01 VICINITY MAP
NO SCALE

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

Reviewed for Code Compliance

11/08/2021

Harnett COUNTY NORTH CAROLINA

There are code compliance notes throughout this plan. It is only approved if these notes are followed.

A NEW BUILDING FOR:

Northgate Therapy

NORTHGATE - LOT 5C
CAMERON, NORTH CAROLINA

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
545 Pearl Street Fayetteville, North Carolina 28303

ROBERT C. EVANS REGISTERED ARCHITECT 6539 NORTH CAROLINA FAYETTEVILLE, N.C.

10.22.21

A0.1

MATERIAL LEGEND

CONCRETE		BATT INSULATION	
EARTH		STEEL	
WOOD FRAMING		CONCRETE BLOCK	
WOOD TRIM		BRICK	
PLYWOOD		GYPSUM BOARD	
CARPET		CAULKING	

DRAWING SYMBOLS

01 A5.6 — DETAIL CUT	clubroom — ROOM NAME & FINISH SCHEDULE
01 A5.6 — ENLARGED PLAN OR DETAIL	WINDOW SCHEDULE
	DOOR SCHEDULE
01 A4.2 — DETAIL SECTION OR BUILDING SECTION	01 A4.2 — INTERIOR ELEVATION

GENERAL NOTES

1. ALL WORK ON THIS APPLICATION SHALL BE IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL CODES, LATEST AMENDMENTS.
2. THE CONTRACTOR SHALL REFER TO DIMENSIONS AND SHALL NOT SCALE THESE DRAWINGS.
3. ALL DIMENSIONS ARE SHOWN TO THE FACE OF ROUGH EXCEPT WHERE NOTED OTHERWISE.
4. NO LOADS SHALL BE APPLIED TO SUSPENDED CEILINGS.
5. THE CONTRACTOR SHALL PROVIDE BLOCKING, GROUNDS, ETC. FOR FIXTURES, SHELVING, TRIM, GYPSUM BOARD, DECKING, PLUMBING FIXTURES, ETC., WHERE THEY ARE REQUIRED.
6. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS PRIOR TO PROCEEDING WITH ANY WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER IN WRITING IMMEDIATELY.

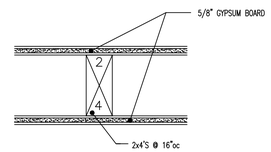
ABBREVIATIONS

ALUM. – Aluminum
ARCH. – Architectural
BD. – Board
BM. – Beam
CL. – Centerline
CLG. – Ceiling
COL. – Column
CONC. – Concrete
CONT. – Continuous
DIM. – Dimension
DISP. – Disposal
DN. – Down
D.S. – Downspout
DW. – Dishwasher
EA. – Each
EQ. – Equal
F.F. – Finish Floor
FIN. – Finished
G.C. – General Contractor
GYP. – Gypsum Board
HD. – Hand
HDR. – Header
HR. – Hour
INSUL. – Insulation
L. – Linen
MFR. – Manufacturer
MW. – Microwave
O.C. – On Center
OPP. – Opposite
PLWD. – Plywood
Q. – Quarry
R. – Rod
REQ'D. – Required
REFGR. – Refrigerator
R.O. – Rough Opening
R/O – Range/Oven
S. – Shelf
S.F. – Square Feet
SIM. – Similar
T.O. – Top Of
TYP. – Typical
V. – Volt
W/ – With
WD. – Wood
W.H. – Water Heater

CONSULTANTS

DRAWING LIST

ARCHITECTURAL



02 TYPICAL PARTITION
3" = 1'0"

NORTH CAROLINA BUILDING CODE SUMMARY – NC 2018 BUILDING CODE

NAME OF PROJECT: A NEW BUILDING FOR: NORTHGATE THERAPY
PROJECT ADDRESS: NORTHGATE LOT 5C, CAMERON, NORTH CAROLINA
OWNER / CONTACT: NED JOHNSON
PHONE #: TELEPHONE: 910.323.1944
EMAIL: nedjohnson@onsitehomesnc.com
OWNED BY: ■ PRIVATE ☐ CITY/COUNTY ☐ STATE
CODE ENFORCEMENT: ☐ CITY ■ COUNTY ☐ STATE

DESIGN PROFESSIONALS

CONTACT: ROBERT C. EVANS, ARCHITECT

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	EMAIL
ARCHITECTURAL	ROBERT C. EVANS, ARCHITECT	ROBERT C. EVANS	6530	910.624.9259	rcearch@gmail.com
CIVIL	NO WORK				
ELECTRICAL	NO WORK				
FIRE ALARM	NO WORK				
PLUMBING	NO WORK				
MECHANICAL	NO WORK				
SPRINKLER	NO WORK				
STRUCTURAL	NO WORK				
RETAINING WALL	NO WORK				
OTHER	NO WORK				

BUILDING CODE DATA

2018 NC BUILDING CODE: ■ NEW BUILDING ☐ ADDITION ☐ RENOVATION
☐ FIRST TIME INTERIOR COMPLETION
☐ SHELL/CORE – CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS
☐ PHASED CONSTRUCTION – SHELL/CORE – CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS

2018 NC EXISTING BUILDING CODE: EXISTING: ☐ PRESCRIPTIVE ☐ REPAIR ☐ CHAPTER 14
ALTERATION: ☐ LEVEL I ☐ LEVEL II ☐ LEVEL III
☐ HISTORIC PROPERTY ☐ CHANGE OF USE

CONSTRUCTED: (date) N/A — CURRENT OCCUPANCY: N/A
RENOVATED: (date) N/A — PROPOSED OCCUPANCY: BUSINESS

RISK CATEGORY: (table 1604.5) CURRENT: ☐ I ☐ II ☐ III ☐ IV
PROPOSED: ☐ I ■ II ☐ III ☐ IV

BASIC BUILDING DATA

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

SPRINKLERS: ■ NO ☐ PARTIAL ☐ YES ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
STANDPIPES: ■ NO ☐ YES CLASS ☐ I ☐ II ☐ III ☐ WET ☐ DRY
FIRE DISTRICT: ■ NO ☐ YES FLOOD HAZARD AREA: ■ NO ☐ YES

BUILDING HEIGHT: 21'-10" FEET 1 NUMBER OF STORIES ☐ UNLIMITED PER _____
MEZZANINE: ■ NO ☐ YES
HIGH RISE: ■ NO ☐ YES CENTRAL REFERENCE SHEET # (IF PROVIDED) _____
FLOOD HAZARD: ■ NO ☐ YES
SPECIAL INSPECTION REQUIRED: ■ NO ☐ YES CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS

GROSS BUILDING AREA TABLE:

FLOOR	THERAPY NET AREA	VACANT NET AREA	TOTAL BLDG GROSS AREA
FIRST FLOOR	2,723	1,360	4,404
		TOTAL	4,404

ALLOWABLE AREA

PRIMARY OCCUPANCY CLASSIFICATION(S):
☐ ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
■ BUSINESS
☐ EDUCATIONAL
☐ FACTORY ☐ F-1 MODERATE ☐ F-2 LOW
☐ HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☐ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM
☐ INSTITUTIONAL ☐ I-1 CONDITION ☐ 1 ☐ 2
☐ I-2 CONDITION ☐ 1 ☐ 2
☐ I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ MERCANTILE
☐ RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
☐ STORAGE ☐ S-1 MODERATE ☐ S-2 LOW ☐ HIGH-PILED
☐ PARKING GARAGE ☐ OPEN ☐ ENCLOSED ☐ REPAIR GARAGE
☐ UTILITY AND MISCELLANEOUS

ACCESSORY OCCUPANCY CLASSIFICATION: N/A
INCIDENTAL USES (Table 509): N/A
SPECIAL USES (CHAPTER 4–LIST CODE SECTIONS): N/A
SPECIAL PROVISIONS (CHAPTER 5–LIST CODE SECTIONS): N/A
MIXED OCCUPANCY: ■ NO ☐ YES SEPARATION: _____ HR. EXCEPTION: _____

☐ NON-SEPARATED MIXED OCCUPANCY (508.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

☐ SEPARATED MIXED OCCUPANCY (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	(C) AREA FOR OPEN SPACE INCREASE [1,5]	(C) ALLOWABLE AREA OR UNLIMITED [2,3]
ONE	BUSINESS	2,723	9,000	–	9,000
–	–	–	–	–	–
–	–	–	–	–	–

1 – FRONTAGE AREA INCREASES FROM SECTION 506.2.
2 – UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
3 – MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES x D (MAXIMUM 3 STORIES) (506.2)
4 – THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH TABLE 406.5.4.
5 – FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
BUILDING HEIGHT IN FEET (TABLE 504.3)	50'-0"	21'-10"	N/A
BUILDING HEIGHT IN STORIES (TABLE 504.4)	2	1	N/A

1 – PROVIDE CODE REFERENCE IF THE "SHOWN ON PLANS" QUANTITY IS NOT BASED ON TABLE 504.3 OR 504.4.

FIRE RESISTANCE RATINGS ~~N/A - EXISTING BUILDING~~

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							
BEARING WALLS							
EXTERIOR							
NORTH	30'±	0	0	–	–	–	–
EAST	0	0	0	–	–	–	–
WEST	0	0	0	–	–	–	–
SOUTH	30'±	0	0	–	–	–	–
INTERIOR	N / A	0	0	–	–	–	–
NONBEARING WALLS AND PARTITIONS							
EXTERIOR							
NORTH	–	0	0	–	–	–	–
EAST	–	0	0	–	–	–	–
WEST	–	0	0	–	–	–	–
SOUTH	–	0	0	–	–	–	–
INTERIOR	–	0	0	–	–	–	–
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS		0	0	–	–	–	–
FLOOR CEILING ASSEMBLY		0	0	–	–	–	–
COLUMNS SOPPORTING FLOORS		0	0	–	–	–	–
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS		0	0	–	–	–	–
ROOF CEILING ASSEMBLY		0	0	–	–	–	–
COLUMNS SUPPORTING ROOF		0	0	–	–	–	–
SHAFTS ENCLOSURES – EXIT		0	0	–	–	–	–
SHAFTS ENCLOSURES – OTHER		0	0	–	–	–	–
CORRIDOR SEPARATION		0	0	–	–	–	–
OCCUPANCY / FIRE BARRIER SEPARATION		0	0	–	–	–	–
PARTY / FIRE WALL SEPARATION		0	0	–	–	–	–
SMOKE BARRIER SEPARATION		0	0	–	–	–	–
SMOKE PARTITION		0	0	–	–	–	–
TENANT SEPARATION		0	0	–	–	–	–
INCIDENTAL USE SEPARATION		0	0	–	–	–	–

* INDICATE SECTION NUMBER PERMITTING REDUCTION

PERCENTAGE OF WALL OPENINGS CALCULATIONS

WALL	FIRE SEPARATION DISTANCE FROM PROPERTY LINES (FEET)	DEGREE OF OPENINGS PROTECTION TABLE 705.8	PERCENTAGE OF ALLOWABLE AREA	ACTUAL PERCENTAGE OF OPENING ON PLANS
NORTH	N/A	–	UL	UL
SOUTH	N/A	–	UL	UL
EAST	N/A	–	UL	UL
WEST	N/A	–	UL	UL

LIFE SAFETY SYSTEMS

EMERGENCY LIGHTING: ☐ NO ■ YES
EXIT SIGNS: ☐ NO ■ YES
FIRE ALARM: (SPRINKLER MONITORING) ■ NO ☐ YES
SMOKE DETECTION SYSTEM: ■ NO ☐ YES
CARBON MONO. DETECTION: ■ NO ☐ YES
PANIC HARDWARE: ■ NO ☐ YES

LIFE SAFETY PLAN A1.2

Check items that are applicable to this project:
☐ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations
☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
☐ Occupancy types for each area as it relates to occupant load calculations (Table 1004.1.1)
☐ Occupant loads for each area
■ Exit access travel distance (1017)
■ Common path of travel distance (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 (1010.1.10)
☐ 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 (407.5)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

EXIT REQUIREMENTS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NUMBER OF EXITS REQUIRED	MINIMUM[2] NUMBER OF EXITS SHOWN ON PLANS	TRAVEL DISTANCE ALLOWABLE TRAVEL DISTANCE (TABLE 1004.2.4)	TRAVEL DISTANCE ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	ARRANGEMENT MEANS OF EGRESS[1,3] (SECTION 1004.1) REQUIRED DISTANCE BETWEEN EXIT DOORS	ARRANGEMENT MEANS OF EGRESS[1,3] (SECTION 1004.1) ACTUAL DISTANCE SHOWN ON PLANS
FIRST	2	2	200'	91'-0"	41'-5"	74'-4"

[1] Corridor dead ends (Section 1004.3.2.3)
[2] Single exits (Table 1005.2.2)
[3] Common path of travel (Section 1004.2.5)

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a) AREA[1] SQ FT	(b) AREA[1] PER OCCUPANT	OCCUPANT CONTENT	(c) EGRESS WIDTH PER OCCUPANT (1005.1) STAIR	(c) EGRESS WIDTH PER OCCUPANT (1005.1) LEVEL	EXIT WIDTH (IN)[2,3,4,5,6] REQUIRED WIDTH (SECTION 1003.2.3) (a ÷ b) x c STAIR	EXIT WIDTH (IN)[2,3,4,5,6] REQUIRED WIDTH (SECTION 1003.2.3) (a ÷ b) x c LEVEL	EXIT WIDTH (IN)[2,3,4,5,6] ACTUAL WIDTH SHOWN ON PLANS STAIR	EXIT WIDTH (IN)[2,3,4,5,6] ACTUAL WIDTH SHOWN ON PLANS LEVEL
BUSINESS	2,723	1/100	28	N/A	0.2	N/A	56	N/A	72

ACCESSIBLE DWELLING UNITS (SECTION 1107) N/A

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 - see civil plans

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

PLUMBING FIXTURE REQUIREMENTS 28 persons

STORAGE, S-1		WATERCLOSETS MALE	WATERCLOSETS FEMALE	WATERCLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SHOWERS /TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE	SERVICE SINK	NOTES & EXCEPTIONS
SPACE	EXIST'G												
	NEW	1	1				1	1		1	1	1	
	REQ'D	1	1				1	1		1	1	1	

EXISSTING TOILET FACILITIES ARE LOCATED WITHIN 500 FEET OF THE WORK AREA.

SPECIAL APPROVALS N/A

(Describe special approvals from local jurisdictions, County of State Department of Health, NC Department of Insurance, International Code Council, etc.)

