EXTEND REFRIGERANT PIPING FROM BRANCH CONTROLLER TO ASSOCIATED AH'S.
10	(X) AH TO REMAIN INCLUDING DUCTWORK AND DIFFUSERS.

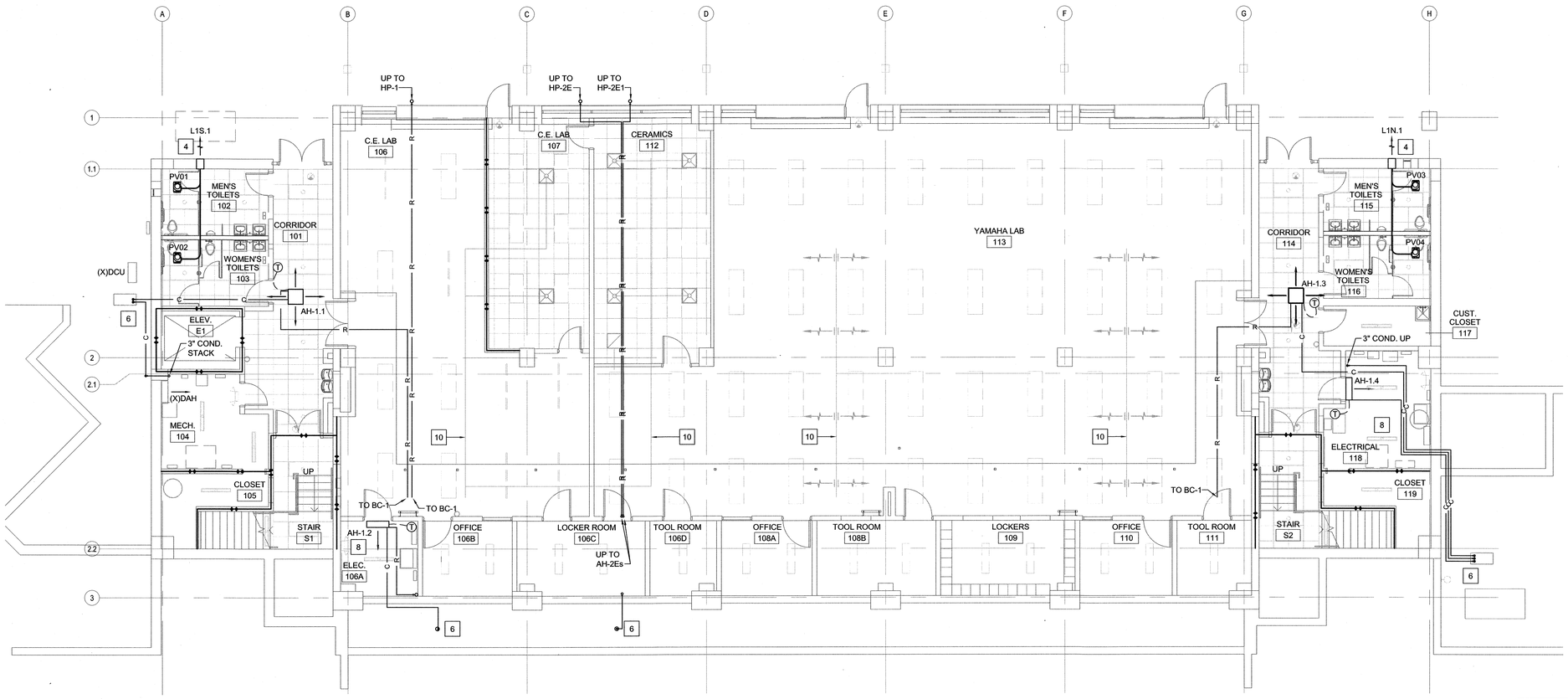


2 MEZZ. CONSTRUCTION PLAN

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH



1 FIRST FLOOR CONSTRUCTION PLAN

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

NOTE: PROVIDE REFRIGERANT LINESETS FROM OUTDOOR UNITS TO MAIN BRANCH CONTROL UNITS OR INDOOR AIR HANDLING UNITS AS DICTATED BY SYSTEM TYPE.

PROVIDE INDIVIDUAL REFRIGERANT PIPING LINESETS FROM BRANCH CONTROL UNITS TO INDOOR AIR HANDLING UNITS OR SUB-BRANCH CONTROL UNITS.

FIRE WALL LEGEND

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL FIRST FLOOR AND MEZZANINE PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

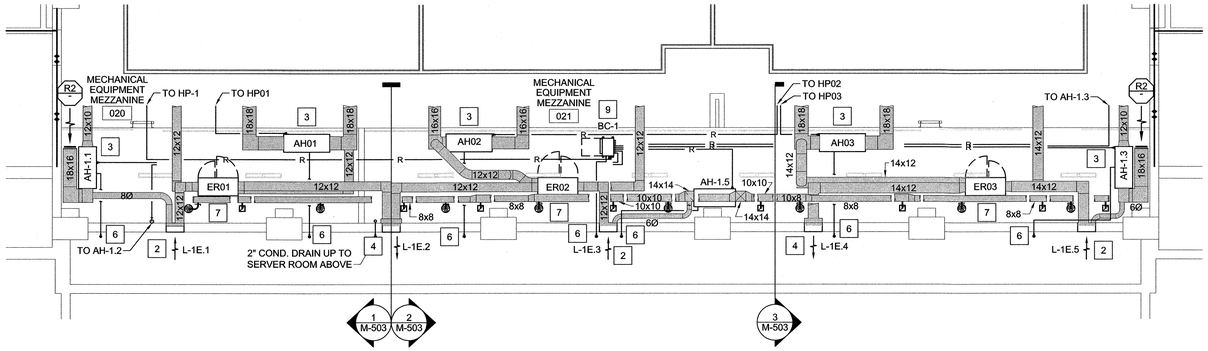
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

M-101

COPYRIGHT © 2020

KEYED NOTES

1. (ALTERNATE BID 1 & 1A) NEW S/A DUCT.
2. (ALTERNATE BID 1 & 1A) INSTALL NEW INTAKE LOUVER AT (X) FAN OPENING. REFER TO ARCHITECTURAL SHEETS FOR WALL PENETRATION DETAILS.
3. (ALTERNATE BID 1 & 1A) INSTALL NEW AHU ON MECHANICAL MEZZANINE.
4. (ALTERNATE BID 1 & 1A) INSTALL NEW EXHAUST LOUVER. REFER TO ARCHITECTURAL SHEETS FOR WALL PENETRATION DETAILS.
5. (ALTERNATE BID 1 & 1A) CORE DRILL (X) MEZZANINE SLAB TO INSTALL NEW SA/RA DISTRIBUTION FOR SPACES BELOW.
6. (ALTERNATE BID 1 & 1A) NEW CONDENSATE DRAIN. SPILL IN (X) AREA DRAIN.
7. (ALTERNATE BID 1 & 1A)INSTALL NEW ERV ON MEZZANINE.
8. (ALTERNATE BID 1 & 1A) DO NOT ROUTE PIPING OR DUCTWORK OVER ELECTRICAL PANELS.
9. (ALTERNATE BID 1 & 1A) EXTEND REFRIGERANT PIPING FROM BRANCH CONTROLLER TO ASSOCIATED AH'S.

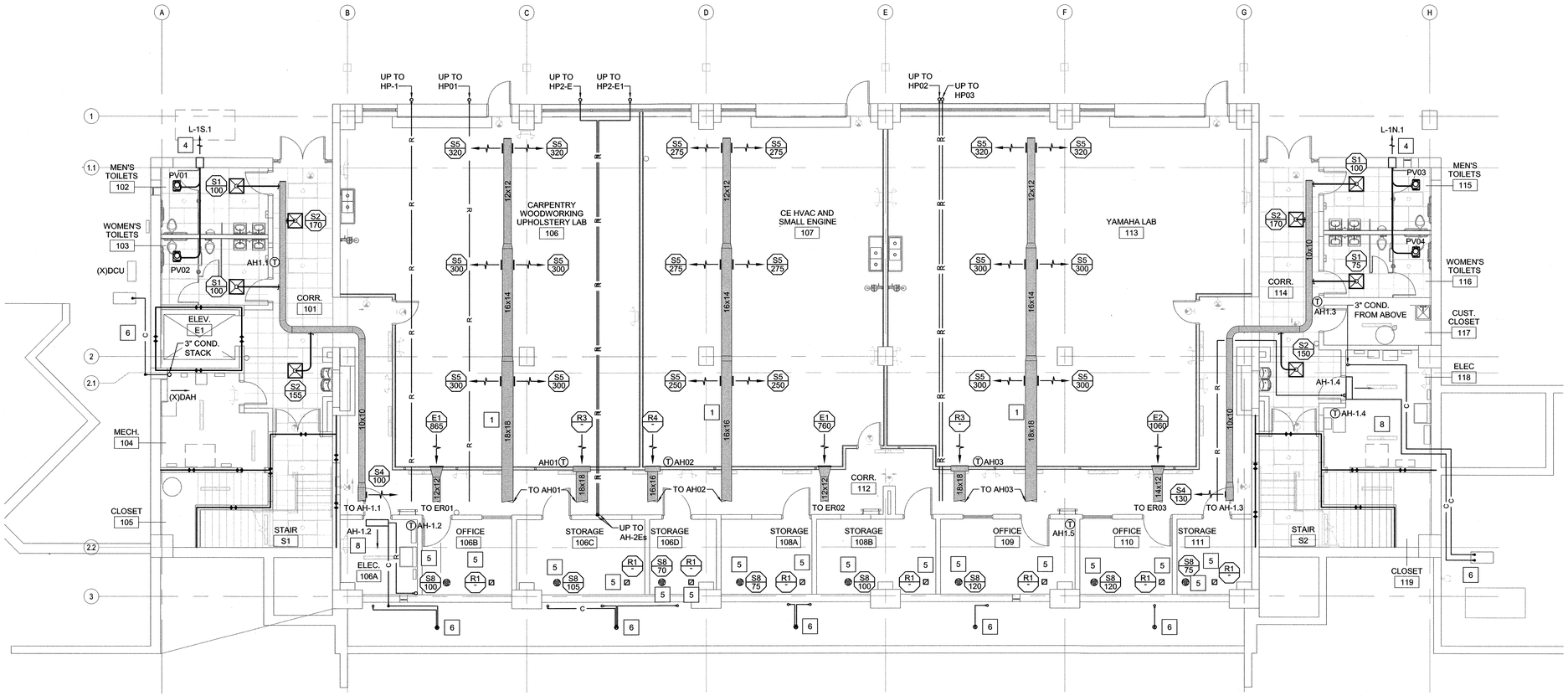


PLAN NORTH

2 ALTERNATE 1: MEZZ. CONSTRUCTION PLAN

1/8" = 1'-0"

0 4' 8' 16'



PLAN NORTH

1 ALTERNATE 1: FIRST FLOOR CONSTRUCTION PLAN

1/8" = 1'-0"

0 4' 8' 16'

NOTE: PROVIDE REFRIGERANT LINESETS FROM OUTDOOR UNITS TO MAIN BRANCH CONTROL UNITS OR INDOOR AIR HANDLING UNITS AS DICTATED BY SYSTEM TYPE.

PROVIDE INDIVIDUAL REFRIGERANT PIPING LINESETS FROM BRANCH CONTROL UNITS TO INDOOR AIR HANDLING UNITS OR SUB-BRANCH CONTROL UNITS.

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER CHRISTOPHER R. BENSON 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL FIRST FLOOR AND MEZZANINE ALTERNATE 1 PLAN

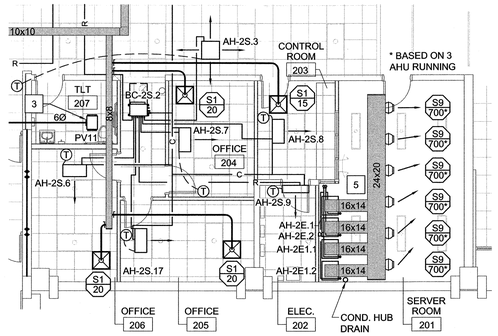
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

M-101A

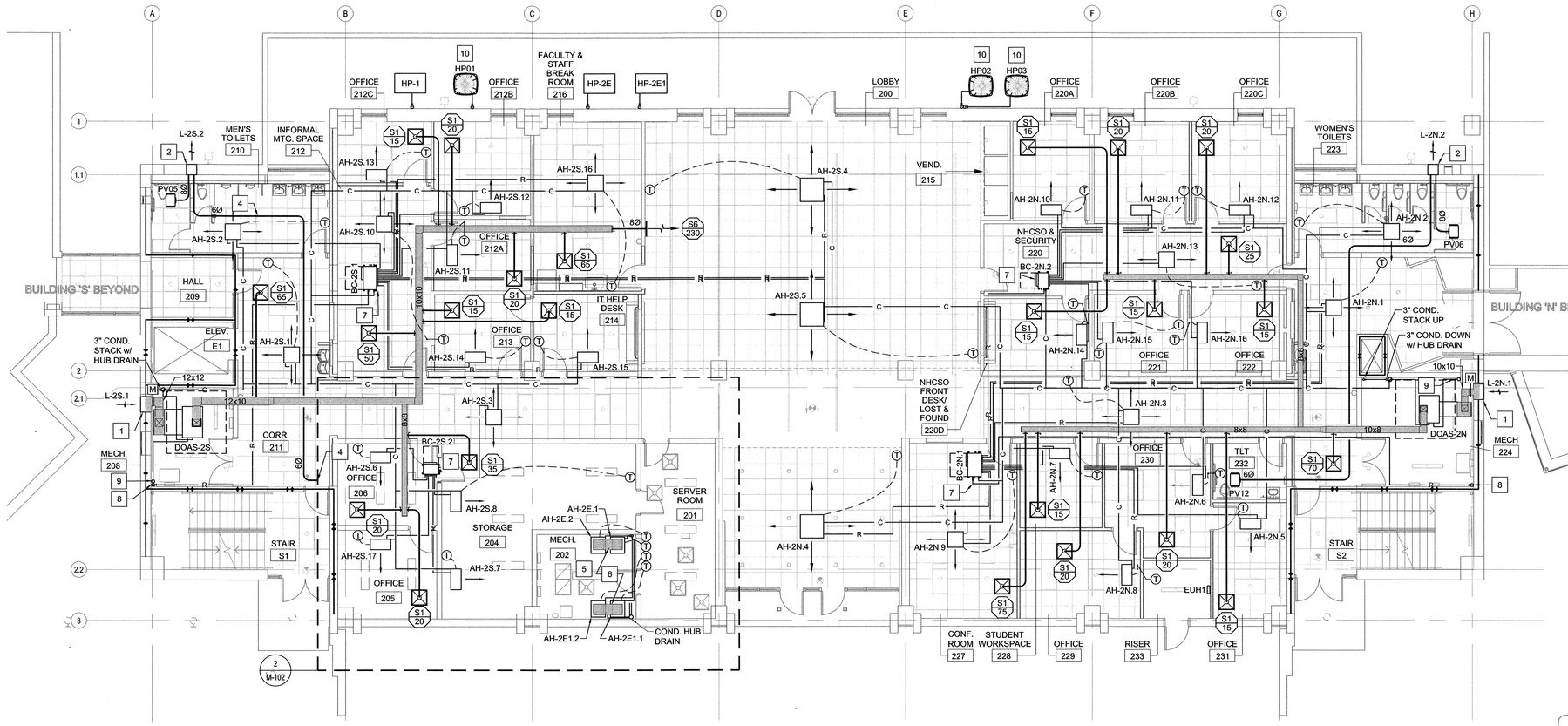
COPYRIGHT © 2020



2 ALTERNATE 2: SECOND FLOOR CONSTRUCTION PARTIAL PLAN

1/8" = 1'-0"

PLAN NORTH



1 SECOND FLOOR CONSTRUCTION PLAN

1/8" = 1'-0"

PLAN NORTH

NOTE: PROVIDE REFRIGERANT LINESETS FROM OUTDOOR UNITS TO MAIN BRANCH CONTROL UNITS OR INDOOR AIR HANDLING UNITS AS DICTATED BY SYSTEM TYPE.

PROVIDE INDIVIDUAL REFRIGERANT PIPING LINESETS FROM BRANCH CONTROL UNITS TO INDOOR AIR HANDLING UNITS OR SUB-BRANCH CONTROL UNITS.

KEYED NOTES

1. NEW INTAKE/RELIEF LOUVER (X) OPENING. PROVIDE INTAKE SECTION WITH MOTORIZED DAMPER. REFER TO DETAIL 8/M-503 FOR MORE INFORMATION. REFER TO ARCHITECTURAL SHEETS FOR WALL PENETRATION DETAILS.
2. INSTALL NEW EXHAUST LOUVER. REFER TO ARCHITECTURAL SHEETS FOR WALL PENETRATION DETAILS.
3. (BASE BID) NO WORK.
(ALTERNATE BID 2) INSTALL PV11 AND ROUTE EXHAUST DUCT TO L-2S.2.
4. (BASE BID) NO WORK.
(ALTERNATE BID 2) ROUTE EXHAUST DUCT FROM PV11 TO L-2S.2.
5. (BASE BID) INSTALL NEW AHU'S FOR SERVER ROOM AS INDICATED AND RECONNECT TO (X) DUCTWORK AND AIR DISTRIBUTION. ROUTE REFRIGERANT PIPING TO ODU'S. KEEP TIGHT TO STRUCTURE. OFFSET AS NECESSARY. MINIMIZE CORE DRILLING OF (X) CONCRETE STRUCTURE. ROUTE CONDENSATE TO NEW HUB DRAIN WITHIN ROOM.
(ALTERNATE BID 2) INSTALL NEW AHU'S AND AIR DISTRIBUTION FOR SERVER ROOM AS INDICATED ON 2/M-102. COORDINATE SCHEDULING OF WORK WITH CFCC IT.
6. (BASE BID) PROVIDE PLENUM ABOVE EACH AHU PAIR AND CONNECT TO (X) SUPPLY DUCTWORK. RE-USE DIFFUSERS/GRILLES.
7. REFER TO VRF SYSTEM SCHEMATICS FOR REFRIGERANT PIPING AND CONTROL WIRING DETAILS.
8. REFRIGERANT PIPING FROM BRANCH CONTROLLER UP TO ROOF HP.
9. REFRIGERANT PIPING FROM DOAS TO ROOF ACC.
10. (BASE BID) NO WORK.
(ALTERNATE BID 1&1A) INSTALL HEAT PUMP AS INDICATED.

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENGEL III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL SECOND FLOOR PLAN AND ALTERNATE BID 2 PARTIAL PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

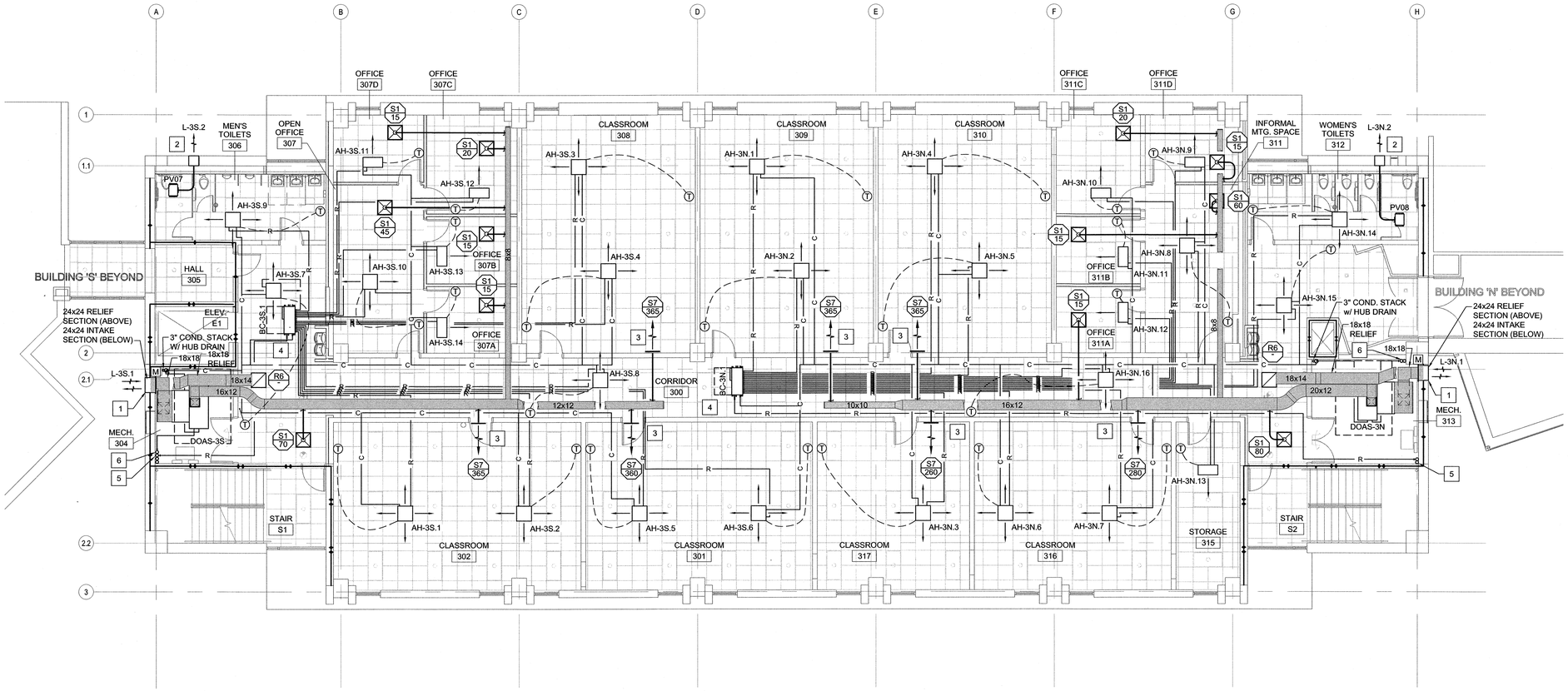
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

M-102

COPYRIGHT © 2020

KEYED NOTES

1. NEW INTAKE/RELIEF LOUVER (X) OPENING. PROVIDE INTAKE SECTION WITH MOTORIZED DAMPER AND PRESSURE RELIEF PRESSURE RELIEF SECTION WITH GRAVITY DAMPER. REFER TO DETAIL 8/M-503 FOR MORE INFORMATION. REFER TO ARCHITECTURAL SHEETS FOR WALL PENETRATION DETAILS.
2. INSTALL NEW EXHAUST LOUVER. REFER TO ARCHITECTURAL SHEETS FOR WALL PENETRATION DETAILS.
3. INSTALL NEW FRESH AIR GRILLE AT DEMOLISHED GRILLE LOCATION THIS AREA. PATCH WALL AS REQUIRED.
4. REFER TO VRF SYSTEM SCHEMATICS FOR REFRIGERANT PIPING AND CONTROL WIRING DETAILS.
5. REFRIGERANT PIPING FROM BRANCH CONTROLLER UP TO ROOF HP.
6. REFRIGERANT PIPING FROM DOAS TO ROOF ACC.



1 **THIRD FLOOR CONSTRUCTION PLAN**

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

NOTE: PROVIDE REFRIGERANT LINESETS FROM OUTDOOR UNITS TO MAIN BRANCH CONTROL UNITS OR INDOOR AIR HANDLING UNITS AS DICTATED BY SYSTEM TYPE.

PROVIDE INDIVIDUAL REFRIGERANT PIPING LINESETS FROM BRANCH CONTROL UNITS TO INDOOR AIR HANDLING UNITS OR SUB-BRANCH CONTROL UNITS.

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10592 JAMES R. BENDER III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL THIRD FLOOR PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

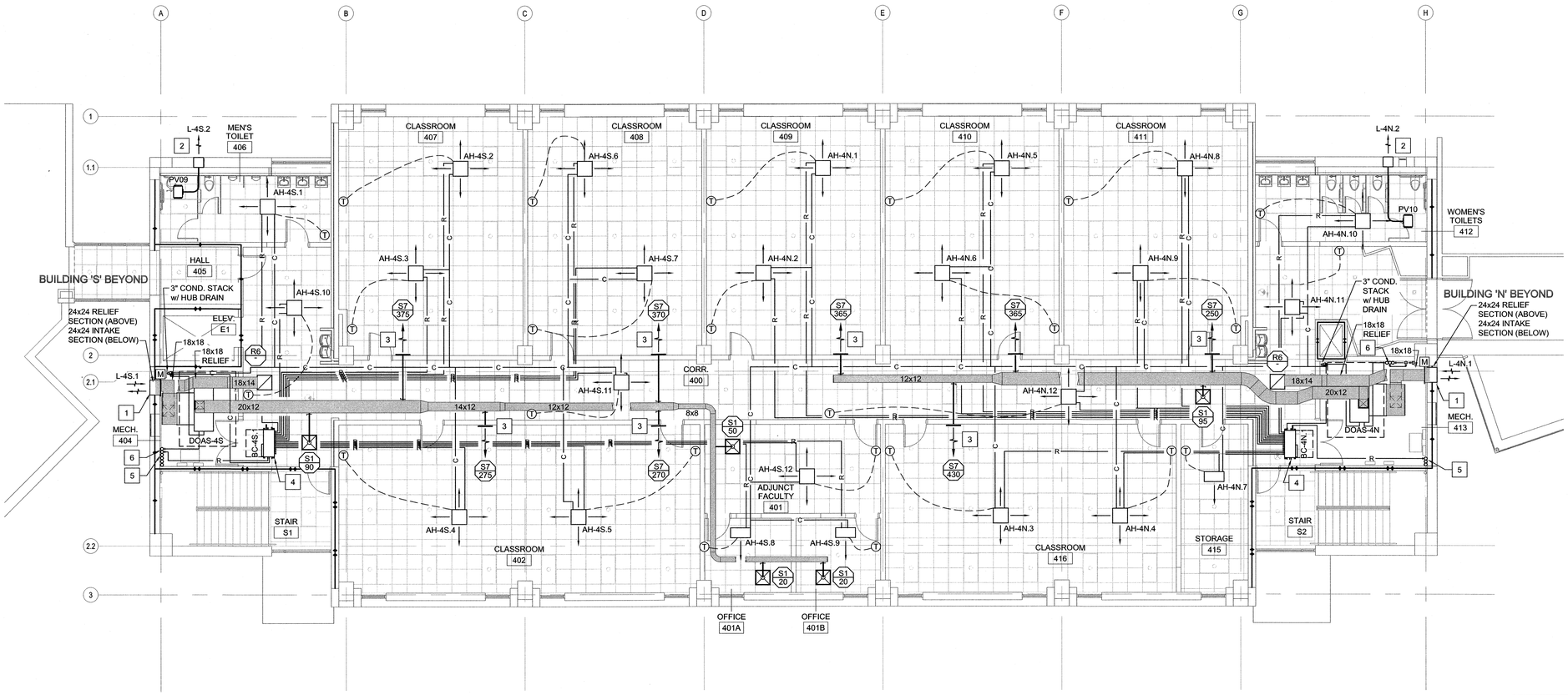
PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: CRG | PROJ MGR: JRB

M-103

COPYRIGHT © 2020

KEYED NOTES

1. NEW INTAKE/RELIEF LOUVER (X) OPENING. PROVIDE INTAKE SECTION WITH MOTORIZED DAMPER AND PRESSURE RELIEF PRESSURE RELIEF SECTION WITH GRAVITY DAMPER. REFER TO DETAIL 8/M-503 FOR MORE INFORMATION. REFER TO ARCHITECTURAL SHEETS FOR WALL PENETRATION DETAILS.
2. INSTALL NEW EXHAUST LOUVER. REFER TO ARCHITECTURAL SHEETS FOR WALL PENETRATION DETAILS.
3. INSTALL NEW FRESH AIR GRILLE AT DEMOLISHED GRILLE LOCATION THIS AREA. PATCH WALL AS REQUIRED.
4. REFER TO VRF SYSTEM SCHEMATICS FOR REFRIGERANT PIPING AND CONTROL WIRING DETAILS.
5. REFRIGERANT PIPING FROM BRANCH CONTROLLER UP TO ROOF HP.
6. REFRIGERANT PIPING FROM DOAS TO ROOF ACC.



1 FOURTH FLOOR CONSTRUCTION PLAN

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

NOTE: PROVIDE REFRIGERANT LINESETS FROM OUTDOOR UNITS TO MAIN BRANCH CONTROL UNITS OR INDOOR AIR HANDLING UNITS AS DICTATED BY SYSTEM TYPE.

PROVIDE INDIVIDUAL REFRIGERANT PIPING LINESETS FROM BRANCH CONTROL UNITS TO INDOOR AIR HANDLING UNITS OR SUB-BRANCH CONTROL UNITS.

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER CHRISTOPHER R. BENDORAITIS
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL FOURTH FLOOR PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

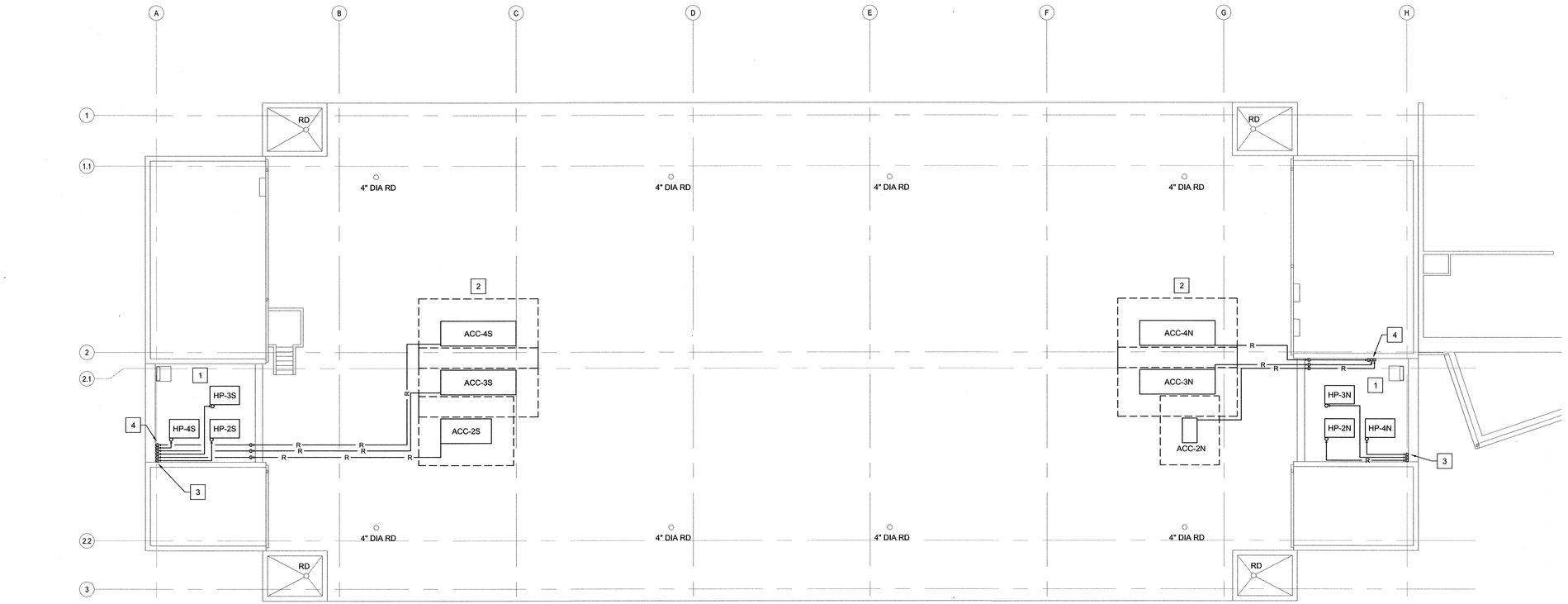
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

M-104

COPYRIGHT © 2020

KEYED NOTES

1. INSTALL NEW VRF HEAT PUMPS ON (X) RACKS IN MECHANICAL EQUIPMENT AREA ON ROOF. PROVIDE ADDITIONAL STRUCTURE TO SUPPORT AS NECCESARY.
2. INSTALL NEW DOAS CONDENSING EQUIPMENT ON (X) ROOF. REFER TO ARCHITECTURAL SHEETS FOR ROOFING DETAILS.
3. REFRIGERANT PIPING DOWN TO VRF BRANCH CONTROLLER, TYPICAL.
4. REFRIGERANT PIPING DOWN TO DOAS, TYPICAL.



1 ROOF PLAN
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

NOTE: PROVIDE REFRIGERANT LINESETS FROM OUTDOOR UNITS TO MAIN BRANCH CONTROL UNITS OR INDOOR AIR HANDLING UNITS AS DICTATED BY SYSTEM TYPE.

PROVIDE INDIVIDUAL REFRIGERANT PIPING LINESETS FROM BRANCH CONTROL UNITS TO INDOOR AIR HANDLING UNITS OR SUB-BRANCH CONTROL UNITS.

FIRE WALL LEGEND

- 2 HR RATED FIRE PARTITION / FIRE BARRIER
- 1 HR RATED FIRE PARTITION / FIRE BARRIER

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 26592 ENGINEER JAMES R. BENSMAN 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL ROOF PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

M-105

COPYRIGHT © 2020

VENTILATION SUMMARY

SYSTEM/SPACE NAME	Mult.	SUPPLY AIR (CFM) (Vpz)	SPACE FLOOR AREA (FT²) (Az)	AREA OUTDOOR AIR RATE (CFM/FT²) (Ra)	TIME AVERAGED OCCUPANCY (OCCUPANTS) (Pz)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON) (Rp)	AIR DISTRIBUTION EFFECTIVENESS (Ez)	SPACE OUTDOOR AIR (CFM) (Voz)	BREATHING ZONE OUTDOOR AIR (CFM) (Vbz)	SPACE VENTILATION EFFICIENCY (Evz)	OUTDOOR AIR DELIVERED (CFM)
AH01/HP01											
106-CARPENTRY	1	1840	1730	0.5	20	0	1	865	865	1	865
TOTALS		**1840**							**865**	**1**	**865**
AH02/HP02											
107-CE HVAC	1	1600	1513	0.5	20	0	0.8	756.5	756.5	1	760
TOTALS		**1600**							**756.5**	**1**	**760**
AH03/HP03											
113-YAMAHA	1	1840	2118	0.5	20	0	0.8	1059	1059	1	1060
TOTALS		**1840**							**1059**	**1**	**1060**
HP-1/AH-1.1											
101-CORRIDOR-S	1	319	366	0.06	0	0	0.8	27	22	0.978	60
102 -MENS TLTS	1	374	134	0	0	0	0.8	0	0	1.064	0
103 -WOMENS TLTS	1	151	125	0	0	0	0.8	0	0	1.064	0
112-CORRIDOR MID-S	1	81	622	0.06	0	0	0.8	47	37	0.489	80
TOTALS		**925**							**59**	**0.489**	**140**
HP-1/AH-1.2											
106A-ELECT	1	408	119	0	0	0	1	0	0	1	0
TOTALS		**408**							**0**	**1**	**0**
HP-1/AH-1.3											
112-CORRIDOR MID-N	1	74	570	0.06	0	0	1	34	34	0.618	80
114-CORRIDOR-N	1	315	337	0.06	0	0	1	20	20	1.014	60
115-MENS TLTS	1	283	127	0	0	0	1	0	0	1.078	0
116-WOMENS TLTS	1	24	134	0	0	0	1	0	0	1.078	0
117-CUST CLOSET	1	0	91	0	0	0	1	0	0	0	0
TOTALS		**696**							**54**	**0**	**140**
HP-1/AH-1.4											
118-MECH	1	326	218	0	0	0	1	0	0	1	0
119-CLOSET	1	0	218	0	0	0	1	0	0	0	0
TOTALS		**326**							**0**	**0**	**0**
HP-1/AH-1.5											
106B-OFFICE	1	149	134	0.06	1	5	0.8	16	13	0.926	20
106C-STG	1	164	189	0	0	0	0.8	0	0	1.035	0
106D-STG	1	88	102	0	0	0	0.8	0	0	1.035	0
108A-STG	1	117	137	0	0	0	0.8	0	0	1.035	0
108B-STG	1	151	176	0	0	0	0.8	0	0	1.035	0
109-OFFICE	1	203	198	0.06	1	5	0.8	21	17	0.932	20
110-OFFICE	1	245	138	0.06	1	5	0.8	17	13	0.968	20
111-STG	1	101	117	0	0	0	0.8	0	0	1.035	0
Totals		**1218**							**43**	**0.926**	**60**
DOAS-2N											
211-CORR N	1	87	496	0.06	0	0	0.8	37	30	1	40
223-WOMENS TLTS	1	372	243	0	0	0	1	0	0	1	0
211-CORR N-MID	1	41	352	0.06	0	0	0.8	26	21	1	30
231-OFFICE	1	170	146	0.06	1	5	0.8	17	14	1	15
230-OFFICE	1	70	188	0.06	1	5	0.8	20	16	1	20
228-STUDENT WKSPACE	1	57	121	0.06	1	5	0.8	15	12	1	15
229-OFFICE	1	252	180	0.06	1	5	0.8	20	16	1	20
227-CONF ROOM	1	187	307	0.06	8	5	0.8	73	58	1	75
220A-OFFICE	1	206	133	0.06	1	5	0.8	16	13	1	15
220B-OFFICE	1	243	164	0.06	1	5	0.8	19	15	1	20
220C-OFFICE	1	286	164	0.06	1	5	0.8	19	15	1	20
220-NHCSO&SEC	1	110	354	0.06	0	5	0.8	27	21	1	25
220D-NHCSO FRNT DSK	1	61	146	0.06	1	5	0.8	17	14	1	15
221-OFFICE	1	57	125	0.06	1	5	0.8	16	13	1	15
222-OFFICE	1	60	139	0.06	1	5	0.8	17	13	1	15
Totals		**2259**							**271**	**1**	**340**

VENTILATION SUMMARY

SYSTEM/SPACE NAME	Mult.	SUPPLY AIR (CFM) (Vpz)	SPACE FLOOR AREA (FT²) (Az)	AREA OUTDOOR AIR RATE (CFM/FT²) (Ra)	TIME AVERAGED OCCUPANCY (OCCUPANTS) (Pz)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON) (Rp)	AIR DISTRIBUTION EFFECTIVENESS (Ez)	SPACE OUTDOOR AIR (CFM) (Voz)	BREATHING ZONE OUTDOOR AIR (CFM) (Vbz)	SPACE VENTILATION EFFICIENCY (Evz)	OUTDOOR AIR DELIVERED (CFM)
DOAS-2S											
211-CORR S	1	75	383	0.06	0	0	0.8	29	23	1	30
210-MENS TLTS	1	466	242	0	0	0	1	0	0	1	0
211-CORR S-MID	1	49	421	0.06	0	0	0.8	32	25	1	35
200-LOBBY	1	882	1095	0.06	10	5	0.8	145	116	0.954	200
215-VEND	1	288	367	0.06	0	5	0.8	28	22	1.022	30
206-OFFICE	1	258	153	0.06	1	5	0.8	18	14	1	20
204-OFFICE	1	60	133	0.06	1	5	0.8	16	13	1	20
203-CONTROL ROOM	1	95	102	0.06	1	5	0.8	14	11	1	15
202 ELECT	1	179	75	0	0	0	1	0	0	1	0
212-INFORMAL MTG SPACE	1	113	307	0.06	4	5	0.8	48	38	1	50
212A-OFFICE	1	57	125	0.06	1	5	0.8	16	13	1	20
212B-OFFICE	1	242	157	0.06	1	5	0.8	18	14	1	20
212C-OFFICE	1	275	98	0.06	1	5	0.8	14	11	1	15
213-OFFICE	1	59	133	0.06	1	5	0.8	16	13	1	15
214-IT HELP DESK	1	61	143	0.06	1	5	0.8	17	14	1	15
216-FAC&STAFF BRK	1	381	313	0.06	6	5	0.8	61	49	1	65
205-OFFICE	1	243	145	0.06	1	5	0.8	17	14	1	20
Totals		**3783**							**390**	**0.954**	**570**
DOAS-3N											
309-CLASSROOM	1	686	782	0.12	20	10	0.8	367	294	1	365
317-CLASSROOM	1	508	482	0.12	15	10	0.8	260	208	1	260
310-CLASSROOM	1	686	782	0.12	20	10	0.8	367	294	1	365
316-CLASSROOM	1	591	619	0.12	15	10	0.8	280	224	1	280
311-INF MTG SPACE	1	167	294	0.06	6	5	0.8	60	48	1	60
311D-OFFICE	1	232	116	0.06	1	5	0.8	15	12	1	15
311C-OFFICE	1	201	174	0.06	1	5	0.8	19	15	1	20
311B-OFFICE	1	49	120	0.06	1	5	0.8	15	12	1	15
311A-OFFICE	1	49	120	0.06	1	5	0.8	15	12	1	15
315-STORAGE	1	150	211	0	0	0	1	0	0	1	0
312-WOMENS	1	356	231	0	0	0	1	0	0	1	0
300(4)-CORR	1	102	430	0.06	0	0	0.8	32	26	1	35
300(3)-CORR	1	48	582	0.06	0	0	0.8	44	35	1	45
Totals		**3825**							**1180**	**1**	**1475**
DOAS-3S											
302-CLASSROOM	1	784	775	0.12	20	10	0.8	366	293	1	365
308-CLASSROOM	1	684	774	0.12	20	10	0.8	366	293	1	365
301-CLASSROOM	1	696	710	0.12	20	10	0.8	357	285	1	360
300(1)-CORR	1	31	374	0.06	0	0	0.8	28	22	0.792	30
300(2)-CORR	1	40	478	0.06	0	0	0.8	36	29	1	40
306-MENS	1	349	227	0	0	0	1	0	0	1	0
307-OPEN OFFICE	1	165	293	0.06	4	5	0.8	47	38	1	45
307D-OFFICE	1	194	113	0.06	1	5	0.8	15	12	1	15
307C-OFFICE	1	200	170	0.06	1	5	0.8	19	15	1	20
307B-OFFICE	1	49	121	0.06	1	5	0.8	15	12	1	15
307A-OFFICE	1	49	120	0.06	1	5	0.8	15	12	1	15
Totals		**3241**							**1011**	**0.792**	**1270**
DOAS-4N											
409-CLASSROOM	1	723	775	0.12	20	10	0.8	366	293	1	365
416-CLASSROOM	1	973	907	0.12	25	10	0.8	449	359	1	430
410-CLASSROOM	1	721	770	0.12	20	10	0.8	366	292	1	365
415-STORAGE	1	162	220	0	0	0	1	0	0	1	0
411-CLASSROOM	1	688	829	0.12	10	10	0.8	249	199	1	250
412-WOMENS	1	357	229	0	0	0	1	0	0	1	0
400(4)-CORR	1	128	430	0.06	0	0	0.8	32	26	1	45
400(3)-CORR	1	107	582	0.06	0	0	0.8	44	35	1	50
Totals		**3859**							**1204**	**1**	**1505**
DOAS-4S											
406-MENS	1	357	229	0	0	0	1	0	0	1	0
407-CLASSROOM	1	784	807	0.12	20	10	0.8	371	297	1	375
402-CLASSROOM	1	1221	1120	0.12	30	10	0.8	543	434	1	545
408-CLASSROOM	1	735	796	0.12	20	10	0.8	369	296	1	370
401A-OFFICE	1	188	125	0.06	1	5	0.8	16	13	1	20
401B-OFFICE	1	185	123	0.06	1	5	0.8	15	12	1	20
400(1)-CORR	1	70	380	0.06	0	0	0.8	29	23	0.949	40
400(2)-CORR	1	87	475	0.06	0	0	0.8	36	29	1	50
401-ADJUNCT FAC	1	183	305	0.06	8	5	0.8	73	58	1	50
Totals		**3810**							**1162**	**0.949**	**1470**

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JOHN R. BENSON III
8/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

VENTILATION SUMMARY

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: CRG | PROJ MGR: JRB

M-501

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

COPYRIGHT © 2020

VRF SYSTEM

DESCRIPTION: SPLIT SYSTEM, VARIABLE REFRIGERANT HEAT RECOVERY SYSTEM CONSISTING OF MULTIPLE INDOOR AIR HANDLERS WITH MULTIPLE SPEED AIR VOLUME, UNDER CONTROL OF FACTORY SUPPLIED INTEGRATED DDC SYSTEM w/ BACnet INTERFACE (BNI). EACH INDOOR UNIT MAY BE IN HEATING OR COOLING MODE INDEPENDENT OF THE OTHER INDOOR UNITS.

HEAT PUMP INDOOR AIR HANDLER:

EACH INDOOR AIR HANDLER SHALL BE SCHEDULED ON BY THE BAS SYSTEM AT THE OCCUPIED TIMES DEFINED BY THE OWNER.

THE INDOOR AIR HANDLER SHALL BE SET TO CONTINUOUS FAN MODE DURING OCCUPIED TIMES. DURING UNOCCUPIED TIMES THE INDOOR UNITS SHALL BE SET TO AUTO FAN MODE. UNITS WITH DIRECT OUTSIDE AIR VENTILATION SHALL OPEN OUTSIDE AIR DAMPER DURING OCCUPIED MODE.

THE BAS SHALL SET THE OCCUPIED AND UNOCCUPIED TEMPERATURE SET-POINTS. BAS SHALL GLOBALLY SET THIS AS A SINGLE HEATING/COOLING SET POINT, WITH AN AMBIENT RESET, 70F AT 50F AMBIENT, AND 75F AT 80F AMBIENT, LINEAR IN BETWEEN. UNOCCUPIED SETPOINT SHALL OFFSET OCCUPIED SETPOINT -7F IN HEATING AND +7F IN COOLING.

DURING UNOCCUPIED TIMES THE BAS SHALL SEND THE OFF COMMAND TO THE INDOOR UNIT AT THE START OF UNOCCUPIED TIMES AND EVERY TWO HOURS THEREAFTER TO REINFORCE THE SETBACK CONDITIONS. THE BAS SHALL MONITOR THE ROOM TEMPERATURE AT THE REMOTE CONTROLLER IN THE SPACE AND COMMAND THE UNIT ON IF THE OWNER SPECIFIED UNOCCUPIED LIMITS ARE EXCEED. THE BAS SHALL SEND THE COOL MODE COMMAND WHEN THE TEMPERATURE UPPER LIMIT IS EXCEEDED OR THE HEAT MODE COMMAND WHEN THE TEMPERATURE LOWER LIMIT IS EXCEEDED. BAS SHALL SEND THE TEMPERATURE UPPER OR LOWER LIMIT AS SPACE TEMPERATURE SET-POINT DURING UNOCCUPIED TIME.

SPLIT SYSTEM HEAT PUMP

DESCRIPTION: SPLIT SYSTEM HEAT PUMP CONSISTING OF INDOOR AIR HANDLER WITH FACTORY MATCHED OUTDOOR UNIT UNDER BACnet COMMUNICATING THERMOSTAT (TSTAT) CONTROL.

HEAT PUMP INDOOR AIR HANDLER SHALL BE SCHEDULED ON BY THE BAS SYSTEM AT THE OCCUPIED TIMES DEFINED BY THE OWNER.

THE INDOOR AIR HANDLER SHALL BE SET TO CONTINUOUS FAN MODE DURING OCCUPIED TIMES. DURING UNOCCUPIED TIMES THE INDOOR UNITS SHALL BE SET TO AUTO FAN MODE. UNITS WITH DIRECT OUTSIDE AIR VENTILATION SHALL OPEN OUTSIDE AIR DAMPER DURING OCCUPIED MODE.

THE BAS SHALL SCHEDULE AND SET THE OCCUPIED/UNOCCUPIED TEMPERATURE SET-POINTS FOR INDIVIDUAL UNIT CONTROL VIA LBACnet THERMOSTAT. BAS SHALL BE CAPABLE OF GLOBALLY SETTING HEATING AND COOLING SETPOINTS FOR EACH THERMOSTAT (70F HEATING / 75F COOLING OCCUPIED, 63F HEATING / 82F COOLING UNCOCCUPIED, ADJ.)

TSTAT FACTORY PROGRAMMING SHALL SEQUENCE INDOOR FAN, COMPRESSOR, REVERSING VALVE AND AUXILIARY HEAT TO MAINTAIN ACTIVE TEMPERATURE SETPOINTS.

TSTAT SHALL COMMUNICATE BACnet POINTS TO BAS FOR MONITORING, ADJUSTMENT AND/OR ALARMS.

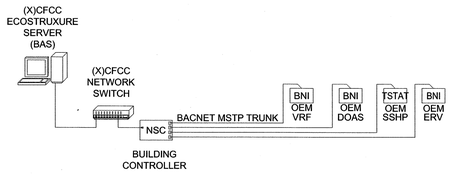
ENERGY RECOVERY VENTILATOR

DESCRIPTION: ENERGY RECOVERY VENTILATOR (ERV) CONSISTING OF FIXED CORE TOTAL ENERGY HEAT EXCHANGER, FRESH AIR SUPPLY FAN AND ROOM AIR EXHAUST FAN WITH UNIT UNDER OEM BACnet CONTROLLER (BNI) CONTROL.

SUPPLY AND EXHAUST FANS AND DAMPERS SHALL BE SCHEDULED ON BY THE BAS SYSTEM AT THE OCCUPIED TIMES DEFINED BY THE OWNER.

THE BAS SHALL SCHEDULE AND SET THE OCCUPIED/UNOCCUPIED MODEL VIA BACnet THROUGH BNI. BAS SHALL BE CAPABLE OF GLOBALLY SETTING SCHEDULE FOR EACH ERV.

ERV BNI SHALL COMMUNICATE BACnet POINTS TO BAS FOR MONITORING, ADJUSTMENT AND/OR ALARMS.



DESIGN BASIS NSC: SCHNEIDER TO MATCH EXISTING CAMPUSWIDE ECOSTRUXURE NETWORK.
APPROVED NSC MANUFACTURERS: JOHNSON CONTROL, TRANE
PREFERED ALTERNATE BID NSC: SCHNEIDER.

1 NETWORK ARCHITECTURE
NOT TO SCALE

DEDICATED OUTSIDE AIR SYSTEM UNIT

DESCRIPTION: FACTORY PACKAGED DEDICATED OUTSIDE AIR SYSTEM UNIT SUPPLYING 100% OUTDOOR AIR DIRECTLY TO SPACE, WITH DX COOLING, HOT GAS REHEAT, AND SCR ELECTRIC HEAT UNDER OEM BACnet CONTROLLER (BNI) CONTROL.

UNIT START/STOP CONTROL: START/STOP SHALL BE SCHEDULED ON BY THE BAS SYSTEM AT THE OCCUPIED TIMES DEFINED BY THE OWNER..

SETPOINTS SHALL BE AS FOLLOWS UNLESS MODIFIED BY USER:

SUPPLY AIR TEMPERATURE:	73ºF (ADJ)
OUTDOOR AIR DEWPOINT TEMPERATURE:	50ºF (ADJ)
DX COIL LEAVING AIR TEMPERATURE:	50ºF (ADJ)

SYSTEM CONTROL:

DURING "ON/OCCUPIED" PERIODS, OUTDOOR AIR DAMPER SHALL OPEN AND UNIT SUPPLY SHALL BE ENERGIZED.

DURING "OFF/UN-OCCUPIED" PERIODS, THE SUPPLY FAN IS OFF AND OUTSIDE AIR DAMPER IS CLOSED.

TEMPERATURE AND HUMIDITY CONTROL:

SUPPLY AIR TEMPERATURE CONTROL: INTERNAL OEM TEMPERATURE CONTROL PROGRAM RAMPS UP AND DOWN HEATING/COOLING DEMAND VALUES BY USING SUPPLY AIR TEMPERATURE CONTROL SET-POINT COMPARED WITH SUPPLY AIR TEMPERATURE SENSOR READING. SUPPLY AIR TEMPERATURE CONTROL SET-POINT IS DETERMINED BY SUPPLY AIR TEMPERATURE SETPOINT (ADJUSTABLE THROUGH BAS VIA BACnet COMMUNICATION WITH BNI).

DEHUMIDIFICATION: IF OUTSIDE AIR DEW-POINT EXCEEDS OUTSIDE AIR DEW-POINT SETPOINT (ADJUSTABLE THROUGH BAS VIA BACnet COMMUNICATION WITH BNI) AND OUTSIDE AIR TEMPERATURE EXCEEDS SUPPLY AIR TEMPERATURE SETPOINT, UNIT WILL ENTER DEHUMIDIFICATION MODE. OEM CONTROLLER WILL MODULATE COOLING CAPACITY TO MAINTAIN DX COIL LEAVING AIR TEMPERATURE SETPOINT AND MODULATE THE HOT GAS REHEAT VALVE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SETPOINT.

COOLING: IF SUPPLY AIR TEMPERATURE EXCEEDS THE SUPPLY AIR TEMPERATURE SETPOINT (ADJUSTABLE THROUGH BAS VIA BACnet COMMUNICATION WITH BNI), UNIT WILL ENABLE THE COMPRESSORS AND MODULATE CAPACITY TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT.

HEATING: IF SUPPLY AIR TEMPERATURE IS LESS THAN THE SUPPLY AIR TEMPERATURE SETPOINT (ADJUSTABLE THROUGH BAS VIA BACnet COMMUNICATION WITH BNI), UNIT WILL INTIATE SCR ELECTRIC HEAT AND MODULATE CAPACITY TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT.

CONTROLS COORDINATION / INTEGRATION:

1. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING / PROGRAMMING AND TESTING ALL OEM CONTROLS FURNISHED UNDER THIS PROJECT USING OEM FACTORY TECHS.
2. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR EXTENDING BACNET MSTP TRUNK WIRING FROM EQUIPMENT TO NSC.
3. BUILDING CONTROLLER VENDOR (DESIGN BASIS-SCHNEIDER) WILL PROVIDE NSC INTEGRATION OF OEM BACNET OBJECTS INTO NSC WITH SUPPORT FROM OEM EQUIPMENT TECHNICIANS.
4. MECHANICAL CONTRACTOR SHALL EMPLOY QUALIFIED OEM FACTORY TECHNICIANS FOR EACH OEM SYSTEM TO SUPPORT BUILDING CONTROLLER VENDOR (DESIGN BASIS-SCHNEIDER) WITH BACNET OBJECTS INTEGRATION INTO NSC.
5. BAS SYSTEM INTEGRATION SHALL BE FULLY COMMISSIONED AND DEMONSTRATED TO VERIFY PROPER OPERATION AND SCHEDULING CAPABILITY OF INSTALLED EQUIPMENT VIA BAS.

