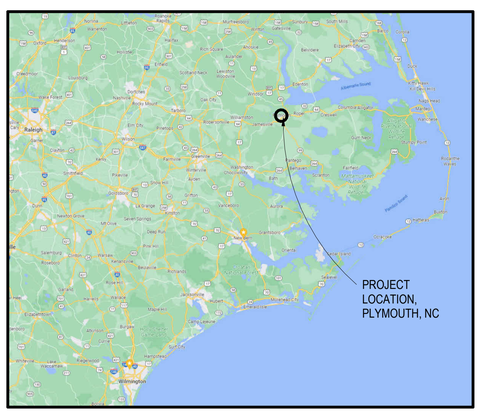
DACS- Tidewater Reseach Station- Swine Unit Replacement

207 Research Station Rd. Plymouth, NC 27962

SCO# 22-25072-01A

VICINITY MAP



LOCATION MAP

GENERAL PROJECT NOTES

1. EXISTING SWINE COMPLEX WILL REMAIN OPERATIONAL FOR DURATION OF PROJECT UNTIL NEW COMPLEX IS CONSTRUCTED. EXISTING UTILITIES MUST BE MAINTAINED.

2. OWNER TO PROVIDE LAY DOWN AREA ON SITE. NO DRIVES SHALL BE BLOCKED BY CONTRACTOR EQUIPMENT.

3. OWNER TO PROVIDE BARN EQUIPMENT. SEE QA101-103, SEE MECHANICAL/PLUMBING/ELECTRICAL FOR COORDINATION INFORMATION.

GOVERNING REGULATIONS

BUILDING CODE:
NORTH CAROLINA STATE BUILDING CODE (2018)

ACCESSIBILITY CODE:
ICC A117.1 - 2009

MECHANICAL CODE:
INTERNATIONAL MECHANICAL CODE (IMC) 2018 EDITION

ELECTRICAL CODE:
NFPA 70, NATIONAL ELECTRIC CODE (2020 EDITION)

PLUMBING CODE:
INTERNATIONAL PLUMBING CODE (IPC) 2018 EDITION

FIRE PREVENTION & LIFE SAFETY CODE:
NORTH CAROLINA STATE FIRE PREVENTION CODE (2018)

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number: 2212.HOGS
Date: 07/05/24
Drawn: CBW
Checked: BBW
Scale: AS NOTED
Drawing Title: **Cover Sheet**

Sheet Number: 1 Of 139
Drawing Number: GI001

INDEX OF DRAWINGS

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4	GI004	Code Analysis- Farrowing Building
5	GI005	Code Analysis- Breeding/Gestation Building
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7	GI007	Life Safety Plan- BioSecurity Building
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10	GI010	Life Safety Plan- Wean to Finish Building
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DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

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Scale
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Drawing Title
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Drawing Number
GI002

BIOSECURITY BUILDING
2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

Name of Project: DACS- Tidewater Research Station Swine Unit Replacement (BioSecurity Building)

Address: 207 Research Station Rd, Plymouth, NC 27962 Zip Code : 27962

Owner or Authorized Agent: Chris Walker Phone # : 252-636-8778 E-Mail : chris@wgarc.com

Owned By: ☐ City/County ☐ Private ☒ State

Code Enforcement Jurisdiction: ☒ City Plymouth ☐ County ☒ State

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-Mail
Architectural	The Walker Group Architecture, Inc.	Chris Walker	15616	252-636-8778	chris@wgarc.com
Civil	Avolis Engineering	Kevin Avolis	15736	252 633-0068	avolisengineering@embarqmail.com
Electrical	PACE Collaborative	James Barkley	046553	757-486-4223	james@pace-pme.com
Fire Alarm					
Plumbing	PACE Collaborative	Tim Hahn	046553	757-486-4223	tim@pace-pme.com
Mechanical	PACE Collaborative	Tim Hahn	046553	757-486-4223	tim@pace-pme.com
Sprinkler-Standpipe					
Structural	NRW Engineering	Kevin Roornburg	022830	757-474-0812	knr@nrwengineering.com
Retaining Walls > 5' High					
Other					

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ☒ New Building ☐ Addition ☐ Renovation

☐ 1st 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 ☐ Level I ☐ Level II ☐ Level III ☐ Historic Property ☐ Change of Use

CONSTRUCTED: (date) N/A **CURRENT OCCUPANCY(S):** (Ch. 3): N/A

RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S):** (Ch. 3): BUSINESS

RISK CATEGORY (Table 1604.5): Current: ☐ I ☐ II ☐ III ☐ IV Proposed: ☐ I ☒ II ☐ III ☐ IV

BASIC BUILDING DATA

Construction Type: (check all that apply) ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A ☐ I-B ☐ II-B ☐ III-B ☒ 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

Special Inspections Required: ☒ No ☐ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table

FLOOR	EXISTING(SQ.FT.)	RENOVATION (SQ.FT.)	NEW CONSTRUCTION
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor			2,000 SF
Basement			
TOTAL			2,000 SF

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; ☐ I-4

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 Classifications(s): _____

Incidental Uses: (Table 509): _____

Special Uses (Chapter 4 - List Code Sections): _____

Special Provisions (Chapter 5 - List Code Sections): _____

Mixed Occupancy: ☒ No ☐ Yes Separation N/A Hr. Exception: 302.1

☐ Non-Separated Use (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 Use (302.3.2) - 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.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad} \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG. AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,2]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED [2,3]
1ST FLOOR	BUSINESS	2,000 SF	9,000 SF	6,750 SF	15,750 SF

[1] Frontage area increases from Section 506.3 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = 187 (F)
b. Total Building Perimeter = 187 (P)
c. Ratio (F/P) = 1 (F/P)
d. W = Minimum width of public way = 30 (W)
e. Percent of frontage increase I_f = 100 [F/P-0.25] x W/30 = 75 (%)

[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 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 PLAN	CODE REFERENCE[1]
Building Height in Feet (Table 504.3)[2]	40'	17'-0"	503
Building Height in Stories (Table 504.4)[3]	2	1	503

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

[2] The maximum height of air traffic control towers must comply with Table 412.3.1.

[3] The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS

Life Safety Plan Sheet #, if Provided G007

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	>30 Ft	0	0	N/A	N/A	N/A	N/A
Bearing walls							
Exterior	>30 Ft	0	0	N/A	N/A	N/A	N/A
North	>30 Ft	0	0	N/A	N/A	N/A	N/A
East	>30 Ft	0	0	N/A	N/A	N/A	N/A
West	>30 Ft	0	0	N/A	N/A	N/A	N/A
South	>30 Ft	0	0	N/A	N/A	N/A	N/A
Interior		0	0	N/A	N/A	N/A	N/A
Nonbearing walls and partitions							
Exterior	>30 Ft	0	0	N/A	N/A	N/A	N/A
North	>30 Ft	0	0	N/A	N/A	N/A	N/A
East	>30 Ft	0	0	N/A	N/A	N/A	N/A
West	>30 Ft	0	0	N/A	N/A	N/A	N/A
South	>30 Ft	0	0	N/A	N/A	N/A	N/A
Interior		0	0	N/A	N/A	N/A	N/A
Floor construction Including supporting beams and joists		N/A	N/A	N/A	N/A	N/A	N/A
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof construction Including supporting beams and joists		N/A	N/A	N/A	N/A	N/A	N/A
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit		N/A	N/A	N/A	N/A	N/A	N/A
Shaft Enclosures - Other		N/A	N/A	N/A	N/A	N/A	N/A
Cooridor Separation		N/A	N/A	N/A	N/A	N/A	N/A
Occupancy/Fire Barrier Separation		N/A	N/A	N/A	N/A	N/A	N/A
Fire Area Separation		N/A	N/A	-	-	-	-
Smoke Barrier Separation		N/A	N/A	N/A	N/A	N/A	N/A
Smoke Partition							
Tenant/Dwelling Unit/Sleeping Unit Separation		N/A	N/A	N/A	N/A	N/A	N/A
Incidental Use Separation							

PERCENTAGE OF WALL OPENING CALCULATIONS

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

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ N/a ☒ Yes

Exit Signs: ☐ No ☒ Yes

Fire Alarm system: ☒ No ☐ Yes

Smoke Detection Systems: ☒ No ☐ Yes ☐ Partial _____

Carbon Monoxide Detection: ☒ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: 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)
- X Occupancy Use for each area as it relates to occupant load calculations (Table 1004.1.2)
- X Occupant loads for each area
- X Exit access travel distances (1017)
- X Common path of travel distances (Tables 1006.2.1 and 1006.3.2(1))
- X Dead end lengths (1020.4)
- X Clear exit widths for each exit door
- X Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- X 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
- X 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 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)

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

ACCESSIBLE PARKING (SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	8' ACCESS AISLE	
1	11	11	1	0	1	2
TOTAL						

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

	USE	WATERCLOSETS			URINALS	LAVATORIES			SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXISTING										
	NEW	1	2	1	2	2	2	1			1
	REQUIRED	1	1	-	-	1	1	-			1

TOTAL BUILDING OCCUPANTS: 20

SPECIAL APPROVALS

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: ☐ No ☐ Yes (The remainder of this section is not applicable)

Exempt Building: ☒ No ☐ Yes (Provide code or statutory reference): _____

Climate Zone: ☒ 3A ☐ 4A ☐ 5A

Method of Compliance: Energy Code ☐ Performance ☒ Prescriptive

ASHRAE 90.1 ☐ Performance ☐ Prescriptive

(If "Other" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly) STANDING SEAM METAL ROOF, VAPOR BARRER, 1/2" SHEATHING, WOOD TRUSSES, R-38 BATT
Description of assembly INSULATION, GYPSUM BOARD CEILING
U-Value of total assembly 0.04
R-Value of insulation 38
Skylights in each assembly N/A
U-Value of skylight
total square footage of skylights in each assembly

Exterior Walls (each assembly) HARDIPLANK SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2X6 WOOD STUDS AT 16" O.C., R-20 BATT
Description of assembly: INSULATION, 5/8" GYPSUM BOARD.
U-Value of total assembly: 0.056
R-Value of insulation: 20
Openings (windows or doors with glazing)
U-Value of assembly: 0.60
Solar heat gain coefficient: 0.25
projection factor: 0.15
Door R-Values: 1.3

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

Floors over unconditioned space (each assembly) N/A
Description of assembly
U-Value of total assembly
R-Value of insulation

Floors slab on grade (each assembly)
Description of assembly 4" CONCRETE FLOOR SLAB
U-Value of total assembly 0.42
R-Value of insulation N/A
Horizontal/vertical requirement N/A
slab heated N/A

STRUCTURAL DESIGN

DESIGN LOADS:

Importance Factors: Snow (I_s) 1.0 Seismic (I_s) 1.0

Live Loads: Roof 20 psf Mezzanine N/A psf Floor 100 psf

Ground Snow Load: 10 psf

Wind Load: Ultimate Wind Speed 122 mph (ASCE-7-10) Exposure Category C

SEISMIC DESIGN CATEGORY ☐ A ☒ B ☐ C ☐ D

Provide the following Seismic Design Parameters:

Risk Category (Table 1604.5) ☐ I ☒ II ☐ III ☐ IV

Spectral Response Acceleration S_s 0.102 %g S_1 0.053 %g

Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☒ D ☐ E ☐ F

Data Source: ☒ Field Test ☐ Presumptive ☐ Historical Data

Basic structural system ☒ Bearing Wall ☐ Building Frame ☐ Moment Frame ☐ Dual w/ Special Moment Frame ☐ Dual w/ Intermediate R/C or Special Steel ☐ Inverted Pendulum

Analysis Procedure: ☐ Simplified ☒ Equivalent Lateral Force ☐ Dynamic

Architectural, Mechanical, Components anchored? ☐ Yes ☒ No

LATERAL DESIGN CONTROL: ☐ Earthquake ☒ Wind

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) 2000 psf
Presumptive Bearing capacity _____ psf
Pile size, type and capacity _____

MECHANICAL DESIGN

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb 22 °
summer dry bulb 92 °

Interior design conditions
winter dry bulb 68 °
summer dry bulb 75 °
relative humidity 50%

Building heating load

Building cooling load 6 TONS

Mechanical Spacing Conditioning system
Unitary
description of unit
heating efficiency
cooling efficiency
size category of unit
Boiler
size category. If oversized, state reason.
Chiller
size category. If oversized, state reason.

List Equipment efficiencies

ELECTRICAL DESIGN

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

Lighting schedule (each fixture type)
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 (whole building or space by space)
total exterior wattage specified vs. allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

- ☐ 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

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No. Date

Project Number **2212.HOGS**

Date **07/05/24**

Drawn **CBW**

Checked **BBW**

Scale **AS NOTED**

Drawing Title

Code Analysis- BioSecurity Building

Sheet Number 3 Of 139

Drawing Number **GI003**

FARROWING BUILDING
2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

Name of Project: DACS- Tidewater Research Station Swine Unit Replacement (Farrowing Building)

Address: 207 Research Station Rd, Plymouth, NC 27962 Zip Code : 27962

Owner or Authorized Agent: Chris Walker Phone # : 252-636-8778 E-Mail : chris@wgarc.com

Owned By: [ ] City/County [ ] Private [X] State

Code Enforcement Jurisdiction: [X] City Plymouth [ ] County [X] State

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-Mail
Architectural	The Walker Group Architecture, Inc.	Chris Walker	15816	252-636-8778	chris@wgarc.com
Civil	Avolis Engineering	Kevin Avolis	15736	252-532-0268	avolisengineering@embarqmail.com
Electrical	PACE Collaborative	James Barkley	046553	757-499-4223	james@pace-pme.com
Fire Alarm					
Plumbing	PACE Collaborative	Tim Hahn	046553	757-499-4223	tim@pace-pme.com
Mechanical	PACE Collaborative	Tim Hahn	046553	757-499-4223	tim@pace-pme.com
Sprinkler-Standpipe					
Structural	NRW Engineering	Kevin Roomberg	022830	757-474-0812	krm@nrwengineering.com
Retaining Walls > 5' High					
Other					

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: [X] New Building [ ] Addition [ ] Renovation

[ ] 1st 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 [ ] Level I [ ] Level II [ ] Level III [ ] Historic Property [ ] Change of Use

CONSTRUCTED: (date) N/A **CURRENT OCCUPANCY(S):** (Ch. 3): N/A

RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S):** (Ch. 3): UTILITY (BARN)

RISK CATEGORY (Table 1604.5): Current: [ ] I [ ] II [ ] III [ ] IV Proposed: [X] I [ ] II [ ] III [ ] IV

BASIC BUILDING DATA

Construction Type: (check all that apply) [ ] I-A [ ] II-A [ ] III-A [ ] IV [ ] V-A [ ] I-B [ ] II-B [ ] III-B [X] V-B

Sprinklers: [X] No [ ] Partial [ ] Yes [ ] NFPA 13 [ ] NFPA 13R [ ] NFPA 13D

Standpipes: [X] No [ ] Yes Class [ ] I [ ] II [ ] III [ ] Wet [ ] Dry

Fire District: [X] No [ ] Yes **Flood Hazard Area :** [X] No [ ] Yes

Special Inspections Required: [X] No [ ] Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table

FLOOR	EXISTING(SQ.FT.)	RINOVATION (SQ.FT.)	NEW CONSTRUCTION
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor			8,954 SF
Basement			
TOTAL			8,954 SF

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
[ ] I-4
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 [X]

Accessory Occupancy Classifications(s):

Incidental Uses: (Table 509):

Special Uses (Chapter 4 - List Code Sections):

Special Provisions (Chapter 5 - List Code Sections):

Mixed Occupancy: [X] No [ ] Yes Separation N/A Hr. Exception: 302.1

[ ] Non-Separated Use (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 Use (302.3.2) - 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.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

_____ + _____ = _____ ≤1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG. AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,2]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED [2,3]
1ST FLOOR	UTILITY (BARN)	8,954 SF	12,000 SF	9,000 SF	21,000 SF

[1] Frontage area increases from Section 506.3 are computed thus:
a. Perimeter which fronts a public way or open space having 20 foot minimum width = 458' (F)
b. Total Building Perimeter = 458' (P)
c. Ratio (F/P) = 1 (F/P)
d. W = Minimum width of public way = 30' (W)
e. Percent of frontage increase $I_f = 100\ [F/P-0.25] \times W/30 =$ 75 (%)

[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 parking garages must comply with Table 406.5.4.
[4] Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLAN	CODE REFERENCE[1]
Building Height in Feet (Table 504.3)[2]	40'	21'	503
Building Height in Stories (Table 504.4)[3]	2	1	503

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
[2] The maximum height of air traffic control towers must comply with Table 412.3.1.
[3] The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS

Life Safety Plan Sheet #, if Provided G008

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	>30 Ft	0	0	N/A	N/A	N/A	N/A
Bearing walls							
Exterior	>30 Ft	0	0	N/A	N/A	N/A	N/A
North	>30 Ft	0	0	N/A	N/A	N/A	N/A
East	>30 Ft	0	0	N/A	N/A	N/A	N/A
West	>30 Ft	0	0	N/A	N/A	N/A	N/A
South	>30 Ft	0	0	N/A	N/A	N/A	N/A
Interior		0	0	N/A	N/A	N/A	N/A
Nonbearing walls and partitions							
Exterior	>30 Ft	0	0	N/A	N/A	N/A	N/A
North	>30 Ft	0	0	N/A	N/A	N/A	N/A
East	>30 Ft	0	0	N/A	N/A	N/A	N/A
West	>30 Ft	0	0	N/A	N/A	N/A	N/A
South	>30 Ft	0	0	N/A	N/A	N/A	N/A
Interior		0	0	N/A	N/A	N/A	N/A
Floor construction Including supporting beams and joists		N/A	N/A	N/A	N/A	N/A	N/A
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof construction Including supporting beams and joists		N/A	N/A	N/A	N/A	N/A	N/A
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit		N/A	N/A	N/A	N/A	N/A	N/A
Shaft Enclosures - Other		N/A	N/A	N/A	N/A	N/A	N/A
Cooridor Separation		N/A	N/A	N/A	N/A	N/A	N/A
Occupancy/Fire Barrier Separation		N/A	N/A	N/A	N/A	N/A	N/A
Fire Area Separation		N/A	N/A	-	-	-	-
Smoke Barrier Separation		N/A	N/A	N/A	N/A	N/A	N/A
Smoke Partition		N/A	N/A	N/A	N/A	N/A	N/A
Tenant/Dwelling Unit/Sleeping Unit Separation		N/A	N/A	N/A	N/A	N/A	N/A
Incidental Use Separation							

PERCENTAGE OF WALL OPENING CALCULATIONS

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

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: [ ] No [X] Yes
Exit Signs: [ ] No [X] Yes
Fire Alarm system: [X] No [ ] Yes
Smoke Detection Systems: [X] No [ ] Yes [ ] Partial _____
Carbon Monoxide Detection: [X] No [ ] Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: G006

- 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)
- [X] Occupancy Use for each area as it relates to occupant load calculations (Table 1004.1.2)
- [X] Occupant loads for each area
- [X] Exit access travel distances (1017)
- [X] Common path of travel distances (Tables 1006.2.1 and 1006.3.2(1))
- [X] Dead-end lengths (1020.4)
- [X] Clear exit widths for each exit door
- [X] Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- [X] 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
- [X] 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 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)

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

ACCESSIBLE PARKING (SEE BIOSECURITY CODE SUMMARY) **(SECTION 1106)**

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

PLUMBING FIXTURE REQUIREMENTS (N/A) **(TABLE 2902.1)**

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXISTING										
	NEW										
	REQUIRED										

SPECIAL APPROVALS

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: [ ] No [ ] Yes (The remainder of this section is not applicable)

Exempt Building: [ ] No [X] Yes (Provide code or statutory reference): GS 143-138

Climate Zone: [X] 3A [ ] 4A [ ] 5A

Method of Compliance: Energy Code [ ] Performance [ ] Prescriptive
ASHRAE 90.1 [ ] Performance [ ] Prescriptive
(If "Other" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly) METAL ROOF, VAPOR BARRIER, 1/2" SHEATHING, WOOD TRUSSES, R-38 BATT INSULATION, METAL CEILING
Description of assembly
U-Value of total assembly 0.04
R-Value of insulation 38
Skylights in each assembly N/A
U-Value of skylight
total square footage of skylights in each assembly

Exterior Walls (each assembly) METAL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2X6 WOOD STUDS AT 16" O.C., R-20 BATT INSULATION,
Description of assembly: INTERIOR METAL PANEL
U-Value of total assembly: 0.056
R-Value of insulation: 20
Openings (windows or doors with glazing)
U-Value of assembly: 0.60
Solar heat gain coefficient: 0.25
projection factor: 0.15
Door R-Values: 1.3

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

Floors over unconditioned space (each assembly)
Description of assembly 4" CONCRETE SLATS OVER SHALLOW PIT
U-Value of total assembly
R-Value of insulation

Floors slab on grade (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Horizontal/vertical requirement
slab heated

STRUCTURAL DESIGN

DESIGN LOADS:

Importance Factors: Snow (I_S) 0.8 Seismic (I_E) 1.0

Live Loads: Roof 20 psf Mezzanine N/A psf Floor 125 psf

Ground Snow Load: 10 psf

Wind Load: Ultimate Wind Speed 113 mph (ASCE-7-10) Exposure Category C

SEISMIC DESIGN CATEGORY [ ] A [X] B [ ] C [ ] D
Provide the following Seismic Design Parameters:

Risk Category (Table 1604.5) [X] I [ ] II [ ] III [ ] IV

Spectral Response Acceleration S_s 0.102 %g S_1 0.053 %g

Site Classification (ASCE 7) [ ] A [ ] B [ ] C [X] D [ ] E [ ] F
Data Source: [X] Field Test [ ] Presumptive [ ] Historical Data

Basic structural system [X] Bearing Wall [ ] Building Frame [ ] Moment Frame [ ] Dual w/ Special Moment Frame [ ] Dual w/ Intermediate R/C or Special Steel [ ] Inverted Pendulum

Analysis Procedure: [ ] Simplified [X] Equivalent Lateral Force [ ] Dynamic

Architectural, Mechanical, Components anchored? [ ] Yes [X] No

LATERAL DESIGN CONTROL: [ ] Earthquake [X] Wind

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) 2000 psf
Prescriptive Bearing capacity _____ psf
Pile size, type and capacity _____

MECHANICAL DESIGN

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb 22 °
summer dry bulb 92 °

Interior design conditions
winter dry bulb
summer dry bulb
relative humidity

Building heating load

Building cooling load Design Temperature: 74 degrees

Mechanical Spacing Conditioning system
Unitary
description of unit
heating efficiency
cooling efficiency
size category of unit
Boiler
size category. If oversized, state reason.
Chiller
size category. If oversized, state reason.

List Equipment efficiencies

ELECTRICAL DESIGN

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code [X] Prescriptive [ ] Performance
ASHRAE 90.1 [ ] Prescriptive [ ] Performance

Lighting schedule (each fixture type)
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 (whole building or space by space)
total exterior wattage specified vs. allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

- [ ] C406.2 More Efficient HVAC Equipment Performance
- [X] 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

the WALKER GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn CBW
Checked BBW
Scale AS NOTED
Drawing Title

Code Analysis- Farrowing Building

Sheet Number 4 Of 139
Drawing Number G1004

BREEDING/GESTATION BUILDING
2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

Name of Project: DACS- Tidewater Research Station Swine Unit Replacement (Breeding/Gestation Building)

Address: 207 Research Station Rd, Plymouth, NC 27962 Zip Code : 27962

Owner or Authorized Agent: Chris Walker Phone # : 252-636-8778 E-Mail : chris@wgarc.com

Owned By: [ ] City/County [ ] Private [X] State

Code Enforcement Jurisdiction: [X] City Plymouth [ ] County [X] State

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-Mail
Architectural	The Walker Group Architecture, Inc.	Chris Walker	15616	252-636-8778	chris@wgarc.com
Civil	Avella Engineering	Kevin Avella	15738	252 833-0068	avellaengineering@embarqmail.com
Electrical	PACE Collaborative	James Barkley	046553	757-499-4223	james@pace-pme.com
Fire Alarm					
Plumbing	PACE Collaborative	Tim Hahn	046553	757-499-4223	tim@pace-pme.com
Mechanical	PACE Collaborative	Tim Hahn	046553	757-499-4223	tim@pace-pme.com
Sprinkler-Standpipe					
Structural	NRW Engineering	Kevin Roomsburg	022830	757-474-0612	krr@nrwengineering.com
Retaining Walls > 5' High					
Other					

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: [X] New Building [ ] Addition [ ] Renovation

[ ] 1st 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 [ ] Level I [ ] Level II [ ] Level III [ ] Historic Property [ ] Change of Use

CONSTRUCTED: (date) N/A **CURRENT OCCUPANCY(S):** (Ch. 3): N/A

RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S):** (Ch. 3): UTILITY (BARN)

RISK CATEGORY (Table 1604.5): Current: [ ] I [ ] II [ ] III [ ] IV Proposed: [X] I [ ] II [ ] III [ ] IV

BASIC BUILDING DATA

Construction Type: (check all that apply) [ ] I-A [ ] I-B [ ] II-A [ ] II-B [ ] III-A [ ] III-B [ ] IV [ ] V-A [X] V-B

Sprinklers: [X] No [ ] Partial [ ] Yes [ ] NFPA 13 [ ] NFPA 13R [ ] NFPA 13D

Standpipes: [X] No [ ] Yes Class [ ] I [ ] II [ ] III [ ] Wet [ ] Dry

Fire District: [X] No [ ] Yes **Flood Hazard Area :** [X] No [ ] Yes

Special Inspections Required: [X] No [ ] Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table

FLOOR	EXISTING(SQ.FT.)	RENOVATION (SQ.FT.)	NEW CONSTRUCTION
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor			11,576SF
Basement			
TOTAL			11,576 SF

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; [ ] I-4

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 [X]

Accessory Occupancy Classifications(s): _____

Incidental Uses: (Table 509): _____

Special Uses (Chapter 4 - List Code Sections): _____

Special Provisions (Chapter 5 - List Code Sections): _____

Mixed Occupancy: [X] No [ ] Yes Separation N/A Hr. Exception: 302.1

[ ] Non-Separated Use (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 Use (302.3.2) - 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.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \quad \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG. AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,2]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED [2,3]
1ST FLOOR	UTILITY (BARN)	11,576 SF	12,000 SF	9,000 SF	21,000 SF

[1] Frontage area increases from Section 506.3 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = 528' (P)
b. Total Building Perimeter = 528' (P)
c. Ratio (F/P) = 1 (F/P)
d. W = Minimum width of public way = 30' (W)
e. Percent of frontage increase I_f = 100 [F/P-0.25] x W/30 = 75 (%)

[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 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 PLAN	CODE REFERENCE[1]
Building Height in Feet (Table 504.3)[2]	40'	21'	503
Building Height in Stories (Table 504.4)[3]	2	1	503

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

[2] The maximum height of air traffic control towers must comply with Table 412.3.1.

[3] The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS

Life Safety Plan Sheet #, if Provided G009

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQD	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	>30 Ft	0	0	N/A	N/A	N/A	N/A
Bearing walls							
Exterior	>30 Ft	0	0	N/A	N/A	N/A	N/A
North	>30 Ft	0	0	N/A	N/A	N/A	N/A
East	>30 Ft	0	0	N/A	N/A	N/A	N/A
West	>30 Ft	0	0	N/A	N/A	N/A	N/A
South	>30 Ft	0	0	N/A	N/A	N/A	N/A
Interior		0	0	N/A	N/A	N/A	N/A
Nonbearing walls and partitions							
Exterior	>30 Ft	0	0	N/A	N/A	N/A	N/A
North	>30 Ft	0	0	N/A	N/A	N/A	N/A
East	>30 Ft	0	0	N/A	N/A	N/A	N/A
West	>30 Ft	0	0	N/A	N/A	N/A	N/A
South	>30 Ft	0	0	N/A	N/A	N/A	N/A
Interior		0	0	N/A	N/A	N/A	N/A
Floor construction Including supporting beams and joists		N/A	N/A	N/A	N/A	N/A	N/A
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof construction Including supporting beams and joists		N/A	N/A	N/A	N/A	N/A	N/A
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit		N/A	N/A	N/A	N/A	N/A	N/A
Shaft Enclosures - Other		N/A	N/A	N/A	N/A	N/A	N/A
Corridor Separation		N/A	N/A	N/A	N/A	N/A	N/A
Occupancy/Fire Barrier Separation		N/A	N/A	N/A	N/A	N/A	N/A
Fire Area Separation		N/A	N/A				
Smoke Barrier Separation		N/A	N/A	N/A	N/A	N/A	N/A
Smoke Partition							
Tenant/Dwelling Unit/Sleeping Unit Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental Use Separation							

PERCENTAGE OF WALL OPENING CALCULATIONS

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

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: [ ] No [X] Yes

Exit Signs: [ ] No [X] Yes

Fire Alarm system: [X] No [ ] Yes

Smoke Detection Systems: [X] No [ ] Yes [ ] Partial _____

Carbon Monoxide Detection: [X] No [ ] Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: G009

- [-] 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)
- [X] Occupancy Use for each area as it relates to occupant load calculations (Table 1004.1.2)
- [X] Occupant loads for each area
- [X] Exit access travel distances (1017)
- [X] Common path of travel distances (Tables 1006.2.1 and 1006.3.2(1))
- [X] Dead end lengths (1020.4)
- [X] Clear exit widths for each exit door
- [X] Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- [X] 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
- [X] 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 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)

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

ACCESSIBLE PARKING (SECTION 1106) (SEE BIOSECURITY CODE SUMMARY)

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

PLUMBING FIXTURE REQUIREMENTS (N/A) **(TABLE 2902.1)**

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXISTING										
	NEW										
	REQUIRED										

SPECIAL APPROVALS

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: [ ] No [ ] Yes (The remainder of this section is not applicable)

Exempt Building: [ ] No [X] Yes (Provide code or statutory reference): GS 143-138

Climate Zone: [X] 3A [ ] 4A [ ] 5A

Method of Compliance: Energy Code [ ] Performance [ ] Prescriptive

ASHRAE 90.1 [ ] Performance [ ] Prescriptive

(if "Other" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly) METAL ROOF, VAPOR BARRIER, 1/2" SHEATHING, WOOD TRUSSES, R-38 BATT INSULATION, METAL CEILING
Description of assembly
U-Value of total assembly 0.04
R-Value of insulation 38
Skylights in each assembly N/A
U-Value of skylight
total square footage of skylights in each assembly

Exterior Walls (each assembly) METAL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2X6 WOOD STUDS AT 16" O.C., R-20 BATT INSULATION,
Description of assembly: INTERIOR METAL PANEL
U-Value of total assembly: 0.056
R-Value of insulation: 20
Openings (windows or doors with glazing)
U-Value of assembly: 0.60
Solar heat gain coefficient: 0.25
projection factor: 0.15
Door R-Values: 1.3

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

Floors over unconditioned space (each assembly)
Description of assembly 4" CONCRETE SLATS OVER SHALLOW PIT
U-Value of total assembly
R-Value of insulation

Floors slab on grade (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Horizontal/vertical requirement
slab heated

STRUCTURAL DESIGN

DESIGN LOADS:

Importance Factors: Snow (I_s) 0.8; Seismic (I_E) 1.0

Live Loads: Roof 20 psf; Mezzanine N/A psf; Floor 125 psf

Ground Snow Load: 10 psf

Wind Load: Ultimate Wind Speed 113 mph (ASCE7-10); Exposure Category C

SEISMIC DESIGN CATEGORY [ ] A [X] B [ ] C [ ] D

Provide the following Seismic Design Parameters:

Risk Category (Table 1604.5) [X] I [ ] II [ ] III [ ] IV

Spectral Response Acceleration S_s 0.102 %g S_1 0.053 %g

Site Classification (ASCE 7) [ ] A [ ] B [ ] C [X] D [ ] E [ ] F

Data Source: [X] Field Test [ ] Presumptive [ ] Historical Data

Basic structural system [X] Bearing Wall [ ] Building Frame [ ] Moment Frame [ ] Dual w/ Special Moment Frame [ ] Dual w/ Intermediate R/C or Special Steel [ ] Inverted Pendulum

Analysis Procedures: [ ] Simplified [X] Equivalent Lateral Force [ ] Dynamic

Architectural, Mechanical, Components anchored? [ ] Yes [X] No

LATERAL DESIGN CONTROL: [ ] Earthquake [X] Wind

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) 2000 psf
Presumptive Bearing capacity _____ psf
Pile size, type and capacity _____

MECHANICAL DESIGN

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb 22 °
summer dry bulb 92 °

Interior design conditions
winter dry bulb
summer dry bulb
relative humidity

Building heating load
Design Temperature: 68 degrees

Building cooling load

Mechanical Spacing Conditioning system
Unitary
description of unit
heating efficiency
cooling efficiency
size category of unit
Boiler
size category. If oversized, state reason.
Chiller
size category. If oversized, state reason.

List Equipment efficiencies

ELECTRICAL DESIGN

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code [X] Prescriptive [ ] Performance
ASHRAE 90.1 [ ] Prescriptive [ ] Performance

Lighting schedule (each fixture type)
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 (whole building or space by space)
total exterior wattage specified vs. allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

- [ ] C406.2 More Efficient HVAC Equipment Performance
- [X] 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

the WALKER GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS

Date 07/05/24

Drawn CBW

Checked BBW

Scale AS NOTED

Drawing Title

Code Analysis- Breeding/Gestation Building

Sheet Number 5 Of 139

Drawing Number G1005

WEEN TO FINISH BUILDING
2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

Name of Project: DACS- Tidewater Research Station Swine Unit Replacement (Ween to Finish Building)

Address: 207 Research Station Rd, Plymouth, NC 27962 Zip Code : 27962

Owner or Authorized Agent: Chris Walker Phone # : 252-636-8778 E-Mail : chris@wgarc.com

Owned By: ☐ City/County ☐ Private ☒ State

Code Enforcement Jurisdiction: ☒ City Plymouth ☐ County ☒ State

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-Mail
Architectural	The Walker Group Architecture, Inc.	Chris Walker	15616	252-636-8778	chris@wgarc.com
Civil	Aycliffe Engineering	Kevin Avolis	15738	252 633-0068	avolisengineering@embarqmail.com
Electrical	PACE Collaborative	James Barkley	046553	757-499-4223	james@pace-pme.com
Fire Alarm					
Plumbing	PACE Collaborative	Tim Hahn	046553	757-499-4223	tim@pace-pme.com
Mechanical	PACE Collaborative	Tim Hahn	046553	757-499-4223	tim@pace-pme.com
Sprinkler-Standpipe					
Structural	NRW Engineering	Kevin Roorsberg	022830	757-474-0812	krnr@nrwengineering.com
Retaining Walls > 5' High					
Other					

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ☒ New Building ☐ Addition ☐ Renovation
☐ 1st 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 ☐ Level I ☐ Level II ☐ Level III ☐ Historic Property ☐ Change of Use

CONSTRUCTED: (date) N/A **CURRENT OCCUPANCY(S):** (Ch. 3): N/A
RENOVATED: (date) **PROPOSED OCCUPANCY(S):** (Ch. 3): UTILITY (BARN)

RISK CATEGORY (Table 1604.5): Current: ☐ I ☐ II ☐ III ☐ IV
Proposed: ☒ I ☐ II ☐ III ☐ IV

BASIC BUILDING DATA

Construction Type: (check all that apply) ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A ☐ I-B ☐ II-B ☐ III-B ☒ 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

Special Inspections Required: ☒ No ☐ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table

FLOOR	EXISTING(SQ.FT.)	RENOVATION (SQ.FT.)	NEW CONSTRUCTION
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor			24,817 SF
Basement			
TOTAL			24,817 SF

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 ☐ I-4
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 Classifications(s):
Incidental Uses: (Table 509):
Special Uses (Chapter 4 - List Code Sections):
Special Provisions (Chapter 5 - List Code Section(s):

Mixed Occupancy: ☒ No ☐ Yes Separation N/A Hr. Exception: 302.1

☐ Non-Separated Use (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 Use (302.3.2) - 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.