ENERGY SUMMARY ~~N/A - EXISTING BUILDING~~

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: ☐ NO ■ YES ■ UNKNOWN
EXEMPT BUILDING: ■ NO ☐ YES (CODE OR STATUTORY REF.) _____
CLIMATE ZONE: ☐ 3A ■ 4A ☐ 5A
METHOD OF COMPLIANCE: ENERGY CODE: ☐ PERFORMANCE ■ PRESCRIPTIVE
ASHRAE 90.1: ☐ PERFORMANCE ☐ PRESCRIPTIVE

THERMAL ENVELOPE (PRESCRIPTIVE METHOD ONLY)

ROOF/CEILING ASSEMBLY
DESCRIPTION OF ASSEMBLY: WOOD TRUSSES & R-38 BATT
U-VALUE OF TOTAL ASSEMBLY: .0263
R-VALUE OF INSULATION: R-38
SKYLIGHTS IN EACH ASSEMBLY: –
U-VALUE OF SKYLIGHT: –
TOTAL SQ.FT. OF SKYLIGHTS IN EACH ASSEMBLY: –

EXTERIOR WALLS
DESCRIPTION OF ASSEMBLY: 6" WOOD STUDS w/ R-19 BATT
U-VALUE OF TOTAL ASSEMBLY: .05
R-VALUE OF INSULATION: R-19
OPENINGS
U-VALUE OF ASSEMBLY: –
SOLAR HEAT GAIN COEFFICIENT: –
PROJECTION FACTOR: –
DOOR R-VALUE: –

WALLS BELOW GRADE
DESCRIPTION OF ASSEMBLY: –
U-VALUE OF TOTAL ASSEMBLY: –
R-VALUE OF INSULATION: –

FLOORS OVER UNCONDITIONED SPACE
DESCRIPTION OF ASSEMBLY: –
U-VALUE OF TOTAL ASSEMBLY: –
R-VALUE OF INSULATION: –

FLOORS SLAB ON GRADE
DESCRIPTION OF ASSEMBLY: –
U-VALUE OF TOTAL ASSEMBLY: –
R-VALUE OF INSULATION: –
HORIZONTAL/VERTICAL REQUIREMENT: –
SLAB HEATED: –

STRUCTURAL DESIGN

DESIGN LOADS:
IMPORTANCE FACTORS: SNOW 1.0 SEISMIC _____
LIVE LOADS: ROOF 10psf MEZZANINE _____ FLOOR 50psf
GROUND SNOW LOADS: 10psf psf
WIND LOADS: BASIC WIND SPEED 116 mph (ASCE-7) EXPOSURE CATEGORY B

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ■ C ☐ D

PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
RISK CATEGORY (Table 1604.5): ☐ 1 ■ 2 ☐ 3 ☐ 4
SPECTRAL RESPONSE ACCELERATION: Sms: 0.236 %g Sm1: 0.179 %g
SITE CLASSIFICATION: ☐ A ☐ B ☐ C ■ D ☐ E ☐ F
DATA SOURCE: ☐ FIELD TEST ■ PRESUMPTIVE ☐ HISTORICAL DATA
BASIC STRUCTURAL SYSTEM: ■ BEARING WALL ☐ DUAL w/ SPECIAL MOMENT FRAME
☐ BUILDING FRAME ☐ DUAL w/ INTERMEDIATE R/C OR SPECIAL STEEL
☐ MOMENT FRAME ☐ INVERTED PENDULUM
ANALYSIS PROCEDURE: ☐ SIMPLIFIED ☐ EQUIVALENT LATERAL FORCE ☐ DYNAMIC
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED: ■ YES ☐ NO

LATERAL DESIGN CONTROL: ☐ EARTHQUAKE ■ WIND

SOIL BEARING CAPACITY:
FIELD TEST: – psf
PRESUMPTIVE BEARING CAPACITY: 2000 psf
PILE SIZE, TYPE AND CAPACITY: –

SPECIAL INSPECTIONS CHAPTER 17 N/A

SPECIAL INSPECTIONS SHALL BE CONDUCTED ON ALL PROJECTS THAT FALL WITHIN BUILDING CATEGORIES AND/OR CONTAIN ELEMENTS SUBJECT TO SPECIAL INSPECTIONS AS PRESCRIBED BY REVISED SECTION 1704.
To schedule the required preconstruction meeting with the City of Raleigh please call 807-5111
List whom will inspect the required special inspections
Fabricator of load bearing components –
Soil tests –
Concrete, caissons, piles, piers, precast –
Post tension concrete –
Modular construction –
Steel and connections, welds, bolts, anchors –
Fire spray tests –
Smoke control –
Seismic, wind designs, Quality Assurance –
Retaining wall –
Masonry –
Wood –
Alternate Methods –
EFIS –
Other (describe) –
Other (describe) –
Owner or agent –

ELECTRICAL SUMMARY N/A

ELECTRICAL SYSTEM AND EQUIPMENT
Method of Compliance: ☐ Prescriptive ☐ Performance ☐ Energy Cost Budget
* Provide a standard riser diagram which indicates designated points for check metering.
* Provide a standard panel schedule description which identifies different end use loads.
Lighting schedule
Lamp type required in fixture
Number of lamps in fixture
Ballast type used in the fixture
Number of ballasts in fixture
Total wattage per fixture
Total interior wattage specified vs. allowed
Total exterior wattage specified vs. allowed
Equipment schedules with motors (not used for mechanical systems)
Motor horsepower
Number of phases
Minimum efficiency
Motor type
# of poles

MECHANICAL SUMMARY N/A

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
Method of Compliance: ☐ Prescriptive ☐ Performance ☐ Energy Cost Budget
THERMAL ZONE
Exterior design conditions
Winter dry bulb
Summer dry bulb
Interior design conditions
Winter dry bulb
Summer dry bulb
Relative humidity
BUILDING HEATING LOAD
BUILDING COOLING LOAD
MECHANICAL SPACING CONDITIONING SYSTEM
Unitary
Description of unit
Heating efficiency
Cooling efficiency
Heat output of unit
Cooling output of unit
Boiler
Total boiler output. If oversized, state reason.
Chiller
Total chiller capacity. If oversized, state reason.
LIST EQUIPMENT EFFICIENCIES
EQUIPMENT SCHEDULES WITH MOTORS (mechanical systems)
Motor horsepower
Number of phases
Minimum efficiency
Motor type
# of poles

SHELL VARIABLE FORM N/A

Check each applicable line to match scope of work. Edit as necessary to provide clear detail of installation.
MECHANICAL:
☐ No work ☐ Equipment set___ with___ without power ☐ Gas line
☐ Trunk line installed___ with___ without outlets ☐ Install complete operational system
☐ Other
PLUMBING:
☐ No work ☐ Install water service and sewer ☐ Install complete plumbing system
☐ Install building drain___ and___ or water distribution main___ with___ without branches
☐ Other
SPRINKLER:
☐ Install complete plumbing system
BUILDING:
☐ Install slab___ partial___ complete ☐ Install demising walls
☐ Install interior partitioning___ partial___ complete ☐ Install ceilings
☐ White box (additional interior completion permits are required for Certificate of Occupancy and power)
☐ Other
ELECTRICAL:
☐ House panel (CONNECTING TO) ☐ Service laterals to meter centers/panels located on buildings
☐ Demise wall and ceilings only ☐ Conduit, duct, raceway, in slab
☐ Power and lighting circuits to "J" Box ☐ Install light fixtures
☐ Install___ Heat/AC___ Elevator___ Generator___ Parking lot lighting
☐ Install complete system
☐ Other
Please Provide full information on any Alternative Methods and Means incorporated into the design of this project. Provide specific details and incorporate into plan submittal any supporting documents or agreement letters.

WALL LEGENDS

☐ FIRE PARTITIONS 709 ☐ FIRE WALLS 706 ☐ FIRE BARRIERS 707
☐ SMOKE PARTITIONS 711 ☐ SMOKE BARRIERS 710 ☐ SHAFT ENCLOSURE 708

OCCUPANT CONTENT

THERAPY	2,703 sf / 100 = 28 PERSONS
OCCUPANT CONTENT	28 PERSONS

ROBERT C. EVANS REGISTERED ARCHITECT 6530 FAYETTEVILLE, N. NORTH CAROLINA
10.22.21

ROBERT CHARLES EVANS ARCHITECT
ARCHITECTURE
545 Pearl Street Fayetteville North Carolina 28303

No info at all. Follow prescriptive method.

This information is all wrong. R-20 minimum in walls, R-15 for slab, and R-42 minimum for attic.

Northgate Therapy
New Building

Drawing Name:
Appendix B

Project Name:
A New Building for
Northgate Therapy

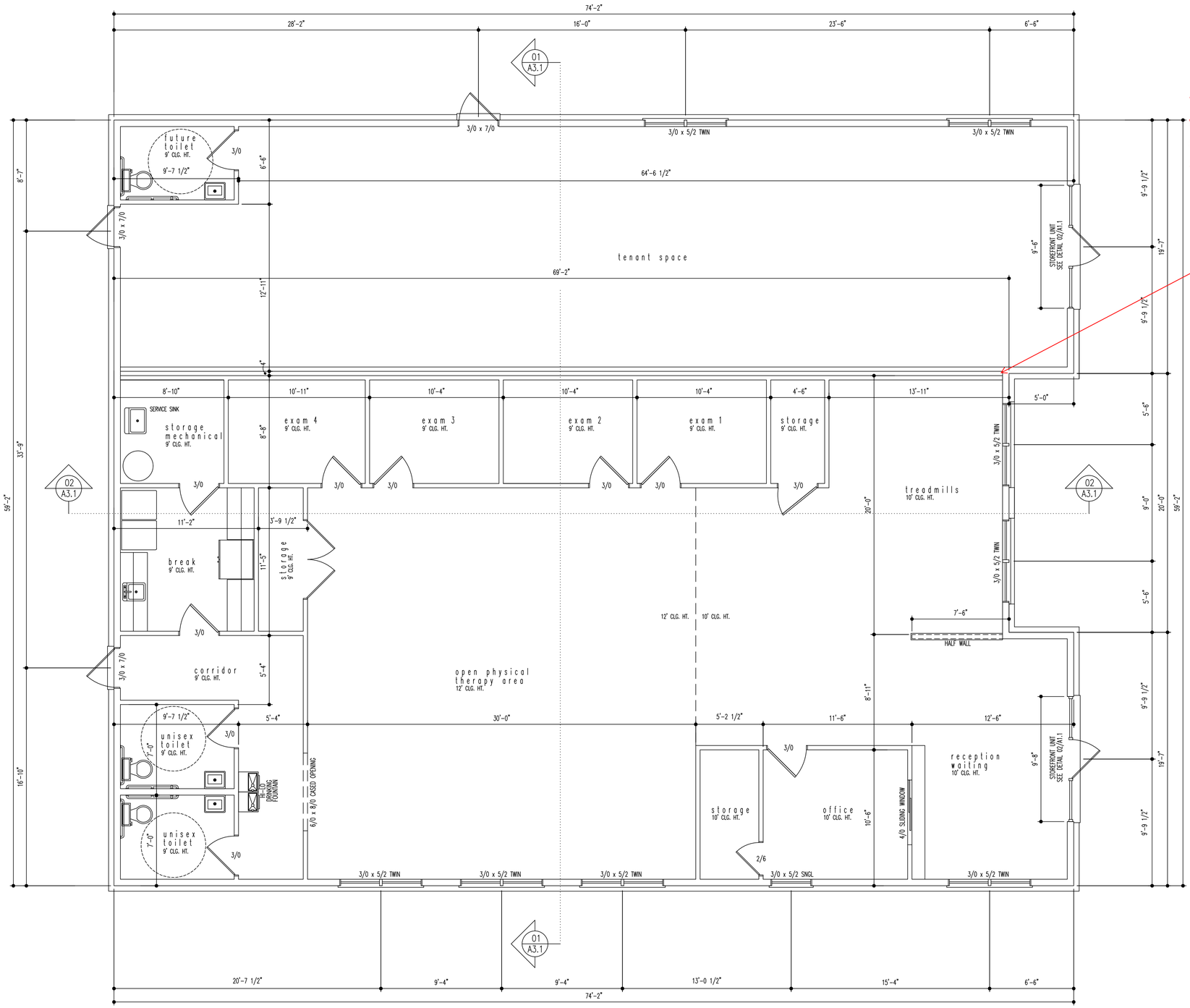
Project Location:
Northgate – Lot 5C
Cameron
North Carolina

DRAWINGS AND THE DESIGN ARE THE PROPERTY OF THE ARCHITECT WHETHER THE PROJECT FOR WHICH THEY ARE PREPARED IS EXECUTED OR NOT. THE DRAWINGS SHALL NOT BE USED BY THE PROJECT OWNER OR ANYONE ELSE FOR ANY OTHER PROJECT.

ADA AND LEGAL DISCLAIMER
THIS DOCUMENT IS INTENDED TO COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA). ARCHITECTS AND ENGINEERS ARE NOT LICENSED TO INTERPRET LAWS OR GIVE ADVICE CONCERNING LAWS OR LEGAL MATTERS. THE OWNER SHOULD HAVE THIS DOCUMENT REVIEWED BY HIS ATTORNEY TO DETERMINE IF IT COMPLIES TO ADA AND OTHER LAWS.

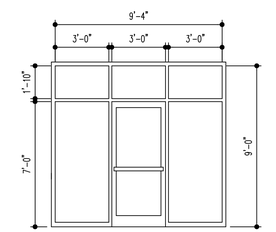
PROJECT NO:	21-099
DRAWN BY:	RCE.
DATE:	03.24.21
REVISIONS:	

SHEET NO: A0.2



This wall may need to be a fire wall, depending upon what occupancy enters the tenant space (at a later date)

01 FLOOR PLAN
1/4" = 1'-0"



02 DOOR DETAIL
1/4" = 1'-0"

ROBERT C. EVANS
REGISTERED ARCHITECT
FAYETTEVILLE, N.C.
NORTH CAROLINA
5630
Robert C. Evans

10.21.22

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
545 Pearl Street Fayetteville North Carolina 28303

Northgate Therapy
New Building

Drawing Name:
Floor Plan

Project Name:
A New Building for
Northgate Therapy

Project Location:
Northgate – Lot 5C
Cameron
North Carolina

DRAWINGS AND THE DESIGN ARE THE PROPERTY OF THE ARCHITECT WHETHER THE PROJECT FOR WHICH THEY ARE PREPARED IS EXECUTED OR NOT. THE DRAWINGS SHALL NOT BE USED BY THE PROJECT OWNER OR ANYONE ELSE FOR ANY OTHER PROJECT.

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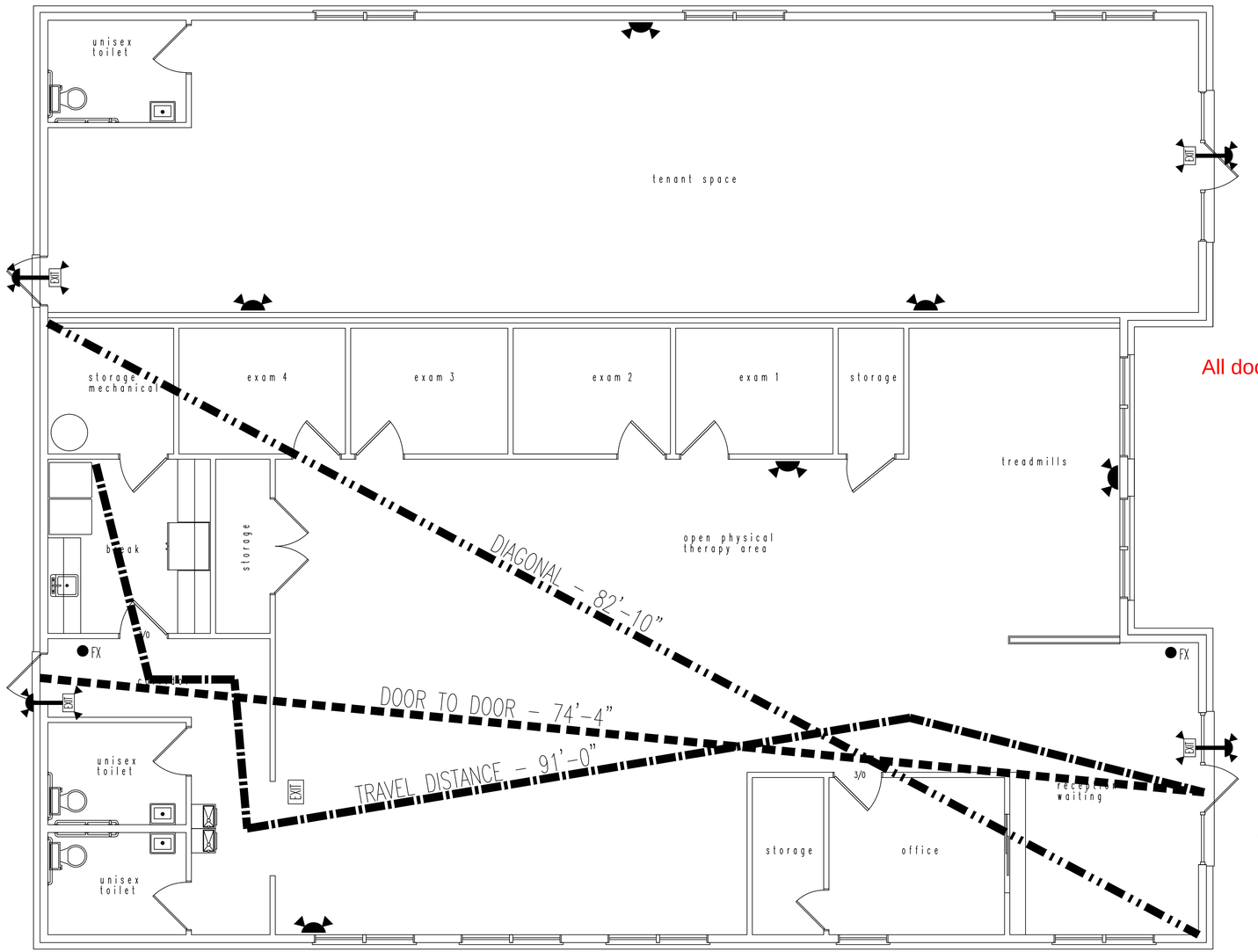
PROJECT NO:	21-099
DRAWN BY:	RCE,jec
DATE:	06.15.21
REVISIONS:	

SHEET NO:
A1.1



All door hardware shall be lever style.