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER CHRISTOPHER J. BENSON
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL CONTROLS

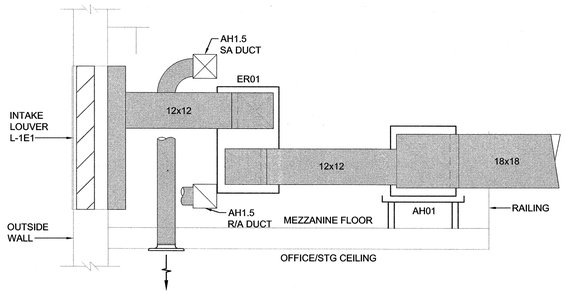
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

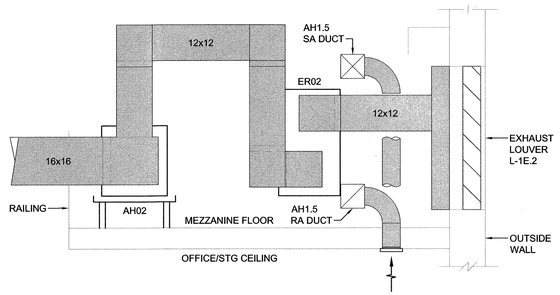
M-502

COPYRIGHT © 2020



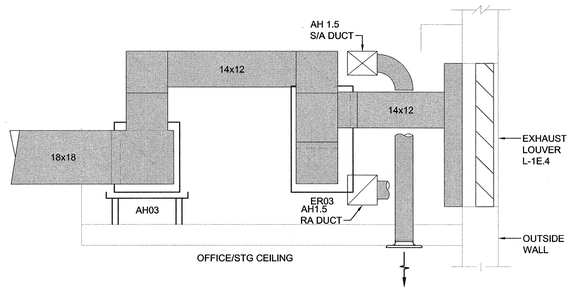
1 MEZZANINE SECTION ER01/AH01

NOT TO SCALE



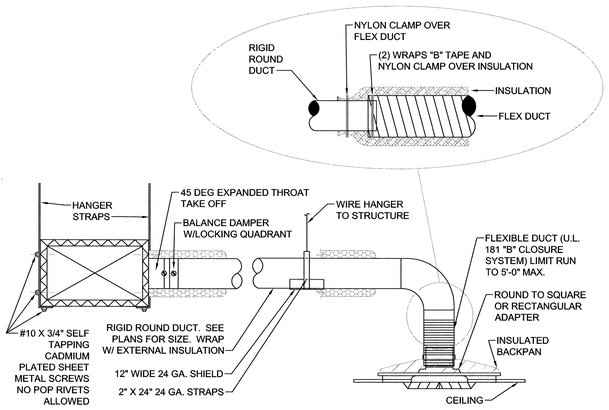
2 MEZZANINE SECTION ER02/AH02

NOT TO SCALE



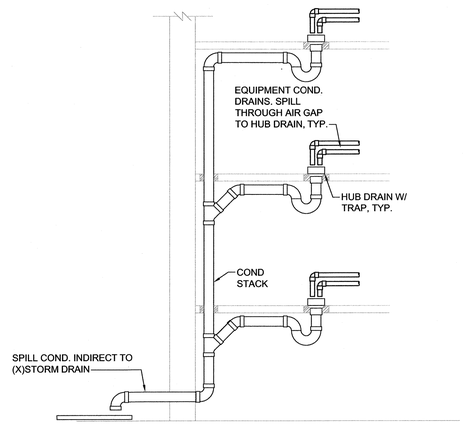
3 MEZZANINE SECTION ER03/AH03

NOT TO SCALE



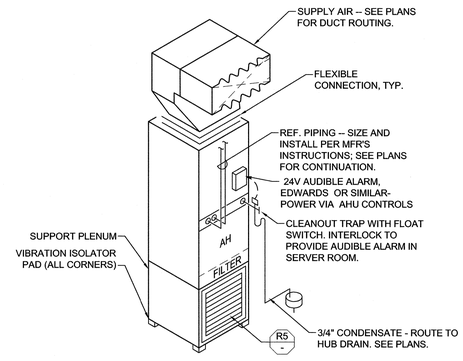
4 TYPICAL DIFFUSER CONNECTION DETAIL

NOT TO SCALE



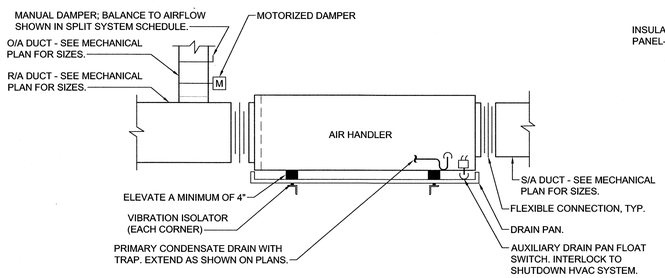
5 CONDENSATE DRAIN DETAIL

NOT TO SCALE



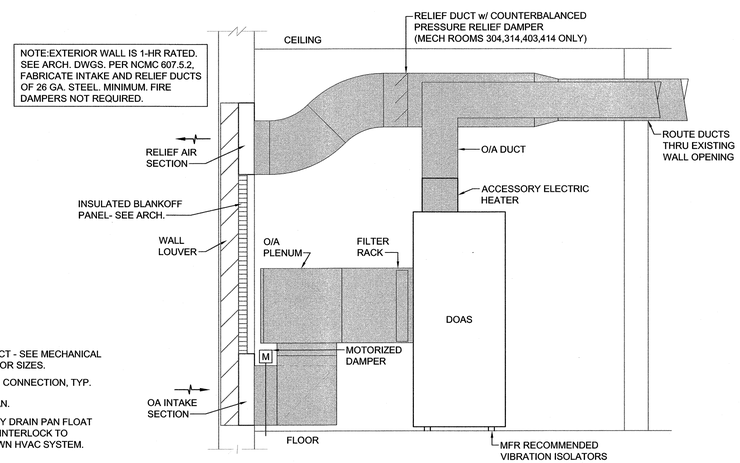
6 SERVER ROOM AIR HANDLER DETAIL

NOT TO SCALE



7 TYPICAL HORIZONTAL AIR HANDLER DETAIL

NOT TO SCALE



8 TYPICAL MECHANICAL ROOM DETAIL

NOT TO SCALE

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENDER
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

M-503

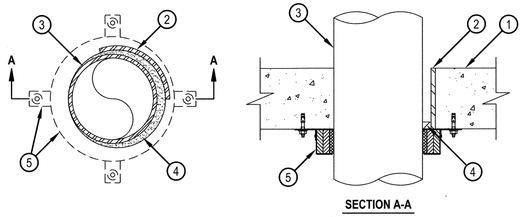
COPYRIGHT © 2020

CAJ 2109

System No. C-AJ-2109

F Ratings — 2 and 3 Hr (See Item 3)
T Ratings — 0, 2 and 3 Hr (See Items 2 and 3)
W Rating - Class 1 (See Items 2, 3 and 4)
L Rating at Ambient — Less Than 1 CFM/sq ft (See Item 4)
L Rating at 400 F — Less Than 1 CFM/sq ft (See Item 4)

Classified by Underwriters Laboratories, Inc. to UL 1479



SECTION A-A

1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 12 in. (305 mm).
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufactures.
2. Steel Sleeve — (Optional) — Nom 12 in. (305 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe cast or grouted into floor or wall assembly, flush with floor or wall surfaces a max of 3 in. (76 mm) above the floor. If the steel sleeve extends above the floor, the T Rating of the firestop system is 0 Hr and a min 1/2 in. (13 mm) annular space is required between the through penetrant (Item 3) and the periphery of the opening. The W Rating does not apply when the steel sleeve is used.
3. Through Penetrants — One nonmetallic pipe to be installed either concentrically or eccentrically within the firestop system. For max 6 in. (152 mm) diam pipes, the annular space between the pipe and the periphery of opening shall be min 0 in. (0 mm, point contact) to max 1/2 in. (13 mm). For nom 8 in. (203 mm) and 10 in. (254 mm) diam pipes, the annular space between the pipe and the periphery of opening shall be min 0 in. (0 mm, point contact) to max 1-1/4 in. (32 mm). If the steel sleeve extends above the floor (Item 2), a min 1/2 in. (13 mm) annular space is required between the through penetrant (Item 3) and the periphery of the opening. Pipe to be rigidly supported on both sides of floor or wall assembly. For systems with a W Rating, the max annular space is 1/2 in. (13 mm). The T Ratings are dependent on the size and/or type of pipe as shown in the table below. The following types and sizes of nonmetallic pipes may be used:
   A. Polyvinyl Chloride (PVC) Pipe — Nom 10 in. (254 mm) diam (or smaller) Schedule 40 solid core or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. For systems with a W Rating, the nom diam of pipe shall not exceed 6 in. (152 mm).
   B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 10 in. (254 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems. For systems with a W Rating, the nom diam of pipe shall not exceed 6 in. (152 mm).
   C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid-core or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
   D. Flame Retardant Polypropylene (FRPP) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. July 31, 2018

CAJ 2109

System No. C-AJ-2109

Pipe Type	Nom Pipe Diam, In. (mm)	F Rating Hr
PVC, CPVC	Greater than 6 (152)	2
PVC, CPVC, ABS, FRPP	6 (152) or smaller	3
Pipe Type	**Nom Pipe Diam, In. (mm)**	**T Rating Hr**
PVC, CPVC, ABS, FRPP	1-1/2, 2, 3 (38, 51, 76)	2
PVC, CPVC, ABS, FRPP	4 (102)	3
PVC, CPVC, ABS+, FRPP	6 (152)	3
PVC, CPVC	Greater than 6 (152)	0
ABS++	6 (152)	0

\+ Indicates solid core ABS only.
++ Indicates cellular core ABS only.

4. Fill, Void or Cavity Material* — Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top or bottom surface of floor or both surfaces of wall. Sealant is optional for pipes having a max diam of 6 in. (152 mm) in unsleeved openings. For systems with W Rating and/or L Rating, min 1/2 in. (13 mm) thickness of CP 601S, CFS-S SIL GG, CFS-S SIL SL (floors only) Sealant shall be applied within the annulus, flush with top or bottom surface of floor.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE MAX Intumescent Sealant, CP 601S Sealant, CFS-S SIL GG, CFS-S SIL SL (floors only) Sealant

4A. Packing Material — (Not Shown) — Min 1/2 in. (13 mm) thickness of 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into annular space and recessed from the top surface of floor to accommodate the required thickness of fill material. Required only when CP 604 Sealant is used.

5. Firestop Device* — Firestop Collar — Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to underside of floor or both sides of wall using the anchor hooks provided with the collar. Minimum two anchor hooks for nom 1-1/2 and 2 in. (38 and 51 mm) diam pipes. Minimum three anchor hooks required for nom 3 and 4 in. (76 and 102 mm) diam pipes. Minimum four anchor hooks required for nom 6 in. (152 mm) diam pipes. Minimum ten anchor hooks required for nom 8 in (203 mm) diam pipes. Minimum twelve anchor hooks required for nom 10 in. (254 mm) diam pipes. The anchor hooks are to be secured with min 1/4 in. (6 mm) diam by min 1-1/4 in. (32 mm) long steel expansion bolts or min 0.145 in. (3.7 mm) diam by 1-1/4 in. (32 mm) long powder actuated fasteners utilizing a 1-7/16 in. (37 mm) diam by 1/16 in. (1.6 mm) thick steel washer. As alternates to the anchors specified above, Hilti 1/4 in. (6 mm) diam by 1-1/4 in. (32 mm) long KWIK-CON II+ concrete screw anchor, Hilti 1/4 in. (6 mm) diam by 1-3/4 in. (45 mm) long KWIK-BOLT 3 steel expansion anchor or Hilti X-DNI 27 P8 S15 powder actuated floor pin with integral nom 9/16 in. (15 mm) diam washer may be used.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 643N 50/1.5", CP 643N 63/2", CP 643N 90/3", CP 643N 110/4", CP 643 160/6", CP 644-200/8" US or CP 644-250/10" US Firestop Collar

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Hilti Firestop Systems

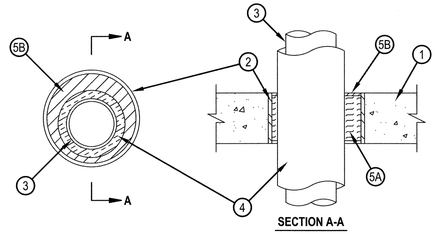
Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. July 31, 2018

CAJ 5090

System No. C-AJ-5090

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 2 and 3 Hr (See Item 4)	F Ratings — 2 and 3 Hr (See Item 4)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — 4 CFM/sq ft	FH Ratings — 2 and 3 Hr (See Item 4)
L Rating At 400 F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
	L Rating At Ambient — 4 CFM/sq ft
	L Rating At 400 F — Less Than 1 CFM/sq ft



SECTION A-A

Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. February 21, 2012

CAJ 5090

1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 18 in. (457 mm).
   See Concrete Blocks (CAZT) Category in the Fire Resistance Directory for names of manufacturers.
2. Metallic Sleeve — (Optional) — Nom 18 in. (457 mm) diam (or smaller) Schedule 10 (or heavier) steel sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces or extending a max of 3 in. (76 mm) above floor or beyond both surfaces of wall.
3. Through Penetrants — One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubing may be used:
   A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
   B. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper tubing.
   C. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
4. Tube Insulation — Plastics+ — Min 1/2 in. (13 mm) to max 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Nom 1 in. (25 mm) thick AB/PVC flexible foam insulation may be used for max 2 hr F and FH Ratings when max 3 in. (76 mm) diam pipe or tubing is used. The annular space shall be min 1/2 in. (13 mm) to max 12 in. (305 mm). When max annular space exceeds 1-1/2 in. (38 mm) the F and FH Ratings are 2 hr.
   See Plastics+ (QMFZ2) Category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.
5. Firestop System — The firestop system shall consist of the following:
   A. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material* — Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall. When max annular space exceeds 1-1/2 in. (38 mm) the min thickness of fill material is 1/2 in. (13 mm).
   HILTI CONSTRUCTION CHEMICALS, DIV OF
   HILTI INC — FS-One Sealant

*Bearing the UL Classification Mark

Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. February 21, 2012

NOTE: PENETRATION DETAILS INDICATED ARE FOR GENERAL REFERENCE ONLY. ALTERNATE LISTED PROTECTION METHODS SUITABLE FOR REQUIRED RATINGS ARE ACCEPATABLE.

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER R. PENDELL LEE 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

UL DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

M-504

COPYRIGHT © 2020

DUCTLESS SPLIT SYSTEM (VRF) SCHEDULE

DRAWING CODE (INDOOR)	DRAWING CODE (OUTDOOR)	BASIS OF DESIGN MANUFACTURER	MODEL INDOOR UNIT	MODEL OUTDOOR UNIT	BRANCH CIRCUIT CONTROLLER	ALTERNATE APPROVED MANUFACTURERS	ARI COOLING 80/67/95		ARI HEATING 70/47	MIN IEER	INDOOR UNIT				OUTDOOR UNIT				NOTES	ACCESSORIES
							TOTAL	SENS	TOTAL		FAN	ELECTRICAL		WEIGHT	ELECTRICAL			WEIGHT		
							(MBH)	(MBH)	(MBH)		SA MIN-MAX (CFM)	VOLTAGE (V/PH/HZ)	MCA (AMPS)	(LBS)	VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)	(LBS)		
AH-1.1 (BASE BID)	HP-1	TRANE/ MITSUBISHI	TPLFYP012FM140A	TURYP0964AN40AN	BC-1	DAIKIN, SANYO	12.0	8.1	13.5	13.1	245-335	208/1/60	0.3	37	460/3/60	32	35	580	1,2,3	A,B,C,D
AH-1.1 (ALT. 1/1A)			TPVFYP024AM141A				24.0	17.4	27.0		515-735		3.0	113						
AH-1.2			TPKFYP015HM142A				15.0	10.5	17.0		320-413		0.4	29						
AH-1.3 (BASE BID)			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-1.3 (ALT. 1/1A)			TPVFYP024AM141A				24.0	17.4	27.0		515-735		3.0	113						
AH-1.4			TPKFYP015HM142A				15.0	10.5	17.0		320-413		0.4	29						
AH-1.5 (ALT. 1/1A)			TPVFYP036AM141A				36.0	26.3	40.0		767-1065		4.1	141						
AH-2E.1	HP-2E	TRANE/ MITSUBISHI	TPVFYP048AM141A	TUHYP0964AN40AN	-	DAIKIN, SANYO	48.0	34.1	54.0	13.1	980-1400	208/1/60	5.6	172	460/3/60	15	20	605	1,3	A,B,C,D
AH-2E.2			TPVFYP048AM141A				48.0	34.1	54.0		980-1400		5.6	172						
AH-2E1.1	HP-2E1		TPVFYP048AM141A	TUHYP0963AN40AN	-	DAIKIN, SANYO	48.0	34.1	54.0	13.1	980-1400	208/1/60	5.6	172	208/3/60	33	50	605	1,3	A,B,C,D
AH-2E1.2			TPVFYP048AM141A				48.0	34.1	54.0		980-1400		5.6	172						
AH-2N.1	HP-2N	TRANE/ MITSUBISHI	TPLFYP005FM140A	TURYP0964AN40AN	BC-2N.1	DAIKIN, SANYO	5.0	4.4	5.6	13.1	230-280	208/1/60	0.2	34	460/3/60	32	35	580	1,2,3	A,B,C,D
AH-2N.2			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-2N.3			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-2N.4			TPLFYP036EM140A				36.0	25.2	40.0		777-1095		0.9	66						
AH-2N.5			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2N.6			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2N.7			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2N.8			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2N.9			TPMFYP006BM140F		BC-2N.2		6.0	5.1	6.7		230-307		0.3	38						
AH-2N.10			TPMFYP008BM140F				8.0	6.3	9.0		258-328		0.3	38						
AH-2N.11			TPMFYP008BM140F				8.0	6.3	9.0		258-328		0.3	38						
AH-2N.12			TPMFYP008BM140F				8.0	6.3	9.0		258-328		0.3	38						
AH-2N.13			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-2N.14			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2N.15			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2N.16			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2S.1	HP-2S	TRANE/ MITSUBISHI	TPLFYP005FM140A	TURYP0964AN40AN	BC-2S.1	DAIKIN, SANYO	5.0	4.4	5.6	13.1	230-280	208/1/60	0.2	34	460/3/60	32	35	580	1,2,3	A,B,C,D
AH-2S.2			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-2S.4			TPLFYP018EM141A				18.0	15.4	20.0		315-460		0.5	37						
AH-2S.5			TPLFYP018EM141A				18.0	15.4	20.0		315-460		0.5	37						
AH-2S.10			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-2S.11			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2S.12			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2S.13			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2S.14			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2S.15			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2S.16			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-2S.3			TPLFYP005FM140A		BC-2S.2		5.0	4.4	5.6		230-280		0.2	34						
AH-2S.6			TPMFYP008BM140F				8.0	6.3	9.0		258-328		0.3	38						
AH-2S.7			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-2S.8			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
*AH-2S.9			TPKFYP012HM142A				12.0	8.8	13.5		320-413		0.4	29						
AH-2S.17			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-3N.1	HP-3N	TRANE/ MITSUBISHI	TPLFYP012FM140A	TURYP0964AN40AN	BC-3N.1	DAIKIN, SANYO	12.0	8.1	13.5	13.1	245-335	208/1/60	0.3	37	460/3/60	32	35	580	1,2,3	A,B,C,D
AH-3N.2			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-3N.3			TPLFYP018FM140A				18.0	15.4	20.0		315-460		0.5	37						
AH-3N.4			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-3N.5			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-3N.6			TPLFYP008FM140A				8.0	6.3	9.0		230-315		0.3	34						
AH-3N.7			TPLFYP008FM140A				8.0	6.3	9.0		230-315		0.3	34						
AH-3N.8			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-3N.9			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-3N.10			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-3N.11			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-3N.12			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-3N.13			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-3N.14			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-3N.15			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-3N.16			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-3S.1	HP-3S	TRANE/ MITSUBISHI	TPLFYP015FM140A	TURYP0964AN40AN	BC-3S.1	DAIKIN, SANYO	15.0	9.9	17.0	13.1	265-390	208/1/60	0.4	37	460/3/60	32	35	580	1,2,3	A,B,C,D
AH-3S.2			TPLFYP015FM140A				15.0	9.9	17.0		265-390		0.4	37						
AH-3S.3			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-3S.4			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-3S.5			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-3S.6			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-3S.7			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-3S.8			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-3S.9			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-3S.10			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-3S.11			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-3S.12			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-3S.13			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-3S.14			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						

NOTES:
1. REFER TO SPECIFICATIONS SECTION 238126.13 FOR FURTHER INFORMATION.
2. WEIGHT INLCUDES GRILLE

ACCESSORIES:
A. SEACOAST COATING PROTECTION ON OUTDOOR UNIT.
B. ROOF MOUNTING RAILS AND ACCESSORIES.
C. WIRED WALL-MOUNTED REMOTE CONTROLLER WITH VANDAL PROOF ENCLOSURE.
D. BACNET INTERFACE FOR INTEGRATION INTO CFCC BMS.

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 16592 ENGINEER CHRISTOPHER R. GRIFFIN III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL SCHEDULES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: CRG | PROJ MGR: JRB

M-601

COPYRIGHT © 2020

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

DUCTLESS SPLIT SYSTEM (VRF) SCHEDULE CONTINUED

DRAWING CODE (INDOOR)	DRAWING CODE (OUTDOOR)	BASIS OF DESIGN MANUFACTURER	MODEL INDOOR UNIT	MODEL OUTDOOR UNIT	BRANCH CIRCUIT CONTROLLER	ALTERNATE APPROVED MANUFACTURERS	ARI COOLING 80/67/95		ARI HEATING 70/47	MIN IEER	INDOOR UNIT				OUTDOOR UNIT				NOTES	ACCESSORIES
							TOTAL	SENS	TOTAL		FAN	ELECTRICAL		WEIGHT	ELECTRICAL			WEIGHT		
							(MBH)	(MBH)	(MBH)		SA MIN-MAX (CFM)	VOLTAGE (V/PH/HZ)	MCA (AMPS)	(LBS)	VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)	(LBS)		
AH-4N.1	HP-4N	TRANE/ MITSUBISHI	TPLFYP012FM140A	TURYP0964AN40AN	BC-4N.1	DAIKIN, SANYO	12.0	8.1	13.5	13.1	245-335	208/1/60	0.3	37	460/3/60	32	35	580	1,2,3	A,B,C,D
AH-4N.2			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-4N.3			TPLFYP018FM140A				18.0	15.4	20.0		315-460		0.5	37						
AH-4N.4			TPLFYP018FM140A				18.0	15.4	20.0		315-460		0.5	37						
AH-4N.5			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-4N.6			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-4N.7			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-4N.8			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-4N.9			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-4N.10			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-4N.11			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-4N.12			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-4S.1	HP-4S	TRANE/ MITSUBISHI	TPLFYP012FM140A	TURYP0964AN40AN	BC-4S.1	DAIKIN, SANYO	12.0	8.1	13.5	13.1	245-335	208/1/60	0.3	37	460/3/60	32	35	580	1,2,3	A,B,C,D
AH-4S.2			TPLFYP015FM140A				15.0	9.9	17.0		265-390		0.4	37						
AH-4S.3			TPLFYP015FM140A				15.0	9.9	17.0		265-390		0.4	37						
AH-4S.4			TPLFYP018FM140A				18.0	15.4	20.0		315-460		0.5	37						
AH-4S.5			TPLFYP018FM140A				18.0	15.4	20.0		315-460		0.5	37						
AH-4S.6			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-4S.7			TPLFYP012FM140A				12.0	8.1	13.5		245-335		0.3	37						
AH-4S.8			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-4S.9			TPMFYP006BM140F				6.0	5.1	6.7		230-307		0.3	38						
AH-4S.10			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-4S.11			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						
AH-4S.12			TPLFYP005FM140A				5.0	4.4	5.6		230-280		0.2	34						

NOTES:
1. REFER TO SPECIFICATIONS SECTION 238126.13 FOR FURTHER INFORMATION.
2. WEIGHT INLCUDES GRILLE

ACCESSORIES:
A. SEACOAST COATING PROTECTION ON OUTDOOR UNIT.
B. ROOF MOUNTING RAILS AND ACCESSORIES.
C. WIRED WALL-MOUNTED REMOTE CONTROLLER WITH VANDAL PROOF ENCLOSURE.
D. BACNET INTERFACE FOR INTEGRATION INTO CFCC BMS.

DEDICATED OUTSIDE AIR SYSTEM SCHEDULE

DRAWING CODE	ASSOCIATED CONDENSING UNIT	LOCATION	DESIGN BASIS MFR	MODEL	ALTERNATE APPROVED MFR	SYSTEM TYPE	CONDENSING UNIT	EFFICIENCY		SA/OA FAN				DX COOLING				HG REHEAT			DX ELECTRICAL			HEATING			HEATER ELECTRICAL			WEIGHT	NOTES	ACCESSORIES
								EER	COP	SA (CFM)	OA (CFM)	ESP (IN H2O)	MOTOR (HP)	TOTAL (MBH)	SENS (MBH)	EAT °F/°Fwb	LAT °F/°Fwb	TOTAL (MBH)	EAT °F	LAT °F	VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)	INPUT (KW)	EAT °F	LAT °F	VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)	(LBS)		
DOAS-2N	ACC-2N	2 MECH N	UNITED COOLAIR	OSAV3G4ASDTA06-T	VALENT, VENMAR	SPLIT SYSTEM	ACC-2N			340	340	0.25	0.25	33.0	15.5	92.0/79.0	50.8/50.8	7.2	50.7	70.7	480/3/60	8.4	15.0	6.0	23.0	78.8	480/3/60	9.0	15.0	552	1,2,3	A-I
DOAS-2S	ACC-2S	2 MECH S	UNITED COOLAIR	OSAV5G4ASDTA10-T	VALENT, VENMAR	SPLIT SYSTEM	ACC-2S			570	570	0.50	0.50	57.9	27.0	92.0/79.0	49.0/49.0	12.3	49.0	69.0	480/3/60	12.8	20.0	10.0	23.0	78.4	480/3/60	15.0	20.0	769	1,2,3	A-I
DOAS-3N	ACC-2N	3 MECH N	UNITED COOLAIR	OSAV12G4ADTA25-T	VALENT, VENMAR	SPLIT SYSTEM	ACC-3N			1475	1475	0.50	0.50	138.7	65.2	92.0/79.0	52.4/52.4	32.0	52.3	72.3	480/3/60	17.7	35.0	25.0	23.0	76.4	480/3/60	37.6	40.0	1126	1,2,3	A-I
DOAS-3S	ACC-3S	3 MECH S	UNITED COOLAIR	OSAV10G4ADTA20-T	VALENT, VENMAR	SPLIT SYSTEM	ACC-3S			1270	1270	0.50	0.50	121.6	57.1	92.0/79.0	51.4/51.4	27.3	51.3	71.3	480/3/60	23.0	30.0	20.0	23.0	72.8	480/3/60	30.1	35.0	1104	1,2,3	A-I
DOAS-4N	ACC-4N	4 MECH N	UNITED COOLAIR	OSAV12G4ADTA25-T	VALENT, VENMAR	SPLIT SYSTEM	ACC-4N			1505	1505	0.50	0.50	139.0	65.4	92.0/79.0	52.5/52.5	32.1	52.5	72.5	480/3/60	27.7	35.0	25.0	23.0	75.5	480/3/60	37.6	45.0	1126	1,2,3	A-I
DOAS-4S	ACC-4S	4 MECH S	UNITED COOLAIR	OSAV12G4ADTA25-T	VALENT, VENMAR	SPLIT SYSTEM	ACC-4S			1470	1470	0.50	0.50	138.7	65.2	92.0/79.0	52.4/52.4	32.0	52.3	72.3	480/3/60	27.7	35.0	25.0	23.0	76.4	480/3/60	37.6	45.0	1126	1,2,3	A-I

NOTES:
1. REFER TO SPECIFICATIONS SECTION 23 74 33 FOR FURTHER INFORMATION.
2. VERTICAL CONFIGURATION
3. EFFICIENCY RATED IN ACCORDANCE WITH ANSI/AHRI STANDARD 340/360.

ACCESSORIES:
A. INSULATED FLOOR AND DRAIN PAN.
B. OA DAMPER WITH MOTOR ACTUATOR.
C. SEPARATE POWER CONNECTIONS FOR DX COOLING AND ELECTRIC HEAT.
D. MODULATING HOT GAS REHEAT.
E. FILTERS: OUTDOOR INTAKE-2"MERV 8
F. DIGITAL SCROLL MODULATING COMPRESSORS ON ALL CIRCUITS.
G. MATCHING SCR CONTROLLED ACCESSORY ELECTRIC HEAT SECTION.
I. 8" HIGH WIND RATED ROOF SUPPORT RAILS WITH SEALED ENGINEERING DOCUMENTATION FOR CONDENSING UNITS. COORDINATE WITH ARCHITECTURAL FOR ROOFING AND FLASHING DETAILS.
H. BACNET INTERFACE FOR INTEGRATION INTO CFCC BMS.

BRANCH CIRCUIT CONTROLLER SCHEDULE

DRAWING CODE	LOCATION	DESIGN BASIS MFR	MODEL	ALTERNATE APPROVED MFR	POWER INPUT (RATED) COOLING (kw)	POWER INPUT (RATED) HEATING (kw)	ELECTRICAL			WEIGHT	NOTES	ACCESSORIES
							VOLTAGE (V/PH/HZ)	MCA (A)	MOCP (A)	(LBS)		
BC-1	SEE PLANS	MITSUBISHI	TCMBG0106SJ11N4	DAIKIN, SANYO	0.086	0.04	208/1/60	0.52	15	76	1,2	1
BC-2N.1			TCMBM1012JA11N4		0.198	0.106		1.57	15	133	1,2	1
BC-2N.2			TCMBS0108KB11N4		0.122	0.061		0.74	15	69	1,2	1
BC-2S.1			TCMBM1012JA11N4		0.198	0.106		1.57	15	133	1,2	1
BC-2S.2			TCMBS0108KB11N4		0.122	0.061		0.74	15	69	1,2	1
BC-3N			TCMBG1016SJ11N4		0.243	0.122		1.47	15	131	1,2	1
BC-3S			TCMBG1016SJ11N4		0.243	0.122		1.47	15	131	1,2	1
BC-4N			TCMBG1016SJ11N4		0.243	0.122		1.47	15	131	1,2	1
BC-4S			TCMBG1016SJ11N4		0.243	0.122		1.47	15	131	1,2	1

NOTES:
1. REFER TO SPECIFICATIONS SECTION 238126.13 FOR FURTHER INFORMATION.
2. PROVIDE GRAVITY DRAIN CONDENSATE PIPING AS INDICATED.

ACCESSORIES:
A. SUCTION AND LIQUID LINES SERVICE ISOLATION VALVES FOR ALL PORTS.

CONDENSING UNIT SCHEDULE

DRAWING CODE	ASSOCIATED EVAPORATOR	LOCATION	DESIGN BASIS MFR	MODEL	ALTERNATE APPROVED MFR	COOLING			ELECTRICAL CHARACTERISTICS				NOTES	ACCESSORIES
						TOTAL (MBH)	SENS (MBH)	COND EAT (°DF)	VOLTAGE (V/PH/HZ)	FAN QTY@FLA	MCA	MOCP		
ACC-2N	DOAS2N-1	ROOF	UNITED COOLAIR	PBC5G4ASTA	VALENT, VENMAR	33.0	15.5	95.0	480/3/60	1@1.2	1.5	15		
ACC-2S	DOAS2S-1	ROOF	UNITED COOLAIR	PBC10G4ASTA	VALENT, VENMAR	57.9	27.0	95.0	480/3/60	2@1.2	2.7	15		
ACC-3N	DOAS3N-1	ROOF	UNITED COOLAIR	PBC23G4ATA	VALENT, VENMAR	138.7	65.2	95.0	480/3/60	3@1.2	3.9	15		
ACC-3S	DOAS3S-1	ROOF	UNITED COOLAIR	PBC21G4ATA	VALENT, VENMAR	121.6	57.1	95.0	480/3/60	3@1.2	3.9	15		
ACC-4N	DOAS4N-1	ROOF	UNITED COOLAIR	PBC23G4ATA	VALENT, VENMAR	139.0	65.4	95.0	480/3/60	3@1.2	3.9	15		
ACC-4S	DOAS4S-1	ROOF	UNITED COOLAIR	PBC23G4ATA	VALENT, VENMAR	138.7	65.2	95.0	480/3/60	3@1.2	3.9	15		

NOTES:
1. REFER TO SPECIFICATIONS SECTION 23 74 33 FOR FURTHER INFORMATION.

ACCESSORIES:

POWER VENTILATOR SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	FAN TYPE	SERVICE	CAPACITIES					ELECTRICAL					SONES	WEIGHT (LBS.)	NOTES	ACCESSORIES
						AIRFLOW (CFM)	ESP (IN. WG.)	DRIVE ARRANGEMENT	FAN RPM	MOTOR RPM	MOTOR TYPE	MOTOR SIZE (W)	V/PH/HZ	MCA	MOCP				
PV01-04	GREENHECK	SP-B150	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	EXHAUST	140	0.30	DIRECT	963	1050	PSC	128	115/1/60	2.1	15	2.5	11	1,2,3	A
PV05-PV11	GREENHECK	SP-A410	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	EXHAUST	280	0.30	DIRECT	906	1000	PSC	121	115/1/60	2.2	15	2.0	32	1,2,3	A
PV11-PV12	GREENHECK	SP-A110	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	EXHAUST	70	0.31	DIRECT	950	-	PSC	17	115/1/60	0.6	15	0.9	17	1,2,3	A

NOTES:
1. REFER TO SPECIFICATION SECTION 23 34 23 FOR FURTHER INFORMATION.
2. WEIGHT INCLUDES ACCESSORIES.
3. ON/OFF CONTROL VIA OCCUPANCY SENSOR BY ELECTRICAL CONTRACTOR. COORDINATE REQUIREMENTS.

ACCESSORIES:
A. SPEED CONTROLLER FOR BALANCING.

ELECTRIC HEATER SCHEDULE

DRAWING CODE	LOCATION	DESIGN BASIS MANUFACTURER	MODEL	DESCRIPTION			ELECTRIC COIL		SUPPLY AIR	FAN MOTOR	ELECTRICAL		WEIGHT (LBS)	MOUNTING HEIGHT (FT)	NOTES	ACCESSORIES
				TYPE	FAN	DISCHARGE	CAPACITY (W)	STEPS	AIRFLOW (CFM)	SPEED (RPM)	POWER (V/PH/HZ)	FLA				
EUH1	RISER	MARKEL	E3055T2DWB	WALL HEATER	PROPELLER	HORIZONTAL	1500	1	100.0	1060.0	120/1/60	12.5	25	2	1	A,B

NOTES:
1. REFER TO SPECIFICATION 23 83 00 FOR FURTHER INFORMATION.

ACCESSORIES:
A. FACTORY INSTALLED THERMOSTAT.
B. WALL MOUNT BRACKET

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER BENJAMIN R. HILL
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL SCHEDULES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: CRG PROJ MGR: JRB

M-602

COPYRIGHT © 2020

SPLIT SYSTEM SCHEDULE

DRAWING CODE (IDU/ODU)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL (IDU/ODU)	ALTERNATE APPROVED MANUFACTURERS	SYSTEM TYPE	COOLING (AHRI STANDARD)			HEATING (AHRI STANDARD)		INDOOR UNIT				ELECTRICAL						REFRIGERANT PIPING		WEIGHT (LBS.)		NOTES	ACCESSORIES
					TOTAL (MBH)	SENSIBLE (MBH)	EFFICIENCY	TOTAL (MBH)	EFFICIENCY	SUPPLY AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP (IN. WG.)	AUX HEAT CAP (KW)	INDOOR UNIT (V/PH/HZ)	INDOOR UNIT (MCA)	INDOOR UNIT (MOCP)	OUTDOOR UNIT (V/PH/HZ)	OUTDOOR UNIT (MCA)	OUTDOOR UNIT (MOCP)	MAXIMUM LENGTH (FT.)	MAXIMUM HEIGHT DIFFERENTIAL (FT.)	INDOOR UNIT	OUTDOOR UNIT		
AH01/HP01	TRANE	GAM5B0C60M51 / 4TWA4060A4	YORK, CARRIER	HEAT PUMP	57.2	43.1	EER 12.0	53.6	COP 3.5	1840	865	0.5	15.0	460/3/60	25.0	30.0	460/3/60	9.0	15	TBD	TBD	170	274	1,2	A,B
AH02/HP02	TRANE	GAM5B0C48M41 / 4TWA4048A4	YORK, CARRIER	HEAT PUMP	48.2	35.9	EER 12.0	42.0	COP 3.4	1600	760	0.5	15.0	460/3/60	25.0	30.0	460/3/60	8.0	15	TBD	TBD	166	218	1,2	A,B
AH03/HP03	TRANE	GAM5B0C60M51 / 4TWA4060A4	YORK, CARRIER	HEAT PUMP	57.2	43.1	EER 12.0	53.6	COP 3.5	1840	1060	0.5	15.0	460/3/60	25.0	30.0	460/3/60	9.0	15	TBD	TBD	170	274	1,2	A,B

NOTES:
1. REFER TO SPECIFICATION SECTION 23 81 26 FOR FURTHER INFORMATION.
2. PROVIDE MATCHING AUXILARY HEATER WITH SINGLE POINT POWER CONNECTION, WARREN TECHNOLOGY WGM1505A.

ACCESSORIES:
A. AUTO-CHANGEOVER HEAT-COOL PROGRAMMABLE THERMOSTAT WITH BACNET INTERFACE FOR INTEGRATION INTO CFCC BMS.
B. SINGLE POINT POWER CONNECTION.

EXHAUST RECOVERY VENTILATOR

DRAWING CODE	LOCATION	DESIGN BASIS MANUFACTURER	MODEL	ALTERNATE APPROVED MANUFACTURER	CONFIGURATION	SUPPLY FAN				EXHAUST FAN				FIXED CORE-SUMMER				FIXED CORE-WINTER				VOLTAGE	MCA	MOCP	WEIGHT	NOTES	ACCESSORIES
						AIRFLOW (CFM)	E.S.P. (IN. WG.)	DRIVE	MOTOR (HP)	AIRFLOW (CFM)	E.S.P. (IN. WG.)	DRIVE	MOTOR (HP)	OA EAT °Fdb/°Fwb	OA LAT °Fdb/°Fwb	EA EAT °Fdb	EA LAT °Fdb/°Fwb	RECOVERY (MBH)	OA EAT °Fdb/°Fwb	OA LAT °Fdb/°Fwb	EA EAT °Fdb	EA LAT °Fdb/°Fwb	RECOVERY (MBH)	(V/PH/HZ)	(AMPS)	(AMPS)	(LBS.)		
ER01	MEZZANINE	RENEWAIRE	HE1XINH	GREENHECK, AIRXCHANGE	HORIZONTAL	865	0.48	DIRECT	0.75	865	0.45	DIRECT	0.75	92.6/77.0	80.9/70.5	75.0	-	47.6	27.7/19.5	55.9/38.2	70.0	-	60.7	460/3/60	2.6	15	275	1	A,B
ER02	MEZZANINE	RENEWAIRE	HE1XINH	GREENHECK, AIRXCHANGE	HORIZONTAL	760	0.88	DIRECT	0.75	760	0.83	DIRECT	0.75	92.6/77.0	80.5/70.1	75.0	-	21.6	27.7/19.5	56.8/39.1	70.0	-	26.0	460/3/60	2.6	15	275	1	A,B
ER03	MEZZANINE	RENEWAIRE	HE1XINH ECM	GREENHECK, AIRXCHANGE	HORIZONTAL	1,060	1.01	DIRECT	0.50	1,060	1.06	DIRECT	0.50	92.6/77.0	80.3/69.9	75.0		30.8	27.7/19.5	57.2/39.4	70.0	-	37.0	460/3/60	2.5	15	504	1	A,B

NOTES:
1. REFER TO SPECIFICATIONS SECTION 23 72 00 FOR FURTHER INFORMATION.
2. PROVIDE 2" MERV 8 FILTERS AND SINGLE POINT POWER CONNECTION.

ACCESSORIES:
A. MOTORIZED ISOLATION DAMPER - BOTH AIRSTREAMS.
B. INTEGRATED PROGRAMMABLE CONTROLLER WITH BACNET INTERFACE FOR INTEGRATION WITH CFCC BMS.

LOUVER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	FRAME	DESCRIPTION	MATERIAL	LOUVER DEPTH (IN.)	SIZE (W x H) (IN.)	SERVICE	AIRFLOW (CFM)	PERFORMANCE RATINGS			NOTES	ACCESSORIES
												FREE AREA (SF)	S.P. LOSS (IN.H20)	WATER PENETRATION (OZ./SF)		
L-1E.1 (ALT 1/1A)	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	36 X 36	INTAKE	1,490	4.77	0.02	0	1,2,3	A
L-1E.2 (ALT 1/1A)	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	36 X 36	EXHAUST	1,625	4.77	0.02	0	1,2,3	A
L-1E.3 (ALT 1/1A)	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	36 X 36	INTAKE	1,525	4.77	0.02	0	1,2,3	A
L-1E.4 (ALT 1/1A)	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	36 X 36	EXHAUST	1,060	4.77	0.01	0	1,2,3	A
L-1E.5 (ALT 1/1A)	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	36 X 36	INTAKE	1,685	4.77	0.02	0	1,2,3	A
L-1N.1	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	12 X 12	EXHAUST	140	0.36	0.03	0	1,2	A
L-1S.1	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	12 X 12	EXHAUST	140	0.36	0.03	0	1,2	A
L-2N.1	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	120 X 24	INTAKE	-	-	-	0	1,2,3	A
L-2N.2	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	16 X 12	EXHAUST	350	0.50	0.07	0	1,2	A
L-2S.1	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	120 X 24	INTAKE	-	-	-	0	1,2	A
L-2S.2 (BASE)	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	16 X 12	EXHAUST	280	0.43	0.05	0	1,2,4	A
L-2S.2 (ALT 2)	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	16 X 12	EXHAUST	350	0.50	0.07	0	1,2,6	A
L-3N.1	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	120 X 24	INT / REL	-	3.32	0.03	0	1,2	A
L-3N.2	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	16 X 12	EXHAUST	280	0.43	0.05	0	1,2	A
L-3S.1	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	32 X 28	INT / REL	-	3.32	0.02	0	1,2	A
L-3S.2	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	16 X 12	EXHAUST	280	0.43	0.05	0	1,2	A
L-4N.1	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	120 X 24	INT / REL	-	3.32	0.03	0	1,2	A
L-4N.2	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	16 X 12	EXHAUST	280	0.43	0.05	0	1,2	A
L-4S.1	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	120 X 24	INT / REL	-	3.32	0.03	0	1,2	A
L-4S.2	RUSKIN	ELF6375DX	GREENHECK, POTTORFF	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	16 X 12	EXHAUST	280	0.43	0.05	0	1,2	A

NOTES:
1. REFER TO SPECIFICATION SECTION 08 91 19 FOR FURTHER INFORMATION.
2. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLOR AND GLOSS.
3. FIELD VERIFY EXACT DIMENSIONS. INSTALL IN EXISTING OPENING. SIZE IS APPROXIMATE.
4. BASE BID ONLY.
5. ALTERNATE BID 1 AND 1A ONLY.
6. ALTERNATE BID 2 ONLY.

ACCESSORIES:
A. BIRDSCREEN (MATERIAL TO MATCH LOUVER MATERIAL).

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	SERVICE	NECK SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	6Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	-
S2	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	8Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	-
S3	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	10Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	-
S4	PRICE	620	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	SUPPLY	8 X 4	-	ALUMINUM	MATCH	DUCT SURFACE	1,2	-
S5	PRICE	620	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	SUPPLY	14 X 4	-	ALUMINUM	MATCH	WALL SURFACE	1,2	-
S6	PRICE	620	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	SUPPLY	18 X 4	-	ALUMINUM	MATCH	WALL SURFACE	1,2	-
S7	PRICE	620	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	SUPPLY	24 X 4	-	ALUMINUM	WHITE	WALL SURFACE	1,2	-
S8	PRICE	RCDE	METALAIRE, TITUS	ROUND CEILING DIFFUSER	SUPPLY	6Ø	-	ALUMINUM	WHITE	CEILING SURFACE	1,2,3	-
S9	KEES	PL-14D	AIR CONCEPTS, ANEMOSTAT	PUNKAH DIFFUSER	SUPPLY	14Ø	-	ALUMINUM	SILVER	DUCT SURFACE	1	A
R1	PRICE	LG50	METALAIRE, TITUS	LATTICE GRILLE	RETURN	6-1/2 X 6-1/2	-	ALUMINUM	WHITE	CEILING SURFACE	1,4	-
R2	PRICE	630	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	RETURN	14 X 12	-	ALUMINUM	MATCH	DUCT SURFACE	1	-
R3	PRICE	630	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	RETURN	28 X 20	-	ALUMINUM	MATCH	WALL SURFACE	1	-
R4	PRICE	630	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	RETURN	24 X 20	-	ALUMINUM	MATCH	WALL SURFACE	1	-
R5	PRICE	630	METALAIRE, TITUS	LOUVERED GRILLE	RETURN	22 X 22	-	ALUMINUM	MATCH	SURFACE	1	-
R6	PRICE	630	METALAIRE, TITUS	LOUVERED GRILLE	RELIEF	22 X 22	-	ALUMINUM	MATCH	T-BAR	1,5	-
E1	PRICE	630	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	EXHAUST	20 X 14	-	ALUMINUM	MATCH	WALL SURFACE	1	A
E2	PRICE	630	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	EXHAUST	20 X 16	-	ALUMINUM	MATCH	WALL SURFACE	1	A

NOTES:
1. REFER TO SPECIFICATION SECTION 23 37 13 FOR FURTHER INFORMATION.
2. DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.
3. DIFFUSER CONES SHALL MOUNT FULLY BELOW CEILING TO MATCH WITH DUCT PENETRATION THRU MEZZANINE FLOOR.
4. MOUNT ON FACE OF CEILING OVER DUCT PENETRATION THRU MEZZANINE FLOOR.
5. ALTERNATE BID 1 AND 1A ONLY.

ACCESSORIES:
A. VOLUME DAMPER.

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC
NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON III 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

MECHANICAL SCHEDULES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: CRG | PROJ MGR: JRB

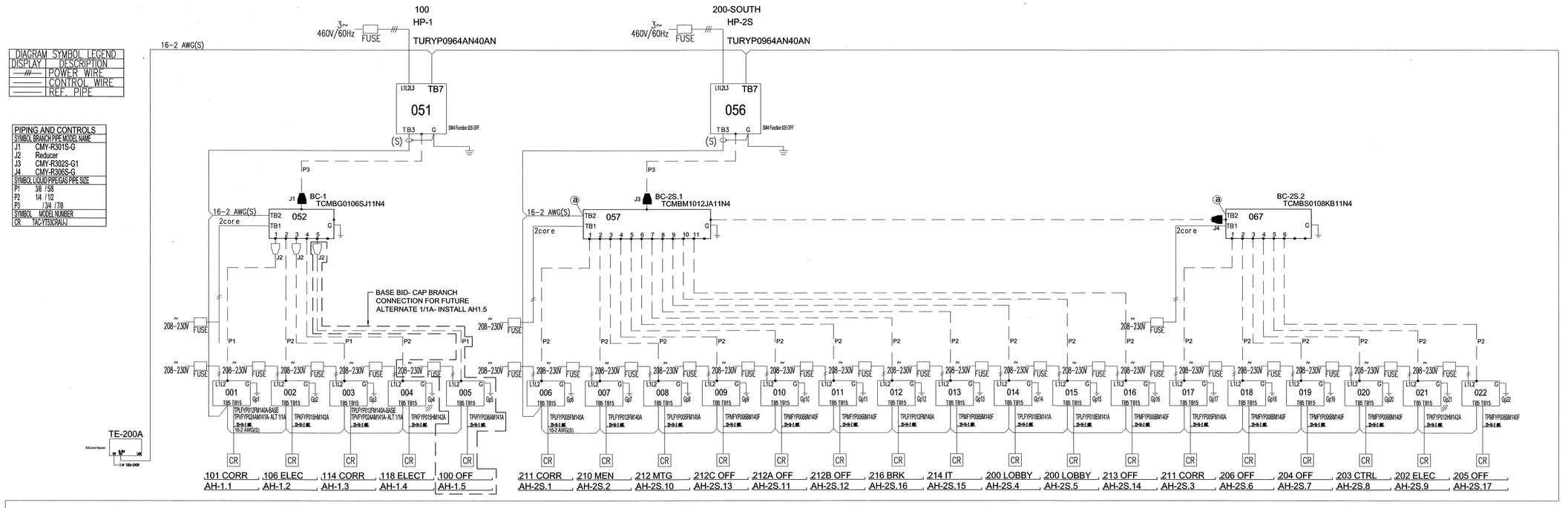
M-603

COPYRIGHT © 2020

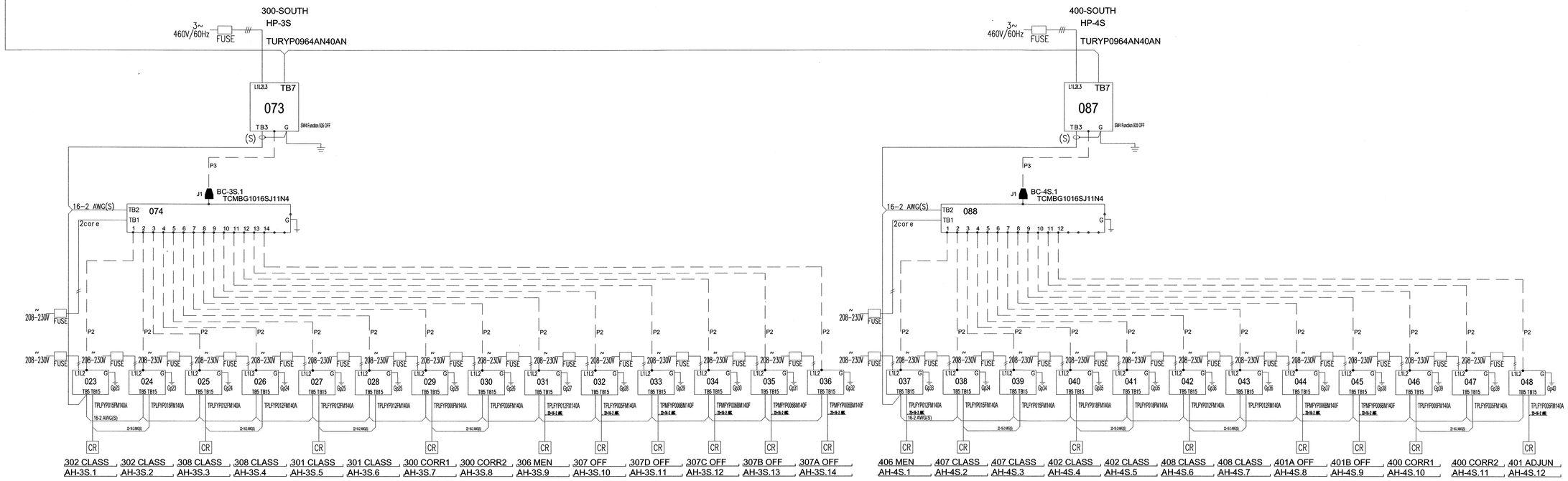
Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
1.25mm(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
——///	POWER WIRE
———	CONTROL WIRE
———	REF. PIPE

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	CMY-R301S-G
J2	Reducer
J3	CMY-R302S-G1
J4	CMY-R306S-G
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	3/8 / 5/8
P2	1/4 / 1/2
P3	3/4 / 7/8
SYMBOL	MODEL NUMBER
CR	TAC-CYS3CRAU-J



TE-200A
BACnet Master



1 VRF SYSTEM SCHEMATIC
NOT TO SCALE

NOTE: PIPING / WIRING DESIGN BASED ON SCHEDULED MITSUBISHI EQUIPMENT. APPROPRIATE ARRANGEMENTS AS REQUIRED BY OTHER MANUFACTURERS ARE ACCEPTABLE.

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER III JAMES A. BOWDEN 08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

VRF PIPING / WIRING SCHEMATIC

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

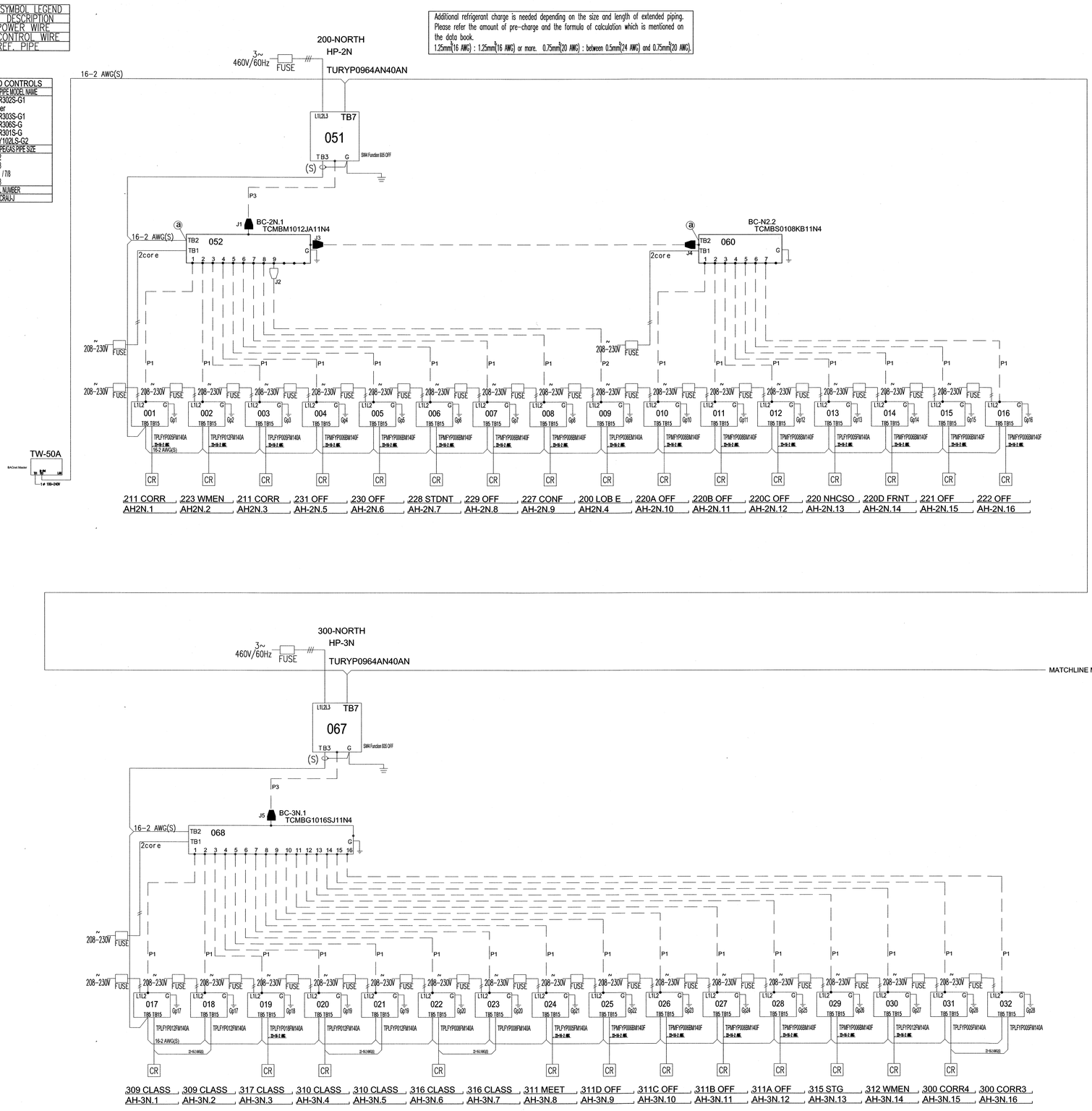
M-604

COPYRIGHT © 2020

DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
-//-	POWER WIRE
———	CONTROL WIRE
———	REF. PIPE

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	CMY-R302S-G1
J2	Reducer
J3	CMY-R303S-G1
J4	CMY-R306S-G
J5	CMY-R301S-G
J6	CMY-Y102LS-G2
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	1/4 / 1/2
P2	3/8 / 5/8
P3	1/2 / 7/8
P4	3/8 / 7/8
SYMBOL	MODEL NUMBER
CR	TAC-(1)S30CRAU-J

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).