Actual Area of Occupancy A / *Allowable Area of Occupancy A* + *Actual Area of Occupancy B* / *Allowable Area of Occupancy B* ≤1
____ + ____ = ____ ≤1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG. AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,2]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED [3,5]
1ST FLOOR	UTILITY (BARN)	24,817 SF	UNLIMITED	-	UNLIMITED

UNLIMITED AREA PER NCBC 2018 APPENDIX C- AGRICULTURAL BUILDINGS. REFERENCE C102.2

[1] Frontage area increases from Section 506.3 are computed thus:
a. Perimeter which fronts a public way or open space having 20 foot minimum width = _____ (F)
b. Total Building Perimeter = _____ (P)
c. Ratio (F/P) = _____ (F/P)
d. W = Minimum width of public way = _____ (W)
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 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 PLAN	CODE REFERENCE[1]
Building Height in Feet (Table 504.3)[2]	40'	18'-2"	503
Building Height in Stories (Table 504.4)[3]	2	1	503

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
[2] The maximum height of air traffic control towers must comply with Table 412.3.1.
[3] The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS

Life Safety Plan Sheet #, if Provided G010

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	>30 Ft	0	0	N/A	N/A	N/A	N/A
Bearing walls							
Exterior	>30 Ft	0	0	N/A	N/A	N/A	N/A
North	>30 Ft	0	0	N/A	N/A	N/A	N/A
East	>30 Ft	0	0	N/A	N/A	N/A	N/A
West	>30 Ft	0	0	N/A	N/A	N/A	N/A
South	>30 Ft	0	0	N/A	N/A	N/A	N/A
Interior		0	0	N/A	N/A	N/A	N/A
Nonbearing walls and partitions							
Exterior	>30 Ft	0	0	N/A	N/A	N/A	N/A
North	>30 Ft	0	0	N/A	N/A	N/A	N/A
East	>30 Ft	0	0	N/A	N/A	N/A	N/A
West	>30 Ft	0	0	N/A	N/A	N/A	N/A
South	>30 Ft	0	0	N/A	N/A	N/A	N/A
Interior		0	0	N/A	N/A	N/A	N/A
Floor construction Including supporting beams and joists		N/A	N/A	N/A	N/A	N/A	N/A
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof construction Including supporting beams and joists		N/A	N/A	N/A	N/A	N/A	N/A
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit		N/A	N/A	N/A	N/A	N/A	N/A
Shaft Enclosures - Other		N/A	N/A	N/A	N/A	N/A	N/A
Coorider Separation		N/A	N/A	N/A	N/A	N/A	N/A
Occupancy/Fire Barrier Separation		N/A	N/A	N/A	N/A	N/A	N/A
Fire Area Separation		N/A	N/A	-	-	-	
Smoke Barrier Separation		N/A	N/A	-	N/A	N/A	N/A
Smoke Partition							
Tenant/Dwelling Unit/Sleeping Unit Separation		N/A	N/A	N/A	N/A	N/A	N/A
Incidental Use Separation							

PERCENTAGE OF WALL OPENING CALCULATIONS

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

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ☒ Yes
Exit Signs: ☐ No ☒ Yes
Fire Alarm system: ☒ No ☐ Yes
Smoke Detection Systems: ☒ No ☐ Yes ☐ Partial _____
Carbon Monoxide Detection: ☒ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: G010

- — 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)
- X Occupancy Use for each area as it relates to occupant load calculations (Table 1004.1.2)
- X Occupant loads for each area
- X Exit access travel distances (1017)
- X Common path of travel distances (Tables 1006.2.1 and 1006.3.2(1))
- X Dead end lengths (1020.4)
- X Clear exit widths for each exit door
- X Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- X 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
- X 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 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)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE I A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ACCESSIBLE PARKING (SEE BIOSECURITY CODE SUMMARY) **(SECTION 1106)**

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

PLUMBING FIXTURE REQUIREMENTS (N/A) **(TABLE 2902.1)**

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXISTING										
	NEW										
	REQUIRED										

SPECIAL APPROVALS

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: ☐ No ☐ Yes (The remainder of this section is not applicable)

Exempt Building: ☐ No ☒ Yes (Provide code or statutory reference): OS 143-138

Climate Zone: ☒ 3A ☐ 4A ☐ 5A

Method of Compliance: Energy Code ☐ Performance ☐ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive
(If "Other" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly) METAL ROOF, VAPOR BARRIER, 1/2" SHEATHING, WOOD TRUSSES, R-38 BATT INSULATION, METAL CEILING
Description of assembly
U-Value of total assembly 0.04
R-Value of insulation 38
Skylights in each assembly N/A
U-Value of skylight
total square footage of skylights in each assembly

Exterior Walls (each assembly) METAL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2X6 WOOD STUDS AT 16" O.C., R-20 BATT INSULATION,
Description of assembly: INTERIOR METAL PANEL.
U-Value of total assembly: 0.056
R-Value of insulation: 20
Openings (windows or doors with glazing)
U-Value of assembly 0.60
Solar heat gain coefficient: 0.25
projection factor: 0.15
Door R-Values: 1.3

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

Floors over unconditioned space (each assembly)
Description of assembly 4" CONCRETE SLATS OVER SHALLOW PIT
U-Value of total assembly
R-Value of insulation

Floors slab on grade (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Horizontal/vertical requirement
slab heated

STRUCTURAL DESIGN

DESIGN LOADS:

Importance Factors: Snow (I_S) 0.8 Seismic (I_E) 1.0

Live Loads: Roof 20 psf Mezzanine N/A psf Floor 125 psf

Ground Snow Load: 10 psf

Wind Load: Ultimate Wind Speed 113 mph (ASCE-7-10) Exposure Category C

SEISMIC DESIGN CATEGORY ☐ A ☒ B ☐ C ☐ D
Provide the following Seismic Design Parameters:

Risk Category (Table 1604.5) ☒ I ☐ II ☐ III ☐ IV

Spectral Response Acceleration S_s 0.102 %g S_1 0.053 %g

Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☒ D ☐ E ☐ F
Data Source: ☒ Field Test ☐ Presumptive ☐ Historical Data

Basic structural system
☒ Bearing Wall ☐ Building Frame ☐ Moment Frame ☐ Dual w/ Special Moment Frame ☐ Dual w/ Intermediate R/C or Special Steel ☐ Inverted Pendulum

Analysis Procedure: ☐ Simplified ☒ Equivalent Lateral Force ☐ Dynamic

Architectural, Mechanical, Components anchored? ☐ Yes ☒ No

LATERAL DESIGN CONTROL: ☐ Earthquake ☒ Wind

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) 2000 psf
Prescriptive Bearing capacity _____ psf
Pile size, type and capacity _____

MECHANICAL DESIGN

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb 22 °
summer dry bulb 82 °

Interior design conditions
winter dry bulb
summer dry bulb
relative humidity

Building heating load
Design Temperature: 68 degrees

Building cooling load

Mechanical Spacing Conditioning system
Unitary
description of unit
heating efficiency
cooling efficiency
size category of unit
Boiler
size category. If oversized, state reason.
Chiller
size category. If oversized, state reason.

List Equipment efficiencies

ELECTRICAL DESIGN

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

Lighting schedule (each fixture type)
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 (whole building or space by space)
total exterior wattage specified vs. allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)
☐ 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

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DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

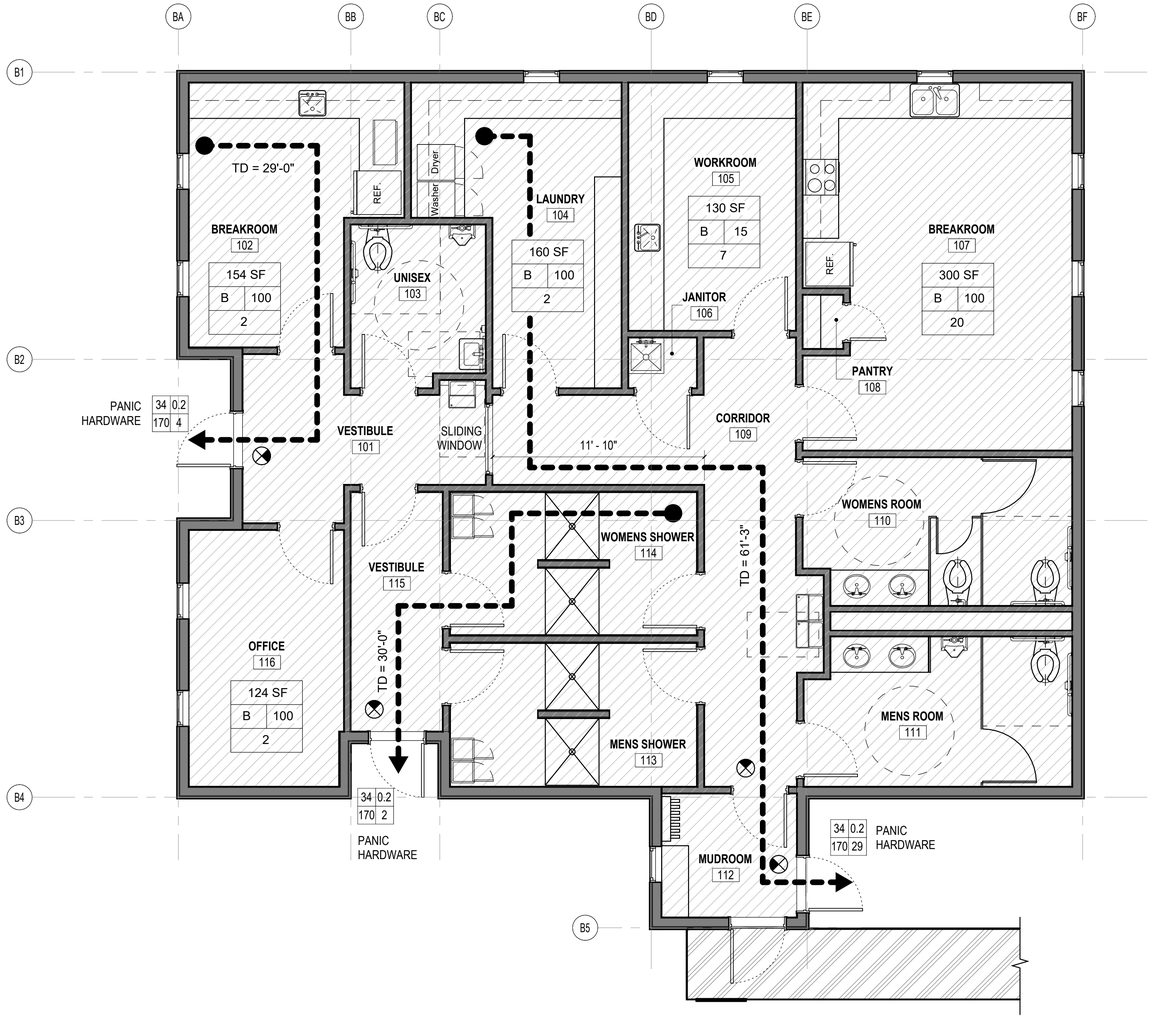
Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn CBW
Checked BBW
Scale AS NOTED
Drawing Title

Code Analysis- Wean to Finish Building

Sheet Number 6 Of 139
Drawing Number GI006



Bio-Security Building Life Safety Plan

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

PLAN NORTH

BUILDING AREA: 2000 SF / 100SF = 20 TOTAL OCCUPANTS

LIFE SAFETY PLAN LEGEND

SYMBOL	DESCRIPTION
CPT = X'-XX"	COMMON PATH OF TRAVEL
TD = X'-XX"	TRAVEL DISTANCE
W | P / C | A	W: NET EXIT WIDTH (INCHES) C: CAPACITY (PEOPLE) P: EXIT WIDTH PER PERSON A: ACTUAL EGRESS (PEOPLE)
OCCUPANCY, TYPE A - ASSEMBLY B - BUSINESS S - STORAGE 1500 SF / B / 150 / 10	ROOM / ZONE AREA OCCUPANCY, ALLOWABLE AREA PER OCCUPANT OCCUPANCY LOAD (PEOPLE)
	(B) BUSINESS
	(U) UTILITY
	COVERED WALKWAY
	EXIT SIGN/EMERGENCY LIGHT

1/4" =1'-0" 0' 2' 4' 8'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions
No. Date

Project Number **2212.HOGS**
Date **07/05/24**
Drawn **CBW**
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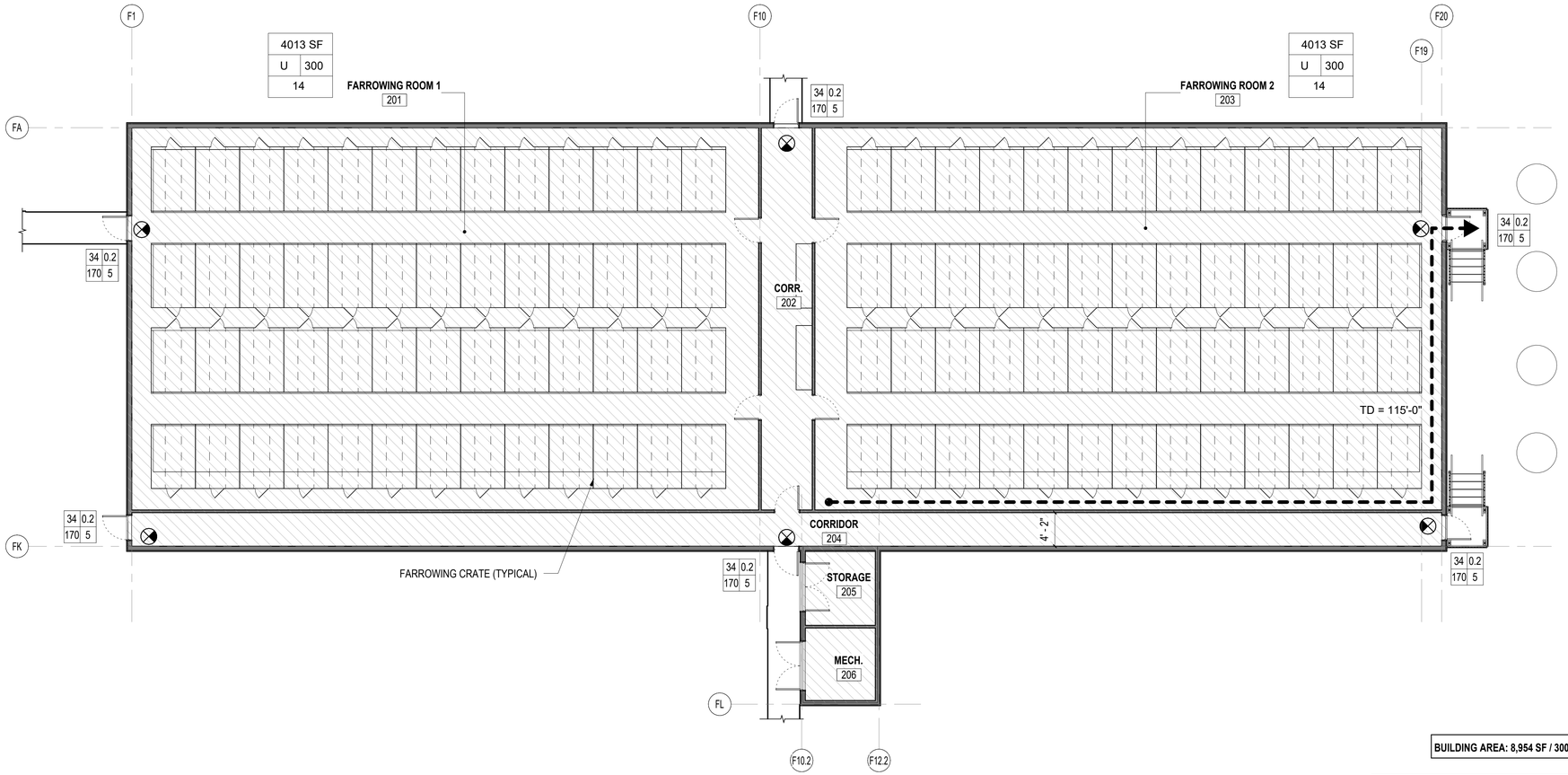
Scale **AS NOTED**
Drawing Title

Life Safety Plan- BioSecurity Building

Sheet Number 7 Of 139
Drawing Number **GI007**



PLAN NORTH

Farrowing Building Life Safety Plan

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

BUILDING AREA: 8,954 SF / 300SF = 30 TOTAL OCCUPANTS

LIFE SAFETY PLAN LEGEND

SYMBOL	DESCRIPTION
CPT = X'-XX"	COMMON PATH OF TRAVEL
TD = X'-XX"	TRAVEL DISTANCE
W P / C A	W: NET EXIT WIDTH (INCHES) C: CAPACITY (PEOPLE) P: EXIT WIDTH PER PERSON A: ACTUAL EGRESS (PEOPLE)
OCCUPANCY, TYPE A - ASSEMBLY B - BUSINESS S - STORAGE; 1500 SF / B 150 / 10	ROOM / ZONE AREA OCCUPANCY, ALLOWABLE AREA PER OCCUPANT OCCUPANCY LOAD (PEOPLE)
	(B) BUSINESS
	(U) UTILITY
	COVERED WALKWAY
	EXIT SIGN/EMERGENCY LIGHT

1/8" =1'-0" 0' 4' 8' 16'

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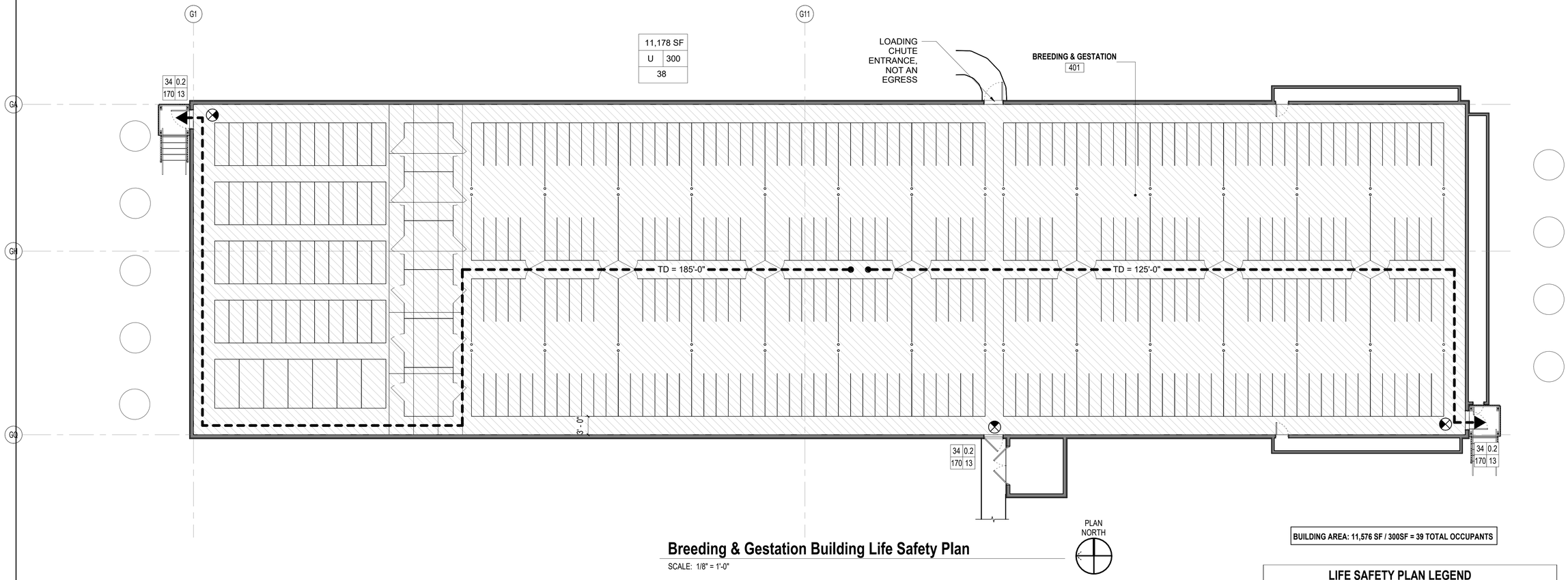
Drawing Title

Life Safety Plan- Farrowing Building

Sheet Number 8 Of 139
Drawing Number **GI008**



Breeding & Gestation Building Life Safety Plan

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

BUILDING AREA: 11,576 SF / 300SF = 39 TOTAL OCCUPANTS

LIFE SAFETY PLAN LEGEND

SYMBOL	DESCRIPTION
CPT = X'-XX"	COMMON PATH OF TRAVEL
TD = X'-XX"	TRAVEL DISTANCE
W P / C A	W: NET EXIT WIDTH (INCHES) C: CAPACITY (PEOPLE) P: EXIT WIDTH PER PERSON A: ACTUAL EGRESS (PEOPLE)
OCCUPANCY, TYPE: A - ASSEMBLY, B - BUSINESS, S - STORAGE; 1500 SF / B / 150 / 10	ROOM / ZONE AREA OCCUPANCY, ALLOWABLE AREA PER OCCUPANT OCCUPANCY LOAD (PEOPLE)
	(B) BUSINESS
	(U) UTILITY
	COVERED WALKWAY
	EXIT SIGN/EMERGENCY LIGHT

1/8" =1'-0" 0' 4' 8' 16'

WALKER the GROUP ARCHITECTURE incorporated
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DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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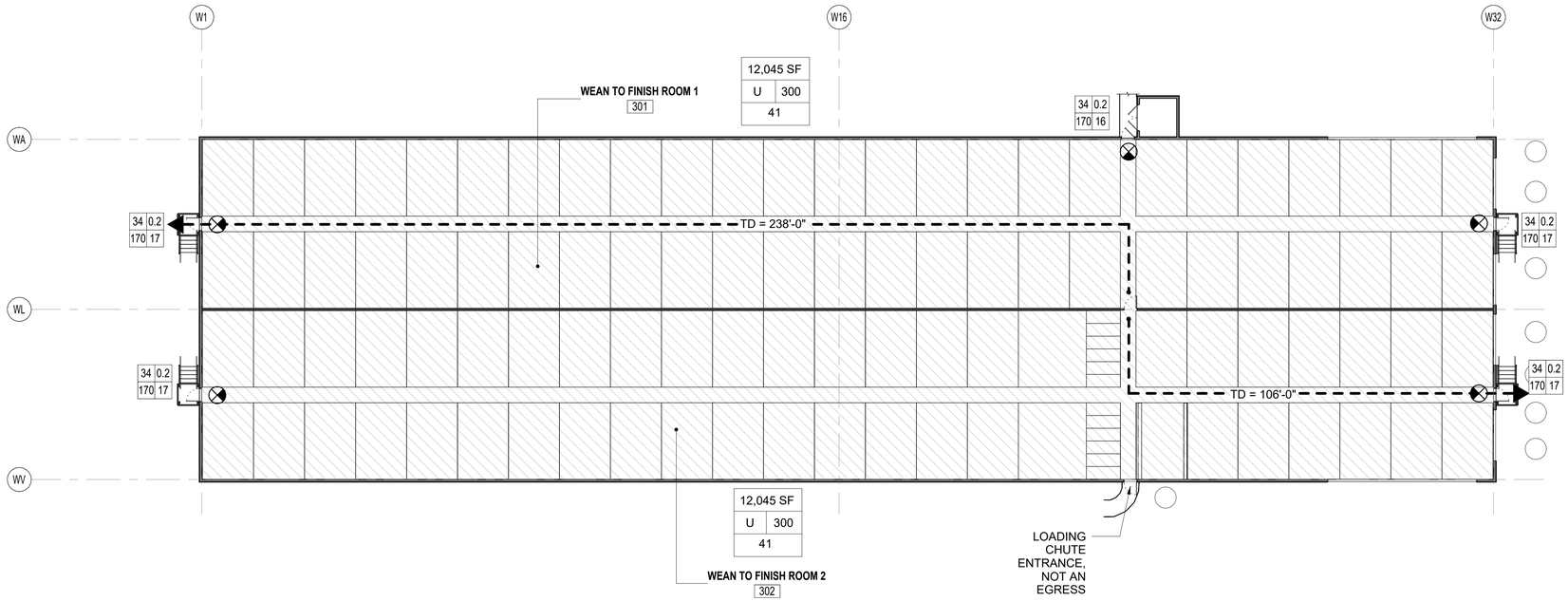
Life Safety Plan- Breeding/Gestation Building

Sheet Number 9 Of 139

Drawing Number **GI009**



Wean to Finish Building Life Safety Plan

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

PLAN NORTH

BUILDING AREA: 24,817 SF / 300SF = 83 TOTAL OCCUPANTS

LIFE SAFETY PLAN LEGEND

SYMBOL	DESCRIPTION
CPT = X'-XX"	COMMON PATH OF TRAVEL
TD = X'-XX"	TRAVEL DISTANCE
W P / C A	W: NET EXIT WIDTH (INCHES) C: CAPACITY (PEOPLE) P: EXIT WIDTH PER PERSON A: ACTUAL EGRESS (PEOPLE)
OCCUPANCY, TYPE: A - ASSEMBLY, B - BUSINESS, S - STORAGE; 1500 SF / B / 150 / 10	ROOM / ZONE AREA OCCUPANCY, ALLOWABLE AREA PER OCCUPANT OCCUPANCY LOAD (PEOPLE)
	(B) BUSINESS
	(U) UTILITY
	COVERED WALKWAY
	EXIT SIGN/EMERGENCY LIGHT

1/16" =1'-0"

0' 8' 16' 32'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
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Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

Project Number: **2212.HOGS**
Date: **07/05/24**
Drawn: **CBW**
Checked: **BBW**
Scale: **AS NOTED**

Drawing Title

Life Safety Plan- Wean to Finish Building

Sheet Number
10 Of 139

Drawing Number
GI010

GENERAL CONSTRUCTION NOTES:

1. CONSTRUCTION OPERATIONS SHALL BE COMPLETED IN COMPLIANCE WITH ALL STATE AND FEDERAL REGULATIONS AND AS SPECIFIED.
2. THE PLANS DEPICT THE GENERAL INTENT OF CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES THAT ARE NOT SLATED FOR DEMOLITION. ANY ITEM DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR REPLACED WITH NEW.
3. DIMENSIONS AND CONDITIONS SHOWN ARE APPROXIMATE AND ARE ACCURATE AS OF THE TIME OF SITE INSPECTION. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION SITE CONDITIONS INCLUDING A VERIFICATION OF CONDITIONS SHOWN AND NOT SHOWN.
4. ADJACENT STRUCTURES AND UTILITIES MUST REMAIN IN OPERATION DURING CONSTRUCTION ACTIVITIES. EXISTING ROADS SHALL REMAIN OPEN AND ACCESSIBLE BY VEHICULAR AND PEDESTRIAN TRAFFIC. IF ROADWAY CLOSURE IS REQUIRED, APPROVAL SHALL BE SECURED FROM THE CONTRACTING OFFICER. THE CONTRACTOR SHALL PROVIDE BARRICADES, LIGHTS, SIGNAGE AND OTHER PROTECTIVE DEVICES IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
5. THE CONTRACTOR SHALL PROVIDE FENCING, BARRICADES OR OTHER PROTECTIVE DEVICES TO MAINTAIN A SECURED WORK AREA AT ALL TIMES.
6. PRIOR TO STARTING CONSTRUCTION ON ANY STRUCTURES OR UTILITIES, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS OF ANY STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL DEVELOP A PLAN OF CONSTRUCTION THAT ENSURES ALL ACTIVITIES ARE COMPLETED IN A SAFE MANNER. PROVIDE ANY TEMPORARY SHORING, SHEETING OR SUPPORT REQUIRED TO COMPLETE WORK IN A SAFE MANNER.
7. COMPLETELY REMOVE ALL STRUCTURE AND UTILITIES INDICATED, BOTH ABOVE GROUND AND BELOW GROUND.
8. ALL EXCAVATIONS CREATED BY CONSTRUCTION ACTIVITIES SHALL BE BACKFILLED WITH COMMON FILL, SHALL BE GRADED TO CREATE POSITIVE DRAINAGE, AND SHALL BE VEGETATED IN ACCORDANCE WITH THE PROJECT VEGETATION PLAN. GRAVEL AND PAVED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
9. ALL EROSION CONTROL FEATURES SHOWN SHALL BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITIES STARTING.
10. THE CONTRACTOR SHALL MINIMIZE DUST GENERATED FROM CONSTRUCTION ACTIVITIES BY WET METHODS OR OTHER APPROVED METHODS.
11. WHERE ROADS, SIDEWALKS, ETC ARE INDICATED TO BE CUT AND PATCHED, EACH SHALL BE REMOVED AND REPLACED ALONG NEAT SAWCUT LINES, AND TO THE NEAREST JOINT WHERE IT EXISTS.
12. ANY FILL MATERIAL REQUIRED TO ESTABLISH THE FINISH GRADES SHOWN SHALL BE OBTAINED FROM A PROPERLY PERMITTED BORROW PIT. ANY EXCESS SOIL MATERIAL GENERATED FROM CONSTRUCTION ACTIVITIES SHALL BE DISPOSED OF OFF OF THE GOVERNMENT PROPERTY.

UTILITY CONSTRUCTION NOTES:

1. THE LOCATION AND DEPTHS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL SECURE THE SERVICES OF A PROFESSIONAL UTILITY LOCATE CONTRACTOR TO MARK ALL EXISTING UTILITIES IN THE AREA OF WORK. UTILITY MARKINGS SHALL BE MAINTAINED FOR THE DURATION OF DEMOLITION ACTIVITIES.
2. EXISTING UTILITIES SHALL NOT BE INTERRUPTED WITHOUT THE APPROVAL OF THE OWNER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE, TO ORIGINAL CONDITION, ANY UTILITIES DAMAGED DURING CONSTRUCTION ACTIVITIES FROM THE CONTRACTOR'S OPERATIONS.
4. ALL COSTS ASSOCIATED WITH LOCATING, DISCONNECTING ABANDONING AND CAPPING OF UTILITY LINES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE REMOVAL OF ALL UTILITIES INDICATED WITH THEIR RESPECTIVE UTILITY PURVEYORS.
6. ALL PIPES AND CONDUITS THAT ARE TO BE ABANDONED IN PLACE, SHALL BE CAPPED OR PLUGGED TO SECURE ALL OPEN ENDS TO FORM A WATERTIGHT SEAL.
7. ALL ELECTRICAL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.

HAZARDOUS AND OTHER MATERIAL SPECIAL HANDLING NOTES:

1. THE CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL CONSTRUCTION WASTE AND EXCESS MATERIAL OFF OF THE PROPERTY. THE CONTRACTOR SHALL COMPLY WITH ALL STATE, LOCAL AND FEDERAL HAULING AND DISPOSAL REGULATIONS.
2. BURNING ON THE PROPERTY IS NOT PERMITTED.

EROSION CONTROL NOTES:

SCHEDULE OF EROSION AND SEDIMENTATION CONTROL ACTIVITIES

1. INSTALL SILT FENCING, GRAVEL CONTROL ENTRANCE AND CHECK DAMS AS INDICATED.
2. COMPLETE SITE CONSTRUCTION AS INDICATED.
3. FINE GRADE SITE AS INDICATED.
4. STABILIZE AND VEGETATE ALL AREAS NOT TO BE FURTHER DISTURBED BY CONSTRUCTION ACTIVITIES PER THE VEGETATION PLAN AND STATED TIME CONSTRAINTS.
5. INSTALL SOD TO ESTABLISH FINAL VEGETATION.
6. ADDITIONAL MISCELLANEOUS EROSION CONTROL MEASURES MAY BE REQUIRED WHEN DEEMED NECESSARY BY THE CONTRACTING OFFICER OR CONTRACTOR.
7. REMOVE SILT FENCING ONCE VEGETATION IS 95% ESTABLISHED MINIMUM.

MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENTATION CONTROL DEVICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL EVENT BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL DEVICES IN THE OPERATIONAL CONDITIONS INTENDED.
2. ALL AREAS WILL BE FERTILIZED, VEGETATED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATION PLAN IN ORDER TO ESTABLISH AND MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ANY SEDIMENT TRACKED ONTO THE ADJACENT ASPHALT ROAD SHALL BE REMOVED ON A DAILY BASIS.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCING PRIOR TO THE SEDIMENT ACCUMULATING TO A MAXIMUM DEPTH OF SIX INCHES.

SPECIAL SEEDING NOTE:

TEMPORARY: ALL DENUDED AREAS WILL, WITHIN 7 DAYS OF STOPPING GRADING ACTIVITIES AT ANY PHASE OF CONSTRUCTION, BE PLANTED AND PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.

PERMANENT: ALL DENUDED AREAS WILL, WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION, BE PROVIDED PERMANENT GROUND COVER.

EROSION CONTROL SYMBOL LEGEND:

—SLT— · · · —SLT— = SILT FENCE, SEE DETAIL A, SHEET CG501

= GRAVEL CONTROL ENTRANCE, SEE DETAIL B, SHEET CG501

= CHECK DAM, SEE DETAIL C, SHEET CG501

= INLET/OUTLET PROTECTION, SEE DETAIL D, SHEET CG501

= DROP INLET PROTECTION, SEE DETAIL F, SHEET CG501

CIVIL LEGEND

EXISTING	DESCRIPTION	NEW
⋈	WATER VALVE	⋈
○ CO	SANITARY SEWER CLEANOUT	○ CO
Ⓢ	SEWER MANHOLE	Ⓢ
TPED ⊠ ⊡	COMMUNICATIONS PEDESTAL	
○ ○	UTILITY POLE/POLE WITH LIGHT	
⟵	GUY WIRE	
—S—	SANITARY SEWER (GRAVITY)	—S—
—RW—	RECIRCULATED WASTE WATER	—RW—
—FM—	SANITARY FORCE MAIN	—FM—
—D—	STORM SEWER	—D—
W	WATER	W
OHE	OVERHEAD ELECTRICAL	
UGE	UNDERGROUND ELECTRICAL	UGE
UGC	UNDERGROUND COMMUNICATIONS	
G	UNDERGROUND GAS	G
	FENCE	
	CONCRETE	
	ASPHALT	
	GRAVEL	
	SILT FENCE	SLT
	SURVEY CONTROL POINT	
× 5.00	SPOT ELEVATIONS	+ XX.XX
	SIGN	
	DEMOLITION ITEMS	
	BORING LOCATION/ID	B-1

ABBREVIATIONS

APPROX.	APPROXIMATE/APPROXIMATELY
CJ	CONTRACTION JOINT
CL, C/L	CENTER LINE
CF	CUBIC FEET
CONT.	CONTINUOUS
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CUMM.	CUMULATIVE
DIA, ø	DIAMETER
DI	(STORM DRAIN) DROP INLET
DMH	DRAINAGE MANHOLE
EL=, ELEV	ELEVATION
E:	EASTING
ELEC.	ELECTRIC; ELECTRICAL
ETC.	ET CETERA
EX., EXIST.	EXISTING
FES	FLARED END SECTION
FH	FIRE HYDRANT
HVAC	HEATING, VENTILATION AND AIR CONDITIONING (EQUIPMENT)
INV	INVERT
LF	LINEAR FOOT/FEET
MAG	MAG NAIL (CONTROL)
MAX	MAXIMUM
MIN	MINIMUM
N:	NORTHING
NO./#	NUMBER
PIV	POST INDICATOR VALVE
PVC	POLYVINYL CHLORIDE (PIPE)
RCP	REINFORCED CONCRETE PIPE
SMH	SANITARY SEWER MANHOLE
SF	SQUARE FOOT/FEET
SLT	SILT FENCE
SQ.	SQUARE
TBM	TEMPORARY BENCHMARK
TYP.	TYPICAL
VOL.	VOLUME
WWF	WELDED WIRE FABRIC
&	AND
@	AT
±	PLUS OR MINUS
%	PERCENT
=	EQUALS

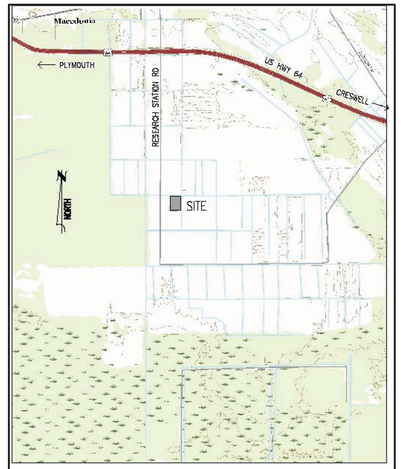
TOTAL LIMITS OF DISTURBANCE
213,704 SF, 4.91 ACRES

NOTE:
ALL FILL MATERIAL NEEDED TO EXECUTE THIS PROJECT SHALL BE OBTAINED FROM AN NCDEQ NCDEMLR PERMITTED BORROW PIT.

NOTE:
NO WETLANDS OR SURFACE WATERS EXIST WITHIN THE LIMITS OF CONSTRUCTION.

NOTE:
THE PROJECT DRAINS TO KENDRICK CREEK (Pasquotank River Basin)
SURFACE WATER CLASSIFICATION: C,Sw
STREAM INDEX: 30-9-1

FLOOD MAP SUMMARY
THE PROJECT SITE IS NOT LOCATED IN ANY SPECIAL FLOOD HAZARD AREAS OR FUTURE CONDITIONS FLOOD HAZARD AREAS, AS SHOWN ON FEMA MAP NUMBER 3720678600K, DATED MARCH 18, 2008.



VICINITY MAP NOT TO SCALE

A CIVIL NOTES, LEGEND AND ABBREVIATIONS
SCALE: 1" = 40'

TN
PN

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-6778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS
7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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Drawing Title

CIVIL NOTES, LEGEND AND ABBREVIATIONS

Sheet Number **11** of **139**
Drawing Number **C-001**

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NEW BERN, NC 28561
PH. (252) 633-0068
kevin@avoliseng.com
LICENSE NO. C-0706
A/E PROJECT #23020

GENERAL CONSTRUCTION NOTES:

1. THE LOCATION AND DEPTHS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCANNING THE AREA OF WORK TO IDENTIFY TO HIS OWN SATISFACTION THE EXTENT OF UTILITIES PRESENT INCLUDING THE UTILITIES INDICATED TO BE PRESENT, THOSE NOT SHOWN, AND THOSE SHOWN TO BE IN A DIFFERENT LOCATION.
2. PHYSICAL SITE FEATURES OUTSIDE THE AREA OF WORK OR THOSE FEATURES NOT RELEVANT TO THE WORK BEING PERFORMED ARE NOT SHOWN FOR CLARITY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW DURING THE COURSE OF CONSTRUCTION. THE CONTRACTOR SHALL DEVELOP A TRAFFIC CONTROL PLAN TO BE SUBMITTED TO THE PROJECT CIVIL ENGINEER FOR APPROVAL PRIOR TO STARTING CONSTRUCTION.
4. ALL EXISTING VEGETATED AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED IN ACCORDANCE WITH THE PROJECT VEGETATION PLAN, SEE DETAIL E, SHEET CG501.
5. COMPLETE ALL TRENCH SECTIONS IN ACCORDANCE WITH DETAIL D, SHEET CU501. ALL GRAVITY SEWER PIPING SHALL BE BEDDED IN STONE PER THE DETAIL. ALL OTHER UTILITIES MAY BE UNBEDDED PER THE DETAIL.
6. GRADE EVENLY BETWEEN ALL SPOT ELEVATIONS SHOWN.

WORK ITEMS APPLICABLE TO SHEET CD101

DEMOLITION WORK ITEMS (SHEET CD101):

(1) REMOVE EXISTING FENCE AND GATES.

(2) INSTALL SILT FENCE – SEE DETAIL A, SHEET CG501.

(3) INSTALL GRAVEL CONTROL ENTRANCE. SEE DETAIL B, SHEET CG501.

(4) INSTALL CHECK DAM. SEE DETAIL C, SHEET CG501.

WORK ITEMS APPLICABLE TO SHEET CS101

WORK ITEMS (SHEET CS101):

[1] NEW BUILDING – SEE ARCHITECTURAL PLANS.