EXIT EXIT SIGN w/ DIRECTIONAL ARROW

EXIT EXIT SIGN

EXIT EXIT SIGN w/ EMERGENCY EGRESS LIGHT

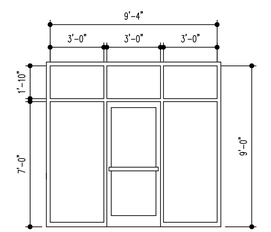
EMERGENCY EGRESS LIGHT

FX FIRE EXTINGUISHER

OCCUPANT CONTENT

THERAPY	2,703 sf / 100 =	28 PERSONS
OCCUPANT CONTENT		28 PERSONS

01 FLOOR PLAN
1/4" = 1'-0"



02 DOOR DETAIL
1/4" = 1'-0"

ROBERT C. EVANS REGISTERED ARCHITECT 6992 NORTH CAROLINA FAYETTEVILLE, N.C.

10.22.21

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
545 Pearl Street Fayetteville North Carolina 28303

Northgate Therapy
New Building

Drawing Name:
Floor Plan

Project Name:
A New Building for
Northgate Therapy

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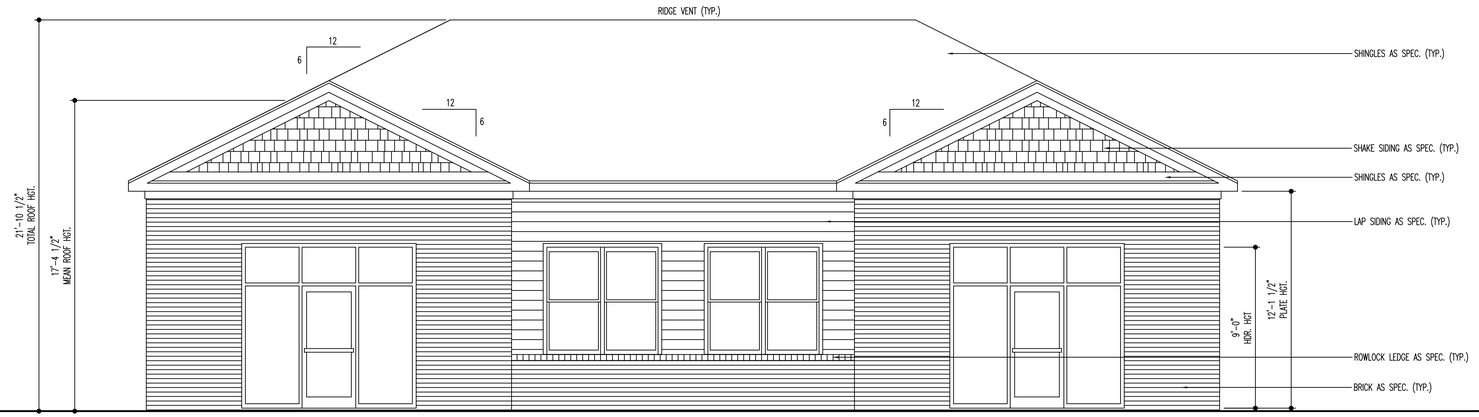
PROJECT NO:	21-099
DRAWN BY:	RCE,jec
DATE:	06.15.21
REVISIONS:	

SHEET NO:
A1.2



01 FRONT ELEVATION
1/4" = 1'-0"

02 LEFT ELEVATION
1/4" = 1'-0"

ROBERT C. EVANS
REGISTERED ARCHITECT
4630
NORTH CAROLINA
FAYETTEVILLE, N.C.

10.22.21

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
545 Pearl Street Fayetteville North Carolina 28303

Northgate Therapy
New Building

Drawing Name:
Exterior Elevations

Project Name:
A New Building for
Northgate Therapy

Project Location:
Northgate – Lot 5C
Cameron
North Carolina

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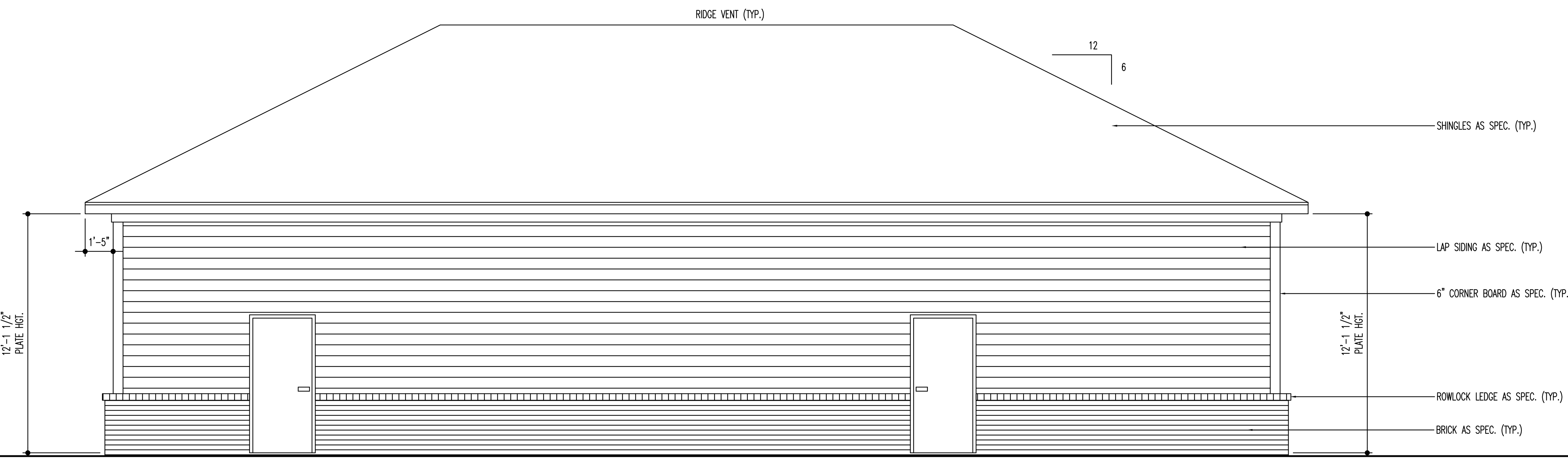
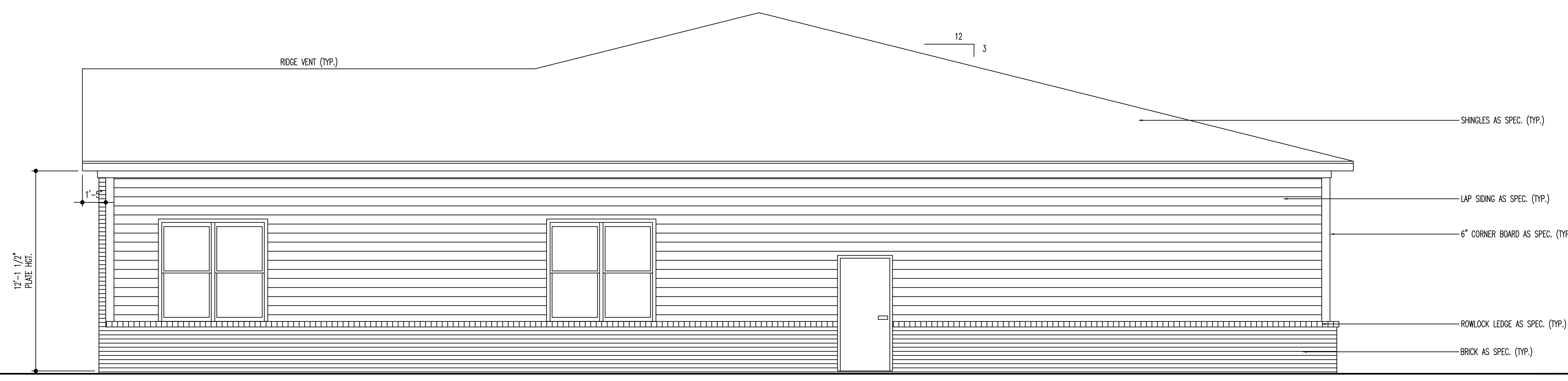
PROJECT NO:	21-099
DRAWN BY:	RCE,jec
DATE:	06.15.21
REVISIONS:	

SHEET NO:
A2.1



01 REAR ELEVATION
1/4" = 1'-0"



02 RIGHT ELEVATION
1/4" = 1'-0"

ROBERT C. EVANS
REGISTERED ARCHITECT
6530
NORTH CAROLINA
FAYETTEVILLE, N.C.

10.22.21

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
545 Pearl Street Fayetteville North Carolina 28303

Northgate Therapy
New Building

Drawing Name:
Exterior Elevations

Project Name:
A New Building for
Northgate Therapy

Project Location:
Northgate – Lot 5C
Cameron
North Carolina

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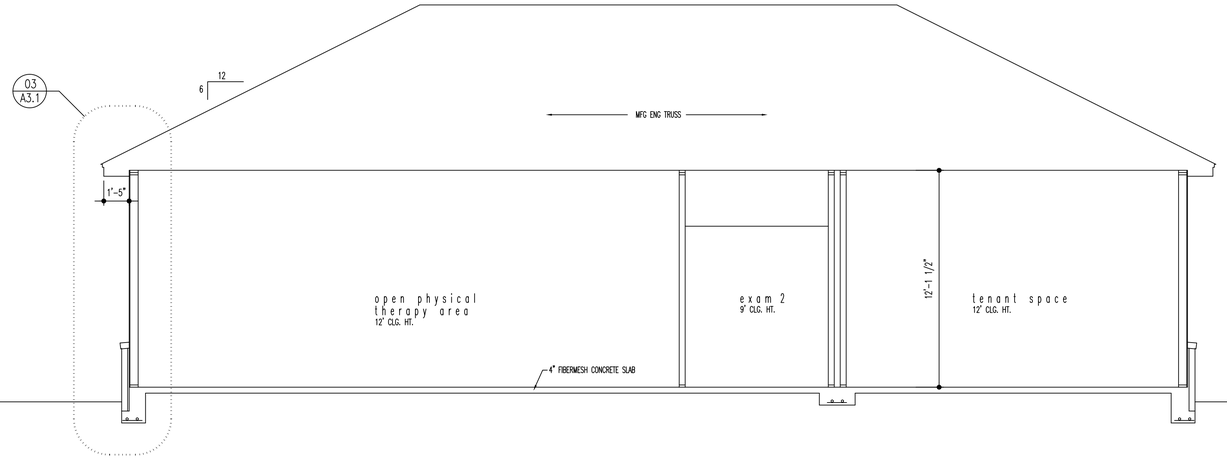
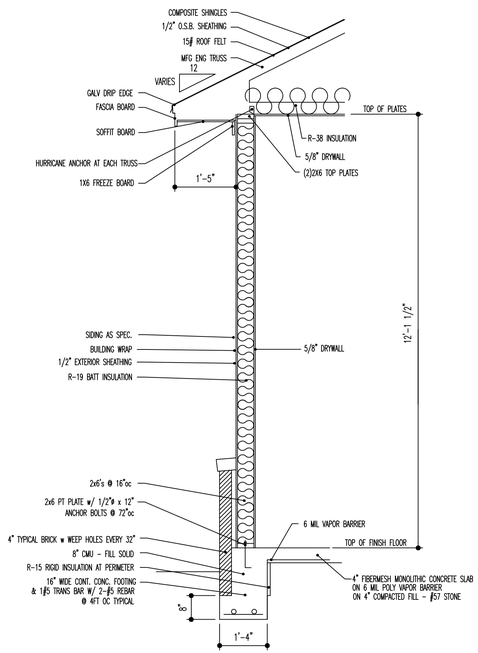
PROJECT NO:	21-099
DRAWN BY:	RCE.jec
DATE:	06.15.21
REVISIONS:	

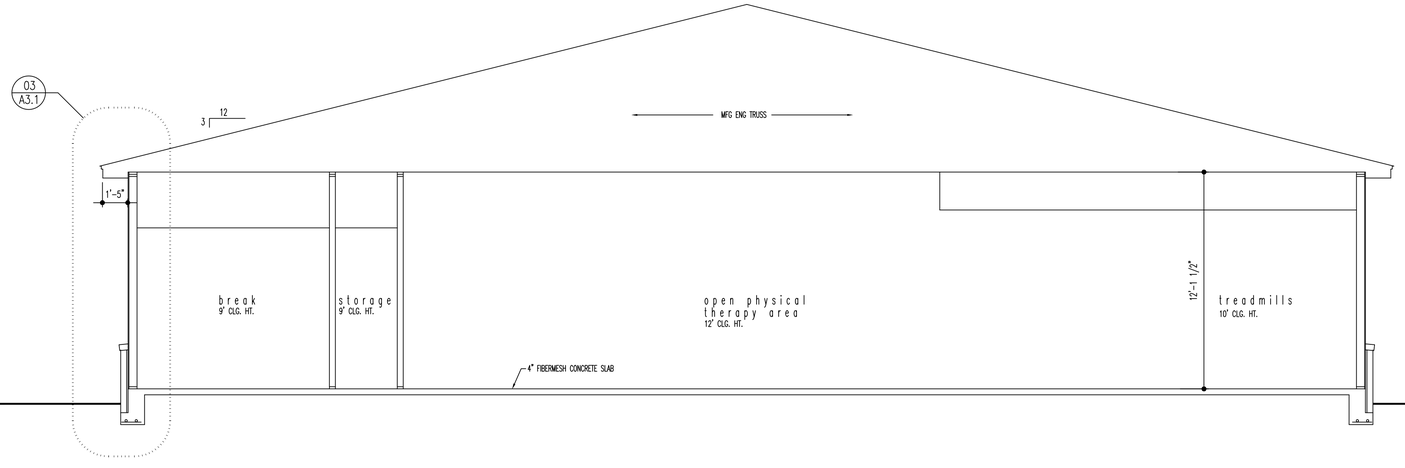
SHEET NO:
A2.2



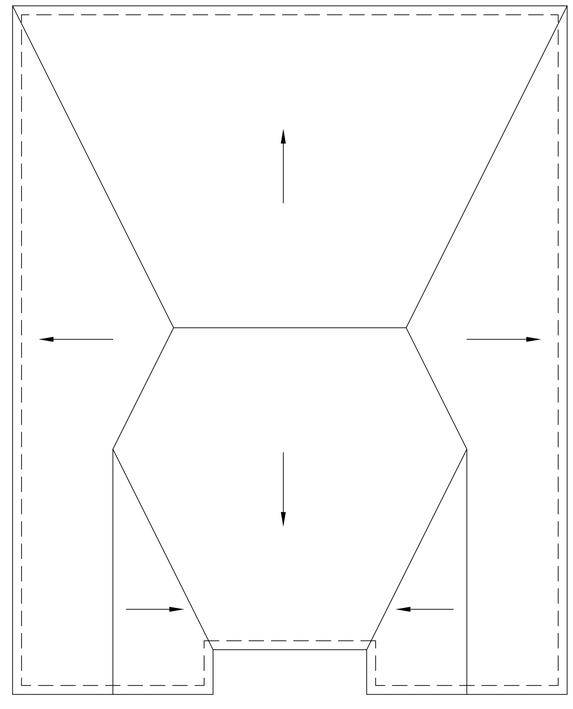
01 BUILDING SECTION
1/4" = 1'-0"