TW-50A
BACnet Master

NOTE: PIPING / WIRING DESIGN BASED ON SCHEDULED MITSUBISHI EQUIPMENT. APPROPRIATE ARRANGEMENTS AS REQUIRED BY OTHER MANUFACTURERS ARE ACCEPTABLE.

1 **VRF SYSTEM SCHEMATIC**
NOT TO SCALE

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 035928 ENGINEER CHRISTOPHER R. BENNETT
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

VRF PIPING / WIRING SCHEMATIC

ISSUE BLOCK

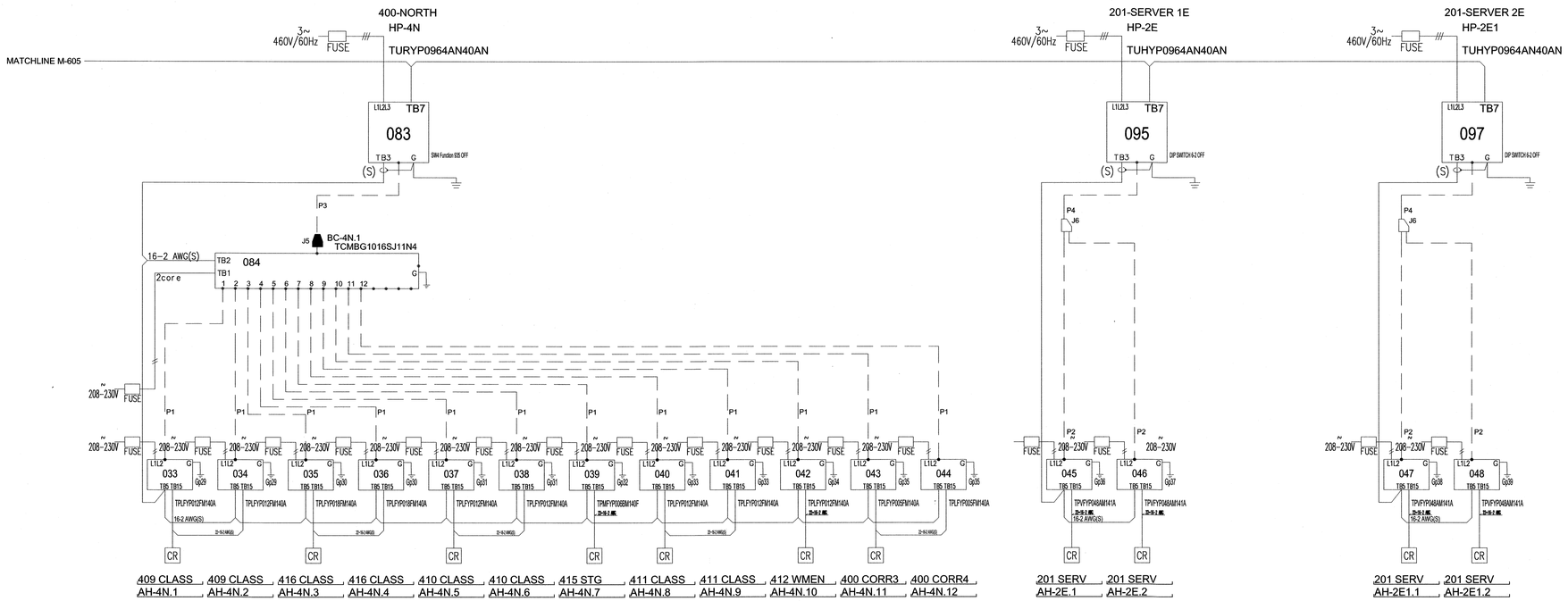
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

M-605

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC NC# P-0506
COPYRIGHT © 2020



1 VRF SYSTEM SCHEMATIC
NOT TO SCALE

NOTE: PIPING / WIRING DESIGN BASED ON SCHEDULED MITSUBISHI EQUIPMENT. APPROPRIATE ARRANGEMENTS AS REQUIRED BY OTHER MANUFACTURERS ARE ACCEPTABLE.

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

© Copyright 2020 CBHF Engineers, PLLC

NC# P-0506

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON III
08/14/2020

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

VRF PIPING / WIRING SCHEMATIC

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: CRG	PROJ MGR: JRB

M-606

COPYRIGHT © 2020

Abbreviations

A	AMPERES
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALUM	ALUMINUM
AMP	AMPERE
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CFM	CUBIC FEET PER MINUTE
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DI	DOOR INTERLOCK
DN	DOWN
E	EXISTING
EC	ELECTRICAL CONTRACTOR
EG	EQUIPMENT GROUND
ELECT	ELECTRICAL
ELEV	ELEVATION
EM	EMERGENCY
ENCL	ENCLOSURE
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FLEX	FLEXIBLE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTING
G, GRD	GROUND
GRS	GALVANIZED RIGID STEEL
HDSS	HEAVY DUTY SAFETY SWITCH
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HT	HEIGHT
HZ	HERTZ
IDU	INDOOR UNIT
INST	INSTANTANEOUS
INSTR	INSTRUMENT
KEC	KITCHEN EQUIPMENT CONTRACTOR
LA	LIGHTNING ARRESTOR
MC	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MFR	MANUFACTURER
MH	METAL HALIDE
MTD	MOUNTED
MTG	MOUNTING
NC	NORMALLY CLOSED
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
ODU	OUTDOOR UNIT
OL	OVERLOAD
P	POLE
PC	PLUMBING CONTRACTOR OR PHOTOCELL
ø	PHASE
PL	PILOT LIGHT
PR	PAIR
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
R	EXISTING TO REMAIN
RECEPT	RECEPTACLE
RGC	RIGID GALVANIZED CONDUIT
RL	RELOCATE OR RELOCATED
RM	ROOM
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTOR
SEC	SECONDS OR SECONDARY
SPECS	SPECIFICATIONS
SN	SOLID NEUTRAL
SS	STAINLESS STEEL
SW	SWITCH
SWGR	SWITCHGEAR
TC	TIME DELAY ON CLOSING
TEL	TELEPHONE
TO	TIME DELAY ON OPENING
TS	TIME SWITCH
TW	TWISTED
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
W	WATTS
WP	WEATHERPROOF
XFMR	TRANSFORMER

Legend

	RACEWAY CONCEALED ABOVE CEILING OR IN WALLS
	RACEWAY EXPOSED ON WALLS OR CEILING
	RACEWAY CONCEALED BELOW OR IN SLAB/FLOOR
PPA-1,3	HOMERUN TO PANEL, ARROWS INDICATE NO. OF CIRCUITS
	FLEXIBLE METAL CONDUIT OR LIQUIDTIGHT FLEX AS APPLICABLE
3/4" C.	CONDUIT: SIZE AND FILL AS NOTED
3 #12 & 1 #12 EG	THREE NO. 12 AWG CONDUCTORS AND ONE NO. 12 AWG EQUIPMENT GROUND
	GROUND AS PRESCRIBED BY CODES, OR AS SHOWN
$	SINGLE POLE SWITCH, 48" AFF, UNO
$3	THREE WAY SWITCH, 48" AFF, UNO
$O	WALL BOX OCCUPANCY SENSOR, 48" AFF UNO, SEE SPECS SECTION 262726
2$O	WALL BOX OCCUPANCY SENSOR, 48" AFF UNO WITH TWO SINGLE POLE SWITCHES FOR BI-LEVEL CONTROL, 48" AFF UNO, SEE SPECS SECTION 262726
D$O	COMBINATION WALL BOX OCCUPANCY SENSOR/0-10V DIMMER SWITCH, 48" AFF UNO, SEE SPECS SECTION 262726
$2P	MOTOR RATED 2 POLE, 208 VOLT SNAP SWITCH
OS	FLUSH CEILING MOUNTED OCCUPANCY SENSOR AND POWER PACK, SEE SPECS SECTION 262726.
J	JUNCTION BOX, SIZE AS SPECIFIED OR REQUIRED
E	EXISTING DUPLEX RECEPTACLE, 18" AFF, UNO
	DUPLEX RECEPTACLE, 18" AFF, UNO
E	EXISTING DUPLEX RECEPTACLE, 42" AFF, UNO
	DUPLEX RECEPTACLE, 42" AFF, UNO
GFI E	EXISTING GROUND FAULT RECEPTACLE, 18" AFF
GFI	GROUND FAULT RECEPTACLE, 42" AFF
Q E	EXISTING QUADRAPLEX RECEPTACLE, 18" AFF, UNO
Q	QUADRAPLEX RECEPTACLE, 42" AFF, UNO
TP	TAMPERPROOF DUPLEX RECEPTACLE, 18" AFF, UNO
▼E	EXISTING TELECOMMUNICATIONS OUTLET, 18" AFF, UNO, EXISTING CABLES MODIFIED AND NEW CABLES PROVIDED AND INSTALLED BY OWNER
▼	TELECOMMUNICATIONS OUTLET, 18" AFF, UNO WITH 1" EMPTY C. TO ACCESSIBLE CEILING CAVITY. EXISTING AND NEW TELECOM/DATA CABLES MODIFIED/PROVIDED AND INSTALLED BY OWNER
	EXISTING ELECTRICAL DISTRIBUTION PANELBOARD/PULLBOX ENCLOSURE
	NEW ELECTRICAL DISTRIBUTION PANELBOARD, SEE PANEL SCHEDULE
30 SAF. SW. PLAN / 30 SAF. SW. ELEVATION	ENCLOSED CIRCUIT BREAKER OR FUSIBLE HEAVY DUTY SAFETY SWITCH, 250 OR 600 VOLT AS APPLICABLE, NEMA-1 ENCLOSURE, 3P, 4W, UNO "30" INDICATES RATING IN AMPERES "CB" INDICATES ENCLOSED CIRCUIT BREAKER "2P" INDICATES 2 POLE, 3 WIRE "3P" INDICATES 3 POLE, 3 WIRE "NF" INDICATES NON-FUSIBLE SAFETY SWITCH "SE" INDICATES U.L. SERVICE ENTRANCE LABEL "3R" INDICATES NEMA-3R ENCLOSURE
CIRC. BKR. PLAN / CB CIRC. BKR. ELEVATION	
LX	RECESS MOUNTED LED LIGHTING FIXTURE, LETTER INDICATES FIXTURE TYPE, SEE LIGHTING FIXTURE SCHEDULE
LX	SURFACE/PENDANT MOUNTED LED LIGHTING FIXTURE. LETTER INDICATES FIXTURE TYPE, SEE LIGHTING FIXTURE SCHEDULE
LX	RECESSED LED DOWNLIGHTING FIXTURE. LETTER INDICATES FIXTURE TYPE, SEE LIGHTING FIXTURE SCHEDULE
LX	CEILING OUTLET AND LED TYPE LIGHTING FIXTURE. LETTER INDICATES FIXTUTE TYPE, SEE LIGHTING FIXTURE SCHEDULE
LX	WALL OUTLET AND LED TYPE LIGHTING FIXTURE. LETTER INDICATED FIXTURE TYPE, SEE LIGHTING FIXTURE SCHEDULE
	CEILING OUTLET AND SINGLE FACE EXIT SIGN WITHOUT CHEVRONS, SEE LIGHTING FIXTURE SCHEDULE
	CEILING OUTLET AND SINGLE OR DOUBLE FACE EXIT SIGN WITH CHEVRONS AS INDICATED, SEE LIGHTING FIXTURE SCHEDULE
	WALL OUTLET AND EMERGENCY LIGHTING FIXTURE, SEE LIGHTING FIXTURE SCHEDULE

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP

ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN D. MCFADYEN
9-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ELECTRICAL ABBREVIATIONS AND LEGEND

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E001

COPYRIGHT © 2020

ELECTRICAL GENERAL NOTES

1. THE CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS, THE AMOUNT OF SPACE AVAILABLE FOR ELECTRICAL EQUIPMENT, AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.

2. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THOROUGHLY FAMILIARIZING HIMSELF WITH ANY CONTRACTUAL REQUIREMENTS AS MAY BE SET FORTH IN THE OTHER DIVISIONS OF THE PROJECT SPECIFICATIONS.

3. UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. INCIDENTAL COMPONENTS MAY NOT BE SHOWN, AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THIS WORK, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. ADDITIONAL CIRCUITS SHALL BE INSTALLED WHEREVER NEEDED TO CONFORM TO THE SPECIFIC REQUIREMENTS OF EQUIPMENT.

4. BIDDERS SHALL HAVE A WORKING KNOWLEGDE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE CONSTRUCTION DOCUMENTS NOTWITHSTANDING.

5. TEMPORARY POWER CONNECTIONS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL TEMPORARY EQUIPMENT WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. THE CONTRACTOR SHALL PROVIDE DETAILS, METHODS, MATERIALS, ETC. TO THE ARCHITECT/ENGINEER PRIOR TO MAKING TEMPORARY CONNECTIONS. FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS INCLUDING CONTROL EQUIPMENT, MOTOR STARTERS, BRANCH AND FEEDER CIRCUIT BREAKERS, PANELBOARDS, TRANSFORMERS, ETC. FOR TEMPORARY POWER. COORDINATE WITH THE OWNER AND UTILITY COMPANY AS REQUIRED.

6. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND ANY MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.

7. ALL EQUIPMENT SHOWN DOTTED OR DASHED IS BY OTHERS OR IS EXISTING, AS NOTED.

8. ALL ELECTRICAL EQUIPMENT SHALL, AT ALL TIMES DURING CONSTRUCTION, BE ADEQUATELY PROTECTED AGAINST MECHANICAL INJURY, OR DAMAGE BY WATER AND/OR THE ELEMENTS. ELECTRICAL EQUIPMENT SHALL BE STORED IN DRY PERMANENT SHELTERS. PROVIDE HEATING FOR EQUIPMENT SUBJECT TO MOISTURE DAMAGE OR DAMAGE FROM CONDENSATION. IF AN APPARATUS HAS BEEN DAMAGED, OR HAS BEEN SUBJECT TO POSSIBLE INJURY BY WATER OR THE ELEMENTS, SUCH DAMAGE SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.

9. DO NOT SCALE ELECTRICAL DRAWINGS. FIELD VERIFY ALL DIMENSIONS AND/OR REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.

10. CIRCUIT LAYOUTS ARE NOT INTENDED TO SHOW THE NUMBER OF FITTINGS, OR OTHER INSTALLATION DETAILS. UNLESS NOTED OTHERWISE, THE EXACT ROUTING OF FEEDER AND BRANCH CIRCUIT RACEWAYS AND CABLES IS THE RESPONSIBILITY OF THE CONTRACTOR. RISER AND GENERAL CIRCUIT ARRANGEMENTS ARE SHOWN SCHEMATICALLY/DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL ROUTE CONDUITS AND CABLES AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION.

11. UNLESS DIMENSIONED, DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADJUST EXACT LOCATIONS AS REQUIRED TO SERVE THE INTENDED PURPOSE AND TO AVOID CONFLICTS AND INTERFERENCES WITH OTHER TRADES. EXACT DEVICE LOCATIONS SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS OR AS DIMENSIONED. IF NOT SHOWN ON THE ARCHITECTURAL DRAWINGS OR DIMENSIONED ON THE ELECTRICAL DRAWINGS, VERIFY EXACT LOCATION WITH THE ARCHITECT/ENGINEER PRIOR TO ROUGH-IN.

12. CONDUIT TERMINATING IN PRESSED STEEL BOXES SHALL HAVE DOUBLE LOCKNUTS AND INSULATED BUSHINGS. CONDUITS TERMINATING IN GASKETED ENCLOSURES SHALL BE TERMINATED WITH GROUNDING TYPE CONDUIT HUBS.

13. DEVICE BOXES SHOWN BACK-TO-BACK SHALL BE OFFSET A MINIMUM OF TWELVE (12) INCHES TO REDUCE SOUND TRANSMISSION BETWEEN ROOMS.

14. THE DRAWINGS INDICATE THE NUMBER OF BRANCH CIRCUIT HOMERUN PHASE CONDUCTORS VIA ARROWHEADS. PROVIDE NEUTRAL AND EQUIPMENT GROUND CONDUCTORS AS REQUIRED. ADDITIONAL CONDUCTORS REQUIRED FOR CONTROL SHALL BE INCLUDED EVEN IF NOT EXPLICITLY SHOWN.

15. SEAL ALL CONDUIT OPENINGS THROUGH EXTERIOR BUILDING WALLS WATERTIGHT.

16. ALL EXTERIOR WIRING DEVICES, BOXES, ETC. SHALL BE WEATHERPROOF. LIGHTING FIXTURES SHALL BE APPROPRIATELY RATED AND LISTED FOR THE ENVIRONMENT.

17. MAINTAIN CEILING FIRE RATINGS WITH ALL NECESSARY LIGHTING FIXTURE TRIM, ACCESSORIES, OPTIONS AND/OR FIELD FABRICATED SHROUDS COMPLYING WITH ALL APPLICABLE CODES.

18. RACEWAYS AND CABLES PENETRATING FLOORS, CEILINGS OR WALLS SHALL BE PROPERLY SEALED SMOKETIGHT.

19. RACEWAYS AND CABLES PENETRATING RATED FLOOR, CEILING OR WALL ASSEMBLIES SHALL BE PROPERLY SEALED IN ACCORDANCE WITH THE CORRESPONDING UNDERWRITERS LABORATORIES (OR OTHER APPROVED THIRD PARTY TESTING AGENCY) APPROVED AND LISTED FIRESTOPPING MATERIALS AND MANUFACTURER APPROVED INSTALLATION TECHNIQUES COMPLYING WITH ALL APPLICABLE CODES. SEE ARCHITECTURAL DRAWINGS FOR IDENTIFICATION OF RATED WALLS AND CEILINGS.

20. LIGHTING FIXTURES MOUNTED IN FIRE-RATED CEILINGS SHALL BE PROVIDED WITH ACCESSORIES NECESSARY TO MAINTAIN THE CEILING FIRE RATING.

21. ALL RACEWAYS AND CABLES SHALL BE CONCEALED EXCEPT THOSE SHOWN ON DRAWINGS TO BE EXPOSED. IF APPLICABLE, MATCH EXISTING RACEWAY INSTALLATION METHODS AND ROUTINGS AT OR NEAR EXISTING FACILITIES.

22. INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS, AND FOLLOW THE SURFACE CONTOURS AS MUCH AS POSSIBLE. NO DIAGONAL RUNS WILL BE ALLOWED. ALL CONDUITS SHALL BE RUN STRAIGHT AND TRUE. RUN PARALLEL OR BANKED RACEWAYS TOGETHER ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM SAME CENTERLINE TO MAKE BENDS PARALLEL.

23. PROVIDE AND PLACE ALL SLEEVES FOR CONDUITS PENETRATING WALLS, FLOORS, PARTITIONS, ETC. LOCATE ALL NECESSARY SLOTS FOR ELECTRICAL WORK AND FORM BEFORE CONCRETE IS POURED.

24. PATCHING OF WATERPROOFED SURFACES SHALL RENDER THE AREA OF THE PATCHING COMPLETELY WATERPROOF.

25. ALL MOTORS, DRY TYPE TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE CONNECTED TO THE CONDUIT SYSTEM BY MEANS OF A SHORT SECTION (18 INCH MINIMUM) OF FLEXIBLE CONDUIT UNLESS OTHERWISE INDICATED. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED INSIDE THE FLEXIBLE CONDUIT AND TERMINATE AT THE LOAD END WITH AN APPROVED GROUNDING CLAMP OR LUG.

26. SURFACE MOUNTED PANELBOARDS, JUNCTION, OUTLET AND PULL BOXES, RACEWAYS, ETC., INSTALLED ON EXTERIOR SURFACES OR INSIDE ON EXTERIOR WALLS SHALL BE SUPPORTED BY SPACERS TO PROVIDE A 1/4" MINIMUM CLEARANCE BETWEEN THE WALL AND EQUIPMENT.

27. CEILING MOUNTED DEVICES INSTALLED IN ACOUSTICAL TILE CEILING AREAS SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE WITH RODS OF SUFFICIENT SIZE TO PREVENT VERTICAL MOVEMENT OF THE OUTLET BOX. BRIDGES ALONE ARE NOT ADEQUATE UNLESS SPECIFICALLY APPROVED. CEILING MOUNTED EXIT LIGHT FIXTURES SHALL BE INSTALLED LEVEL. DO NOT SUPPORT DEVICES FROM ACOUSTICAL CEILING TILE.

28. EXCAVATION AND TRENCHING REQUIRED FOR THE INSTALLATION OF ELECTRICAL POWER AND TELECOMMUNICATIONS RACEWAYS SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF DIVISION 26 OF THE PROJECT SPECIFICATIONS.

29. PRIOR TO TRENCHING IN ANY AREA, THE CONTRACTOR SHALL CONTACT ELECTRICAL, COMMUNICATIONS/DATA/FIBER, CABLE TELEVISION, GAS AND WATER UTILITY PROVIDERS AND HAVE ALL UTILITIES IN THE AREA IDENTIFIED. DAMAGE TO ANY UNDERGROUND UTILITIES OR STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.

30. ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED BY UNDERGROUND LINE MARKING TAPE LOCATED DIRECTLY ABOVE THE RACEWAY AT 6 TO 8 INCHES BELOW FINISHED GRADE. SEE SPECIFICATIONS SECTION 260553.

31. WHERE UNDERGROUND SERVICE, FEEDER AND BRANCH CIRCUIT RACEWAYS ARE REQUIRED TO TURN UP INTO CABINETS, EQUIPMENT, ETC., AND ON TO POLES, THE ELBOW REQUIRED AND THE STUB-UP OUT OF THE SLAB OR EARTH SHALL BE OF PLASTIC-COATED RIGID STEEL. ALTERNATELY, FIELD APPLIED CORROSION PROTECTION WRAPS MAY BE USED, IN EQUIVALENT THICKNESS TO FACTORY APPLIED MATERIALS, WITH THE SPECIFIC APPROVAL OF THE ARCHITECT/ENGINEER.

32. PROVIDE 200% RATED NEUTRAL FEEDERS AND NEUTRAL BARS FOR PANELBOARDS FED BY K-RATED TRANSFORMERS, EVEN IF NOT SHOWN ON THE POWER RISER DIAGRAM AND/OR PANELBOARD SCHEDULES.

33. PROVIDE MACHINE PRINTED, LAMINATED, CLEAR WITH BLACK LETTERING, ADHESIVE BACKED RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER. INSTALL CENTERED ON UPPER PORTION OF THE DEVICE PLATE. SEE SPECIFICATIONS SECTION 260553 FOR REQUIREMENTS.

34. FINAL TYPED PANELBOARD DIRECTORIES INSTALLED IN THE PANELBOARD DOOR POCKET SHALL INCLUDE FINAL ACTUAL ROOM NAMES AND NUMBERS IN ADDITION TO THE GENERAL DESCRIPTION SHOWN ON THE PANEL SCHEDULES ON THE DRAWINGS.

35. UNLESS NOTED OTHERWISE, CONDUCTOR SIZING IS BASED ON 75 DEGREE C. COPPER NEC RATINGS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY, PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THE ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE C. WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE C. CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY FOR EVALUATION/CORRECTION.

36. DO NOT PULL CONDUCTORS UNTIL THE CONDUIT SYSTEM IS COMPLETE IN EVERY DETAIL. IN THE CASE OF CONCEALED WORK, "COMPLETE" MEANS UNTIL ALL ROUGH PLASTERING OR MASONRY HAS BEEN COMPLETED.

37. WHERE SIZE IS NOT SHOWN ON THE DRAWINGS, BRANCH CIRCUITS SHALL CONSIST OF #12 OR #10 AWG MINIMUM PHASE, NEUTRAL AND EQUIPMENT GROUND CONDUCTORS IN 1/2" MINIMUM RACEWAY. REFER TO THE "MINIMUM CONDUCTORS SIZE CHART" ON THE DRAWINGS AND INCREASE CONDUCTORS SIZES AS REQUIRED TO MAINTAIN A MAXIMUM OF 3% VOLTAGE DROP.

38. ALTERNATE MULTIWIRE RECEPTACLE CIRCUITS SUCH THAT ADJACENT RECEPTACLES ARE ON DIFFERENT CIRCUITS.

39. COMMON NEUTRAL BRANCH CIRCUITS ARE NOT PERMITTED. PROVIDE SEPARATE, INDIVIDUAL NEUTRAL CONDUCTORS FOR ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS.

40. MC CABLE SHALL BE SUPPORTED IN STRAIGHT LINES USING APPROVED SUPPORTING MEANS AND IN COMPLIANCE WITH THE NEC. DEDICATED SUPPORT WIRES MAY BE USED ABOVE FINISHED CEILINGS AND SHALL BE PAINTED RED PRIOR TO INSTALLATION. DO NOT SUPPORT CABLE WITH CEILING GRID SUPPORTS WIRES. DO NOT DRAPE CABLE OVER CEILINGS, LIGTING FIXTURES, CONDUIT, DUCTWORK, PIPING OR EQUIPMENT.

41. KEEP CONDUCTOR SPLICES TO A MINIMUM. INSTALL SPLICES AND TAPES THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN CONDUCTORS BEING SPLICED. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH CONDUCTOR MATERIAL. INSTALL CONDUCTORS AT EACH OUTLET WITH AT LEAST 6 INCHES OF SLACK. CONNECT OUTLETS AND COMPONENTS TO WIRING AND TO GROUND AS INDICATED AND INSTRUCTED BY THE MANUFACTURER.

42. DO NOT SPLICE BRANCH CIRCUIT HOMERUNS WITHOUT THE PERMISSION OF THE ARCHITECT/ENGINEER. HOMERUNS SHALL BE CONTINUOUS FROM THE LAST OUTLET BOX TO THE SERVING PANELBOARD.

43. DO NOT COMBINE BRANCH CIRCUIT HOMERUNS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.

44. DO NOT CHANGE CIRCUITING SHOWN WITHOUT PERMISSION OF THE ARCHITECT/ENGINEER.

45. TROUGH TAPS SHALL BE AT SWITCH/CIRCUIT BREAKER AMPACITY, UNLESS NOTED OTHERWISE.

46. INSTALL WIRING DEVICES AT HEIGHTS AS SHOWN ON THE DRAWINGS. ALSO COORDINATE MOUNTING HEIGHTS WITH THE ARCHITECTURAL DRAWINGS AND CASEWORK DETAILS. IF CONFLICTING, ARCHITECTURAL DRAWINGS AND DETAILS SHALL GOVERN.

47. PROVIDE GROUND FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR PERSONNEL IN ACCORDANCE WITH THE NEC INCLUDING ALL ELECTRIC WATER COOLERS, EXTERIOR RECEPTACLES AND RECEPTACLES IN AREAS SUBJECT TO POSSIBLE WET CONDITIONS. ALL RECEPTACLES INSTALLED WITHIN 6 FEET OF A SINK SHALL BE GFI PROTECTED. ALL RECEPTACLES IN NON-RESIDENTIAL KITCHENS SHALL BE GFI PROTECTED.

48. GFCI RECEPTACLES SHALL BE READILY ACCESSIBLE AFTER INSTALLATION. IF CONDITIONS OF THE INSTALLATION TO NOT ALLOW FOR READY ACCESS, PROVIDE A STANDARD RECEPTACLE AND PROVIDE A GFCI CIRCUIT BREAKER TO FEED THE CIRCUIT.

49. IN AREAS IN WHICH DUAL LEVEL SWITCHING IS INDICATED (TYPICALLY BY 2 OR MORE ADJACENT, GANGED SWITCHES), PROVIDE THE APPROPRIATE NUMBER OF CONDUCTORS TO FACILITATE THIS FUNCTION (AS TYPICALLY SHOWN).

50. IF NOT CIRCUITED, CONNECT BATTERY PACK TYPE EMERGENCY AND EXIT LIGHTING FIXTURES TO THE UNSWITCHED LIGHTING CIRCUIT SERVING THE SPACE LIGHTED BY THE EMERGENCY AND EXIT FIXTURES. THESE CONNECTIONS ARE INTENTIONALLY NOT SHOWN TO MAINTAIN DRAWING CLARITY.

51. COORDINATE LIGHTING FIXTURE LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN. IF CONFLICTS ARE NOTED, REQUEST CLARIFICATION FROM THE ARCHITECT/ENGINEER BEFORE PROCEEDING.

52. ADJACENT SWITCHES SHALL BE GANGED. INSTALL BARRIERS BETWEEN 277 VOLT AND UNLIKE VOLTAGE SECTIONS.

53. ADJACENT RECEPTACLES AND DATA/TELEPHONE OUTLETS SHALL BE INSTALLED 6 INCHES CENTER TO CENTER AND SHALL BE AT THE SAME ELEVATION.

54. SEPARATE NEUTRALS ARE REQUIRED FOR ALL LINE VOLTAGE DIMMED LIGHTING CIRCUITS.

55. WHERE THE DRAWINGS INDICATE A LIGHTING FIXTURE IS TO BE PROVIDED WITH SPECIAL FEATURES/SWITCHING (DIMMING, MULTI-LEVEL, ETC.), THE CONTRACTOR SHALL PROVIDE THESE FIXTURES WITH THE APPROPRIATE DRIVERS TO ACCOMMODATE THE SPECIAL FEATURE. THE CONTRACTOR SHALL PROVIDE THE FIXTURES AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE WITH MODIFICATIONS AS REQUIRED BY DRAWING NOTES.

56. COORDINATE LOCATIONS OF PLUMBING, MECHANICAL, DATA AND TELEPHONE AND AUDIO/VISUAL EQUIPMENT AND OF OWNER-PROVIDED EQUIPMENT WITH THE RESPECTIVE CONTRACTORS AND VENDORS AND THE OWNER BEFORE ROUGH-IN. ADJUST LIGHTING FIXTURES, RECEPTACLES AND ELECTRICAL EQUIPMENT TO ACCOMMODATE THIS EQUIPMENT. ADVISE THE ARCHITECT/ENGINEER OF CONFLICTS BEFORE ROUGH-IN. SEE SPECIFICATIONS SECTION 260580 FOR ADDITIONAL DETAIL INVOLVING WORK WITH OTHER TRADES.

57. LIGHTING FIXTURES ARE, IN SOME INSTANCES, SHOWN TO BE INSTALLED ON THE BOTTOM OF THE EXPOSED STRUCTURE. THE CONTRACTOR SHALL NOT INSTALL FIXTURES ABOVE DUCTWORK WHICH BLOCKS LIGHTING FROM REACHING THE FLOOR. FIELD ADJUST FIXTURE LOCATIONS TO AVOID DUCTWORK AND OTHER EQUIPMENT WHICH INTERFERES WITH INTENDED LIGHTING OF THE SPACE. INSTALL FIXTURES ON WALLS IN SPACES WHERE FIXTURE OUTPUT WOULD OTHERWISE BE BLOCKED. COORDINATE RELOCATIONS WITH THE ARCHITECT/ENGINEER.

58. THE LOCATIONS OF ELECTRICAL EQUIPMENT SERVING MECHANICAL, PLUMBING, ELEVATOR AND FOOD SERVICE EQUIPMENT MAY NOT BE SHOWN PRECISELY ON THE ELECTRICAL DRAWINGS DUE TO THE VARIABILITY OF INSTALLATIONS, SPACE AND EQUIPMENT ROOM ARRANGEMENTS AND THE EQUIPMENT PROVIDED. LOCATIONS OF ELECTRICAL EQUIPMENT, PANELBOARDS, WIRING TROUGHS, LOCAL DISCONNECTING MEANS, ETC. SHALL BE COORDINATED WITH THE RESPECTIVE CONTRACTORS PRIOR TO ROUGH-IN. LOCATE AND/OR ADJUST EQUIPMENT LOCATIONS SHOWN IN CONSULTATION WITH OTHER TRADES TO MAINTAIN VISIBILITY OF THE EQUIPMENT FROM DISCONNECTING MEANS AND PROVIDE ACCESS AND WORKING SPACE IN COMPLIANCE WITH CODES.

59. BEFORE COMMENCING WORK OR ORDERING MATERIALS, THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND VERIFY THE NAMEPLATE RATINGS OF ALL EQUIPMENT (MOTORS, HEATERS, COMPRESSORS, ETC.) AND ADJUST THE RATINGS OF THE ELECTRICAL EQUIPMENT (SWITCHES, FUSES, CIRCUIT BREAKERS, CONDUCTORS, RACEWAYS, ETC.) AS APPROPRIATE TO SERVE THIS EQUIPMENT.

60. COORDINATE ALL EQUIPMENT TERMINATIONS, PLUGS AND CORDSETS WITH VENDOR EQUIPMENT AND VERIFY ALL DEVICE LOCATIONS FOR SPECIALTY EQUIPMENT WITH CASEWORK PRIOR TO ROUGH-IN.

61. THE LAYOUT AND PLACEMENT OF ELECTRICAL DISTRIBUTION EQUIPMENT IN ELECTRICAL AND MECHANICAL EQUIPMENT ROOMS IS BASED ON PUBLISHED EQUIPMENT SIZES AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. DEVIATIONS FROM CONFIGURATIONS SHOWN IS THE RESPONSIBILITY OF THE CONTRACTOR. PROVIDE NATIONAL ELECTRIC CODE REQUIRED CLEARANCES FOR ALL ELECTRICAL EQUIPMENT, SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SAFETY SWITCHES, ETC. COORDINATE RESOLUTION OF CONFLICTS WITH OTHER TRADES. ADVISE THE ARCHITECT/ENGINEER OF CONFLICTS BEFORE ROUGH-IN.

62. COORDINATION WITH THE ELECTRICAL UTILITY COMPANY IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. COORDINATE WITH THE UTILITY COMPANY FOR PLACEMENT OF THE UTILITY'S FACILITIES AND THE CONTRACTOR'S SERVICE ENTRANCE RACEWAYS AND FOR CONNECTIONS TO THE CONTRACTOR'S SERVICE ENTRANCE CONDUCTORS.

63. TELECOMMUNICATIONS AND DATA CABLES WILL BE PROVIDED AND INSTALLED BY THE OWNER. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.

64. THE EXACT SPACING OF SMOKE AND HEAT DETECTORS AND A/V DEVICES SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE WITH POSITIONS SHOWN ON THE DRAWINGS. DETECTOR SPACING IS BASED UPON NFPA 72 INCLUDING APPENDIX A. SLIGHT ADJUSTMENTS MAY BE MADE IN SPACING IF REQUIRED BY FIELD CONDITIONS, BUT SPACING SHALL NOT EXCEED ADA, NFPA AND EQUIPMENT MANUFACTURERS SPACING CRITERIA. DO NOT INSTALL SMOKE DETECTORS WITHIN 3 FEET OF SUPPLY AIR DIFFUSERS OR RETURN GRILLES. PROVIDE FLEX CONDUIT CONNECTION TO SMOKE AND HEAT DETECTORS OF ADEQUATE LENGTH TO ALLOW HORIZONTAL ADJUSTMENT OF FOUR FEET FROM POSITION INDICATED ON DRAWINGS.

65. SHOP DRAWINGS MUST BE SUBMITTED BY THE FIRE ALARM CONTRACTOR COMPLYING WITH THE FIRE ALARM PLAN REVIEW REQUIREMENTS POLICY - JANUARY 2002 BEFORE PERMITTING BY THE WILMINGTON FIRE DEPARTMENT. THESE DRAWINGS DO NOT CONSTITUTE APPROVAL AND MAY CHANGE AFTER A FULL REVIEW BY THE WILMINGTON FIRE DEPARTMENT. A SEPARATE PERMIT MUST BE OBTAINED PRIOR TO INSTALLATION.

66. COORDINATE FIRE ALARM SYSTEM MODIFICATIONS WITH THE OWNER AND THE OWNER'S [TENANT'S] FIRE ALARM SYSTEM VENDOR. THE EXISTING SYSTEM SHALL REMAIN OPERATIONAL AT ALL TIMES UNLESS PRIOR ARRANGEMENTS HAVE BEEN MADE WITH THE OWNER.

67. INSTALLATION INFORMATION PACKED WITH LIGHTING FIXTURES, DEVICES AND EQUIPMENT SHALL BE RETAINED FOR INCLUSION IN THE OPERATIONS AND MAINTENANCE MANUALS.

68. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED AND SHALL REESTABLISH ALL FINISHES TO THEIR ORIGINAL CONDITION WHERE CUTTING AND PATCHING OCCUR. ALL CUTTING AND PATCHING SHALL BE DONE IN A THOROUGHLY WORKMANSHIP MANNER. SAW CUT CONCRETE AND MASONRY PRIOR TO BREAKING OUT SECTIONS. ALL PATCHING MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH DIVISION 9 OF THESE SPECIFICATIONS AND PERFORMED BY TRADESMEN EXPERIENCED IN THAT WORK. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT/ENGINEER.

69. CORE DRILL HOLES IN EXISTING CONCRETE WALLS AS REQUIRED.

70. INSTALL WORK AT SUCH TIME AS TO REQUIRE THE MINIMUM AMOUNT TO CUTTING AND PATCHING.

71. CUT OPENINGS ONLY LARGE ENOUGH TO ALLOW EASY INSTALLATION OF THE CONDUIT.

72. EXISTING CIRCUITING WHERE SHOWN IS FOR CONVENIENCE PURPOSES ONLY. VERIFICATION OF EXISTING WIRING DESTINATION, TERMINATION AND ADDITIONS OF NEW LOADS IS THE RESPONSIBILITY OF THE CONTRACTOR.

73. MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS TO REMAIN OR PORTIONS THEREOF AFFECTED BY THIS WORK.

74. ABANDONED POWER WIRING, RACEWAYS AND CONDUCTORS, SHALL BE REMOVED BACK TO THEIR SOURCE. THE ACCESSIBLE PORTIONS OF ABANDONED FREE RUN CABLES (VOICE, DATA, VIDEO, ALARM, ETC.) SHALL BE REMOVED. VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES.

75. TRACE OUT EXISTING WIRING THAT IS TO BE RELOCATED, OR REMOVED AND PERFORM THE RELOCATION OR REMOVAL WORK AS REQUIRED FOR A COMPLETE OPERATING AND SAFE SYSTEM.

76. THE EXISTING ELECTRICAL SYSTEMS DEPICTED ON THESE DRAWINGS HAVE BEEN COMPILED BY THE ENGINEER FROM THE OWNER'S RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF THE EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, POINTS OF ACCESS AND FIELD CONDITIONS AFFECTING HIS WORK.

77. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING ELECTRICAL SYSTEMS AND THE EXISTING BUILDING. THE SUBMISSION OF THE PROPOSAL BY THE CONTRACTOR SHALL BE CONSIDERED EVIDENCE THAT HE OR HIS REPRESENTATIVE HAS VISITED THE SITE AND BUILDINGS AND NOTED THE LOCATION AND CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED AND THAT HE TAKES FULL RESPONSIBILITY OF ALL FACTORS GOVERNING HIS WORK. NO EXTRAS WILL BE CONSIDERED BECAUSE OF ADDITIONAL WORK NECESSITATED BY EXISTING JOB CONDITIONS THAT ARE NOT INDICATED ON THE DRAWINGS.

78. SOME EXISTING RECEPTACLE, LIGHTING OR OTHER LOADS MAY BE SERVED BY CIRCUITS INDICATED TO BE REMOVED. IF SUCH CONDITIONS ARE DISCOVERED, REQUEST THE ARCHITECT/ENGINEER PROVIDE NEW CIRCUIT NUMBER FOR THE LOAD. DO NOT INDISCRIMINATELY CONNECT TO THE NEAREST CIRCUIT.

79. ALL UNUSED OUTLET BOXES SHALL BE REMOVED OR, WITH SPECIFIC APPROVAL OF THE ARCHITECT/ENGINEER, SHALL BE BLANKED WITH STAINLESS STEEL PLATES. ALL OPENINGS IN EXISTING WALLS AND CEILINGS MADE BY THIS CONTRACTOR SHALL BE REPAIRED TO AN EQUAL FINISH AS ADJACENT SURFACES.

80. PROVIDE ALL ELECTRICAL RELOCATION WORK ASSOCIATED WITH THE RELOCATING OF EQUIPMENT FOR THE EXISTING FACILITIES, INCLUDING DISCONNECTING ALL EXISTING WIRING AND CONDUITS AND PROVIDING NEW WIRING AND CONDUITS TO THE RELOCATED EQUIPMENT.

SELECTIVE DEMOLITION NOTES

81. THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND CARRY OUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL WIRING DEVICES, BOXES, FIXTURES, EXPOSED ABANDONED RACEWAYS, HANGARS, ETC., MADE OBSOLETE BY THESE ALTERATIONS AND AS SHOWN ON THE DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN, HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY ELECTRICAL WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE OWNER OR ARCHITECT/ENGINEER. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS MAY EXIST.

82. PROTECT ALL EXISTING POWER, COMMUNICATIONS, DATA, TELEPHONE, LIFE SAFETY, FIRE ALARM, ACCESS CONTROL, SECURITY, PUBLIC ADDRESS AND CLOSED CIRCUIT TV SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ARCHITECT/ENGINEER IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.

83. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE THE RENOVATION.

84. DISCONNECT AND/OR DE-ENERGIZE ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL.

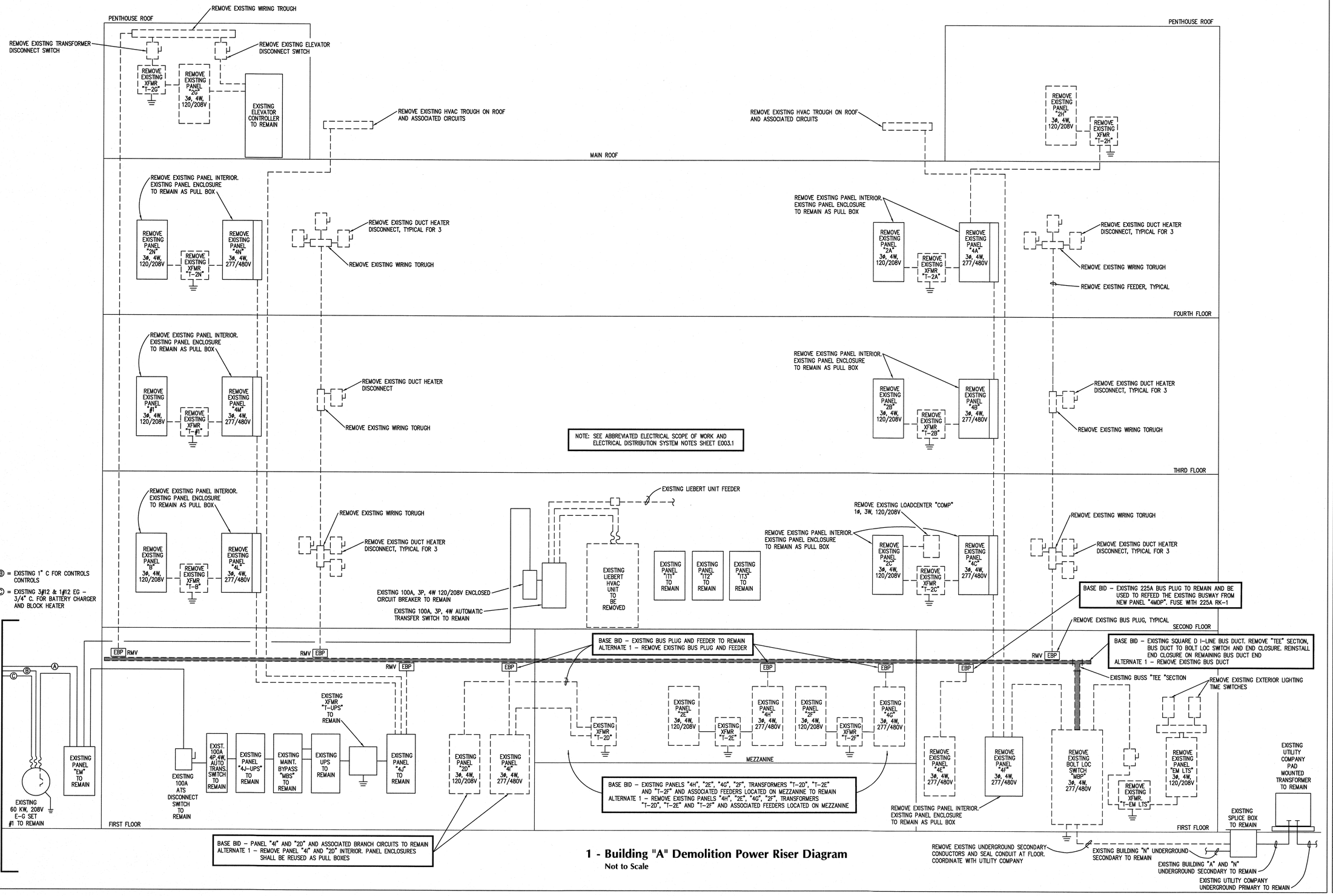
85. PROVIDE TEMPORARY AND/OR PERMANENT WIRING AND CONNECTIONS AS SHOWN AND/OR AS REQUIRED BY CONDITIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, AND WHEN SUCH WORK IS SPECIFICALLY APPROVED BY THE OWNER AND PERMITTED BY REGULATORY AUTHORITIES, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.

86. EXISTING ELECTRICAL SERVICE: COORDINATE POWER OUTAGES WITH THE OWNER AND UTILITY COMPANY. MAINTAIN EXISTING SYSTEMS IN SERVICE. DISABLE SYSTEMS ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN WRITTEN PERMISSION FROM THE OWNER AT LEAST 24 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION. MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN AREAS ADJACENT TO WORK AREA.

87. WHERE ELECTRICAL SYSTEMS PASS THROUGH THE RENOVATION AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, THEY SHALL BE PROTECTED FROM DAMAGE AND REMAIN OR BE SUITABLY RELOCATED UTILIZING MATCHING SIZE AND TYPE MATERIALS AND THE SYSTEM RESTORED TO NORMAL OPERATION. ADVISE THE ARCHITECT/ENGINEER IMMEDIATELY IF SUCH CONDITIONS ARE UNCOVERED BEFORE PROCEEDING WITH ADDITIONAL WORK.

88. EXISTING FIRE ALARM SYSTEM: COORDINATE WORK WITH THE OWNER'S FIRE ALARM

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010



1 - Building "A" Demolition Power Riser Diagram
Not to Scale

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarkk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN C. MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" DEMOLITION POWER RISER DIAGRAM

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E003

COPYRIGHT © 2020

ABBREVIATED ELECTRICAL SCOPE OF WORK SUMMARY AND ELECTRICAL DISTRIBUTION SYSTEM NOTES

1. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ELECTRICAL BASE AND ALTERNATE BIDS DESCRIPTIONS AND DETAILS.
2. ABBREVIATED ELECTRICAL SCOPE

   FIRST FLOOR:
   - A. BASE BID EXCLUDES THE EXISTING SHOP AREAS AS SHOWN, BUT UPGRADES THE NORTH AND SOUTH ENTRANCE LOBBIES, TOILETS, ETC. SPACES. EXISTING SHADED SHOP AREA POWER DISTRIBUTION SYSTEM EQUIPMENT AND CIRCUITS, LIGHTING AND RECEPTACLES BRANCH CIRCUITS, AND MISCELLANEOUS AND HVAC POWER CIRCUITS SHALL REMAIN. EXISTING POWER DISTRIBUTION SYSTEM EQUIPMENT AND CIRCUITS, LIGHTING AND RECEPTACLES BRANCH CIRCUITS, AND MISCELLANEOUS AND HVAC POWER CIRCUITS IN THE NORTH AND SOUTH LOBBIES, TOILETS, MECHANICAL ROOMS, ETC. ON FLOOR 1 WILL BE DEMOLISHED AND REPLACED WITH NEW AS SHOWN.
   - B. ALTERNATE 1 INCLUDES THE SHOP AREAS EXCLUDED IN THE BASE BID AND EXISTING LIGHTING FIXTURES REMAIN/ARE RELOCATED EXCEPT AS SHOWN.
   - C. ALTERNATE 1A REPLACES EXISTING FLUORESCENT LIGHTING FIXTURES WITH NEW LED FIXTURES AS SHOWN ON THE DRAWINGS.

   SECOND FLOOR:
   - A. BASE BID INCLUDES ALL WORK SHOWN ON THE DRAWINGS, BUT EXCLUDES RENOVATIONS TO THE EXISTING IT SERVICES AREA.
   - B. ALTERNATE 2 INCLUDES THE IT SERVICES AREA RENOVATIONS.

   THIRD FLOOR:
   - A. BASE BID SCOPE INCLUDES ALL WORK SHOWN ON THE DRAWINGS.
   - B. ALTERNATE 3 REPLACES EXISTING CLASSROOM FLORESCENT LIGHTING FIXTURES WITH NEW LED FIXTURES AS SHOWN ON THE DRAWINGS.

   FOURTH FLOOR:
   - A. BASE BID SCOPE INCLUDES ALL WORK SHOWN ON THE DRAWINGS.
   - B. ALTERNATE 4 REPLACES EXISTING CLASSROOM FLORESCENT LIGHTING FIXTURES WITH NEW LED FIXTURES AS SHOWN ON THE DRAWINGS.

EXISTING POWER DISTRIBUTION SYSTEM, PANELBOARDS AND BRANCH CIRCUITS NOTES

1. THE ELECTRICAL DISTRIBUTION SYSTEM, WITH THE EXCEPTION OF CERTAIN EXISTING COMPONENTS ON THE FIRST FLOOR IN THE BASE BID, INCLUDING THE FEEDER BUSWAY, POWER AND BRANCH CIRCUIT PANELBOARDS, FEEDER CONDUCTORS AND RACEWAYS, ETC., WILL BE REPLACED WITH A NEW SYSTEM. EXISTING POWER AND BRANCH CIRCUIT PANELBOARDS WILL BE REPLACED WITH NEW PANELBOARDS AS SHOWN ON THE DEMOLITION POWER RISER DIAGRAM (SHEETS E003, E003A & E003.1), NEW WORK POWER RISER DIAGRAM (SHEETS E004 & E004.1), AND AS DETAILED BELOW.
2. ALTHOUGH MANY NEW BRANCH CIRCUITS ARE INCLUDED IN THE PROJECT, DETAILS OF WHICH VARY BY SPACE, SOME EXISTING BRANCH CIRCUITS (PRIMARILY LIGHTING AND RECEPTACLES) WILL REMAIN AND BE REFED BY NEW DISTRIBUTION EQUIPMENT. THE EXACT QUANTITY, ROUTINGS, LOADS AND CONDITION OF THE EXISTING BRANCH CIRCUITS TO REMAIN IS UNKNOWN. THE CONTRACTOR SHALL INVESTIGATE/TRACE EXISTING BRANCH CIRCUITS PRIOR TO DEMOLITION AND DETERMINE WHICH FEED EXISTING LOADS TO REMAIN. THE CONTRACTOR SHALL TAG AND DISCONNECT EXISTING BRANCH CIRCUITS TO REMAIN AT EXISTING PANELBOARDS, REMOVE PANELBOARD INTERIORS AND RETAIN THE ENCLOSURE AND TRIM AS A PULL/SPLICE BOX. RECONNECT THESE BRANCH CIRCUITS TO NEW PANELBOARD BRANCH CIRCUIT BREAKERS BY EXTENDING THE BRANCH CIRCUIT CONDUCTORS FROM EXISTING PANELBOARD ENCLOSURES TO THE CORRESPONDING NEW PANELBOARDS AS NOTED BELOW. SPARE CIRCUIT BREAKERS ARE PROVIDED IN NEW PANELBOARDS FOR THIS PURPOSE.

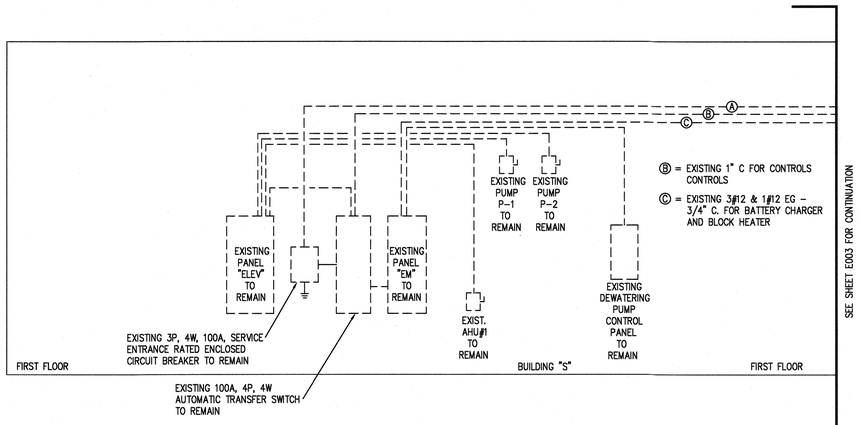
EXISTING PANELBOARD	BASE BID: MOVE SURVIVING BRANCH CIRCUITS TO PANELBOARD
FLOOR 1:	
2K	N/A
4J	N/A
4E	N/A
4F	N/A
FLOOR 2:	
8	N/A
4L	N/A
8	2N2
4C	4N2
FLOOR 3:	
1	2S3
4M	4S3
2B	2N3
4B	4N3
FLOOR 4:	
2N	2S4
4N	4S4
2A	2N4
4A	4N4
ROOF:	
2G	2SR
2H	2NR

EXISTING PANELBOARD	ALTERNATE BID 1: MOVE SURVIVING BRANCH CIRCUITS TO PANELBOARD
FLOOR 1:	
2K	2S1
4J	4S1
4F	4MDP

1. FOR FIRST, THIRD AND FOURTH FLOOR ALTERNATES, AND SECOND FLOOR BASE BID AND ALTERNATE, EXISTING FLUORESCENT LIGHTING FIXTURES ARE REPLACED WITH NEW FIXTURES AND NEW BRANCH CIRCUIT CONDUCTORS AND RACEWAYS AS INDICATED ON THE DRAWINGS. THE CONTRACTOR MAY UTILIZE EXISTING LIGHTING BRANCH CIRCUIT HOMERUN RACEWAYS THAT ARE IN GOOD CONDITION AND PROPER SIZE. THE ARCHITECT/ENGINEER RESERVES THE RIGHT TO DISAPPROVE REUSE OF EXISTING RACEWAYS IF DEEMED UNSUITABLE FOR REUSE. REMOVE EXISTING LIGHTING BRANCH CIRCUIT CONDUCTORS AS REQUIRED AND EXTEND NEW CONDUCTORS IN NEW AND EXISTING RACEWAYS. INSTALL NEW HOMERUNS AND/OR CIRCUIT SEGMENTS AS REQUIRED, CONCEALED OVERHEAD. NEW CIRCUITS SHALL MATCH EXISTING AND BE NO LESS THAN #12 AWG WITH EQUIPMENT GROUND CONDUCTOR, OR LARGER AS REQUIRED BY LENGTH AND THE MINIMUM CONDUCTORS SIZE CHART ON SHEET E005.
2. MAINTAIN EXISTING PHASING OF BRANCH CIRCUITS
3. REPLACE CONDUCTORS OF EXISTING COMMON NEUTRAL MULTIWIRE BRANCH CIRCUITS WITH NEW CONDUCTORS AND INDIVIDUAL NEUTRALS.
4. WHERE REQUIRED, EXISTING SINGLE RECEPTACLES TO REMAIN MAY BE CONNECTED TO A NEW RECEPTACLE CIRCUIT WITH NEW MATCHING CONDUCTORS WHERE THE RESULTING TOTAL LOAD DOES NOT EXCEED 13 AMPERES FOR A 20 AMPERE CIRCUIT (USING 1.5A AS THE RECEPTACLE LOAD). SEE NOTE 6 BELOW.