[2] GRAVEL SURFACING – SEE DETAIL A, SHEET CS501.

[3] CONCRETE WHEEL STOP – SEE DETAIL B, SHEET CS501.

[4] ACCESSIBLE MARKINGS AND SIGNAGE – SEE DETAIL C, SHEET CS501.

[5] STEEL BOLLARD – SEE DETAIL D, SHEET CS501.

[6] CONCRETE APRON – SEE DETAIL E, SHEET CS501.

[7] CONCRETE SIDEWALK – SEE DETAIL G, SHEET CS501.

[8] SECURITY FENCE AND GATES – SEE DETAIL A, SHEET CS502.

[9] PROPANE TANK CONCRETE PAD – SEE DETAIL A, SHEET CS503.

[10] INCINERATOR CONCRETE PAD – SEE DETAIL B, SHEET CS503.

[11] FUEL TANK ON CONTAINMENT PAD AND CMU PEDESTAL – SEE DETAIL C, SHEET CS503.

[12] WELL HOUSE – SEE ARCHITECTURAL AND MECHANICAL PLANS.

[13] RETAINING WALL – SEE ARCHITECTURAL AND STRUCTURAL PLANS.

[14] FEED SILO CONCRETE PAD – SEE DETAIL D, SHEET CS503.

WORK ITEMS APPLICABLE TO SHEET CG101

WORK ITEMS (SHEET CG101):

[1] INSTALL SILT FENCE. SEE DETAIL A, SHEET CG501.

[2] INSTALL GRAVEL CONTROL ENTRANCE. SEE DETAIL B, SHEET CG501.

[3] INSTALL CHECK DAM. SEE DETAIL C, SHEET CG501.

[4] INSTALL INLET/OUTLET PROTECTION. SEE DETAIL D, SHEET CG501.

[5] DROP INLET. SEE DETAIL B, SHEET CG502.

[6] DROP INLET PROTECTION. SEE DETAIL F, SHEET CG501.

[7] LINED AND GRADED SWALE, SIDE SLOPE AS INDICATED – SEE DETAIL F, SHEET CG501.

WORK ITEMS APPLICABLE TO SHEET CU101

WORK ITEMS (SHEET CU101):

[1] VALVE AND VALVE BOX, SIZED TO MATCH LINE – SEE DETAIL A, SHEET CU501.

[2] THRUST BLOCKING – TYPICAL ALL FITTINGS AS INDICATED BY SYMBOL, SEE DETAIL B, SHEET CU501.

[3] YARD HYDRANT – SEE DETAIL C, SHEET CU501.

[4] PRECAST MANHOLE – SEE DETAIL E, SHEET CU501.

[5] SEWER CLEANOUT – SEE DETAIL G, SHEET CU501.

[6] SEWER PUMP STATION – SEE DETAIL A, SHEET CU503.

[7] PVC DOMESTIC WATER SERVICE, SIZE AS INDICATED. PROVIDE MINIMUM 36" CLEAR COVER. SEE PLUMBING DRAWINGS FOR CONTINUATION.

[8] PVC SEWER SERVICE, SIZE AND SLOPE AS INDICATED. PROVIDE STONE BEDDING FOR ALL SEWER PIPE. PROVIDE MINIMUM 36" CLEAR COVER. SEE PLUMBING DRAWINGS FOR CONTINUATION.

[9] 4" PVC RECYCLED WATER PIPING. PROVIDE MINIMUM 36" COVER. SEE PLUMBING DRAWINGS FOR CONTINUATION.

[10] 6" PVC SEWER FORCE MAIN.

[11] PAD-MOUNTED GENERATOR – SEE ELECTRICAL PLANS.

[12] (2) LP TANKS ON CONCRETE PAD – SEE DETAIL A, SHEET CS503.

[13] FUEL TANK ON CONTAINMENT PAD AND CMU PEDESTAL – SEE DETAIL B, SHEET CS503.

[14] BACKFLOW PREVENTER – SEE DETAIL F, SHEET CU501.

[15] UNDERGROUND LP GAS PIPING. SEE MECHANICAL DRAWINGS FOR CONTINUATION.

[16] HVAC UNIT AND PAD. SEE MECHANICAL DRAWINGS FOR CONTINUATION.

[17] 4-INCH WELL SYSTEM – SEE DETAIL A, SHEET CU502.

[18] WELL HOUSE – SEE ARCHITECTURAL AND MECHANICAL PLANS.

[19] SEPTIC SYSTEM – SEE DETAILS, SHEET CU505.

[20] FORCE MAIN DISCHARGE AT LAGOON. SEE DETAIL F, SHEET CU504.

[21] CONTROL PANEL SUPPORT STAND – SEE DETAIL B, SHEET CU503.

[22] ROUTE UTILITY 30" MINIMUM BELOW DITCH BOTTOM.

[23] ROUTE SEWER 24" MINIMUM BELOW WATER SERVICE.

[24] 12" GATE VALVE AND VALVE BOX (FOR FLOW CONTROL)–SEE DETAIL A, SHEET CU501 AND NOTES SHEET CU101.

[25] CONNECTION AT REUSE WATER SERVICE – SEE DETAIL G, SHEET CU504.

[26] FLOW CONTROL VALVE SIGNAGE – SEE DETAIL H, SHEET CU501.

A CIVIL WORK ITEMS

NO SCALE

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS

7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

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Plymouth, NC 27962**

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CIVIL WORK ITEMS

Sheet Number **12** or **139**

Drawing Number **C-002**

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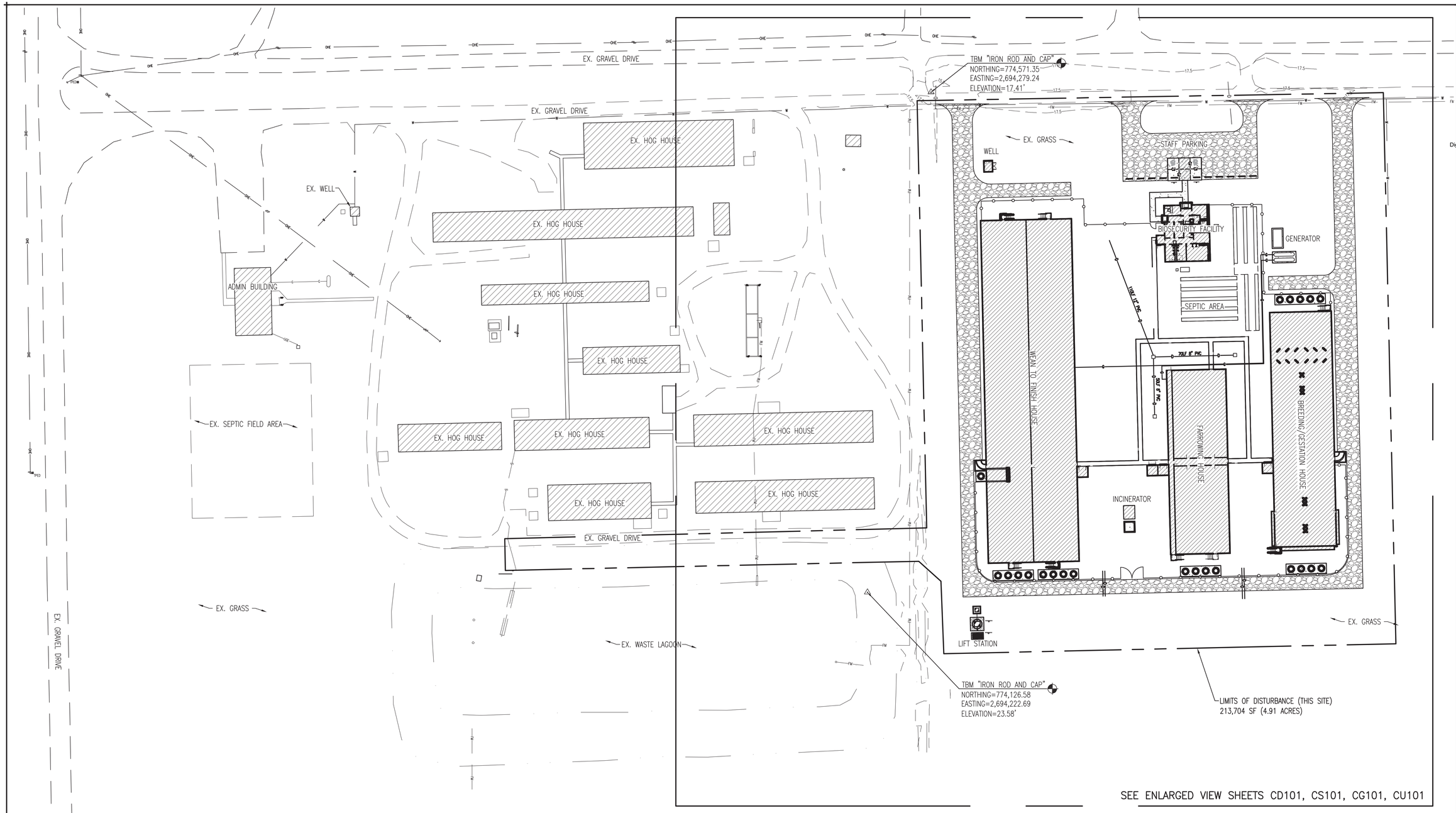
LICENSE NO. C-0706
A/E PROJECT #23020



A OVERALL SITE PLAN
SCALE: 1" = 40'

TN
PN

40 0 20 40 80
GRAPHIC SCALE: 1" = 40'

AVOLIS ENGINEERING, P.A.
P.O. BOX 15564
NEW BERN, NC 28561
PH. (252) 633-0068
kevin@avoliseng.com
LICENSE NO. C-0706
A/E PROJECT #23020

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS
7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

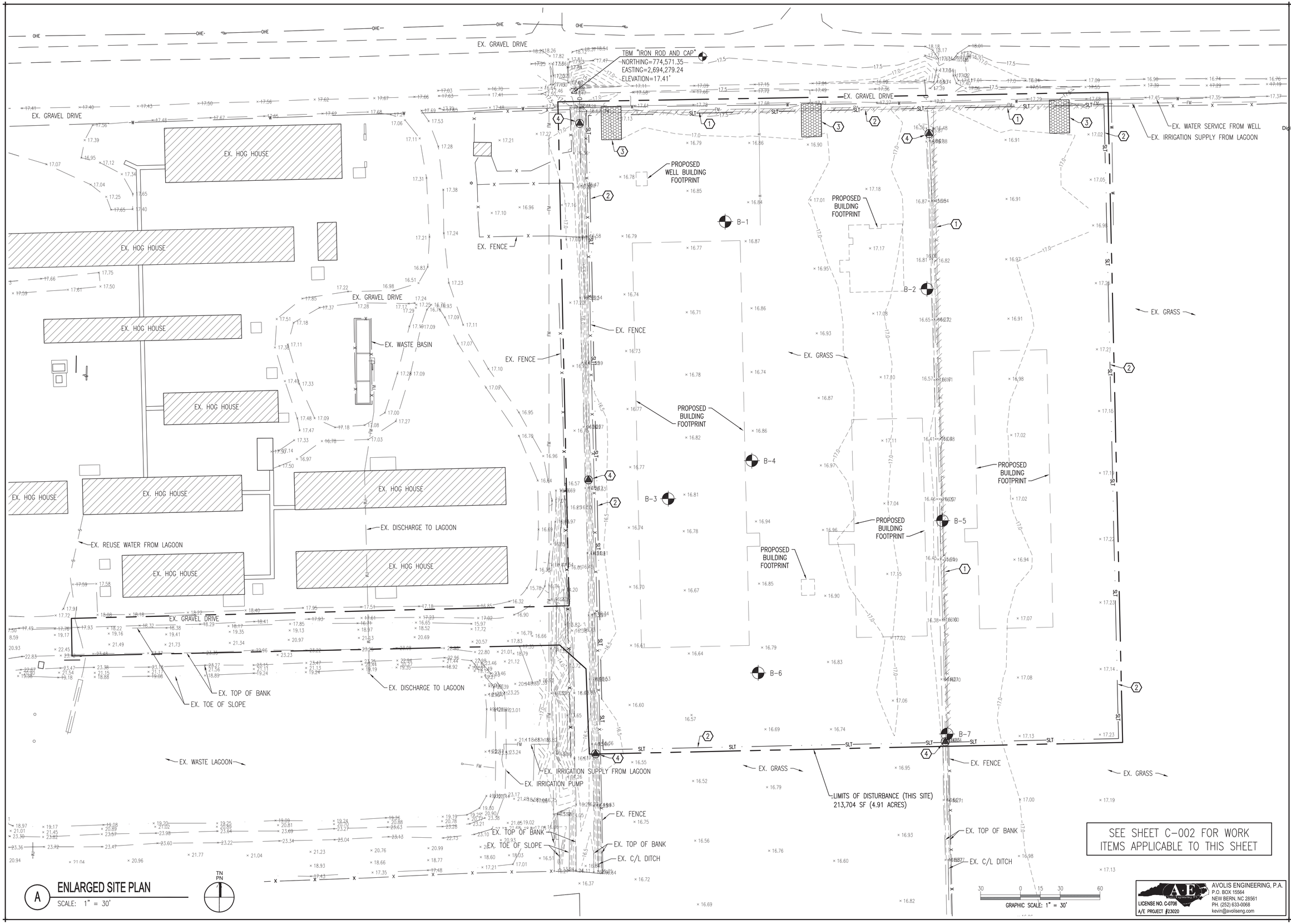
207 Research Station Rd.
Plymouth, NC 27962

Revisions
No. Date

Project Number **2212.HOGS**
Date **7/5/2024**
Drawn **MSP**
Checked **JKA**
Scale **AS NOTED**
Drawing Title

Overall Site Plan

Sheet Number **13** Of **139**
Drawing Number **C-100**



A ENLARGED SITE PLAN

SCALE: 1" = 30'

TN
PN

GRAPHIC SCALE: 1" = 30'

SEE SHEET C-002 FOR WORK ITEMS APPLICABLE TO THIS SHEET

WALKER the GROUP ARCHITECTURE incorporated
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252-636-6778

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7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

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207 Research Station Rd.
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No.	Date
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Project Number: 2212.HOGS
Date: 7/5/2024
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Scale: AS NOTED

Drawing Title

ENLARGED SITE PLAN- EXISTING CONDITIONS AND DEMOLITION

Sheet Number: 14 of 139

Drawing Number: CD101

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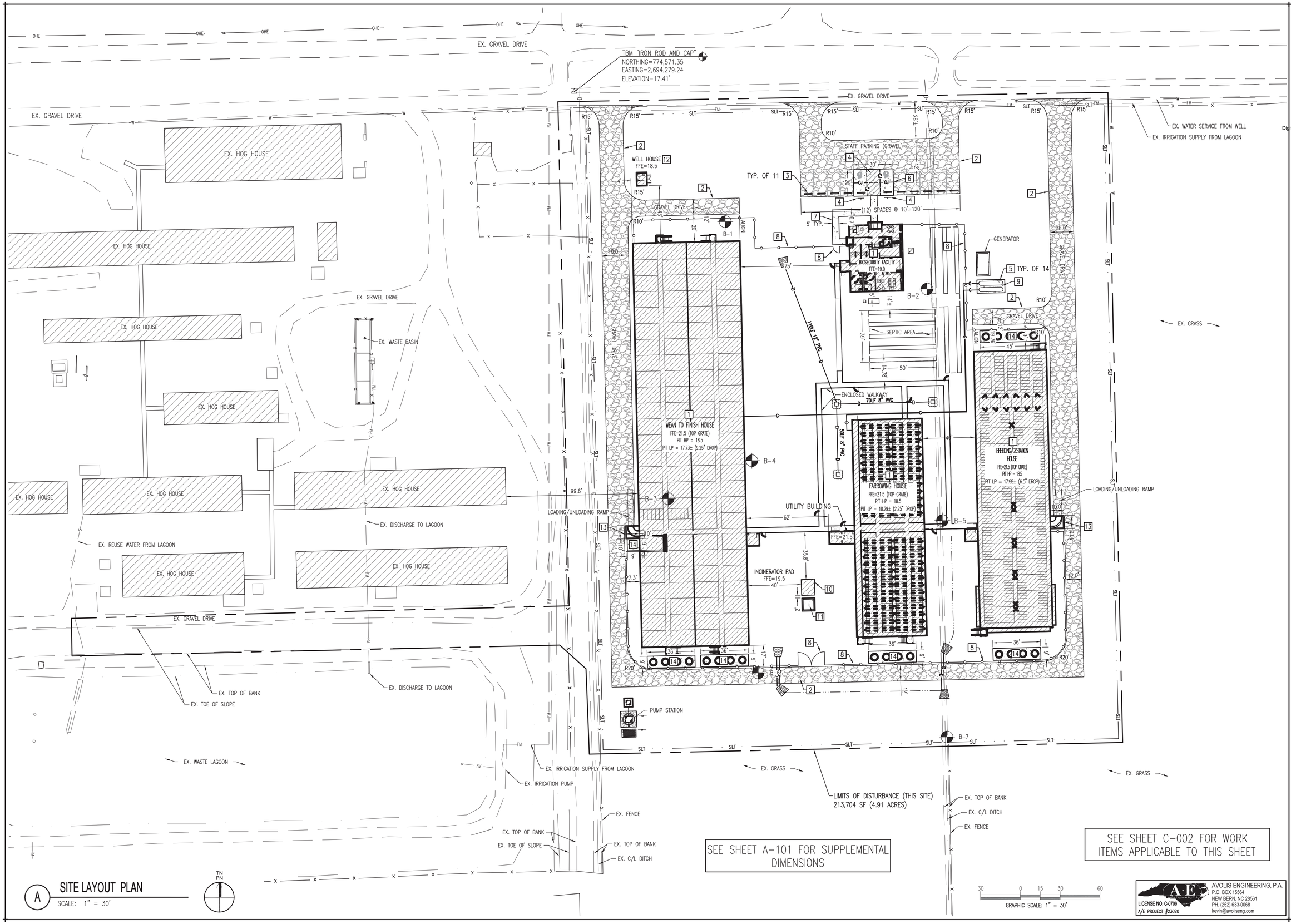

A SITE LAYOUT PLAN
SCALE: 1" = 30'

TN
PN

SEE SHEET A-101 FOR SUPPLEMENTAL DIMENSIONS

SEE SHEET C-002 FOR WORK ITEMS APPLICABLE TO THIS SHEET

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7/5/2024

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7/5/2024

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Scale
AS NOTED

Drawing Title
ENLARGED SITE PLAN- SITE LAYOUT PLAN

Sheet Number
15 of 139

Drawing Number
CS101

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LICENSE NO. C-0706
A/E PROJECT #23020

TBM "IRON ROD AND CAP"
NORTHING=774,571.35
EASTING=2,694,279.24
ELEVATION=17.41'

EX. GRAVEL DRIVE

EX. HOG HOUSE

EX. WATER SERVICE FROM WELL

EX. IRRIGATION SUPPLY FROM LAGOON

WELL HOUSE
FFE=18.5

BIOSECURITY FACILITY
FFE=19.0

EX. GRASS

EX. WASTE BASIN

WEAN TO FINISH HOUSE
FFE=21.5 (TOP GRATE)
PIT HP = 18.5
PIT LP = 17.73± (9.25" DROP)

DI
RIM=20.5
INV=18.8

DI
RIM=20.7
INV=19.2

FARROWING HOUSE
FFE=21.5 (TOP GRATE)
PIT HP = 18.5
PIT LP = 18.29± (2.25" DROP)

BREEDING/GESTATION HOUSE
FFE=21.5 (TOP GRATE)
PIT HP = 18.5
PIT LP = 17.96± (6.5" DROP)

INCINERATOR PAD
FFE=19.5

SIDE SLOPE

EX. DISCHARGE TO LAGOON

EX. REUSE WATER FROM LAGOON

EX. TOP OF BANK

EX. TOE OF SLOPE

EX. WASTE LAGOON

EX. IRRIGATION PUMP

EX. FENCE

EX. C/L DITCH

(2) 24LF 10" SCH 80 PVC

70LF 8" PVC

118LF 12" PVC

3:1 SIDE SLOPE

LIMITS OF DISTURBANCE (THIS SITE)
213,704 SF (4.91 ACRES)

SEE SHEET C-002 FOR WORK ITEMS APPLICABLE TO THIS SHEET

A SITE GRADING PLAN
SCALE: 1" = 30'

TN
PN

GRAPHIC SCALE: 1" = 30'

WALKER the GROUP ARCHITECTURE incorporated
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252-636-6778

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7/5/2024

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2212.HOGS

Date
7/5/2024

Drawn
MSP

Checked
JKA

Scale
AS NOTED

Drawing Title
ENLARGED SITE PLAN- SITE GRADING PLAN

Sheet Number
16 of 139

Drawing Number
CG101

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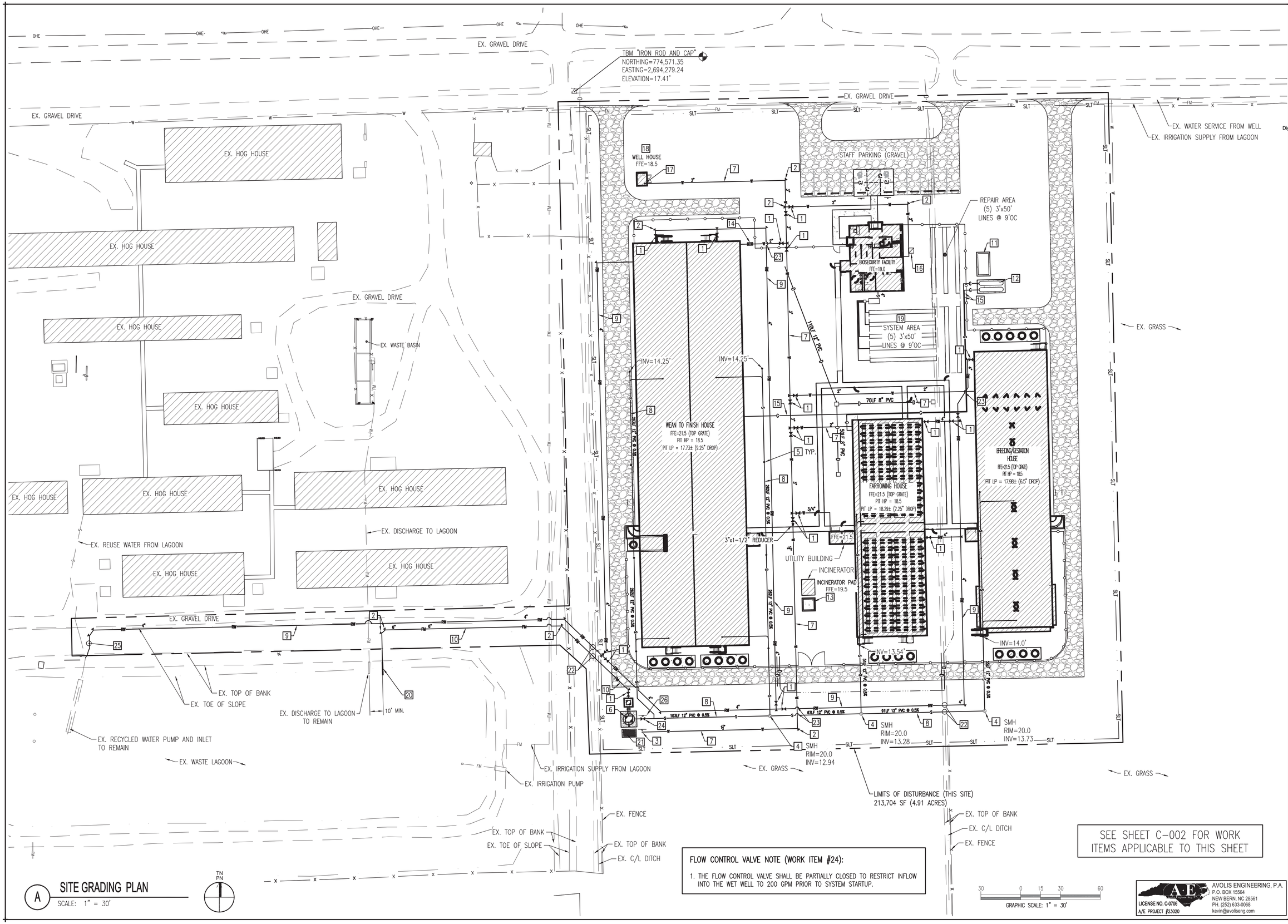
A/E PROJECT #23020



A SITE GRADING PLAN

SCALE: 1" = 30'

GRAPHIC SCALE: 1" = 30'

SEE SHEET C-002 FOR WORK ITEMS APPLICABLE TO THIS SHEET

FLOW CONTROL VALVE NOTE (WORK ITEM #24):

1. THE FLOW CONTROL VALVE SHALL BE PARTIALLY CLOSED TO RESTRICT INFLOW INTO THE WET WELL TO 200 GPM PRIOR TO SYSTEM STARTUP.

WALKER the GROUP ARCHITECTURE incorporated
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7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

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Date **7/5/2024**

Drawn **MSP**

Checked **JKA**

Scale **AS NOTED**

Drawing Title

ENLARGED SITE PLAN- SITE UTILITY PLAN

Sheet Number **17** of **139**

Drawing Number **CU101**

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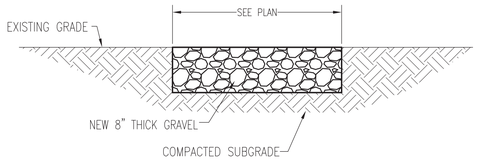
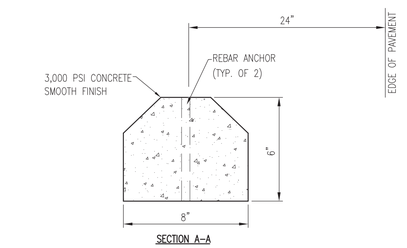
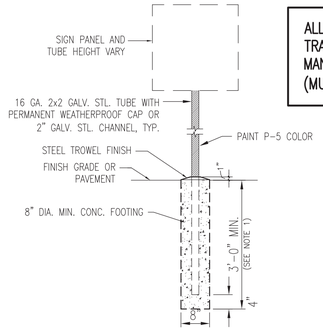


A GRAVEL SURFACING
NOT TO SCALE



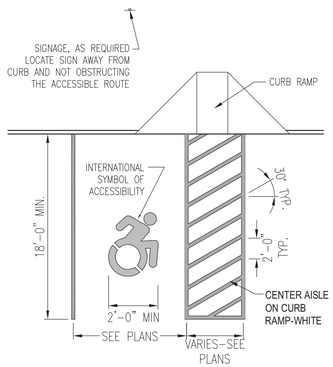
B CONCRETE WHEEL STOP
NOT TO SCALE



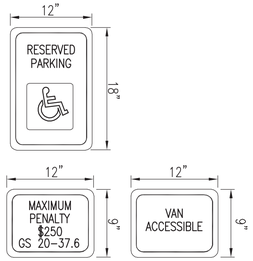
SIGN MOUNTING

ALL SIGNAGE TO CONFORM TO US DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION (OR CURRENT IF NEWER).

PAVEMENT MARKING



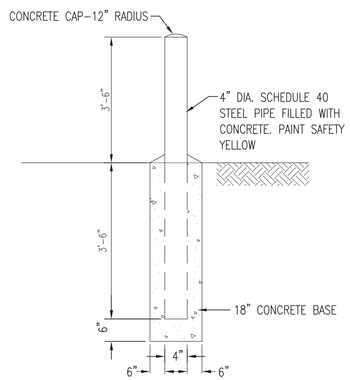
HANDICAP SPACE DESIGNATION



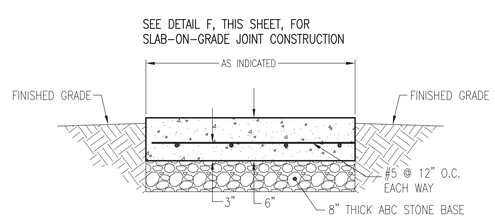
NOTES:
1. COLORS
   BACKGROUND: WHITE
   LEGEND AND BORDER: GREEN
   WHITE SYMBOL ON BLUE BACKGROUND
2. MOUNT THE SIGN 60" ABOVE GRADE.

TYPE A – HANDICAP PARKING SIGNAGE

C ACCESSIBLE MARKINGS AND SIGNAGE
NOT TO SCALE

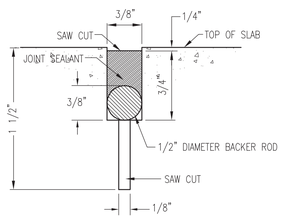


D STEEL BOLLARD
NOT TO SCALE

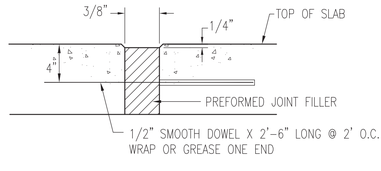


CJ = CONTRACTION JOINT, SEE DETAIL F, THIS SHEET.
EJ = EXPANSION JOINT, SEE DETAIL F, THIS SHEET.

E CONCRETE APRON
SCALE: NTS



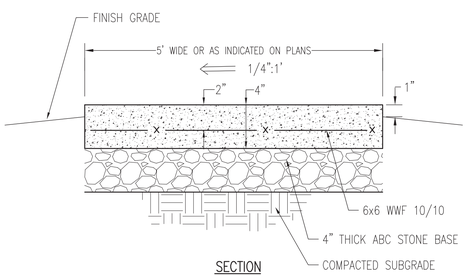
TYPICAL SLAB-ON-GRADE JOINT (CJ)



EXPANSION JOINT (EJ)

LEGEND:
CJ=CONTRACTION JOINT
EJ=EXPANSION JOINT

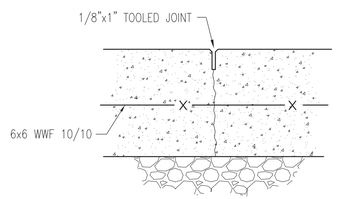
F SLAB-ON-GRADE JOINTS
NOT TO SCALE



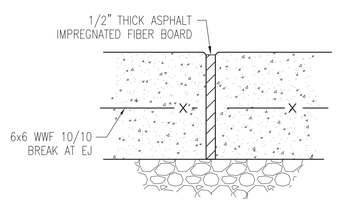
SECTION

NOTES:
1. PROVIDE EXPANSION JOINTS ALONG ALL EXISTING STRUCTURES AND WALKS AND AT 20' INTERVALS ALONG STRAIGHT SECTIONS OF WALK.
2. PROVIDE TOOLED CONTRACTION JOINTS AT 6'-0" INTERVALS AND AT ALL CHANGES IN DIRECTION OF WALK. TOOLED CONTRACTION JOINTS MUST BE 1/8" WIDE X 1" DEEP.
3. SUBGRADE MUST BE WETTED IMMEDIATELY PRIOR TO PLACING CONCRETE, OR PROVIDE POLYETHYLENE SHEETING ON GROUND SURFACE BELOW CONCRETE.
4. PROVIDE FLOATED SURFACE WITH LIGHT BROOM FINISH.
5. PROTECT WORK IN PLACE FROM VANDALISM, GRAFFITI, ETC... UNTIL CONCRETE IS SUFFICIENTLY DRY.

G CONCRETE SIDEWALK
NOT TO SCALE



CONTRACTION JOINT (CJ)



EXPANSION JOINT (EJ)

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS
7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

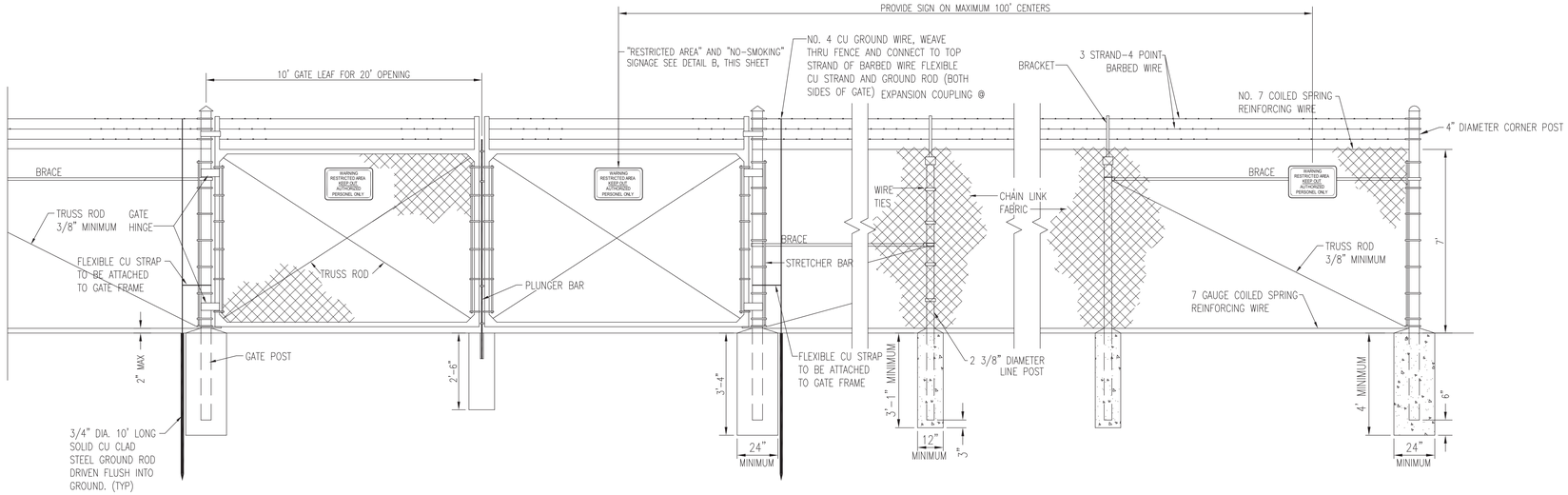
Revisions

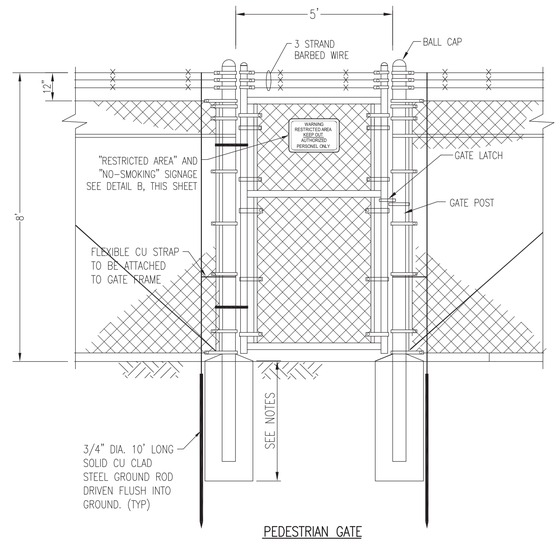
No.	Date

Project Number **2212.HOGS**
Date **7/5/2024**
Drawn **TRA**
Checked **CBW**
Scale **AS NOTED**
Drawing Title

DETAILS

Sheet Number **18** of **139**
Drawing Number **CS501**





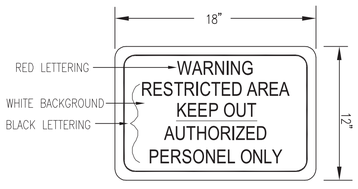
PEDESTRIAN GATE

FENCE NOTES:

1. CONCRETE FOOTINGS AT CORNER, LINE AND GATE POSTS SHALL BE SIZED TO WITHSTAND LATERAL WIND LOADS ON THE FENCE SYSTEM. PROVIDE FOOTING DIMENSIONS AND SUPPORTING CALCULATIONS AS A PART OF THE SUBMITTAL PACKAGE.
2. ALL FENCE SEGMENTS SHALL HAVE AT LEAST ONE GROUNDING POINT. GROUNDING POINTS SHALL NOT EXCEED 1,000 FOOT SPACING.
3. GATES SHALL HAVE HEAVY DUTY HINGES AND LOCKING DEVICES.
4. ALL HINGES FASTENERS SHALL BE WELDED OR PEENED TO PREVENT REMOVAL.
5. CAP TOPS SHALL HAVE SET SCREWS OR RIVETS TO PREVENT REMOVAL.
6. ALL GALVANIZED AREAS DISTURBED DURING INSTALLATION SHALL BE CLEANED AND PRIMED WITH (2) COATS OF POWDERED ZINC PRIMER. ZINC-RICH COMPOUND FOR REPAIRS SHALL BE 95% METALLIC ZINC, BY WEIGHT IN DRIED FILM; INSTALL AT LEAST TWO COATS, 4 MILS MIN. TOTAL THICKNESS.

A HIGH SECURITY CHAIN LINK FENCE

NOT TO SCALE



RESTRICTED AREA SIGNAGE

NOTES:

1. MOUNT SIGN ON FENCE ON EACH FACE OF FENCE AND ON EACH GATE LEAF, ALL FACING TO THE UNPROTECTED SIDE OF THE FENCE.
2. MOUNT BOTOM OF SIGN AT 60" ABOVE FINISH GRADE.
3. MOUNT SIGN VISIBLE FROM AN OUTSIDE-IN APPROACH.
4. SIGN BOARD SHALL BE ALUMINUM.

SIGN MOUNTING BRACKET

B SIGNAGE

NOT TO SCALE

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS

7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

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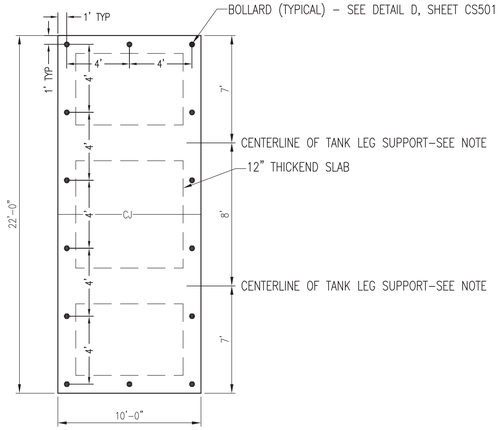
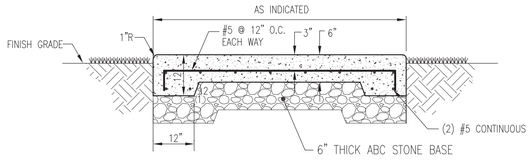
Project Number: 2212.HOGS
Date: 7/5/2024
Drawn: TRA
Checked: CBW
Scale: AS NOTED
Drawing Title:

DETAILS

Sheet Number: 19 of 139
Drawing Number: CS502



PLAN VIEW



SECTION

CJ=CONTRACTION JOINT, SEE DETAIL F, SHEET CS501

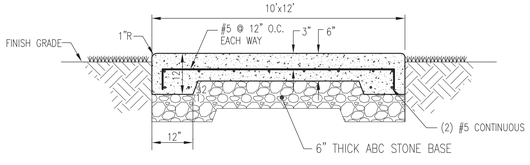
PROVIDE THICKENED SLAB ALONG ALL EDGES.