03 WALL SECTION
1/2" = 1'-0"



02 BUILDING SECTION
1/4" = 1'-0"



04 ROOF PLAN
1/8" = 1'-0"

ROBERT C. EVANS
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FAYETTEVILLE, N.C.
NORTH CAROLINA

10.22.21

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
545 Pearl Street Fayetteville North Carolina 28303

Northgate Therapy
New Building

Drawing Name:
Exterior Elevations

Project Name:
A New Building for
Northgate Therapy

Project Location:
Northgate - Lot 5C
Cameron
North Carolina

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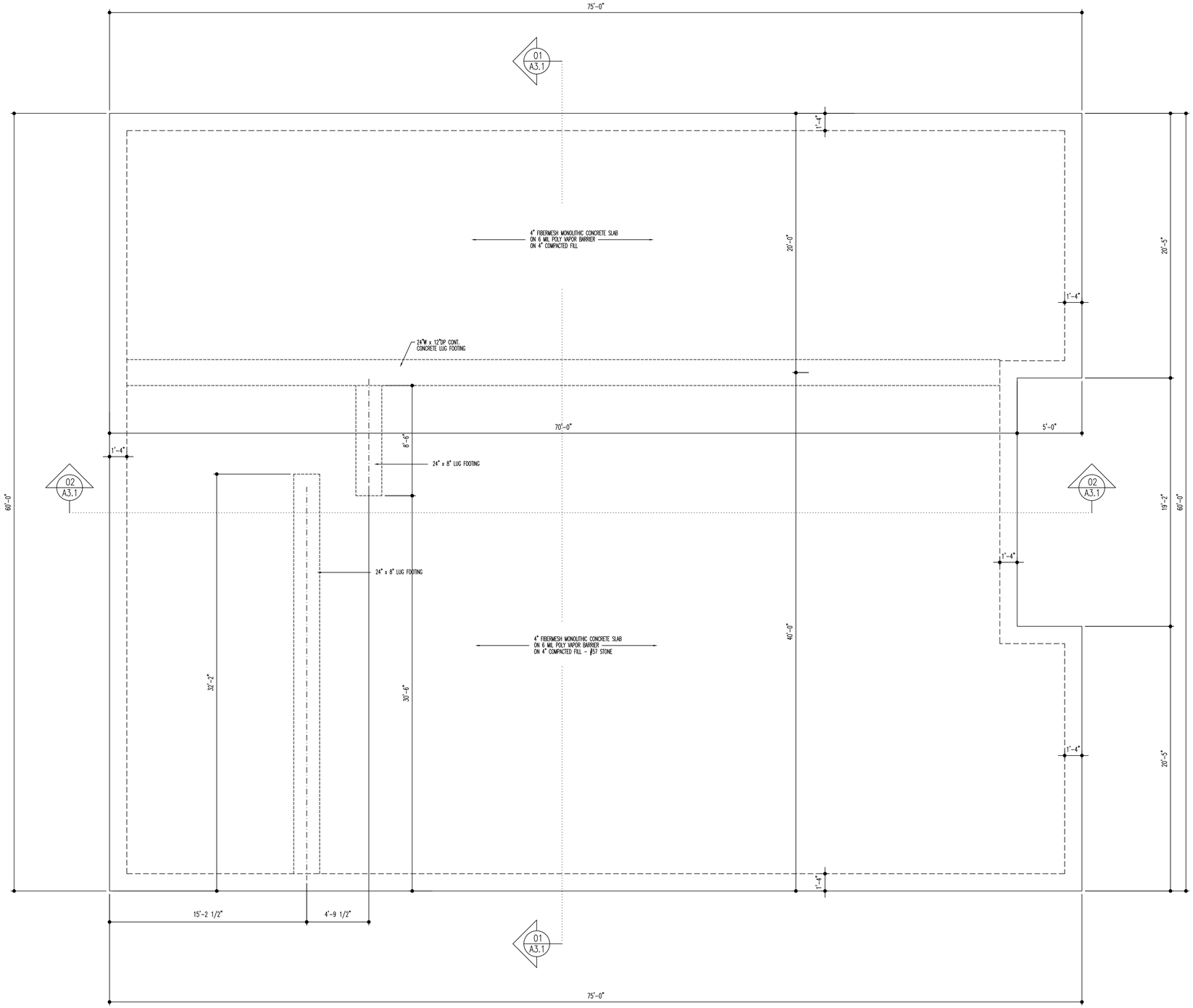
PROJECT NO:	21-099
DRAWN BY:	RCE,jec
DATE:	06.15.21
REVISIONS:	

SHEET NO:
A3.1



Slab shall have R-15 insulation from within 2 inches top of slab to bottom of footing, or 24 inches, whichever is less.

01 FOUNDATION PLAN
1/4" = 1'-0"

ROBERT C. EVANS
REGISTERED ARCHITECT
6574
NORTH CAROLINA
FAYETTEVILLE, N.C.

10.22.21

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
545 Pearl Street Fayetteville North Carolina 28303

Northgate Therapy
New Building

Drawing Name:
Foundation Plan

Project Name:
A New Building for
Northgate Therapy

Project Location:
Northgate - Lot 5C
Cameron
North Carolina

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PROJECT NO:	21-099
DRAWN BY:	RCE,jec
DATE:	06.15.21
REVISIONS:	

SHEET NO:
A4.1

PLUMBING LEGEND

TYPE	DESCRIPTION
—— - ——	DOMESTIC COLD WATER PIPING
—— - ——	DOMESTIC HOT WATER PIPING
————	SANITARY WASTE PIPING
— — —	SANITARY VENT PIPING
⊥○⊥	PIPE TEE UP (DOWN)
○⊥	PIPE TURN UP (UP)
⊂⊥	PIPE TURN DOWN (DN)
⋈	GATE VALVE
◒	BEGINNING OR END OF NEW WORK, CONNECT TO EXISTING

PLUMBING FIXTURE SCHEDULE

SYMBOL	MANUFACTURER	MODEL #	FIXTURE DESCRIPTION	FIXTURE MOUNTING	ACCESSORIES	SUPPLY	WASTE	VENT	ELECTRICAL	REMARKS
P1	AMERICAN STANDARD	CADET ADA/ 215AA.104	ELONGATED BOWL; FLUSH TANK TOILET	FLOOR MOUNTED	SEAT: AMERICAN STANDARD / 5901.100	3/4" C.W.	3"	2"		
P2	AMERICAN STANDARD	LUCERNE/ 0355.012	TOILET LAVATORY	WALL MOUNTED	AMERICAN STANDARD METERING FAUCET 1340.227	1/2" C.W. /H.W.	2"	1-1/2"		
P3	OASIS	P8ACSL	2 STATION WATER COOLER (REFRIGERATED)	WALL MOUNTED		1/2" C.W.	2"	1-1/2"	120V 286 W	
P4	ELKAY	DLR-2522-10	KITCHEN SINK	COUNTER MOUNTED	DELTA MODEL 4175.501 FAUCET, W/SPRAYER	1/2" C.W. /H.W.	2"	1-1/2"		
P5	GUY GRAY		WASHING MACHINE/DRYER COMBO			1/2" C.W. /H.W.	3"	2"		
P6	WATER TITE	AB9700	OUTLET BOX, ICE MAKER	WALL MOUNTED		1/2" C.W.				
P7	A.O. SMITH	DSE-30	30 GALLON ELECTRIC WATER HEATER			3/4" C.W./H.W.			208-230V 6000 W	
P8	OWNER SELECTED	⚠1	UTILITY SINK	FLOOR MOUNTED		1/2" C.W. /H.W.	3"	2"		

All fixtures, cabinets, and bathrooms shall be ANSI117.1 compliant.

PLUMBING NOTES:

PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA PLUMBING CODE 2018 EDITION AND LOCAL CODES.

ALL WORK SHALL BE COORDINATED AND PERFORMED WITH PRIOR APPROVAL FROM THE GENERAL CONTRACTOR AND OWNER TO SUIT THE OWNER'S OPERATING CONDITIONS.

PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE GENERAL CONTRACTOR OF ANY DEVIANCIES FROM THE CONTRACT DRAWINGS PRIOR TO STARTING ANY WORK.

THE PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING SPACE AND MAINTENANCE. THINK OF OTHER CONTRACTORS AND THEIR REQUIREMENTS IN VERTICAL CHASES AND WALL MOUNT SPACE. ALL CONTRACTORS TO FOLLOW THIS ORDER OF PRIORITY:
1. STORM AND SANITARY SEWER LINES
2. DUCTWORK AND HVAC SYSTEMS
3. HOT AND COLD WATER LINES
4. RIGID CONDUIT
5. CABLE

THE PLUMBING CONTRACTOR TO ORGANIZE HIS PIPING IN ATTIC SPACES, CRAWL SPACES, AND ABOVE CEILINGS. MAKE RUNS PARALLEL, PERPENDICULAR, AND GROUPED TOGETHER WHERE POSSIBLE. LOCATE MAJOR GROUPINGS OVER HALLWAYS AND AREAS OF PUBLIC ACCESS IF POSSIBLE. FREE RUNS OF PIPING IS NOT ACCEPTABLE.

THE PLUMBING CONTRACTOR SHALL LAY OUT AND INSTALL HIS WORK IN ADVANCE OF POURING CONCRETE FLOORS OR WALLS. HE SHALL FURNISH ALL SLEEVES TO THE GENERAL CONTRACTOR FOR OPENINGS THROUGH POURED MASONRY FLOORS, OR WALLS, ABOVE GRADE REQUIRED FOR PASSAGE OF ALL PIPES TO SUPPORT HIS EQUIPMENT.

HORIZONTAL DRAINAGE AND WASTE PIPE SHALL HAVE A MINIMUM SLOPE OR FALL OF 1/8 INCH PER FOOT. ALL CHANGE OF HORIZONTAL DIRECTIONS IN SOIL WASTE PIPE SHALL BE MADE WITH LONG RADIUS FITTINGS WITH "Y" BRANCHES AND 1/8 OR 1/16 BENDS.

COLD AND HOT WATER PIPING ABOVE GRADE SHALL BE TYPE "L" HARD DRAWN COPPER TUBING CONFORMING TO ASTM B-88 WITH SWEAT JOINTS AND WROUGHT OR CAST VALVES AND FITTINGS (UNIONS, STRAINERS, ETC.). JOINT SHALL BE MADE WITH LEAD FREE SOLDER. PEX PIPING MAY BE USED WITH OWNERS APPROVAL.

ALL HOT WATER PIPING SHALL BE INSULATED WITH 1 INCH THICK SECTIONAL INSULATION OR FIBROUS GLASS MATERIALS WITH FACTORY APPLIED COVER. COVER SHALL BE EMBOSSED VAPOR BARRIER, LAMINATED WITH PRESSURE SEALING CAP ADHESIVE.

ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2 INCH THICK SECTIONAL INSULATION OR FIBROUS GLASS MATERIALS WITH FACTORY APPLIED COVER. COVER SHALL BE EMBOSSED VAPOR BARRIER, LAMINATED WITH PRESSURE SEALING CAP ADHESIVE.

SANITARY HORIZONTAL WASTE, VENT PIPING, AND FITTINGS ABOVE GRADE SHALL BE SCHEDULE 40 PVC-DWV PIPE-CELLULAR CORE FROM CHARLOTTE PIPE AND FOUNDRY COMPANY OR APPROVED EQUAL, AND MUST MEET OR EXCEED THE REQUIREMENTS OF ASTM F-891, NSF STANDARD NO. 14, AND IAPMO UPC.

ALL WASTE STACK PIPING SHALL BE CAST IRON AND INSULATED FOR SOUND IN WALLS.

ALL WASTE AND STORM PIPING ABOVE CEILING, VERTICAL CHASES, WALLS SHALL BE INSULATED WITH 1/2 INCH THICK SECTIONAL INSULATION OR FIBROUS GLASS MATERIALS WITH FACTORY APPLIED COVER. COVER SHALL BE EMBOSSED VAPOR BARRIER, LAMINATED WITH PRESSURE SEALING CAP ADHESIVE. NO INSULATION REQUIRED IN CRAWL SPACE OR BELOW FLOOR SLAB OF ANY WASTE AND STORM PIPING.

~~IN LIEU OF FIBERGLASS INSULATION, THE PLUMBING CONTRACTOR IS ALLOWED TO USE CLOSED CELL INSULATION, 1/2 INCH THICK~~ ARMSTRONG/ARMAFLEX II ON ALL COLD WATER PIPES. RIGID URETHANE FOAM INSULATION, 1 INCH THICK ARMSTRONG/ARMALOK II ON ALL HOT WATER PIPING.

All piping in unconditioned spaces shall be insulated to min. R 6.5

ALL PLUMBING EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

ALL FIXTURES, DRAINS, TRAPS, ETC. SHALL BE SET PLUMB AND LEVEL.

ALL HANDICAPPED FIXTURES AND TRIM SHALL BE INSTALLED IN ACCORDANCE WITH THE NORTH CAROLINA PLUMBING CODE 2018 EDITION.

CHROME PLATED ESCUTCHEONS SHALL BE PROVIDED AT EACH WALL PENETRATION.

ESCUTCHEONS SHALL BE CHROME PLATED, SPRING TYPE, ON ALL PIPES PASSING THROUGH WALLS AND CEILINGS IN FINISHED AREAS. FLOOR ESCUTCHEONS SHALL BE CAST BRASS, CHROME PLATED, WITH SET SCREW.

ESCUTCHEONS SHALL BE OF SUFFICIENT SIZE TO COVER OUTSIDE DIAMETER OF THE PIPE OR THE INSULATION OF THE PIPE.

FLASHING FOR VENTS THROUGH THE ROOF SHALL BE TWO-PIECE TYPE, 16 OUNCE COPPER COUNTER FLASHING AND BASE FLASHING, OR A TWO-PIECE TYPE, 4 POUND LEAD COUNTER FLASHING AND BASE FLASHING. THE BASE FLASHING SHALL BE INSTALLED BY THE GENERAL CONTRACTOR WITH THE ROOF SYSTEM.

VENT FLASHING SHALL EXTEND DOWN AT LEAST 4 INCHES FROM THE TOP OF THE PIPE. FLASHING SHALL EXTEND AT LEAST 12 INCHES IN ALL DIRECTIONS FROM THE PIPE AND SHALL BE PARALLEL TO THE ROOF LINE.

ALL EQUIPMENT AND INSTALLED MATERIALS SHALL BE THOROUGHLY CLEAN AND FREE OF ALL DIRT, OIL, GRIT, GREASE, AND ETC.

ALL PLUMBING SYSTEMS AND EQUIPMENT SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE BUILDING FROM THE OWNER.