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING ELECTRICAL SYSTEMS, EXISTING ELECTRICAL AND MECHANICAL EQUIPMENT LOADS AND THE EXISTING BUILDING CONSTRUCTION. THE SUBMISSION OF THE PROPOSAL BY THE CONTRACTOR SHALL BE CONSIDERED EVIDENCE THAT HE OR HIS REPRESENTATIVE HAS VISITED THE SITE AND BUILDINGS AND NOTED THE LOCATION AND CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED AND THAT HE TAKES FULL RESPONSIBILITY OF ALL FACTORS GOVERNING HIS WORK. NO EXTRAS WILL BE CONSIDERED BECAUSE OF ADDITIONAL WORK NECESSITATED BY EXISTING JOB CONDITIONS THAT ARE NOT INDICATED ON THE DRAWINGS.
2. THE EXISTING ELECTRICAL SYSTEMS DEPICTED ON THESE DRAWINGS HAVE BEEN COMPILED BY THE ENGINEER FROM THE OWNER'S RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF THE EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, POINTS OF ACCESS AND FIELD CONDITIONS AFFECTING HIS WORK. BEGINNING OF DEMOLITION MEANS THE CONTRACTOR ACCEPTS EXISTING CONDITIONS.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELECTRICAL HVAC, RECEPTACLE, LIGHTING, ELEVATOR, ETC. LOADS TO REMAIN, INCLUDING LOADS NOT SHOWN ON THESE DRAWINGS, AND EXTEND CIRCUITS TO NEW PANELS AS REQUIRED USING MATCHING CONDUCTORS AND RACEWAYS.
4. ALL EXISTING RECEPTACLES AND DATA/TELEPHONE OUTLETS MAY NOT BE SHOWN. EXISTING FURNITURE AND EQUIPMENT LIMITS VISUALIZATION OF ALL DEVICES. EXISTING ELECTRICAL EQUIPMENT AND CIRCUITING WHERE SHOWN IS FOR CONVENIENCE PURPOSES ONLY. VERIFICATION OF EXISTING ELECTRICAL EQUIPMENT, EXISTING CIRCUITS TO REMAIN, WIRING DESTINATIONS, TERMINATIONS AND EXTENSION OF EXISTING CIRCUITS TO NEW LOADS AND/OR NEW AND EXISTING PANELBOARDS IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. REPLACE EXISTING RECEPTACLES TO REMAIN WITH NEW DEVICES AND PLATES AS SPECIFIED IN SPECIFICATIONS SECTION 262726.
6. WHERE INDICATED, NEW RECEPTACLE AND LIGHTING LOADS MAY BE CONNECTED TO EXISTING GENERAL PURPOSE LIGHTING AND RECEPTACLE CIRCUITS WHERE THE RESULTING TOTAL LOAD DOES NOT EXCEED 13 AMPERES FOR A 20 AMPERE CIRCUIT. CONFIRM EXISTING CIRCUIT LOADS WITH ACTUAL FIELD MEASUREMENTS WITH ALL LIGHTING SWITCHED ON (IN THE CASE OF LIGHTING CIRCUITS), EXISTING EQUIPMENT NAMEPLATE DATA AND FIELD OBSERVATION OF DEVICE QUANTITIES USING 180 VA PER GENERAL USE RECEPTACLE. DO NOT EXCEED 80% OF BRANCH CIRCUIT RATINGS. DO NOT CONNECT NEW LOADS TO FIXED EQUIPMENT CIRCUITS. IF THE ABOVE PROCEDURE IS NOT ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, REFER TO NEC ARTICLE 220.87 (1) EXCEPTION AND RECORD THE LOAD OF THE CIRCUIT AND PANELBOARD IN QUESTION FOR A MINIMUM OF 30 DAYS TO DETERMINE THE EXISTING LOAD AND FOLLOW THE REQUIREMENTS OF NEC ARTICLES 220.87 (2) AND (3) FOR LOADING.
7. MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS TO REMAIN OR PORTIONS THEREOF AFFECTED BY THIS WORK.
8. TRACE OUT EXISTING WIRING THAT IS TO BE RELOCATED, EXTENDED OR REMOVED AND PERFORM THE RELOCATION, EXTENSION OR REMOVAL WORK AS REQUIRED FOR A COMPLETE OPERATING AND SAFE SYSTEM.
9. ABANDONED POWER WIRING, RACEWAYS AND CONDUCTORS, SHALL BE REMOVED BACK TO THEIR SOURCE. REMOVE ABANDONED FEEDER CONDUCTORS AND CUT THE EXISTING FEEDER RACEWAYS FLUSH WITH THE FLOOR (AND CEILING, IF APPLICABLE) AND SEAL. REMOVE EXPOSED FEEDER RACEWAYS. REMOVE EXPOSED ABANDONED BRANCH CIRCUIT RACEWAYS.
10. THE ACCESSIBLE PORTIONS OF ABANDONED FREE RUN CABLES (VOICE, DATA, VIDEO, ALARM, ETC.) SHALL BE REMOVED. VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES.
11. INSOFAR AS POSSIBLE, MATCH EXISTING EXPOSED DEVICES IN FINISHED AREAS IN TYPE, COLOR AND FINISH.
12. SOME EXISTING RECEPTACLE, LIGHTING OR OTHER LOADS MAY BE SERVED BY CIRCUITS INDICATED TO BE REMOVED. IF SUCH CONDITIONS ARE DISCOVERED, REQUEST THE ARCHITECT/ENGINEER PROVIDE A NEW SOURCE CIRCUIT FOR THE LOAD. DO NOT INDISCRIMINATELY CONNECT TO THE NEAREST CIRCUIT.



1 - Building "A" Demolition Power Riser Diagram
Not to Scale

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RANDOLPH D. MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" DEMOLITION POWER RISER DIAGRAM AND NOTES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

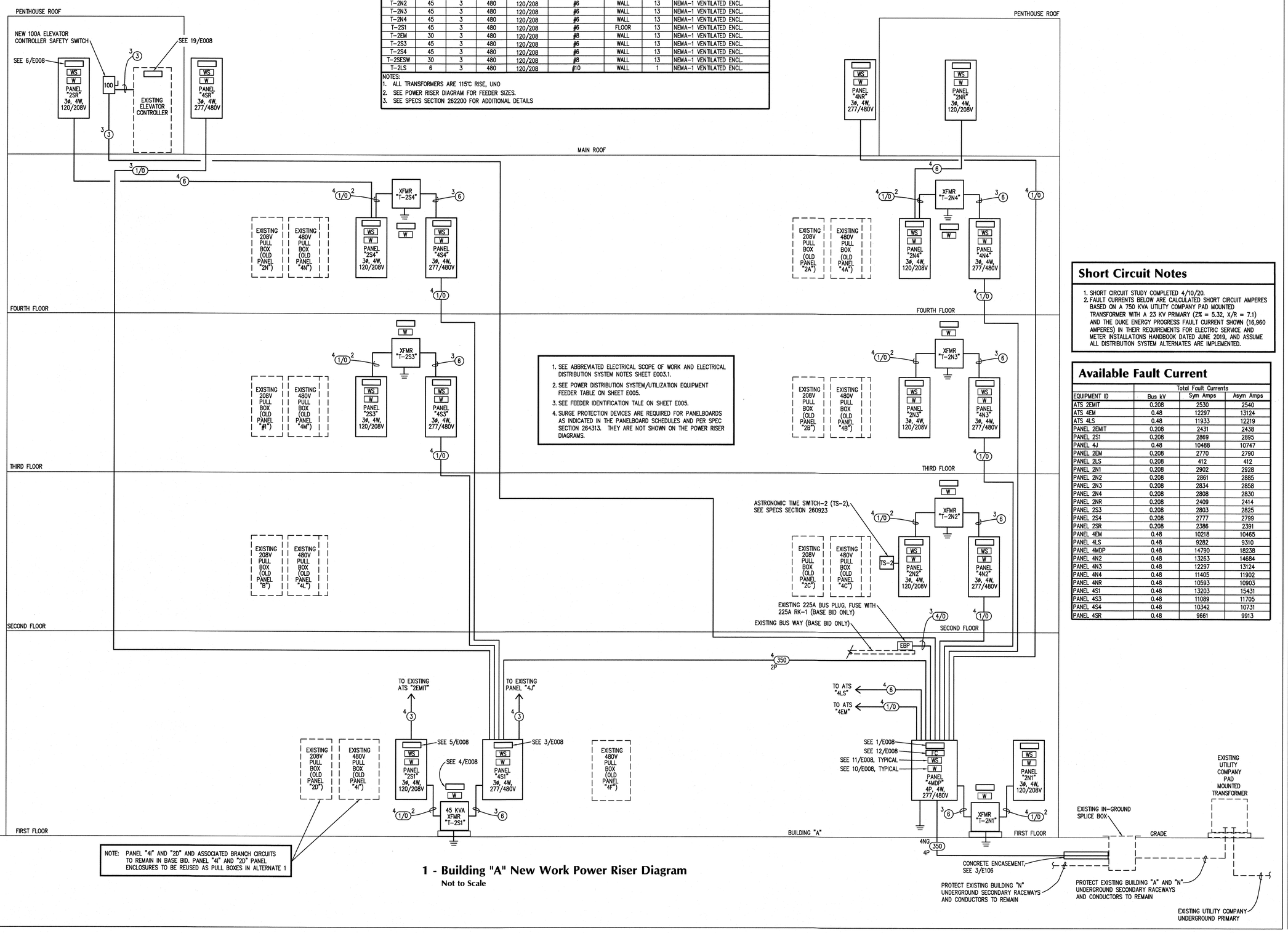
E003.1

COPYRIGHT © 2020

Dry Type Transformer Schedule

MARK	RATING (KVA)	PH	PRIMARY VOLTAGE (DELTA)	SECONDARY VOLTAGE (WYE)	GROUNDING ELECTRODE CONDX. (AWG)	MOUNTING	K RATING	REMARKS
T-2N1	45	3	480	120/208	#6	FLOOR	13	NEMA-1 VENTILATED ENCL.
T-2N2	45	3	480	120/208	#6	WALL	13	NEMA-1 VENTILATED ENCL.
T-2N3	45	3	480	120/208	#6	WALL	13	NEMA-1 VENTILATED ENCL.
T-2N4	45	3	480	120/208	#6	WALL	13	NEMA-1 VENTILATED ENCL.
T-2S1	45	3	480	120/208	#6	FLOOR	13	NEMA-1 VENTILATED ENCL.
T-2EM	30	3	480	120/208	#8	WALL	13	NEMA-1 VENTILATED ENCL.
T-2S3	45	3	480	120/208	#6	WALL	13	NEMA-1 VENTILATED ENCL.
T-2S4	45	3	480	120/208	#6	WALL	13	NEMA-1 VENTILATED ENCL.
T-2SESW	30	3	480	120/208	#8	WALL	13	NEMA-1 VENTILATED ENCL.
T-2LS	6	3	480	120/208	#10	WALL	1	NEMA-1 VENTILATED ENCL.

NOTES:
1. ALL TRANSFORMERS ARE 115°C RISE, UNO
2. SEE POWER RISER DIAGRAM FOR FEEDER SIZES.
3. SEE SPECS SECTION 262200 FOR ADDITIONAL DETAILS



1. SEE ABBREVIATED ELECTRICAL SCOPE OF WORK AND ELECTRICAL DISTRIBUTION SYSTEM NOTES SHEET E003.1.
2. SEE POWER DISTRIBUTION SYSTEM/UTILIZATION EQUIPMENT FEEDER TABLE ON SHEET E005.
3. SEE FEEDER IDENTIFICATION TALE ON SHEET E005.
4. SURGE PROTECTION DEVICES ARE REQUIRED FOR PANELBOARDS AS INDICATED IN THE PANELBOARD SCHEDULES AND PER SPEC SECTION 264313. THEY ARE NOT SHOWN ON THE POWER RISER DIAGRAMS.

NOTE: PANEL "4I" AND "2D" AND ASSOCIATED BRANCH CIRCUITS TO REMAIN IN BASE BID. PANEL "4I" AND "2D" PANEL ENCLOSURES TO BE REUSED AS PULL BOXES IN ALTERNATE 1

1 - Building "A" New Work Power Riser Diagram
Not to Scale

Short Circuit Notes

1. SHORT CIRCUIT STUDY COMPLETED 4/10/20.
2. FAULT CURRENTS BELOW ARE CALCULATED SHORT CIRCUIT AMPERES BASED ON A 750 KVA UTILITY COMPANY PAD MOUNTED TRANSFORMER WITH A 23 KV PRIMARY (Z% = 5.32, X/R = 7.1) AND THE DUKE ENERGY PROGRESS FAULT CURRENT SHOWN (16,960 AMPERES) IN THEIR REQUIREMENTS FOR ELECTRIC SERVICE AND METER INSTALLATIONS HANDBOOK DATED JUNE 2019, AND ASSUME ALL DISTRIBUTION SYSTEM ALTERNATES ARE IMPLEMENTED.

Available Fault Current

	Total Fault Currents		
EQUIPMENT ID	Bus kV	Sym Amps	Asym Amps
ATS 2EMIT	0.208	2530	2540
ATS 4EM	0.48	12297	13124
ATS 4LS	0.48	11933	12219
PANEL 2EMIT	0.208	2431	2438
PANEL 2S1	0.208	2869	2895
PANEL 4J	0.48	10488	10747
PANEL 2EM	0.208	2770	2790
PANEL 2LS	0.208	412	412
PANEL 2N1	0.208	2902	2928
PANEL 2N2	0.208	2861	2885
PANEL 2N3	0.208	2834	2858
PANEL 2N4	0.208	2808	2830
PANEL 2NR	0.208	2409	2414
PANEL 2S3	0.208	2803	2825
PANEL 2S4	0.208	2777	2799
PANEL 2SR	0.208	2386	2391
PANEL 4EM	0.48	10218	10465
PANEL 4LS	0.48	9282	9310
PANEL 4MDP	0.48	14790	18238
PANEL 4N2	0.48	13263	14684
PANEL 4N3	0.48	12297	13124
PANEL 4N4	0.48	11405	11902
PANEL 4NR	0.48	10593	10903
PANEL 4S1	0.48	13203	15431
PANEL 4S3	0.48	11089	11705
PANEL 4S4	0.48	10342	10731
PANEL 4SR	0.48	9661	9913

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER ROBERT DEAN MCFADYEN
9-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" NEW WORK POWER RISER DIAGRAM, SCHEDULES AND NOTES

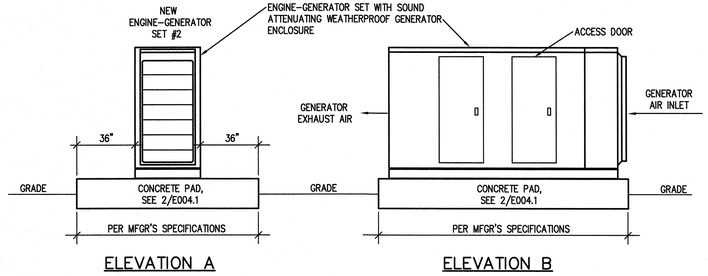
ISSUE BLOCK

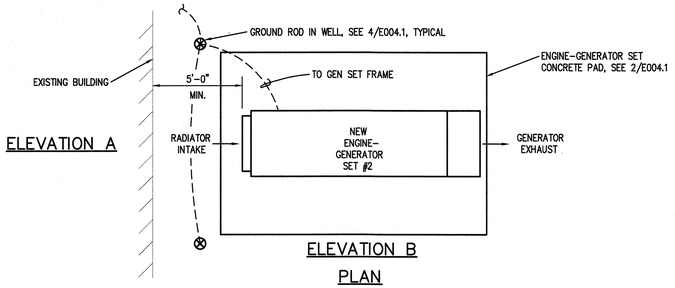
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E004

COPYRIGHT © 2020





3 - Engine Generator Details

Not to Scale

ENGINE-GENERATORS LOAD SUMMARIES

EXISTING ENGINE–GENERATOR #1 LOAD SUMMARY

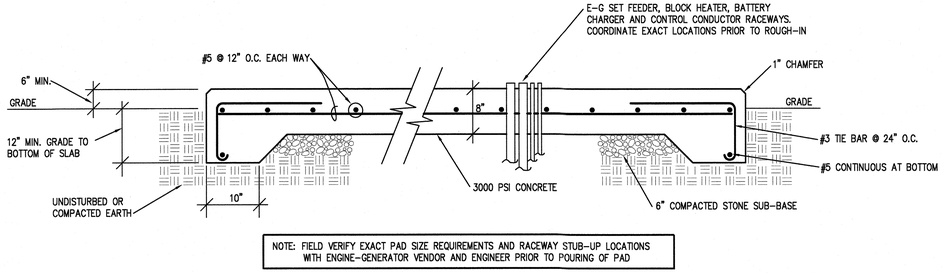
LOAD	PHASE A (VA)	PHASE B (VA)	PHASE C (VA)
EXISTING LOADS			
UPS	8,000	8,000	8,000
SUMP PUMPS (2 – 1/2 HP, 120V)	1,127	1,127	
PANEL 2EMIT CONNECTED LOAD (VA)	3,639	3,639	4,107
TOTAL E–G #2 CONNECTED LOAD (VA) / PHASE	12,766	12,766	12,107
TOTAL E–G #2 CONNECTED LOAD (VA)	37,639		

EXISTING E–G #1 RATING IS 60 KW / 75 KVA.

ENGINE–GENERATOR #2 LOAD SUMMARY

LOAD	PHASE A (VA)	PHASE B (VA)	PHASE C (VA)
PANEL 4EM CONNECTED LOAD (VA)	29,807	27,598	28,232
PANEL 4EM DEMAND (VA)	25,800	25,800	25,800
PANEL 4LS CONNECTED LOAD (VA)	3,904	4,494	4,496
PANEL 4LS DEMAND (VA)	5,106	5,106	5,106
TOTAL E–G #2 DEMAND LOAD (VA) / PHASE	30,906	30,906	30,906
TOTAL E–G #2 DEMAND LOAD (VA)	92,718		

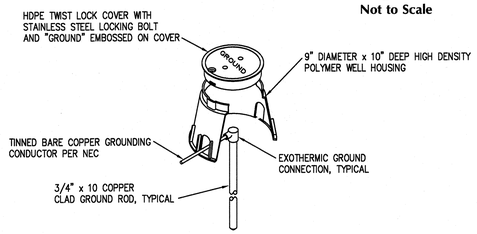
NOTES:
1. E–G SET #2 SPECIFIED MINIMUM RATING IS 100 KW / 125 KVA.
2. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DISTRIBUTION EQUIPMENT, OCPD AND CONDUCTORS/RACEWAYS RATING REVISIONS IF A LARGER CAPACITY GEN SET IS PROVIDED. REQUIRED REVISIONS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD.
3. REFER TO SPEC SECTION 263313, PARA. 2.4 FOR REQUIRED RATINGS AND MAXIMUM VOLTAGE DIP WITH ALL CONNECTED LOADS.



NOTE: FIELD VERIFY EXACT PAD SIZE REQUIREMENTS AND RACEWAY STUB–UP LOCATIONS WITH ENGINE–GENERATOR VENDOR AND ENGINEER PRIOR TO POURING OF PAD

2 - Engine Generator Concrete Pad Detail

Not to Scale

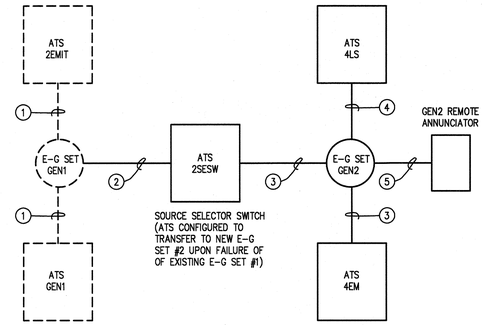


SEE SPECS. SECTION 260526

4 - Grounding Inspection Well Detail

NOT TO SCALE

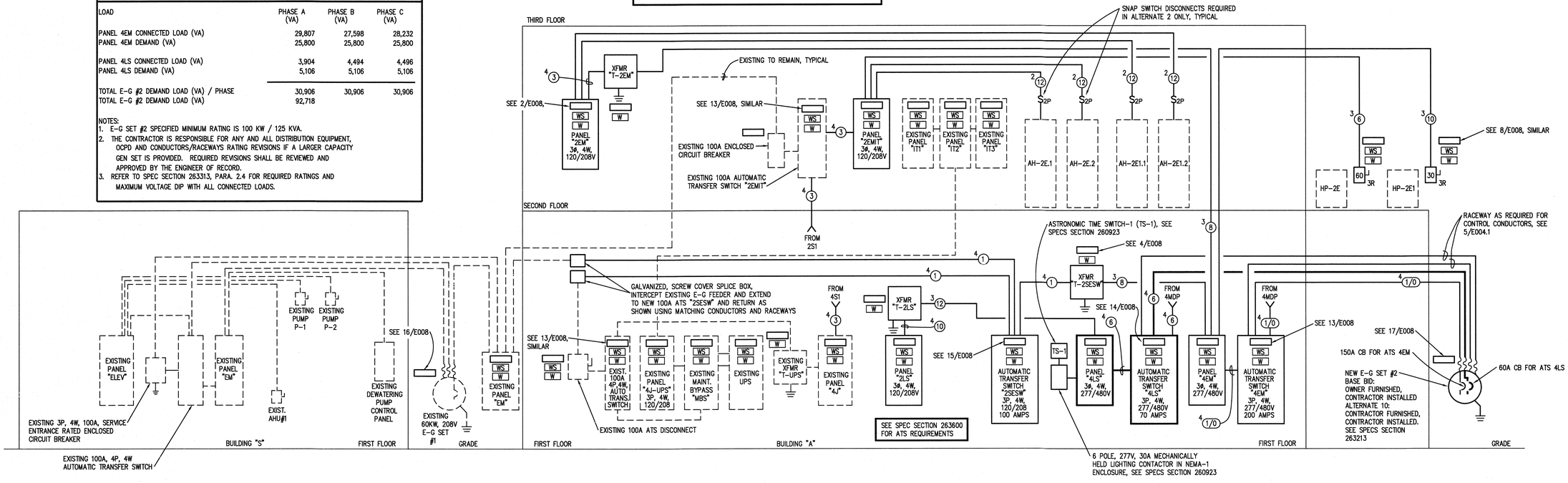
1. REDUNDANT SERVER ROOM HVAC SYSTEMS ARE FED FROM SEPARATE ELECTRICAL SOURCES (VIA ATS 2EMIT & E–G SET #1, AND ATS 4EM & E–G SET #2) FOR POWER REDUNDANCY.
2. THE EXISTING SERVER ROOM UPS IS FED FROM TWO ENGINE–GENERATOR SETS VIA THE AUTOMATIC EM SOURCE SELECTOR SWITCH ATS 2SESW TO PROVIDE REDUNDANT GENERATOR POWER.
3. SEE GENERATORS CONTROL BLOCK DIAGRAM SHEET E004.1.
4. SEE ABBREVIATED ELECTRICAL SCOPE OF WORK AND ELECTRICAL DISTRIBUTION SYSTEM NOTES SHEET E003.1.
5. SEE POWER DISTRIBUTION SYSTEM/UTILIZATION EQUIPMENT FEEDER TABLE ON SHEET E005.
6. SEE FEEDER IDENTIFICATION TALE ON SHEET E005.
7. SURGE PROTECTION DEVICES ARE REQUIRED FOR PANELBOARDS AS INDICATED IN THE PANELBOARD SCHEDULES AND PER SPEC SECTION 264313. THEY ARE NOT SHOWN ON THE POWER RISER DIAGRAMS.



1. EXISTING GEN1 START–STOP, COMMUNICATIONS AND CONTROL CABLES
2. GEN1 START–STOP, COMMUNICATIONS/CONTROL CABLES AND CONDUCTORS, AND ADDITIONAL CONDUCTORS AS REQUIRED BY GEN SET AND ATS MANUFACTURERS RECOMMENDATIONS IN 1 1/2" MINIMUM C.
3. GEN2 START–STOP, COMMUNICATIONS/CONTROL CABLES AND CONDUCTORS, AND ADDITIONAL CONDUCTORS AS REQUIRED BY GEN SET AND ATS MANUFACTURERS RECOMMENDATIONS IN 1 1/2" MINIMUM C.
4. GEN2 START–STOP, COMMUNICATIONS/CONTROL CABLES AND CONDUCTORS, AND ADDITIONAL CONDUCTORS AS REQUIRED BY GEN SET AND ATS MANUFACTURERS RECOMMENDATIONS IN 1 1/2" MINIMUM C.
5. GEN2 REMOTE ANUNCIATOR CABLE AND CONDUCTORS, SIZE AND QUANTITY AS REQUIRED IN 1" MINIMUM C.

5 - Generators Control Block Diagram

NOT TO SCALE



1 - Building "A" New Work Emergency Power Riser Diagram

Not to Scale

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone: 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP

ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 8433 ENGINEERING CORPORATION ACCREDITATION
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" NEW WORK EMERGENCY POWER RISER DIAGRAM AND ENGINE-GENERATOR DETAILS

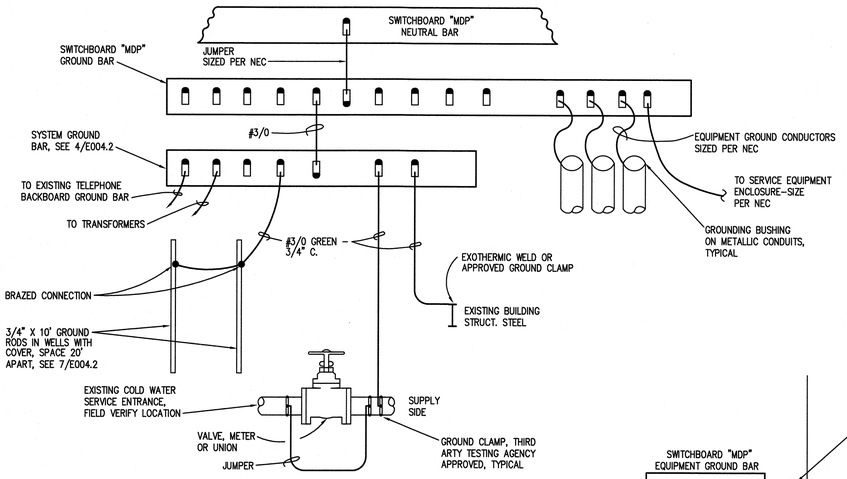
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

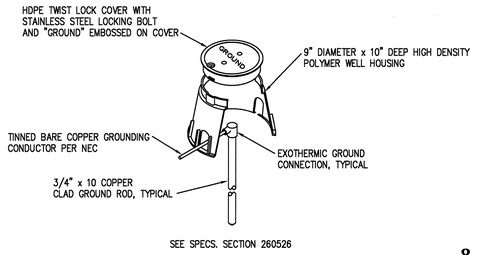
E004.1

COPYRIGHT © 2020



3 - Service Grounding System Detail

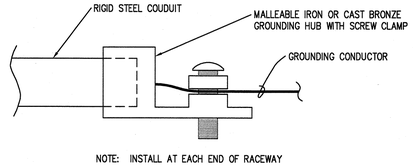
Not to Scale



SEE SPECS. SECTION 260526

7 - Grounding Inspection Well Detail

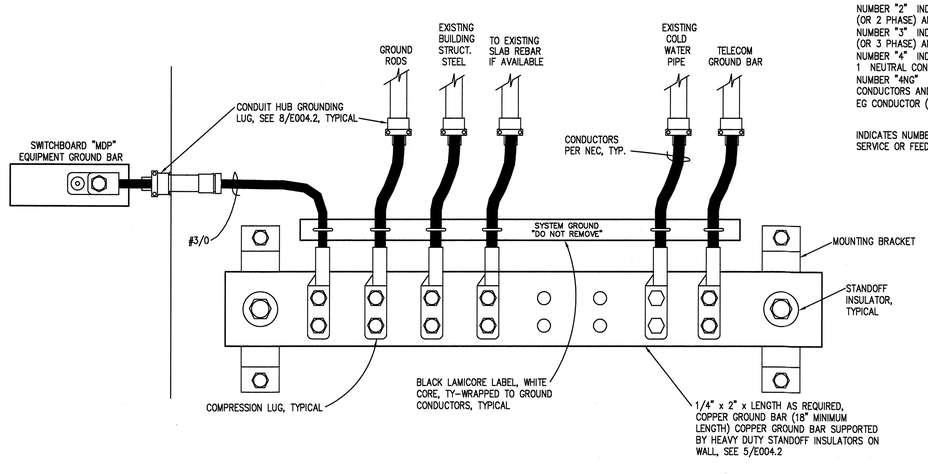
NOT TO SCALE



NOTE: INSTALL AT EACH END OF RACEWAY

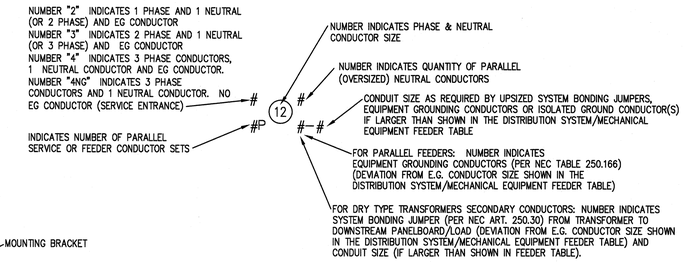
8 - Conduit and Grounding Conductor Grounding Detail

Not to Scale



4 - System Ground Bar Detail

Not to Scale



8 - Conductors Identification Detail

Not to Scale

Power Distribution System/Utilization Equipment Conductors Identification Table

ID#	MAX OCP	CONDUCTORS	CONDUIT SIZE
2 (12)	20	2#12 & 1#12 EG	1/2"
3 (12)	20	3#12 & 1#12 EG	1/2"
4 (12)	20	4#12 & 1#12 EG	1/2"
2 (10)	30	2#10 & 1#10 EG	1/2"
3 (10)	30	3#10 & 1#10 EG	1/2"
4 (10)	30	4#10 & 1#10 EG	1/2"
2 (8)	50	2#8 & 1#10 EG	1/2"
3 (8)	50	3#8 & 1#10 EG	3/4"
4 (8)	50	4#8 & 1#10 EG	1"
2 (6)	70	2#6 & 1#8 EG	1"
3 (6)	70	3#6 & 1#8 EG	1"
4 (6)	70	4#6 & 1#8 EG	1"
2 (4)	90	2#4 & 1#8 EG	1"
3 (4)	90	3#4 & 1#8 EG	1"
4 (4)	90	4#4 & 1#8 EG	1 1/4"
2 (3)	100	2#3 & 1#8 EG	1 1/4"
3 (3)	100	3#3 & 1#8 EG	1 1/4"
4 (3)	100	4#3 & 1#8 EG	1 1/4"
2 (2)	115	2#2 & 1#6 EG	1 1/4"
3 (2)	115	3#2 & 1#6 EG	1 1/4"
4 (2)	115	4#2 & 1#6 EG	1 1/4"
2 (1)	125	2#1 & 1#6 EG	1 1/4"
3 (1)	125	3#1 & 1#6 EG	1 1/4"
4 (1)	125	4#1 & 1#6 EG	1 1/2"
3 (1/0)	150	3#1/0 & 1#6 EG	1 1/2"
4 (1/0)	150	4#1/0 & 1#6 EG	2"
3 (2/0)	175	3#2/0 & 1#6 EG	2"
4 (2/0)	175	4#2/0 & 1#6 EG	2"
3 (3/0)	200	3#3/0 & 1#6 EG	2"
4 (3/0)	200	4#3/0 & 1#6 EG	2"
3 (4/0)	225	3#4/0 & 1#4 EG	2"
4 (4/0)	225	4#4/0 & 1#4 EG	2 1/2"
3 (250)	250	3#250 KCMIL & 1#4 EG	2 1/2"
4 (250)	250	4#250 KCMIL & 1#4 EG	2 1/2"
3 (300)	300	3#300 KCMIL & 1#4 EG	2 1/2"
4 (300)	300	4#300 KCMIL & 1#4 EG	3"
3 (350)	300	3#350 KCMIL & 1#3 EG	2 1/2"
4 (350)	300	4#350 KCMIL & 1#3 EG	3"
3 (400)	350	3#400 & 1#3 EG	2 1/2"
4 (400)	350	4#400 & 1#3 EG	3"
3 (500)	400	3#500 KCMIL & 1#3 EG	3 1/2"
4 (500)	400	4#500 KCMIL & 1#3 EG	3"

1. TABLE IS FOR THHN/THWN INSULATED COPPER CONDUCTORS USING 75°C RATING IN EMT ONLY. OTHER INSULATION AND RACEWAY TYPES MAY REQUIRE LARGER RACEWAYS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE CODE COMPLIANCE AND DESIGN INTENT.
2. SOME DRY TYPE TRANSFORMER SECONDARY CONDUCTORS AND PARALLEL CONDUCTORS REQUIRE UPSIZED BONDING JUMPERS, UPSIZED EQUIPMENT GROUND CONDUCTORS AND LARGER RACEWAYS THAN SHOWN IN THIS TABLE. SEE CONDUCTORS IDENTIFICATION DETAIL.
3. OVERSIZED AND PARALLELED NEUTRAL CONDUCTORS MAY ALSO REQUIRE LARGER RACEWAYS THAN INDICATED. SEE CONDUCTORS IDENTIFICATION DETAIL.
4. CONDUIT SIZING IS CODE MINIMUM. LARGER SIZES MAY BE REQUIRED.
5. REFER TO THE CONDUCTORS IDENTIFICATION DETAIL FOR ADDITIONAL INFORMATION.
6. MAX OCP = MAXIMUM OCP DEVICE DESIGN AMPACITY.

MINIMUM CONDUCTORS SIZE CHART

PROVIDE THE FOLLOWING MINIMUM SIZES FOR BRANCH CIRCUIT CONDUCTORS:

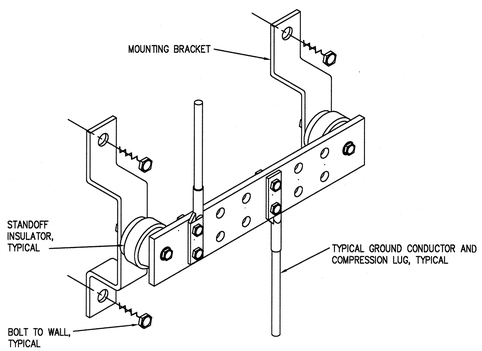
SINGLE PHASE CIRCUITS

CONDUCTOR SIZE (AWG)	BRANCH CIRCUIT BREAKER TRIP (AMPERES)	CIRCUIT VOLTAGE MAXIMUM ALLOWABLE CIRCUIT LENGTH (FEET) 120	208	240	277
#12	15	81	141	163	188
#10	15	135	234	270	312
#8	15	204	355	409	473
#12	20	61	106	122	141
#10	20	101	175	202	233
#8	20	153	266	307	354
#10	30	67	117	135	155
#8	30	102	177	204	236

THREE PHASE CIRCUITS

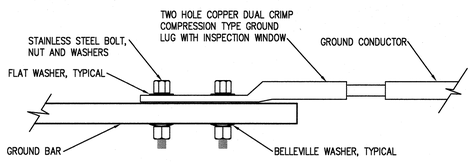
CONDUCTOR SIZE (AWG)	BRANCH CIRCUIT BREAKER TRIP (AMPERES)	CIRCUIT VOLTAGE MAXIMUM ALLOWABLE CIRCUIT LENGTH (FEET) 208	240	480
#12	15	163	188	377
#10	15	270	312	624
#12	20	122	141	283
#10	20	202	234	468
#10	30	135	156	312
#8	30	205	236	473
#8	40	153	177	354
#6	40	239	276	553
#8	50	123	142	283
#6	50	191	221	442
#6	60	159	184	368
#4	60	245	283	567

NOTES:
1. CONDUCTOR LENGTHS ARE BASED ON SINGLE & THREE PHASE, 90% POWER FACTOR LOADS USING 75°C COPPER CONDUCTORS IN EMT RACEWAYS TO ACHIEVE NO MORE THAN 3 PERCENT VOLTAGE DROP.
2. CALCULATIONS ASSUME LOADS OF 80% OF CIRCUIT BREAKER TRIP (12A, 16A & 24A, 32A, 40A & 48A, RESPECTIVELY) ARE CONCENTRATED AT THE END OF THE CIRCUITS.
3. IF LOAD CHARACTERISTICS DIFFER FROM ABOVE, CALCULATE USING KNOWN CHARACTERISTICS AND SUBMIT CALCULATIONS TO THE ARCHITECT/ENGINEER DOCUMENTING 3% OR LESS VOLTAGE DROP UNDER THE ACTUAL LOAD CONDITIONS.
4. WHEN A DEDICATED SINGLE LOAD LESS THAN NOTED ABOVE IS KNOWN, THE CONTRACTOR MAY UTILIZE SMALLER CONDUCTORS UPON SUBMISSION OF VOLTAGE DROP CALCULATIONS DOCUMENTING 3% OR LESS VOLTAGE DROP. THE MINIMUM LOAD SHALL BE ASSUMED TO BE 60% OF THE CB TRIP RATING REGARDLESS OF ACTUAL DEDICATED LOAD.
5. USE THE LARGER OF THE CONDUCTORS INDICATED ON THE DRAWINGS OR THIS TABLE.



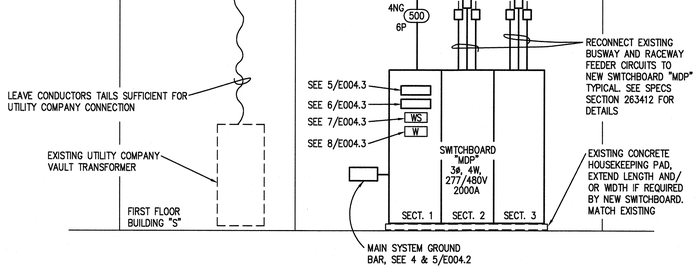
5 - Typical Ground Bar Mounting Detail

Not to Scale



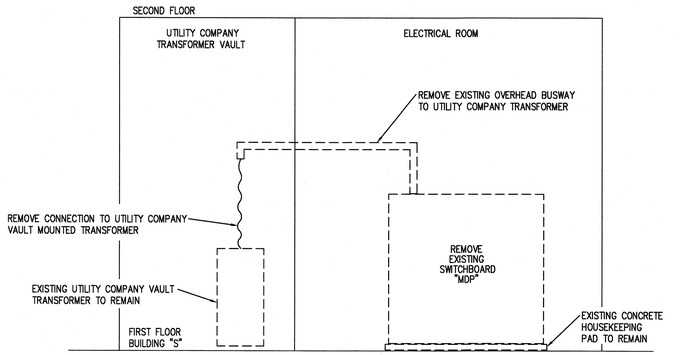
6 - Typical Ground Bar Connection Detail

Not to Scale



2 - Building "S" New Work Power Riser Diagram

Not to Scale



1 - Building "S" Demolition Power Riser Diagram

Not to Scale

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone: 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER A. DUNCAN McFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 9 BUILDING "S" POWER RISER DIAGRAMS AND DETAILS

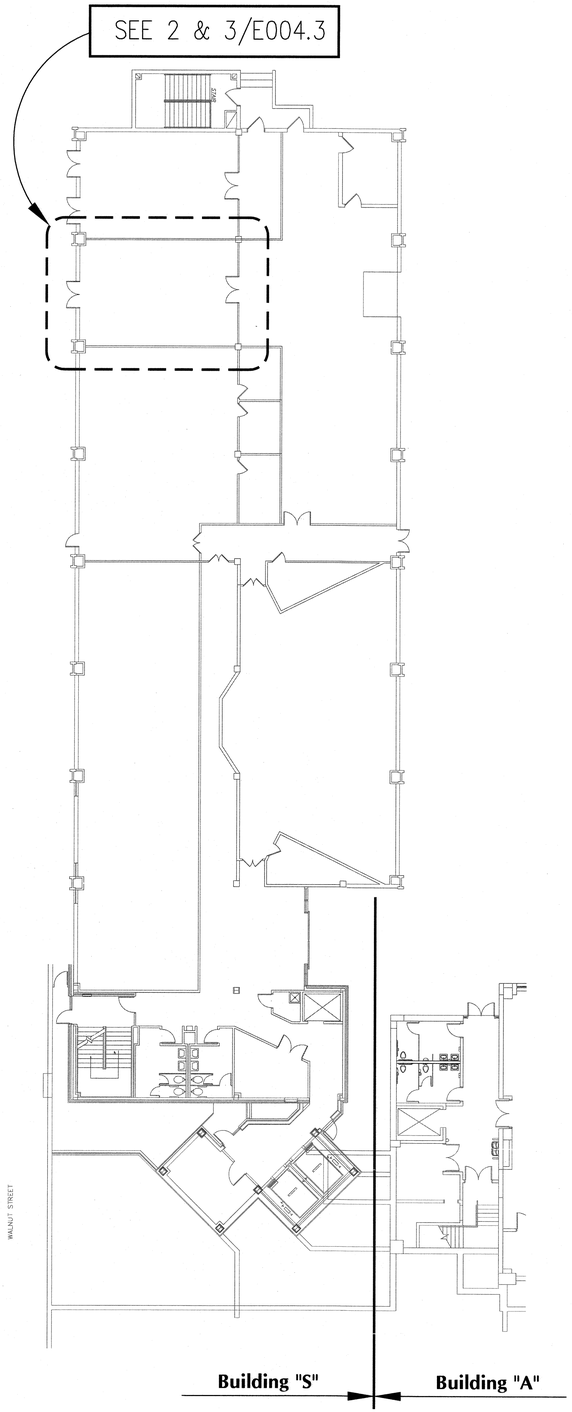
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

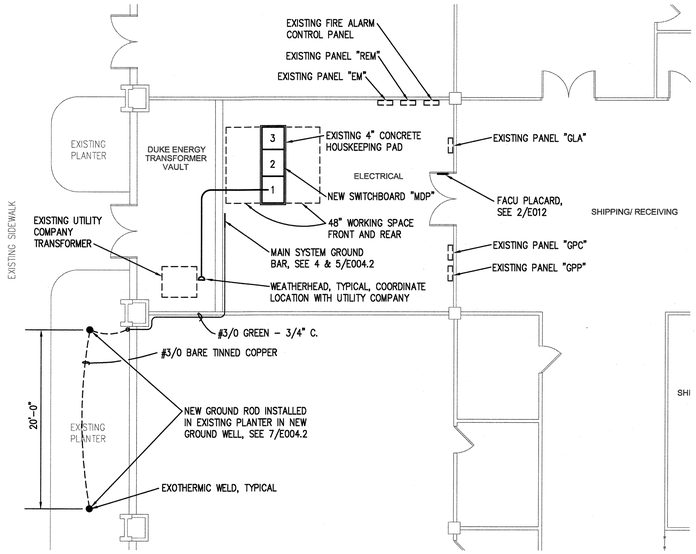
PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ PROJ MGR: RDM

E004.2

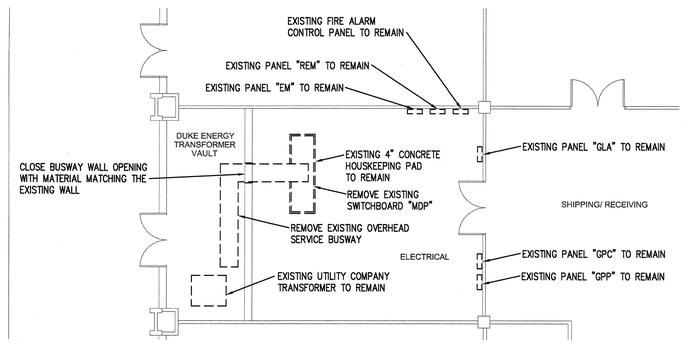
COPYRIGHT © 2020



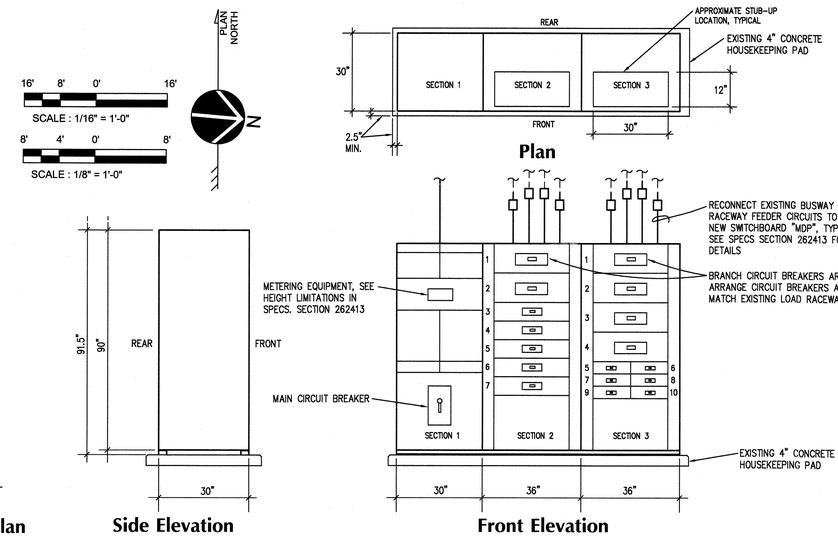
1 - Building "S" and Partial Building "A" First Floor Overall Floor Plan
Scale: 1/16" = 1'-0"



3 - Building "S" First Floor Switchgear Room New Work Plan
Scale: 1/8" = 1'-0"



2 - Building "S" First Floor Switchgear Room Demolition Plan
Scale: 1/8" = 1'-0"

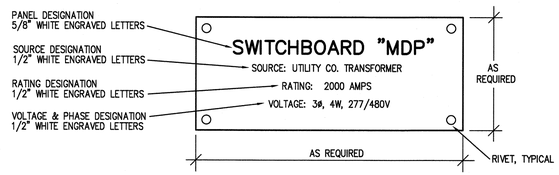


APPROXIMATE DIMENSIONS SHOWN. VERIFY WITH ACTUAL EQUIPMENT PROVIDED

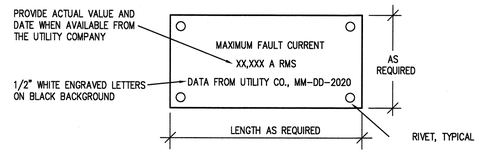
4 - Switchboard Elevation
Not to Scale

Switchboard "MDP" - Building "S" Switchboard Replacement

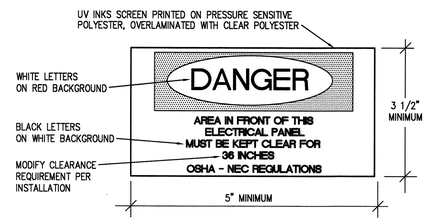
TYPE: FREESTANDING, MULTI-SECTION,	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	xx	EQUIPMENT GROUND BUS			
SWITCHBOARD CONSTRUCTION,	MOUNT:	SURFACE							IF	xx	100	% NEUTRAL BUS		
FRONT AND REAR ACCESSIBLE,	FEED:	TOP							CHECKED	xx	ULSE LABEL			
SEISMIC QUALIFIED	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR			
	LOAD	CKT BKR	CKT	LOAD VA			CKT	CKT BKR	LOAD					
LOAD SERVED	VA	POLES/TRIP	#	A	B	C	#	POLES/TRIP	VA	LOAD SERVED				
				0										
SPARE		3/100	1		0		2	3/100		SPARE				
						0								
				0										
PANELBOARD GHA		3/90	3		0		4	3/70		PANELBAORD GLA				
						0								
				0										
TRANSFORMER T-1		3/150	5		0		6	3/300		MCC				
						0								
				0										
CHILLER #2		3/350	7		0		8	3/350		CHILLER #1				
						0								
				0										
SPARE		3/400	9		0		10	3/400		SPARE				
						0								
				0										
BUSWAY		3/800	11		0		12	3/800		BUSWAY				
						0								
				0										
PREPARED SPACE		3/400	13		0		14	3/400		PREPARED SPACE				
						0								
				0										
PREPARED SPACE		3/800	15		0		16	3/800		PREPARED SPACE				
						0								
NOTES:				0	0	0	TOTAL VA			2,000 A. BUS (COPPER, UNO)				
1. PROVIDE MCB WITH LSIG ELECTRONIC TRIP UNIT WITH ARMS.				0	0	0	TOTAL AMPERES			2,000 A. MAIN CIRCUIT BREAKER				
2. SWBD. ENCLOSURE SHALL BE FREE-STANDING, FRONT ACCESSIBLE ONLY.							PHASE BALANCE							
3. PROVIDE LSI ELECTRONIC TRIP UNITS FOR ALL BRANCH CIRCUIT BREAKERS.										65 KAIC MINIMUM RATING				
4. SEE SPECIFICATIONS SECTION 262413 FOR ADDITIONAL REQUIREMENTS AND DETAILS.														



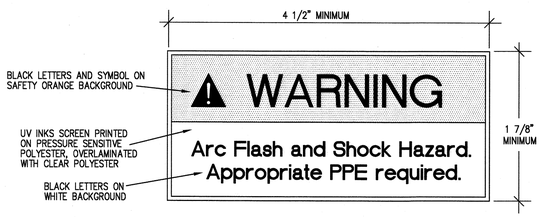
5 - Switchboard "MDP" Nameplate Detail
Not to Scale



6 - Fault Current Nameplate Detail
Not to Scale



7 - NEC Working Space Label Detail
Not to Scale



8 - Electrical Equipment Warning Label Detail
Not to Scale

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER DUNCAN McFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 9
BUILDING "S" PLANS, SWITCHBOARD SCHEDULE AND DETAILS

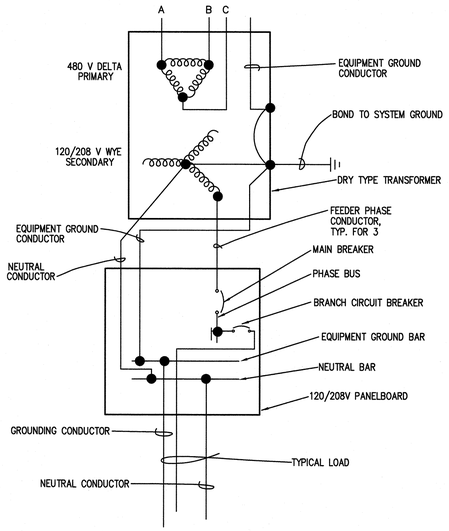
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

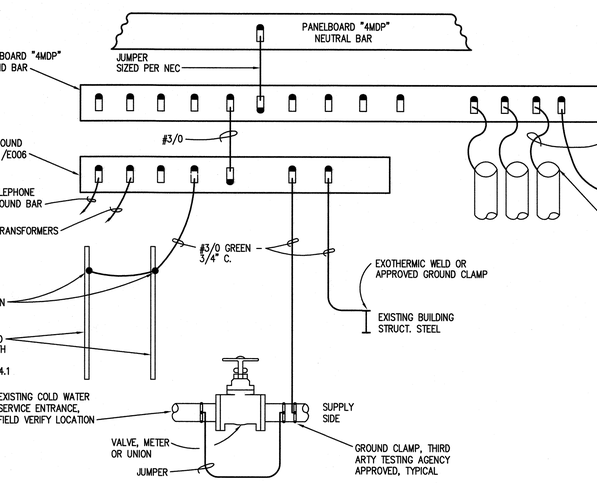
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E004.3

COPYRIGHT © 2020

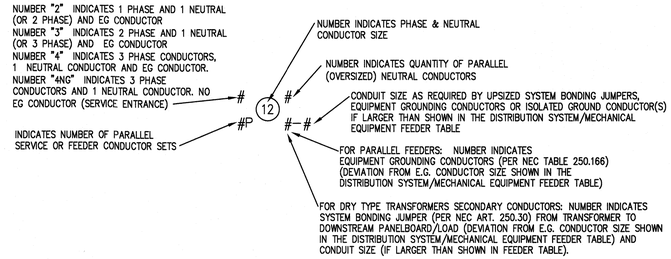


3 - Transformer Grounding System Detail
Not to Scale



2 - Dry Type Transformer Bonding Detail
Not to Scale

1 - Service Grounding System Detail
Not to Scale



4 - Conductors Identification Detail
Not to Scale

MINIMUM CONDUCTORS SIZE CHART

PROVIDE THE FOLLOWING MINIMUM SIZES FOR BRANCH CIRCUIT CONDUCTORS:

SINGLE PHASE CIRCUITS

CONDUCTOR SIZE (AWG)	BRANCH CIRCUIT BREAKER TRIP (AMPERES)	CIRCUIT VOLTAGE MAXIMUM ALLOWABLE CIRCUIT LENGTH (FEET)			
		120	208	240	277
#12	15	81	141	163	188
#10	15	135	234	270	312
#8	15	204	355	409	473
#12	20	61	106	122	141
#10	20	101	175	202	233
#8	20	153	266	307	354
#10	30	67	117	135	155
#8	30	102	177	204	236

THREE PHASE CIRCUITS

CONDUCTOR SIZE (AWG)	BRANCH CIRCUIT BREAKER TRIP (AMPERES)	CIRCUIT VOLTAGE MAXIMUM ALLOWABLE CIRCUIT LENGTH (FEET)		
		208	240	480
#12	15	163	188	377
#10	15	270	312	624
#12	20	122	141	283
#10	20	202	234	468
#10	30	135	156	312
#8	30	205	236	473
#8	40	153	177	354
#6	40	239	276	553
#8	50	123	142	283
#6	50	191	221	442
#6	60	159	184	368
#4	60	245	283	567

NOTES:
1. CONDUCTOR LENGTHS ARE BASED ON SINGLE & THREE PHASE, 90% POWER FACTOR LOADS USING 75°C COPPER CONDUCTORS IN EMT RACEWAYS TO ACHIEVE NO MORE THAN 3 PERCENT VOLTAGE DROP.
2. CALCULATIONS ASSUME LOADS OF 80% OF CIRCUIT BREAKER TRIP (12A, 16A & 24A, 32A, 40A & 48A, RESPECTIVELY) ARE CONCENTRATED AT THE END OF THE CIRCUITS.
3. IF LOAD CHARACTERISTICS DIFFER FROM ABOVE, CALCULATE USING KNOWN CHARACTERISTICS AND SUBMIT CALCULATIONS TO THE ARCHITECT/ENGINEER DOCUMENTING 3% OR LESS VOLTAGE DROP UNDER THE ACTUAL LOAD CONDITIONS.
4. WHEN A DEDICATED SINGLE LOAD LESS THAN NOTED ABOVE IS KNOWN, THE CONTRACTOR MAY UTILIZE SMALLER CONDUCTORS UPON SUBMISSION OF VOLTAGE DROP CALCULATIONS DOCUMENTING 3% OR LESS VOLTAGE DROP. THE MINIMUM LOAD SHALL BE ASSUMED TO BE 60% OF THE CB TRIP RATING REGARDLESS OF ACTUAL DEDICATED LOAD.
5. USE THE LARGER OF THE CONDUCTORS INDICATED ON THE DRAWINGS OR THIS TABLE.