NOTES:

1. THE CONTRACTOR SHALL COORDINATE THE SIZE OF THE LP GAS TANKS TO BE PROVIDED BY THE UTILITY PURVEYOR THROUGH THE OWNER'S REPRESENTATIVE.
2. THE CONTRACTOR SHALL ADJUST THE INTERIOR THICKENED FOUNDATION LOCATIONS TO COINCIDE WITH THE CENTERLINE OF THE TANK SUPPORT LEGS.

A PROPANE TANK CONCRETE APRON

NOT TO SCALE

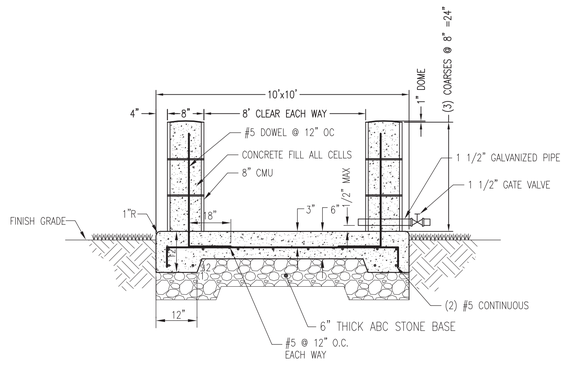


SECTION

PROVIDE THICKENED SLAB ALONG ALL EDGES.

B INCINERATOR CONCRETE PAD

NOT TO SCALE

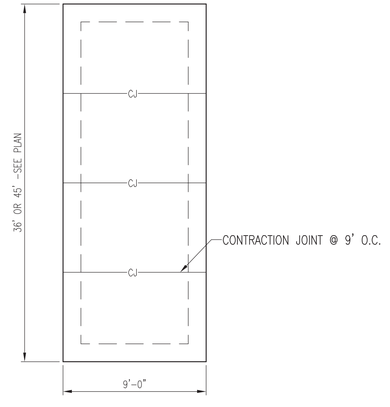


SECTION

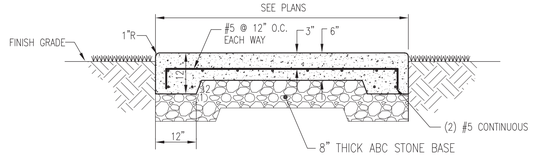
PROVIDE THICKENED SLAB ALONG ALL EDGES.

C FUEL TANK CONTAINMENT PAD

NOT TO SCALE



PLAN VIEW



SECTION

CJ=CONTRACTION JOINT, SEE DETAIL F, SHEET CS501

PROVIDE THICKENED SLAB ALONG ALL EDGES.

D FEED SILO CONCRETE PAD

NOT TO SCALE

WALKER the GROUP ARCHITECTURE incorporated
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2526366778

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NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS

7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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Date **7/5/2024**

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Checked **CBW**

Scale **AS NOTED**

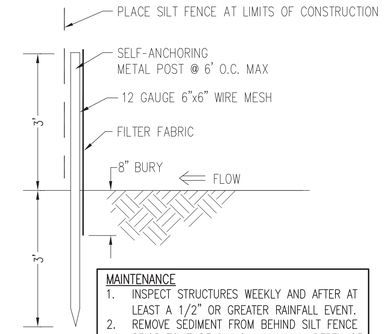
Drawing Title

DETAILS

Sheet Number **20** or **139**

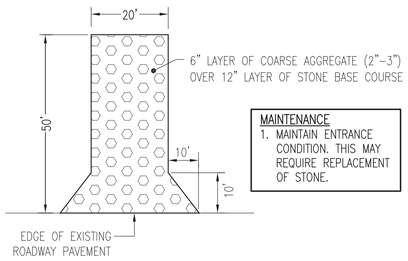
Drawing Number

CS503



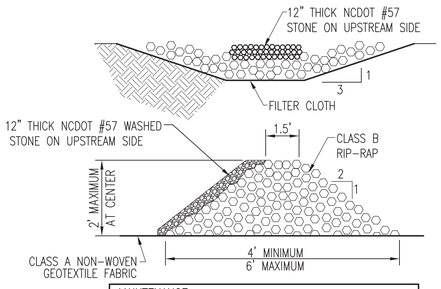
MAINTENANCE
1. INSPECT STRUCTURES WEEKLY AND AFTER AT LEAST A 1/2" OR GREATER RAINFALL EVENT.
2. REMOVE SEDIMENT FROM BEHIND SILT FENCE PRIOR TO IT REACHING A MAXIMUM DEPTH OF SIX (6) INCHES.

A SILT FENCE
NOT TO SCALE



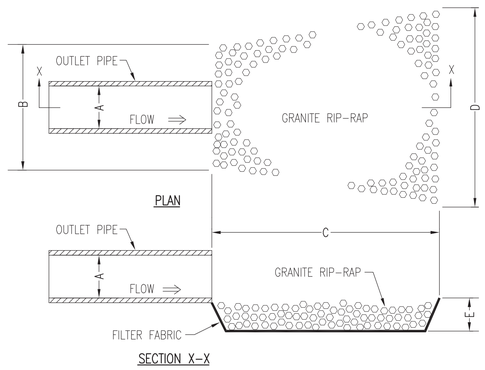
MAINTENANCE
1. MAINTAIN ENTRANCE CONDITION. THIS MAY REQUIRE REPLACEMENT OF STONE.

B GRAVEL CONTROL ENTRANCE
NOT TO SCALE



MAINTENANCE
1. CONSTRUCT CHECK DAM OF RIP–RAP STONE PLACED IN ACCORDANCE WITH DETAIL.
2. SEDIMENT BEHIND THE CHECK DAM MUST BE REMOVED PRIOR TO THE LEVEL REACHING WITHIN 6" OF THE CENTERLINE CREST OF THE DAM.
3. SHOULD SCOUR DEVELOP AT THE DOWNSTREAM END, IT MUST BE REPAIRED IMMEDIATELY.

C CHECK DAM
NOT TO SCALE



A	B	C	D	E	MIN. RIP RAP SIZE	MAX. RIP RAP SIZE
12"	6'	10'	12'	18"	6"	9"
15"	6'	10'	12'	18"	6"	9"

MAINTENANCE:
1. INSPECT STRUCTURES AT LEAST WEEKLY AND AFTER ANY RAINFALL EVENT GREATER THAN ONE–HALF INCH.
2. IMMEDIATELY MAKE ALL NEEDED REPAIRS.

D INLET/OUTLET PROTECTION
NOT TO SCALE

SEEDING

AFTER COMPLETION OF GRADING ACTIVITIES AND THE CONSTRUCTION OF SWALES, ALL EXPOSED AREAS SHALL BE SEEDED TO THE FOLLOWING SPECIFICATIONS:

SEED BED
LIME 1-1/2 TON PER ACRE
FERTILIZER 1/2-TON PER ACRE
SEED
RYE GRAIN 100 LBS PER ACRE
TALL FESCUE 200 LBS PER ACRE

SUPPLEMENTAL SEED
MAY THROUGH AUGUST:
CENTIPEDE 10 LBS PER ACRE

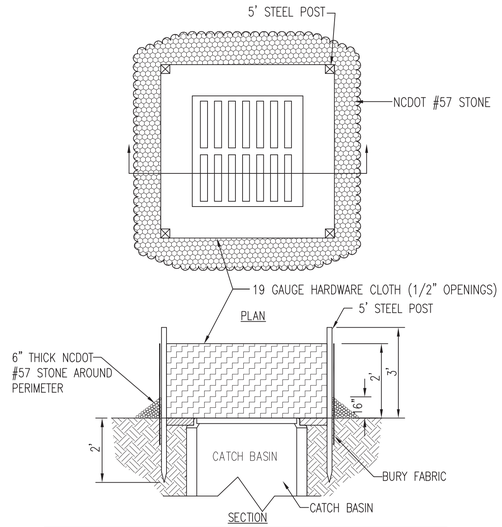
PROCEDURE
STRAW MULCH SHALL BE APPLIED AT A RATE WHICH WILL INSURE APPROXIMATELY 75% COVERAGE OF THE SEEDED AREA. THE STRAW AND SOWN SEED WILL BE LIGHTLY DISCED INTO THE BED TO GIVE IT FURTHER RESISTANCE TO BLOWING AND WASHING. THE CONTRACTOR SHALL GUARANTEE A FULL STAND OF GRASS OVER THE ENTIRE DISTURBED AREA. IF NECESSARY THE CONTRACTOR WILL WET DOWN THE AREAS TO ASSIST IN SEED GERMINATION OR AID IN GROWTH IN TIMES OF EXCESSIVELY DRY WEATHER. A STAND OF GRASS WILL BE CONSIDERED ACCEPTABLE WHEN THE ENTIRE STAND OF GRASS IS AT LEAST FOUR INCHES HIGH AND HAS ACHIEVED AT LEAST 95% COVERAGE OF DISTURBED AREAS. RESEEDING WILL BE REQUIRED AS NECESSARY BY THE CONTRACTOR TO OBTAIN THE SPECIFIED STAND OF GRASS.

SPECIAL SEEDING NOTE:

ALL DENUDED AREAS WILL, WITHIN 7 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING OR CEASING OF GRADING ACTIVITIES, BE PLANTED AND PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.

ALL DENUDED AREAS WILL, WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION, BE PROVIDED PERMANENT GROUND COVER.

E VEGETATION PLAN
NOT TO SCALE

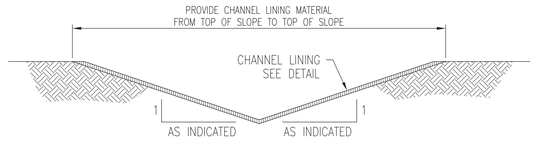


NOTE:
UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.

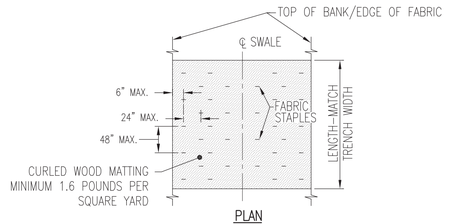
NOTE:
PROVIDE DROP INLET PROTECTION AT ALL DRAINAGE STRUCTURES.

MAINTENANCE:
1. INSPECT STRUCTURES WEEKLY AND AFTER AT LEAST A 1/2" OR GREATER RAINFALL EVENT.
2. CLEAR DEBRIS AND REPLACE STONE AS NEEDED.
3. REMOVED ACCUMULATED SEDIMENT WHEN IT REACHES A MAXIMUM DEPTH OF 6 INCHES.

F DROP INLET PROTECTION
NOT TO SCALE



SECTION



PLAN

NOTES:
1. INSTALL MATTING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. PREPARE, SEED AND FERTILIZE SWALE PRIOR TO MATTING INSTALLATION.
3. APPLY MATTING IN DIRECTION OF WATER FLOW.
4. PLACE MATTING IN CONTACT WITH SOIL.
5. BUTT ROLLS OF MATTING WITH 6" OVERLAP.
6. U–STAPLES SHOULD HAVE 6" MIN. LENGTH AND 1" MIN. CROWN.

CHANNEL LINING

G LINED SWALE
NOT TO SCALE

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS

7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions
No. Date

Project Number **2212.HOGS**
Date **7/5/2024**
Drawn **TRA**
Checked **CBW**
Scale **AS NOTED**
Drawing Title

Erosion Control Details

Sheet Number **21** Of **139**
Drawing Number
CG501

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	**Stabilize within this many calendar days after ceasing land disturbance**	**Timeframe variations**
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	7 days for slopes greater than 50' in length and with slopes steeper than 4:1 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones 10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones 10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Tall temporary grass seed (barley with straw or other mulches and tackifiers) • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or straw mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and densely established ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

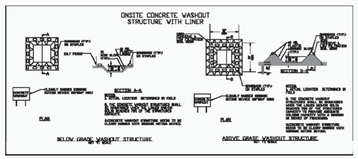
PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

NORTH CAROLINA *Environmental Quality*



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barries and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label instructions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING | EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un attended days (one this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDCs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- **They are 25 gallons or more,**
- **They are less than 25 gallons but cannot be cleaned up within 24 hours,**
- **They cause sheen on surface waters (regardless of volume), or**
- **They are within 100 feet of surface waters (regardless of volume).**

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible***. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

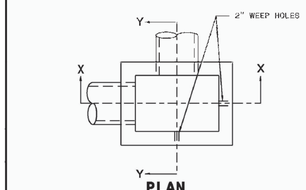
Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

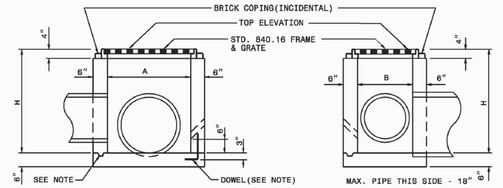
NORTH CAROLINA *Environmental Quality*

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19

A EROSION CONTROL NOTES
NOT TO SCALE



PLAN
WITH GRATE & FRAME REMOVED



GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

CONSTRUCT WITH PIPE CROWNS MATCHING.

SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.

INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.

INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.

CHAMFER ALL EXPOSED CORNERS 1".

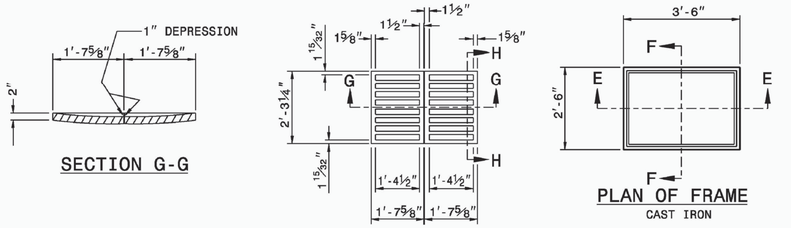
DRAWING NOT TO SCALE.

DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)

DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX			DEDUCTIONS FOR ONE PIPE	
PIPE D	SPAN A	WIDTH B	MIN. HEIGHT H	BOTTOM SLAB	WALL PER FT. HT.	TOTAL CONCRETE FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015	0.026
15"	/	/	2'-3"	/	/	0.648	0.023	0.036
18"	/	/	2'-6"	/	/	0.703	0.033	0.049
24"	/	/	3'-0"	/	/	0.814	0.059	0.085
30"	3'-0"	2'-0"	3'-6"	0.222	0.222	0.925	0.092	0.127

CONCRETE DROP INLET

B DROP INLET
NOT TO SCALE



DROP INLET FRAME AND GRATE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
1-18

ROADWAY STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE

SHEET 1 OF 1
840.14

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
1-18

ROADWAY STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
FOR USE WITH STD. DWG.S 840.14 AND 840.15

SHEET 1 OF 1
840.16

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2626366778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS

7/5/2024

DACS- Tidewater Reseach Station-Swine Unit Replacement

SCO# 22-25072-01A

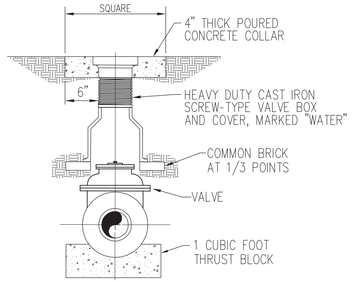
207 Research Station Rd. Plymouth, NC 27962

Revisions
No. Date

Project Number **2212.HOGS**
Date **7/5/2024**
Drawn **TRA**
Checked **CBW**
Scale **AS NOTED**
Drawing Title

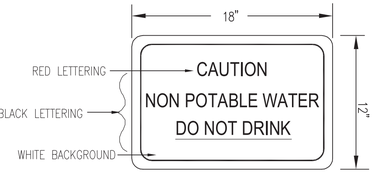
Erosion Control Notes

Sheet Number **22** of **139**
Drawing Number **CG502**

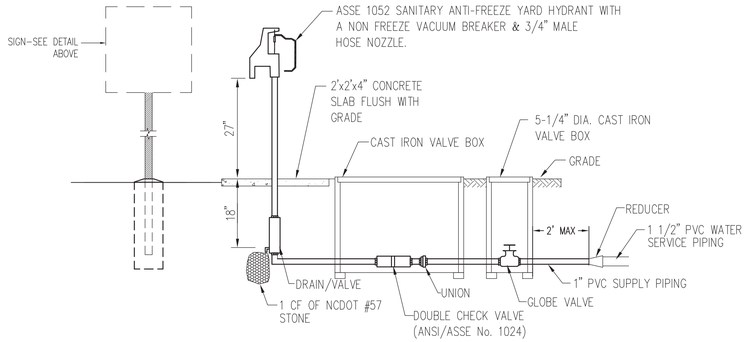


A VALVE AND VALVE BOX

SCALE: NTS

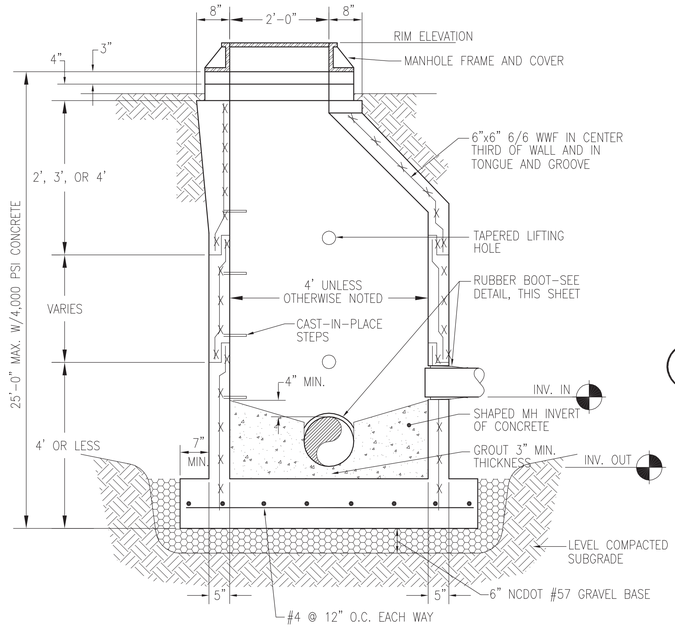


NOTES:
1. MOUNT SIGN ON 16 GA. 2x2 GALVANIZED STEEL TUBE WITH WEATHERPROOF CAP.
2. MOUNT BOTOM OF SIGN AT 60" ABOVE FINISH GRADE.
3. SIGN BOARD SHALL BE ALUMINUM.



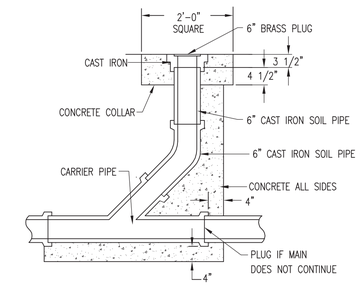
C FROST PROOF YARD HYDRANT

SCALE: NTS



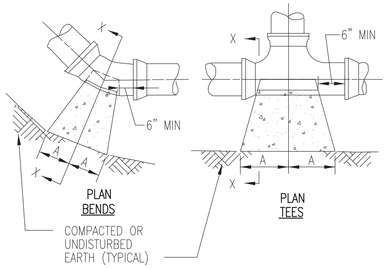
E PRECAST MANHOLE

NOT TO SCALE



G CLEANOUT

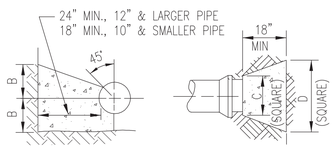
SCALE: NTS



PLAN
BENDS

COMPACTED OR UNDISTURBED EARTH (TYPICAL)

PLAN
TEES



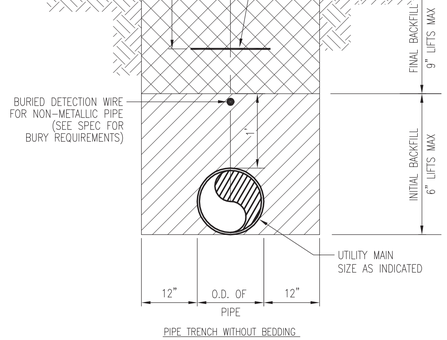
SECTION X-X
BENDS & TEES

PLAN & ELEVATION
PLUGS

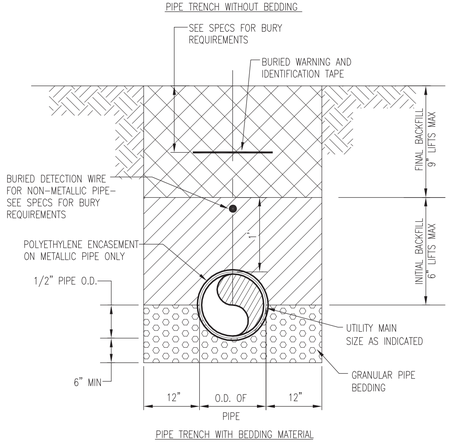
SIZE	1/4 BENDS		1/8 BENDS		1/16 BENDS		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
2"-6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"

D THRUST BLOCKING

SCALE: NTS



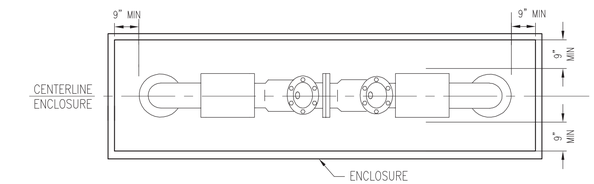
PIPE TRENCH WITHOUT BEDDING

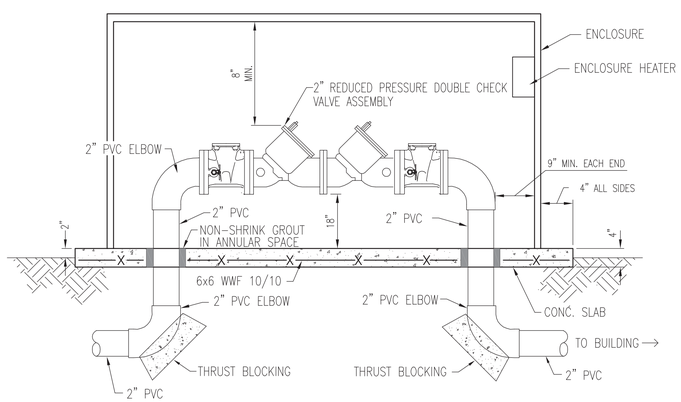


PIPE TRENCH WITH BEDDING MATERIAL

D PIPE TRENCH SECTION

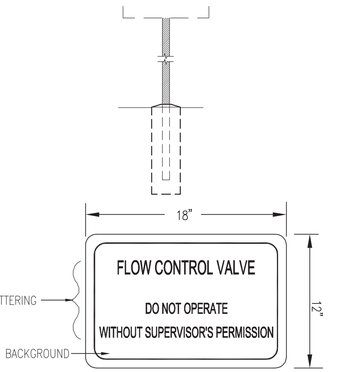
SCALE: NTS





F BACKFLOW ASSEMBLY AND ENCLOSURE

NOT TO SCALE



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2. MOUNT BOTOM OF SIGN AT 60" ABOVE FINISH GRADE.
3. SIGN BOARD SHALL BE ALUMINUM.

H SIGNAGE AT FLOW CONTROL VALVE

SCALE: NTS

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS

7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No. Date

Project Number **2212.HOGS**

Date **7/5/2024**

Drawn **TRA**

Checked **CBW**

Scale **AS NOTED**

Drawing Title

UTILITY DETAILS

Sheet Number **23** of **134**

Drawing Number

CU501

Martin-Tyrrell-Washington
DISTRICT HEALTH
Wes Gray, MPA, MPH, Health Director
252.793.3028 (o) · 252.791.3108 (f) · mtwdistricthealth.org

Public Health

Permit to Construct Private Drinking Water Well
(Permit Expires 5 Years from Date Issued)

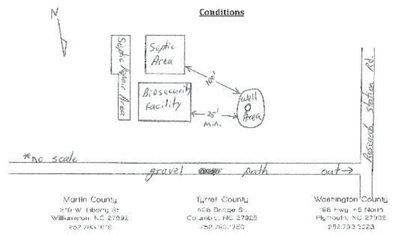
Applicant Information
Name: Tidewater Research Station
Address: 207 Research Station Rd. Plymouth, NC 27962
Phone:

Well Identification
Physical Location: **Research Station Rd. adjacent to existing swine unit.**
GPS Latitude: Longitude:
Contractor Certification Number: Well Contractor:

Well Head Inspection
__Well Contractor Identification Plate __Pump Installer Identification Plate __Sample Tap __Access Port/Vent
__Well Seal __Well Head 12 inches/Pitless Adaptor 8 inches above Grade __Grout to Ground Surface

Well Inspection Record
Permit Issued By: [signature] Date: 11-22-2023
Grout Inspection: Date:
__ Contractor Certification for Grouting Not Witnessed by Department, Date:
Well Head Inspection: Date:
Certificate of Completion Issued By: Date:

Conditions

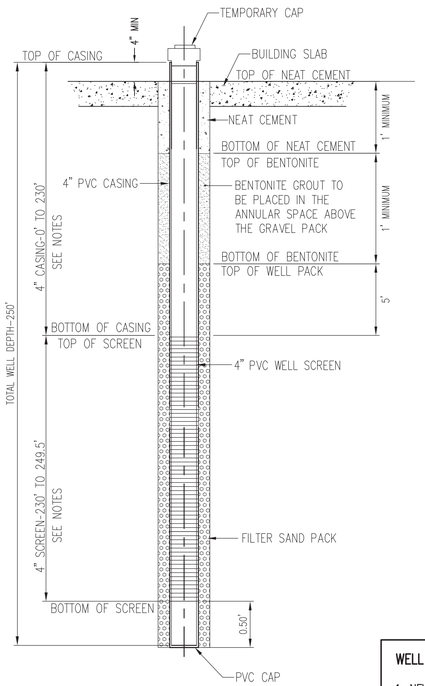


Martin County
310 W. Liberty St.
Williamston, NC 27892
252.792.1101

Tyrrell County
406 Bridge St.
Columbia, NC 27925
252.796.1793

Washington County
186 Hwy 45 North
Plymouth, NC 27962
252.793.3223

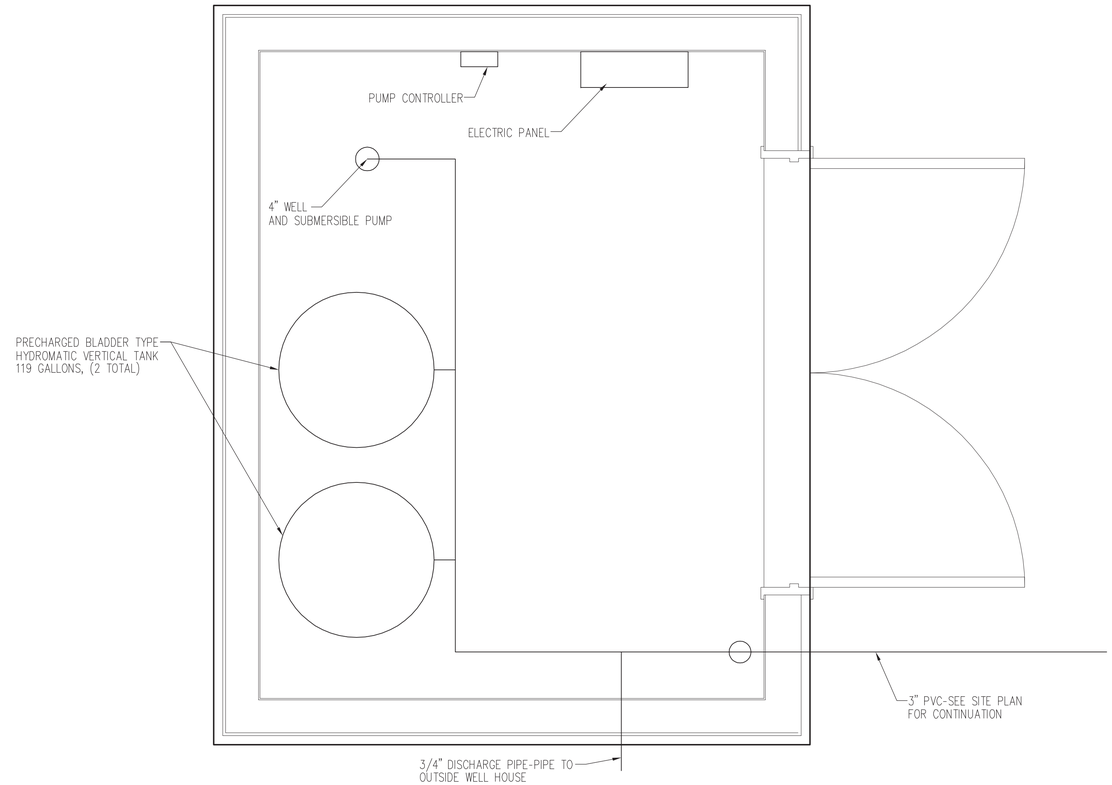
WELL CONSTRUCTION PERMIT



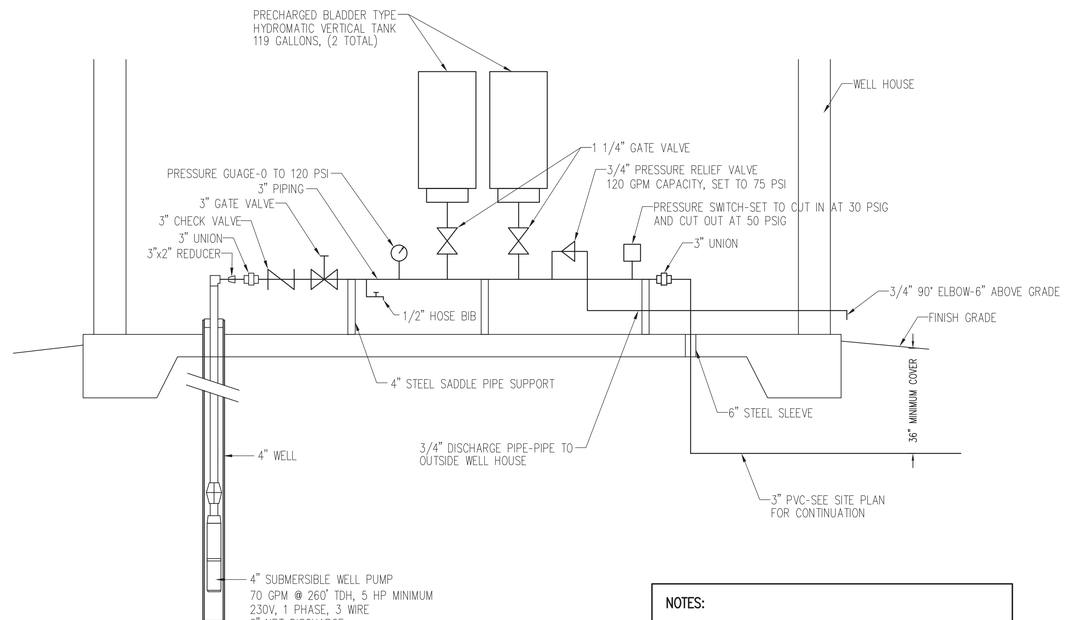
WELL CONSTRUCTION NOTES:

1. NEW WELL CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH 15A NCAC .0100, SUBCHAPTER 2C–WELL CONSTRUCTION STANDARDS.
2. THE CONTRACTOR SHALL COORDINATE WELL INSTALLATION WITH THE WASHINGTON COUNTY ENVIRONMENTAL HEALTH DEPARTMENT.
3. WELL INSTALLATION SHALL BE COMPLETED BY A NORTH CAROLINA LICENSED WELL INSTALLER.
4. THE CASING AND SCREEN LENGTHS SHOWN ARE FROM AS–BUILT WELL DATA FROM AN ON–SITE WELL. THESE LENGTHS SHALL BE ADJUSTED, IF NECESSARY, ACCORDING TO RECOMMENDATIONS FROM THE WELL DRILLER AND AS APPROVED BY THE PROJECT ENGINEER TO VALUES THAT WILL BEST ACHIEVE THE DESIGN MINIMUM FLOW.

E 4-INCH WELL
SCALE: NTS



WELL HOUSE LAYOUT



WELL HOUSE PIPING SCHEMATIC

NOTES:

1. ALL PIPING IN THE WELL HOUSE SHALL BE SCHEDULE 80 PVC.

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2626366778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS
7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions
No. Date

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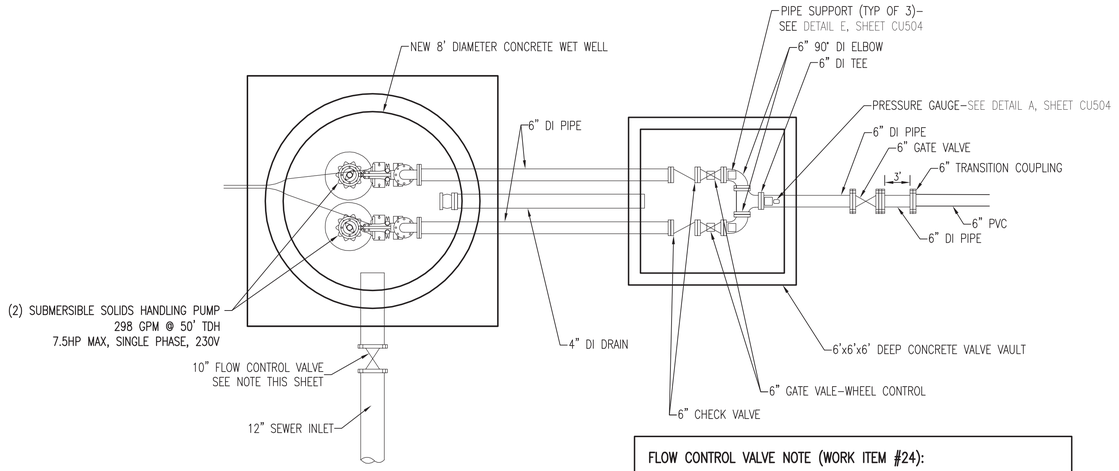
Scale **AS NOTED**
Drawing Title

UTILITY DETAILS

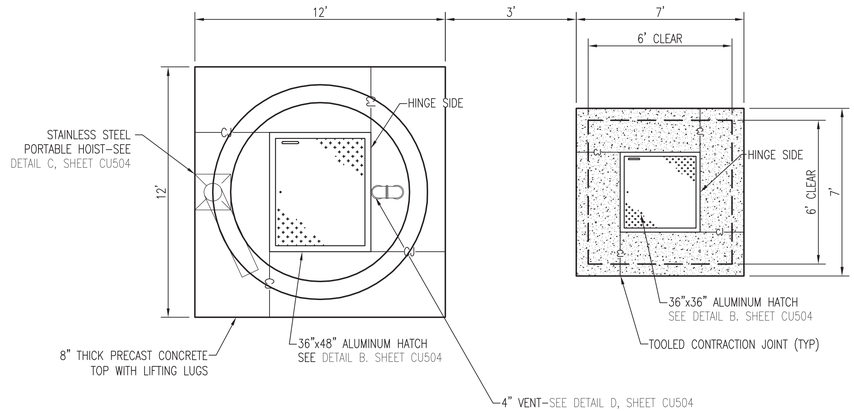
Sheet Number **24** or **139**
Drawing Number
CU502



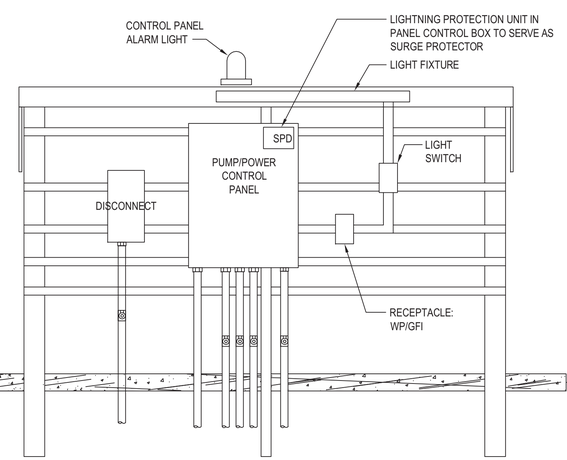
PLAN VIEW WITHOUT COVERS

FLOW CONTROL VALVE NOTE (WORK ITEM #24):

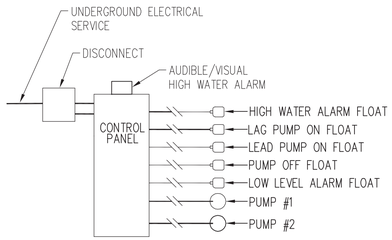
1. THE FLOW CONTROL VALVE SHALL BE PARTIALLY CLOSED TO RESTRICT INFLOW INTO THE WET WELL TO 200 GPM PRIOR TO SYSTEM STARTUP.