QUIKDRAFT
DRAFTING & DESIGN
(910) 574-4901

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 14901 ENGINEER RONALD S. HUFF
10-25-21

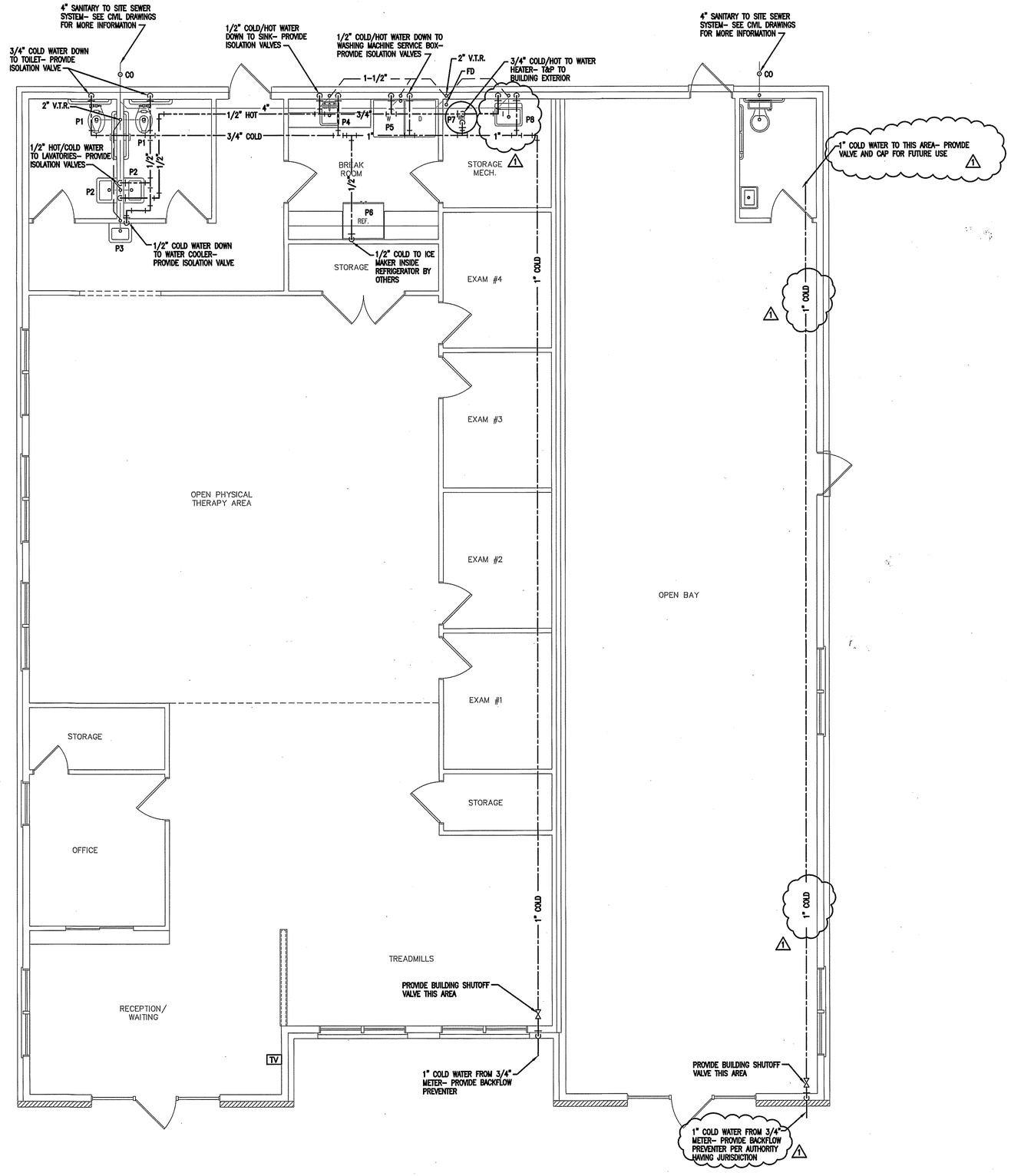
FINAL DRAWING ☐ FOR REVIEW PURPOSES ONLY
PRELIMINARY ☐ FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING ☑ FOR CONSTRUCTION

NORTHGATE
CAMERON NORTH CAROLINA

PROJECT NO:	21003
DRAWN BY:	J.PARRISH
DATE:	04-15-2021
⚠1	10-07-2021

SHEET NO:
P1

All water lines in unconditioned attic space shall be insulated to R-6.5 Minimum.



1 P2 PLUMBING FLOOR PLAN
SCALE: 1/4" = 1'-0"

QUIKDRAFT
DRAFTING & DESIGN
(910) 574-4901

NORTH CAROLINA PROFESSIONAL SEAL 14907 ENGINEER RONALD S. HUF
10-25-21

FINAL DRAWING ☐ FOR REVIEW PURPOSES ONLY
PRELIMINARY ☐ FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING ☑ FOR CONSTRUCTION

NORTHGATE
CAMERON NORTH CAROLINA

PROJECT NO: 21003
DRAWN BY: J.PARRISH
DATE: 04-15-2021
1 10-07-2021

SHEET NO:
P2

GENERAL NOTES:

ALL WORK SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA MECHANICAL CODE 2018 EDITION, ASHRAE, SMACNA, AND NFPA.

STRUCTURAL MEMBERS OF THE BUILDING SHALL NOT BE CUT IN ANY MANNER FOR THE INSTALLATION OF ANY EQUIPMENT UNLESS PRIOR APPROVAL IS OBTAINED.

THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS AND ROUTING OF ALL DUCTWORK, PIPING, AND EQUIPMENT WITH OTHER TRADES TO AVOID CONFLICT.

THE MECHANICAL CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE MECHANICAL PLANS, SCHEDULES, AND DETAILS PRIOR TO INSTALLATION OF THE MECHANICAL SYSTEMS AND REVIEW ANY CONFLICTS WITH THE GENERAL CONTRACTOR.

THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING SPACE AND MAINTENANCE. THINK OF OTHER CONTRACTORS AND THEIR REQUIREMENTS IN VERTICAL CHASES AND WALL MOUNT SPACE.

ALL CONTRACTORS TO FOLLOW THIS ORDER OF PRIORITY:

1. STORM AND SANITARY SEWER LINES
2. DUCTWORK AND HVAC SYSTEMS
3. HOT AND COLD WATER LINES
4. RIGID CONDUIT
5. CABLE

THE MECHANICAL CONTRACTOR SHALL COORDINATE SIZE AND LOCATION OF ALL PENETRATIONS (PERTAINING TO HIS WORK) THROUGH THE ROOF, WALLS, FLOORS WITH THE GENERAL CONTRACTOR. ANY WATERPROOFING AROUND THE OPENINGS TO BE COMPLETED BY THE GENERAL CONTRACTOR.

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL HIS OWN SUPPORT DEVICES. ALL LOCATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS PRIOR TO INSTALLATION. ALL PLATFORMS AND WALKWAYS IN ATTIC SPACES ARE PROVIDED BY THE GENERAL CONTRACTOR. THE MECHANICAL CONTRACTOR TO COORDINATE THE LOCATION AND DIMENSIONS OF ALL PLATFORMS IN THE ATTIC WITH THE GENERAL CONTRACTOR.

ALL EQUIPMENT HAVING ROTATING OR MOVING PARTS SHALL HAVE VIBRATION ISOLATORS TO ELIMINATE TRANSMISSION OF OBJECTIONABLE NOISE TO OTHER MATERIAL OR EQUIPMENT.

WHERE OUTSIDE AIR INTAKE DUCTWORK CONNECTS TO OUTSIDE AIR LOUVER, THE INSIDE FACE OF THE DUCTWORK SHALL BE PRIMED AND PAINTED WITH (2) TWO COATS OF FLAT BLACK TO PREVENT DUCTWORK FROM BEING VISIBLE

THE MECHANICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT AND BACK WITH WHITE CORE, WHITE ENGRAVED LETTERS (1/4 INCH MINIMUM) ETCHED INTO THE WHITE CORE. NAME TAGS TO BE MOUNTED WITH SELF-TAPPING SHEET METAL SCREWS.

ALL EQUIPMENT MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE WORK OR IN ACCORDANCE WITH THE PARTICULAR MANUFACTURER'S STANDARD GUARANTEE IF LONGER. ANY FAULTY MATERIAL OR WORKMANSHIP OR FAILURE OF ANY PART OF THE SYSTEM DURING NORMAL OPERATIONS UNDER THIS GUARANTEE SHALL BE CORRECTED WITHOUT COST TO THE OWNER.

THE MECHANICAL CONTRACTOR SHALL CLEAN ALL OF HIS EQUIPMENT PRIOR TO FINAL CLOSE OUT OF THIS PROJECT TO BE FREE OF ANY DIRT OR DEBRIS IN DRAIN PANS, CONDENSATE DRAINS, CONDENSING UNIT COILS, AND ETC.

ALL EQUIPMENT SHALL BE LOCATED AND INSTALLED TO PROVIDE MAXIMUM SPACE FOR MAINTENANCE AND SERVICE.

PROVIDE EQUIPMENT SUPPORT PAD FOR ALL BASE MOUNTED EQUIPMENT. PAD SHALL BE 4" HIGH OR PREFABRICATED CONCRETE PAD FOR ALL CONDENSING UNITS, AND PACKAGE UNITS, 4" MINIMUM FROM EQUIPMENT EDGE TO END OF PAD ON ALL SIDES.

THE MECHANICAL CONTRACTOR SHALL CONFIRM ALL BREAKER AND DISCONNECT SIZES OF HIS EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING ANY EQUIPMENT FOR THIS PROJECT.

CONDENSATE DRAINS SHALL BE A MINIMUM OF 3/4" ø PVC PIPE. A P-TRAP SHALL BE INSTALLED IN PIPE AT THE UNIT. ALL CONDENSATE LINES SHALL BE ROUTED AS INDICATED ON PLANS.

INSTALL FLEXIBLE DUCT CONNECTION AT SUPPLY AND RETURN DUCTWORK CONNECTIONS TO ALL AIR HANDLING UNITS, FAN BOXES, ETC.

DESIGN CRITERIA NOTES:

ALL SUPPLY, RETURN, EXHAUST AND OUTDOOR AIR DUCTWORK (WITH THE EXCEPTION OF COMMERCIAL KITCHEN DUCTWORK) SHALL BE SIZED AT 0.08" PER 100'-0" OF DUCT FOR EXTERNAL STATIC PRESSURE. ALL DUCTWORK SHALL BE 1"WG PRESSURE CLASS.

ECONOMIZERS ARE REQUIRED FOR ANY HVAC SYSTEM WITH A COOLING CAPACITY OF 65,000 BTU/HR OR GREATER (NCECC C403.1)

CORRIDORS SHALL NOT SERVE AS SUPPLY, RETURN, EXHAUST, RELIEF OR VENTILATION AIR DUCTS; CORRIDORS MAY BE USED FOR MAKEUP AIR PROVIDED TO TOILET AREAS FOR EXHAUST MAKEUP PROVIDING THE CORRIDOR IS PROVIDED WITH AN OUTSIDE AIR RATE GREATER THAN THE MAKEUP REQUIRED FOR EXHAUST. WHERE LOCATED IN TENANT SPACES OF LESS THAN 1000 SQ/FT THE USE OF CORRIDORS FOR RETURN AIR IS PERMITTED. (NCMC 601.2.1 & 601.2.3)

HVAC SYSTEM SHALL HAVE PROGRAMMABLE THERMOSTAT CAPABLE OF OFF HOUR CONTROLS (NIGHT SETBACK) TO MAINTAIN NO MORE THAN 85°F OR NO LESS THAN 55°F (NCECC C403.2.4.2.1, C403.2.4.2.3 & C403.2.4.2.3)

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL A DUCT MOUNTED SMOKE DETECTOR IN THE RETURN AIR DUCT AT EACH UNIT IN ACCORDANCE WITH NORTH CAROLINA BUILDING CODE EDITION 2012. THE MECHANICAL CONTRACTOR TO WIRE FROM THE DETECTOR TO EACH UNIT.

DUCTWORK NOTES:

ALL DUCTWORK, PIPING, EQUIPMENT, ETC. SHALL BE SUPPORTED FROM THE BUILDING SUPPORT STRUCTURE AND NOT THE ROOF.

ALL DUCT LAYOUT AND LOCATIONS ARE SHOWN DIAGRAMMATIC. THE MECHANICAL CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE BUILDING CONDITIONS AND COORDINATE THE DUCT LAYOUT WITH ALL CONTRACTORS PRIOR TO INSTALLATION.

ALL DUCTWORK SHALL BE CONSTRUCTED OF SHEET METAL IN ACCORDANCE WITH ASHRAE & SMACNA. DUCT SIZES SHOWN ARE NET FREE AREA REQUIRED.

VOLUME OR SPLITTER DAMPERS SHALL BE INSTALLED WHERE NECESSARY TO GUIDE AND CONTROL THE AIR FLOW. TURNING VANES ARE REQUIRED IN ALL ELBOWS AND AIR DEFLECTION DEVICES WILL BE INSTALLED WHERE REQUIRED FOR A BALANCED SYSTEM. PROVIDE SHEET METAL SLEEVES AND COLLARS WHERE DUCTS PASS THRU WALLS.

ALL DUCTS SHALL BE AIR TIGHT, RIGID AND FREE FROM VIBRATION AND NOISE. ALL LAP JOINTS SHALL BE IN THE DIRECTION OF FLOW AND SEALED WITH DUCT SEALER. ALL TAPES AND MASTICS USED SHALL LISTED WITH UL181A AND SHALL BE MARKED. (NCMC (603.9) & NCECC (C403.2.9)

FLEXIBLE DUCT RUNS SHALL NOT EXCEED 12'-0" IN LENGTH. FLEXIBLE DUCT SHALL BE SUPPORTED EVERY 5'-0". MAXIMUM SAG IS A 1/2 INCH PER FOOT OF SPACING BETWEEN SUPPORTS. SADDLE MATERIAL IN CONTACT WITH THE FLEXIBLE DUCT SHALL BE WIDE ENOUGH SO THAT IT DOES NOT REDUCE THE INTERNAL DIAMETER OF THE DUCT. THE SADDLE MUST COVER ONE-HALF THE CIRCUMFERENCE OF THE OUTSIDE DIAMETER OF THE FLEXIBLE DUCT AND FIT NEATLY AROUND THE LOWER HALF OF THE DUCT'S OUTER CIRCUMFERENCE.

PROVIDE PERMANENT MANUAL DAMPERS IN ALL SUPPLY AND RETURN AIR DUCTS AT THE MAIN TRUNK LINE FOR SYSTEM BALANCING. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR BALANCING THE AIR DISTRIBUTION SYSTEM AFTER THE SYSTEM HAS BEEN INSTALLED AND EQUIPMENT IS OPERATING. MANUAL DAMPERS ARE REQUIRED TO BE INSTALLED IN THE RETURN AIR DUCT IF THE DUCT IS RETURNING AIR FROM INDIVIDUAL ROOMS. MANUAL DAMPERS ARE NOT REQUIRED IF THE DUCT IS RETURNING AIR FROM CENTRALLY LOCATED FILTER/RETURN GRILLES.

THE OUTSIDE AIR INTAKE DUCTWORK SHALL BE HARD ROUND DUCT, FLEXIBLE DUCT WILL NOT BE ACCEPTED. SEE PLAN FOR DUCT SIZE.

ALL OUTSIDE AIR INTAKE DUCTS SHALL HAVE A FILTER BOX TO HOUSE A MINIMUM OF 16 IN. X 20 IN. X 2 IN. THICK FILTER, U.N.O. AT EACH AIR HANDLING UNIT EITHER IN THE ATTIC OR CRAWL SPACE. THE FILTER BOX SHALL HAVE A HINGED DOOR THAT IS GASKETED TO MAINTAIN A AIRTIGHT SEAL WITH A THUMBSCREW TO ACCESS THE FILTER.