Power Distribution System/Utilization Equipment Conductors Identification Table

ID#	MAX OCP	CONDUCTORS	CONDUIT SIZE
2 (12)	20	2#12 & 1#12 EG	1/2"
3 (12)	20	3#12 & 1#12 EG	1/2"
4 (12)	20	4#12 & 1#12 EG	1/2"
2 (10)	30	2#10 & 1#10 EG	1/2"
3 (10)	30	3#10 & 1#10 EG	1/2"
4 (10)	30	4#10 & 1#10 EG	1/2"
2 (8)	50	2#8 & 1#10 EG	1/2"
3 (8)	50	3#8 & 1#10 EG	3/4"
4 (8)	50	4#8 & 1#10 EG	1"
2 (6)	70	2#6 & 1#8 EG	1"
3 (6)	70	3#6 & 1#8 EG	1"
4 (6)	70	4#6 & 1#8 EG	1"
2 (4)	90	2#4 & 1#8 EG	1"
3 (4)	90	3#4 & 1#8 EG	1"
4 (4)	90	4#4 & 1#8 EG	1 1/4"
2 (3)	100	2#3 & 1#8 EG	1 1/4"
3 (3)	100	3#3 & 1#8 EG	1 1/4"
4 (3)	100	4#3 & 1#8 EG	1 1/4"
2 (2)	115	2#2 & 1#6 EG	1 1/4"
3 (2)	115	3#2 & 1#6 EG	1 1/4"
4 (2)	115	4#2 & 1#6 EG	1 1/4"
2 (1)	125	2#1 & 1#6 EG	1 1/4"
3 (1)	125	3#1 & 1#6 EG	1 1/4"
4 (1)	125	4#1 & 1#6 EG	1 1/2"
3 (1/0)	150	3#1/0 & 1#6 EG	1 1/2"
4 (1/0)	150	4#1/0 & 1#6 EG	2"
3 (2/0)	175	3#2/0 & 1#6 EG	2"
4 (2/0)	175	4#2/0 & 1#6 EG	2"
3 (3/0)	200	3#3/0 & 1#6 EG	2"
4 (3/0)	200	4#3/0 & 1#6 EG	2"
3 (4/0)	225	3#4/0 & 1#4 EG	2"
4 (4/0)	225	4#4/0 & 1#4 EG	2 1/2"
3 (250)	250	3#250 KCMIL & 1#4 EG	2 1/2"
4 (250)	250	4#250 KCMIL & 1#4 EG	2 1/2"
3 (300)	300	3#300 KCMIL & 1#4 EG	2 1/2"
4 (300)	300	4#300 KCMIL & 1#4 EG	3"
3 (350)	300	3#350 KCMIL & 1#3 EG	2 1/2"
4 (350)	300	4#350 KCMIL & 1#3 EG	3"
3 (400)	350	3#400 & 1#3 EG	2 1/2"
4 (400)	350	4#400 & 1#3 EG	3"
3 (500)	400	3#500 KCMIL & 1#3 EG	3"
4 (500)	400	4#500 KCMIL & 1#3 EG	3 1/2"

1. TABLE IS FOR THHN/THWN INSULATED COPPER CONDUCTORS USING 75°C RATING IN EMT ONLY. OTHER INSULATION AND RACEWAY TYPES MAY REQUIRE LARGER RACEWAYS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE CODE COMPLIANCE AND DESIGN INTENT.
2. SOME DRY TYPE TRANSFORMER SECONDARY CONDUCTORS AND PARALLEL CONDUCTORS REQUIRE UPSIZED BONDING JUMPERS, UPSIZED EQUIPMENT GROUND CONDUCTORS AND LARGER RACEWAYS THAN SHOWN IN THIS TABLE. SEE CONDUCTORS IDENTIFICATION DETAIL.
3. OVERSIZED AND PARALLELED NEUTRAL CONDUCTORS MAY ALSO REQUIRE LARGER RACEWAYS THAN INDICATED. SEE CONDUCTORS IDENTIFICATION DETAIL.
4. CONDUIT SIZING IS CODE MINIMUM. LARGER SIZES MAY BE REQUIRED.
5. REFER TO THE CONDUCTORS IDENTIFICATION DETAIL FOR ADDITIONAL INFORMATION.
6. MAX OCP = MAXIMUM OCP DEVICE DESIGN AMPACITY.

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER R. DUNCAN McFADYEN 8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ELECTRICAL DETAILS

ISSUE BLOCK

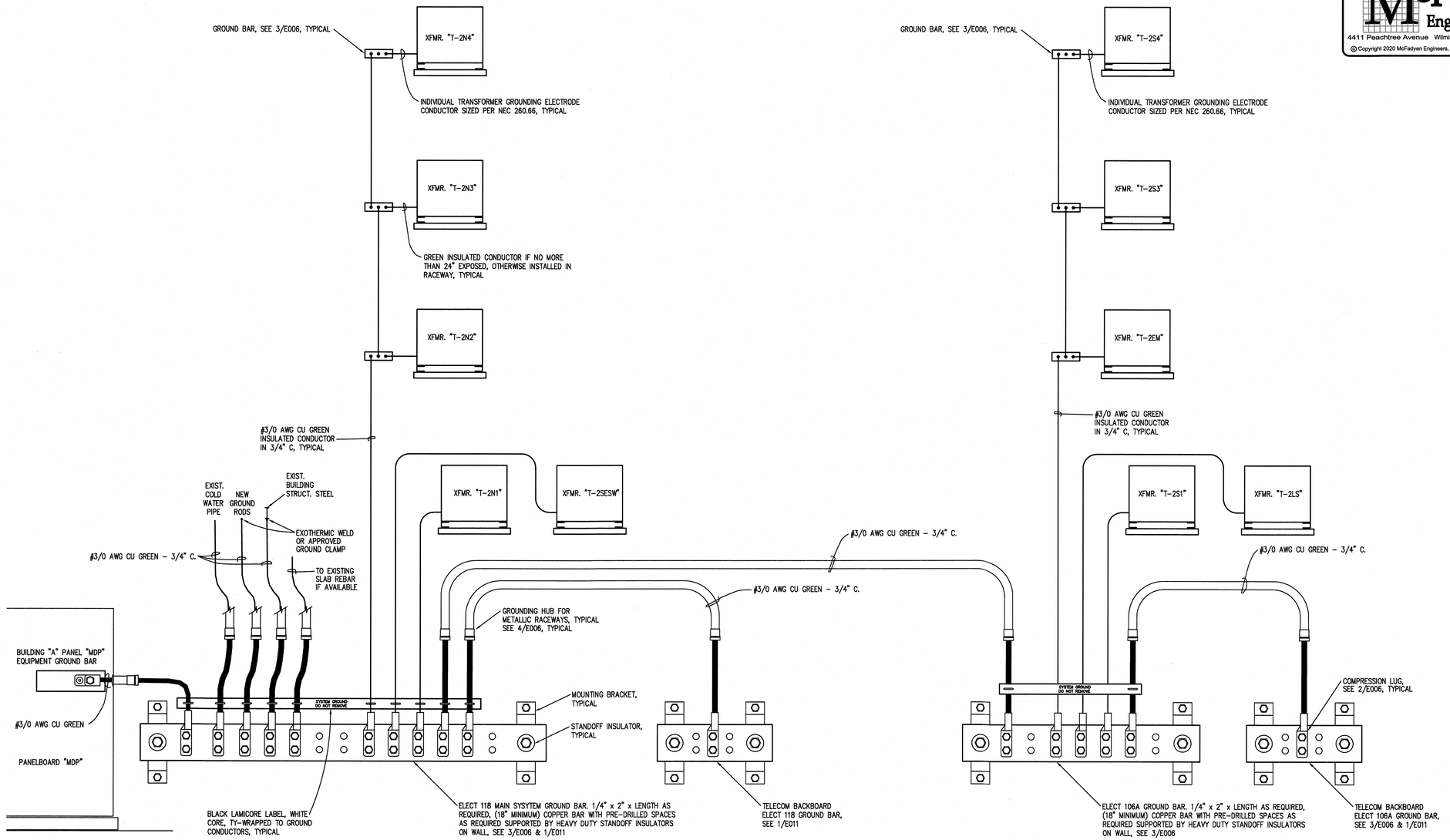
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ PROJ MGR: RDM

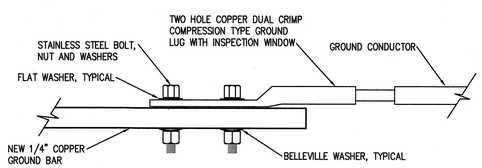
E005

COPYRIGHT © 2020

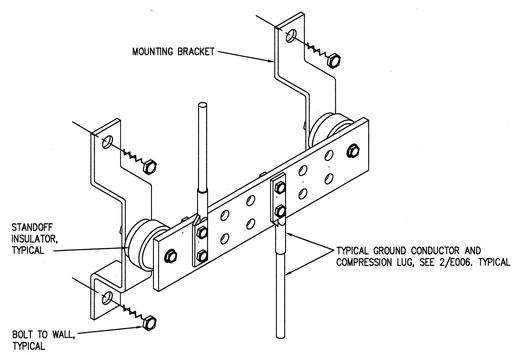
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010



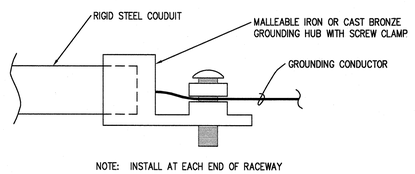
1 - System Grounding Detail
Not to Scale



2 - Typical Ground Bar Connection Detail
Not to Scale



3 - Typical Ground Bar Mounting Detail
Not to Scale



NOTE: INSTALL AT EACH END OF RACEWAY

4 - Conduit Hub and Grounding Conductor Detail
Not to Scale

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.becker morgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER ROBERT DEAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ELECTRICAL DETAILS

ISSUE BLOCK

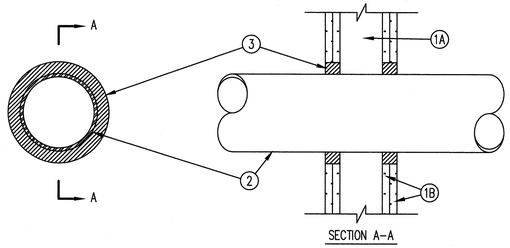
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E006

COPYRIGHT © 2020

System No. W-L-1054
December 04, 2002
F Ratings – 1 and 2 Hr (See Items 1 and 3)
T Rating – 0 Hr
L Rating At Ambient – Less Than 1 CFM/Sq Ft
L Rating At 400 F – 4 CFM/Sq Ft



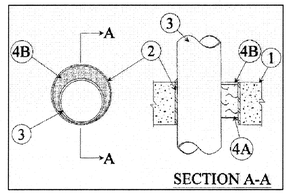
1. Wall Assembly – The 1 or 2 hr fire–rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2–1/2 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw–attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.
   B. Gypsum Board* – 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32–1/4 in. for steel stud walls. Max diam of opening is 14–1/2 in. for wood stud walls.

   The F Rating of the firestop system is equal to the fire rating of the wall assembly.
2. Through–Penetrants – One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2–1/4 in. Pipe may be installed with continuous point contact. Pipe, conduit or tubing may be installed at an angle not greater than 45 degrees from perpendicular. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. Steel Pipe – Nom 30 in diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe – Nom 30 in. diam (or smaller) cast or ductile iron pipe.
   C. Conduit – Nom 4 in diam (or smaller) steel electrical metallic tubing or 6 in. diam steel conduit.
   D. Copper Tubing – Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
   E. Copper Pipe – Nom 6 in. diam (or smaller) regular (or heavier) copper pipe.
3. Fill, Void or Cavity Material* – Sealant – Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall .
HILTI CONSTRUCTION CHEMICALS, DIV OF
HILTI INC – FS–One Sealant

Filename = XHEZ.W–L–1054
Copyright December 04, 2002 Underwriters Laboratories, INC.
Reprinted from the UL Online Directory with permission from Underwriters Laboratories INC.

2 - 1 and 2 Hour Firewall Penetration Detail
NOT TO SCALE

System No. C–AJ–1226
October 30, 2003
F Rating – 3 Hr
T Rating – 0 Hr
L Rating At Ambient – Less Than 1 CFM/Sq Ft
L Rating At 400 F – 4 CFM/Sq Ft

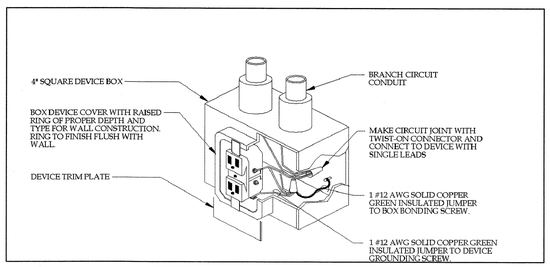


1. Floor or Wall Assembly – Min 4–1/2 in. thick reinforced lightweight or normal weight (100–150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 32 in.
2. Metallic Sleeve – (Optional) Nom 32 in. diam (or smaller) Schedule 40 (or heavier) steel sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces or extending a max of 3 in. above floor or beyond both surfaces of wall.
3. Through–Penetrant – One metallic pipe, tube or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between penetrant and periphery of opening shall be min 0 in. (point contact) to max 1–7/8 in. Penetrant may be installed with continuous point contact. Penetrant to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic penetrants may be used:
   A. Steel Pipe – Nom 30 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe – Nom 30 in. diam (or smaller) cast or ductile iron pipe.
   C. Copper Pipe – Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
   D. Copper Tubing – Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
   E. Conduit – Nom 6 in. diam (or smaller) steel conduit.
   F. Conduit – Nom 4 in. diam (or smaller) steel electrical metallic tubing (EMT).
4. Firestop System – The firestop system shall consist of the following:
   A. Packing Material – Min 4 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or sleeve or from both surfaces of wall or sleeve as required to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material* – Sealant – Min 1/4 in. thickness of fill material applied within the annulus, flush with top surface of floor or sleeve or with both surfaces of wall or sleeve. At the point or continuous contact locations between penetrant and concrete or sleeve, a min 1/4 in. diam bead of fill material shall be applied at the concrete or sleeve/ pipe penetrant interface on the top surface of floor and on both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF
   HILTI INC – FS–One Sealant

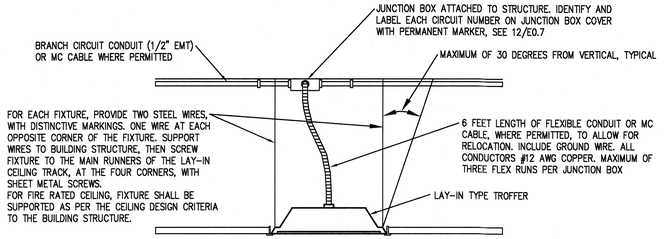
*Bearing the UL Classification Mark

Filename = XHEZ.C–AJ–1226
Copyright 2005 Underwriters Laboratories, INC.
Reprinted from the UL Online Directory with permission from Underwriters Laboratories INC.

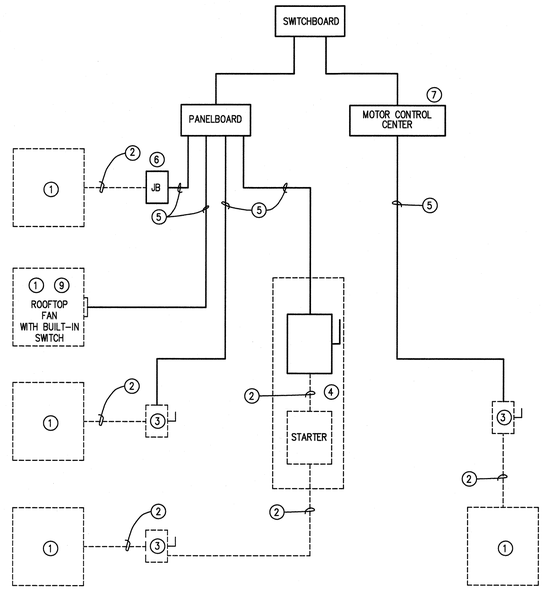
3 - 3 Hour Firewall Penetration Detail
NOT TO SCALE



4 - Receptacle Grounding Detail
NOT TO SCALE



5 - Lighting Fixture Mounting and Installation Detail
Not to Scale



ELECTRICAL 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 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. FEEDER CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE PANELBOARD SCHEDULES FOR WIRE AND BREAKER 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 WILL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
7. PROJECTS UTILIZING AN MCC, THE STARTER CB, OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.
8. IN ALL CASES THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS,, START UP AND TEST EQUIPMENT.
9. IF THE ROOFTOP EQUIPMENT IS NOT PROVIDED WITH BUILTIN SWITCH THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.

1 - Electrical Equipment Connection Detail
NOT TO SCALE

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER PATRICK J. DUNCAN, NC FADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ELECTRICAL DETAILS

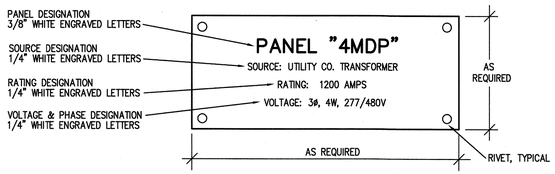
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

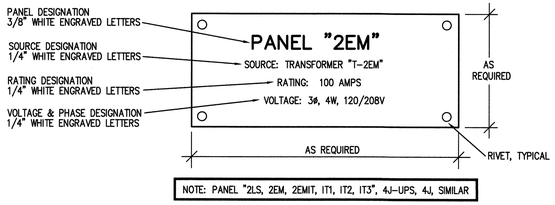
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E007

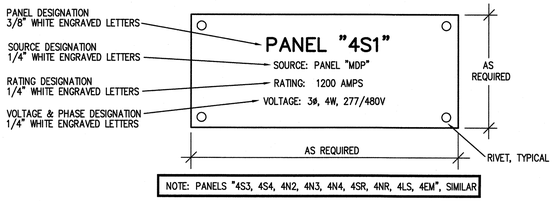
COPYRIGHT © 2020



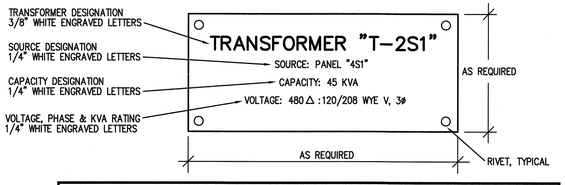
1 - Panel "4MDP" Nameplate Detail
Not to Scale



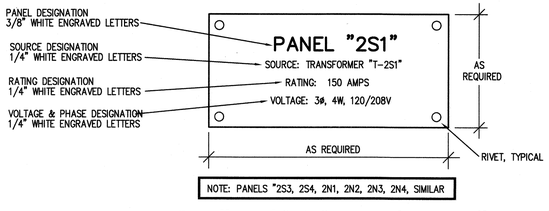
2 - Panelboard "2EM" Nameplate Detail
Not to Scale



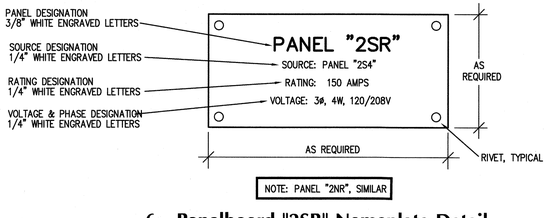
3 - Panelboard "4S1" Nameplate Detail
Not to Scale



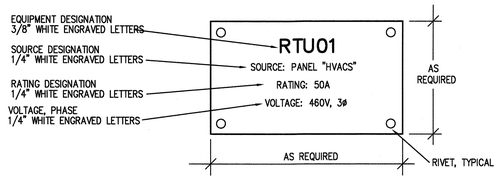
4 - Transformer "T-2S1" Nameplate Detail
Not to Scale



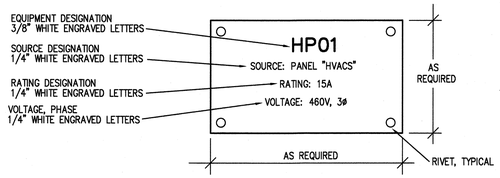
5 - Panelboard "2S1" Nameplate Detail
Not to Scale



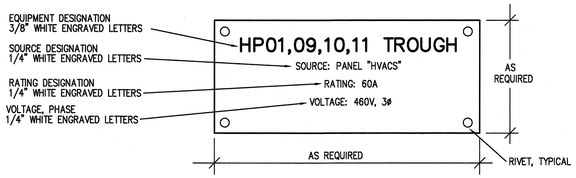
6 - Panelboard "2SR" Nameplate Detail
Not to Scale



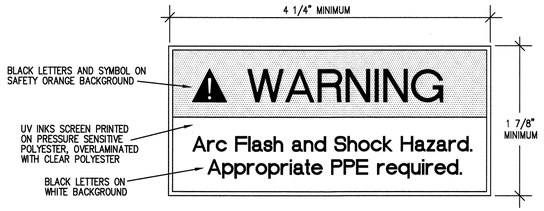
7 - Typical Rooftop Unit Equipment Nameplate Detail
Not to Scale



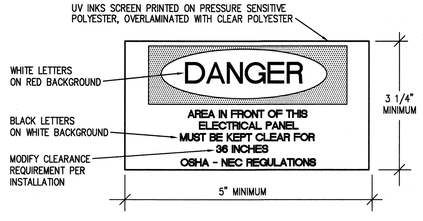
8 - Typical Heat Pump Equipment Nameplate Detail
Not to Scale



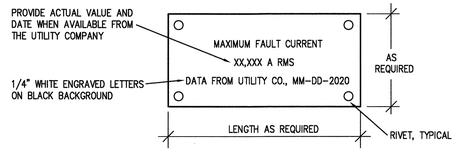
9 - Typical Equipment Trough Nameplate Detail
Not to Scale



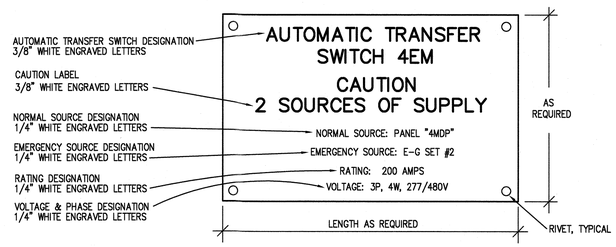
10 - Electrical Equipment Warning Label Detail
Not to Scale



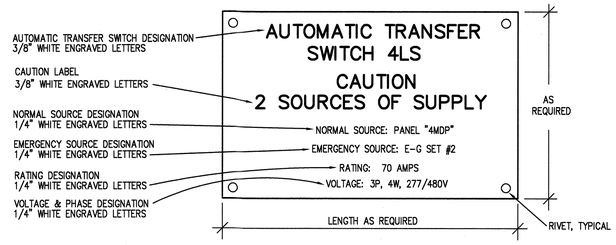
11 - NEC Working Space Label Detail
Not to Scale



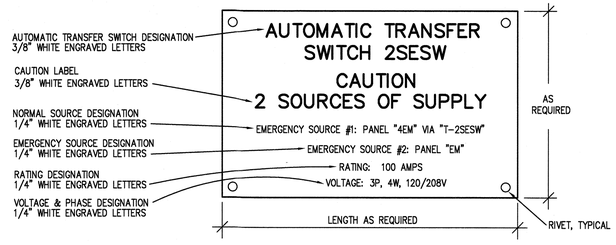
12 - Fault Current Nameplate Detail
Not to Scale



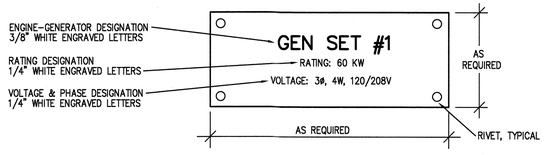
13 - Transfer Switch Nameplate Detail
NOT TO SCALE



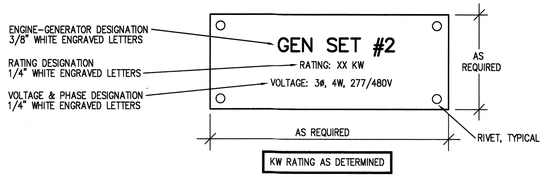
14 - Transfer Switch Nameplate Detail
NOT TO SCALE



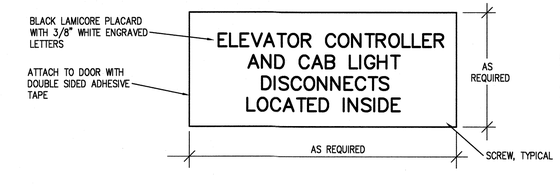
15 - Transfer Switch Nameplate Detail
NOT TO SCALE



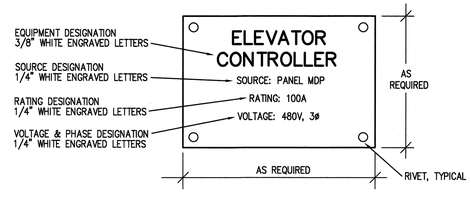
16 - Existing E-G Set #1 Nameplate Detail
Not to Scale



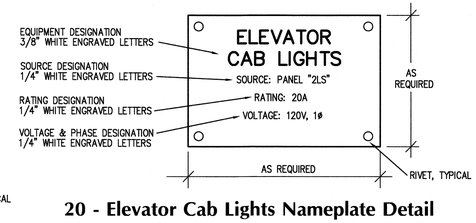
17 - E-G Set #2 Nameplate Detail
Not to Scale



18 - Elevator Controller and Cab Light Disconnect Placard Detail
Not to Scale



19 - Elevator Controller Nameplate Detail
Not to Scale



20 - Elevator Cab Lights Nameplate Detail
Not to Scale

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone: 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN D. MCFADYEN
8-4-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ELECTRICAL DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

E008

COPYRIGHT © 2020

Panel "4MDP"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA –	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
LIGHTING 117,118,119	152	1/20	1	152			2	1/20		SPARE
LIGHTING 113	3,264	1/20	3		3,264		4	1/20		SPARE
LIGHTING 107	2,304	1/20	5			2,304	6	1/20		SPARE
	5,543		7	6,097			8		554	
AH03	5,543	3/30	9		6,097		10	3/15	554	ER02
	5,543		11			6,097	12		554	
	3,769		13	20,219			14		16,450	
HP-02 & HP-03 TROUGH	3,769	3/30	15		20,219		16	3/100	16,450	EXISTING ELEVATOR (ESTIMTED 20 HP LOAD)
	3,769		17			20,219	18		16,450	(NOTE 4)
	9,834		19	16,618			20		6,784	
PANEL 4N2	8,769	3/150	21		12,069		22	3/70	3,300	PANEL 2N1 VIA XFMR T-2N1
	6,353		23			11,433	24		5,080	
	19,030		25	22,935			26		3,904	
PANEL 4N3	19,242	3/150	27		23,736		28	3/60	4,494	PANEL 4LS VIA ATS 4LS
	16,336		29			20,834	30		4,498	
	21,430		31	45,042			32		23,611	
PANEL 4N4	20,790	3/150	33		44,401		34	3/150	23,611	PANEL 4NR
	18,932		35			42,543	36		23,611	
	29,807		37	138,328			38		108,522	
PANEL 4EM VIA ATS 4EM	27,598	3/150	39		135,745		40	3/600	108,148	PANEL 4S1
	28,232		41			131,288	42		103,056	
			43	2,000			44		2,000	
SPD		3/60	45		2,000		46	3/15	2,000	EXISTING EWH #2
			47			2,000	48		2,000	
	20,000		49	20,000			50			
EXISTING FIRST FL. BUSWAY (ESTIMATED LOAD)	20,000	3/225	51		20,000		52	3/400		SPARE
(SPARE IF ALTERNATE 1 IS ACCEPTED)	20,000		53			20,000	54			
				271,390	267,531	256,718	TOTAL VA			
				980	966	927	TOTAL AMPERES			
				34%	34%	32%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. PROVIDE MCB WITH LSIG ELECTR. TRIP UNIT WITH ARMS (PER NEC ART. 240.87).
3. COORDINATE SPD CB TRIP WITH SPD MANUFACTURER'S RECOMMENDATIONS.
4. SHUNT TRIP CIRCUIT BREAKER

1,200 A. BUS (COPPER, UNO)
1,200 A. MAIN CIRCUIT BREAKER
30 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 74,248				
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000	
RECEPTACLES > 10 KVA	64,248	0.50	32,124	
L: LIGHTING	30,881	1.25	38,602	
M: MISCELLANEOUS EQUIPMENT	138,620	1.00	138,620	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR	49,350	1.25	61,688	ELEVATOR
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	398,671	1.125	448,505	DEMAND FACTOR REFLECTS APPROX. 50% OF LOAD IS CONTINUOUS
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	691,771			
TOTAL DEMAND (VA)			729,538	
TOTAL DEMAND (AMPERES)			877.5	
PANEL DEMAND LOADING VS RATING		73.1%		

Panel "4N2"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA –	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
LIGHTING 200,208,215,220,220A-C,221,222,24,227-23	1,475	1/20	1	1,475			2	1/20		SPARE
SPARE		1/20	3				4	1/20		SPARE
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
SPARE		1/20	19				20	1/20		SPARE
SPARE		1/20	21				22	1/20		SPARE
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27				28	1/20		SPARE
SPARE		1/20	29				30	1/20		SPARE
	2,001		31	3,863			32		1,862	
DOAS-2N ELECTRIC HEAT	2,001	3/15	33		3,863		34	3/15	1,862	DOAS-2N
	2,001		35			3,863	36		1,862	(NOT SIMULTANEOUS W/ DOAS-2N ELECTRIC HEAT)
SPARE			37	4,496			38		4,496	
SPARE		3/70	39		4,906		40	3/70	4,906	PANEL 2N2 VIA XFMR T-2N2
SPARE			41			2,489	42		2,489	
				9,834	8,769	6,353	TOTAL VA			
				36	32	23	TOTAL AMPERES			
				39%	35%	25%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
25 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 6,012				
RECEPTACLES FIRST 10 KVA	6,012	1.00	6,012	
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING	1,475	1.25	1,844	
M: MISCELLANEOUS EQUIPMENT	5,100	1.00	5,100	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	6,782	1.00	6,782	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	19,369			
TOTAL DEMAND (VA)			19,738	
TOTAL DEMAND (AMPERES)			23.7	
PANEL DEMAND LOADING VS RATING		15.8%		

Panel "4N3"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA –	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
LIGHTING 301,313,315,31,6,317	1,048	1/20	1	1,048			2	1/20		SPARE
LIGHTING 309,310,311,311A,311B,311C,311D	1,364	1/20	3		1,364		4	1/20		SPARE
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
SPARE		1/20	19				20	1/20		SPARE
SPARE		1/20	21				22	1/20		SPARE
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27				28	1/20		SPARE
SPARE		1/20	29				30	1/20		SPARE
	8,338		31	12,262			32		3,924	
DOAS-3N ELECTRIC HEAT	8,338	4/40	33		12,262		34	3/35	3,924	DOAS-3N
	8,338		35			12,262	36		3,924	(NOT SIMULTANEOUS W/ DOAS-3N ELECTRIC HEAT)
			37	5,720			38		5,720	
SPARE		3/70	39		5,615		40	3/70	5,615	PANEL 2N3 VIA XFMR T-2N3
			41			4,075	42		4,075	
				19,030	19,242	16,338	TOTAL VA			
				69	69	59	TOTAL AMPERES			
				35%	35%	30%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
25 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 12,320				
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000	
RECEPTACLES > 10 KVA	2,320	0.50	1,160	
L: LIGHTING	2,412	1.25	3,015	
M: MISCELLANEOUS EQUIPMENT	1,500	1.00	1,500	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	26,005	1.00	26,005	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	42,237			
TOTAL DEMAND (VA)			41,680	
TOTAL DEMAND (AMPERES)			50.1	
PANEL DEMAND LOADING VS RATING		33.4%		

Panel "4N4"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA –	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
LIGHTING 401,401A,401B,402,413,415,416	1,239	1/20	1	1,239			2	1/20		SPARE
LIGHTING 409,410,411	1,458	1/20	3		1,458		4	1/20		SPARE
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
SPARE		1/20	19				20	1/20		SPARE
SPARE		1/20	21				22	1/20		SPARE
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27				28	1/20		SPARE
SPARE		1/20	29				30	1/20		SPARE
	8,338		31	14,479			32		6,141	
DOAS-4N ELECTRIC HEAT	8,338	3/45	33		14,479		34	3/35	6,141	DOAS-4N
	8,338		35			14,479	36		6,141	(NOT SIMULTANEOUS W/ DOAS-4N ELECTRIC HEAT)
			37	5,712			38		5,712	
SPARE		3/70	39		4,853		40	3/70	4,853	PANEL 2N4 VIA XFMR T-2N4
			41			4,453	42		4,453	
				21,430	20,790	18,932	TOTAL VA			
				77	75	68	TOTAL AMPERES			
				35%	34%	31%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
18 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 10,340				
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000	
RECEPTACLES > 10 KVA	340	0.50	170	
L: LIGHTING	2,697	1.25	3,371	
M: MISCELLANEOUS EQUIPMENT	3,000	1.00	3,000	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	25,641	1.00	25,641	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	41,678			
TOTAL DEMAND (VA)			42,182	
TOTAL DEMAND (AMPERES)			50.7	
PANEL DEMAND LOADING VS RATING		33.8%		

Panel "4NR"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA –	3R	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
SPARE		1/20	1				2	1/20		SPARE
SPARE		1/20	3				4	1/20		SPARE
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
	7,094		19	7,693			20		599	
HP-2N	7,094	3/35	21		7,693		22	3/15	599	ACC-2N
	7,094		23			7,693	24		599	
	7,094		25	7,959			26		865	
HP-3N	7,094	3/35	27		7,959		28	3/15	865	ACC-3N
	7,094		29			7,959	30		865	
	7,094		31	7,959			32		865	
HP-4N	7,094	3/35	33		7,959		34	3/15	865	ACC-4N
	7,094		35			7,959	36		865	
			37				38			
SPD		3/60	39				40	3/70		SPARE
			41				42			
				23,611	23,611	23,611	TOTAL VA			
				85	85	85	TOTAL AMPERES			
				33%	33%	33%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. COORDINATE SPD CB TRIP WITH SPD MANUFACTURER'S RECOMMENDATIONS.

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
18 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) =				
RECEPTACLES FIRST 10 KVA		1.00		
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING		1.25		
M: MISCELLANEOUS EQUIPMENT		1.00		
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	70,834	1.00	70,834	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	70,834			
TOTAL DEMAND (VA)			70,834	
TOTAL DEMAND (AMPERES)			85.2	
PANEL DEMAND LOADING VS RATING		56.8%		

Panel "4LS"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA –	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
LIGHTING 101,102,103,112,114,115,116	1,026	1/20	1	1,344			2	1/20	318	LIGHTING STAIR S1
LIGHTING 200,210,211,223	3,576	1/20	3		3,894		4	1/20	318	LIGHTING STAIR S2
LIGHTING 300,306,312	1,160	1/20	5			3,296	6	1/20	2,136	EXTERIOR LIGHTS THRU TS-1
LIGHTING 400,406,412	1,160	1/20	7	1,160			8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
			19				20			
SPARE		3/20	21				22	3/30		SPARE
			23				24			
			25	1,400			26		1,400	
SPD		3/60	27		600		28	3/15	600	PANEL 2LS VIA XFMR T-2LS
			29			1,200	30		1,200	
				3,904	4,494	4,496	TOTAL VA			
				14	16	16	TOTAL AMPERES			
				30%	35%	35%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. PROVIDE CIRCUIT BREAKER HANDLE LOCKS FOR ALL CIRCUIT BREAKERS.
3. COORDINATE SPD CB TRIP WITH SPD MANUFACTURER'S RECOMMENDATIONS.

60 A. BUS (COPPER, UNO)
60 A. MAIN CIRCUIT BREAKER
18 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) =				
RECEPTACLES FIRST 10 KVA		1.00		
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING	9,694	1.25	12,118	
M: MISCELLANEOUS EQUIPMENT	3,200	1.00	3,200	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)		1.00		
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	12,894			
TOTAL DEMAND (VA)			15,318	
TOTAL DEMAND (AMPERES)			18.4	
PANEL DEMAND LOADING VS RATING		30.7%		

NOTE: ARRANGE PANELBOARD BRANCH CIRCUIT BREAKERS AS SHOWN ON THE ABOVE SCHEDULES. AGREEMENT OF CIRCUIT BREAKER (POLE) NUMBERS WITH THE PANEL SCHEDULES AND ELECTRICAL FLOOR PLANS IS REQUIRED IN ORDER TO AVOID CONFUSION DURING CONSTRUCTION, REDRAWING THE CIRCUITRY FOR RECORD DRAWING PURPOSES AND ACCURATE DOCUMENTATION OF THE AS-BUILT CONDITIONS.

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER BRIAN MCFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ELECTRICAL PANEL SCHEDULES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

E009

COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

Panel "4EM"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
LIGHTING 201-207,212,212A,212B,212C,213,214,216	1,107	1/20	1	1,107			2	1/20		SPARE
SPARE		1/20	3				4	1/20		SPARE
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
	8,000		19	8,000			20	1/20		SPARE
ATS 2SESW (ESTIMATED LOAD)	8,000	3/50	21		8,000		22	1/20		SPARE
	8,000		23			8,000	24	1/20		SPARE
	3,328		25	10,420			26		7,094	
HP-1E	3,328	3/20	27		10,420		28	3/35	7,094	HP-2S
	3,328		29			10,420	30		7,094	
	3,335		31	6,173			32		2,838	
DOAS-2S ELECTRIC HEAT	3,335	3/20	33		6,173		34	3/20	2,838	DOAS-2S
	3,335		35			6,173	36		2,838	(NOT SIMULTANEOUS W/ DOAS-2S ELECTRIC HEAT)
			37	4,106			38		4,106	
SPD		3/60	39		3,005		40	3/50	3,005	PANEL 2EM VIA XFMR T-2EM
			41			3,639	42		3,639	
				29,807	27,598	28,232	TOTAL VA			225 A. BUS (COPPER, UNO)
				108	100	102	TOTAL AMPERES			150 A. MAIN CIRCUIT BREAKER
				35%	32%	33%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. COORDINATE SPD CB TRIP WITH SPD MANUFACTURER'S RECOMMENDATIONS.

18 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 4,572				
RECEPTACLES FIRST 10 KVA	4,572	1.00	4,572	
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING	1,107	1.25	1,384	
M: MISCELLANEOUS EQUIPMENT	3,100	1.00	3,100	
O: OTHER EQUIPMENT	24,000	1.00	24,000	
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	44,344	1.00	44,344	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	77,123			
TOTAL DEMAND (VA)			77,400	
TOTAL DEMAND (AMPERES)			93.1	
PANEL DEMAND LOADING VS RATING		62.1%		

Panel "4S3"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
LIGHTING 301,302,304,307,307A,307B,307C,307D	1,858	1/20	1	1,858			2	1/20		SPARE
SPARE		1/20	3				4	1/20		SPARE
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
SPARE		1/20	19				20	1/20		SPARE
SPARE		1/20	21				22	1/20		SPARE
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27				28	1/20		SPARE
SPARE		1/20	29				30	1/20		SPARE
	6,671		31	11,770			32		5,099	
DOAS-3S ELECTRIC HEAT	6,671	3/35	33		11,770		34	3/30	5,099	DOAS-3S
	6,671		35			11,770	36		5,099	(NOT SIMULTANEOUS W/ DOAS-3S ELECTRIC HEAT)
			37	5,120			38		5,120	
SPARE		3/70	39		5,442		40	3/70	5,442	PANEL 2S3 VIA XFMR T-2S3
			41			3,962	42		3,962	
				18,748	17,212	15,732	TOTAL VA			225 A. BUS (COPPER, UNO)
				68	62	57	TOTAL AMPERES			150 A. MAIN CIRCUIT BREAKER
				36%	33%	30%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

18 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 11,780				
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000	
RECEPTACLES > 10 KVA	1,780	0.50	890	
L: LIGHTING	1,858	1.25	2,323	
M: MISCELLANEOUS EQUIPMENT	2,100	1.00	2,100	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	20,656	1.00	20,656	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	36,394			
TOTAL DEMAND (VA)			35,969	
TOTAL DEMAND (AMPERES)			43.3	
PANEL DEMAND LOADING VS RATING		28.8%		

Panel "4SR"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA -	3R	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
SPARE		1/20	1				2	1/20		SPARE
SPARE		1/20	3				4	1/20		SPARE
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
	7,094		19	7,427			20		333	
HP-2S	7,094	3/35	21		7,427		22	3/15	333	ACC-2S
	7,094		23			7,427	24		333	
	7,094		25	7,959			26		865	
HP-3S	7,094	3/35	27		7,959		28	3/15	865	ACC-3S
	7,094		29			7,959	30		865	
	7,094		31	7,959			32		865	
HP-4S	7,094	3/35	33		7,959		34	3/15	865	ACC-4S
	7,094		35			7,959	36		865	
			37	865			38		865	
SPD		3/60	39				40	3/70		SPARE
			41				42			
				24,210	23,345	23,345	TOTAL VA			225 A. BUS (COPPER, UNO)
				87	84	84	TOTAL AMPERES			150 A. MAIN CIRCUIT BREAKER
				34%	33%	33%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. COORDINATE SPD CB TRIP WITH SPD MANUFACTURER'S RECOMMENDATIONS.

18 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) =				
RECEPTACLES FIRST 10 KVA		1.00		
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING		1.25		
M: MISCELLANEOUS EQUIPMENT		1.00		
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	70,900	1.00	70,900	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	70,900			
TOTAL DEMAND (VA)			70,900	
TOTAL DEMAND (AMPERES)			85.3	
PANEL DEMAND LOADING VS RATING		56.9%		

Panel "4S1" Schedule

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA -		ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
LIGHTING 104,105,106A-106D,108A, 108B,109-111	658	1/20	1	658			2	1/20		SPARE
LIGHTING 108	2,688	1/20	3		2,688		4	1/20		SPARE
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
			13	8,000			14		8,000	
SPARE		3/100	15		8,000		16	3/100	8,000	EXISTING PANEL 4J (ESTIMATED LOAD)
			17			8,000	18		8,000	
			19	576			20		576	
SPD		3/60	21		576		22	3/15	576	ER01
			23			576	24		576	
	6,000		25	6,576			26		576	
EXISTING EWH #1	6,000	3/30	27		6,576		28	3/15	576	ER02
	6,000		29			6,576	30		576	
	5,543		31	11,085			32		5,543	
AH01	5,543	3/30	33		11,085		34	3/30	5,543	AH02
	5,543		35			11,085	36		5,543	
	9,090		37	17,989			38		8,899	
HP-1 & HP-01 TROUGH	9,090	3/50	39		18,778		40	3/70	9,688	PANEL 2S1 VIA XFMR T-2S1
	9,090		41			18,706	42		9,617	
	18,748		43	42,958			44		24,210	
PANEL 4S3	17,212	3/150	45		40,557		46	3/150	23,345	PANEL 4SR
	15,732		47			39,077	48		23,345	
	20,679		49	20,679			50			
PANEL 4S4	19,887	3/150	51		19,887		52	3/225		SPARE
	19,035		53			19,035	54			
				108,522	108,148	103,056	TOTAL VA			600 A. BUS (COPPER, UNO)
				392	390	372	TOTAL AMPERES			600 A. MAIN CIRCUIT BREAKER
				34%	34%	32%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

25 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 32,200				
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000	
RECEPTACLES > 10 KVA	22,200	0.50	11,100	
L: LIGHTING	7,776	1.25	9,720	
M: MISCELLANEOUS EQUIPMENT	50,560	1.00	50,560	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	195,468	1.00	195,468	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	286,004			
TOTAL DEMAND (VA)			276,848	
TOTAL DEMAND (AMPERES)			333.0	
PANEL DEMAND LOADING VS RATING		55.5%		

Panel "4S4"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
LIGHTING 402,404,407,408	2,020	1/20	1	2,020			2	1/20		SPARE
SPARE		1/20	3				4	1/20		SPARE
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
SPARE		1/20	19				20	1/20		SPARE
SPARE		1/20	21				22	1/20		SPARE
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27				28	1/20		SPARE
SPARE		1/20	29				30	1/20		SPARE
	8,338		31	14,479			32		6,141	
DOAS-4S ELECTRIC HEAT	8,338	3/45	33		14,479		34	3/35	6,141	DOAS-4S
	8,338		35			14,479	36		6,141	(NOT SIMULTANEOUS W/ DOAS-4S ELECTRIC HEAT)
			37	4,180			38		4,180	
SPARE		3/70	39		5,407		40	3/70	5,407	PANEL 2S4 VIA XFMR T-2S4
			41			4,555	42		4,555	
				20,679	19,887	19,035	TOTAL VA			225 A. BUS (COPPER, UNO)
				75	72	69	TOTAL AMPERES			150 A. MAIN CIRCUIT BREAKER
				35%	33%	32%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

18 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 8,160				
RECEPTACLES FIRST 10 KVA	8,160	1.00	8,160	
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING	2,572	1.25	3,215	
M: MISCELLANEOUS EQUIPMENT	3,800	1.00	3,800	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	26,646	1.00	26,646	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	41,178			
TOTAL DEMAND (VA)			41,821	
TOTAL DEMAND (AMPERES)			50.3	
PANEL DEMAND LOADING VS RATING		33.5%		

NOTE: ARRANGE PANELBOARD BRANCH CIRCUIT BREAKERS AS SHOWN ON THE ABOVE SCHEDULES. AGREEMENT OF CIRCUIT BREAKER (POLE) NUMBERS WITH THE PANEL SCHEDULES AND ELECTRICAL FLOOR PLANS IS REQUIRED IN ORDER TO AVOID CONFUSION DURING CONSTRUCTION, REDRAWING THE CIRCUITRY FOR RECORD DRAWING PURPOSES AND ACCURATE DOCUMENTATION OF THE AS-BUILT CONDITIONS.

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 38433 ENGINEER JOHN MCFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ELECTRICAL PANEL SCHEDULES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ PROJ MGR: RDM

E009.1

COPYRIGHT © 2020

Panel "2N1"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE	PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							XX	200 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM								ULSE LABEL
	NEMA –	1	ENCLOSURE							ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
RECEPTACLES 113	500	1/20	1	2,084			2	1/20	1,384	RECEPTACLES 115,115, PV03,PV04
RECEPTACLES 113	500	1/20	3		1,100		4	1/20	600	EWC 114
RECEPTACLES 113	500	1/20	5			1,220	6	1/20	720	RECEPTACLES 109,110
RECEPTACLES 113	500	1/20	7	700			8	1/20	200	HW CIRC PUMP CP2
RECEPTACLES 113	500	1/20	9		500		10	1/20		SPARE
RECEPTACLES 113	500	1/20	11			500	12	1/20		SPARE
RECEPTACLES 113	500	1/20	13	500			14	1/20		SPARE
RECEPTACLES 113	500	1/20	15		500		16	1/20		SPARE
RECEPTACLES 113	500	1/20	17			1,000	18	1/20	500	HVAC CONTROL POWER
CORD REEL 113	500	1/20	19	1,000			20	1/20	500	HVAC CONTROL POWER
CORD REEL 113	500	1/20	21		1,000		22	1/20	500	HVAC CONTROL POWER
CORD REEL 113	500	1/20	23			860	24	1/20	360	TELECOMMUNICATION BACKBOARD @1 118
CORD REEL 113	500	1/20	25	1,000			26	1/20	500	ANTI-CONDENSATION HEATER
SPARE		1/20	27		200		28	1/20	200	GEN @2 BATTERY CHARGER (NOTE 2)
SPARE		1/20	29			1,500	30	2/15	1,500	GEN @2 BLOCK HEATER (NOTE 2)
			31	1,500			32		1,500	
SPARE		3/30	33				34	3/30		SPARE
			35				36			
			37				38			
SPARE		3/70	39				40	3/70		SPARE
			41				42			
				6,784	3,300	5,080	TOTAL VA			
				57	28	42	TOTAL AMPERES			
				45%	22%	34%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. PROVIDE CIRCUIT BREAKER LOCKING DEVICE

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 8,804				
RECEPTACLES FIRST 10 KVA	8,804	1.00	8,804	
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING		1.25		
M: MISCELLANEOUS EQUIPMENT	6,160	1.00	6,160	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)		1.00		
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	14,964			
TOTAL DEMAND (VA)			14,964	
TOTAL DEMAND (AMPERES)			41.5	
PANEL DEMAND LOADING VS RATING		27.7%		

Panel "2N2"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE	PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							XX	200 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM								ULSE LABEL
	NEMA –	1	ENCLOSURE							ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
RECEPTACLE 233	180	1/20	1	1,440			2	1/20	1,260	RECEPTACLES 220,220A,220B,220C,220D,221,222
EXTERIOR POLE LIGHT RECPTACLES THRU TS-2	900	1/20	3		1,980		4	1/20	1,080	RECEPTACLES 220,220A,220B,220C,220D,221,222
SPARE		1/20	5			600	6	1/20	600	EWC 211
SPARE		1/20	7	1,000			8	1/20	1,000	VENDING MACHINE 200
SPARE		1/20	9		1,000		10	1/20	1,000	VENDING MACHINE 200
SPARE		1/20	11			1,000	12	1/20	1,000	VENDING MACHINE 200
SPARE		1/20	13	1,332			14	1/20	1,332	RECEPTACLES 227,228,229,230,231,232,233, PV12
SPARE		1/20	15		1,260		16	1/20	1,260	RECEPTACLES 227,228,229,230,231,232,233
SPARE		1/20	17			500	18	1/20	500	HVAC CONTROL POWER
SPARE		1/20	19	500			20	1/20	500	HVAC CONTROL POWER
SPARE		1/20	21		500		22	1/20	500	HVAC CONTROL POWER
SPARE		1/20	23			224	24	2/20	224	BC–2N.1 & CASSETTES
SPARE		1/20	25	224			26		224	
SPARE		1/20	27		166		28	2/20	166	BC–2N.2 & CASSETTES
SPARE		1/20	29			166	30		166	
			31				32			
SPARE		3/30	33				34	3/30		SPARE
			35				36			
			37				38			
SPARE		3/70	39				40	3/70		SPARE
			41				42			
				4,496	4,908	2,489	TOTAL VA			
				37	41	21	TOTAL AMPERES			
				38%	41%	21%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 6,012				
RECEPTACLES FIRST 10 KVA	6,012	1.00	6,012	
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING		1.25		
M: MISCELLANEOUS EQUIPMENT	5,100	1.00	5,100	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	779	1.00	779	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	11,891			
TOTAL DEMAND (VA)			11,891	
TOTAL DEMAND (AMPERES)			33.0	
PANEL DEMAND LOADING VS RATING		22.0%		

Panel "2LS"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE	PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM								ULSE LABEL
	NEMA –	1	ENCLOSURE							ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
FIRE ALARM CONTROL PANEL	500	1/20	1	1,000			2	1/20	500	AREA OF RESCUE ASSISTANCE SYSTEM
NAC POWER SUPPLY FIRST FLOOR	200	1/20	3		400		4	1/20	200	ELEVATOR CAB LIGHTS
NAC POWER SUPPLY SECOND FLOOR	200	1/20	5			1,200	6	1/20	1,000	GEN @2 RECEPTACLE
NAC POWER SUPPLY THIRD FLOOR	200	1/20	7	400			8	1/20	200	GEN @2 HOUSING LIGHTING
NAC POWER SUPPLY FOURTH FLOOR	200	1/20	9		200		10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
				1,400	600	1,200	TOTAL VA			
				44%	19%	38%	PHASE BALANCE			

NOTES:
1. PROVIDE CIRCUIT BREAKER HANDLE LOCKS FOR ALL CIRCUIT BREAKERS.
2. QUANTITY OF NAC POWER SUPPLIES IS ESTIMATED. USE SPARE CIRCUIT BREAKERS IF ADDITIONAL LOADS ARE REQUIRED.