PLAN VIEW WITH COVERS

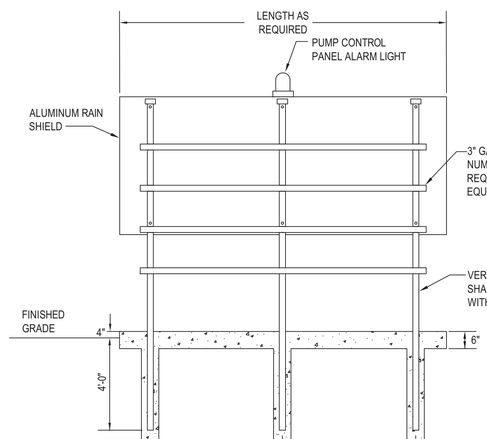


FRONT ELEVATION



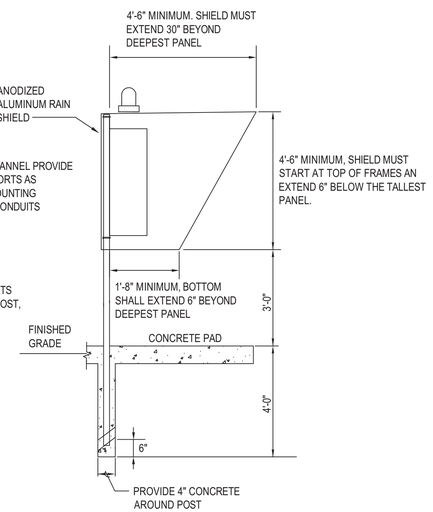
NOTE:
SEPARATE ELECTRCIAL CIRCUITS ARE REQUIRED FOR PUMP CONTROL AND CONTROL PANEL CONTROL. SEE ELECTRCIAL PLANS.

POWER/CONTROLLER SCHEMATIC
NOT TO SCALE

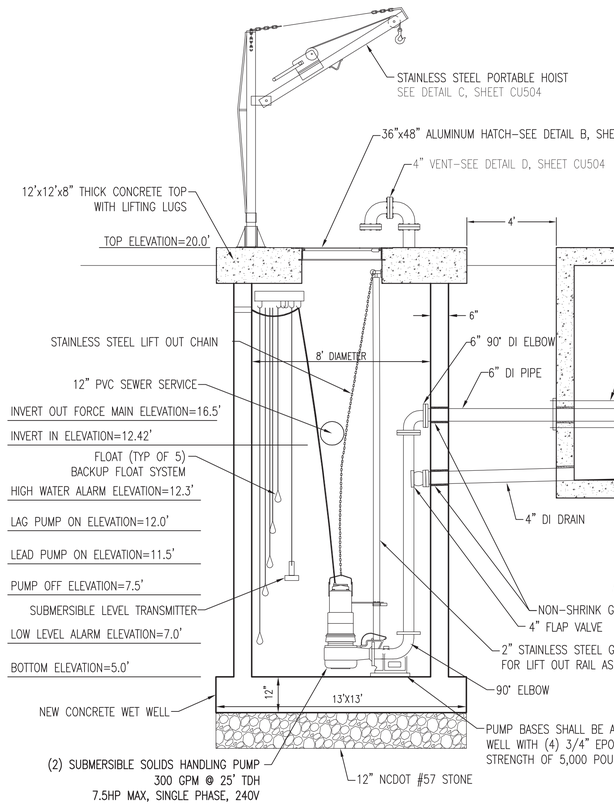


NOTE:
RAIN SHIELD SHALL EXTEND THE ENTIRE LENGTH OF THE EQUIPMENT RACK AND EXTEND A MINIMUM OF 30" BEYOND THE DEEPEST PANEL.

REAR ELEVATION



SIDE ELEVATION



ELEVATION

A PUMP STATION

NOT TO SCALE

B CONTROL PANEL SUPPORT STAND

NOT TO SCALE

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526364778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS

7/5/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

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Scale **AS NOTED**

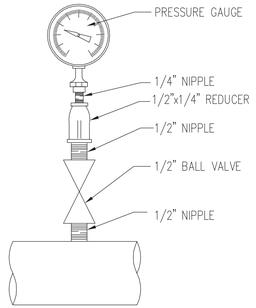
Drawing Title

UTILITY DETAILS

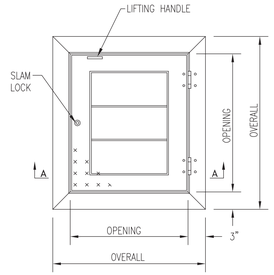
Sheet Number **25** of **139**

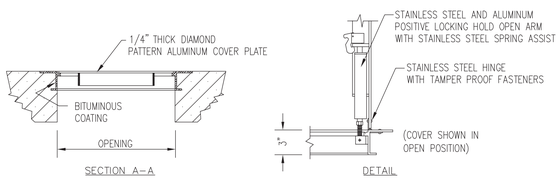
Drawing Number

CU503

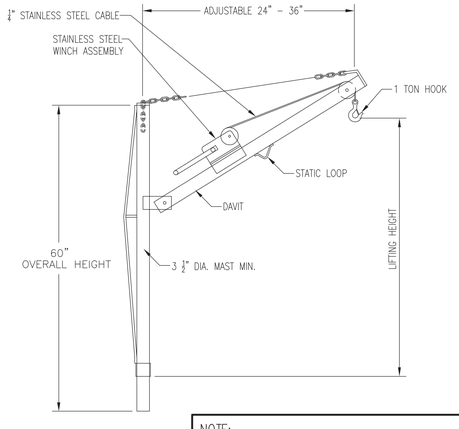


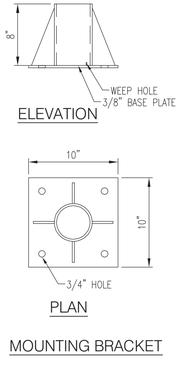
A PRESSURE GUAGE ASSEMBLY
NOT TO SCALE





B ACCESS HATCH
NOT TO SCALE

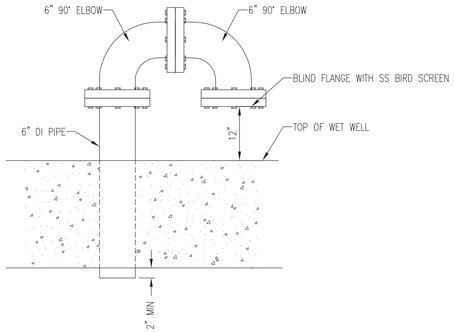




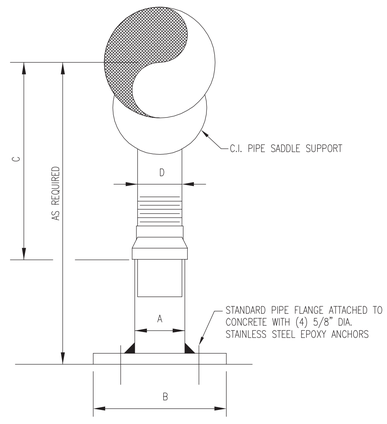
MOUNTING BRACKET

NOTE:
1. MINIMUM HOIST CAPACITY SHALL BE 1,330 LBS.
2. ALL PIPING SHALL BE STAINLESS STEEL

C STAINLESS STEEL PORTABLE HOIST
NOT TO SCALE



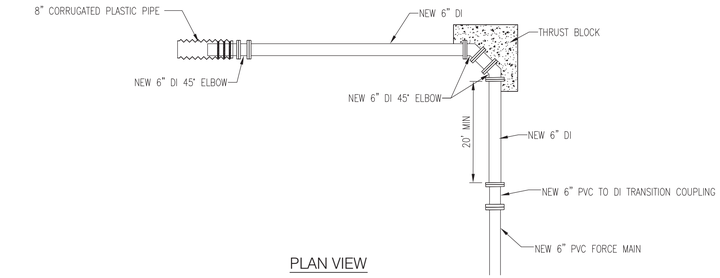
D WET WELL VENT
NOT TO SCALE



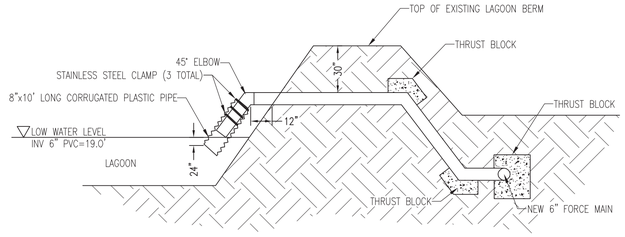
PIPE SIZE	A	B	C		D
			MIN.	MAX.	
4	3	9	9–1/4	14	2–1/2
5	3	9	10	14–3/4	2–1/2
6	3	9	10–1/2	15–1/4	2–1/2
8	3	9	11–3/4	16–1/2	2–1/2
10	3	9	13–1/2	18–1/4	2–1/2

PIPE SUPPORT NOTES:
1. ALL HARDWARE, FLANGE, ANGLE, PIPES AND COUPLING SHALL BE 316 STAINLESS STEEL.
2. FOR BASE, HEIGHT AND FLANGE DIMENSIONS, SEE TABLE ABOVE. ALL DIMENSIONS ARE IN INCHES.

E STANCHION PIPE SUPPORT
NOT TO SCALE



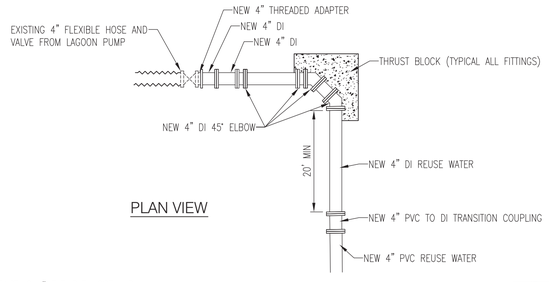
PLAN VIEW



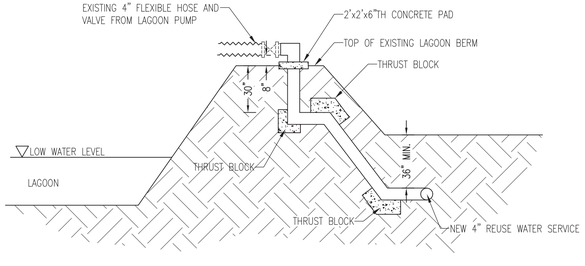
SECTION

NOTE:
1. ALL DUCTILE IRON PIPING AND FITTINGS ARE FLANGED.

F FORCE MAIN DISCHARGE AT BASIN
NOT TO SCALE



PLAN VIEW



SECTION

NOTE:
1. ALL DUCTILE IRON PIPING AND FITTINGS ARE FLANGED.

G CONNECTION AT REUSE WATER SERVICE
NOT TO SCALE

EXISTING CONDITIONS PHOTO

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS
7/5/2024

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UTILITY DETAILS

Sheet Number **26** of **139**
Drawing Number **CU504**

Martin-Tyrrell-Washington DISTRICT HEALTH

Public Health

Wes Gray, MPA, MPH, Health Director

252.793.3028 (p) • 252.791.3108 (f) • mtwdistricthealth.org

CONSTRUCTION AUTHORIZATION
(Required for Building Permit)

The construction and installation requirements of Rules .1950, .1952, .1954, .1955, .1956, .1957, .1958, and .1959 are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached system layout.

ISSUED TO: Tidewater Research Station
ADDRESS: 207 Research Rd.
Plymouth, NC 27962

PROPERTY LOCATION: Research Station Rd. approximately 2 miles south adjacent to existing swine operation.

Facility Type: **Swine Operation Office** ☒New ☐ Expansion ☐ Repair
Basement? ☐ Yes ☒ No Basement Fixtures? ☐ Yes ☐ No
Type of Wastewater System** Accepted (Initial) Wastewater Flow: **200 GPD**
(See note below, if applicable: ☐)
Accepted (Repair)

Installation Requirements/Conditions

Septic Tank Size: **1,000 gallons**
Pump Tank Size _____ gallons. Pump requirements: ___ ft. TDH vs. ___ GPM.

Total Trench Length: 250 Maximum Trench Depth of: **12 inches**
Trench Spacing: 9 Feet on Center; Soil Cover: 6 inches minimum.
Aggregate Depth: 6 inches above pipe, 6 inches below pipe, 12 inches total.
Trench bottoms shall be level to +/- ½" in all directions. Maximum soil cover shall not exceed 36" above trench bottom.

Conditions:

_____

****If applicable:**
I understand the system type specified is different from the type specified on the application. I accept the specifications of this permit.

Owner/Legal Representative Signature: _____ Date: _____

This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be transferred when there is a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit.

Authorized State Agent: Mitchell E. Patrick, REHS **Date of Issuance: 11-22-2023**
See Attached site sketch

Construction Authorization Expiration Date: 11-22-2028
PAGE 1 OF 2

Martin County
210 W. Liberty St.
Williamston, NC 27892
252.793.1616

Tyrrell County
406 Bridge St.
Columbia, NC 27925
252.793.1750

Washington County
196 Hwy 45 North
Plymouth, NC 27962
252.793.3028

Martin-Tyrrell-Washington DISTRICT HEALTH

Public Health

Wes Gray, MPA, MPH, Health Director

252.793.3028 (p) • 252.791.3108 (f) • mtwdistricthealth.org

PIN: N/A Permit Number: N/A

IMPROVEMENT PERMIT
A building permit cannot be issued with only an Improvement Permit

ISSUED TO: Tidewater Research Station PROPERTY LOCATION: Research Station Rd.
ADDRESS: 207 Research Station Rd. 2 miles south, adjacent to existing swine unit.
Plymouth, NC 27962

New X Repair___ Expansion___

Site Improvements required prior to Construction Authorization Issuance:

_____
_____
_____

Type of Structure: Biosecurity Facility for Swine Unit
Proposed Wastewater System Type: Conventional
Projected Daily Flow: 200 GPD
Number of bedrooms: 0 Maximum Number of Occupants: 8 employees
Basement ___Yes __X__No
Pump Required: ___Yes X No ___May be required based upon final location and elevations of facilities.
Type of Water Supply: **Private** Permit valid for: __X__Five years
___No expiration

Permit conditions: **See Construction Authorization**

Authorized State Agent: Mitchell E. Patrick, REHS November 22, 2023

See Attached Site Sketch

The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This site is subject to revocation if the site plan, plat, or the intended use changes. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to conditions of this permit.

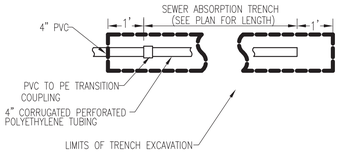
Martin County
210 W. Liberty St.
Williamston, NC 27892
252.793.1616

Tyrrell County
406 Bridge St.
Columbia, NC 27925
252.793.1750

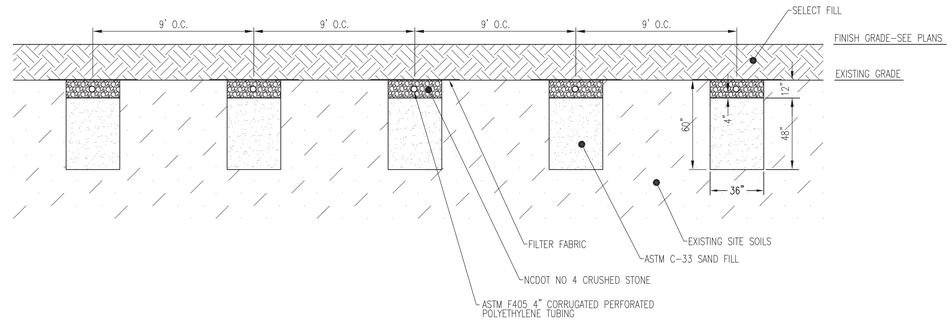
Washington County
196 Hwy 45 North
Plymouth, NC 27962
252.793.3028

NOTES:

1. THE CONTRACTOR SHALL COORDINATE SEPTIC SYSTEM INSTALLATION WITH THE WASHINGTON COUNTY ENVIRONMENTAL HEALTH DEPARTMENT. A HEALTH DEPARTMENT REPRESENTATIVE SHALL OBSERVE SEPTIC SYSTEM INSTALLATION.
2. THE SEPTIC SYSTEM SHALL BE INSTALLED AS LATE AS PRACTICAL IN THE CONSTRUCTION SEQUENCE TO AVOID INADVERTENT DAMAGE TO THE INSTALLED SYSTEM.
3. THE PROPOSED SEPTIC FIELD AREA SHALL BE PROTECTED WITH CONSTRUCTION FENCING AT THE ONSET OF SITE WORK AND SHALL BE MAINTAINED THROUGHOUT THE PERIOD OF CONSTRUCTION.
4. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON THE PROPOSED SEPTIC FIELD AREA.
5. THE SEPTIC FIELD AREA SHALL BE GRADED TO REMOVE ANY SURFACE IRREGULARITIES THAT WOULD POND WATER. THE ENTIRE SEPTIC FIELD AREA SHALL BE SODDED.
6. THE SEPTIC TANK AND DISTRIBUTION BOX SHALL BE NC DEPARTMENT OF HEALTH APPROVED COMPONENTS.
7. AN EFFLUENT FILTER SHALL BE PROVIDED ON THE SEPTIC TANK OUTLET.
8. SEPTIC SYSTEM INSTALLATION SHALL BE IN STRICT COMPLIANCE WITH THE PROVISIONS OF THE APPROVED SEPTIC SYSTEM PERMIT ISSUED BY WASHINGTON COUNTY.



PLAN VIEW–NITRIFICATION LINE



CROSS SECTION–NITRIFICATION FIELD

Site Sketch

P.N: N/A Permit Number: N/A Improvement Permit ☒Construction Authorization

Tidewater Research Station — Applicant's Name
Research Station Rd. adjacent to existing swine operation — Subdivision/Section/Lot Number

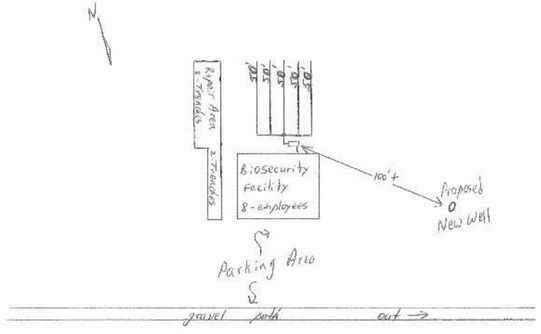
Authorized State Agent
11-22-2023 — Date

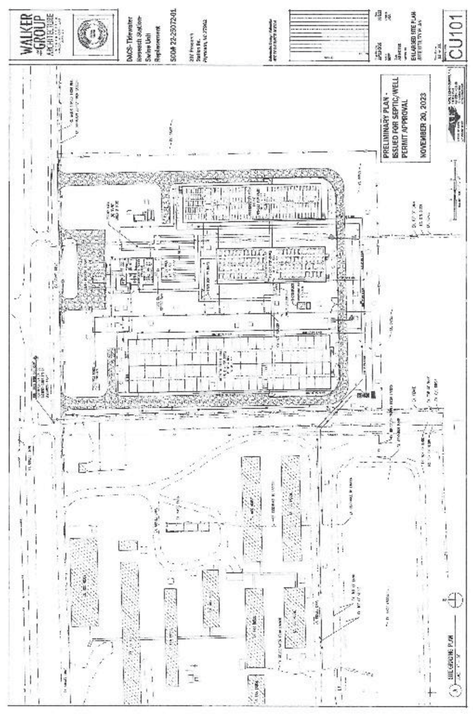
System components represent approximate contours only. The contractor must flag the system prior to beginning the installation to ensure that the proper grade is maintained.

Scale = As noted

Conditions:

1. **Sand Lined Trench septic system.**
2. **Install five septic trenches at 50 feet in length as shown.**
3. **12 inches trench depth from existing grade.**
4. **Excavate trenches 60 inches deep and back-fill to with 12 inches of existing grade.**
5. **Gravel trenches requested by applicant.**
6. **Install 1,000 gallons septic tank.**
7. **Reference engineered plans SCO# 22-25072-01, DACS-Tidewater Research Station-Swine Unit Replacement, Preliminary Plan-Issued for Septic/Well Permit Approval**





A SEPTIC SYSTEM CONSTRUCTIOPN
NOT TO SCALE

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2626366778

Digitally signed by John K Avolis

NORTH CAROLINA PROFESSIONAL SEAL 15738 ENGINEER JOHN K. AVOLIS

7/5/2024

DACS- Tidewater Reseach Station-Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

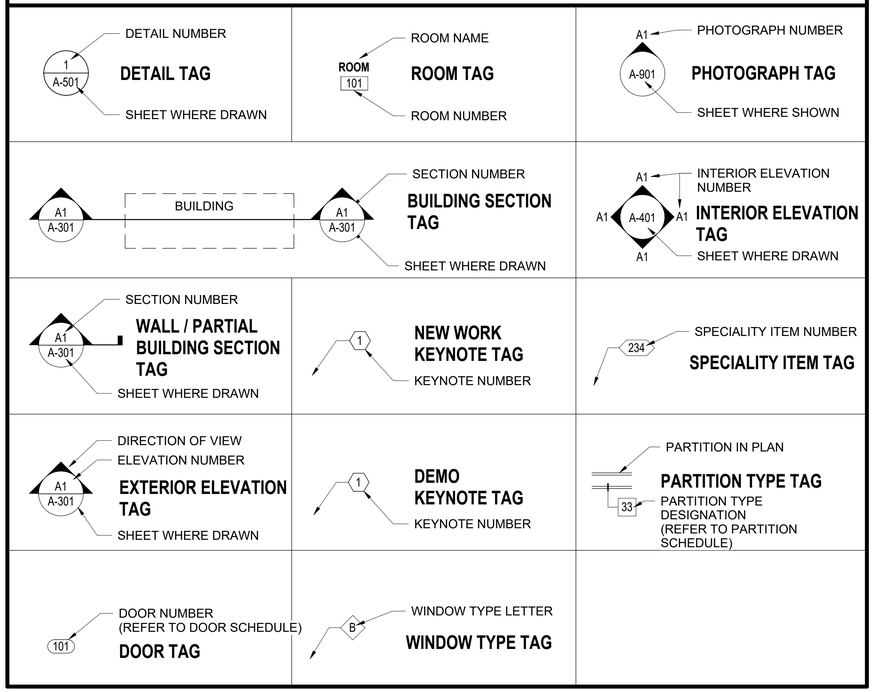
Project Number **2212.HOGS** Date **7/5/2024**
Drawn **TRA** Checked **CBW**
Scale **AS NOTED**
Drawing Title

UTILITY DETAILS

Sheet Number **27** of **139**
Drawing Number **CU505**

UNCLASSIFIED//FOR OFFICIAL USE ONLY

ARCHITECTURAL SYMBOLS



MATERIALS LEGEND

SECTION		ELEVATION	
	WOOD - ROUGH		EIFS - PAINTED
	WOOD BLOCKING		CMU - PAINTED
	PLYWOOD		CMU - PAINTED - ACCENT
	CONCRETE MASONRY UNIT		GLAZED BLOCK
	BRICK		GLAZING
	CAST-IN-PLACE CONCRETE		SPANDREL GLAZING / STEEL PANEL
	STEEL		CONCRETE FOUNDATION
	ALUMINUM		
	GYPSUM BOARD		
	BATT/LOOSE FILL INSULATION		
	RIGID INSULATION		
	SAND / MORTAR / PLASTER		
	EARTH / COMPACT FILL		
	POROUS FILL / GRAVEL		
	ACOUSTICAL TILE CEILING		
	CERAMIC TILE		
	FINISHED WOOD		

ARCHITECTURAL ABBREVIATIONS

AB	ANCHOR BOLT
ACS PNL	ACCESS PANEL
ADJ	ADJUST
ALT	ALTERNATE, ALTITUDE
ALUM	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECT
ASPH	ASPHALT
ATC	ACOUSTICAL TILE CEILING
BD	BOARD
BLDG	BUILDING
BLW	BELOW
BM	BEAM
BOS	BOTTOM OF SLAB / STEEL
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
C TO C	CENTER TO CENTER
CAB	CABINET
CEM	CEMENT
CER	CERAMIC
CI	CAST IRON
CIP	CAST IRON PIPE
CJ	CONTROL / CONSTRUCTION JOINT
CLG	CEILING
CLG REG	CEILING REGISTER
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CND	CONDUIT
CNDS	CONDENSATE
CNSTR	CONSTRUCTION
CNTR	CNTR
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECT
CONT	CONTINUE / CONTINUOUS
CORR	CORRIDOR
CPT	CARPET / COMMON PATH OF TRAVEL
CT	CERAMIC TILE
CTR	CENTER
D	DEPTH / DEEP
DEG	DEGREE
DEMO	DEMOLITION
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DR	DRAIN
DS	DOWNSPOUT
DW	DISHWASHER
DWG	DRAWING
E	EAST
EA	EACH
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC / ELECTRICAL
EPDM	ETHLENE PROPYLENE DIEN MONOMER
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION / EXPOSED / EXPAND
EXT	EXTERIOR
FD	FLOOR DRAIN
FDTN	FOUNDATION
FF	FINISH FACE
FG	FIGURE
FHC	FIRE HOUSE CABINET
FIN FLR	FINISHED FLOOR
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUB / FACE OF SLAB
FR	FRAME / FIRE RATING / FIRE RESISTANT
FT	FOOT, FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GFCI	GOVERNMENT FURNISHED CONTRACTOR INSTALLED
GL	GLASS / GROUND LEVEL
GR	GROSS
GSU	GLAZED STRUCTURAL UNIT
GYP	GYPSUM
H	HIGH
HB	HOSE BIB
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HT	HEIGHT
HVY	HEAVY
ID	INSIDE DIAMETER
INSUL	INSULATION / INSULATED
INT	INTERIOR
J-BOX	JUNCTION BOX
JAN	JANITOR CLOSET
LAV	LAVATORY
LB	POUND
LT	LIGHT
MACH	MACHINE
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MFG	MANUFACTURING
MIN	MINIMUM / MINUTE
MISC	MISCELLANEOUS
ML	MATCH LINE
MO	MASONRY OPENING / MOTOR OPERATED
MTD	MOUNTED
MTG	MOUNTING / MEETING
MTL	METAL
MWP	MEMBRANE WATERPROOFING
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
SF	SQUARE FOOT
SH	SHINGLES / SINGLE HUNG
SIM	SIMILAR
SPC	SUSPENDED PLASTER CEILING
SPEC	SPECIFICATION
SQ	SQUARE
STD	STANDARD
STOR	STORAGE
STR	STRAIGHT STRIKE / STRINGERS
SUSP	SUSPENDED
T&B	TOP AND BOTTOM
TEL	TELEPHONE
THRES	THRESHOLD
THRU	THROUGH
TOS	TOP OF SLAB / STEEL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT
VAR	VARIATION
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VENT	VENTILATION / VENTILATOR
VERT	VERTICAL
VEST	VESTIBULE
VS	VENT STACK
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	WASTE / WATT / WEST / WIDE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET / WALL COVERING
WD	WOOD
WH	WATER HEATER
WP	WATERPROOFING / WEATHERPROOF / WORKING POINT
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
XRMR	TRANSFORMER

GENERAL SHEET NOTES

1. ALL ITEMS INDICATED TO BE REMOVED MUST BE DISPOSED OF OFF SITE UNLESS OTHERWISE NOTED.
2. ALL MATERIALS MUST BE NEW AND PROVIDED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED AS EXISTING OR AS PROVIDED BY THE OWNER.
3. ALL WOOD BLOCKING AND MISCELLANEOUS STEEL SHOWN IN DETAILS AND SECTIONS MUST BE CONTINUOUS UNLESS SPECIFICALLY NOTED OTHERWISE.
4. VERIFY ALL FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. DIMENSIONS FOR EXISTING WORK ARE INDICATED AS "±". ALL DISCREPANCIES MUST BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT IN WRITING.
5. DEMOLITION OF PLUMBING, MECHANICAL AND ELECTRICAL ITEMS INDICATED ON THE ARCHITECTURAL DRAWINGS IS NOT INTENDED TO INCLUDE ALL NECESSARY DEMOLITION WORK FOR THESE ITEMS. REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DEMOLITION DRAWINGS FOR ADDITIONAL INFORMATION.
6. DIMENSIONS INDICATED FOR NEW WORK ARE TO FACE OF STUD, FACE OF MASONRY OR FACE OF EXISTING SURFACES UNLESS OTHERWISE NOTED.
7. STUDY AND COMPARE THE CONTRACT DOCUMENTS WITH EACH OTHER, AND AT ONCE, REPORT TO THE ARCHITECT ANY ERRORS AND INCONSISTENCIES OR OMISSIONS DISCOVERED. ANY CONSTRUCTION ACTIVITY PERFORMED KNOWING IT INVOLVES A RECOGNIZED ERROR, INCONSISTENCY OR OMISSION IN THE CONTRACT DOCUMENTS WITHOUT SUCH NOTICE TO THE ARCHITECT, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR SUCH PERFORMANCE AND WILL BEAR THE AMOUNT OF THE COST OF THE CONSTRUCTION.

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

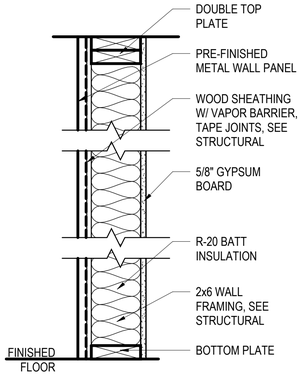
No.	Date

Project Number **2212.HOGS**
Date **07/05/24**
Drawn **CBW**
Checked **BBW**
Scale **AS NOTED**
Drawing Title

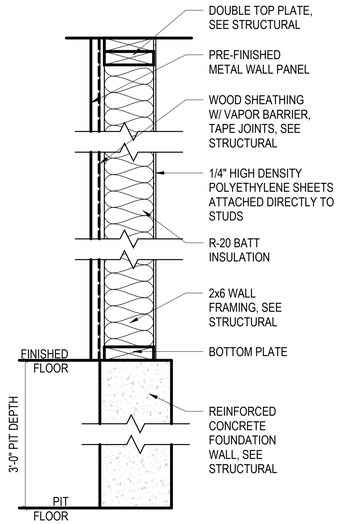
Architectural Notes & Symbols

Sheet Number 28 Of 139

Drawing Number **A-001**



TYPE A



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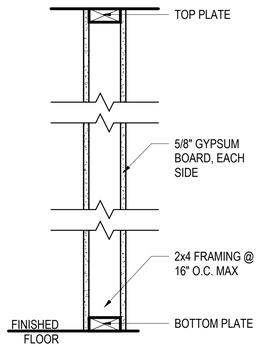
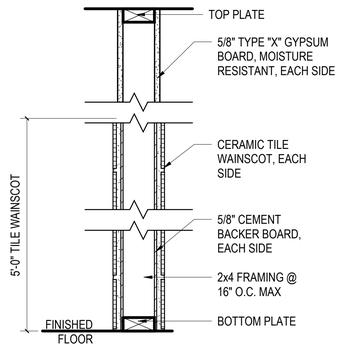
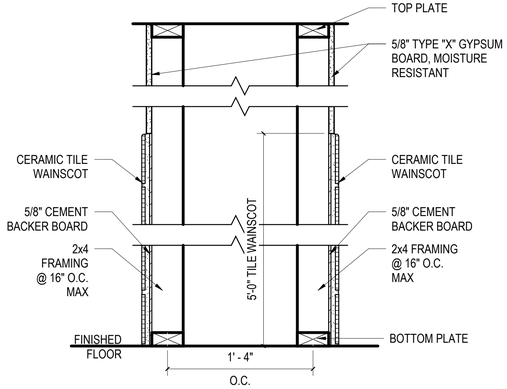


TYPE C

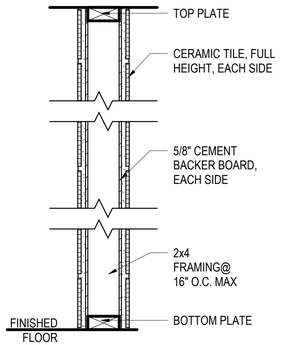


TYPE C1

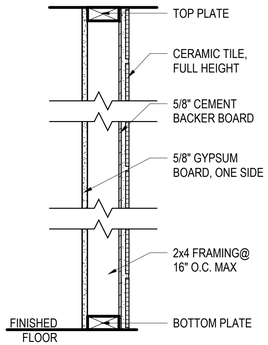


TYPE D

TYPE E



TYPE F



TYPE G

TYPE H

TYPE J

1 1/2" =1'-0"

0' 4" 8" 1'-4"

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

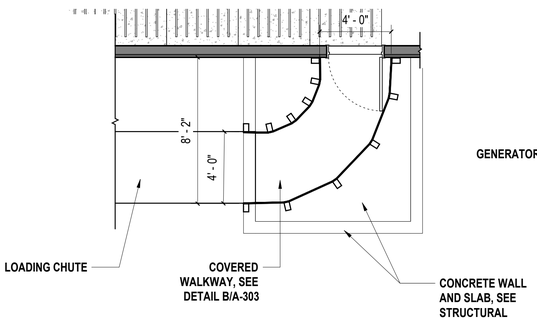
No. Date

Project Number **2212.HOGS**
Date **07/05/24**
Drawn **CBW**
Checked **BBW**
Scale **AS NOTED**
Drawing Title

Wall Assembly Types

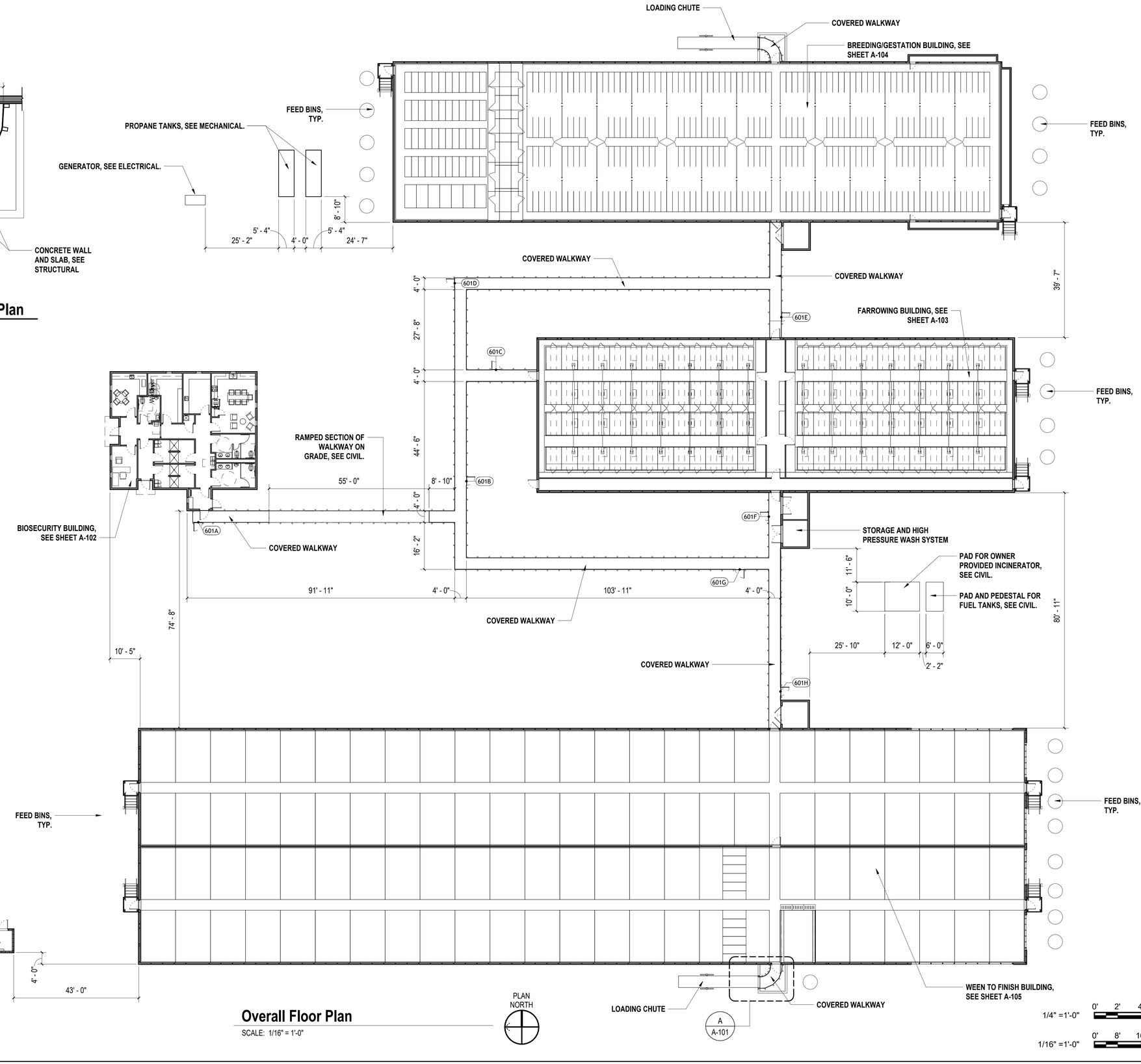
Sheet Number 29 Of 139

Drawing Number **A-002**



A Enlarged Loading Chute Plan

SCALE: 1/4" = 1'-0" (A-101)



Overall Floor Plan

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

PLAN NORTH

1/4" =1'-0" 0' 2' 4' 8'

1/16" =1'-0" 0' 8' 16' 32'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

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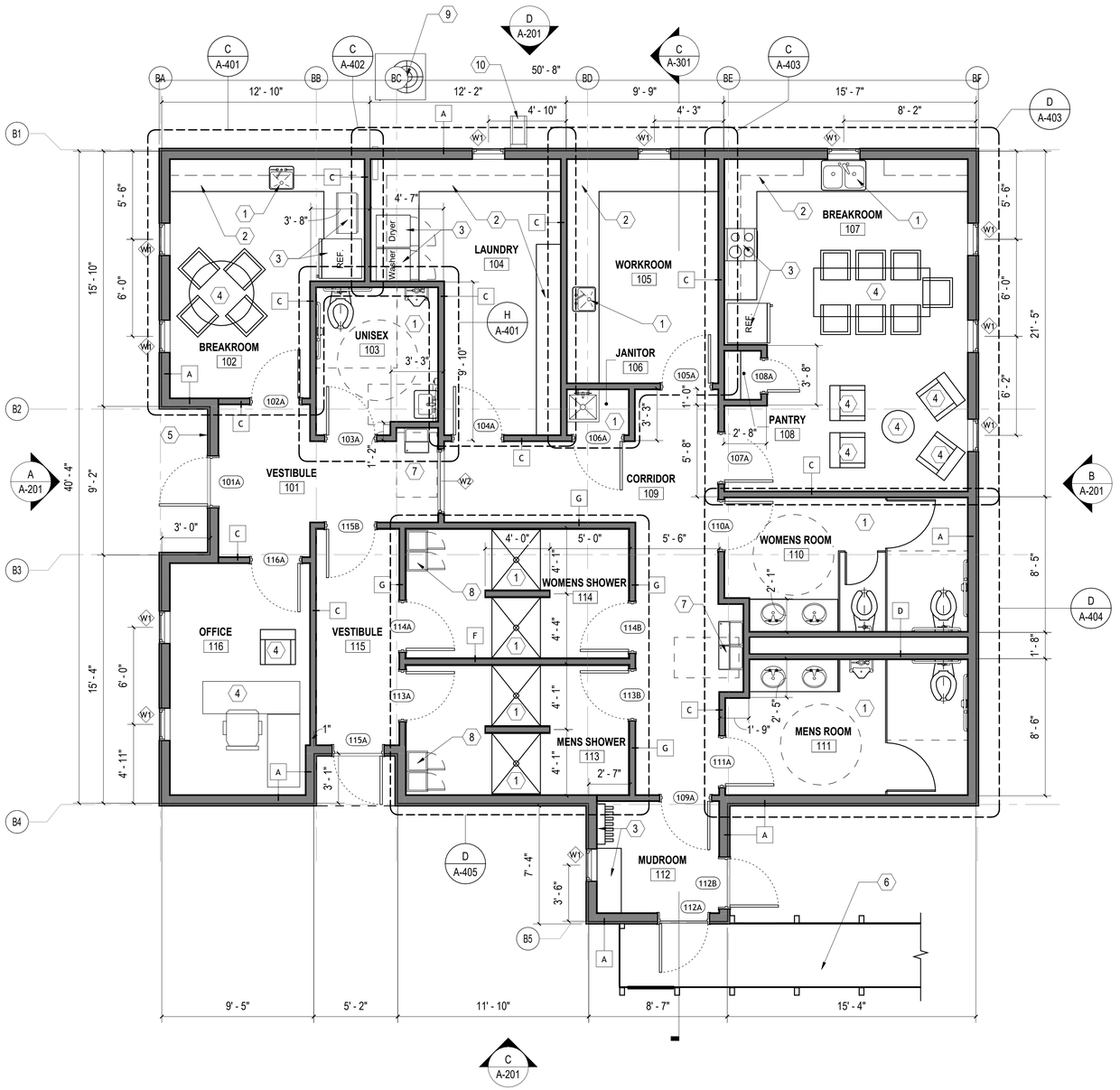
Project Number 2212.HOGS
Date 07/05/24
Drawn CBW
Checked BBW
Scale AS NOTED
Drawing Title

Overall Plan

Sheet Number 30 Of 139
Drawing Number A-101



Bio-Security Building Floor Plan

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

PLAN NORTH

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

NEW WORK KEYNOTES

MARK	DESCRIPTION
1	PROVIDE PLUMBING FIXTURES AND ACCESSORIES, INCLUDING TOILET PARTITIONS, SOLID SURFACE COUNTERS, MIRRIORS, SOAP DISPENSERS, TOILET TISSUE DISPENSERS, SEMI RECESSED PAPER TOWEL COMBINATION WASTE RECEPTACLE, AND SHOWER COMPONENTS. SEE PLUMBING.
2	WOOD/PLASTIC LAMINATE BASE AND UPPER CABINETS WITH SOLID SURFACE COUNTERTOPS.
3	EQUIPMENT PROVIDED BY OWNER. INSTALLED BY CONTRACTOR.
4	FURNITURE PROVIDED BY OWNER.
5	PROVIDE KNOX BOX AT EXTERIOR DOOR.
6	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
7	ACCESSIBLE WATER FOUNTAIN.
8	DOUBLE TIER H.D.P.E LOCKER (15"Wx15"Dx75"H) (4) TOTAL
9	MECHANICAL EQUIPMENT, SEE MECHANICAL.
10	SPLASH BLOCK FOR MECHANICAL EQUIPMENT, SEE MECHANICAL.