THE OUTSIDE AIR FILTER SHALL BE THE HI-E 40 AS MANUFACTURED BY PUROLATOR PRODUCTS AIR FILTRATION COMPANY, OR APPROVED EQUAL. AIR FILTER SHALL BE (2) TWO INCHES DEEP, MEDIUM EFFICIENCY, PLEATED MEDIA, DISPOSABLE PANEL TYPE. THE FILTER MEDIA SHALL BE SELF-EXTINGUISHING NON-WOVEN COTTON AND SYNTHETIC FIBERS. THE FILTER MEDIA SHALL BE BONDED TO A 28-GAUGE CORROSION RESISTANT, EXPANDED METAL SUPPORT GRID WITH A 95% OPEN FACE AREA.

DUCT/PIPING INSULATION NOTES:

ALL SUPPLY AND RETURN AIR DUCTS SHALL BE INSULATED WITH MIN. R-6.0 INSULATION UNLESS NOTED OTHERWISE IN THE DRAWING. NCECC (C403.2.9) ACCEPTABLE MANUFACTURERS ARE JOHNSON MANVILLE.

SUCTION PIPING TO AND FROM AIR HANDLING UNITS SHALL BE INSULATED WITH 1-1/2" THICK PIPE INSULATION IN ACCORDANCE WITH NCECC TABLE (C403.2.10).

ALL FLEXIBLE DUCT REQUIRING INSULATION SHALL HAVE A VALUE OF AT LEAST R-8.0. THE FLEXIBLE DUCT SHALL BE ATCO RUBBER PRODUCTS, INC. UPC NO. 038 OR APPROVED EQUAL WITH A REINFORCED METALLIZED POLYESTER JACKET. THE INNER CORE IS AIRTIGHT AND IS DESIGNED FOR LOW TO MEDIUM OPERATING PRESSURES IN HVAC SYSTEMS. AIR DUCT CONNECTIONS AND JOINTS SHALL BE MADE PER INSTALLATION INSTRUCTIONS OUTLINED BY ATCO.

OUTSIDE AIR INTAKE DUCTWORK AND EXHAUST DUCTWORK IS TO BE UNINSULATED.

Minimum R-8 In this zone

HEAT PUMP SCHEDULE

EQUIPMENT INFO			COOLING CAPACITIES						HEATING CAPACITIES		COMPRESSOR/CONDENSER SECTION					ELECTRICAL INFORMATION					MANUFACTURER/MODEL
TAG	TYPE	LOCATION	NOM. TONS	TOTAL COOLING	MIN. IEER	MIN. EER	MIN. SEER	MIN. COP	UNIT CAPACITY	MIN. HSPF	NO. OF COMPR.	COMPRESSOR AMPS RLA	CONDENSER FAN AMPS FLA	NO. OF FANS	FAN HP	UNIT VOLTS	UNIT PHASE	MCA	MOCP	WIRE SIZE (CU. 75 C)	
HP-1	SPLIT-SYSTEM HEATPUMP	GROUND	5.0	60,000	N/A	12.00	14.00	3.5	55,000	8.2	1	15.9	1.10	1	1/5	208	3	21.0	35	#8	TRANE / 4TWA4060A3000A
HP-2	SPLIT-SYSTEM HEATPUMP	GROUND	3.5	42,000	N/A	12.00	14.00	3.5	38,000	8.2	1	13.5	1.10	1	1/5	208	3	18.0	30	#10	TRANE / 4TWA4042A3000A

AIR HANDLING UNIT SCHEDULE

EQUIPMENT INFO				INDOOR FAN SECTION							ELECTRICAL INFORMATION						MANUFACTURER/MODEL
TAG	TYPE	LOCATION	NOM. TONS	SUPPLY CFM	OA CFM	ESP INCHES	FAN TYPE	FAN HP	FAN RPM	FAN FLA	HEAT STRIPS	UNIT VOLTS	UNIT PHASE	MOCP	MCA	WIRE SIZE (CU. 75 C)	
AHU-1	SPLIT-SYSTEM	ABOVE CEILING	5.0	2000	300	0.50	DIRECT	3/4	1050	6.0	7.20	208	1	60	51	#6	TRANE / TEM4A0C60S51SB
AHU-2	SPLIT-SYSTEM	ABOVE CEILING	3.5	1400	140	0.50	DIRECT	1/2	1050	4.1	7.20	208	1	50	48	#8	TRANE / TEM4A0C42S41SB

Does not match electrical drawings

EXHAUST/VENTILATION/MAKEUP FAN SCHEDULE

EQUIPMENT TYPE			FAN INFORMATION						ELECTRICAL INFORMATION								MFG & MODEL
TAG	SERVICE	LOCATION	EXHAUST CFM	MAKEUP CFM	ESP IN WG	FAN DRIVE	FAN DIA.	SONES	RPM	FAN FLA	FAN HP	FAN WATT	UNIT VOLTS	UNIT PHASE	MOCP	MCA	WIRE SIZE (CU. 75 C)	
EF-1	TOILET EXHAUST	CEILING	70	N/A	0.125	DIRECT	N/A	2.0	1050	–	–	54	120	1	–	–	#12	GREENHECK / SP-B70 OR EQUAL

GRILLE/RETURN SCHEDULE

TAG	CFM	AIR PATTERN	FACE SIZE	NECK SIZE	SERVICE	MFG & MODEL	REMARKS
A	0-100	4-WAY	12X12	6"ø	SUPPLY	TITUS TDC OR EQUAL	LAY-IN; OFF WHITE; ALUM.
B	0-100	4-WAY	24X24	6"ø	SUPPLY	TITUS TDC OR EQUAL	LAY-IN; OFF WHITE; ALUM.
C	100-250	4-WAY	24X24	8"ø	SUPPLY	TITUS TDC OR EQUAL	LAY-IN; OFF WHITE; ALUM.
D	0-125	LOUVERED	24X24	8"ø	RETURN	TITUS PAR OR EQUAL	LAY-IN; OFF WHITE; ALUM.; FILTER
E	780-1125	LOUVERED	24X24	18X18	RETURN	TITUS PAR OR EQUAL	LAY-IN; OFF WHITE; ALUM.; FILTER
F	1125-1600	LOUVERED	24X24	22X22	RETURN	TITUS PAR OR EQUAL	LAY-IN; OFF WHITE; ALUM.; FILTER
G	125-225	LOUVERED	24X24	8"ø	RETURN	TITUS PAR OR EQUAL	LAY-IN; OFF WHITE; ALUM.; FILTER

APPENDIX B MECHANICAL DESIGN
2018 BUILDING CODE SUMMARY

PROJECT NAME: NORTHGATE

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
METHOD OF COMPLIANCE
PRESCRIPTIVE [X] ENERGY COST BUDGET [ ]

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

THERMAL ZONE: ZONE 4A NORTH CAROLINA
WINTER DRY BULB: 17.0° F
SUMMER DRY BULB: 97.0° F

INTERIOR DESIGN CONDITIONS
WINTER DRY BULB: 68°
SUMMER DRY BULB: 78°
RELATIVE HUMIDITY: 50%

BUILDING HEATING LOAD: 42,800 BTU'S
BUILDING COOLING LOAD: 101,100 BTU'S

MECHANICAL SPACING CONDITIONING SYSTEM

UNITARY
DESCRIPTION OF UNIT: SPLIT SYSTEM HEAT PUMPS
HEATING EFFICIENCY: 8.2 HSPF (8.2 HSPF MINIMUM STANDARD EFFICIENCY, TABLE C403.2.3 (2))

COOLING EFFICIENCY: 14.0 SEER (14.0 SEER MINIMUM STANDARD EFFICIENCY, TABLE C403.2.3 (2))

SIZE CATEGORY OF UNIT: (1) 5.0 & (1) 3.5 TON (≤ 65,000 BTU/H)

BOILER
SIZE CATEGORY. IF OVERSIZED, STATE REASON.: _____

CHILLER
SIZE CATEGORY. IF OVERSIZED, STATE REASON.: _____

LIST EQUIPMENT EFFICIENCIES: _____

DESIGNER STATEMENT: TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT REQUIREMENTS OF THE INTERNATIONAL ENERGY CODE. THE HVAC UNIT QUALIFIES AS MORE EFFICIENT MECHANICAL EQUIPMENT DESCRIBED IN THE CODE.

SIGNED: _____
NAME: _____
TITLE: ENGINEER

HVAC LEGEND

20X12	SUPPLY/MAKEUP DUCTWORK WITH INSIDE SIZE NOTED
20X12	RETURN/EXHAUST DUCTWORK WITH INSIDE SIZE NOTED
	SQUARE/RETANGULAR SUPPLY/RETURN/EXHAUST TRANSITION
	ROUND/OVAL SUPPLY/RETURN/EXHAUST TRANSITION
	RADIUS TYPE SUPPLY/RETURN/EXHAUST DUCTWORK ELBOW
	SQUARE TYPE SUPPLY/RETURN/EXHAUST DUCTWORK ELBOW WITH TURNING VANES
VD	INCREASED AREA TAKEOFF WITH/WITHOUT VOLUME DAMPER
A 300	LAY-IN/SURFACE SUPPLY DIFFUSER WITH TAG AND CFM NOTED
A 300	SIDEWALL SUPPLY/RETURN/EXHAUST DIFFUSER WITH TAG AND CFM NOTED
A	LAY-IN/SURFACE RETURN GRILLE WITH TAG
	ROUND DUCTWORK TURN UP/DOWN
VD	FLEXIBLE/RIGID AIR DUCT CONNECTOR WITH/WITHOUT VOLUME DAMPER
RTU-1	HVAC EQUIPMENT WITH TAG: SEE EQUIPMENT SCHEDULE FOR MORE INFORMATION

QUIKDRAFT
DRAFTING & DESIGN
(910) 574-4901

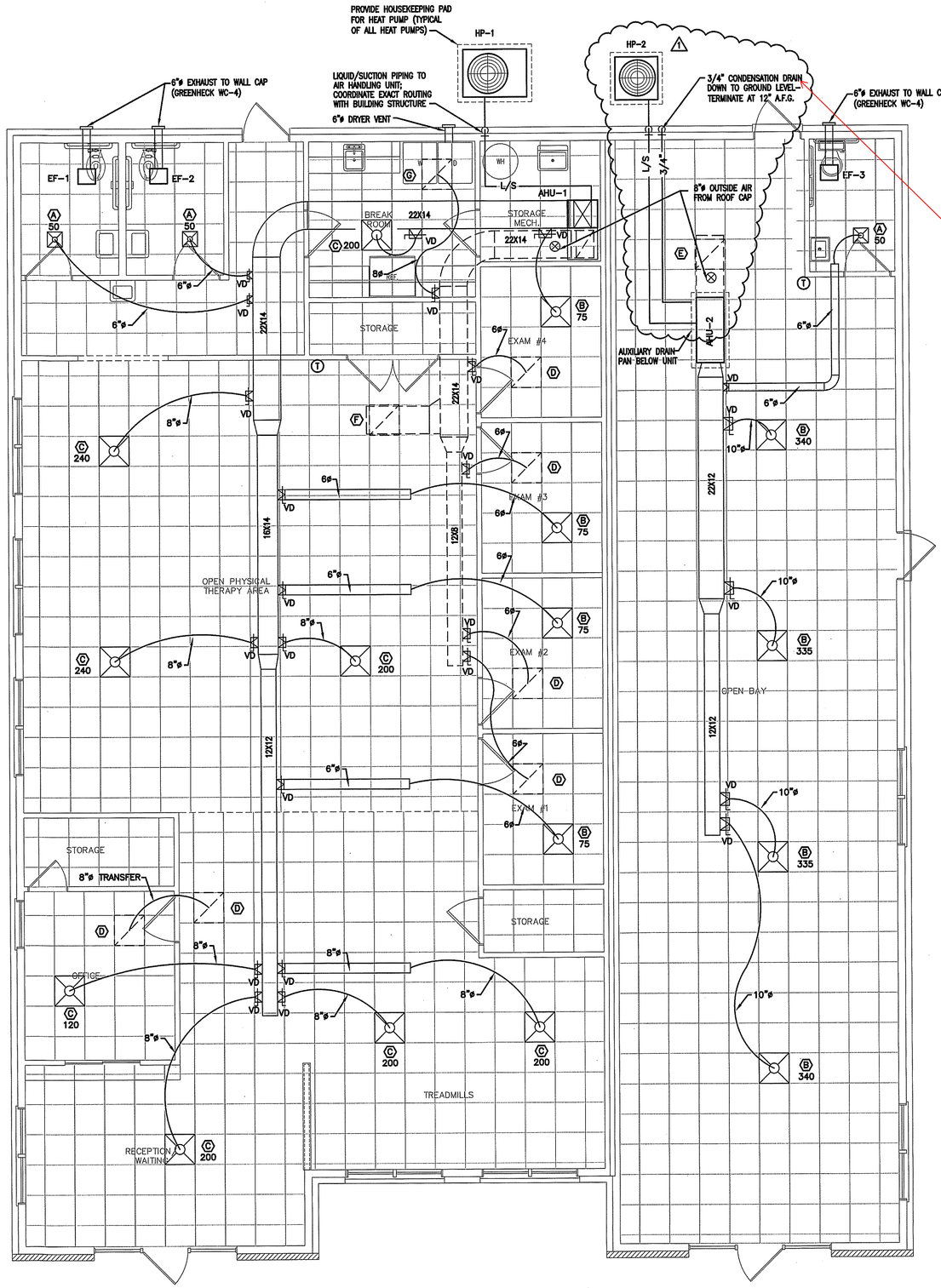
NORTH CAROLINA PROFESSIONAL SEAL 14907 ENGINEER RONALD S. HUFF
10-25-21

FINAL DRAWING [ ] FOR REVIEW PURPOSES ONLY
PRELIMINARY [ ] FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING [X] FOR CONSTRUCTION

NORTHGATE
CAMERON NORTH CAROLINA

PROJECT NO: 21003
DRAWN BY: J.PARRISH
DATE: 04-15-2021
1 10-07-2021

SHEET NO:
M1



All condensate in unconditioned spaces shall be insulated to min. R-6.5

QUIKDRAFT
DRAFTING &
DESIGN
(910) 574-4901

NORTH CAROLINA PROFESSIONAL SEAL 019490 ENGINEER RONALD S. HUFF
10-25-21

FINAL DRAWING ☐ FOR REVIEW PURPOSES ONLY
PRELIMINARY ☐ FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING ☑ FOR CONSTRUCTION

NORTHGATE
CAMERON NORTH CAROLINA

PROJECT NO:	21003
DRAWN BY:	J.PARRISH
DATE:	04-15-2021
1	10-07-2021

SHEET NO:
M2

1 / M2 HVAC FLOOR PLAN
SCALE: 1/4" = 1'-0"

ELECTRICAL LEGEND

	DUPLEX RECEPTACLE; MOUNT AT 18" A.F.F.
TR	DUPLEX RECEPTACLE; MOUNT AT 18" A.F.F.; TAMPER RESISTANT
GFCI	DUPLEX RECEPTACLE; GROUND FAULT CIRCUIT INTERRUPTER
TR/GFCI	DUPLEX RECEPTACLE; GROUND FAULT CIRCUIT INTERRUPTER; TAMPER RESISTANT
WP/GFCI	DUPLEX RECEPTACLE; WEATHERPROOF/GROUND FAULT CIRCUIT INTERRUPTER
	QUAD RECEPTACLE; MOUNT AT 18" A.F.F.
	2 POLE/208V RECEPTACLE
	SINGLE POLE POWER/LIGHTING HOMERUN (SINGLE PHASE)
	2-POLE POWER HOMERUN (SINGLE PHASE)
	3-POLE POWER HOMERUN (3 PHASE)
	WALL MOUNTED DATA OUTLET
	WALL MOUNTED VOICE (TELEPHONE) OUTLET
	WALL MOUNTED VOICE/DATA OUTLET
TV	TELEVISION OUTLET
	DISCONNECT
J	JUNCTION BOX
	POWER PANEL
$	SWITCH
OS	OCCUPANCY SENSOR WITH MANUAL OVERRIDE
	LAY-IN/SURFACE MOUNTED LED
	EMERGENCY LIGHT
EXIT	EXIT/EMERGENCY COMBO
EXIT	EXIT LIGHT
	REMOTE HEAD FOR EXIT LIGHTING
	EXTERIOR MOUNTED WALL PACK