60 A. BUS (COPPER, UNO)
30 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 1,000				
RECEPTACLES FIRST 10 KVA	1,000	1.00	1,000	
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING	400	1.25	500	
M: MISCELLANEOUS EQUIPMENT	1,800	1.00	1,800	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)		1.00		
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	3,200			
TOTAL DEMAND (VA)			3,300	
TOTAL DEMAND (AMPERES)			9.2	
PANEL DEMAND LOADING VS RATING		30.5%		

Panel "2N3"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE	PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							XX	200 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM								ULSE LABEL
	NEMA –	1	ENCLOSURE							ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	1	2,080			2	1/20	1,080	RECEPTACLES 311,311A,311B,311C,311D
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	3		2,080		4	1/20	1,080	RECEPTACLES 311,311A,311B,311C,311D
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	5			1,540	6	1/20	540	RECEPTACLES 310
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	7	1,540			8	1/20	540	RECEPTACLES 309
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	9		1,540		10	1/20	540	RECEPTACLES 316
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	11			1,540	12	1/20	540	RECEPTACLES 317
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	13	1,600			14	1/20	600	EWC 300
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	15		1,000		16	1/20		SPARE
SPARE		1/20	17			500	18	1/20	500	HVAC CONTROL POWER
SPARE		1/20	19	500			20	1/20	500	HVAC CONTROL POWER
SPARE		1/20	21		500		22	1/20	500	HVAC CONTROL POWER
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27			495	28	2/15	495	BC–3N.1 & CASSETTES
SPARE		1/20	29			495	30		495	
			31				32			
SPARE		3/30	33				34	3/30		SPARE
			35				36			
			37				38			
SPARE		3/70	39				40	3/70		SPARE
			41				42			
				5,720	5,815	4,075	TOTAL VA			
				48	47	34	TOTAL AMPERES			
				37%	36%	26%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 12,320				
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000	
RECEPTACLES > 10 KVA	2,320	0.50	1,160	
L: LIGHTING		1.25		
M: MISCELLANEOUS EQUIPMENT	1,500	1.00	1,500	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	990	1.00	990	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	14,810			
TOTAL DEMAND (VA)			13,650	
TOTAL DEMAND (AMPERES)			37.9	
PANEL DEMAND LOADING VS RATING		25.3%		

Panel "2N4"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE	PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							XX	200 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM								ULSE LABEL
	NEMA –	1	ENCLOSURE							ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	1	1,540			2	1/20	540	RECEPTACLES 410
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	3		1,540		4	1/20	540	RECEPTACLES 411
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	5			1,540	6	1/20	540	RECEPTACLES 416
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	7	1,720			8	1/20	720	RECEPTACLES 401
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	9		1,000		10	1/20		RECEPTACLES ON ROOF
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	11			1,600	12	1/20	600	EWC 400
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	13	1,000			14	1/20		SPARE
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	15		1,000		16	1/20		SPARE
SPARE		1/20	17			500	18	1/20	500	HVAC CONTROL POWER
SPARE		1/20	19	500			20	1/20	500	HVAC CONTROL POWER
SPARE		1/20	21		500		22	1/20	500	HVAC CONTROL POWER
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27		313		28	2/15	313	BC–4N.1
SPARE		1/20	29			313	30		313	
			31				32			
		3/30	33				34	3/30		SPARE
			35				36			
			37	952			38		952	
SPD		3/60	39		500		40	3/60	500	PANEL 2NR
			41			500	42		500	
				5,712	4,853	4,453	TOTAL VA			
				48	40	37	TOTAL AMPERES			
				38%	32%	30%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 10,340				
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000	
RECEPTACLES > 10 KVA	340	0.50	170	
L: LIGHTING	452	1.25	565	
M: MISCELLANEOUS EQUIPMENT	3,000	1.00	3,000	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	626	1.00	626	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	14,418			
TOTAL DEMAND (VA)			14,361	
TOTAL DEMAND (AMPERES)			39.9	
PANEL DEMAND LOADING VS RATING		26.6%		

Panel "2NR"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE	PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM								ULSE LABEL
	NEMA –		ENCLOSURE							ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
SPARE		1/20	1	452			2	1/20	452	LIGHTS AND RECEPTACLES ON ROOF
SPARE		1/20	3				4	1/20		SPARE
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17			500	18	1/20	500	HVAC CONTROL POWER
SPARE		1/20	19	500			20	1/20	500	HVAC CONTROL POWER
SPARE		1/20	21		500		22	1/20	500	HVAC CONTROL POWER
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27				28	1/20		SPARE
SPARE		1/20	29				30	1/20		SPARE
				952	500	500	TOTAL VA			
				8	4	4	TOTAL AMPERES			
				49%	26%	26%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

60 A. BUS (COPPER, UNO)
60 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) =				
RECEPTACLES FIRST 10 KVA		1.00		
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING	452	1.25	565	
M: MISCELLANEOUS EQUIPMENT	1,500	1.00	1,500	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)		1.00		
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	1,952			
TOTAL DEMAND (VA)			2,065	
TOTAL DEMAND (AMPERES)			5.7	
PANEL DEMAND LOADING VS RATING		9.6%		

Panel "2EM"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE	PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM								ULSE LABEL
	NEMA –	1	ENCLOSURE							ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
SPARE		1/20	1	1,080			2	1/20	1,080	RECEPTACLES 212,212A,212B,212C,213,214
SPARE		1/20	3		1,260		4	1/20	1,260	RECEPTACLES 212,212A,212B,212C,213,214
SPARE		1/20	5			1,500	6	1/20	1,500	MICROWAVE 216
SPARE		1/20	7	1,000			8	1/20	1,000	REFRIGERATOR 216
SPARE		1/20	9		360		10	1/20	360	RECEPTACLES 216
SPARE		1/20	11			600	12	1/20	600	EWC 211
SPARE		1/20	13	1,152			14	1/20	1,152	RECEPTACLES 204,205,206,PV11
SPARE		1/20	15		720		16	1/20	720	RECEPTACLES 202,203
			17				18			
SPARE		3/20	19				20	3/30		SPARE
			21				22			
BC–2S.1 & CASSETTES	406	2/15	23			874	24	2/15	468	AH–2E.1
	406		25	874			26		468	
BC–2S.2 & CASSETTES	196	2/15	27		665		28	2/15	468	AH–2E.2
	196		29			665	30		468	
				4,106	3,005	3,639	TOTAL VA			
				34	25	30	TOTAL AMPERES			
				38%	28%	34%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

100 A. BUS (COPPER, UNO)
100 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 4,572				
RECEPTACLES FIRST 10 KVA	4,572	1.00	4,572	
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING		1.25		
M: MISCELLANEOUS EQUIPMENT	3,100	1.00	3,100	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	3,078	1.00	3,078	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	10,750			
TOTAL DEMAND (VA)			10,750	
TOTAL DEMAND (AMPERES)			29.8	
PANEL DEMAND LOADING VS RATING		29.8%		

Panel "2EMIT"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE	PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM								ULSE LABEL
	NEMA –	1	ENCLOSURE							ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
SPARE		1/20	1				2	1/20		SPARE
SPARE		1/20	3				4	1/20		SPARE
SPARE		1/20	5			468	6	2/15	468	AH–2E1.1
	3,170		7	3,639			8		468	
HP–2E1	3,170	3/50	9		3,639		10	2/15	468	AH–2E1.2
	3,170		11			3,639	12		468	
			13				14			
SPD		3/60	15				16	3/30		SPARE
			17				18			
				3,639	3,639	4,107	TOTAL VA			
				30	30	34	TOTAL AMPERES			
				32%	32%	36%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

100 A. BUS (COPPER, UNO)
100 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) =				
RECEPTACLES FIRST 10 KVA		1.00		
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING		1.25		
M: MISCELLANEOUS EQUIPMENT		1.00		
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	11,385	1.00	11,385	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	11,385			
TOTAL DEMAND (VA)			11,385	
TOTAL DEMAND (AMPERES)			31.6	
PANEL DEMAND LOADING VS RATING		31.6%		

NOTE: ARRANGE PANELBOARD BRANCH CIRCUIT BREAKERS AS SHOWN ON THE ABOVE SCHEDULES. AGREEMENT OF CIRCUIT BREAKER (POLE) NUMBERS WITH THE PANEL SCHEDULES AND ELECTRICAL FLOOR PLANS IS REQUIRED IN ORDER TO AVOID CONFUSION DURING CONSTRUCTION, REDRAWING THE CIRCUITRY FOR RECORD DRAWING PURPOSES AND ACCURATE DOCUMENTATION OF THE AS–BUILT CONDITIONS.

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone: 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER JOHN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ELECTRICAL PANEL SCHEDULES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ PROJ MGR: RDM

E009.2

COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

Panel "2S1"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	xx	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								xx	200 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA –	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
RECEPTACLES 106	500	1/20	1	1,400			2	1/20	900	RECEPTACLES 106A,112
RECEPTACLES 106	500	1/20	3		1,100		4	1/20	600	EWC 101
RECEPTACLES 106	500	1/20	5			860	6	1/20	360	RECEPTACLES 108B
RECEPTACLES 106	500	1/20	7	860			8	1/20	360	TELECOMMUNICATION BACKBOARD @2 106A
RECEPTACLES 106	500	1/20	9		1,000		10	1/20	500	CORD REEL 107
RECEPTACLES 106	500	1/20	11			1,000	12	1/20	500	CORD REEL 107
RECEPTACLES 106	500	1/20	13	1,000			14	1/20	500	CORD REEL 107
RECEPTACLES 106	500	1/20	15		1,000		16	1/20	500	CORD REEL 107
RECEPTACLES 106	500	1/20	17			1,000	18	1/20	500	HVAC CONTROL POWER
RECEPTACLES 107	500	1/20	19	1,000			20	1/20	500	HVAC CONTROL POWER
RECEPTACLES 107	500	1/20	21		1,000		22	1/20	500	HVAC CONTROL POWER
RECEPTACLES 107	500	1/20	23			700	24	1/20	200	HW CIRC PUMP CP1
RECEPTACLES 107	500	1/20	25	500			26	1/20		SPARE
RECEPTACLES 107	500	1/20	27		1,449		28	2/15	949	AH1.2, AH1.4
RECEPTACLES 107	500	1/20	29			1,449	30		949	
RECEPTACLES 107	500	1/20	31	500			32			
RECEPTACLES 107	500	1/20	33		500		34	3/30		SPARE
RECEPTACLES 107	500	1/20	35			500	36			
			37	3,639			38		3,639	
SPARE		3/70	39		3,639		40	3/100	3,639	PANEL 2EMIT VIA EXISTING ATS 2EMIT
			41			4,107	42		4,107	
				8,899	9,688	9,617	TOTAL VA			
				74	81	80	TOTAL AMPERES			
				32%	34%	34%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONNL. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 12,260				
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000	
RECEPTACLES > 10 KVA	2,260	0.50	1,130	
L: LIGHTING		1.25		
M: MISCELLANEOUS EQUIPMENT	2,660	1.00	2,660	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	13,283	1.00	13,283	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	28,203			
TOTAL DEMAND (VA)			27,073	
TOTAL DEMAND (AMPERES)			75.1	
PANEL DEMAND LOADING VS RATING		50.1%		

Panel "2S4"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	xx	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								xx	200 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA –	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	1	1,540			2	1/20	540	RECEPTACLES 407
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	3		1,540		4	1/20	540	RECEPTACLES 408
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	5			1,540	6	1/20	540	RECEPTACLES 409
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	7	1,540			8	1/20	540	RECEPTACLES 402
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	9		1,600		10	1/20	600	EWC 400
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	11			1,000	12	1/20		RECEPTACLES ON ROOF
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17			500	18	1/20	500	HVAC CONTROL POWER
SPARE		1/20	19	500			20	1/20	500	HVAC CONTROL POWER
SPARE		1/20	21		500		22	1/20	500	HVAC CONTROL POWER
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27		315		28	2/15	315	BC–4S.1 & CASSETTES
SPARE		1/20	29			315	30		315	
SPARE			31				32			
		3/30	33				34	3/30		SPARE
SPARE			35				36			
			37	600			38		600	
SPD		3/60	39		1,452		40	3/70	1,452	PANEL 2SR
			41			1,200	42		1,200	
				4,180	5,407	4,555	TOTAL VA			
				35	45	38	TOTAL AMPERES			
				30%	38%	32%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONNL. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 8,160				
RECEPTACLES FIRST 10 KVA	8,160	1.00	8,160	
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING	552	1.25	690	
M: MISCELLANEOUS EQUIPMENT	3,800	1.00	3,800	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	1,631	1.00	1,631	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	14,143			
TOTAL DEMAND (VA)			14,281	
TOTAL DEMAND (AMPERES)			39.6	
PANEL DEMAND LOADING VS RATING		26.4%		

Panel "2S3"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	xx	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE									
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA –	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	1	2,080			2	1/20	1,080	RECEPTACLES 307,307A,307B,307C,307D
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	3		2,080		4	1/20	1,080	RECEPTACLES 307,307A,307B,307C,307D
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	5			1,540	6	1/20	540	RECEPTACLES 308
EXISTING CLASSROOM RECEPTACLES	1,000	1/20	7	1,540			8	1/20	540	RECEPTACLES 302
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	9		1,540		10	1/20	540	RECEPTACLES 301
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	11			1,600	12	1/20	600	EWC 300
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	13	1,000			14	1/20		SPARE
EXISTING CLASSROOM O/H PROJECTOR	1,000	1/20	15		1,000		16	1/20		SPARE
SPARE		1/20	17			500	18	1/20	500	HVAC CONTROL POWER
SPARE		1/20	19	500			20	1/20	500	HVAC CONTROL POWER
SPARE		1/20	21		500		22	1/20	500	HVAC CONTROL POWER
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27		322		28	2/15	322	BC–3S.1 & CASSETTES
SPARE		1/20	29			322	30		322	
			31				32			
SPARE		3/30	33				34	3/30		SPARE
			35				36			
			37				38			
SPARE		3/70	39				40	3/70		SPARE
			41				42			
				5,120	5,442	3,962	TOTAL VA			
				43	45	33	TOTAL AMPERES			
				35%	37%	27%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

225 A. BUS (COPPER, UNO)
150 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONNL. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) = 11,780				
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000	
RECEPTACLES > 10 KVA	1,780	0.50	890	
L: LIGHTING		1.25		
M: MISCELLANEOUS EQUIPMENT	2,100	1.00	2,100	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	644	1.00	644	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	14,524			
TOTAL DEMAND (VA)			13,634	
TOTAL DEMAND (AMPERES)			37.8	
PANEL DEMAND LOADING VS RATING		25.2%		

Panel "2SR"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	xx	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								xx	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA –		ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR POLES/TRIP	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR POLES/TRIP	LOAD VA	LOAD SERVED
SPARE		1/20	1	100			2	1/20	100	ELEVATOR CAB LIGHTS
SPARE		1/20	3		452		4	1/20	452	LIGHTS AND RECEPTACLES ON ROOF
SPARE		1/20	5				6	1/20		SPARE
SPARE		1/20	7				8	1/20		SPARE
SPARE		1/20	9				10	1/20		SPARE
SPARE		1/20	11				12	1/20		SPARE
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17			500	18	1/20	500	HVAC CONTROL POWER
SPARE		1/20	19	500			20	1/20	500	HVAC CONTROL POWER
SPARE		1/20	21		500		22	1/20	500	HVAC CONTROL POWER
SPARE		1/20	23			200	24	1/20	200	ELEVATOR SHUNT TRIP POWER
SPARE		1/20	25				26	1/20		SPARE
SPARE		1/20	27		500		28	2/30	500	EXISTING ELEVATOR MACHINE ROOM DAHU–X
SPARE		1/20	29			500	30		500	
				600	1,452	1,200	TOTAL VA			
				5	12	10	TOTAL AMPERES			
				18%	43%	37%	PHASE BALANCE			

NOTES:
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.

60 A. BUS (COPPER, UNO)
60 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONNL. (VA)	DEMAND FACTOR	DEMAND (VA)	NOTES
R: TOTAL RECEPTACLES (VA) =				
RECEPTACLES FIRST 10 KVA		1.00		
RECEPTACLES > 10 KVA		0.50		
L: LIGHTING	552	1.25	690	
M: MISCELLANEOUS EQUIPMENT	1,700	1.00	1,700	
O: OTHER EQUIPMENT		1.00		
B: LARGEST MOTOR		1.25		
H: HVAC EQUIPMENT (FLA = MCA X 0.8)	1,000	1.00	1,000	
K: KITCHEN EQUIPMENT		1.00		DEMAND FACTOR PER NEC TABLE 220.56
TOTAL CONNECTED (VA)	3,252			
TOTAL DEMAND (VA)			3,390	
TOTAL DEMAND (AMPERES)			9.4	
PANEL DEMAND LOADING VS RATING		15.7%		

NOTE: ARRANGE PANELBOARD BRANCH CIRCUIT BREAKERS AS SHOWN ON THE ABOVE SCHEDULES. AGREEMENT OF CIRCUIT BREAKER (POLE) NUMBERS WITH THE PANEL SCHEDULES AND ELECTRICAL FLOOR PLANS IS REQUIRED IN ORDER TO AVOID CONFUSION DURING CONSTRUCTION, REDRAWING THE CIRCUITRY FOR RECORD DRAWING PURPOSES AND ACCURATE DOCUMENTATION OF THE AS–BUILT CONDITIONS.

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ELECTRICAL PANEL SCHEDULES

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

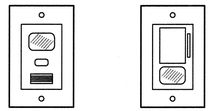
PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

E009.3

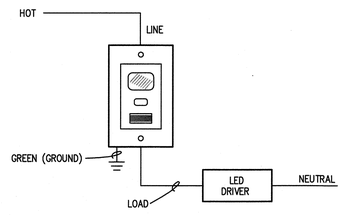
COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone: 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

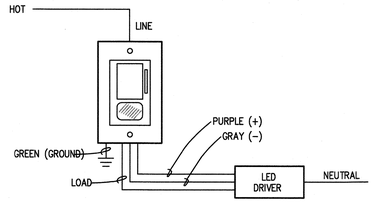
NOTE:
OCCUPANCY SENSOR WIRING SCHEMATICS ARE PROVIDED TO INDICATE SWITCHING FUNCTION(S) REQUIRED. COMPONENTS AND CONNECTIONS BETWEEN COMPONENTS ARE REPRESENTATIVE ONLY AND MAY NOT BE APPLICABLE FOR ALL MANUFACTURER'S DEVICES. CONSULT ACTUAL APPROVED DEVICE MANUFACTURER APPLICATION INFORMATION AND INSTALLATION INSTRUCTIONS FOR COMPONENTS AND WIRING REQUIRED BEFORE ROUGHING IN AND INSTALLING SYSTEMS.



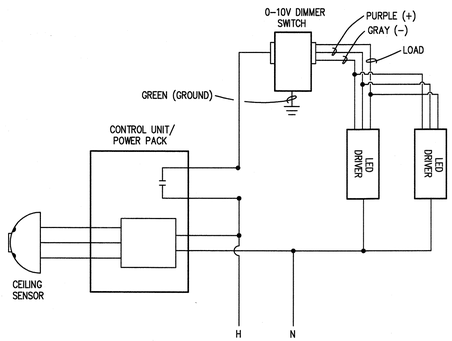
3 - Occupancy Sensor Wall Switch Plate Detail
NOT TO SCALE



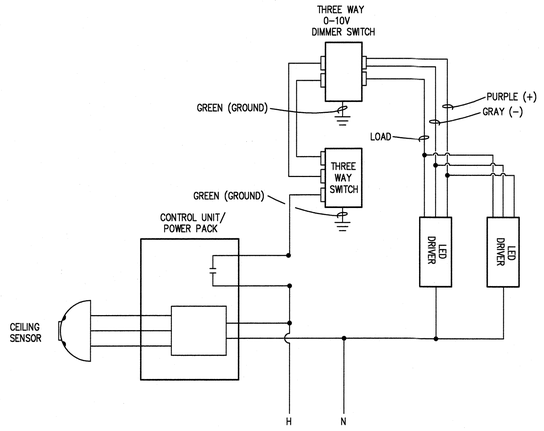
4 - Wall Box Occupancy Sensor Switch Wiring Diagram ($o)
NOT TO SCALE



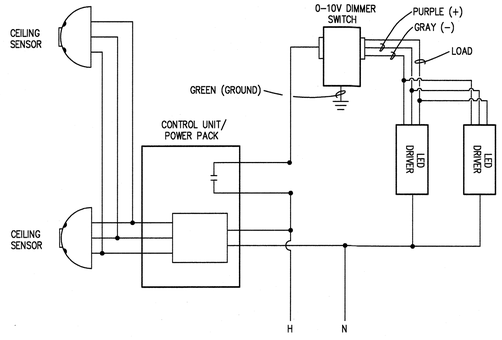
5 - Wall Box Combination Occupancy Sensor/0-10 Volt Dimmer Switch, Single Circuit Wiring Diagram (oS$o)
NOT TO SCALE



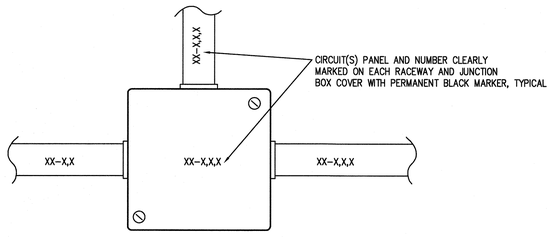
6 - Ceiling Mounted Occupancy Sensor, Wall Mounted 0-10 Volt Dimmer Switch, Single Circuit Wiring Diagram(OS)
NOT TO SCALE



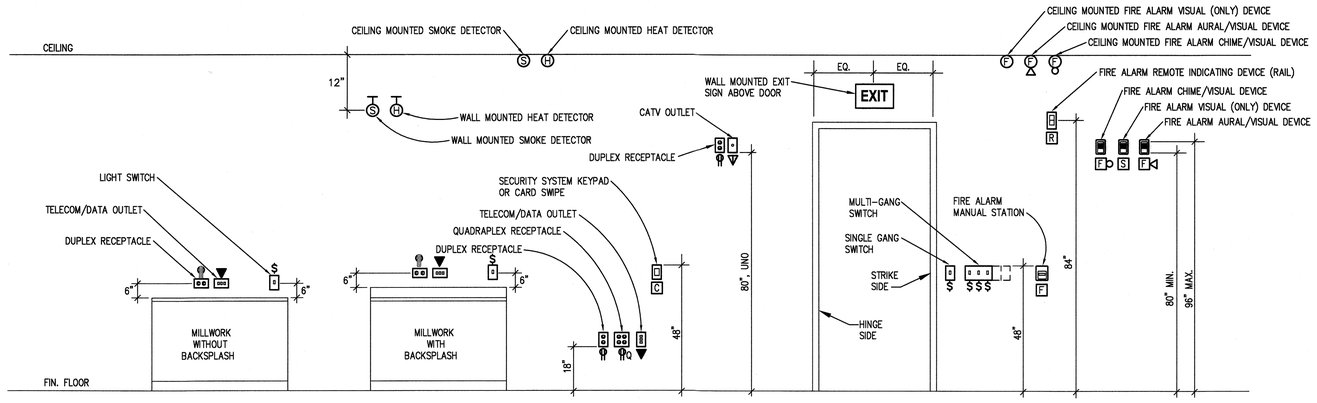
7 - Ceiling Mounted Occupancy Sensor, Wall Mounted Three Way, 0-10 Volt Dimmer Switch, Single Circuit Wiring Diagram (OS)
NOT TO SCALE



8 - Multiple Ceiling Mounted Occupancy Sensor, Wall Mounted 0-10 Volt Dimmer Switch, Single Circuit Wiring Diagram (OS)
NOT TO SCALE



2 - Circuit Identification Detail
NOT TO SCALE



NOTE: TELECOM/DATA OUTLETS ARE TO BE INSTALLED AT THE SAME HEIGHT AS ADJACENT RECEPTACLE, UNO

1 - Standard Device Mounting Height Detail
Not to Scale

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN DUNCAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ELECTRICAL DETAILS

ISSUE BLOCK

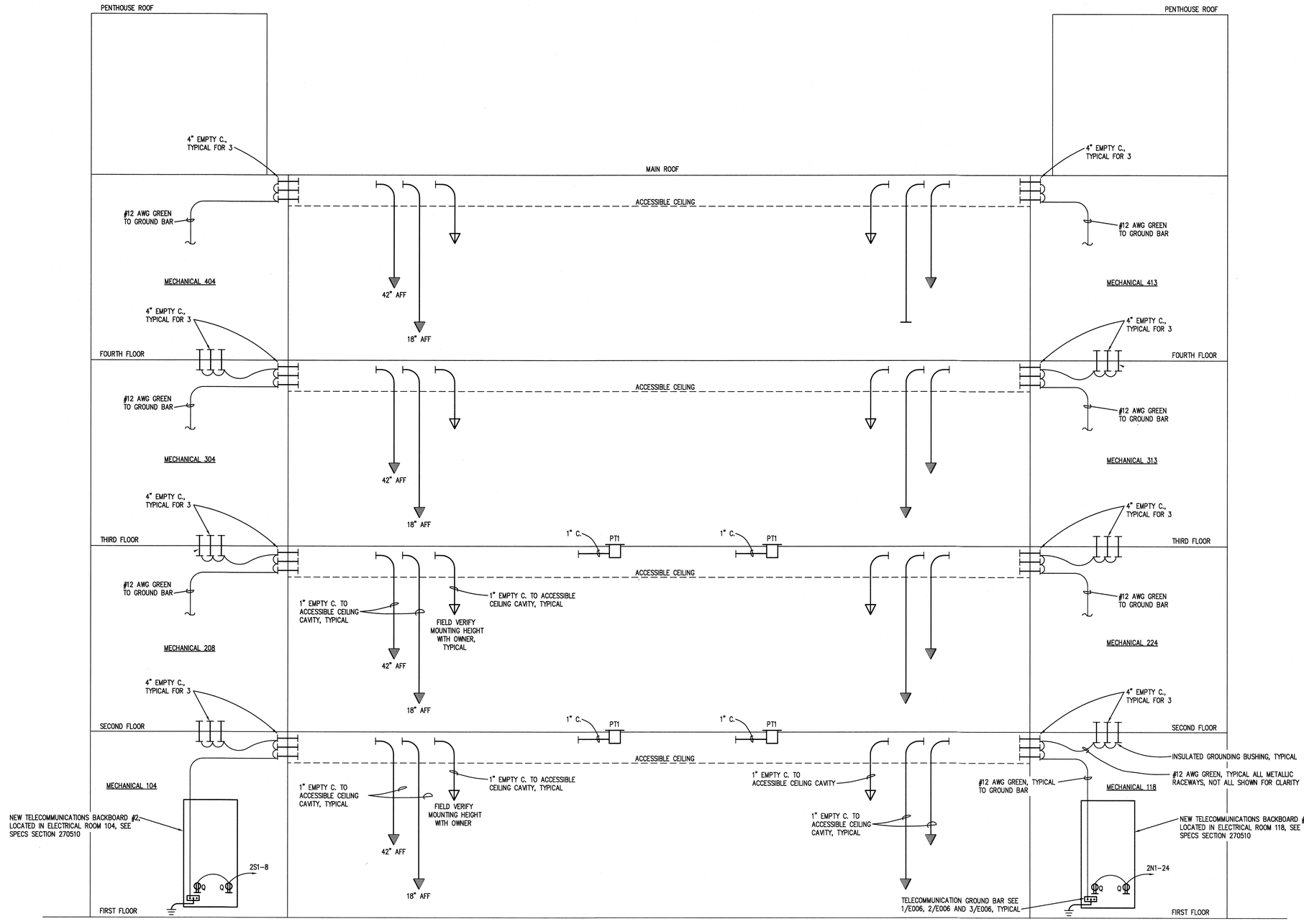
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

E010

COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010



NOTE : 1. RISER DIAGRAM IS DEPICTIVE (FUNCTIONAL) ONLY. ALL DEVICES ARE NOT SHOWN
2. ALL CABLES ARE PROVIDED AND INSTALLED BY THE OWNER

1 - Functional Telecommunications Riser Diagram
Not to Scale

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN DUNCAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE
RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE
FUNCTIONAL TELECOMMUNICATIONS RISER DIAGRAM

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E011

COPYRIGHT © 2020

FIRE ALARM SYSTEM CONTROL MATRIX

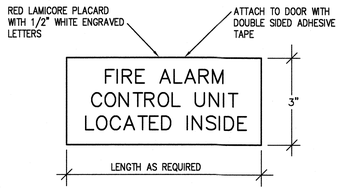
SYSTEM INPUTS	NOTE	SYSTEM OUTPUTS: ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE NOTIFICATION APPLIANCES	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ALARM SIGNAL TO MONITORING SERVICE	SUPERVISORY SIGNAL TO MONITORING SERVICE	TROUBLE SIGNAL TO MONITORING SERVICE	DISPLAY/PRINT CHANGE OF STATUS	RELEASE MAGNETICALLY HELD DOORS	RECALL ELEVATORS TO PRIMARY RECALL FLOOR	RECALL ELEVATORS TO ALTERNATE RECALL FLOOR	ACTIVATE FIRE HAT SIGNAL	SIGNAL HVAC CONTROL SYSTEM	ACTUATE SMOKE DAMPERS	SHUNT TRIP ELEVATOR FEEDER CIRCUIT BREAKER
SMOKE DETECTORS		X	X			X			X	X				X	X	
HEAT DETECTORS		X	X			X			X	X				X	X	
DUCT MOUNTED SMOKE DETECTORS	2	X	X			X			X	X				X	X	
MANUAL PULL STATIONS		X	X			X			X	X				X	X	
AHU SHUTDOWN AND SMOKE DAMPER OVERRIDE SWITCH					X		X									
SYSTEM TROUBLE CONDITION				X				X								
LOSS OF FACU AC POWER	1			X				X								
FACP LOW BATTERY				X												
NAC POWER SUPPLY LOW BATTERY				X												
GROUND FAULT				X				X								
SHORT CIRCUIT				X				X								
OPEN CIRCUIT				X				X								
PRIMARY FLOOR ELEVATOR LOBBY RECALL SMOKE DETECTOR		X				X			X	X		X		X	X	
ALTERNATE FLOOR ELEVATOR LOBBY RECALL SMOKE DETECTOR		X	X			X			X	X	X			X	X	
ELEVATOR MACHINE ROOM SMOKE DETECTOR		X	X			X			X	X			X	X	X	
ELEVATOR MACHINE ROOM HEAT DETECTOR		X	X			X			X	X			X	X	X	X
ELEVATOR SHUNT TRIP POWER SUPERVISORY SYSTEM					X		X									
SPRINKLER SYSTEM FLOW SWITCH	3	X	X			X			X	X				X	X	
STANDPIPE FLOW SWITCH	3	X	X			X			X	X				X	X	
SPRINKLER SYSTEM TAMPER SWITCH	3				X		X									
STANDPIPE TAMPER SWITCH	3				X		X									
SPRINKLER PRESSURE SWITCH	3				X		X									
STANDPIPE PRESSURE SWITCH	3				X		X									
POST INDICATOR VALVE TAMPER SWITCH					X		X									
RPZ TAMPER SWITCH	3				X		X									
RPZ HOT BOX LOW TEMPERATURE	3				X		X									

NOTES:
1. ONLY AFTER LOSS OF POWER FOR > 8 HOURS.
2. REFER TO MECHANICAL DRAWINGS FOR DUCT MOUNTED SMOKE DETECTOR LOCATIONS.
3. QUANTITIES OF DEVICES ARE NOT SHOWN. SEE FIRE PROTECTION DRAWINGS FOR QUANTITIES AND LOCATIONS. COORDINTE WITH THE FIRE PROTECTION CONTRACTOR AND CONFIRM ALL DEVICES REQUIRING FIRE ALARM SYSTEM SUPERVISION.
4. THIS IS A ABBREVIATED CONTROL MATRIX. REFER TO THE MECHANICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

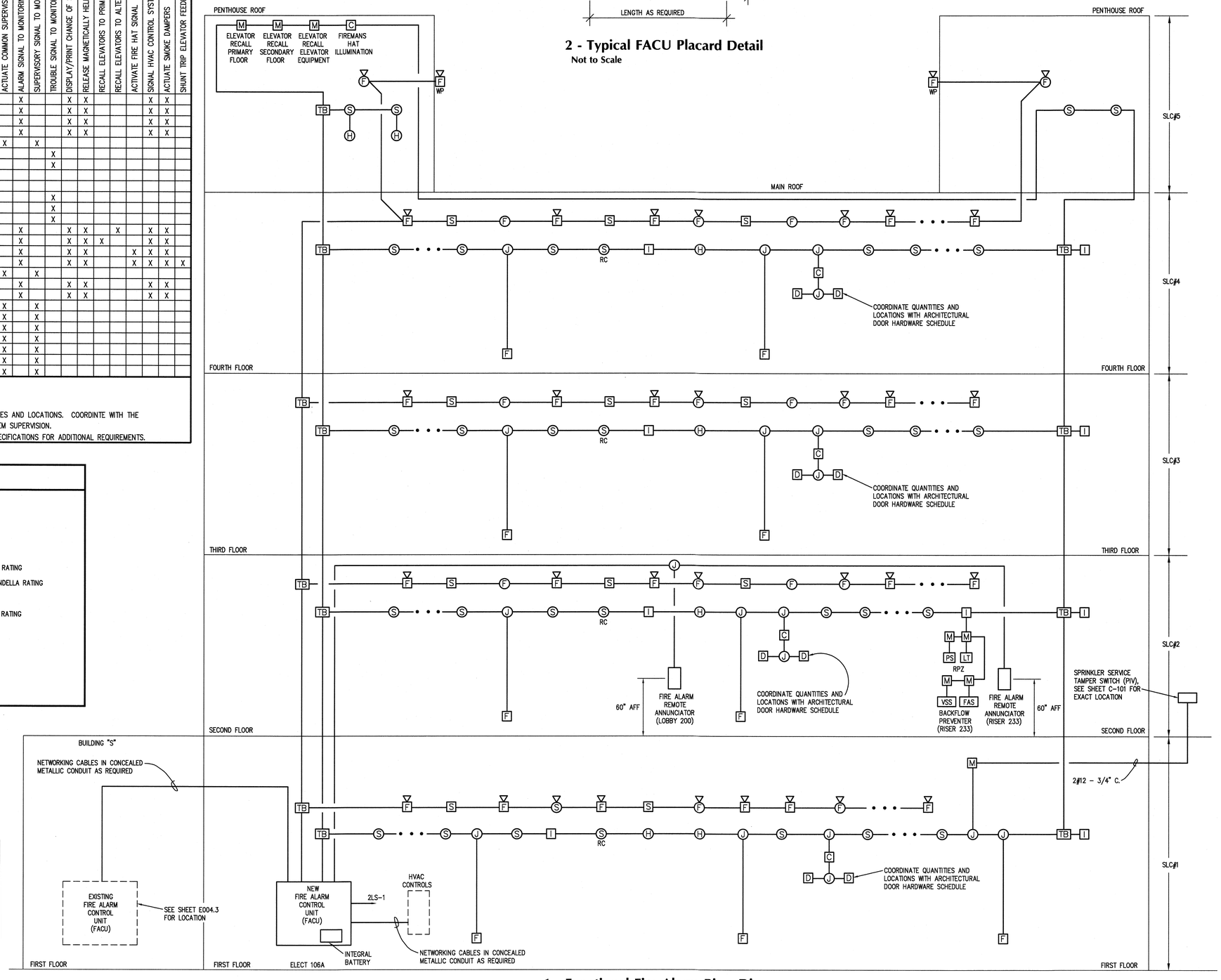
Fire Alarm Legend

F	FIRE ALARM MANUAL STATION, 48" AFF
SE F	FIRE ALARM MANUAL STATION, 48" AFF WITH SECURITY ENCLOSURE
WP F	WEATHERPROOF FIRE ALARM MANUAL STATION, 48" AFF
75 F	FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
75 (F)	FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED, "75" INDICATED CANDELLA RATING
WP 75 F	WEATHERPROOF FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
15 S	FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF, "15" INDICATES CANDELLA RATING
15 (F)	FIRE ALARM VISUAL (ONLY) DEVICE, CEILING MOUNTED, "15" INDICATES CANDELLA RATING
(S)	SMOKE DETECTOR, CEILING MOUNTED
RC (S)	SMOKE DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
(H)	HEAT DETECTOR, CEILING MOUNTED
RC (H)	HEAT DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
I	FIRE ALARM ISOLATION MODULE
C	FIRE ALARM SYSTEM CONTROL MODULE
M	FIRE ALARM SYSTEM MONITOR MODULE
TB	FIRE ALARM SYSTEM TERMINAL BOX
D	DOOR HOLD OPEN DEVICE
LT	LOW TEMPERATURE SWITCH
PS	FIRE PROTECTION SYSTEM PRESSURE SWITCH
VSS	FIRE PROTECTION SYSTEM TAMPER SWITCH
FAS	FIRE PROTECTION SYSTEM FLOW SWITCH

NOTES:
1. RISER DIAGRAM IS DEPICTIVE (FUNCTIONAL) ONLY. ALL DEVICES ARE NOT SHOWN
2. SEE SPECIFICATIONS SECTION 283111 FOR DETAILS.
3. SHOP DRAWINGS MUST BE SUBMITTED BY THE FIRE ALARM CONTRACTOR COMPLYING WITH THE FIRE ALARM PLAN REVIEW REQUIREMENTS POLICY – JANUARY 2002 BEFORE PERMITTING BY THE WILMINGTON FIRE DEPARTMENT. THESE DRAWINGS DO NOT CONSTITUTE APPROVAL AND MAY CHANGE AFTER A FULL REVIEW BY THE WILMINGTON FIRE DEPARTMENT. A SEPARATE PERMIT MUST BE OBTAINED PRIOR TO INSTALLATION.
4. DETECTOR SPACINGS ARE PER NFPA 72 IN AREAS WITH CONCRETE TEE CEILING ON THE FIRST FLOOR, FOLLOW SPACING INDICATED.



2 - Typical FACU Placard Detail
Not to Scale



1 - Functional Fire Alarm Riser Diagram
Not to Scale

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone: 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER DUNCAN MCFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

FIRE ALARM RISER DIAGRAM

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E012

COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION.	SIZE/APERTURE	VOLTS	LAMPS	WATTS	LENS	TRIM/DOOR	TRIM COLOR	MOUNTING HEIGHT	REMARKS	MANUFACTURER	NOTE 5 APPLIES?
L1	LAY-IN GRID LED	2'x4'	UNIV.	7200 LUMEN 3500K LED	54	ADP DIFFUSER	FLUSH STEEL	WHITE	RECESSED GRID MOUNTED	10%, 0-10V GZ10 DIMMING DRIVER	LITHONIA "2BLT" SERIES COLUMBIA "LCAT24" SERIES DAY-BRITE "2FGG" SERIES	
L2	LAY-IN GRID LED	2'x4'	UNIV.	6000 LUMEN 3500K LED	49	ADP DIFFUSER	FLUSH STEEL	WHITE	RECESSED GRID MOUNTED	10%, 0-10V GZ10 DIMMING DRIVER	LITHONIA "2BLT" SERIES COLUMBIA "LCAT24" SERIES DAY-BRITE "2FGG" SERIES	
L3	LAY-IN GRID LED	2'x4'	UNIV.	4800 LUMEN 3500K LED	36	0.125" ACRYLIC PRISMATIC	FLUSH STEEL	WHITE	RECESSED GRID MOUNTED	10%, 0-10V GZ10 DIMMING DRIVER	LITHONIA "2GTL" SERIES COLUMBIA "LJT24" SERIES DAY-BRITE "2TG" SERIES	
L3A	LAY-IN GRID LED	2'x2'	UNIV.	4000 LUMEN 3500K LED	30	0.125" ACRYLIC PRISMATIC	FLUSH STEEL	WHITE	RECESSED GRID MOUNTED	10%, 0-10V GZ10 DIMMING DRIVER	LITHONIA "2GTL" SERIES COLUMBIA "LJT24" SERIES DAY-BRITE "2TG" SERIES	
L4	SURFACE MOUNTED LED	4'	UNIV.	4146 LUMEN 3500K LED	38	DIFFUSE POLYCARBONATE	FLUSH STEEL	WHITE	SURFACE CEILING	80 CRI	LITHONIA "CDS" SERIES COLUMBIA "CSL4" SERIES DAY-BRITE "SCD" SERIES	
L5	WALL MOUNTED INDIRECT / DIRECT LED	4'	UNIV.	2800 LUMEN 3500K LED	23			WHITE	WALL AT EXISTING FIXTURE LOCATION	WHITE REFLECTOR, OPD SHIELDING, SSB BAFFLE, SCT SWITCHING, 70% UP / 30% DOWN DISTRIBUTION, 80 CRI	PEERLESS "BRW9L" SERIES FINELITE "S16LED" SERIES LEDALITE "7408" SERIES	
L6	PENANT MOUNTED LINEAR LED LINEAR LED	2" x LENGTH AS INDICATED	UNIV.	900 LUMENS/LF 3500K LED	13.6 W/LF 42W	SPOTLESS LENS	EXTRUDED ALUMINUM	WHITE	PENDANT AT 8'-0" BOTTOM OF FIXTURE	80 CRI, 0-10V DIMMING,	AXIS "BRLED" SERIES FINELITE " HP2" SERIES LEDALITE " 2203" SERIES	YES
L7	RECESSED FLANGELESS MOUNTED LINEAR LED	2" x LENGTH AS INDICATED	UNIV.	900 LUMENS/LF 3500K LED	13.6 4W/LF 42W	SPOTLESS LENS	EXTRUDED ALUMINUM	WHITE	"D" DRYWALL FLANGLESS	80 CRI, 0-10V DIMMING	AXIS "BRLED" SERIES FINELITE "HP2" SERIES LEDALITE " 2301" SERIES	YES
L9	RECESSED LED DOWNLIGHT	4"	UNIV.	2500 LUMEN 3500K LED	30	_____	ALUMINUM	WHITE	RECESSED CEILING	MEDIUM WIDE DISTRIBUTION, SEMI-SPECULAR DIFFUSE	LITHONIA "LDN4" SERIES INTL "SS4" SERIES HALO "PD4" SERIES	
L10	RECESSED LED DOWNLIGHT	4"	UNIV.	3000 LUMEN 3500K LED	35	_____	ALUMINUM	WHITE	RECESSED CEILING	MEDIUM WIDE DISTRIBUTION, SEMI-SPECULAR DIFFUSE	LITHONIA "LDN4" SERIES INTL "SS4" SERIES HALO "PD4" SERIES	
L11	SURFACE MOUNTED LED WRAPAROUND	4'	UNIV.	4800 LUMEN 3500K LED	41	ACRYLIC	STEEL	WHITE	SURFACE CEILING	GTZ 0-10V DIMMING, 80 CRI	LITHONIA "LBL4" SERIES INTL "SS4" SERIES HALO "PD4" SERIES	
L12	SURFACE MOUNTED LED	4'	UNIV.	4000 LUMEN 3500K LED	40	ACL ACRYLIC	FIBERGLASS	_____	WALL AT EXISTING FIXTURE ELEVATION	MEDIUM DISTRIBUTION, 80 CRI, WET LOCATION LABEL	LITHONIA "FEM LED" SERIES COLUMBIA "LXEM4" SERIES LUMEX "VNBTLED" SERIES	
L12A	SURFACE MOUNTED LED	4'	UNIV.	4000 LUMEN 3500K LED	40	ACL ACRYLIC	FIBERGLASS	_____	SURFACE CEILING	MEDIUM DISTRIBUTION, 80 CRI, WET LOCATION LABEL	LITHONIA "FEM LED" SERIES COLUMBIA "LXEM4" SERIES LUMEX "VNBTLED" SERIES	
L13	WALL MOUNTED LED AREA LIGHT	16" x 15"	UNIV.	20C, 8427 LUMEN 4000K LED	72	GLASS	_____	DARK BRONZE	WALL, AT EXISTING FIXTURE LOCATON	1000 mA DRIVER, TYPE III MEDIUM DISTRIBUTION, WET LOCATION LABEL	LITHONIA "TWH LED" SERIES ILP "WPLO" SEREIS STONCO "WP75" SERIES	
L14	WALL MOUNTED LED AREA LIGHT	16" x 15"	UNIV.	10C, 6983 LUMEN 4000K LED	39	GLASS	_____	DARL BRONZE	WALL AT 7'-6"	WET LOCATION LABEL	LITHONIA "TWH LED" SERIES ILP "WPLO" SEREIS STONCO "WP50" SERIES	
L15	POLE STREETLIGHTING FIXTURE	16" x 32"	277	6245 LUMEN 4000K LED	56	CLEAR LEXAN WITH HSS HOUSESIDE SHIELD	_____	BLACK	POLE	12' TALL, 4" DIAMETER FLUTED ALUMINUM POLE, 120V, 20A, WEATHERPROOF DUPLEX RECEPTACLE, FINIAL	STERBERG LANTERNS "VLED-A-850" CITY OF WLMNGTON STANDARD NO SUBSTITUTIONS	
L16	LED HIGHBAY	4'	277	24000 LUMEN 3500K LED	192	SEMI-DIFFUSE ACRYLIC	ALUMINUM	WHITE	SURFACE ON STRUCTURE	WD DISTRIBUTION, SD125 LENS, SURFACE MOUNTING BRACKET	LITHONIA "IBL" SEREIS ILP "EDV" SERIES DAY-BRITE "FBY" SERIES	
L17	WAL MOUNTED DIRECT/INDIRECT LED	4'	UNIV.	1000 LUMEN / FOOT 3500K LED	30		ALUMINUM	WHITE	WALL MOUNTED AT 9'-0"	WD DISTRIBUTION, AWM WALL MOUNT, 80% DOWN / 20% UP DISTRIBUTION	STARTEK "BEAMD" SERIES FINELITE "EX30I" SERIES PAL "MLPJ" SERIES	YES
L18	SURFACE MOUNTED LED AREA LIGHT	16" x 15"	UNIV.	30C, 8375 LUMEN 4000K LED	104	GLASS	_____	DARK BRONZE	SURFACE CEILING	1000 mA DRIVER, TYPE III MEDIUM DISTRIBUTION, WET LOCATION LABEL	LITHONIA "TWH LED" SERIES ILP "WPLO" SERIES STONCO "WP75" SERIES	
X1	EXIT LIGHT	_____	UNIV	RED LED	5	_____	POLYCARBONATE	WHITE	FLUSH CEILING	RED LED, 6" LETTERS, SINGLE OR DOUBLE FACE UNITS AND CHEVRONS AS INDICATED, INTERNAL 90 MINUTE BATTERY BACKUP, SELF DIAGNOSTICS	LITHONIA "LQM" SERIES EMERGILITE "ELX" SERIES CHLORIDE "CLX" SERIES	
X2	EXIT LIGHT	_____	UNIV	RED LED	5	_____	POLYCARBONATE	WHITE	WALL OVER DOOR	RED LED, 6" LETTERS, SINGLE OR DOUBLE FACE UNITS AND CHEVRONS AS INDICATED, INTERNAL 90 MINUTE BATTERY BACKUP, SELF DIAGNOSTICS	LITHONIA "LQM" SERIES EMERGILITE "ELX" SERIES CHLORIDE "CLX" SERIES	
E	EMERGENCY LIGHT	_____	UNIV	2 - 1.5W LED	3	_____	POLYCARBONATE	WHITE	WALL / 7'-6"	INTERNAL 90 MINUTE BATTERY BACKUP, SELF DIAGNOSTICS	LITHONIA "ELM2 LED" SERIES EMERGILITE "EL" SERIES CHLORIDE "CLU" SERIES	

NOTES:
1. ACRYLIC PRISMATIC LENSES SHALL BE 0.125" NOMINAL MINIMUM THICKNESS.
2. ALL EXIT AND EMERGENCY FIXTURES SHALL COMPLY WITH NCSBC STANDARDS AND HAVE AUTOMATIC TESTING DEVICES.
3. LED EMERGENCY BATTERY SHALL PROVIDE 1400 MINIMUM LUMENS OUTPUT FOR 90 MINUTES MINIMUM.
4. SEE SPECIFICATIONS SECTIONS 265100 AND 265200 FOR ADDITIONAL REQUIREMENTS.
5. THE FIRST FIXTURE NAMED IN THE MANUFACTURER COLUMN IS THE BASIS OF DESIGN. OTHER FIXTURES ARE SIMILAR IN THE OPINION OF THE ARCHITECT AND ENGINEER. IF THE CONTRACTOR ELECTS TO SUBMIT A FIXTURE OTHER THAN THE BASIS OF DESIGN FIXTURE, INCLUDING ONE OF THE TWO SIMILAR FIXTURES, REQUIREMENTS OF NOTES 6 AND 7 APPLY.
6. LIGHTING FIXTURES HAVE BEEN SELECTED AND SPECIFIED TO ACHIEVE REQUIRED/DESIRED ILLUMINATION LEVELS AND OTHER CHARACTERISTICS IN THEIR RESPECTIVE AREAS. SPECIFIED FIXTURES HAVE SPECIFIC CHARACTERISTICS WHICH MAY CREATE UNIQUE ILLUMINATION RESULTS ESSENTIAL TO THE PROJECT. LIGHTING FIXTURES PROVIDED SHALL MEET THE ASTHETICS, DETAILS, AND SPECIFICATIONS STATED ABOVE AND IN THE DIVISION 26 SPECIFICATIONS, AND MOUNTING HEIGHTS AND SPACINGS SHOWN ON THE DRAWINGS. ANY DEVIATIONS FROM THE SPECIFIED FIXTURES SHALL DEEM ALL PARTIES IN THE SUPPLY CHAIN AND CONTRACTOR RESPONSIBLE FOR PROVIDING DETAILED COMPARISONS OF THE SPECIFIED FIXTURE AND THE PROPOSED FIXTURE FOR ARCHITECT AND ENGINEER REVIEW IN DETERMINING EQUALITY. PROVIDE COMPLETE POINT BY POINT ILLUMINATION STUDIES FOR ALL SUBSTITUTIONS.
7. SUBSTITUTIONS MAY BE APPROVED BY THE ARCHITECT AND ENGINEER IF THEY ARE JUDGED TO BE EQUAL TO THE SPECIFIED FIXTURES. 'EQUAL'MAY INCLUDE, AT THE SOLE DISCRETION OF THE ARCHITECT AND ENGINEER, LENS MATERIAL AND CHARACTERISTICS, COLORS, REFLECTORS, HOUSING MATERIAL AND CONFIGURATION, FINISHES, PHOTOMETRICS, EFFICIENCY, OPTIONS, FUNCTIONALITY, ETC..

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER ROBERT DAN MCFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE
RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE
LIGHTING FIXTURE SCHEDULE

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

E013

COPYRIGHT © 2020

BASE BID:

EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN SPACES 106, 106B, 106C, 106D, 107, 108A, 108B, 109, 110, 111, 112 AND 113 SHALL REMAIN.

REMOVE EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN ALL OTHER SPACES AND REPLACE WITH NEW LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS AS INDICATED ON SHEETS E115 AND E106.

REMOVE EXISTING FIRE ALARM SYSTEM DEVICES AND ASSOCIATED RACEWAYS AND CONDUCTORS/CABLES THROUGHOUT THE ENTIRE FLOOR AND INSTALL NEW FIRE ALARM SYSTEM AS INDICATED ON SHEET E119 AND SPECIFICATIONS SECTION 283111.

ALTERNATE 1:

EXISTING LIGHTING FIXTURES IN RESULTING SPACES 106, 107 AND 113 SHALL REMAIN AND/OR BE RECONFIGURED AS SHOWN ON SHEET E115A. PROVIDE BRANCH CIRCUITS AND SWITCHING AS SHOWN.

EXISTING LIGHTING FIXTURES, BRANCH CIRCUITS AND SWITCHING SHALL REMAIN IN SPACES 106B, 106C, 106D, 108A, 108B, 109, 110 AND 111.

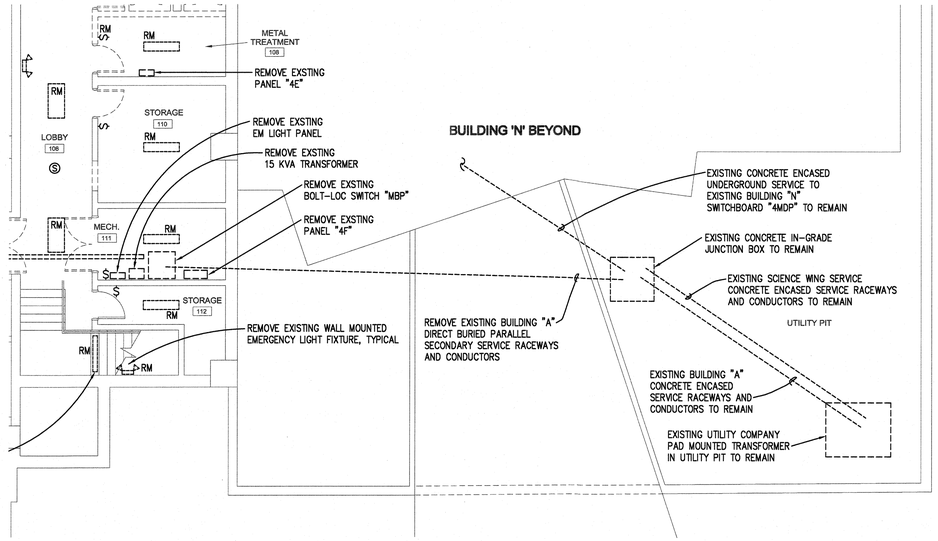
PROVIDE NEW LIGHTING FIXTURES, BRANCH CIRCUITS AND SWITCHING IN CORRIDOR 112 AS SHOWN ON SHEET E115A.

REMOVE EXISTING RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN ALL SPACES AND REPLACE WITH NEW RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS AS INDICATED ON SHEET E106A.

REMOVE EXISTING FIRE ALARM SYSTEM DEVICES AND ASSOCIATED RACEWAYS AND CONDUCTORS/CABLES THROUGHOUT THE ENTIRE FLOOR AND INSTALL NEW FIRE ALARM SYSTEM AS INDICATED ON SHEET E119A AND SPECIFICATIONS SECTION 283111.

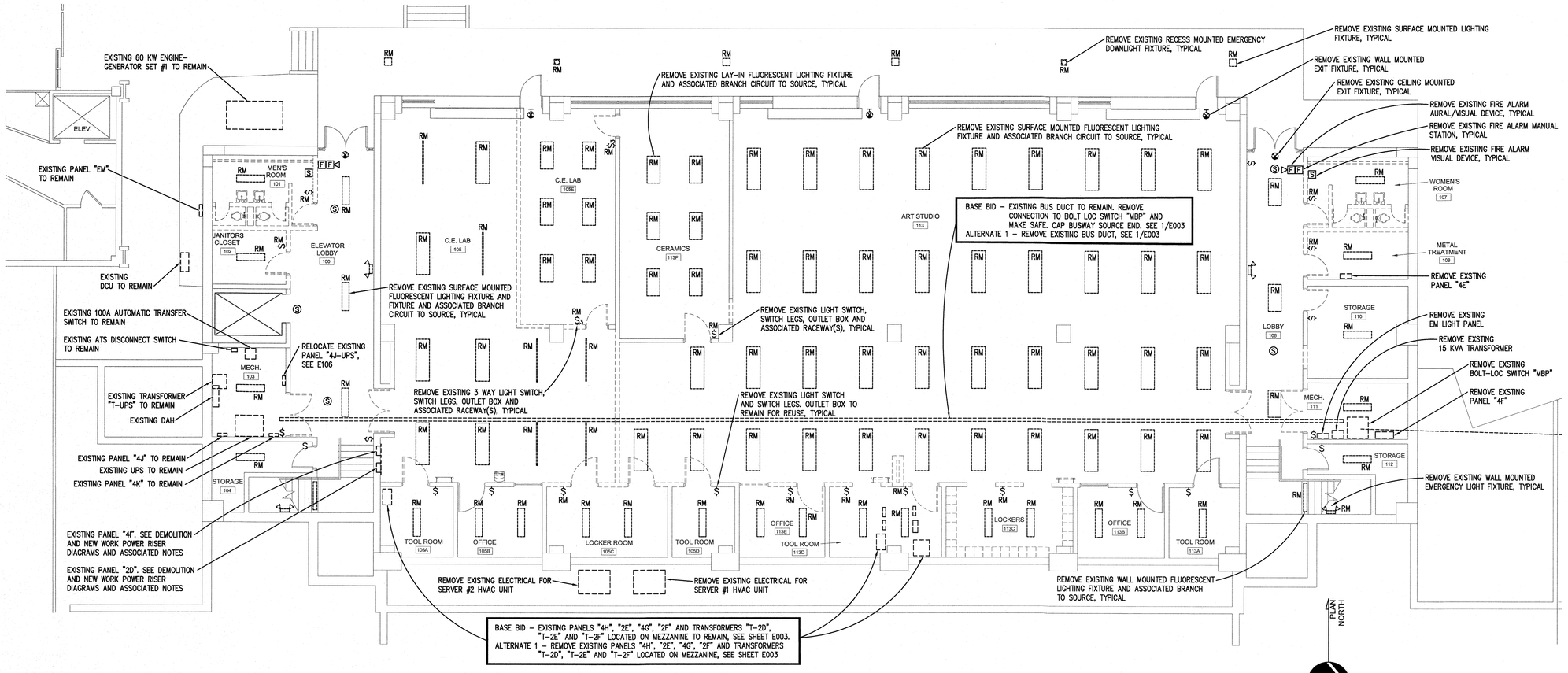
ALTERNATE 1A:

REMOVE EXISTING LIGHTING FIXTURES AND ASSOCIATED BRANCH CIRCUITS IN SPACES 106, 106B, 106C, 106D, 107, 108A, 108B, 109, 110, 111 AND 113 AND REPLACE WITH NEW LIGHTING FIXTURES, BRANCH CIRCUITS AND SWITCHING AS INDICATED ON SHEET E115.1A.