WALL TYPES LEGEND

MARK	NOTES
A	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 5/8" GYPSUM BOARD. TAPE, TEXTURE, AND PAINT.
B	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/4" POLYETHYLENE BOARD.
C	2x4 WOOD STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE. TAPE, TEXTURE, AND PAINT.
D	2x4 WOOD CHASE WITH STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD ON OUTSIDE. TAPE, TEXTURE, AND PAINT.
E	2x4 WOOD STUDS @ 16" O.C. WITH 1/4" POLYETHYLENE BOARD, EACH SIDE.
F	2x4 WOOD STUDS @ 16" O.C. WITH 1/2" CEMENT BOARD AND CERAMIC WALL TILE. FULL HEIGHT.
G	2x4 WOOD STUDS @ 16" O.C. WITH 1/2" CEMENT BOARD AND CERAMIC WALL TILE, ONE SIDE 5/8" GYPSUM BOARD, TAPE TEXTURE AND PAINT. ONE SIDE.
H	1/2" PLYWOOD SHEATHING OVER 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/4" POLYETHYLENE BOARD.
J	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 2x4 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/2" PLYWOOD SHEATHING W/ VAPOR BARRIER.

NOTE:

- RESTROOMS: PROVIDE 1/2" CEMENT BOARD AND CERAMIC TILE WAINSCOT TO 5' - 0" A.F.F.
- SEE A-002 WALL ASSEMBLIES FOR MORE INFORMATION.

GRAPHIC SCALE(S)

1/4" =1'-0" 0' 2' 4' 8'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

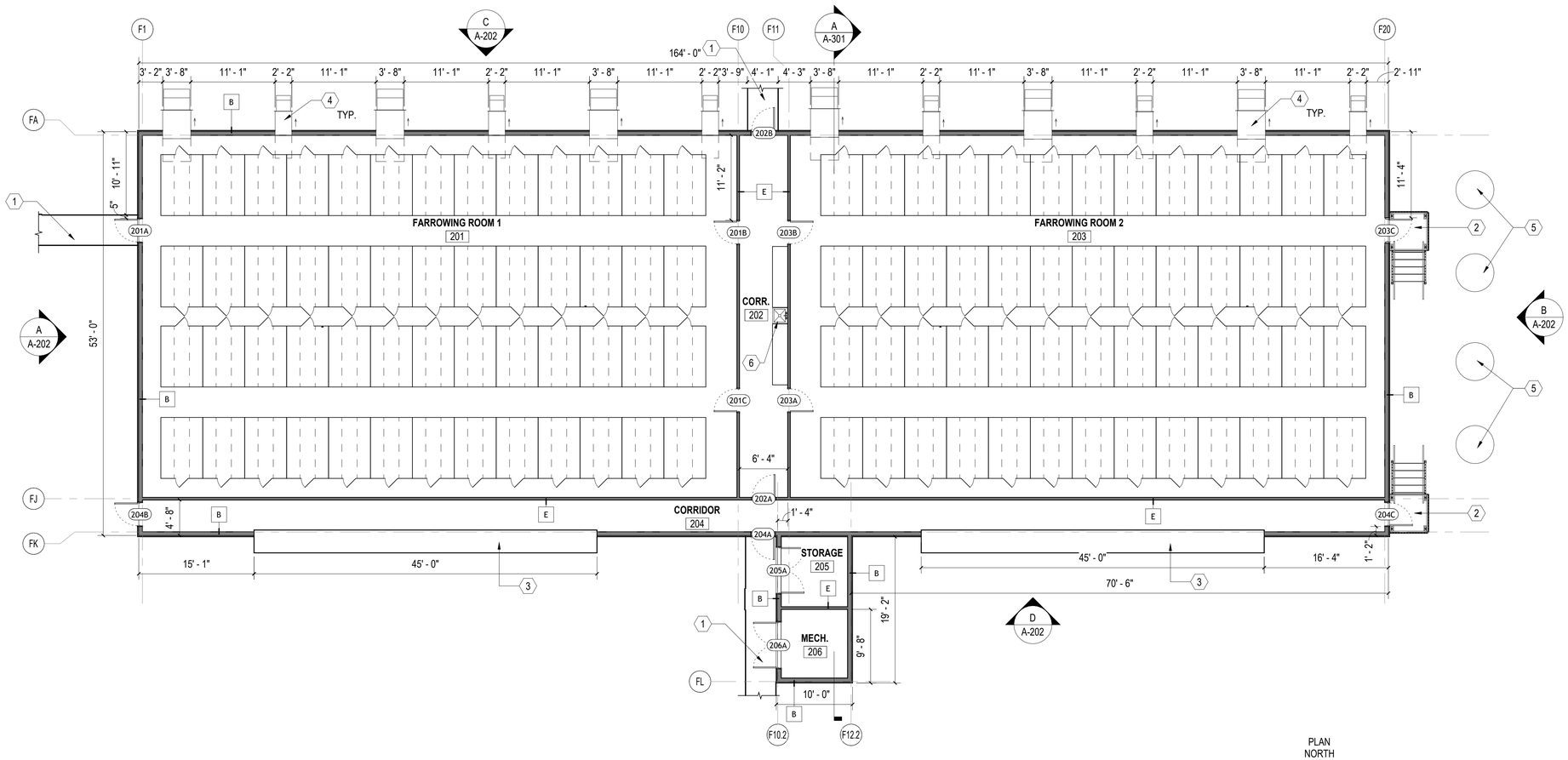
No.	Date

Project Number **2212.HOGS**
Date **07/05/24**
Drawn **CBW**
Checked **BBW**
Scale **AS NOTED**
Drawing Title

Biosecurity Building Floor Plan

Sheet Number 31 Of 139

Drawing Number **A-102**



PLAN

Farrowing Building Floor Plan

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

PLAN NORTH

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.

4 SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	PROVIDE 4'W GALVANIZED STEEL STAIRS WITH OPEN GRATE TREADS AND DECK. PROVIDE 42" GUARDRAIL AND 36" HAINDRAIL. SEE DETAIL A/A104.
3	COOL CELL PAD. SEE MECHANICAL.
4	MECHANICAL EQUIPMENT, SEE MECHANICAL.
5	FEED BINS (PROVIDED AND INSTALLED BY OWNER)
6	UTILITY SINK. SEE PLUMBING

WALL TYPES LEGEND

MARK	NOTES
A	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 5/8" GYPSUM BOARD. TAPE, TEXTURE, AND PAINT.
B	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/4" POLYETHYLENE BOARD.
C	2x4 WOOD STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE. TAPE, TEXTURE, AND PAINT.
D	2x4 WOOD CHASE WITH STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD ON OUTSIDE. TAPE, TEXTURE, AND PAINT.
E	2x4 WOOD STUDS @ 16" O.C. WITH 1/4" POLYETHYLENE BOARD, EACH SIDE.
F	2x4 WOOD STUDS @ 16" O.C. WITH 1/2" CEMENT BOARD AND CERAMIC WALL TILE. FULL HEIGHT.
G	2x4 WOOD STUDS @ 16" O.C. WITH 1/2" CEMENT BOARD AND CERAMIC WALL TILE, ONE SIDE 5/8" GYPSUM BOARD, TAPE TEXTURE AND PAINT. ONE SIDE.
H	1/2" PLYWOOD SHEATHING OVER 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/4" POLYETHYLENE BOARD.
J	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 2x4 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/2" PLYWOOD SHEATHING W/ VAPOR BARRIER.

NOTE:
- RESTROOMS: PROVIDE 1/2" CEMENT BOARD AND CERAMIC TILE WAINSCOT TO 5' - 0" A.F.F.
- SEE A-002 WALL ASSEMBLYS FOR MORE INFORMATION.

GRAPHIC SCALE(S)

1/8" =1'-0" 0' 4' 8' 16'

the WALKER GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

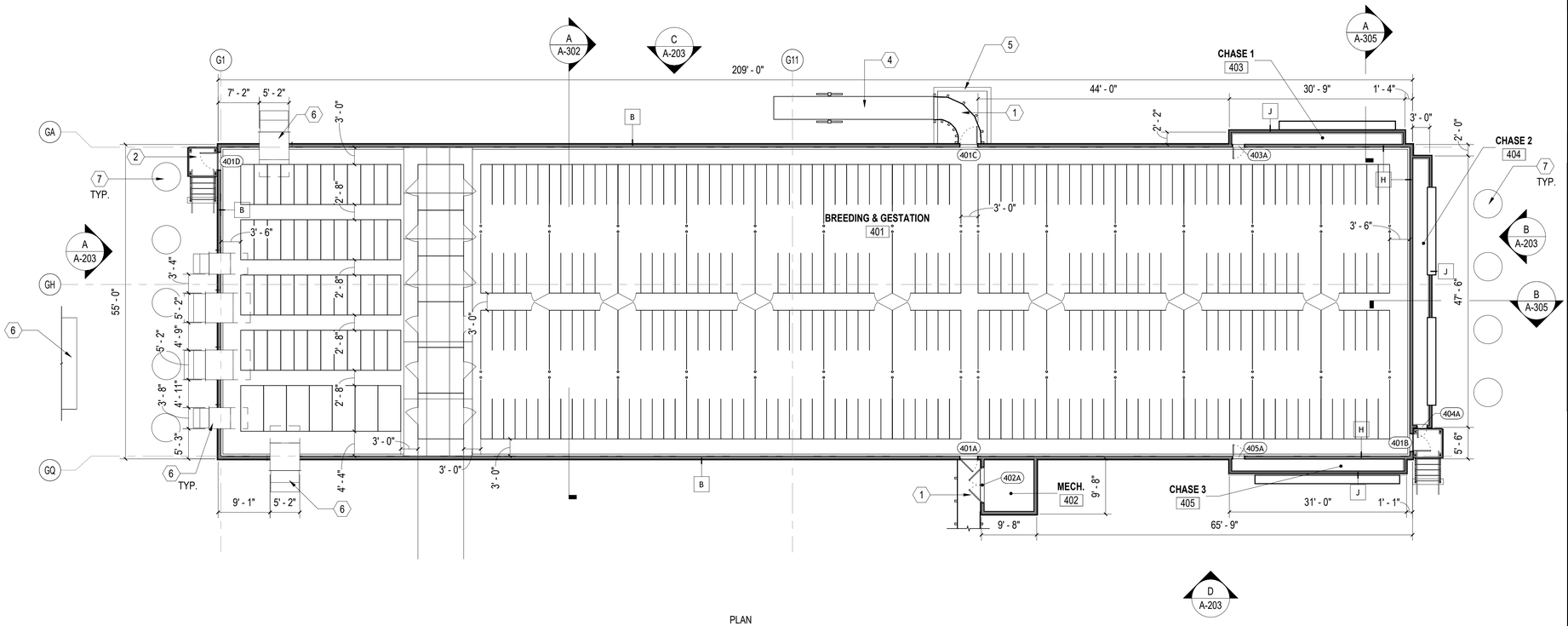
207 Research Station Rd.
Plymouth, NC 27962

Revisions
No. Date

Project Number 2212.HOGS
Date 07/05/24
Drawn CBW
Checked BBW
Scale AS NOTED
Drawing Title

Farrowing Building Floor Plan

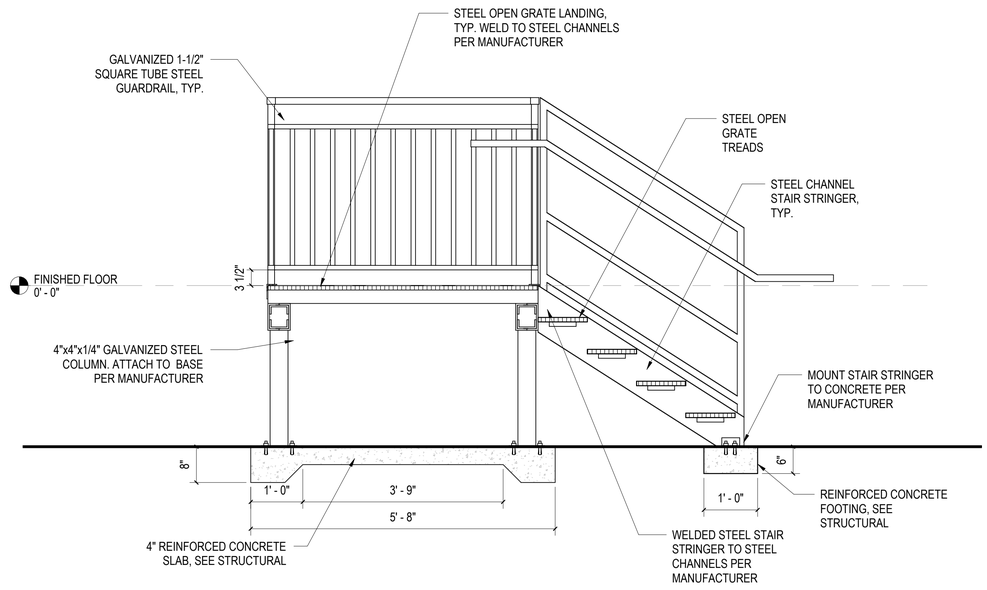
Sheet Number 32 Of 139
Drawing Number A-103



Breeding & Gestation Building Floor Plan

SCALE: 3/32" = 1'-0"

PLAN NORTH



A Steel Stair Section

SCALE: 3/4" = 1'-0"

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	PROVIDE 4'W GALVANIZED STEEL STAIRS WITH OPEN GRATE TREADS AND DECK. PROVIDE 42" GUARDRAIL AND 36" HAINDRAIL. SEE DETAIL A/A104.
3	COOL CELL PAD. SEE MECHANICAL.
4	28' LOADING CHUTE (PROVIDED AND INSTALLED BY OWNER)
5	CONCRETE RETAINING WALL, SEE STRUCTURAL.
6	MECHANICAL EQUIPMENT, SEE MECHANICAL.
7	FEED BINS (PROVIDED AND INSTALLED BY OWNER)

WALL TYPES LEGEND

MARK	NOTES
A	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 5/8" GYPSUM BOARD. TAPE, TEXTURE, AND PAINT.
B	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/4" POLYETHYLENE BOARD.
C	2x4 WOOD STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE. TAPE, TEXTURE, AND PAINT.
D	2x4 WOOD CHASE WITH STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD ON OUTSIDE. TAPE, TEXTURE, AND PAINT.
E	2x4 WOOD STUDS @ 16" O.C. WITH 1/4" POLYETHYLENE BOARD, EACH SIDE.
F	2x4 WOOD STUDS @ 16" O.C. WITH 1/2" CEMENT BOARD AND CERAMIC WALL TILE. FULL HEIGHT.
G	2x4 WOOD STUDS @ 16" O.C. WITH 1/2" CEMENT BOARD AND CERAMIC WALL TILE, ONE SIDE 5/8" GYPSUM BOARD, TAPE TEXTURE AND PAINT. ONE SIDE.
H	1/2" PLYWOOD SHEATHING OVER 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/4" POLYETHYLENE BOARD.
J	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 2x4 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/2" PLYWOOD SHEATHING W/ VAPOR BARRIER.

NOTE:
- RESTROOMS: PROVIDE 1/2" CEMENT BOARD AND CERAMIC TILE WAINSCOT TO 5' - 0" A.F.F.
- SEE A-002 WALL ASSEMBLYS FOR MORE INFORMATION.

GRAPHIC SCALE(S)

3/32" =1'-0" 0' 6' 12' 18'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions
No. Date

Project Number 2212.HOGS
Date 07/05/24
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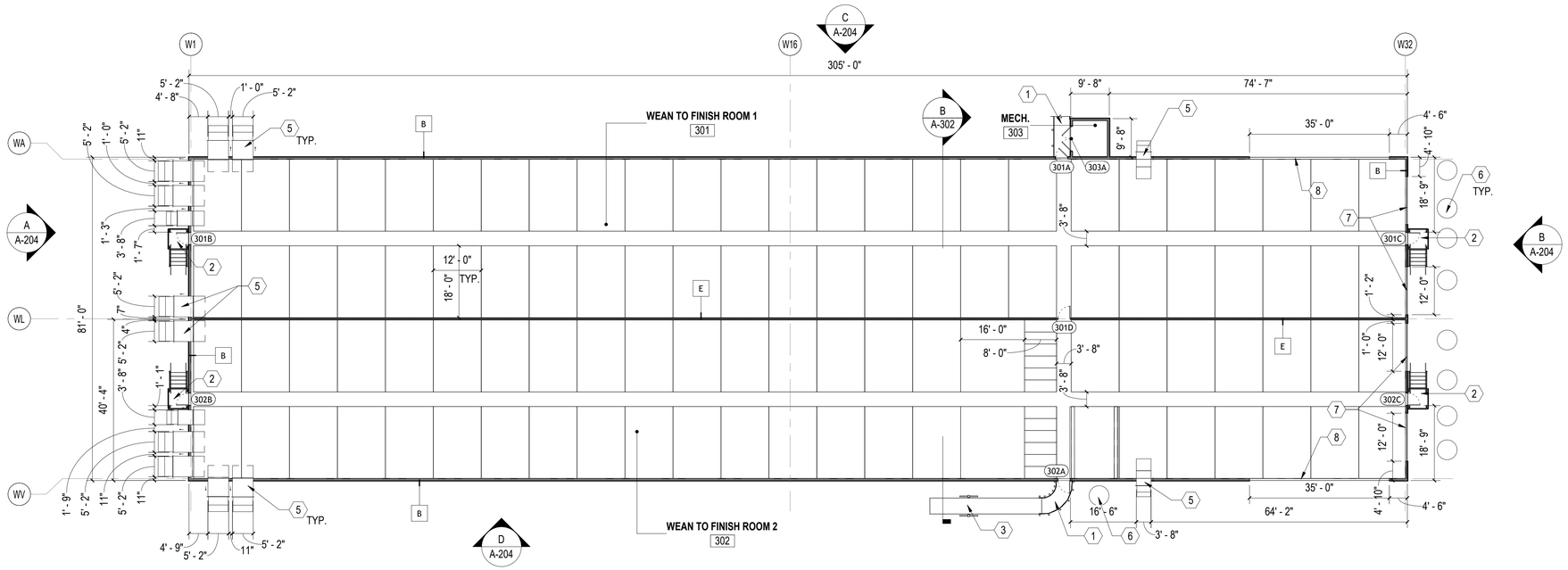
Checked BBW
Scale AS NOTED
Drawing Title

Breeding/Gestation Building Floor Plan

Sheet Number 33 Of 139
Drawing Number A-104



Wean to Finish Building Floor Plan

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

PLAN NORTH

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

NEW WORK KEYNOTES

MARK	DESCRIPTION
1	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	PROVIDE 4'W GALVANIZED STEEL STAIRS WITH OPEN GRATE TREADS AND DECK. PROVIDE 42" GUARDRAIL AND 36" HAINDRAIL. SEE DETAIL A/A104.
3	28' LOADING CHUTE (PROVIDED AND INSTALLED BY OWNER)
5	MECHANICAL EQUIPMENT, SEE MECHANICAL.
6	FEED BIN (PROVIDED AND INSTALLED BY OWNER)
7	12'Wx5'H WALL OPENING WITH STUDS REMANING @ 16" O.C., INTERIOR SIDE OF WALL TO BE COVERED WITH 4 GA.GALVANIZED WELDED HOG PANEL WITH 2" OPENINGS AND EXTERIOR SIDE COVERED WITH BIRD SREENING.
8	35'Wx5'H WALL OPENING WITH STUDS REMANING @ 16" O.C., INTERIOR SIDE OF WALL TO BE COVERED WITH 4 GA.GALVANIZED WELDED HOG PANEL WITH 2" OPENINGS AND EXTERIOR SIDE SIDE COVERED WITH BIRD SREENING.

WALL TYPES LEGEND

MARK	NOTES
A	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 5/8" GYPSUM BOARD. TAPE, TEXTURE, AND PAINT.
B	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/4" POLYETHYLENE BOARD.
C	2x4 WOOD STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE. TAPE, TEXTURE, AND PAINT.
D	2x4 WOOD CHASE WITH STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD ON OUTSIDE. TAPE, TEXTURE, AND PAINT.
E	2x4 WOOD STUDS @ 16" O.C. WITH 1/4" POLYETHYLENE BOARD, EACH SIDE.
F	2x4 WOOD STUDS @ 16" O.C. WITH 1/2" CEMENT BOARD AND CERAMIC WALL TILE. FULL HEIGHT.
G	2x4 WOOD STUDS @ 16" O.C. WITH 1/2" CEMENT BOARD AND CERAMIC WALL TILE, ONE SIDE 5/8" GYPSUM BOARD, TAPE TEXTURE AND PAINT. ONE SIDE.
H	1/2" PLYWOOD SHEATHING OVER 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/4" POLYETHYLENE BOARD.
J	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 2x4 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/2" PLYWOOD SHEATHING W/ VAPOR BARRIER.

NOTE:
- RESTROOMS: PROVIDE 1/2" CEMENT BOARD AND CERAMIC TILE WAINSCOT TO 5' - 0" A.F.F.
- SEE A-002 WALL ASSEMBLYS FOR MORE INFORMATION.

GRAPHIC SCALE(S)

1/16" =1'-0" 0' 8' 16' 32'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

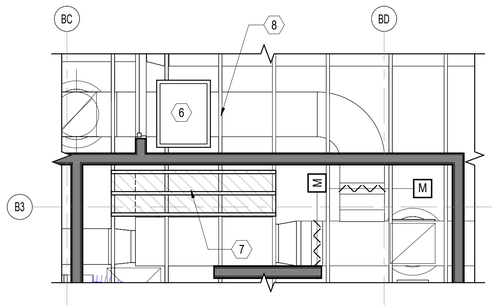
207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

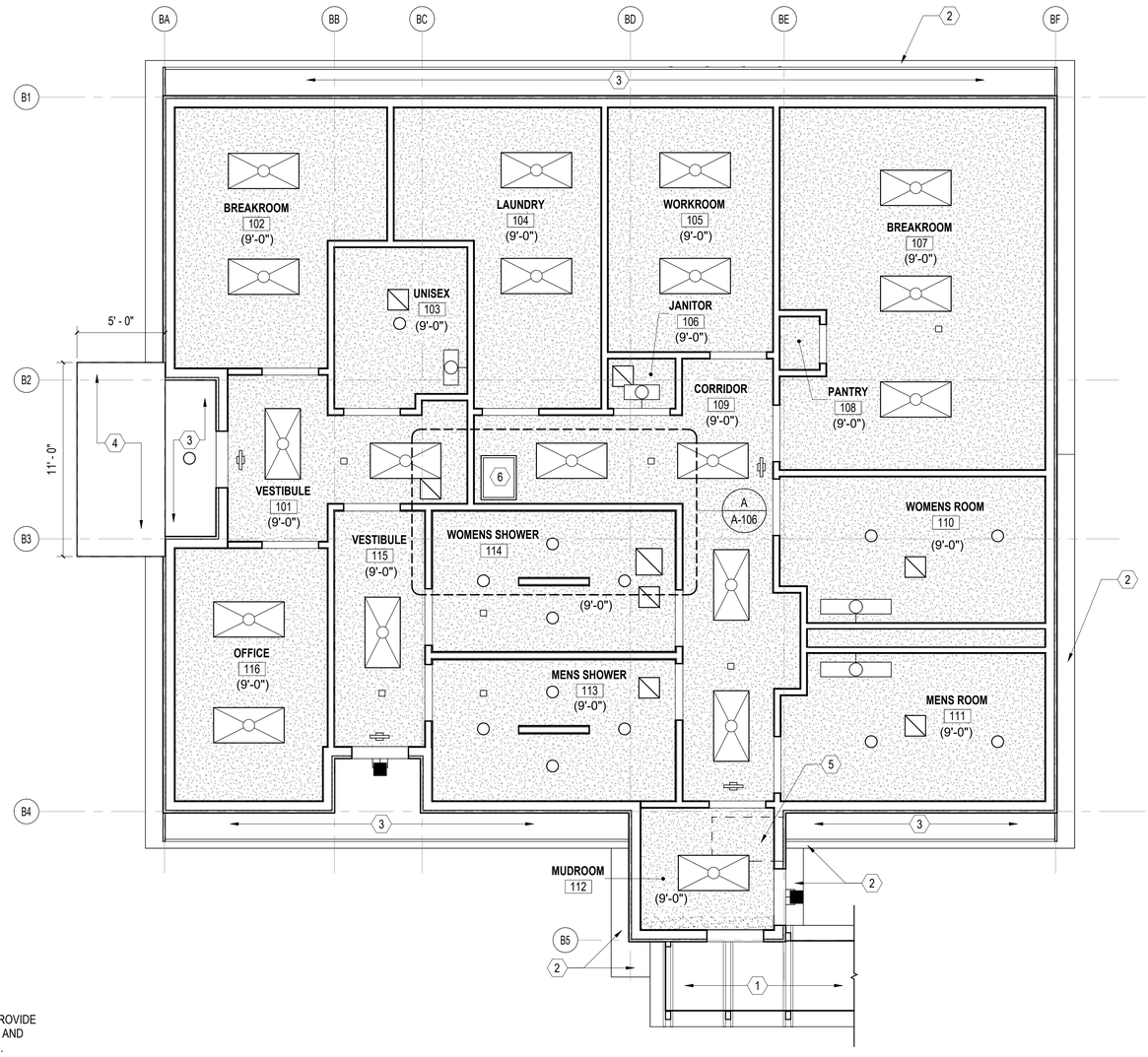
Project Number: 2212.HOGS
Date: 07/05/24
Drawn: CBW
Checked: BBW
Scale: AS NOTED
Drawing Title: **Wean to Finish Building Floor Plan**

Sheet Number: 34 Of 139
Drawing Number: A-105



A Bio-Security Partial Attic Plan

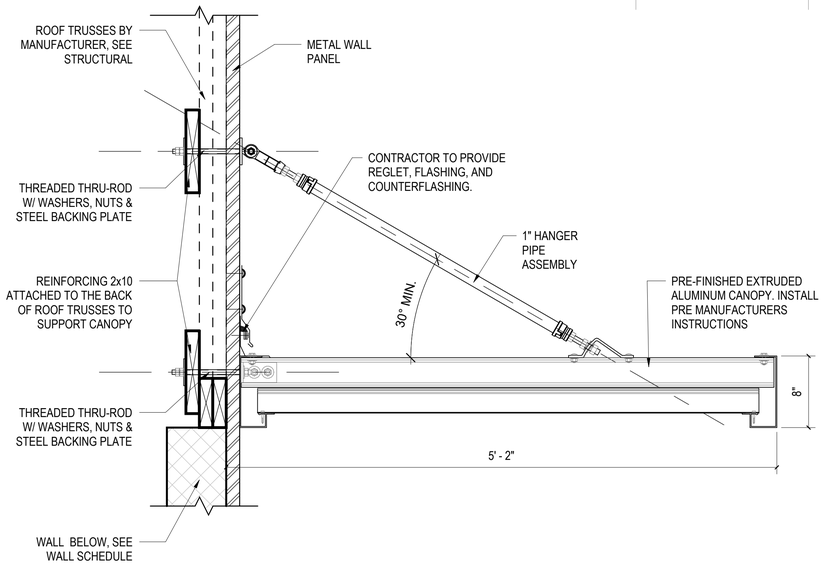
SCALE: 3/8" = 1'-0" (A-106)



Bio-Security Reflected Ceiling Plan

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

PLAN NORTH



B Typical Metal Canopy Detail

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

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	BUILDING ROOF EDGE ABOVE.
3	VENTED VINYL SOFFIT.
4	OVERHEAD SUPPORTED PRE-MANUFACTURED PRE-FINISHED METAL CANOPY. INSTALL PER CANOPY MANUFACTURER'S RECOMMENDATION. SEE DETAIL B/A106.
5	ELECTRICAL PANELS, SEE ELECTRICAL.
6	PAINTED 24"x30" WOOD ATTIC ACCESS PANEL.
7	PROVIDE 2x6 WOOD FRAMED PLATFORM WITH 3/4" T&G PLYWOOD OVER WOOD TRUSSES. COORDINATE PLATFORM WITH TRUSS MANUFACTURER.
8	WOOD TRUSSES, SEE STRUCTURAL.

REFLECTED CEILING PLAN LEGEND

SYMBOL	DESCRIPTION
	GYPSUM BOARD CEILING.
○	LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
	CEILING SUPPLY DIFFUSER. REFER TO MECHANICAL DRAWINGS.
	CEILING RETURN OR EXHAUST. REFER TO MECHANICAL DRAWINGS.
(X'-X")	FINISHED CEILING HEIGHT ABOVE FINISHED FLOOR

GRAPHIC SCALE(S)

1 1/2" =1'-0" 0' 4" 8" 1'-4"

3/8" =1'-0" 0' 2' 4' 6'

1/4" =1'-0" 0' 2' 4' 8'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No. Date

Project Number 2212.HOGS
Date 07/05/24
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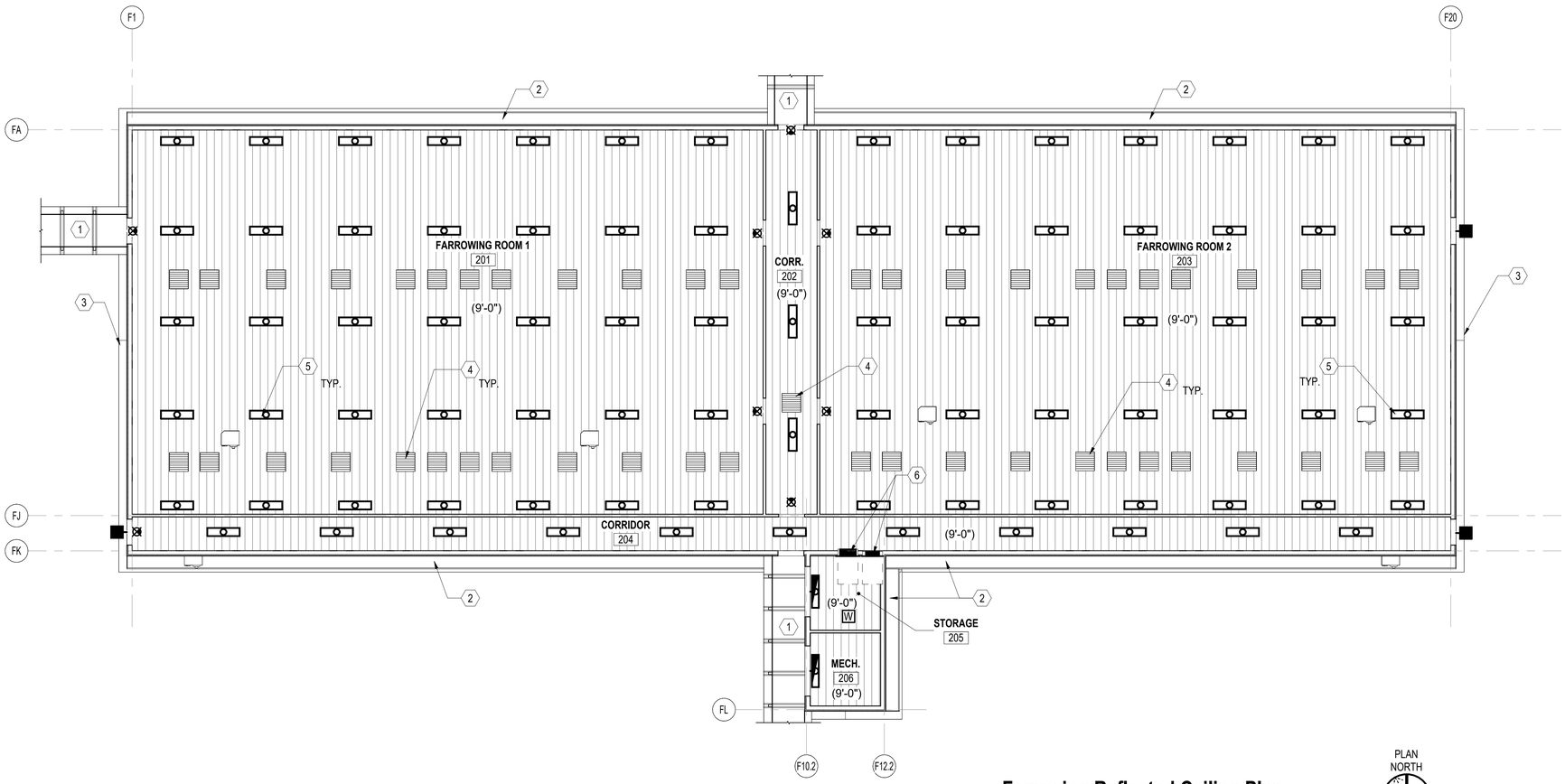
Checked BBW
Scale AS NOTED
Drawing Title

Biosecurity Reflected Ceiling Plan

Sheet Number 35 Of 139

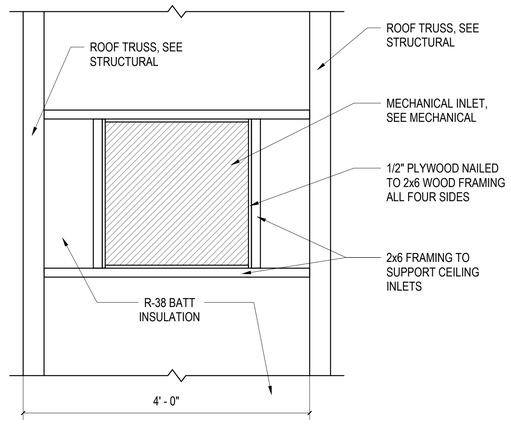
Drawing Number **A-106**



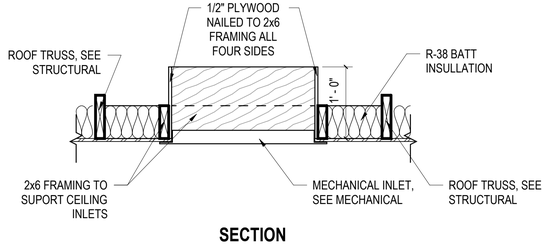
Farrowing Reflected Ceiling Plan

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

PLAN NORTH



PLAN



SECTION

A Typical Ceiling Inlet Detail

SCALE: 1" = 1'-0"

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	VENTED VINYL SOFFIT.
3	BUILDING ROOF EDGE ABOVE.
4	CEILING INLET, SEE MECHANICAL, OWNER PROVIDED CONTRACTOR INSTALLED. SEE DETAIL A/A-107.
5	MECHANICAL EQUIPMENT, SEE MECHANICAL.
6	ELECTRICAL PANELS, SEE ELECTRICAL.