PANEL A

PHASE 3 WIRE 4 VOLTS 120/208 MAIN 200 MLO
TYPE NEMA 1 MOUNTING FLUSH ENCLOSURE
SHORT CKT. RATING 22,000 RMS SYM.
☒ GROUND TERMINAL BAR ☒ NEUTRAL TERMINAL BAR

PHASE LOADING A	B	C	DESCRIPTION	CKT. TYPE	WIRE SIZE	CKT. BKR. TRIP	CKT. NO.
643			LIGHTING	C	#12	20/1	1
	901		LIGHTING	C	#12	20/1	3
		720	EXAM RECEPTACLES	R	#12	20/1	5
720			EXAM RECEPTACLES	R	#12	20/1	7
	720		EXAM RECEPTACLES	R	#12	20/1	9
		720	EXAM RECEPTACLES	R	#12	20/1	11
720			TREADMILL RECEPTACLES	R	#12	20/1	13
	720		TREADMILL RECEPTACLES	R	#12	20/1	15
		720	OPEN AREA RECEPTACLES	R	#12	20/1	17
720			OPEN AREA RECEPTACLES	R	#12	20/1	19
	720		OPEN AREA RECEPTACLES	R	#12	20/1	21
		900	OFFICE RECEPTACLES	R	#12	20/1	23
1080			RECEPTION RECEPTACLES	R	#12	20/1	25
	180		TOILET POWER	R	#12	20/1	27
		180	TOILET POWER	R	#12	20/1	29
360			CORRIDOR RECEPTACLES	R	#12	20/1	31
	720		BREAKROOM RECEPTACLES	R	#12	20/1	33
			SPACE				35
			SPACE				37
			SPACE				39
			SPACE				41
4243	3981	3240	SUB-TOTAL (VA)				

CKT. NO.	CKT. BKR. TRIP	WIRE SIZE	CKT. TYPE	DESCRIPTION	PHASE LOADING A	B	C
2					2521		
4	35/3	#8	N	HP-1		2521	
6							2521
8	60/2	#6	N	AHU-1	5304		
10						5304	
12	30/2	#10	N	WATER HEATER			2250
14					2250		
16	40/2	#8	N	DRYER		3500	
18							3500
20	20/1	#12	N	WASHER	1800		
22				SPACE			
24				SPACE			
26				SPACE			
28				SPACE			
30				SPACE			
32				SPACE			
34				SPACE			
36				SPACE			
38				SPACE			
40				SPACE			
42				SPACE			
				SUB-TOTAL (VA)	11875	11325	8271

C CONTINUOUS LOAD
H HVAC LOAD
N NON-CONTINUOUS LOAD
R RECEPTACLE LOAD
K KITCHEN LOAD
E ESTIMATED LOAD

TOTAL CONNECTED LOAD = 42915 KVA AMPS = 119.12
TOTAL OF 42 SPACES

This unit is designed for 10 KW heat kit, but mechanical design is for 8 KW. Need to verify.

PANEL B

PHASE 3 WIRE 4 VOLTS 120/208 MAIN 200 MLO
TYPE NEMA 1 MOUNTING FLUSH ENCLOSURE
SHORT CKT. RATING 22,000 RMS SYM.
☒ GROUND TERMINAL BAR ☒ NEUTRAL TERMINAL BAR

PHASE LOADING A	B	C	DESCRIPTION	CKT. TYPE	WIRE SIZE	CKT. BKR. TRIP	CKT. NO.
723			LIGHTING	C	#12	20/1	1
	1080		RECEPTACLES	R	#12	20/1	3
		900	RECEPTACLES	R	#12	20/1	5
			SPACE				7
			SPACE				9
			SPACE				11
			SPACE				13
			SPACE				15
			SPACE				17
			SPACE				19
			SPACE				21
			SPACE				23
			SPACE				25
			SPACE				27
			SPACE				29
			SPACE				31
			SPACE				33
			SPACE				35
			SPACE				37
			SPACE				39
			SPACE				41
723	1080	900	SUB-TOTAL (VA)				

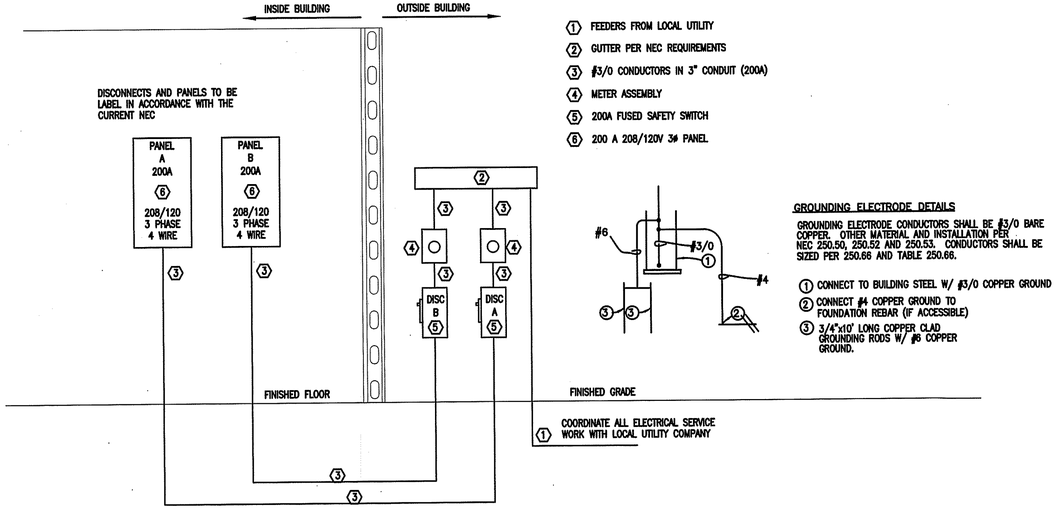
CKT. NO.	CKT. BKR. TRIP	WIRE SIZE	CKT. TYPE	DESCRIPTION	PHASE LOADING A	B	C
2					2161		
4	30/3	#8	N	HP-2		2161	
6							2161
8	50/2	#8	N	AHU-2	4992		
10						4992	
12				SPACE			
14				SPACE			
16				SPACE			
18				SPACE			
20				SPACE			
22				SPACE			
24				SPACE			
26				SPACE			
28				SPACE			
30				SPACE			
32				SPACE			
34				SPACE			
36				SPACE			
38				SPACE			
40				SPACE			
42				SPACE			
				SUB-TOTAL (VA)	7153	7153	2161

C CONTINUOUS LOAD
H HVAC LOAD
N NON-CONTINUOUS LOAD
R RECEPTACLE LOAD
K KITCHEN LOAD
E ESTIMATED LOAD

TOTAL CONNECTED LOAD = 19170 KVA AMPS = 53.22
TOTAL OF 42 SPACES

LIGHT FIXTURE SCHEDULE

TAG	DESCRIPTION	SIZE	MOUNTING	LENS	COLOR	LUMENS OUTPUT	BULB	BALLAST TYPE	HOUSING	VOLTAGE	WATTAGE	MANU/MODEL NUMBER	REMARKS
A	LED RECESSED TROFFER	2' X 4'	LAY-IN	N/A	4000 K	3,000	LED	LED DRIVER	STEEL	120	30	LITHONIA NO. 2RTL4 30L EZ1 LP840 OR EQUAL	
B	LED RECESSED TROFFER	2' X 4'	LAY-IN	N/A	4000 K	7,580	LED	LED DRIVER	STEEL	120	71	LITHONIA NO. 2RTL4 72L EZ1 LP840 OR EQUAL	
C	LED WALL LUMINAIRE	10" X 6"	SURFACE	N/A	5000 K	1,017	LED	LED DRIVER	STEEL	120	19	LITHONIA NO. TWS LED 1 50K 120 PE OR EQUAL	WALL PACK MOUNTED AT 10'-0" A.F.G.
D	LED CANOPY/CEILING	12" X 8"	SURFACE	N/A	5000 K	3,389	LED	LED DRIVER	STEEL	120	41	LITHONIA NO. VRC 1 50K MVOLT OR EQUAL	EXTERIOR CANOPY LIGHT
EM	EMERGENCY	N/A	WALL	N/A	N/A	N/A	(2) LAMPS	ELECTRONIC	POLYCARBONATE	120/240		LITHONIA 6ELM2 N	6 VOLT NICAD BATTERY, TEST SWITCH, POWER INDICATOR
EX	EXIT SIGN	N/A	WALL	SINGLE	N/A	N/A	LED LIGHT	LED DRIVER	POLYCARBONATE	120/240		LITHONIA LHQM S W 3 R 120/240 EL N	6 VOLT NICAD BATTERY, (2) REMOTE HEADS



GROUNDING ELECTRODE DETAILS

GROUNDING ELECTRODE CONDUCTORS SHALL BE #3/0 BARE COPPER. OTHER MATERIAL AND INSTALLATION PER NEC 250.50, 250.52 AND 250.53. CONDUCTORS SHALL BE SIZED PER 250.66 AND TABLE 250.66.

1 CONNECT TO BUILDING STEEL W/ #3/0 COPPER GROUND
2 CONNECT #4 COPPER GROUND TO FOUNDATION REBAR (IF ACCESSIBLE)
3 3/4"x10' LONG COPPER CLAD GROUNDING RODS W/ #6 COPPER GROUND.

POWER RISER DIAGRAM

NOT TO SCALE

ELECTRICAL NOTES:

ALL WORK SHALL BE IN ACCORDANCE WITH 2020 NEC.

WIRE AND CABLE SHALL BE INSULATED, TYPE THHN, 600 VOLTS, WITH COPPER CONDUCTORS. CONDUCTOR SIZES NO. 8 AWG AND LARGER MAY BE STRANDED. CONDUCTOR SIZES NO. 10 AWG AND SMALLER MAY BE SOLID OR STRANDED.

ROMEX CANNOT BE USED IN THIS PROJECT.

EMT SHALL BE GALVANIZED STEEL TUBING 1/2-INCH MINIMUM SIZE, EQUAL TO ELECTRUNITE BRAND OR APPROVED AND USED ONLY WITH HEXAGONAL ALL STEEL COMPRESSION FITTINGS. MC CABLE MAY BE SUBSTITUTED FOR CONDUIT RACEWAYS WHERE PERMITTED BY THE CODE, AND APPROVED BY OWNER

PLASTIC CONDUIT SHALL BE RIGID, 3/4-INCH MINIMUM, NONMETALLIC, HEAVY DUTY, POLYVINYLCHORIDE (PVC), TYPE I WILL BE USED FOR CONCRETE ENCASEMENT. FITTINGS SHALL BE THE SAME MATERIALS AND MANUFACTURER AS THE PLASTIC CONDUIT.

FLEXIBLE METAL CONDUIT SHALL BE 1/2-INCH MINIMUM SINGLE STRIP, STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, MAXIMUM LENGTH OF 72 INCHES FOR LIGHTING, AND 36 INCHES FOR MOTORS. FLEXIBLE METAL CONDUIT SHALL BE LIQUID TIGHT OR WATER TIGHT WITH PVC JACKET WHERE USED IN DAMP, WET, OR OUTSIDE AREAS, AND LIQUID TIGHT OR WATER TIGHT CONNECTORS SHALL BE USED.

NO RECEPTACLES OR TELEPHONE OUTLETS ARE TO BE MOUNTED BACK TO BACK. KEEP AT LEAST 1 1/2 INCHES BETWEEN RECEPTACLES AND TELEPHONE OUTLETS.

ALL RECEPTACLES WITHIN THE FOLLOWING COMMERCIAL SPACES SHALL BE TAMPER RESISTANT PER 2017 NEC 406.12: MOTEL GUEST/SUITE ROOMS, CHILD CARE FACILITIES, PRESCHOOLS AND ELEMENTARY EDUCATION FACILITIES, BUSINESS OFFICES, CORRIDORS, WAITING ROOMS AND THE LIKE AT (CLINICS, MEDICAL AND DENTAL OFFICES, AND OUTPATIENT FACILITIES), SUBSET OF ASSEMBLY OCCUPANCIES DESCRIBED 518.2 TO INCLUDE PLACES OF WAITING TRANSPORTATION, GYMNASIUMS, SKATING RINKS, AND AUDITORIUMS, AND DORMITORIES.

ALL CONDUCTORS SHALL BE COPPER WITH A MINIMUM SIZE OF #12 AWG EXCEPT FOR FIRE ALARM. THESE CONDUCTORS SHOULD COMPLY WITH NFPA REQUIREMENTS.

THE ELECTRICAL CONTRACTOR SHALL ALIGN ALL FIXTURES, SMOKE DETECTORS, CEILING DIFFUSERS, ETC. AS REQUIRED TO PROVIDE A UNIFORM PRESENTATION. FOLLOW THE REFLECTED CEILING PLAN IF PROVIDED

CIRCUIT BREAKERS AND WIRE ARE SIZED FOR SPECIFIC EQUIPMENT. BEFORE ORDERING WIRE, BREAKERS, FIXTURES, CONDUIT, AND ETC. FOR THIS PROJECT; THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS ON THE JOB AND VERIFY THE ELECTRICAL DATA FOR THE EQUIPMENT THAT WILL BE ACTUALLY INSTALLED. RECOMPUTE WIRE AND BREAKER SIZES IF REQUIRED BY THE NEC.

THE MOUNTING HEIGHTS AND LOCATIONS OF ALL WALL MOUNTED OUTLETS AND JUNCTION BOXES SHALL BE REVIEWED AND COORDINATED WITH THE GENERAL CONTRACTOR AND OWNER PRIOR TO INSTALLATION FOR USE WITH ACTUAL EQUIPMENT.

ALL LIGHT SWITCHES, RECEPTACLES, WALL PLATES, TELEPHONE/COMPUTER OUTLET BOXES, AND, CABLE OUTLET BOXES SHALL BE WHITE.

EACH CONTRACTOR WILL PROVIDE HIS OWN SUPPORT OF ALL DEVICES AND EQUIPMENT PROVIDED IN HIS CONTRACT AND SHALL SUPPORT SUCH EQUIPMENT PER APPROVED GOVERNING CODES. UNACCEPTABLE WORKMANSHIP OR MATERIALS SHALL BE REPLACED AT THE ELECTRICAL CONTRACTORS EXPENSE.

THE ELECTRICAL CONTRACTOR SHALL REFER TO THE DRAWINGS FOR FLOOR PLAN AND BUILDING ELEVATION DIMENSIONS.

THE ELECTRICAL CONTRACTOR TO ORGANIZE HIS CONDUIT, WIRE, AND CABLE RUNS IN ATTIC SPACES AND ABOVE CEILINGS. MAKE RUNS PARALLEL, PERPENDICULAR, AND GROUPED TOGETHER WHERE POSSIBLE. LOCATE MAJOR GROUPINGS OVER HALLWAYS AND AREAS OF PUBLIC ACCESS. FREE RUNS OF PHONE, TELEVISION, SECURITY, ALARM, AND OTHER CABLES IS NOT ACCEPTABLE.