1 - Building "A" Partial First Floor Demolition Plan

Scale: 1/8" = 1'-0"



1 - Building "A" First Floor Demolition Plan

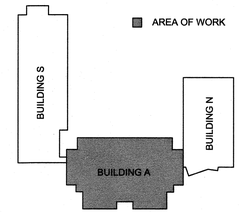
Scale: 1/8" = 1'-0"

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

AREA OF WORK



KEY PLAN

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" FIRST FLOOR DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ PROJ MGR: RDM

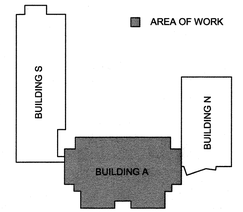
E101

COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN

BASE BID:

EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN SPACES 201, 202, 204, 205 AND 206 SHALL REMAIN.

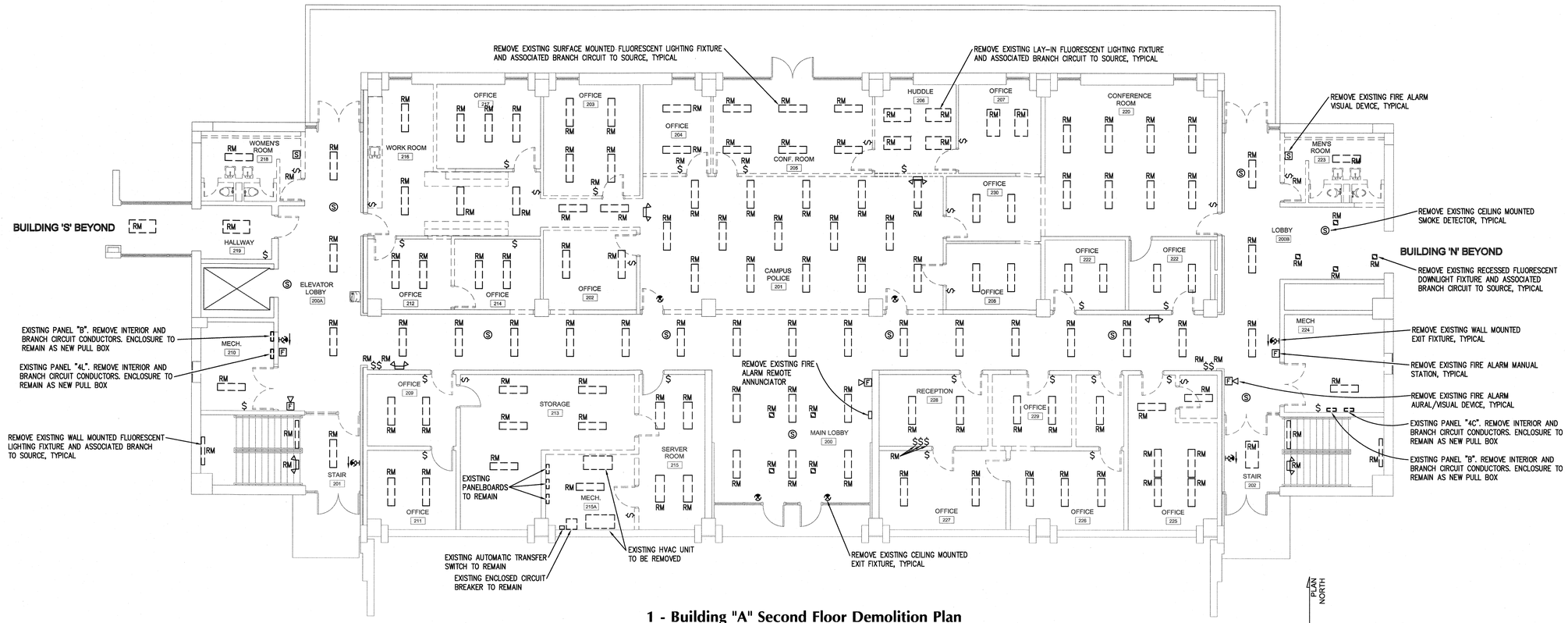
REMOVE EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN ALL OTHER SPACES AND REPLACE WITH NEW LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS AS INDICATED ON SHEETS E116 AND E107.

REMOVE EXISTING FIRE ALARM SYSTEM DEVICES AND ASSOCIATED RACEWAYS AND CONDUCTORS/CABLES THROUGHOUT THE ENTIRE FLOOR AND INSTALL NEW FIRE ALARM SYSTEM AS INDICATED ON SHEET E120 AND SPECIFICATIONS SECTION 283111.

ALTERNATE 2:

REMOVE EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN ALL SPACES LISTED TO REMAIN IN THE BASE BID AND REPLACE WITH NEW LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS AND SWITCHING AS INDICATED ON SHEET E107 AND E116.

REMOVE EXISTING FIRE ALARM SYSTEM DEVICES AND ASSOCIATED RACEWAYS AND CONDUCTORS/CABLES ALL SPACES LISTED TO REMAIN IN THE BASE BID AND INSTALL NEW FIRE ALARM SYSTEM AS INDICATED ON SHEET E120 AND SPECIFICATIONS SECTION 283111.



1 - Building "A" Second Floor Demolition Plan

Scale: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER ROBERT DANIEL MCFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" SECOND FLOOR DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ PROJ MGR: RDM

E102

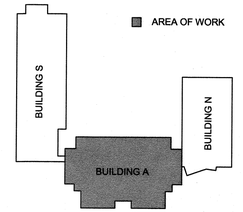
COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

AREA OF WORK



KEY PLAN

BASE BID:

EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN SPACES 300, 301, 302, 308, 309, 310, 316 AND 317 SHALL REMAIN.

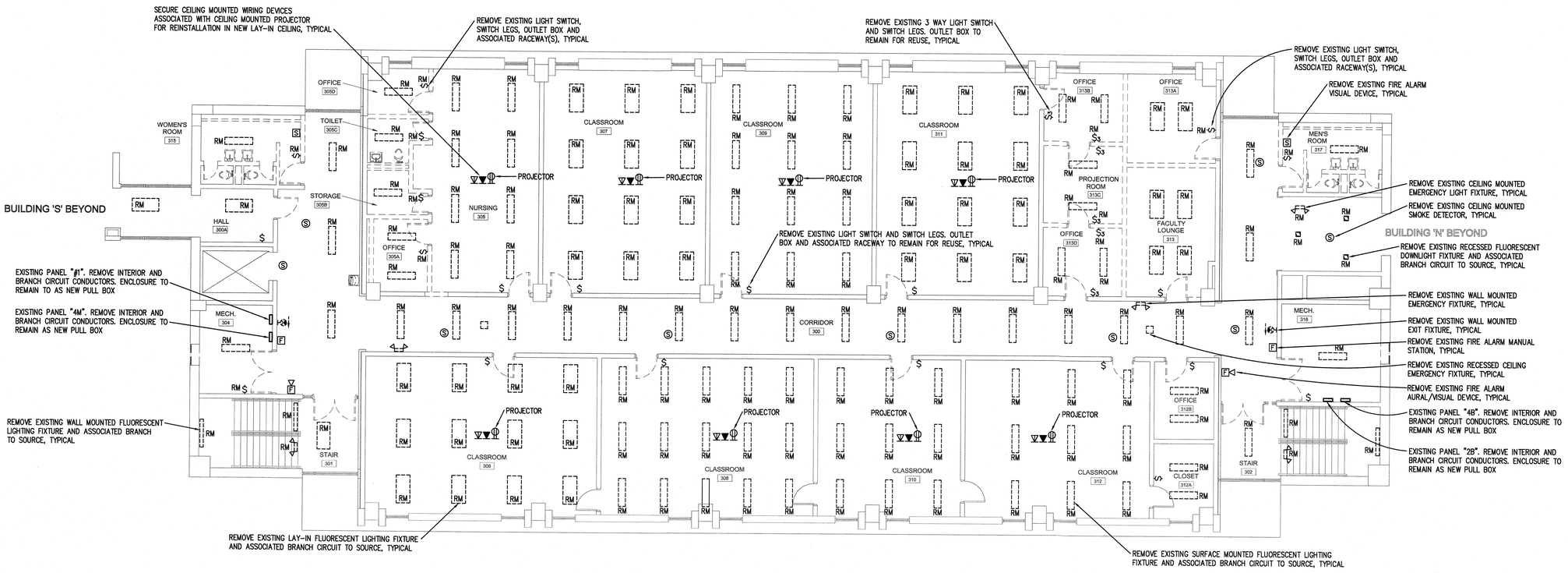
REMOVE EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN ALL OTHER SPACES AND REPLACE WITH NEW LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS AS INDICATED ON SHEETS E117 AND E108.

REMOVE EXISTING FIRE ALARM SYSTEM DEVICES AND ASSOCIATED RACEWAYS AND CONDUCTORS/CABLES THROUGHOUT THE ENTIRE FLOOR AND INSTALL NEW FIRE ALARM SYSTEM AS INDICATED ON SHEET E121 AND SPECIFICATIONS SECTION 283111.

ALTERNATE 2:

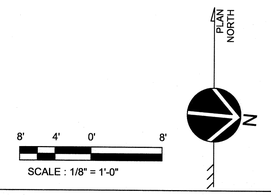
REMOVE EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN ALL SPACES LISTED TO REMAIN IN THE BASE BID AND REPLACE WITH NEW LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS AND SWITCHING AS INDICATED ON SHEET E117A.

ADJUST BASE BID CEILING FIRE ALARM SYSTEM DEVICE PLACEMENT FOR ALTERNATE 2 NEW LIGHTING FIXTURE LOCATIONS IN SPACES 300, 301, 302, 308, 309, 310, 316 AND 317 MAINTAINING BASE BID LAYOUT SPACINGS WHERE POSSIBLE, AND NO GREATER THAN LISTED SPACINGS, AND REQUIREMENTS OF SPECS SECTION 283111.



1 - Building "A" Third Floor Demolition Plan

Scale: 1/8" = 1'-0"



BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 033433 ENGINEER RONALD DUNCAN MCFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" THIRD FLOOR DEMOLITION PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

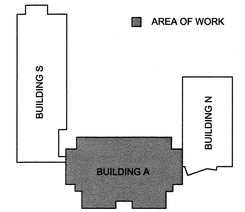
E103

COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN

BASE BID:

EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN SPACES 400, 401, 401A, 401B, 402, 407, 408, 409, 410, 411, 415 AND 416 SHALL REMAIN.

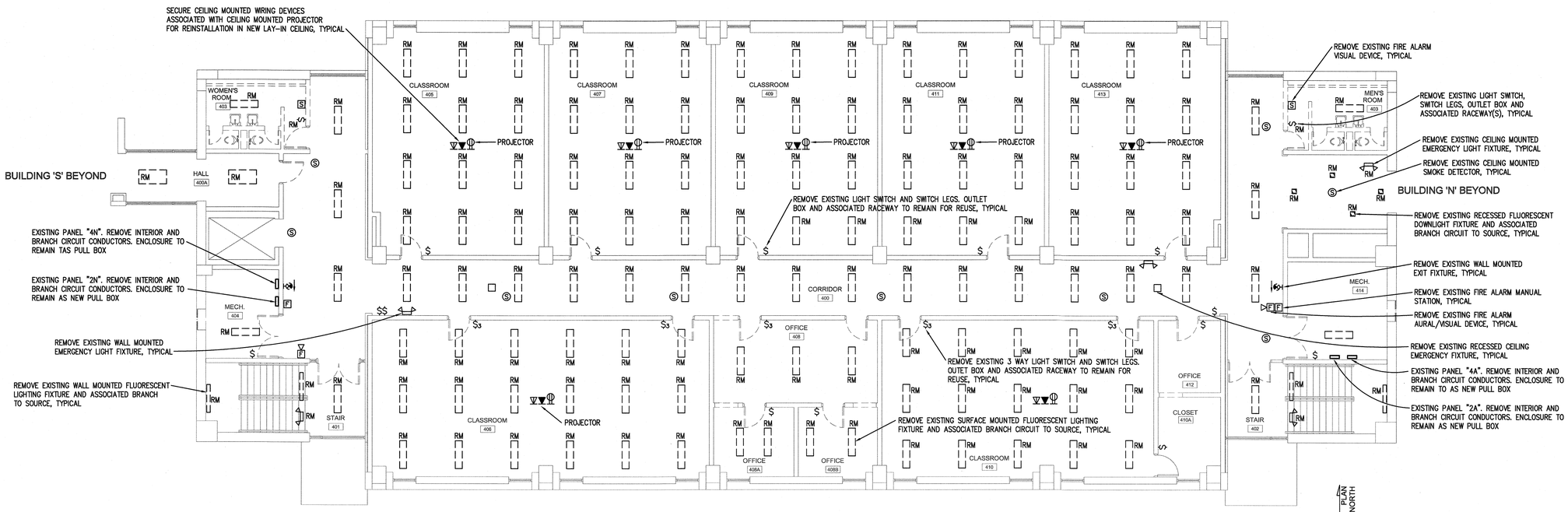
REMOVE EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN ALL OTHER SPACES AND REPLACE WITH NEW LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS AS INDICATED ON SHEETS E118 AND E109.

REMOVE EXISTING FIRE ALARM SYSTEM DEVICES AND ASSOCIATED RACEWAYS AND CONDUCTORS/CABLES THROUGHOUT THE ENTIRE FLOOR AND INSTALL NEW FIRE ALARM SYSTEM AS INDICATED ON SHEET E122 AND SPECIFICATIONS SECTION 283111.

ALTERNATE 2:

REMOVE EXISTING LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS IN ALL SPACES LISTED TO REMAIN IN THE BASE BID AND REPLACE WITH NEW LIGHTING FIXTURES, RECEPTACLES, MISCELLANEOUS POWER OUTLETS, ETC. AND ASSOCIATED BRANCH CIRCUITS AND SWITCHING AS INDICATED ON SHEET E118A.

ADJUST BASE BID CEILING FIRE ALARM SYSTEM DEVICE PLACEMENT FOR ALTERNATE 2 NEW LIGHTING FIXTURE LOCATIONS IN SPACES 400, 401, 401A, 401B, 402, 407, 408, 409, 410, 411, 415 AND 416 MAINTAINING BASE BID LAYOUT SPACINGS WHERE POSSIBLE, AND NO GREATER THAN LISTED SPACINGS, AND REQUIREMENTS OF SPECS SECTION 283111.



1 - Building "A" Fourth Floor Demolition Plan

Scale: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN JAMES MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" FOURTH FLOOR DEMOLITION

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ PROJ MGR: RDM

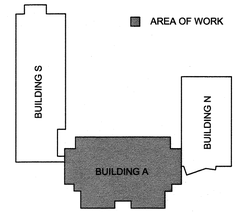
E104

COPYRIGHT © 2020

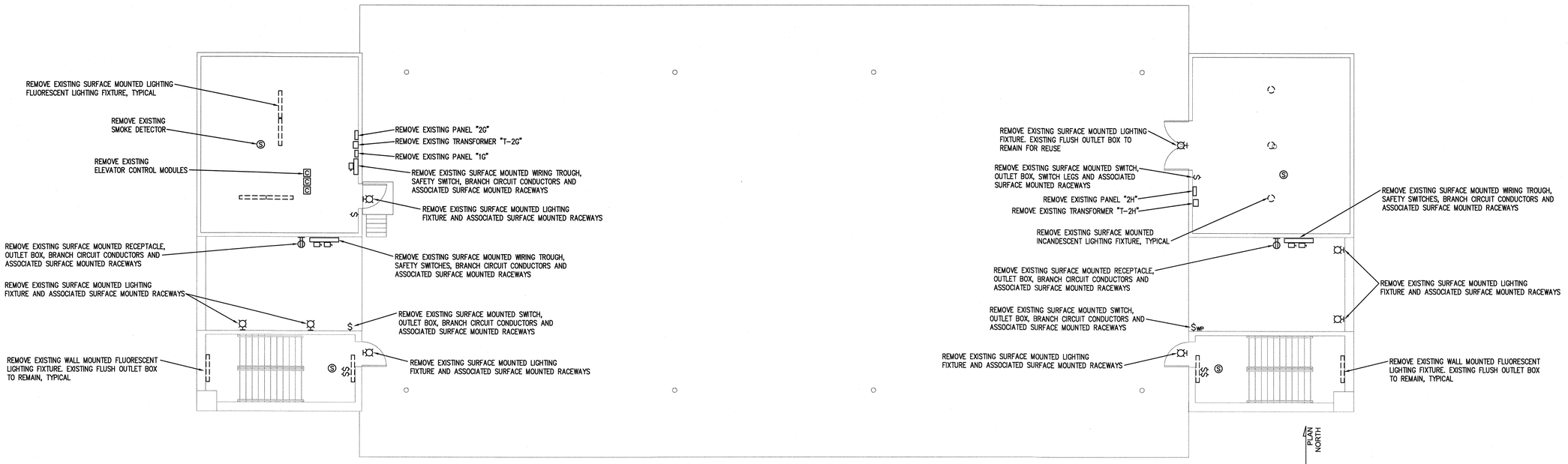
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN



1 - Building "A" Roof Demolition Plan

Scale: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN JOSEPH MCLEOD
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" ROOF DEMOLITION PLAN

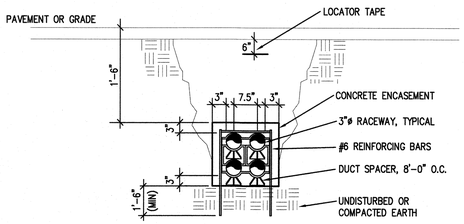
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

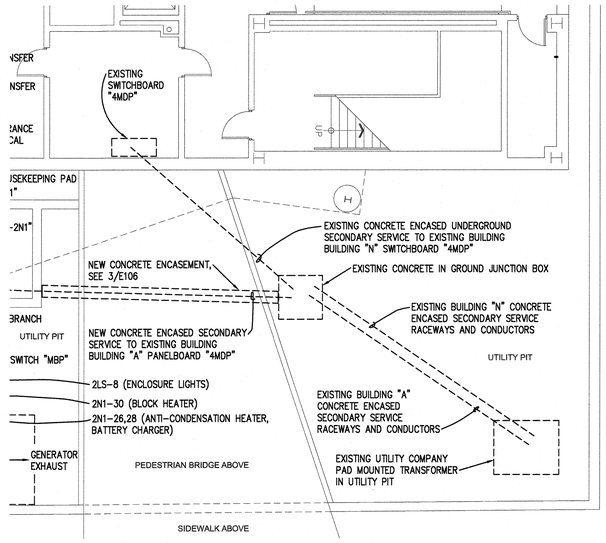
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E105

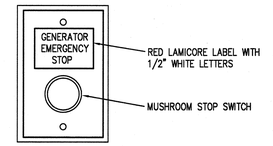
COPYRIGHT © 2020



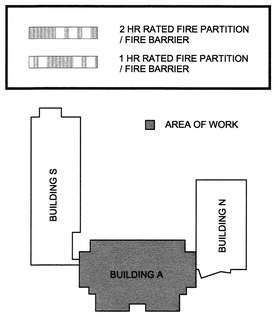
3 - Secondary Service Concrete Encased Raceway Detail
NOT TO SCALE



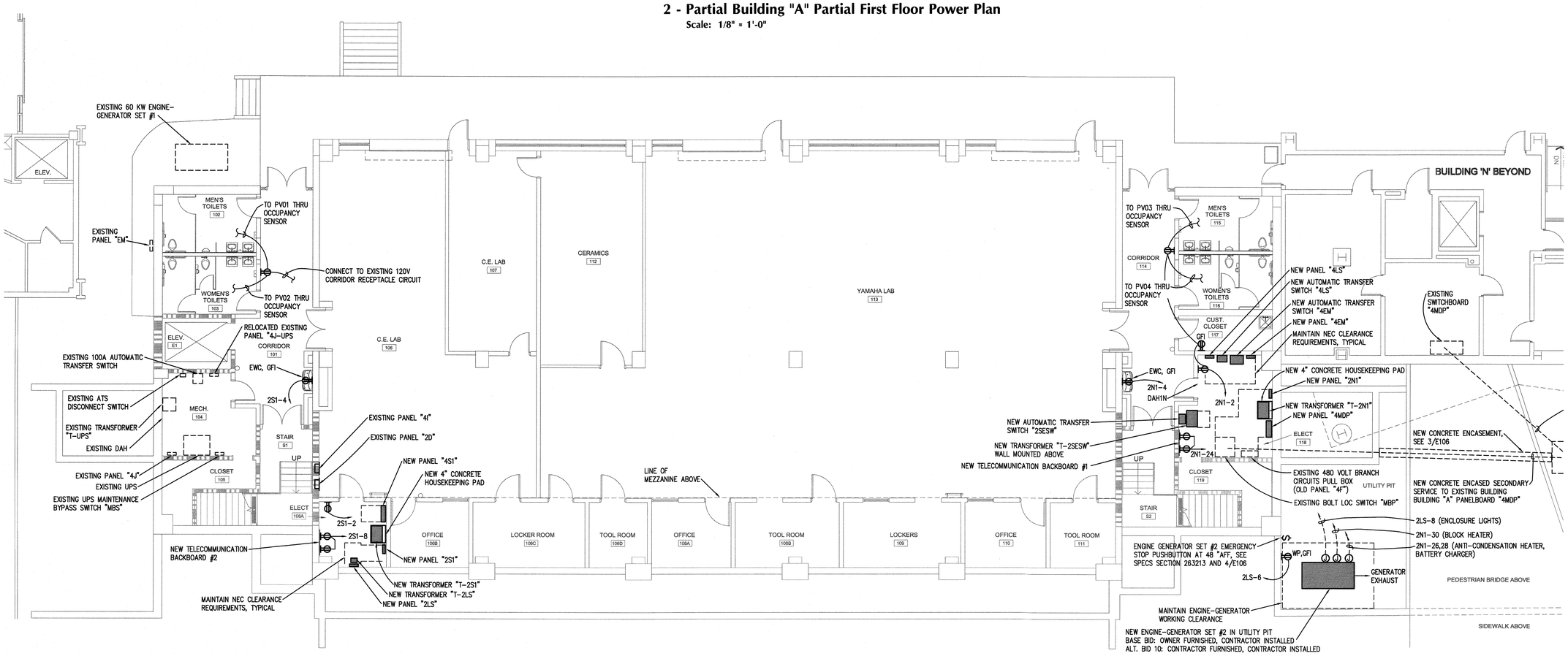
2 - Partial Building "A" Partial First Floor Power Plan
Scale: 1/8" = 1'-0"



4 - E-G Set Emergency Stop Switch Detail
Not to Scale



KEY PLAN



1 - Building "A" First Floor Power Plan
Scale: 1/8" = 1'-0"

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100
Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950
Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700
www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN DUNCAN MCFADYEN 8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" FIRST FLOOR POWER PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

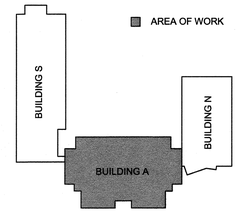
E106

COPYRIGHT © 2020

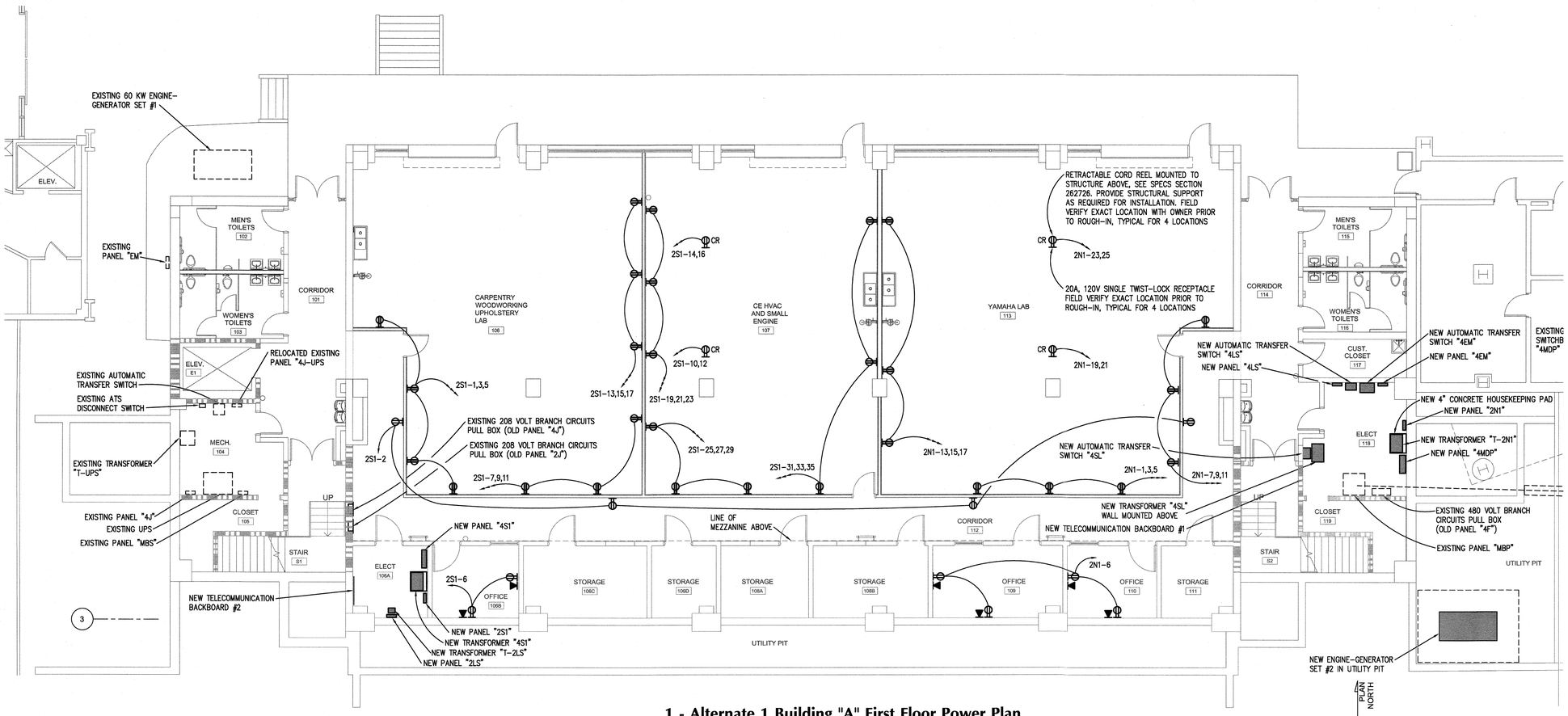
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN



1 - Alternate 1 Building "A" First Floor Power Plan

Scale: 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER R. DUNCAN MCFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1
BUILDING "A" FIRST
FLOOR POWER PLAN

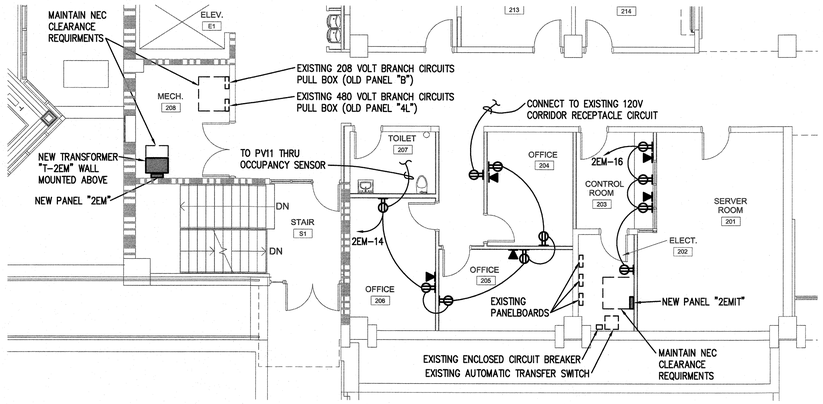
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

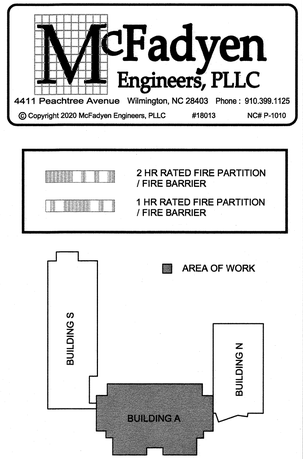
E106A

COPYRIGHT © 2020

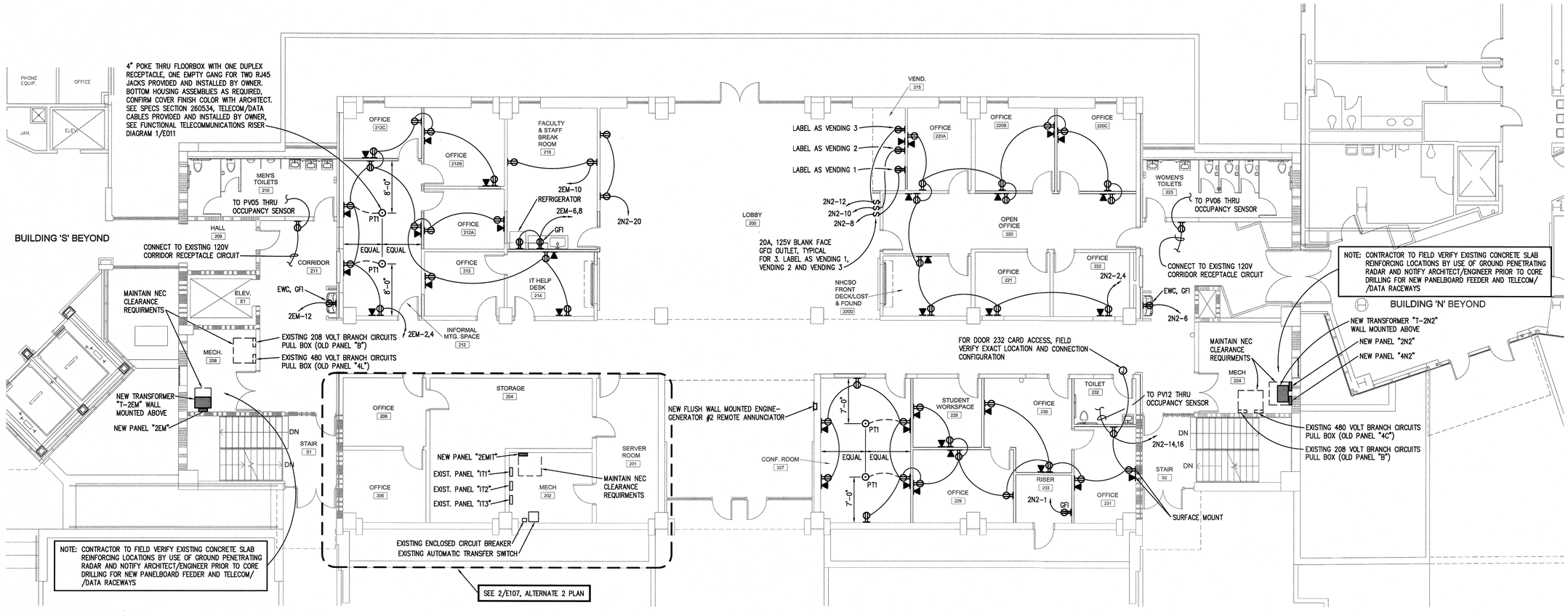


2 - Alternate 2 - Building "A" Second Floor Power Plan

Scale: 1/8" = 1'-0"

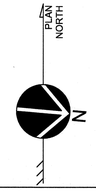


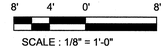
KEY PLAN



1 - Building "A" Second Floor Power Plan

Scale: 1/8" = 1'-0"





McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone: 910.389.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 34331 ENGINEER DUNCAN M. MCFADYEN 8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" SECOND FLOOR POWER PLAN AND ALTERNATE 2 SECOND FLOOR POWER PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

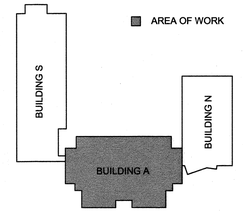
E107

COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

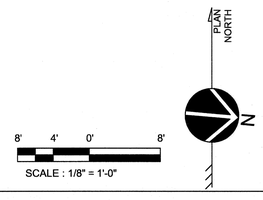
1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN

1 - Building "A" Third Floor Power Plan

Scale: 1/8" = 1'-0"



BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RODNEY DUNCAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" THIRD FLOOR POWER PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

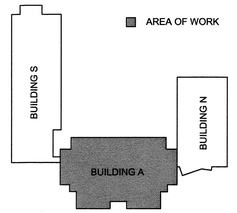
E108

COPYRIGHT © 2020

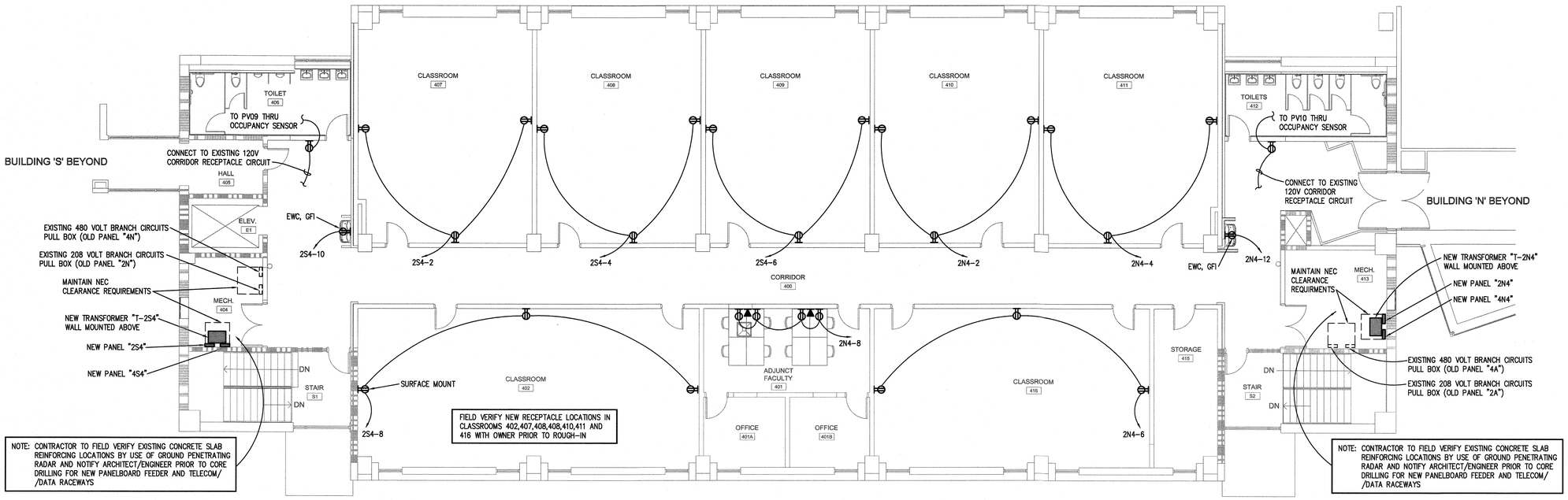
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN



1 - Building "A" Fourth Floor Power Plan

Scale: 1/8" = 1'-0"

PLAN NORTH

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER ROBERT DUNCAN MCFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" FOURTH FLOOR POWER PLAN

ISSUE BLOCK

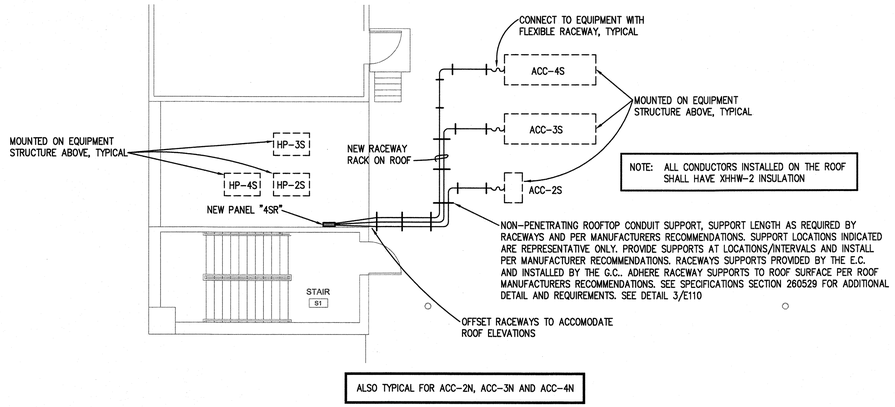
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

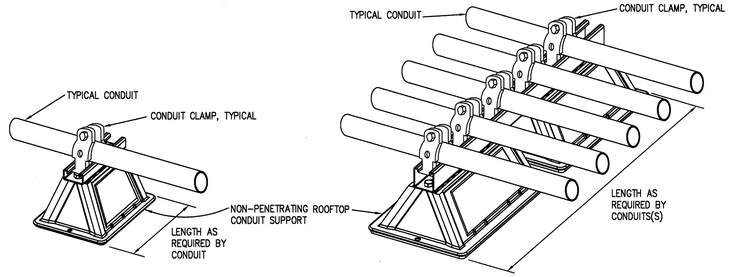
E109

COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010



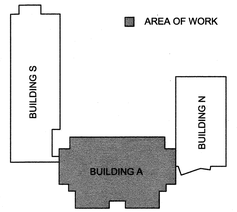
2 - Roof Conduit Support Plan
SCALE: NONE



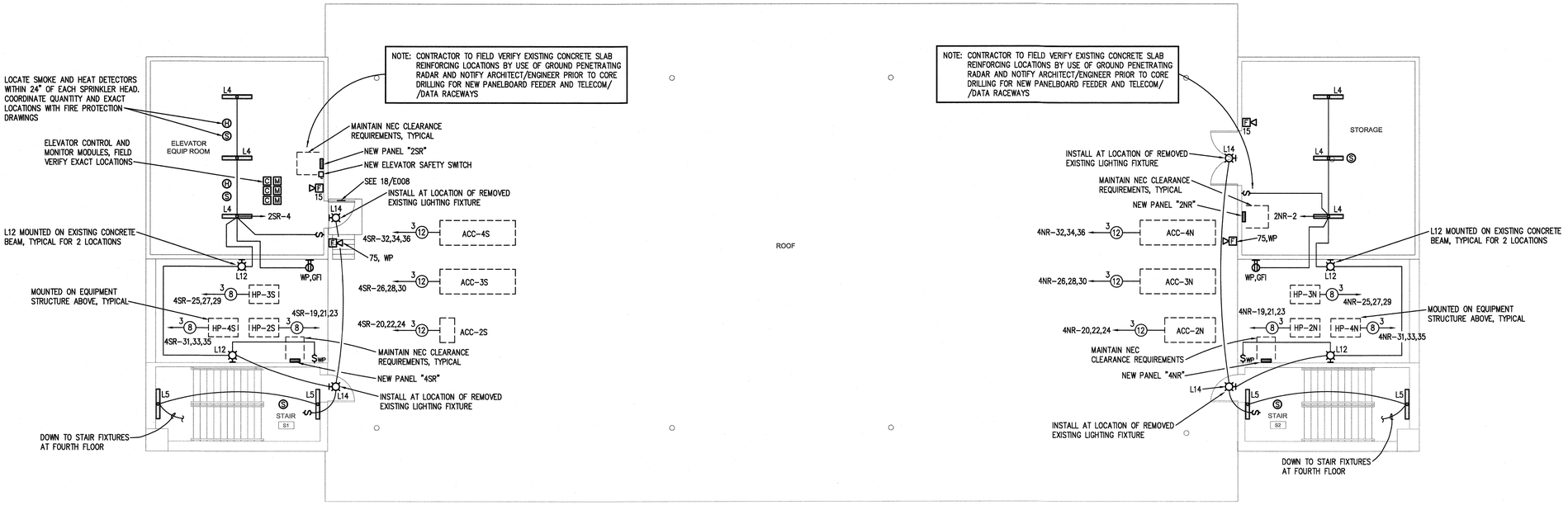
3 - Raceway Support Detail
SCALE: NONE

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN



1 - Building "A" Roof Power, Lighting and Systems Plan
Scale: 1/8" = 1'-0"

PLAN NORTH

8' 4' 0' 8'
SCALE : 1/8" = 1'-0"

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER DUNCAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" ROOF POWER, LIGHTING AND SYSTEMS PLAN

ISSUE BLOCK

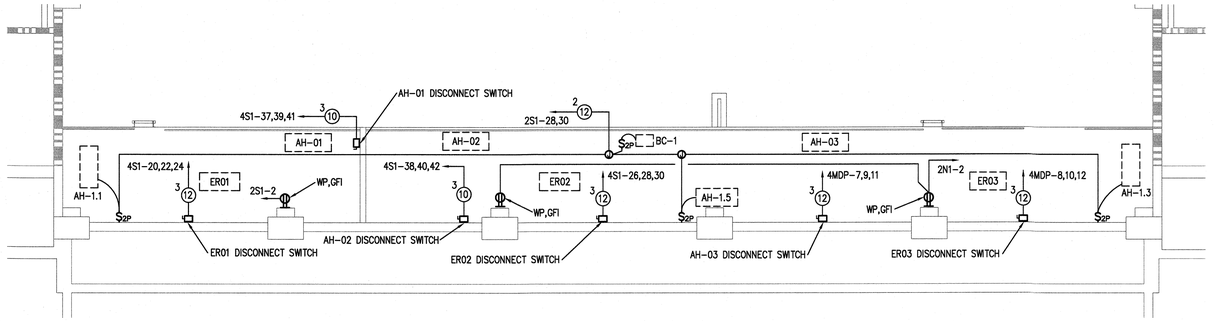
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

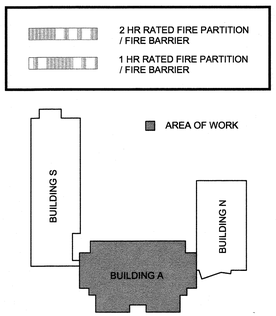
E110

COPYRIGHT © 2020

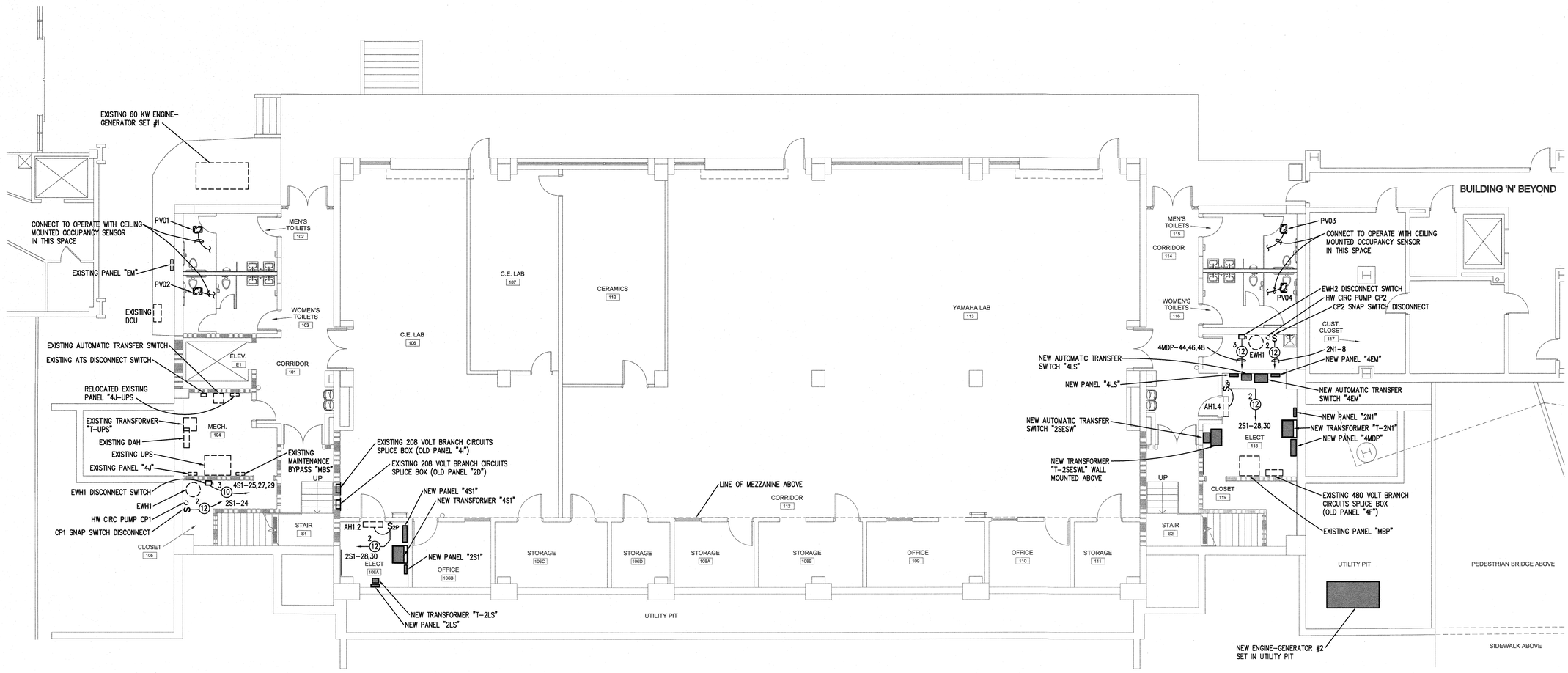
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone: 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010



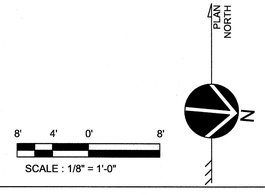
1 - Alternate 1 Building "A" First Floor Mezzanine Mechanical Power Plan
Scale: 1/8" = 1'-0"



KEY PLAN



1 - Building "A" First Floor Mechanical Power Plan
Scale: 1/8" = 1'-0"



BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com



CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" FIRST FLOOR MECHANICAL POWER PLAN AND ALTERNATE 1 FIRST FLOOR MEZZANINE MECHANICAL POWER PLAN

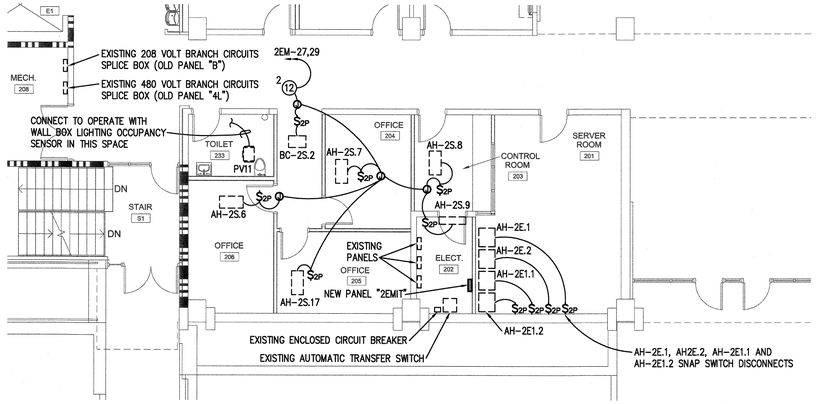
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

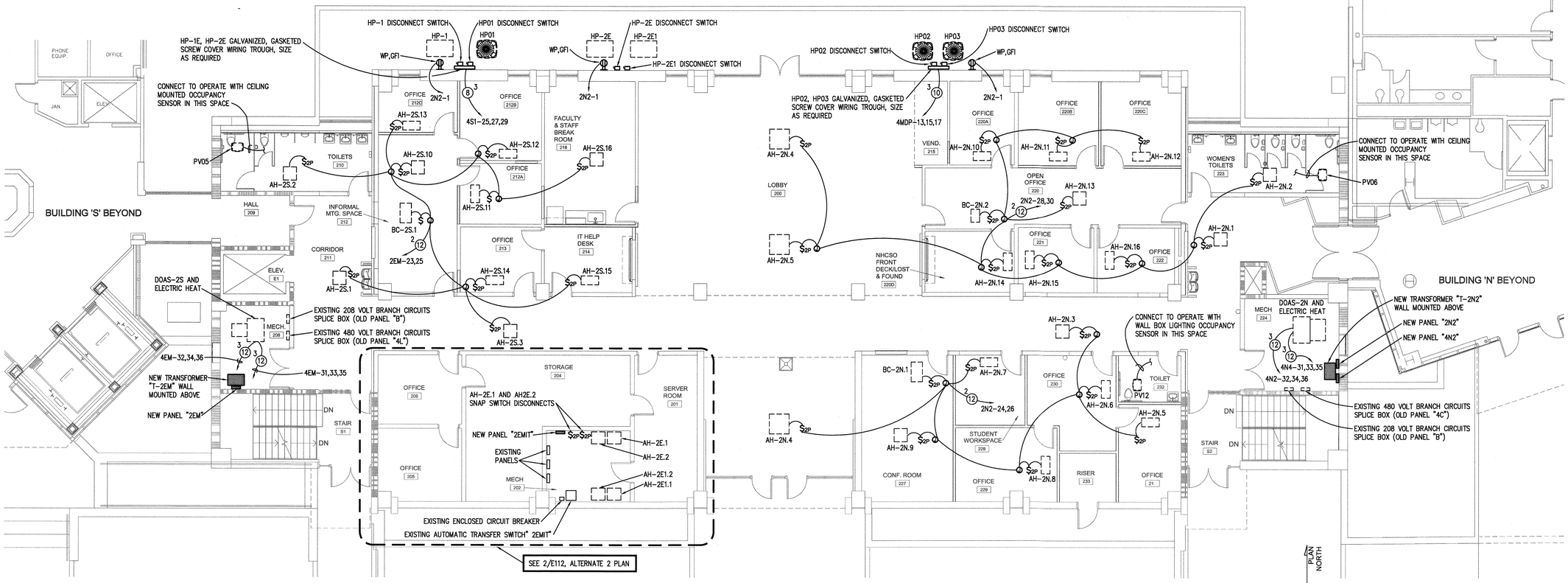
E111

COPYRIGHT © 2020



2 - Alternate 2 - Building "A" Second Floor Mechanical Power Plan

Scale: 1/8" = 1'-0"



1 - Building "A" Second Floor Mechanical Power Plan

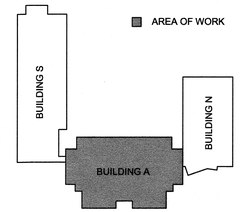
Scale: 1/8" = 1'-0"

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN

BECKER MORGAN GROUP

ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" SECOND FLOOR MECHANICAL POWER PLAN AND ALTERNATE 2 SECOND FLOOR MECHANICAL POWER PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

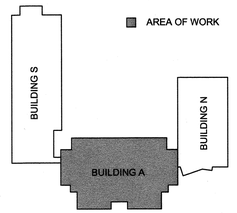
E112

COPYRIGHT © 2020

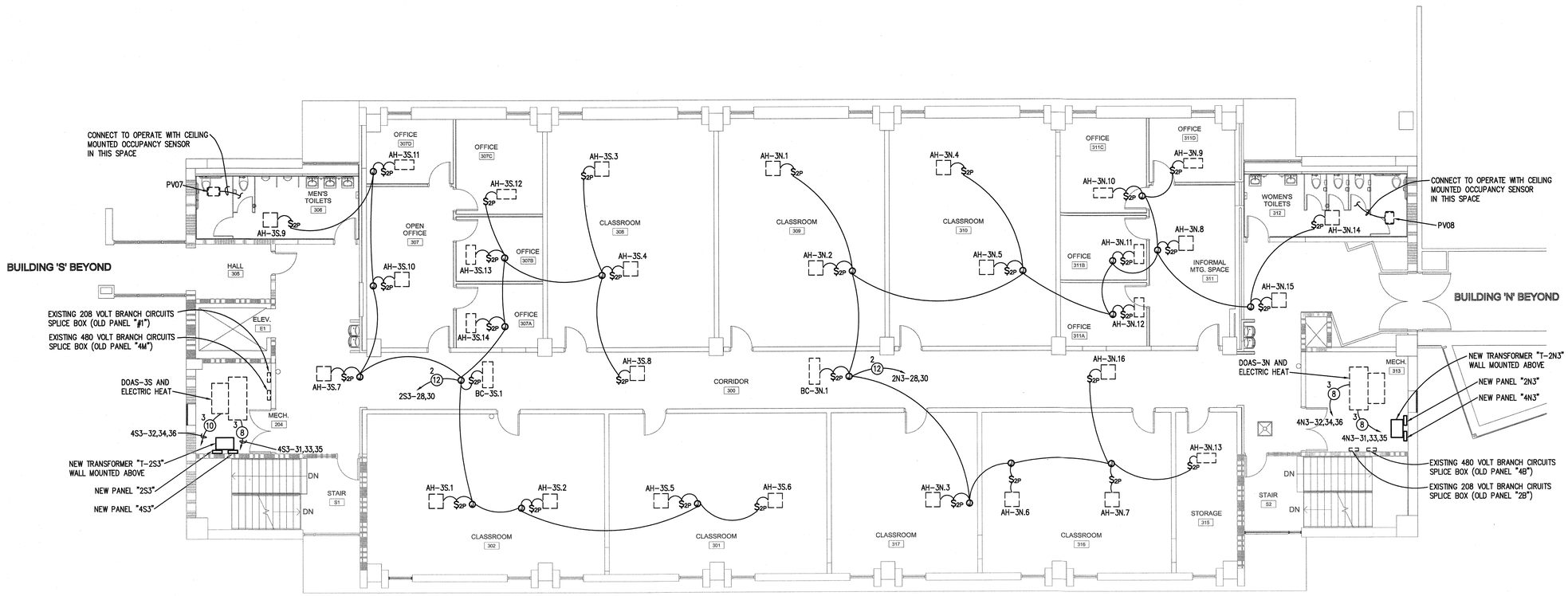
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN



1 - Building "A" Third Floor Mechanical Power Plan

Scale: 1/8" = 1'-0"

PLAN NORTH

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER ROBERT DUNCAN MCFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" THIRD FLOOR MECHANICAL POWER PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

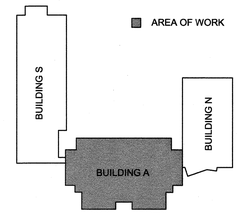
E113

COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN

1 - Building "A" Fourth Floor Mechanical Power Plan

Scale: 1/8" = 1'-0"

PLAN NORTH

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER ROBERT DANIEL MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" FOURTH FLOOR MECHANICAL POWER PLAN

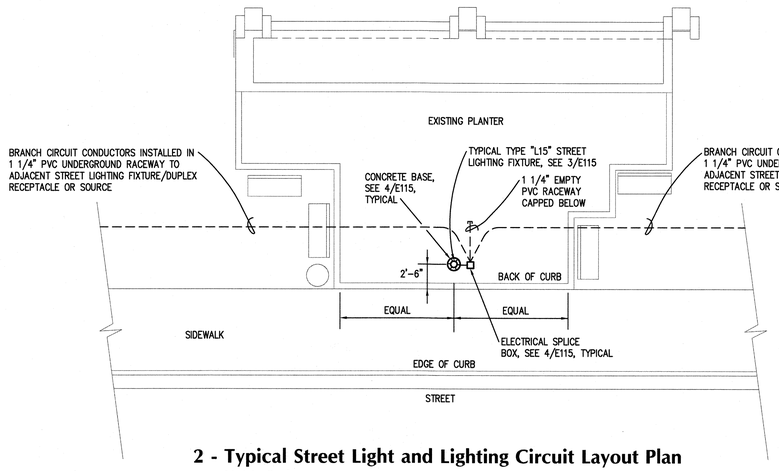
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