REFLECTED CEILING PLAN LEGEND

SYMBOL	DESCRIPTION
	METAL PANEL CEILING. ATTACHED TO BOTTOM OF WOOD TRUSSES.
	LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
	CEILING SUPPLY DIFFUSER. REFER TO MECHANICAL DRAWINGS.
	CEILING RETURN OR EXHAUST. REFER TO MECHANICAL DRAWINGS.
	CEILING INLET. SEE A/A-107. SEE MECHANICAL.
(X'-X")	FINISHED CEILING HEIGHT ABOVE FINISHED FLOOR

GRAPHIC SCALE(S)

1/8" =1'-0" 0' 4' 8' 16'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

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No.	Date

Project Number 2212.HOGS
Date 07/05/24
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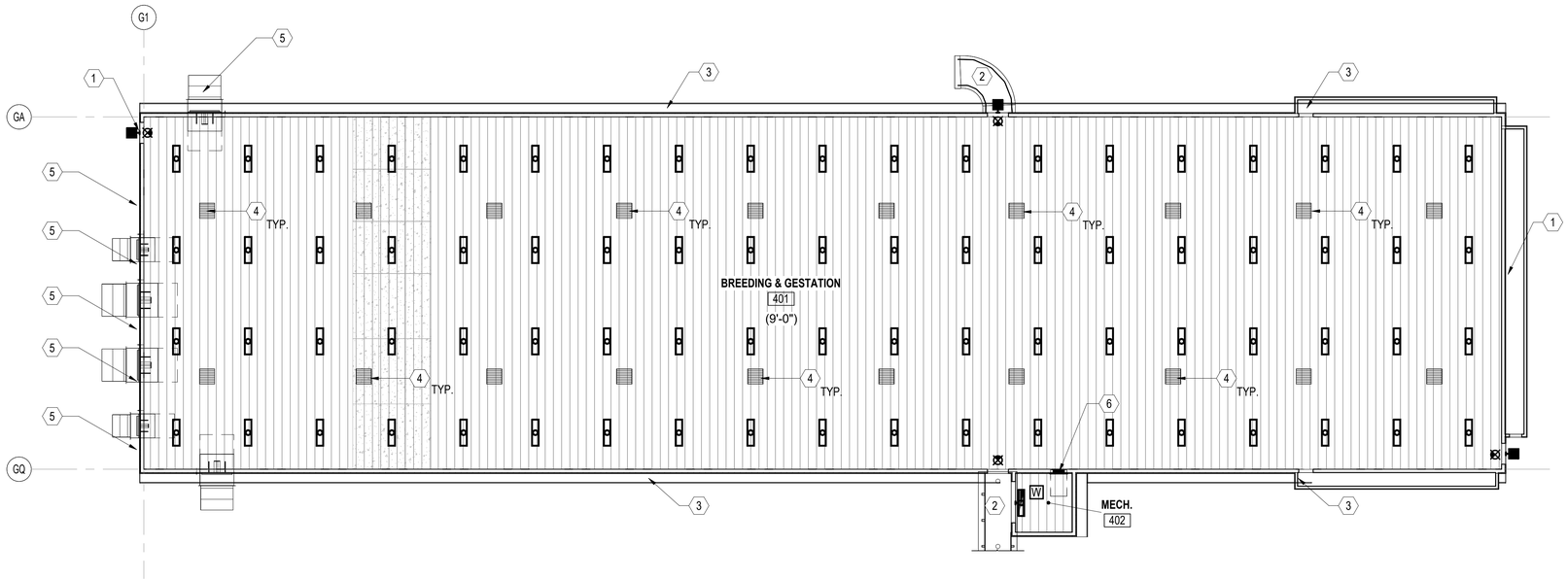
Checked BBW
Scale AS NOTED
Drawing Title

Farrowing Reflected Ceiling Plan

Sheet Number 36 Of 139
Drawing Number A-107



Breeding & Gestation Reflected Ceiling Plan

SCALE: 3/32" = 1'-0"

PLAN NORTH

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	BUILDING ROOF EDGE ABOVE.
2	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
3	VENTED VINYL SOFFIT.
4	CEILING INLETS, SEE MECHANICAL, OWNER PROVIDED CONTRACTOR INSTALLED. SEE DETAIL A/A-107.
5	MECHANICAL EQUIPMENT, SEE MECHANICAL.
6	ELECTRICAL PANELS, SEE ELECTRICAL.

REFLECTED CEILING PLAN LEGEND

SYMBOL	DESCRIPTION
	METAL PANEL CEILING. ATTACHED TO BOTTOM OF WOOD TRUSSES.
	LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
	CEILING SUPPLY DIFFUSER. REFER TO MECHANICAL DRAWINGS.
	CEILING RETURN OR EXHAUST. REFER TO MECHANICAL DRAWINGS.
	CEILING INLET. SEE A/A-107. SEE MECHANICAL.
(X'-X")	FINISHED CEILING HEIGHT ABOVE FINISHED FLOOR

GRAPHIC SCALE(S)

1/8" =1'-0" 0' 4' 8' 16'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

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DACS- Tidewater Research Station- Swine Unit Replacement

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Revisions

No.	Date

Project Number **2212.HOGS**

Date **07/05/24**

Drawn **CBW**

Checked **BBW**

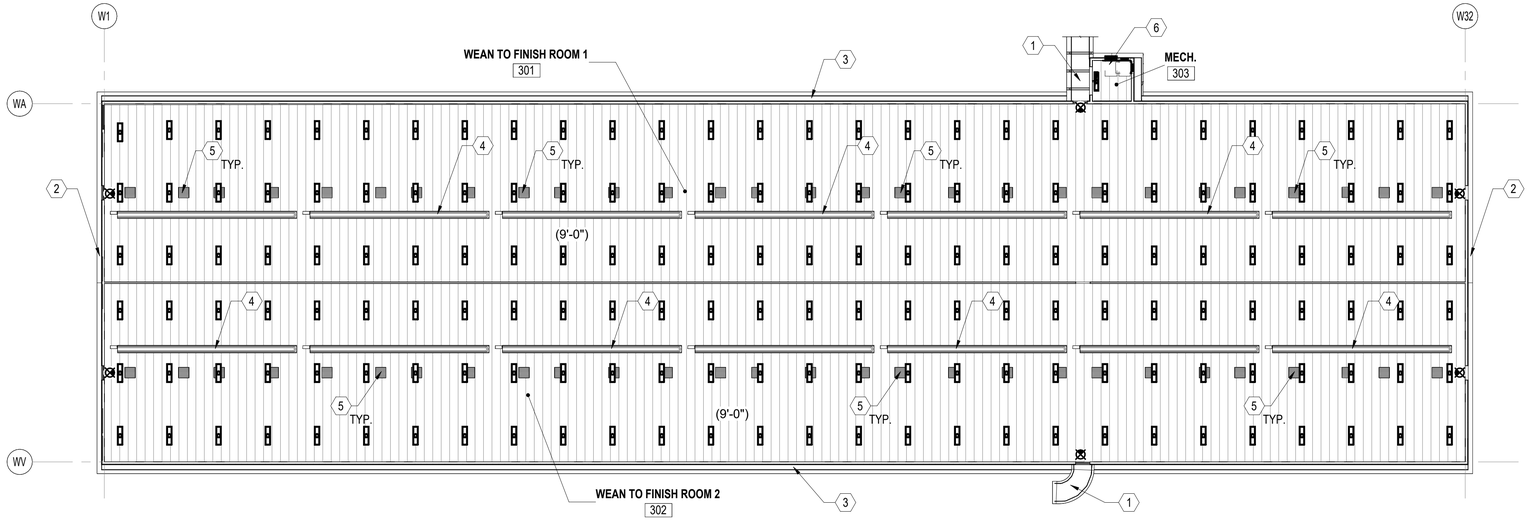
Scale **AS NOTED**

Drawing Title

Beeding/Gestation Reflected Ceiling Plan

Sheet Number 37 Of 139

Drawing Number **A-108**



Wean to Finish Reflected Ceiling Plan

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

PLAN NORTH

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	BUILDING ROOF EDGE ABOVE.
3	VENTED VINYL SOFFIT.
4	RADIANT HEATER. SEE MECHANICAL.
5	CEILING INLET, SEE MECHANICAL, OWNER PROVIDED CONTRACTOR INSTALLED. SEE DETAIL A/A-107.
6	ELECTRICAL PANELS, SEE ELECTRICAL.

REFLECTED CEILING PLAN LEGEND

SYMBOL	DESCRIPTION
	METAL PANEL CEILING. ATTACHED TO BOTTOM OF WOOD TRUSSES.
	LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
	CEILING SUPPLY DIFFUSER. REFER TO MECHANICAL DRAWINGS.
	CEILING RETURN OR EXHAUST. REFER TO MECHANICAL DRAWINGS.
	CEILING INLET. SEE A/A-107. SEE MECHANICAL.
(X'-X")	FINISHED CEILING HEIGHT ABOVE FINISHED FLOOR

GRAPHIC SCALE(S)

1/8" =1'-0"

0' 4' 8' 16'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

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Revisions

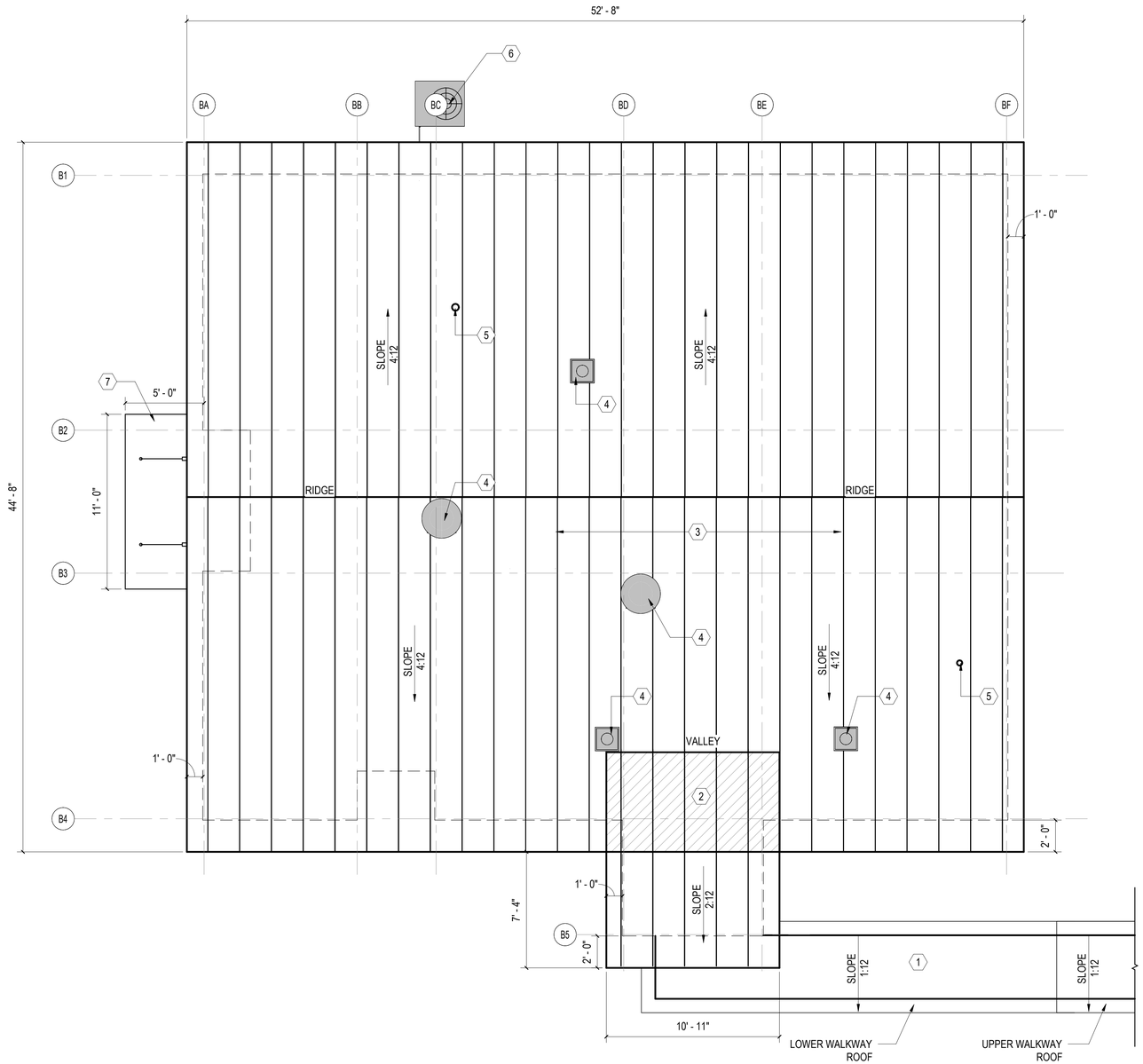
No.	Date

Project Number: 2212.HOGS
Date: 07/05/24
Drawn: CBW
Checked: BBW
Scale: AS NOTED
Drawing Title:

Wean to Finish Reflected Ceiling Plan

Sheet Number: 38 Of 139

Drawing Number: A-109



Bio-Security Building Roof Plan

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

PLAN NORTH

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	AREA OF OVERBUILT ROOF
3	METAL PANEL ROOFING
4	MECHANICAL ROOF EQUIPMENT. SEE MECHANICAL.
5	PLUMBING ROOF VENT. SEE PLUMBING.
6	MECHANICAL EQUIPMENT, SEE MECHANICAL.
7	OVERHEAD SUPPORTED PRE-MANUFACTURED PRE-FINISHED METAL CANOPY. INSTALL PER CANOPY MANUFACTURER'S RECOMMENDATION. SEE DETAIL A/A106.

GRAPHIC SCALE(S)

1/8" =1'-0" 0' 4' 8' 16'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

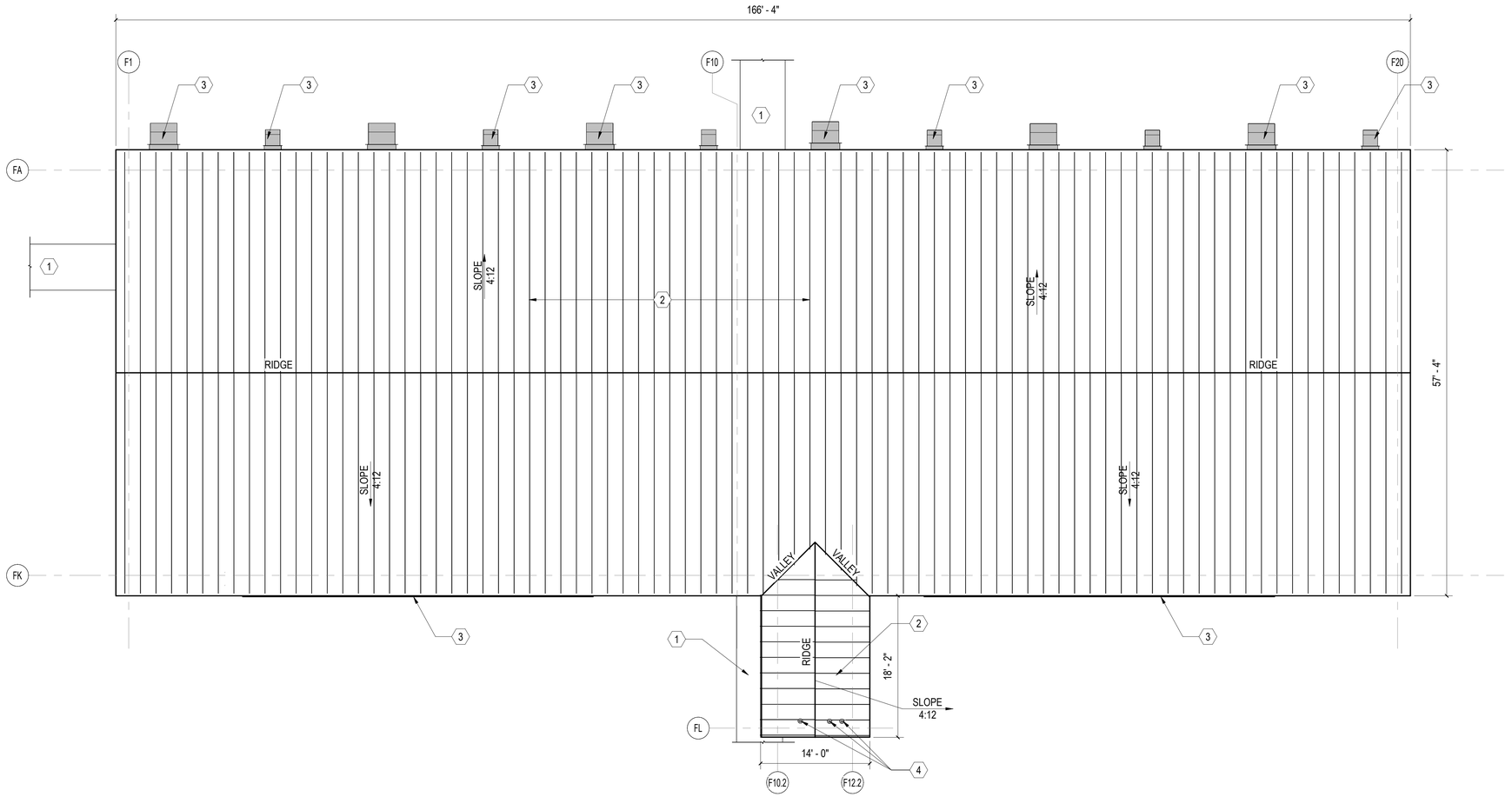
Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn CBW
Checked BBW
Scale AS NOTED
Drawing Title

Biosecurity Building Roof Plan

Sheet Number 39 Of 139
Drawing Number A-110



Farrowing Building Roof Plan

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

PLAN NORTH

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	METAL PANEL ROOFING
3	MECHANICAL EQUIPMENT, SEE MECHANICAL.
4	PLUMBING ROOF VENT. SEE PLUMBING.

GRAPHIC SCALE(S)

1/8" =1'-0" 0' 4' 8' 16'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
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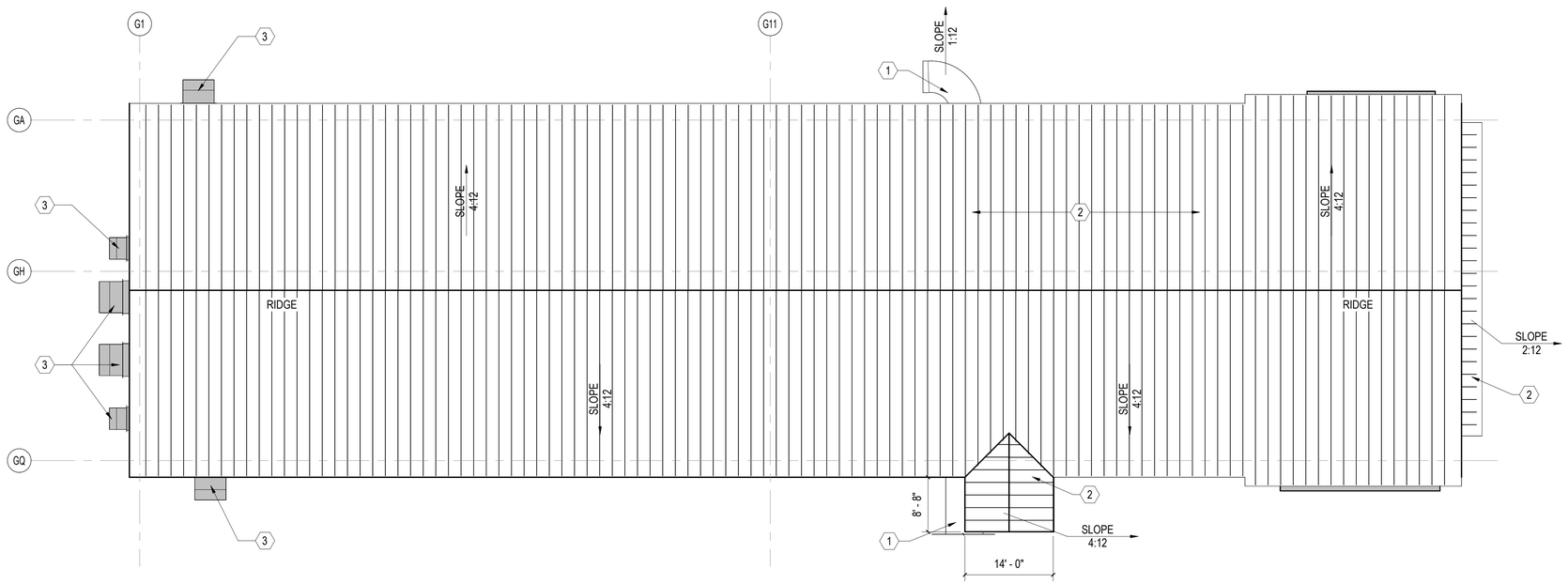
Checked BBW
Scale AS NOTED
Drawing Title

Farrowing Building Roof Plan

Sheet Number 40 Of 139
Drawing Number A-111



Breeding & Gestation Building Roof Plan

SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	METAL PANEL ROOFING
3	MECHANICAL EQUIPMENT, SEE MECHANICAL.

GRAPHIC SCALE(S)

3/32" =1'-0"

0' 6' 12' 18'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No. Date

Project Number
2212.HOGS

Date
07/05/24

Drawn
CBW

Checked
BBW

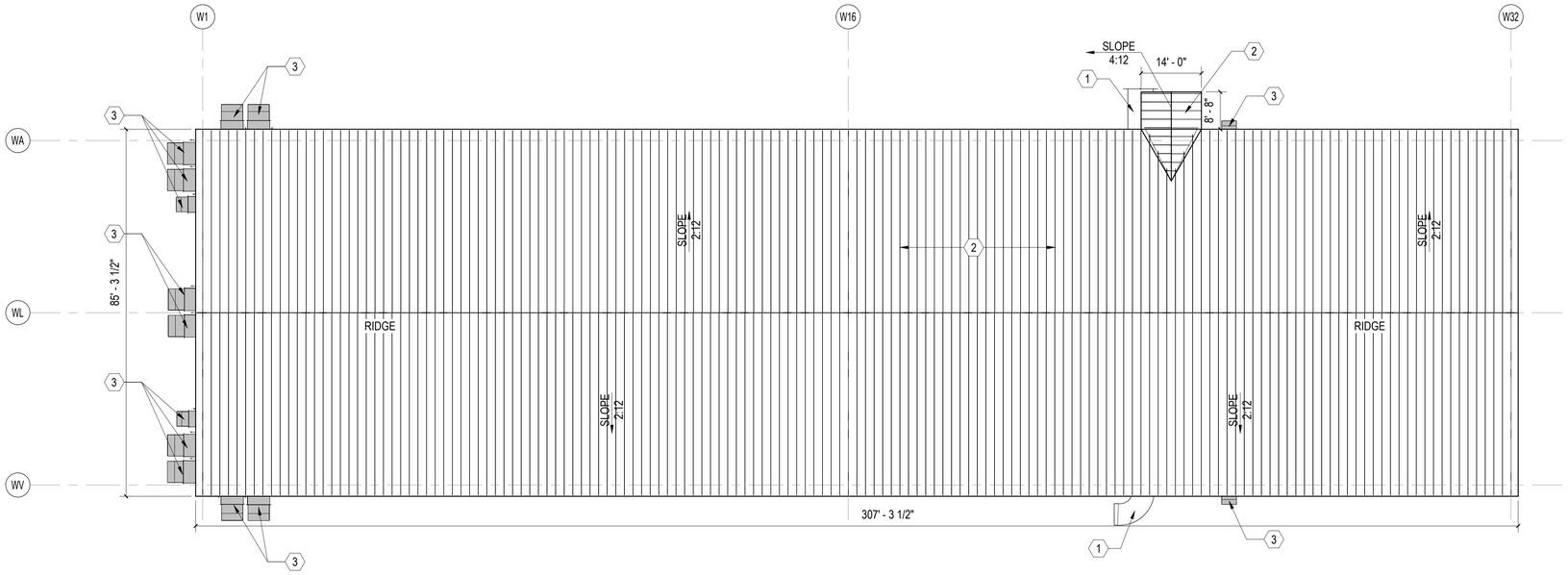
Scale
AS NOTED

Drawing Title

Breeding/Gestation Building Roof Plan

Sheet Number
41 Of 139

Drawing Number
A-112



Wean to Finish Building Roof Plan

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

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	METAL PANEL ROOFING
3	MECHANICAL EQUIPMENT, SEE MECHANICAL.

GRAPHIC SCALE(S)

1/16" =1'-0"

0' 8' 16' 32'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

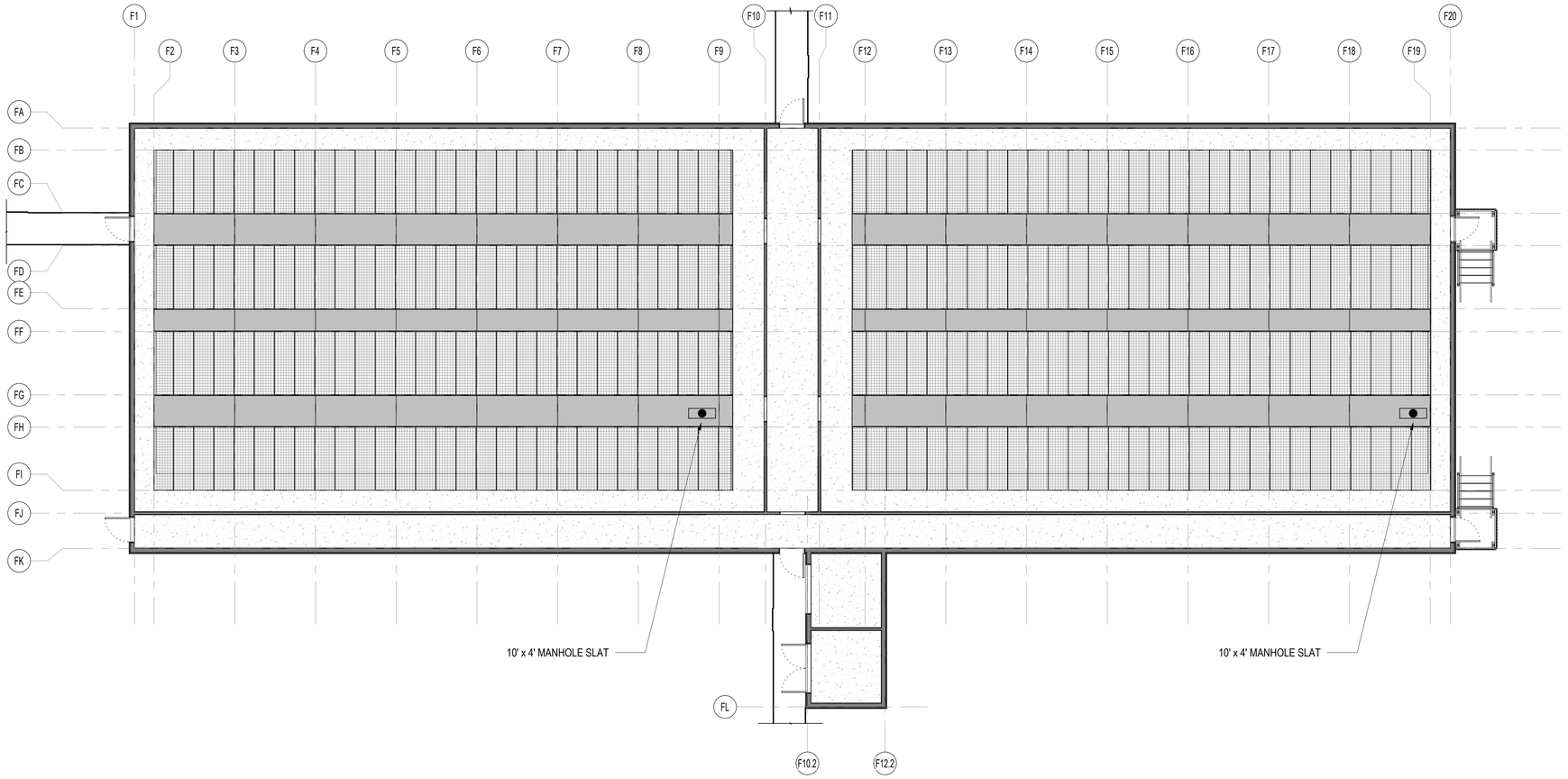
207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

Project Number: 2212.HOGS
Date: 07/05/24
Drawn: CBW
Checked: BBW
Scale: AS NOTED
Drawing Title: Wean to Finish Building Roof Plan

Sheet Number: 42 Of 139
Drawing Number: A-113



Farrowing Building Slat Plan

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

PLAN NORTH

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

NOTE: SLAT FLOORING IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. OWNER TO PROVIDE AND INSTALL ALL SLAT FLOORING AND CONCRETE LINTEL SYSTEMS. CONTRACTOR TO COORDINATE INSTALLATION OF CONTRACTOR INSTALLED CONCRETE PIERS. SEE STRUCTURAL PLANS FOR LOCATION OF PIERS.

CONRETE SLATS: (MANUFACTURER: HOGSLAT) - 4" THICK BROOM FINISHED, 8' OR 10' LENGTHS WITH 1" SLAT OPENINGS IN WEAN TO FINISH, AND 1-1/2" IN BREEDING/GESTATION AND FARROWING.

METAL SLATS: (MANUFACTURER: HOGSLAT) SELF SUPPORTED TRIDEK FLOORING SYSTEM 30"W X 8'L.

MANUFACTURER FLOORING INFO: https://www.hogslat.com/global/flyers/hog-slat-swine-flooring-systems-information-flyer/4/

FLOORING LEGEND

SYMBOL	DESCRIPTION
	4" PRECAST CONCRETE SOLID SLAT
	4" PRECAST CONCRETE SLAT WITH 1" SLOTS
	GALVANIZED TRANGULAR BAR FLOORING SYSTEM
	CONCRETE SLAB ON GRADE/COMPACTED FILL. SEE STRUCTURAL.

GRAPHIC SCALE(S)

1/8" =1'-0"

0' 4' 8' 16'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

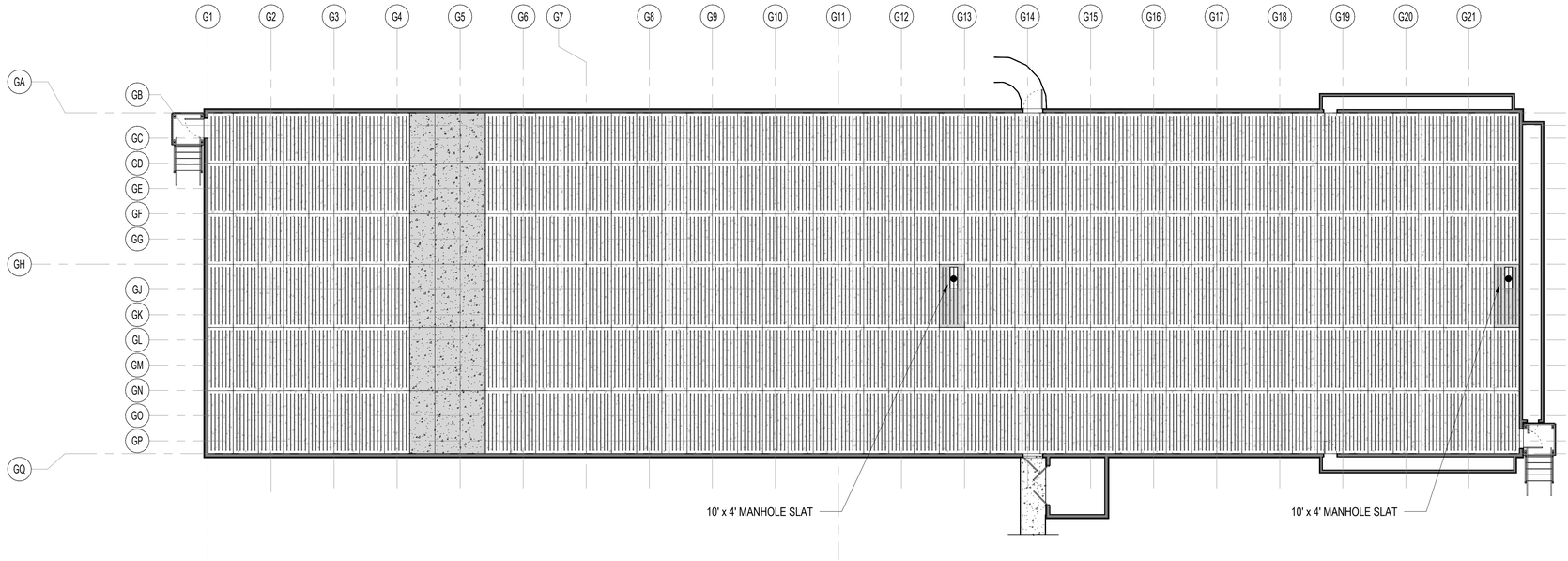
Revisions

No.	Date

Project Number: 2212.HOGS
Date: 07/05/24
Drawn: CBW
Checked: BBW
Scale: AS NOTED
Drawing Title: **Farrowing Building Slat Plan**

Sheet Number: 43 Of 139

Drawing Number: **A-114**



Breeding & Gestation Building Slat Plan

SCALE: 3/32" = 1'-0"

PLAN NORTH

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

NOTE: SLAT FLOORING IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. OWNER TO PROVIDE AND INSTALL ALL SLAT FLOORING AND CONCRETE LINTEL SYSTEMS. CONTRACTOR TO COORDINATE INSTALLATION OF CONTRACTOR INSTALLED CONCRETE PIERS. SEE STRUCTURAL PLANS FOR LOCATION OF PIERS.

CONRETE SLATS: (MANUFACTURER: HOGSLAT) - 4" THICK BROOM FINISHED, 8' OR 10' LENGTHS WITH 1" SLAT OPENINGS IN WEAN TO FINISH, AND 1-1/2" IN BREEDING/GESTATION AND FARROWING.

METAL SLATS: (MANUFACTURER: HOGSLAT) SELF SUPPORTED TRIDEK FLOORING SYSTEM 30"W X 8'L.

MANUFACTURER FLOORING INFO: https://www.hogslat.com/global/flyers/hog-slat-swine-flooring-systems-information-flyer/4/

FLOORING LEGEND

SYMBOL	DESCRIPTION
	4" PRECAST CONCRETE SOLID SLAT
	4" PRECAST CONCRETE SLAT WITH 1" SLOTS
	GALVANIZED TRANGULAR BAR FLOORING SYSTEM
	CONCRETE SLAB ON GRADE/COMPACTED FILL. SEE STRUCTURAL.

GRAPHIC SCALE(S)

3/32" =1'-0"

0' 6' 12' 18'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No. Date

Project Number 2212.HOGS

Date 07/05/24

Drawn CBW

Checked BBW

Scale AS NOTED

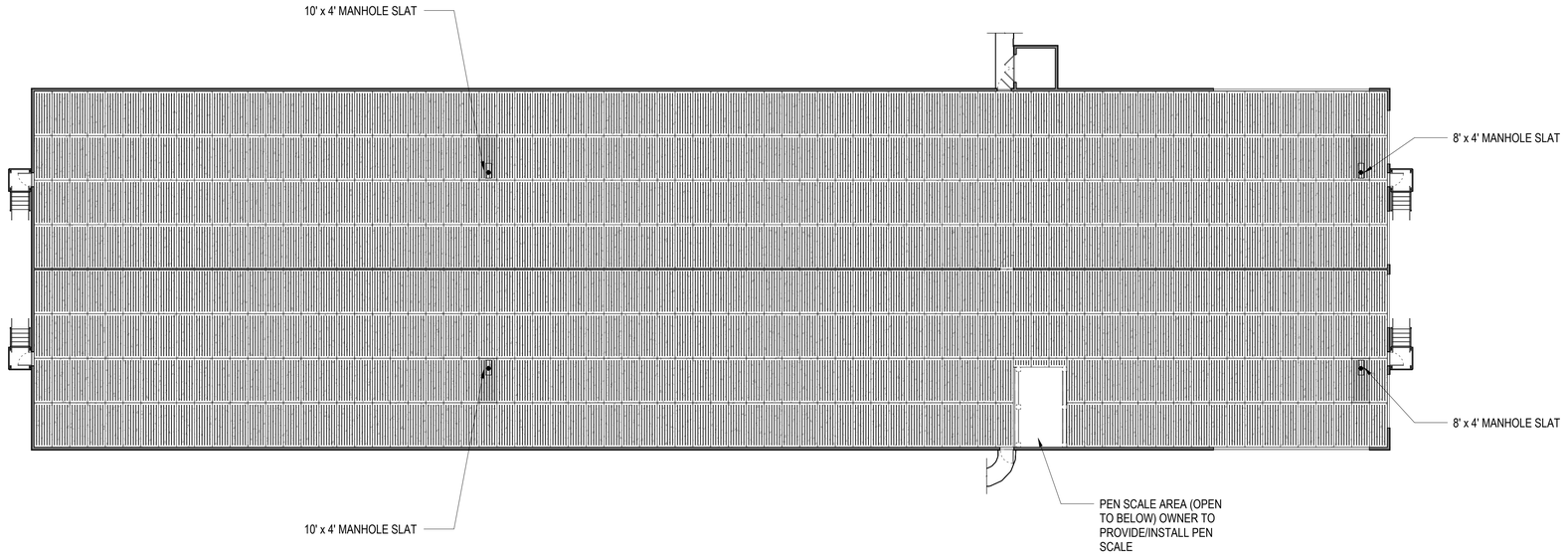
Drawing Title

Breeding/Gestation Building Slat Plan

Sheet Number 44 Of 139

Drawing Number

A-115



Wean to Finish Building Slat Plan

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

PLAN NORTH

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

NEW WORK KEYNOTES

NOTE: SLAT FLOORING IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. OWNER TO PROVIDE AND INSTALL ALL SLAT FLOORING AND CONCRETE LINTEL SYSTEMS. CONTRACTOR TO COORDINATE INSTALLATION OF CONTRACTOR INSTALLED CONCRETE PIERS. SEE STRUCTURAL PLANS FOR LOCATION OF PIERS.