ALL DISCONNECT SWITCHES AND BREAKER SIZES SHOWN FOR MECHANICAL EQUIPMENT, KITCHEN EQUIPMENT, AND ETC. SHALL BE VERIFIED BEFORE PURCHASE AND INSTALLATION OF SAID EQUIPMENT WITH THE EQUIPMENT SUPPLIER AND MECHANICAL CONTRACTOR.

WHERE EQUIPMENT PENETRATES EXTERIOR WALLS OR ROOF, THEY SHALL BE PROPERLY SEALED.

EXHAUST FANS ARE TO BE PROVIDED AND INSTALLED BY THE MECHANICAL CONTRACTOR, AND ELECTRICAL WIRING BY THE ELECTRICAL CONTRACTOR.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT, SWITCHES, PANELS, ETC. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT AND BACK WITH WHITE CORE. WHITE ENGRAVED LETTERS (1/4 INCH MINIMUM) ETCHED INTO THE WHITE CORE. NAME TAGS TO BE MOUNTED WITH SELF-TAPPING SHEET METAL SCREWS.

THE ELECTRICAL CONTRACTOR IS NOT TO SCALE THE DRAWINGS FOR RECEPTACLES AND LIGHT FIXTURES TO BE INSTALLED. THE DRAWINGS ARE FOR DIAGRAMMATIC PURPOSES ONLY TO SHOW GENERAL LOCATION. THE ELECTRICAL CONTRACTOR TO COORDINATE EXACT LOCATION OF RECEPTACLES AND LIGHT FIXTURES WITH THE GENERAL CONTRACTOR AND/OR CASEWORK DRAWINGS.

QUIKDRAFT
DRAFTING & DESIGN
(910) 574-4901

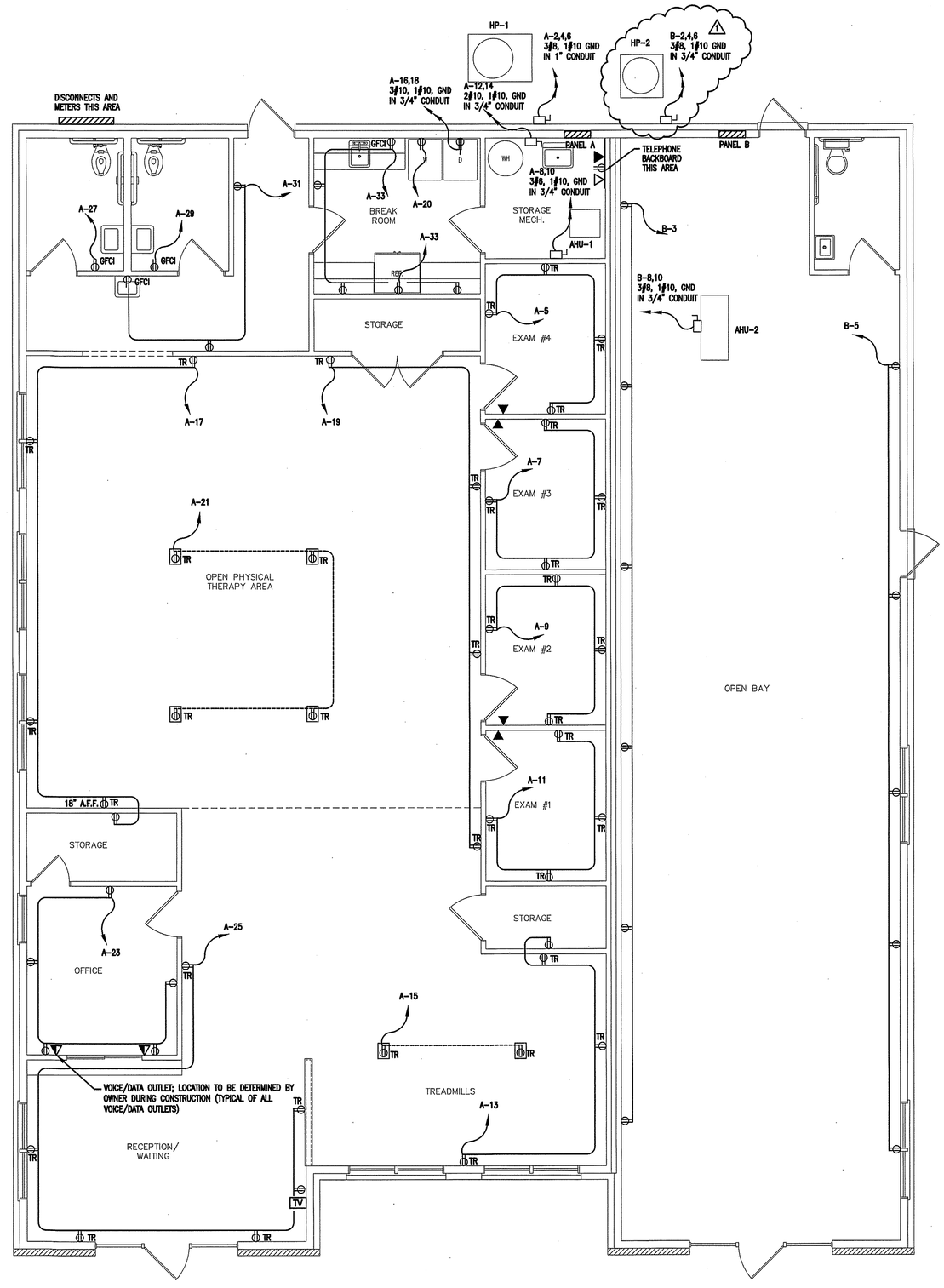
NORTH CAROLINA PROFESSIONAL SEAL 14907 ENGINEER RONALD S. HUFF
10-25-21

FINAL DRAWING ☐ FOR REVIEW PURPOSES ONLY
PRELIMINARY ☐ FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING ☑ FOR CONSTRUCTION

NORTHGATE
CAMERON NORTH CAROLINA

PROJECT NO: 21003
DRAWN BY: J.PARRISH
DATE: 04-15-2021
1 10-07-2021

SHEET NO: E1



1 E2 ELECTRICAL FLOOR PLAN – POWER
SCALE: 1/4" = 1'-0"

QUIKDRAFT

DRAFTING & DESIGN

(910) 574-4901

NORTH CAROLINA PROFESSIONAL SEAL 14907 ENGINEER RONALD S. HUFF

10-25-21

FINAL DRAWING [ ] FOR REVIEW PURPOSES ONLY
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FINAL DRAWING [X] FOR CONSTRUCTION

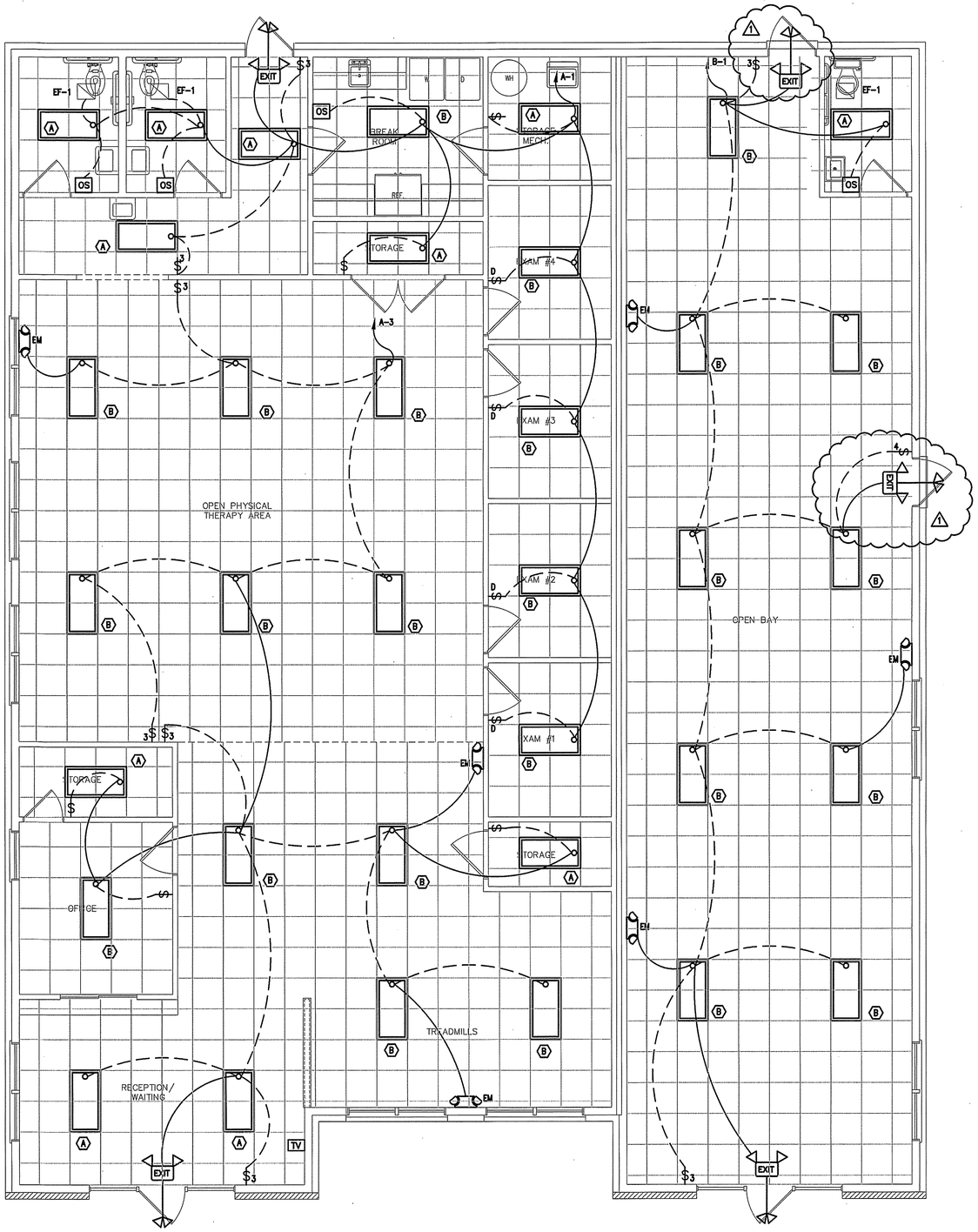
NORTHGATE

CAMERON NORTH CAROLINA

PROJECT NO: 21003
DRAWN BY: J.PARRISH
DATE: 04-15-2021
1 10-07-2021

SHEET NO:
E2

Occupancy sensors shall be installed in all room listed in C405.2.1



1 E3 ELECTRICAL FLOOR PLAN – LIGHTING
SCALE: 1/4" = 1'-0"

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(910) 574-4901

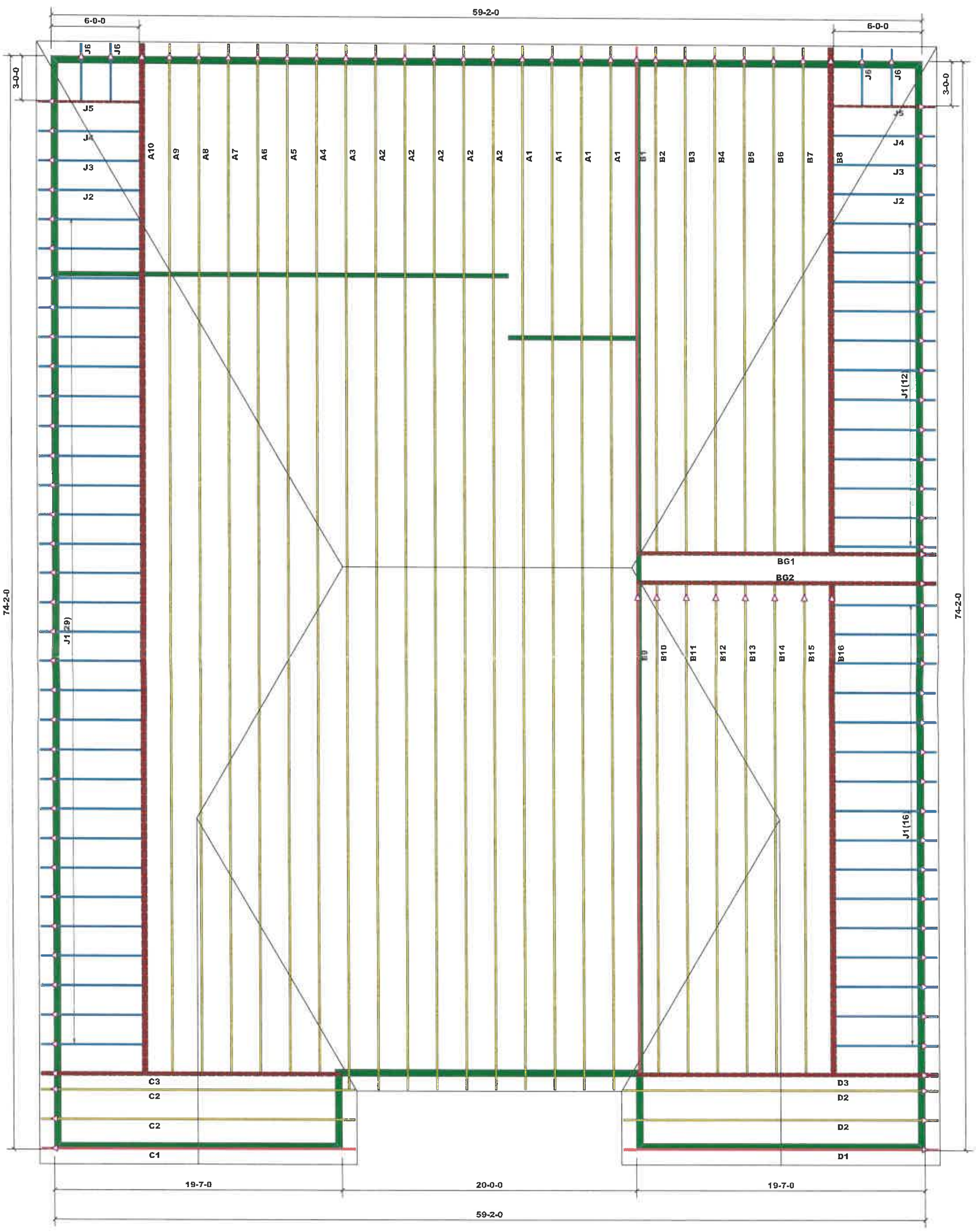
NORTH CAROLINA PROFESSIONAL SEAL 14907 ENGINEER RONALD S. WUFF
10-25-21

FINAL DRAWING ☐ FOR REVIEW PURPOSES ONLY
PRELIMINARY ☐ FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING ☑ FOR CONSTRUCTION

NORTHGATE
CAMERON NORTH CAROLINA

PROJECT NO:	21003
DRAWN BY:	J.PARRISH
DATE:	04-15-2021
1	10-07-2021

SHEET NO:
E3



= Load Bearing Walls

= Indicates Left End of Truss
(Reference Engineered Truss Drawing)
Do NOT Erect Truss Backwards

Truss Placement Plan
SCALE: NTS

LOAD CHART FOR JACK STUDS
(BASED ON TABLES R502.5(1) & (b))
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (UP TO)	REQ'D STUDS FOR (2) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (3) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (4) PLY HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Onsite Homes	CITY / CO.	spout springs / Harnett
JOB NAME	1610 NORTHGATE	ADDRESS	NORTHGATE 5C
PLAN	NORTHGATE 5C	MODEL	Roof
SEAL DATE	Seal Date	DATE REV.	05/13/21
QUOTE #	B1120-5567	DRAWN BY	Marshall Naylor
JOB #	J1120-5567	SALES REP.	Marshall Naylor

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY.
These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com

Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature Marshall Naylor
Marshall Naylor

COMTECH
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