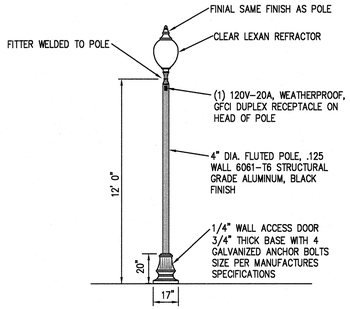
PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

E114

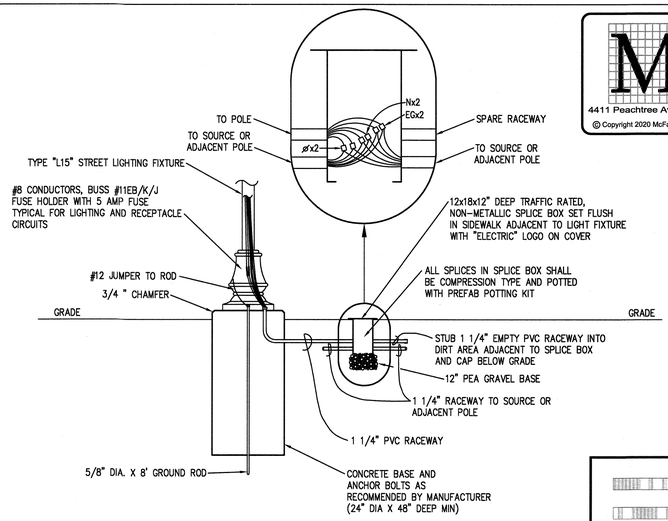
COPYRIGHT © 2020



2 - Typical Street Light and Lighting Circuit Layout Plan
Not to Scale



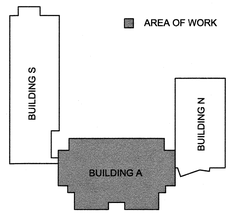
3 - Typical Type "L15" Street lighting Fixture (City of Wilmington Standard SD 9-04)
Not To Scale



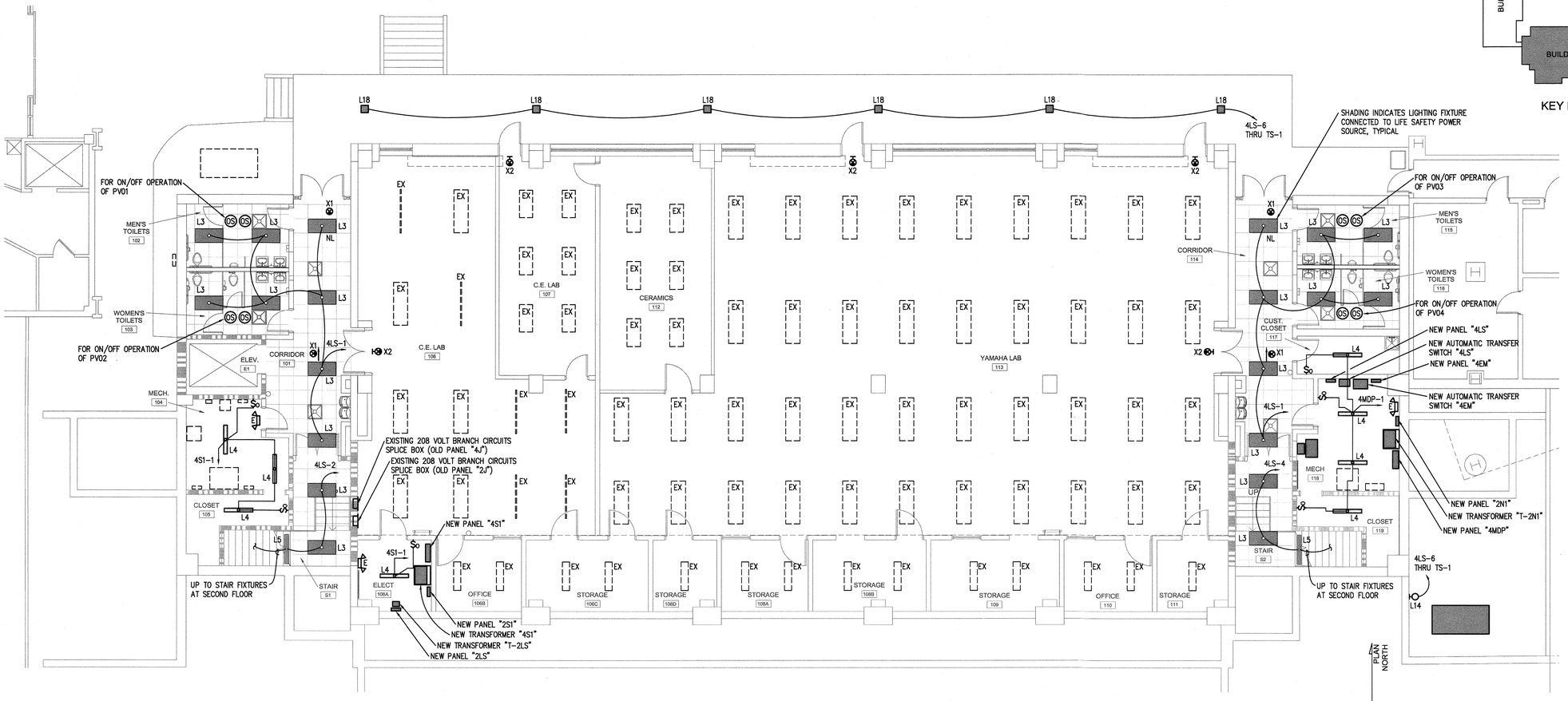
4 - Typical L15 Street Light Lamp Base and Electrical Detail (City of Wilmington Standard SD 9-04)
Not To Scale

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN



1 - Building "A" First Floor Lighting Plan
Scale: 1/8" = 1'-0"

8' 4' 0' 8'
SCALE : 1/8" = 1'-0"

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RICHARD DAN MCFADYEN
8-14-20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" FIRST FLOOR LIGHTING PLAN AND SITE LIGHTING DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ PROJ MGR: RDM

E115

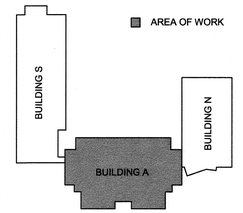
COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

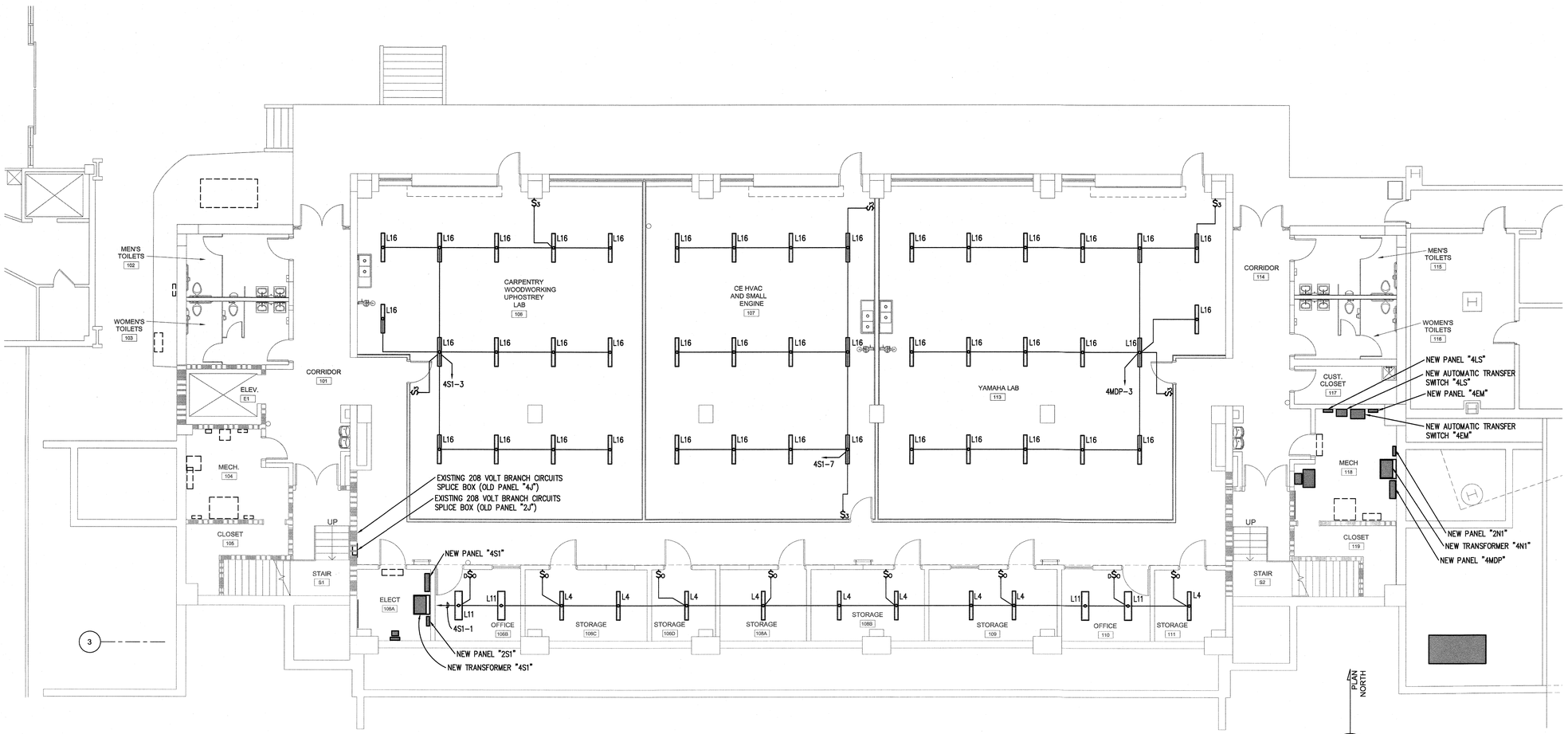
12x18x12" DEEP TRAFFIC RATED,

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN



1 - Alternate 1A - Building "A" First Floor Lighting Plan
Scale: 1/8" = 1'-0"

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER JOHN W. MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1A - BUILDING "A" FIRST FLOOR LIGHTING PLAN

ISSUE BLOCK

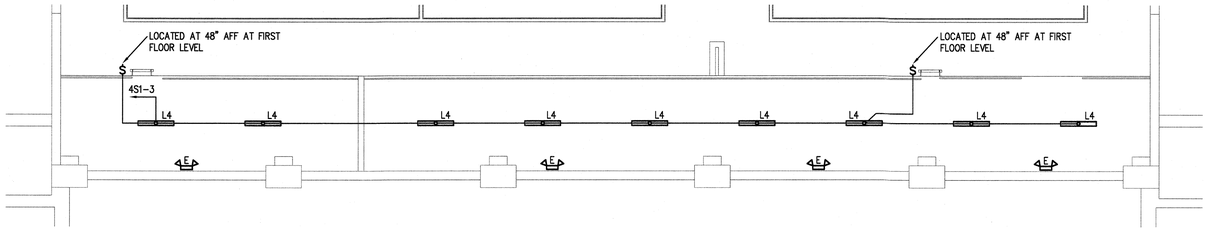
Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

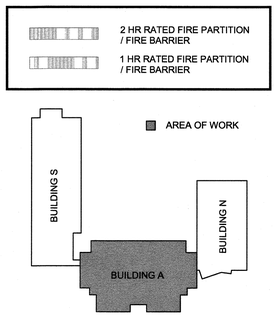
E115.1A

COPYRIGHT © 2020

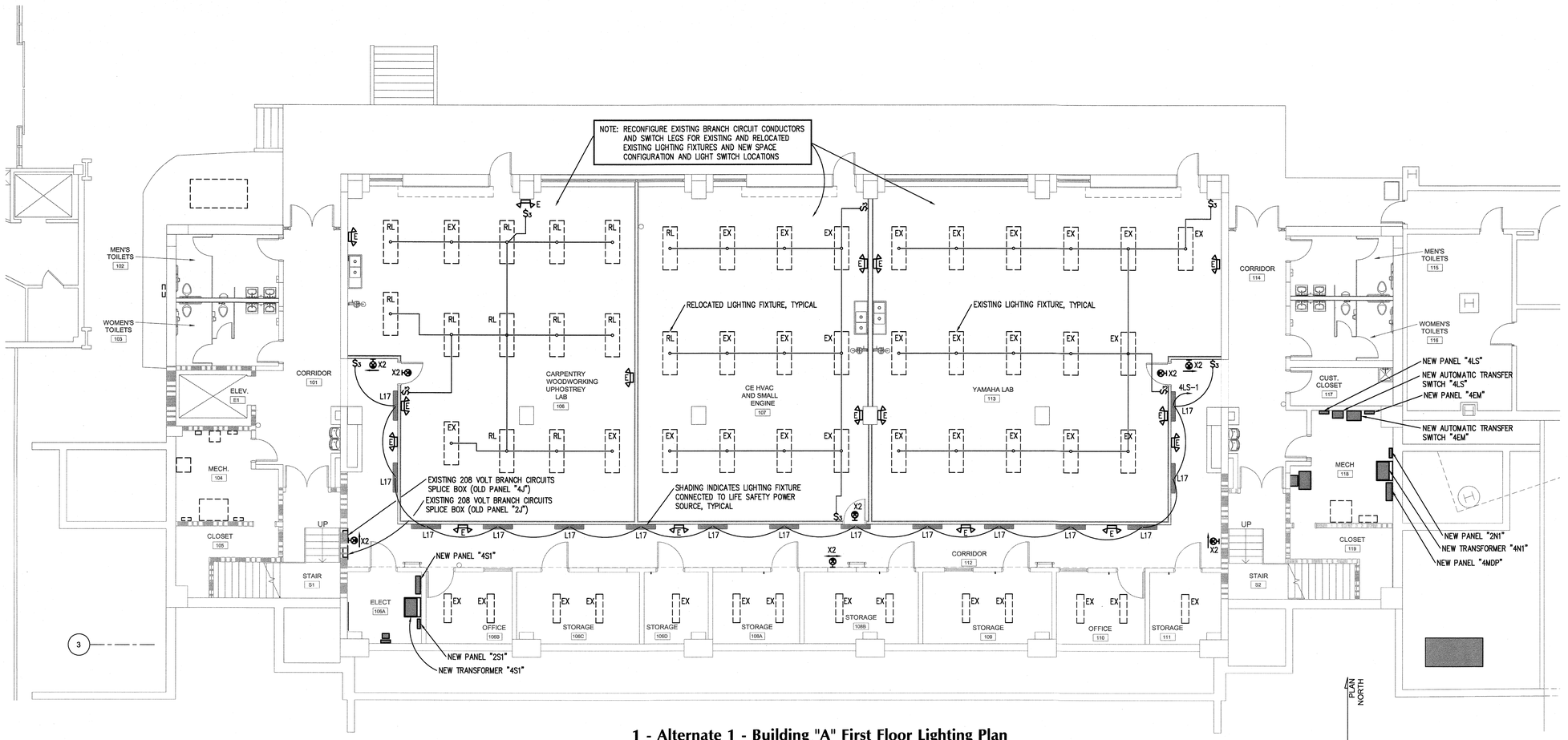
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010



2 - Alternate 1 - Building "A" First Floor Mezzanine Lighting Plan
Scale: 1/8" = 1'-0"



KEY PLAN



1 - Alternate 1 - Building "A" First Floor Lighting Plan
Scale: 1/8" = 1'-0"

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN DAVID MCFADYEN 8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1 - BUILDING "A" FIRST FLOOR AND FIRST FLOOR MEZZANINE LIGHTING PLANS

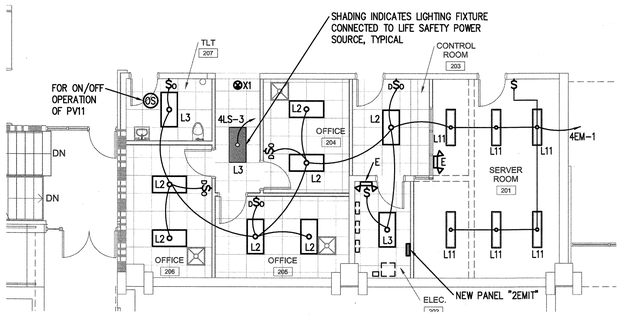
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

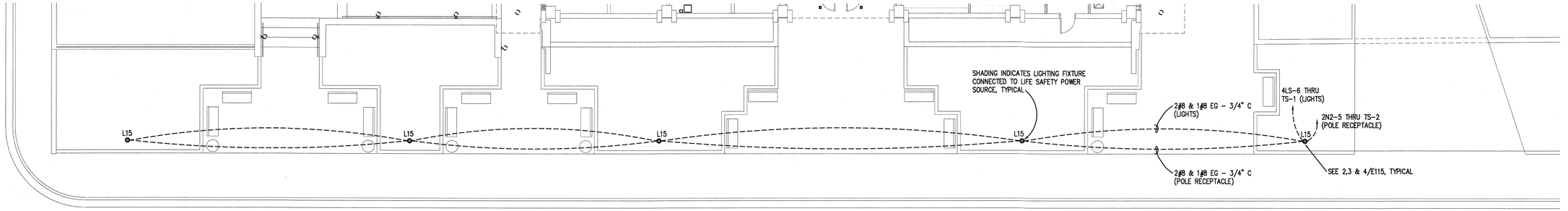
E115A

COPYRIGHT © 2020



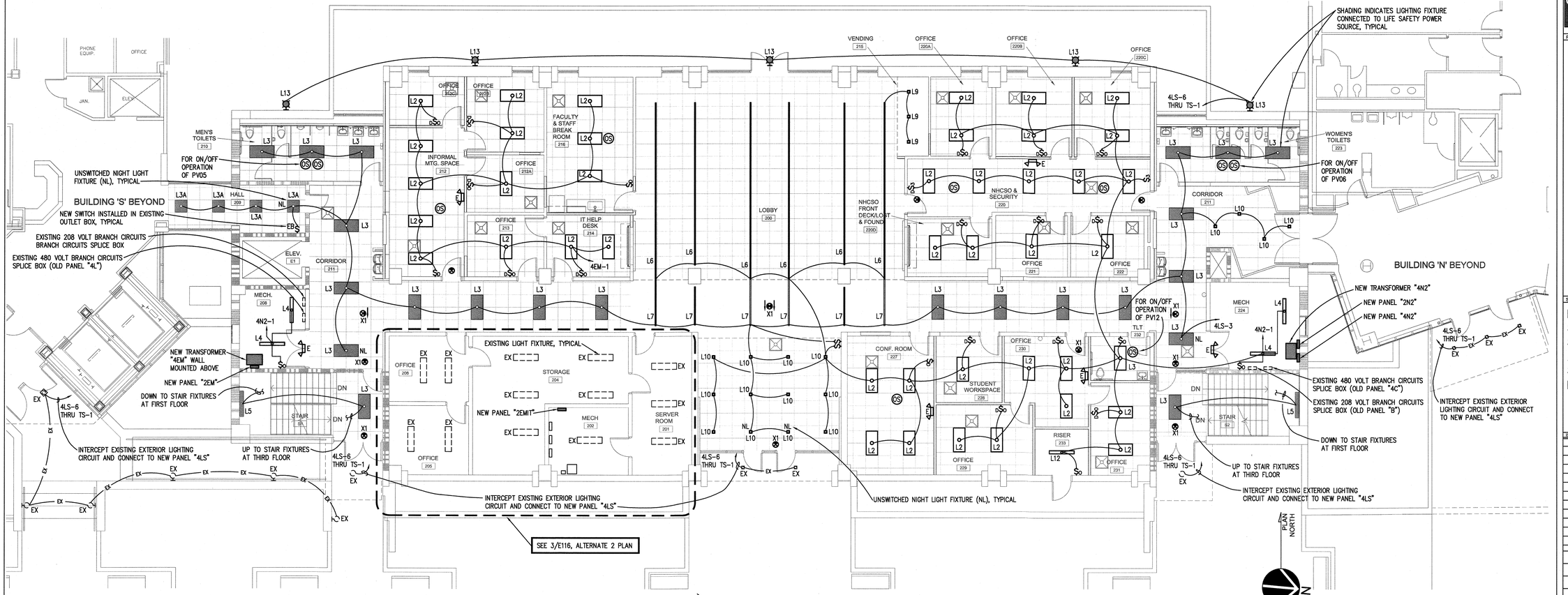
3 - Alternate 2 - Building "A" Second Floor Lighting Plan

Scale: 1/8" = 1'-0"



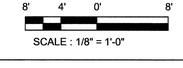
2 - Building "A" Second Floor Site Lighting Plan

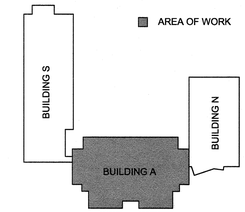
Scale: 3/32" = 1'-0"



1 - Building "A" Second Floor Lighting Plan

Scale: 1/8" = 1'-0"





KEY PLAN

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN W. MCFADYEN
8.4.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" SECOND FLOOR AND SITE LIGHTING PLANS AND ALTERNATE 2 - SECOND FLOOR LIGHTING PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

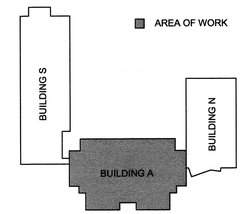
E116

COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN

1 - Building "A" Third Floor Lighting Plan
Scale: 1/8" = 1'-0"

PLAN NORTH

8' 4' 0' 8'
SCALE : 1/8" = 1'-0"

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER CHRISTOPHER DAN MCFADYEN
8/14/20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" THIRD FLOOR LIGHTING PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO: 2018023.00
DATE: 8/14/2020
SCALE: As indicated
DRAWN BY: WPJ | PROJ MGR: RDM

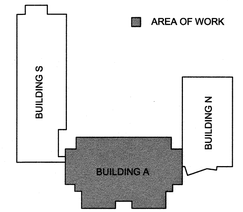
E117

COPYRIGHT © 2020

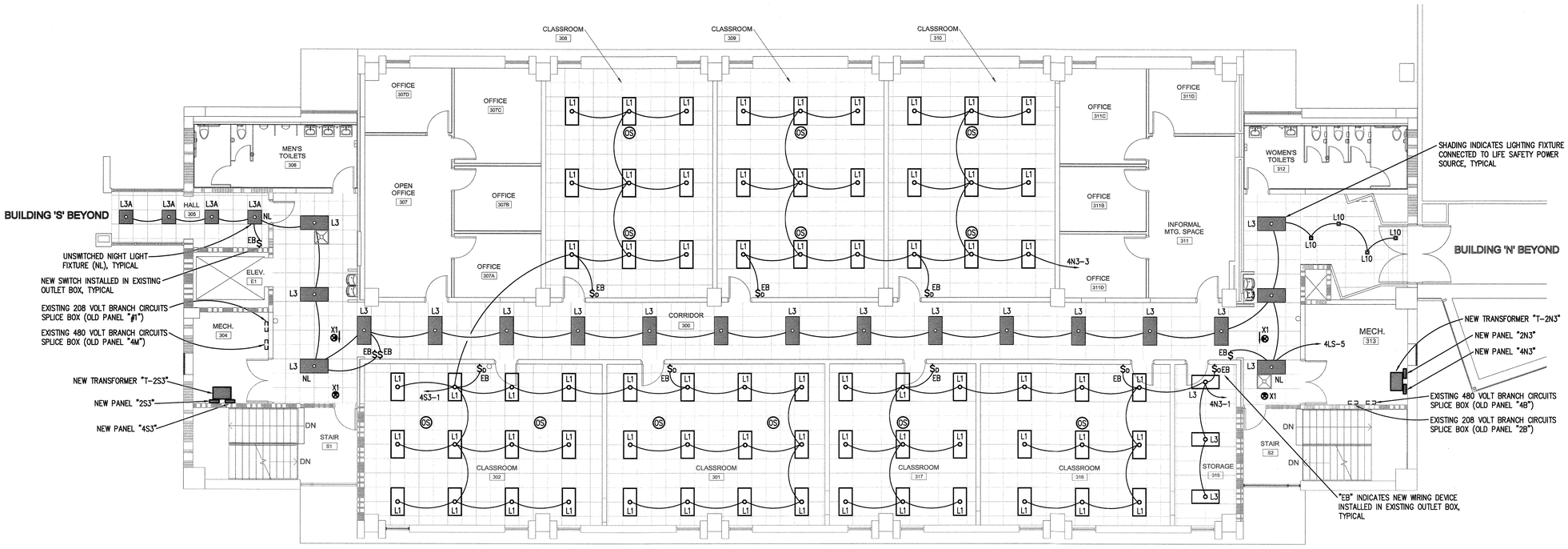
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN



1 - Alternate 3 - Building "A" Third Floor Lighting Plan

Scale: 1/8" = 1'-0"

PLAN NORTH

8' 4' 0' 8'

SCALE : 1/8" = 1'-0"

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER ROWAN DUNCAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 3 - BUILDING "A" THIRD FLOOR LIGHTING PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E117A

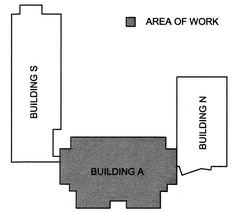
COPYRIGHT © 2020

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

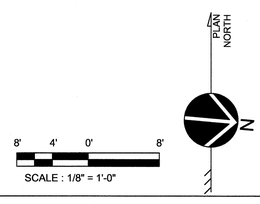
AREA OF WORK



KEY PLAN

1 - Building "A" Fourth Floor Lighting Plan

Scale: 1/8" = 1'-0"



BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN D. MCFADYEN
8/14/20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" FOURTH FLOOR LIGHTING PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

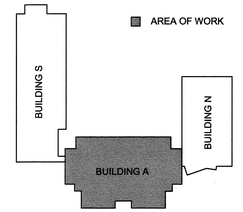
E118

COPYRIGHT © 2020

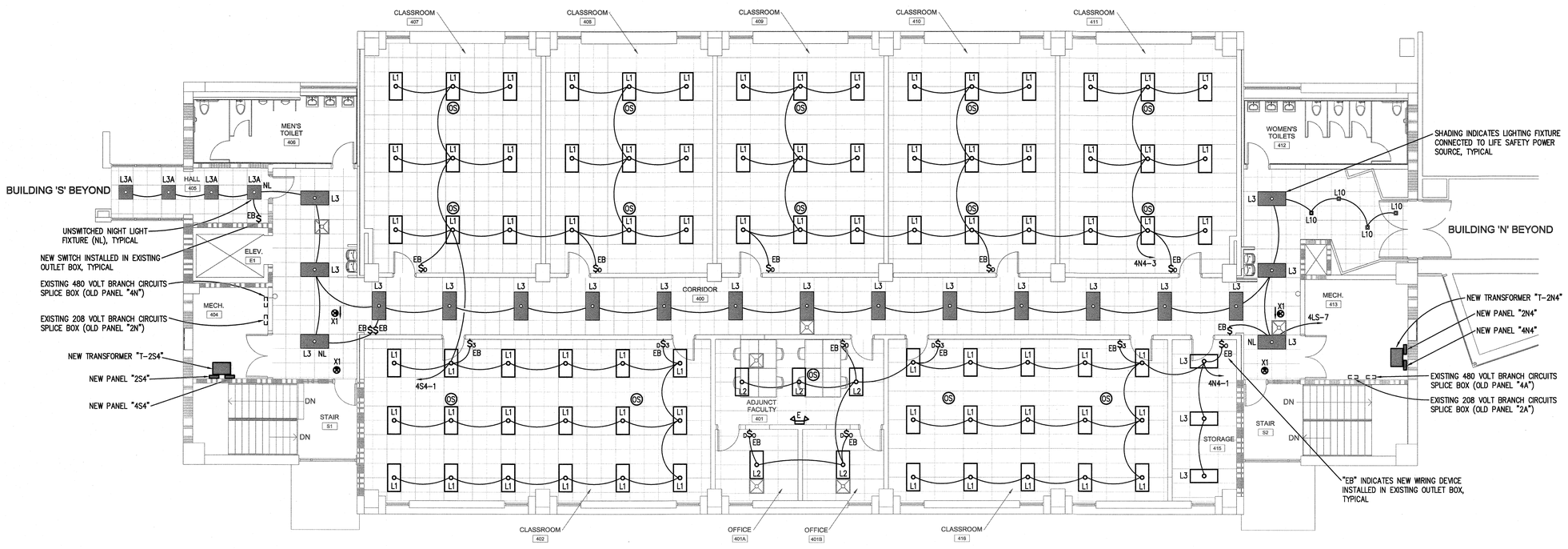
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

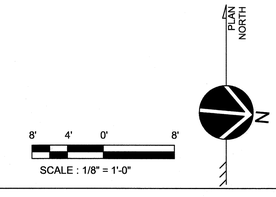


KEY PLAN



1 - Alternate 4 - Building "A" Fourth Floor Lighting Plan

Scale: 1/8" = 1'-0"



BECKER MORGAN GROUP
ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER DUNCAN McFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 4 - BUILDING "A" FOURTH FLOOR LIGHTING

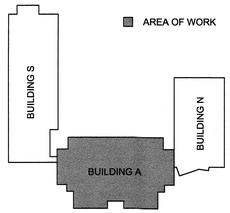
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

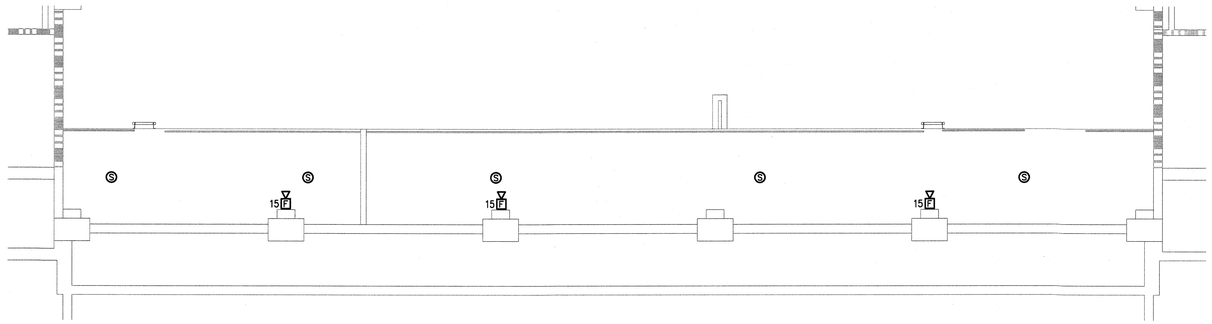
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E118A

COPYRIGHT © 2020

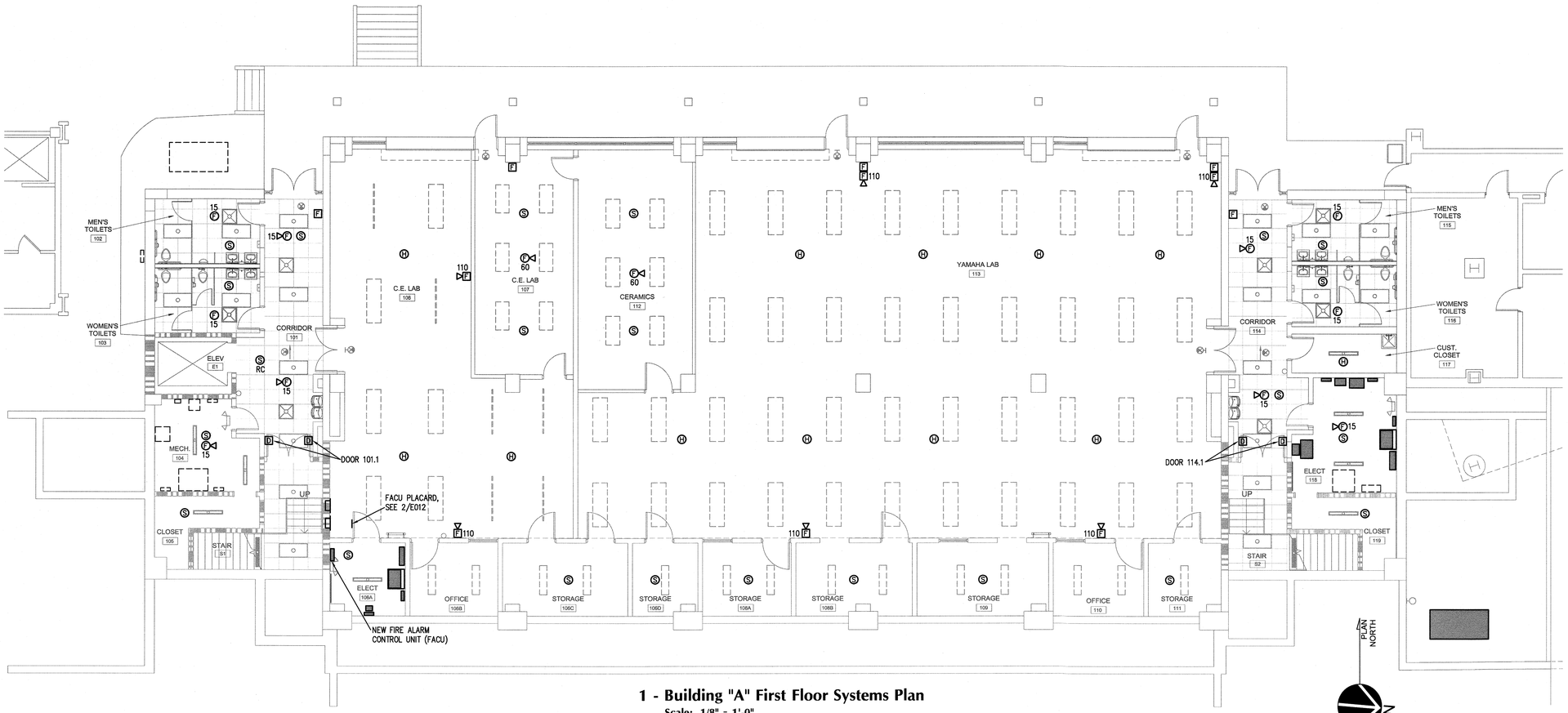


KEY PLAN



2 - Building "A" First Floor Mezzanine Systems Plan

Scale: 1/8" = 1'-0"



1 - Building "A" First Floor Systems Plan

Scale: 1/8" = 1'-0"

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

Fire Alarm Legend

F	FIRE ALARM MANUAL STATION, 48" AFF
SE F	FIRE ALARM MANUAL STATION, 48" AFF WITH SECURITY ENCLOSURE
WP F	WEATHERPROOF FIRE ALARM MANUAL STATION, 48" AFF
75 F	FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
75 F	FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED, "75" INDICATED CANDELLA RATING
WP 75 F	WEATHERPROOF FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
15 S	FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF, "15" INDICATES CANDELLA RATING
15 F	FIRE ALARM VISUAL (ONLY) DEVICE, CEILING MOUNTED, "15" INDICATES CANDELLA RATING
S	SMOKE DETECTOR, CEILING MOUNTED
RC S	SMOKE DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
H	HEAT DETECTOR, CEILING MOUNTED
RC H	HEAT DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
I	FIRE ALARM ISOLATION MODULE
C	FIRE ALARM SYSTEM CONTROL MODULE
M	FIRE ALARM SYSTEM MONITOR MODULE
TB	FIRE ALARM SYSTEM TERMINAL BOX
D	DOOR HOLD OPEN DEVICE
LT	LOW TEMPERATURE SWITCH
PS	FIRE PROTECTION SYSTEM PRESSURE SWITCH
VSS	FIRE PROTECTION SYSTEM TAMPER SWITCH
FAS	FIRE PROTECTION SYSTEM FLOW SWITCH

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER R. DUNCAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" FIRST FLOOR AND FIRST FLOOR MEZZANINE SYSTEMS PLANS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

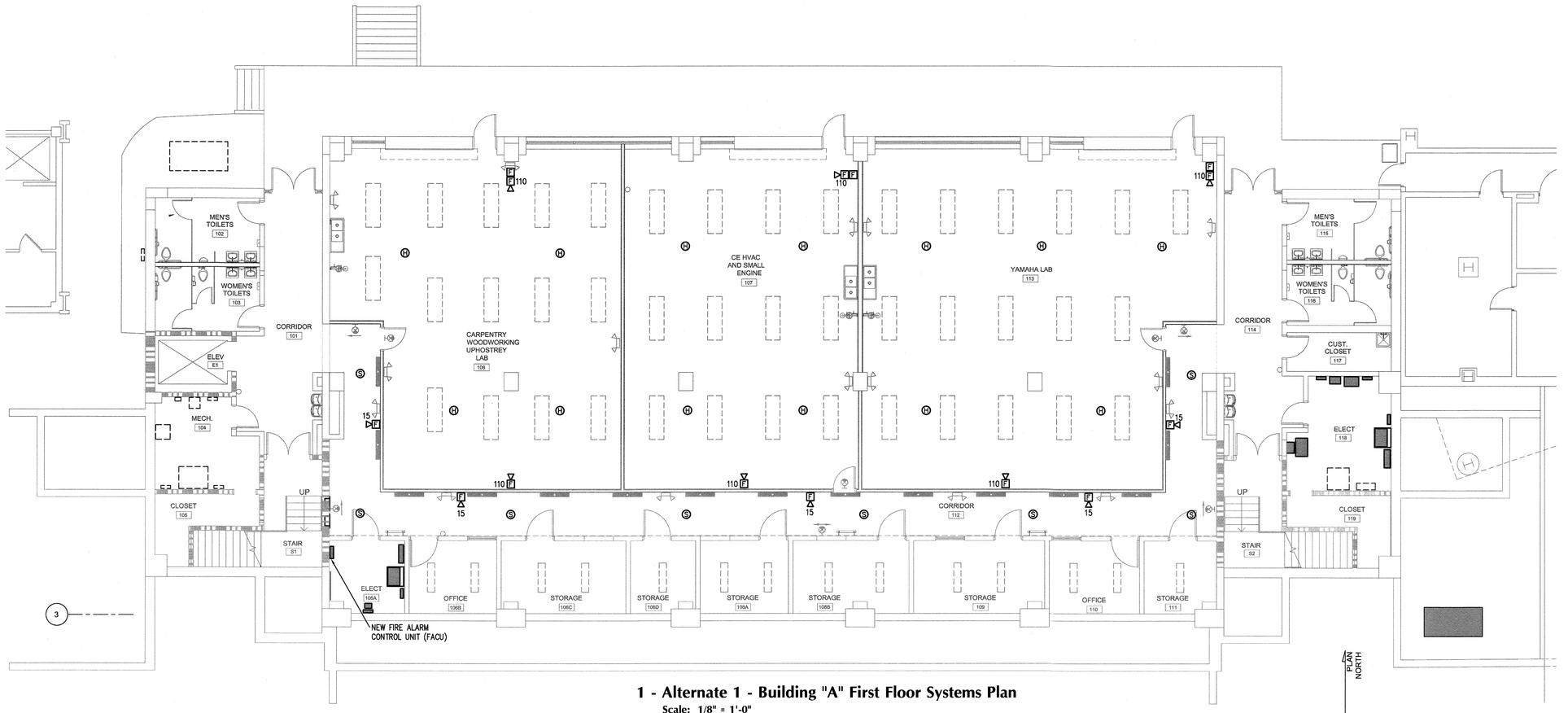
PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E119

COPYRIGHT © 2020

Fire Alarm Legend

F	FIRE ALARM MANUAL STATION, 48" AFF
SE F	FIRE ALARM MANUAL STATION, 48" AFF WITH SECURITY ENCLOSURE
WP F	WEATHERPROOF FIRE ALARM MANUAL STATION, 48" AFF
75 F◁	FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
75 (F)◁	FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED, "75" INDICATED CANDELLA RATING
WP 75 F◁	WEATHERPROOF FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
15 S	FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF, "15" INDICATES CANDELLA RATING
15 (F)	FIRE ALARM VISUAL (ONLY) DEVICE, CEILING MOUNTED, "15" INDICATES CANDELLA RATING
(S)	SMOKE DETECTOR, CEILING MOUNTED
RC (S)	SMOKE DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
(H)	HEAT DETECTOR, CEILING MOUNTED
RC (H)	HEAT DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
I	FIRE ALARM ISOLATION MODULE
C	FIRE ALARM SYSTEM CONTROL MODULE
M	FIRE ALARM SYSTEM MONITOR MODULE
TB	FIRE ALARM SYSTEM TERMINAL BOX
D	DOOR HOLD OPEN DEVICE
LT	LOW TEMPERATURE SWITCH
PS	FIRE PROTECTION SYSTEM PRESSURE SWITCH
VSS	FIRE PROTECTION SYSTEM TAMPER SWITCH
FAS	FIRE PROTECTION SYSTEM FLOW SWITCH



1 - Alternate 1 - Building "A" First Floor Systems Plan
Scale: 1/8" = 1'-0"

8' 4' 0' 8'
SCALE : 1/8" = 1'-0"

PLAN NORTH

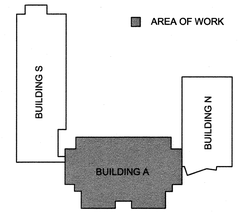
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125

© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER

AREA OF WORK



KEY PLAN

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER ROMAN W. MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

ALTERNATE 1 - BUILDING "A" FIRST FLOOR SYSTEMS PLANS

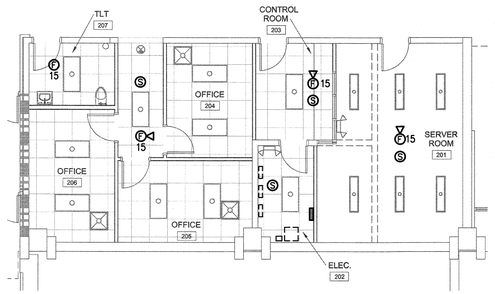
ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E119A

COPYRIGHT © 2020

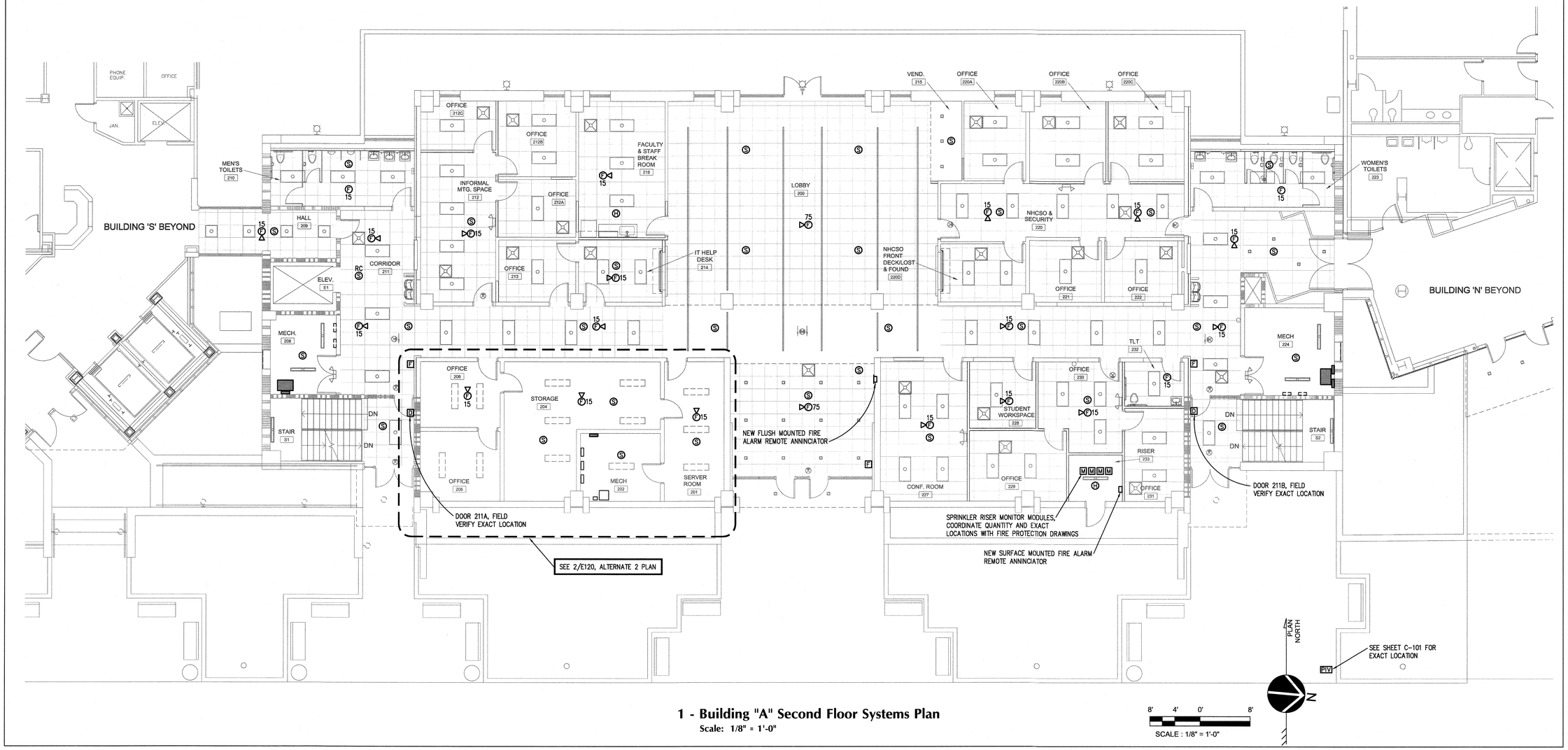


2 - Alternate 2 - Building "A" Second Floor Systems Plan

Scale: 1/8" = 1'-0"

Fire Alarm Legend

F	FIRE ALARM MANUAL STATION, 48" AFF
SE F	FIRE ALARM MANUAL STATION, 48" AFF WITH SECURITY ENCLOSURE
WP F	WEATHERPROOF FIRE ALARM MANUAL STATION, 48" AFF
75 F	FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
75 F	FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED, "75" INDICATED CANDELLA RATING
WP 75 F	WEATHERPROOF FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
15 S	FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF, "15" INDICATES CANDELLA RATING
15 F	FIRE ALARM VISUAL (ONLY) DEVICE, CEILING MOUNTED, "15" INDICATES CANDELLA RATING
S	SMOKE DETECTOR, CEILING MOUNTED
RC S	SMOKE DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
H	HEAT DETECTOR, CEILING MOUNTED
RC H	HEAT DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
I	FIRE ALARM ISOLATION MODULE
C	FIRE ALARM SYSTEM CONTROL MODULE
M	FIRE ALARM SYSTEM MONITOR MODULE
TB	FIRE ALARM SYSTEM TERMINAL BOX
D	DOOR HOLD OPEN DEVICE
LT	LOW TEMPERATURE SWITCH
PS	FIRE PROTECTION SYSTEM PRESSURE SWITCH
VSS	FIRE PROTECTION SYSTEM TAMPER SWITCH
FAS	FIRE PROTECTION SYSTEM FLOW SWITCH



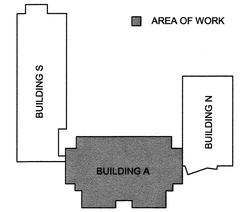
1 - Building "A" Second Floor Systems Plan

Scale: 1/8" = 1'-0"

McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN M. McFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" SECOND FLOOR SYSTEMS PLAN AND ALTERNATE 2 SECOND FLOOR SYSTEMS PLAN AND DETAILS

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E120

COPYRIGHT © 2020

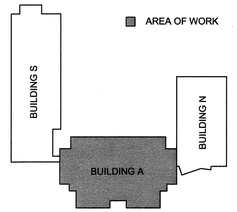
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

Fire Alarm Legend

F	FIRE ALARM MANUAL STATION, 48" AFF
SE F	FIRE ALARM MANUAL STATION, 48" AFF WITH SECURITY ENCLOSURE
WP F	WEATHERPROOF FIRE ALARM MANUAL STATION, 48" AFF
75 F	FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
75 F	FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED, "75" INDICATED CANDELLA RATING
WP 75 F	WEATHERPROOF FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
15 S	FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF, "15" INDICATES CANDELLA RATING
15 F	FIRE ALARM VISUAL (ONLY) DEVICE, CEILING MOUNTED, "15" INDICATES CANDELLA RATING
S	SMOKE DETECTOR, CEILING MOUNTED
RC S	SMOKE DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
H	HEAT DETECTOR, CEILING MOUNTED
RC H	HEAT DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
I	FIRE ALARM ISOLATION MODULE
C	FIRE ALARM SYSTEM CONTROL MODULE
M	FIRE ALARM SYSTEM MONITOR MODULE
TB	FIRE ALARM SYSTEM TERMINAL BOX
D	DOOR HOLD OPEN DEVICE
LT	LOW TEMPERATURE SWITCH
PS	FIRE PROTECTION SYSTEM PRESSURE SWITCH
VSS	FIRE PROTECTION SYSTEM TAMPER SWITCH
FAS	FIRE PROTECTION SYSTEM FLOW SWITCH

2 HR RATED FIRE PARTITION / FIRE BARRIER

1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN

1 - Building "A" Third Floor Systems Plan
Scale: 1/8" = 1'-0"

PLAN NORTH

8' 4' 0' 8'
SCALE : 1/8" = 1'-0"

BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 8433 ENGINEER RYAN D. MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" THIRD FLOOR SYSTEMS PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E121

COPYRIGHT © 2020

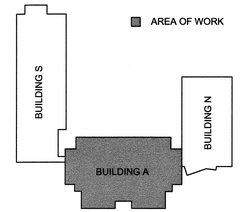
McFadyen Engineers, PLLC
4411 Peachtree Avenue Wilmington, NC 28403 Phone : 910.399.1125
© Copyright 2020 McFadyen Engineers, PLLC #18013 NC# P-1010

Fire Alarm Legend

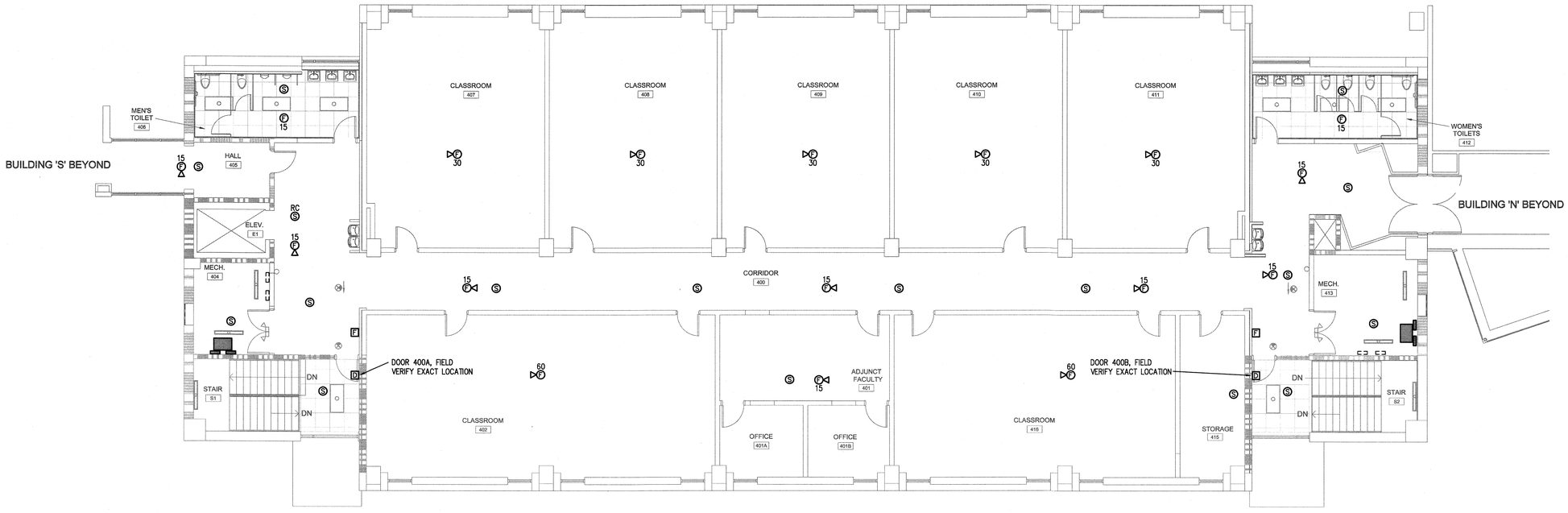
F	FIRE ALARM MANUAL STATION, 48" AFF
SE F	FIRE ALARM MANUAL STATION, 48" AFF WITH SECURITY ENCLOSURE
WP F	WEATHERPROOF FIRE ALARM MANUAL STATION, 48" AFF
75 F	FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
75 F	FIRE ALARM AURAL/VISUAL DEVICE, CEILING MOUNTED, "75" INDICATED CANDELLA RATING
WP 75 F	WEATHERPROOF FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
15 S	FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF, "15" INDICATES CANDELLA RATING
15 F	FIRE ALARM VISUAL (ONLY) DEVICE, CEILING MOUNTED, "15" INDICATES CANDELLA RATING
S	SMOKE DETECTOR, CEILING MOUNTED
RC S	SMOKE DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
H	HEAT DETECTOR, CEILING MOUNTED
RC H	HEAT DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
I	FIRE ALARM ISOLATION MODULE
C	FIRE ALARM SYSTEM CONTROL MODULE
M	FIRE ALARM SYSTEM MONITOR MODULE
TB	FIRE ALARM SYSTEM TERMINAL BOX
D	DOOR HOLD OPEN DEVICE
LT	LOW TEMPERATURE SWITCH
PS	FIRE PROTECTION SYSTEM PRESSURE SWITCH
VSS	FIRE PROTECTION SYSTEM TAMPER SWITCH
FAS	FIRE PROTECTION SYSTEM FLOW SWITCH

2 HR RATED FIRE PARTITION / FIRE BARRIER

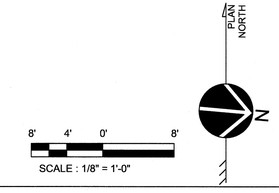
1 HR RATED FIRE PARTITION / FIRE BARRIER



KEY PLAN



1 - Building "A" Fourth Floor Systems Plan
Scale: 1/8" = 1'-0"



BECKER MORGAN GROUP
ARCHITECTURE PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newarrk, DE 19711
302.369.3700

www.beckermorgan.com

NORTH CAROLINA PROFESSIONAL SEAL 18433 ENGINEER BRIAN MCFADYEN
8.14.20

CAPE FEAR COMMUNITY COLLEGE

PROJECT TITLE

RENOVATIONS OF GALEHOUSE (A BUILDING), MCLEOD (S BUILDING), AND NATURAL SCIENCES (N BUILDING)

411 N Front Street
Wilmington, NC 28401
SCO#17-18154-01A;NCCCS# 2352

SHEET TITLE

BUILDING "A" FOURTH FLOOR SYSTEMS PLAN

ISSUE BLOCK

Mark	Date	Description
0	8/14/2020	ISSUED FOR BID

PROJECT NO:	2018023.00
DATE:	8/14/2020
SCALE:	As indicated
DRAWN BY: WPJ	PROJ MGR: RDM

E122

COPYRIGHT © 2020