CONRETE SLATS: (MANUFACTURER: HOGSLAT) - 4" THICK BROOM FINISHED, 8' OR 10' LENGTHS WITH 1" SLAT OPENINGS IN WEAN TO FINISH, AND 1-1/2" IN BREEDING/GESTATION AND FARROWING.

METAL SLATS: (MANUFACTURER: HOGSLAT) SELF SUPPORTED TRIDEK FLOORING SYSTEM 30"W X 8'L.

MANUFACTURER FLOORING INFO: https://www.hogslat.com/global/flyers/hog-slat-swine-flooring-systems-information-flyer/4/

FLOORING LEGEND

SYMBOL	DESCRIPTION
	4" PRECAST CONCRETE SOLID SLAT
	4" PRECAST CONCRETE SLAT WITH 1" SLOTS
	GALVANIZED TRANGULAR BAR FLOORING SYSTEM
	CONCRETE SLAB ON GRADE/COMPACTED FILL. SEE STRUCTURAL.

GRAPHIC SCALE(S)

1/16" =1'-0"

0' 8' 16' 32'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No. Date

Project Number 2212.HOGS

Date 07/05/24

Drawn CBW

Checked BBW

Scale AS NOTED

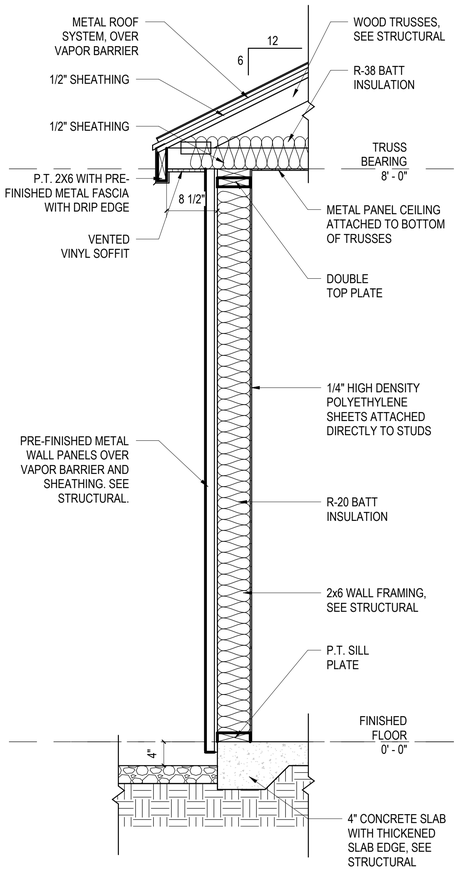
Drawing Title

Wean to Finish Building Slat Plan

Sheet Number 45 Of 139

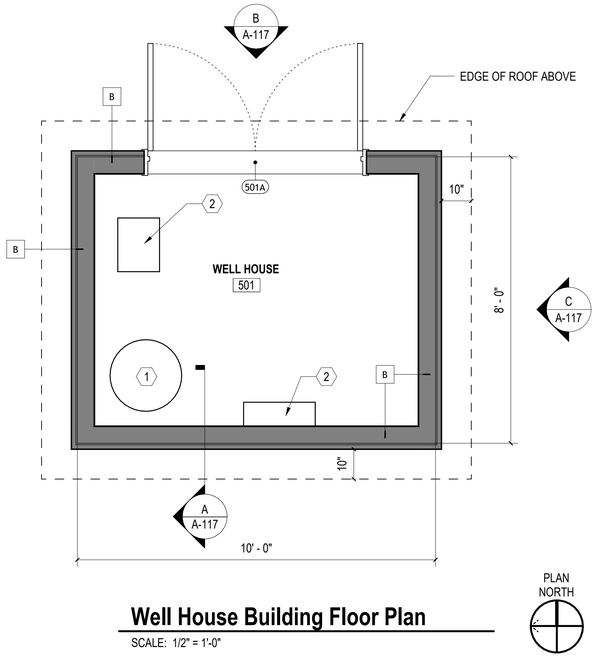
Drawing Number

A-116



A Well House Wall Section

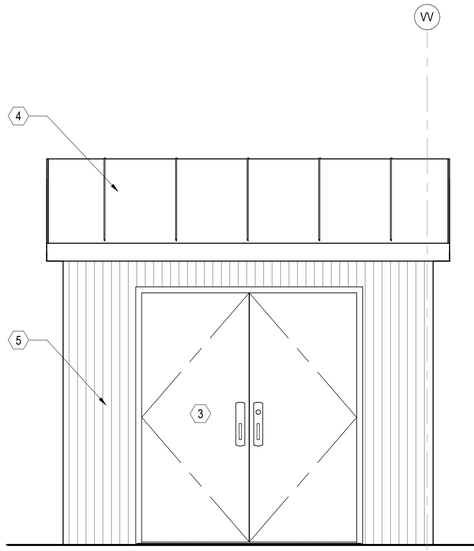
SCALE: 1" = 1'-0" (A-117)



Well House Building Floor Plan

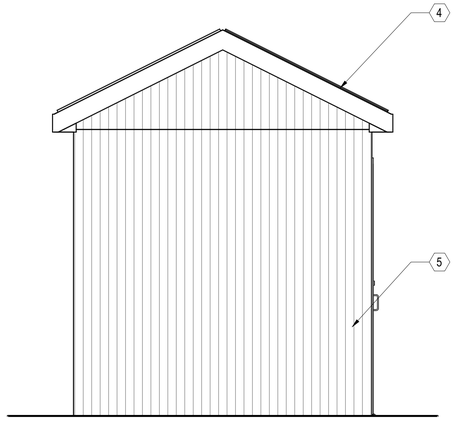
SCALE: 1/2" = 1'-0"

PLAN NORTH



B Well House North Elevation

SCALE: 1/2" = 1'-0" (A-117)



C Well House East Elevation

SCALE: 1/2" = 1'-0" (A-117)

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	NEW WELL, SEE CIVIL
2	NEW PLUMBING EQUIPMENT, SEE PLUMBING
3	HOLLOW METAL DOOR & FRAME
4	METAL PANEL ROOFING
5	VERTICAL METAL SIDING

WALL TYPES LEGEND

MARK	NOTES
A	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 5/8" GYPSUM BOARD. TAPE, TEXTURE, AND PAINT.
B	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 1/2" SHEATHING, 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/4" POLYETHYLENE BOARD.
C	2x4 WOOD STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE. TAPE, TEXTURE, AND PAINT.
D	2x4 WOOD CHASE WITH STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD ON OUTSIDE. TAPE, TEXTURE, AND PAINT.
E	2x4 WOOD STUDS @ 16" O.C. WITH 1/4" POLYETHYLENE BOARD, EACH SIDE.
F	2x4 WOOD STUDS @ 16" O.C. WITH 1/2" CEMENT BOARD AND CERAMIC WALL TILE. FULL HEIGHT.
G	2x4 WOOD STUDS @ 16" O.C. WITH 1/2" CEMENT BOARD AND CERAMIC WALL TILE, ONE SIDE 5/8" GYPSUM BOARD, TAPE TEXTURE AND PAINT. ONE SIDE.
H	1/2" PLYWOOD SHEATHING OVER 2x6 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/4" POLYETHYLENE BOARD.
J	VERTICAL METAL PANEL SIDING, VAPOR BARRIER, 2x4 WOOD STUD FRAMING, R-20 FIBERGLASS BATT INSULATION, 1/2" PLYWOOD SHEATHING W/ VAPOR BARRIER

GRAPHIC SCALE(S)

1/2" = 1'-0" 0 2 4'

1" = 1'-0" 0' 6" 1' 2'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No. Date

Project Number 2212.HOGS

Date 07/05/24

Drawn CBW

Checked BBW

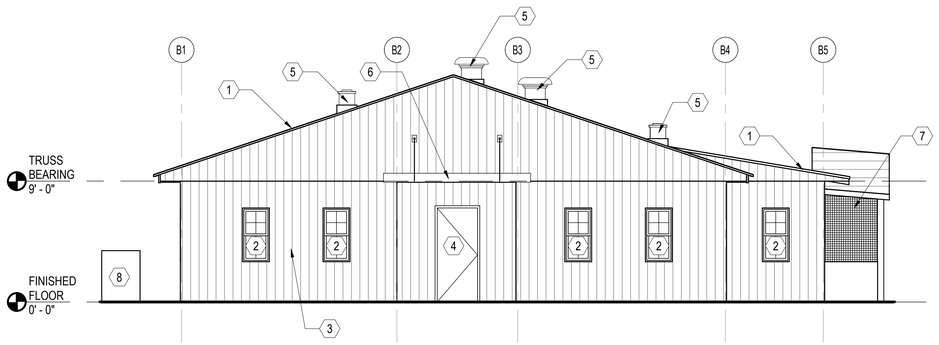
Scale AS NOTED

Drawing Title

Well House Plans

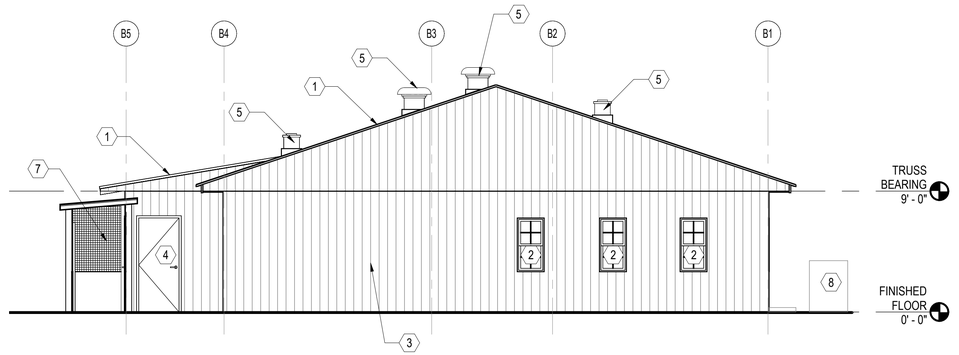
Sheet Number 46 Of 139

Drawing Number A-117



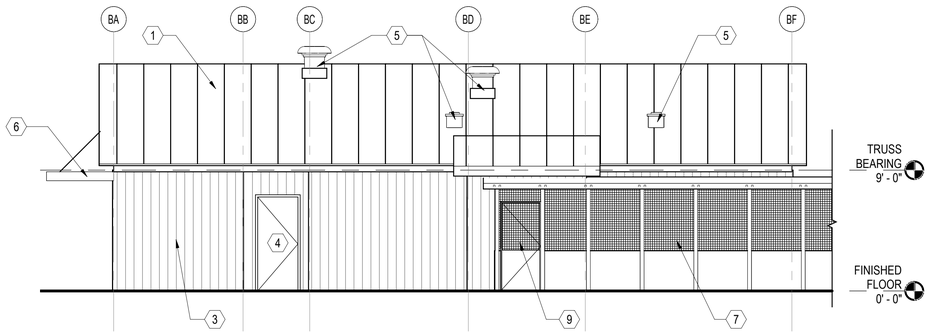
A Bio-Security West Elevation

SCALE: 3/16" = 1'-0" (A-102)



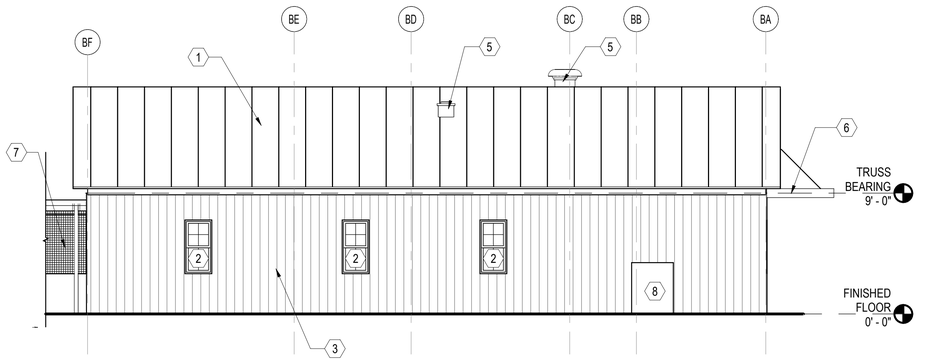
B Bio-Security East Elevation

SCALE: 3/16" = 1'-0" (A-102)



C Bio-Security South Elevation

SCALE: 3/16" = 1'-0" (A-102)



D Bio-Security North Elevation

SCALE: 3/16" = 1'-0" (A-102)

3/16" =1'-0" 0' 4' 8' 12'

NEW WORK KEY NOTES

MARK	DESCRIPTION
1	METAL PANEL ROOFING
2	ALUMINUM WINDOW AS SCHEDULED, SEE WINDOW SCHEDULE A-601.
3	VERTICAL METAL SIDING
4	HOLLOW METAL DOOR & FRAME
5	MECHANICAL ROOF EQUIPMENT. SEE MECHANICAL.
6	OVERHEAD SUPPORTED PRE-MANUFACTURED PRE-FINISHED METAL CANOPY. INSTALL PER CANOPY MANUFACTURER'S RECOMMENDATION. SEE DETAIL A/A106.
7	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
8	MECHANICAL EQUIPMENT, SEE MECHANICAL.
9	COVERED WALKWAY DOOR, SEE DOOR SCHEDULE.

GENERAL NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

WALKER the GROUP ARCHITECTURE incorporated
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252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

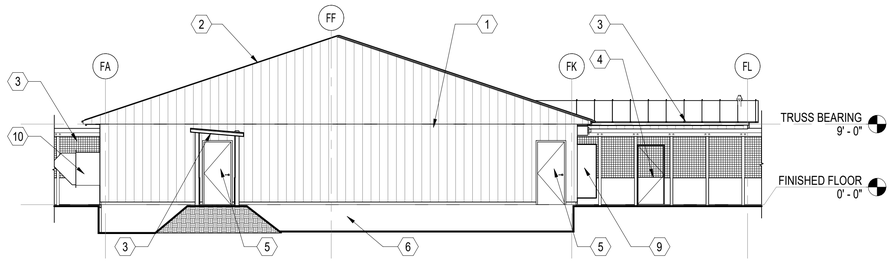
No.	Date

Project Number **2212.HOGS**
Date **07/05/24**
Drawn **CBW**
Checked **BBW**
Scale **AS NOTED**
Drawing Title

Biosecurity Building Elevations

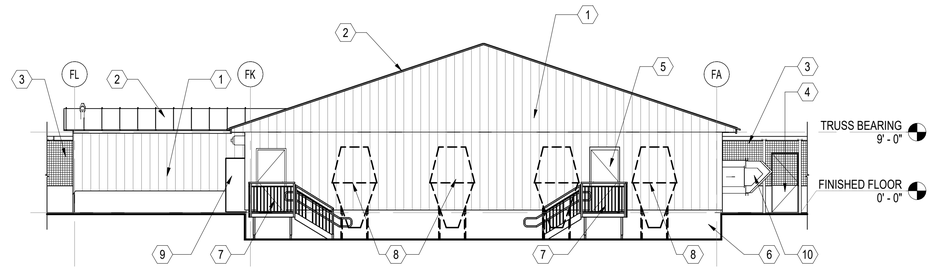
Sheet Number 47 Of 139

Drawing Number **A-201**



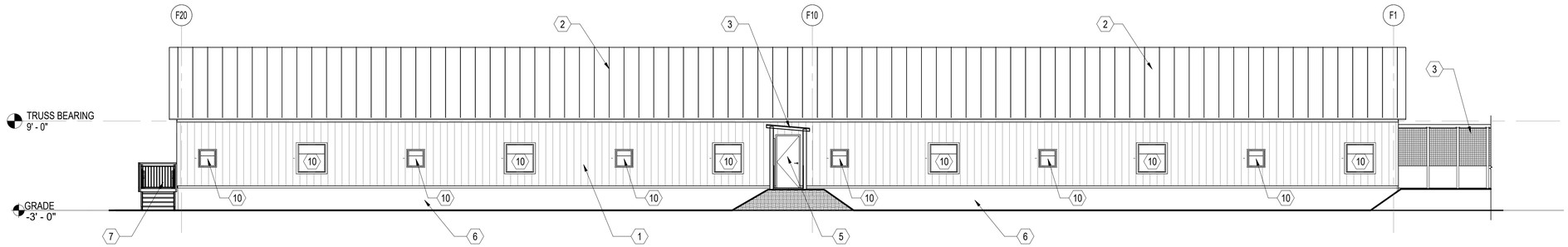
A Farrowing West Elevation

SCALE: 1/8" = 1'-0" (A-103)



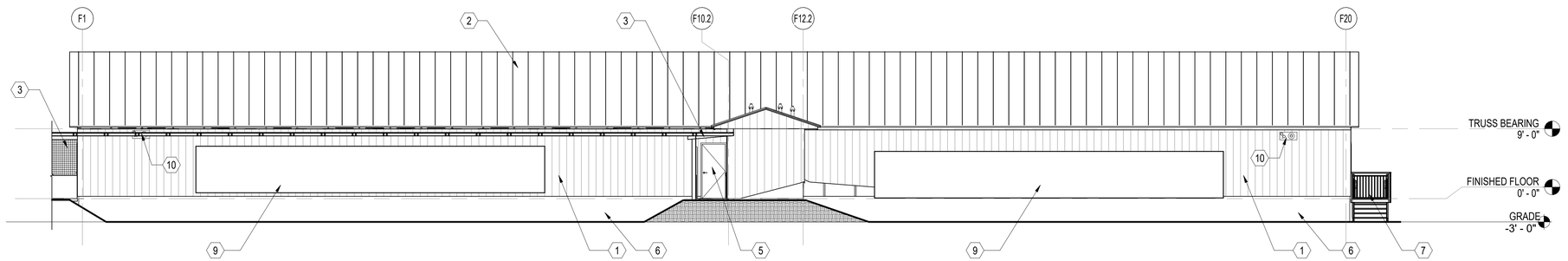
B Farrowing East Elevation

SCALE: 1/8" = 1'-0" (A-103)



C Farrowing North Elevation

SCALE: 1/8" = 1'-0" (A-103)



D Farrowing South Elevation

SCALE: 1/8" = 1'-0" (A-103)

1/8" =1'-0" 0' 4' 8' 16'

NEW WORK KEY NOTES

MARK	DESCRIPTION	MARK	DESCRIPTION
1	VERTICAL METAL SIDING	6	CONCRETE FOUNDATION WALL, SEE STRUCTURAL.
2	METAL PANEL ROOFING	7	4'W GALVANIZED STEEL STAIRS WITH OPEN GRATE TREADS AND DECK. PROVIDE 42" GUARDRAIL AND 36" HANDRAIL. SEE DETAIL A/A104.
3	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.	8	FEED BINS, PROVIDED AND INSTALLED BY OWNER.
4	COVERED WALKWAY DOOR, SEE DOOR SCHEDULE.	9	COOL CELL PAD. SEE MECHANICAL.
5	HOLLOW METAL DOOR & FRAME	10	MECHANICAL EQUIPMENT, SEE MECHANICAL.

GENERAL NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

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Drawn
CBW

Checked
BBW

Scale
AS NOTED

Drawing Title

Farrowing Building Elevations

Sheet Number
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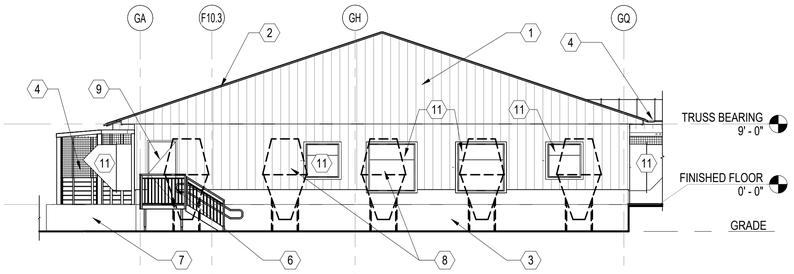
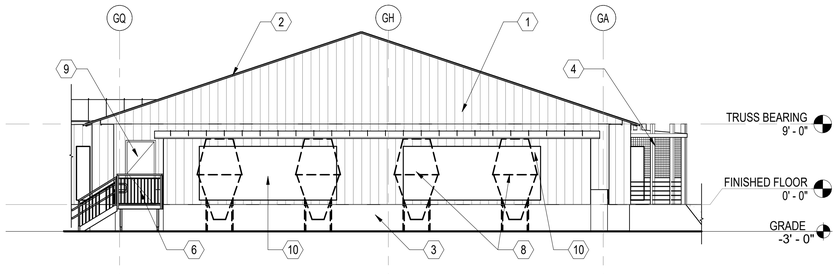
Drawing Number
A-202



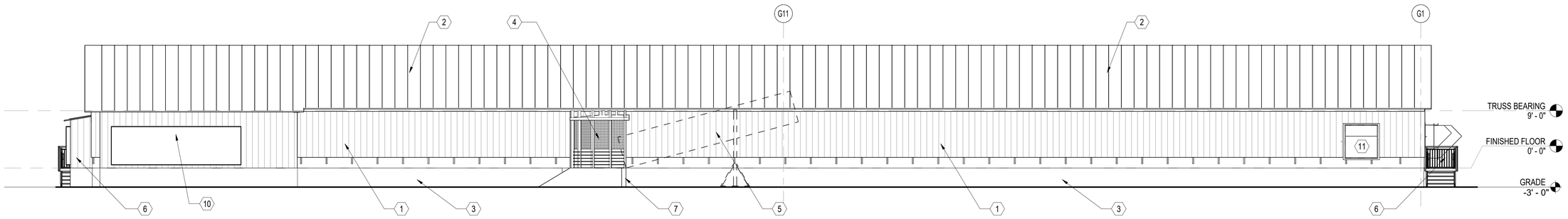
A Breeding & Gestation West Elevation

SCALE: 1/8" = 1'-0" (A-104)



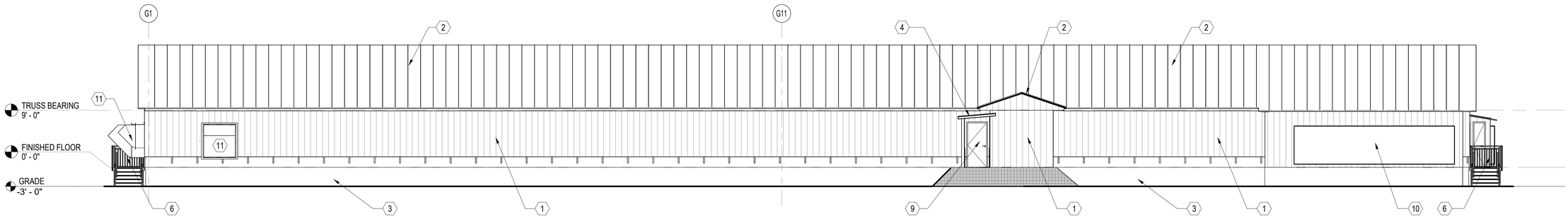
B Breeding & Gestation East Elevation

SCALE: 1/8" = 1'-0" (A-104)



C Breeding & Gestation North Elevation

SCALE: 1/8" = 1'-0" (A-104)



D Breeding & Gestation South Elevation

SCALE: 1/8" = 1'-0" (A-104)

1/8" =1'-0" 0' 4' 8' 16'

NEW WORK KEY NOTES

MARK	DESCRIPTION	MARK	DESCRIPTION
1	VERTICAL METAL SIDING	7	CONCRETE RETAINING WALL, SEE STRUCTURAL.
2	METAL PANEL ROOFING	8	FEED BINS, OWNER PROVIDED CONTRACTOR INSTALED.
3	CONCRETE FOUNDATION WALL, SEE STRUCTURAL.	9	HOLLOW METAL DOOR & FRAME
4	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.	10	COOL CELL PAD. SEE MECHANICAL.
5	LOADING CHUTE	11	MECHANICAL EQUIPMENT, SEE MECHANICAL.
6	PROVIDE 4'W GALVANIZED STEEL STAIRS WITH OPEN GRATE TREDS AND DECK. PROVIDE 42" GUARDRAIL AND 36" HAINDRAIL. SEE DETAIL A/A104.		

GENERAL NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

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Drawing Title

Breeding/Gestation Building Elevations

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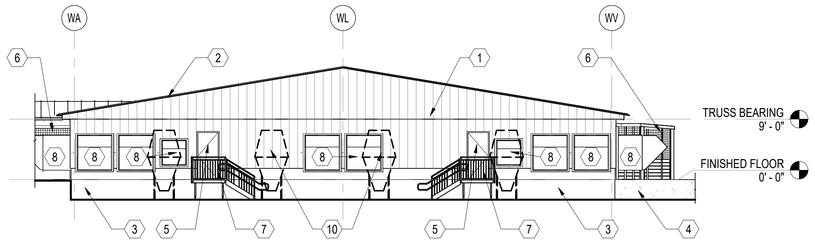
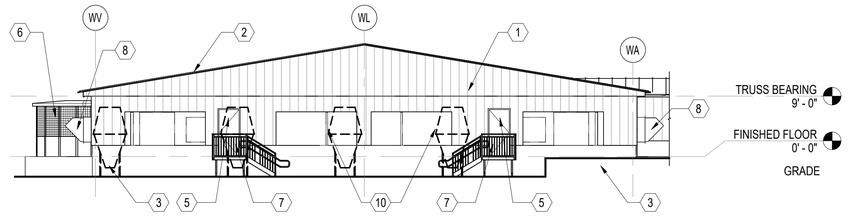
Drawing Number A-203



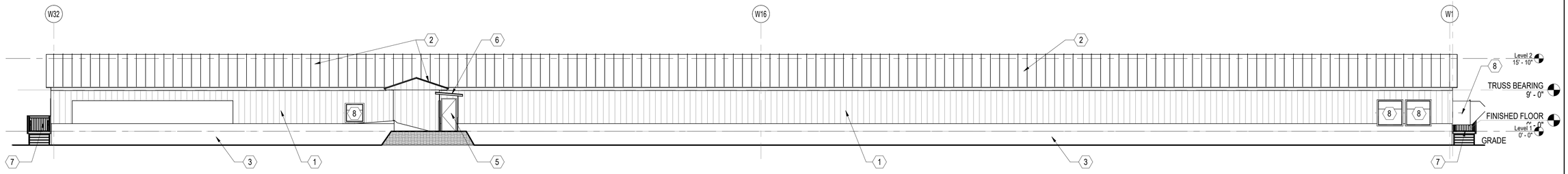
A Wean to Finish West Elevation

SCALE: 3/32" = 1'-0" (A-105)



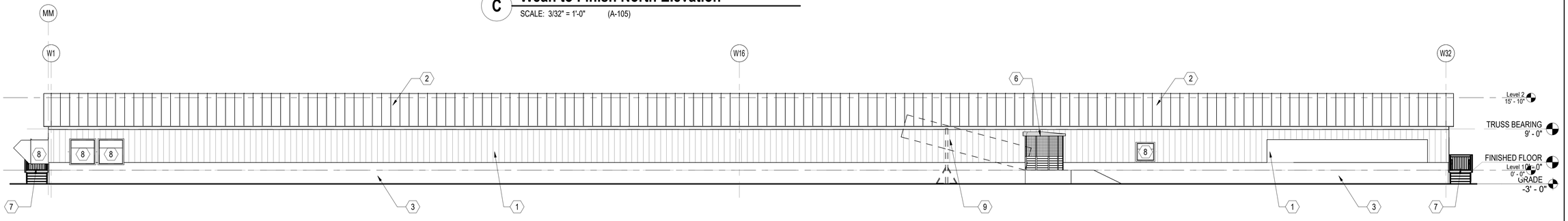
B Wean to Finish East Elevation

SCALE: 3/32" = 1'-0" (A-105)



C Wean to Finish North Elevation

SCALE: 3/32" = 1'-0" (A-105)



D Wean to Finish South Elevation

SCALE: 3/32" = 1'-0" (A-105)

3/32" =1'-0" 0' 6' 12' 18'

NEW WORK KEY NOTES

MARK	DESCRIPTION	MARK	DESCRIPTION
1	VERTICAL METAL SIDING	6	COVERED WALKWAY, SEE STRUCTURAL. SEE OVERALL PLAN.
2	METAL PANEL ROOFING	7	PROVIDE 4'W GALVANIZED STEEL STAIRS WITH OPEN GRATE TREDS AND DECK. PROVIDE 42" GUARDRAIL AND 36" HAINDRAIL. SEE DETAIL A/A104.
3	CONCRETE FOUNDATION WALL, SEE STRUCTURAL.	8	MECHANICAL EQUIPMENT, SEE MECHANICAL.
4	CONCRETE RETAINING WALL, SEE STRUCTURAL.	9	LOADING CHUTE, OWNER PROVIDED CONTRACTOR INSTALED.
5	HOLLOW METAL DOOR & FRAME	10	FEED BINS, OWNER PROVIDED CONTRACTOR INSTALED.

GENERAL NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

WALKER the GROUP ARCHITECTURE
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252-636-8778

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DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

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Drawing Title

Wean to Finish Building Elevations

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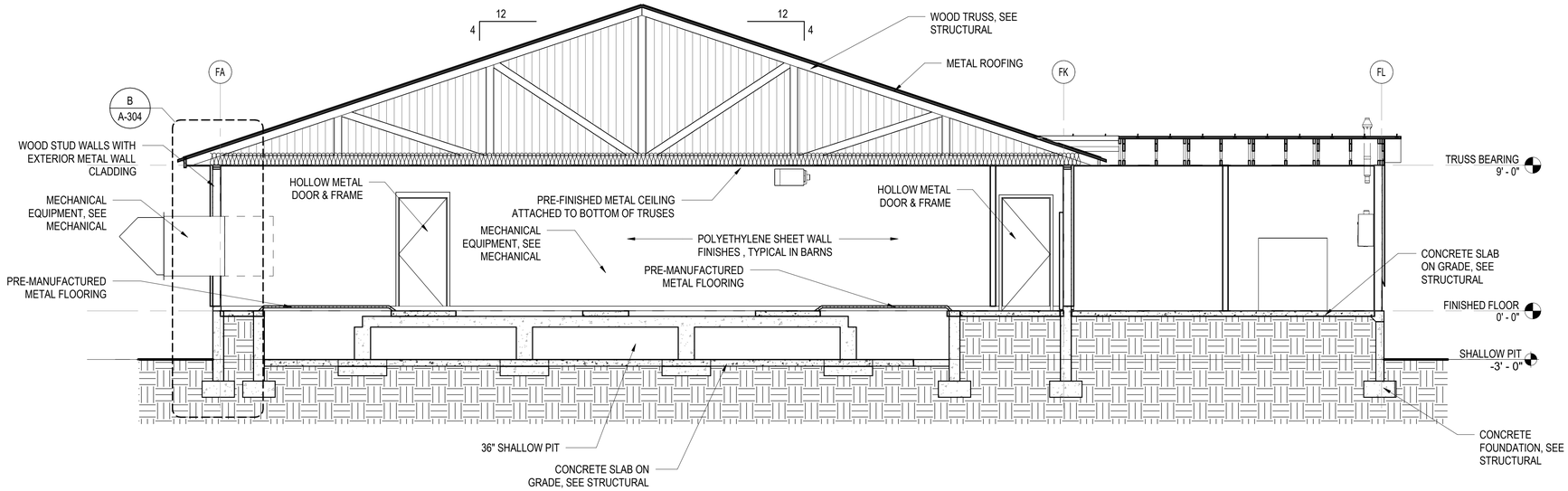
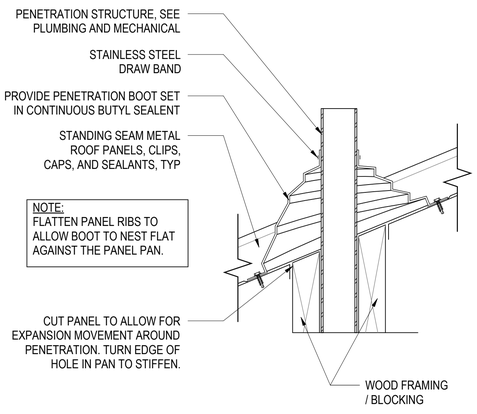
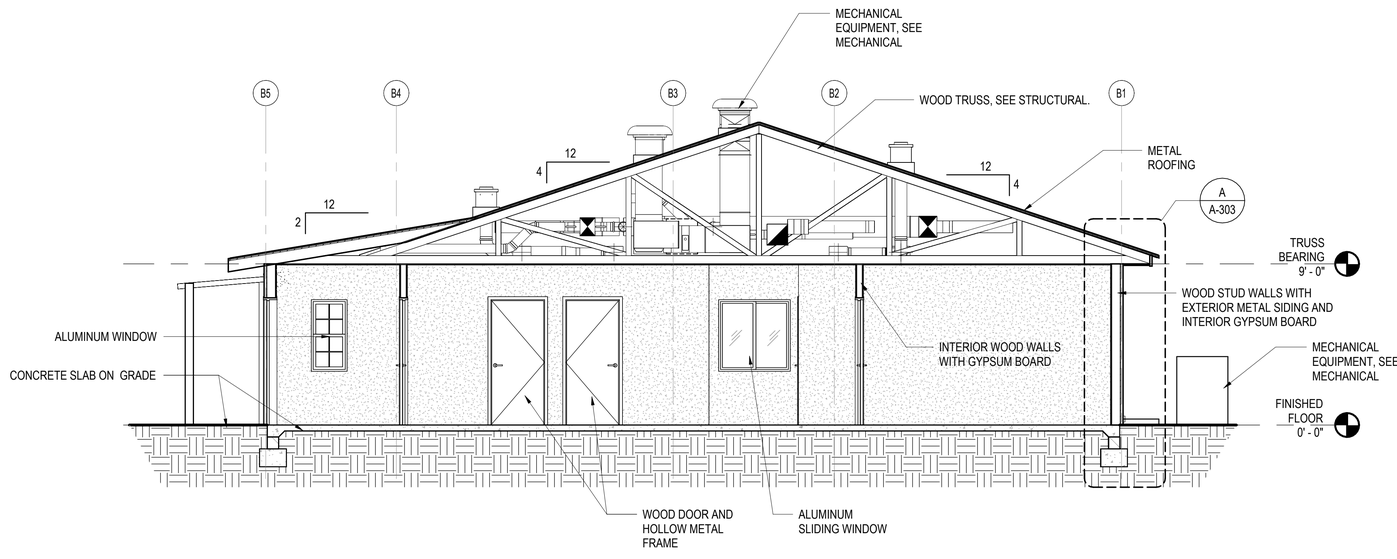
A-204



A **Farrowing Building Section**
SCALE: 1/4" = 1'-0" (A-103)



B **Typical Pipe Penetration Detail**
SCALE: 3" = 1'-0"



C **Biosecurity Building Section**
SCALE: 1/4" = 1'-0" (A-102)

3" =1'-0" 0' 3" 6" 9"

1/4" =1'-0" 0' 2' 4' 8'

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Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

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Building Sections

Sheet Number 51 Of 139
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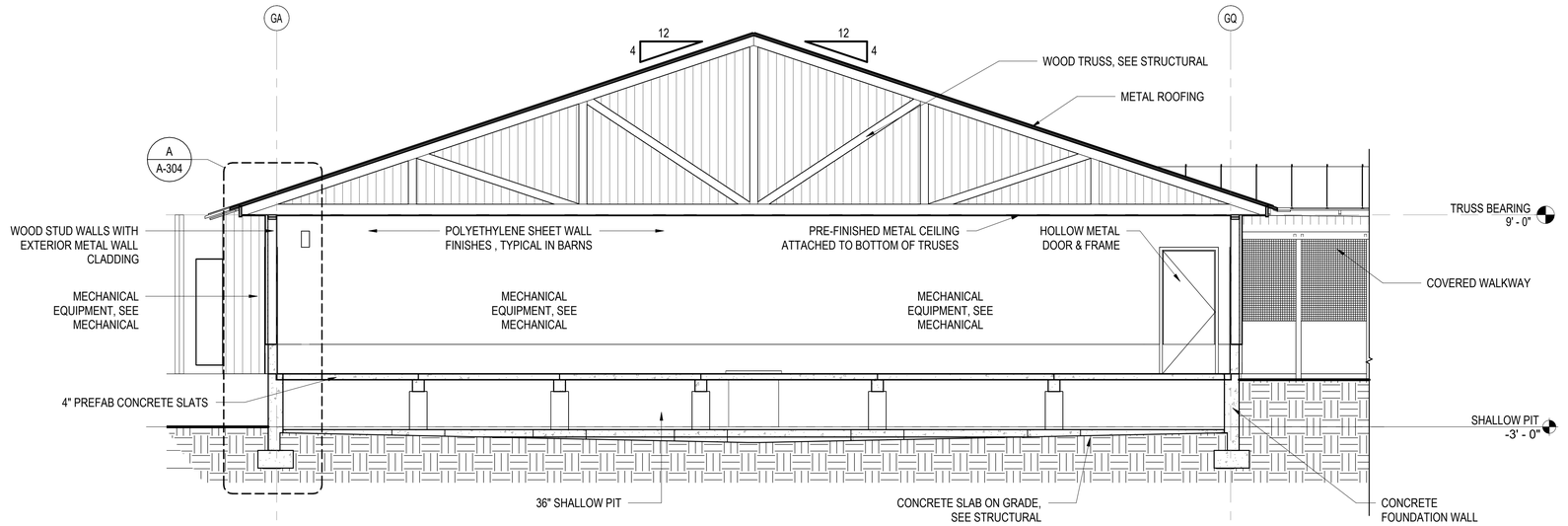
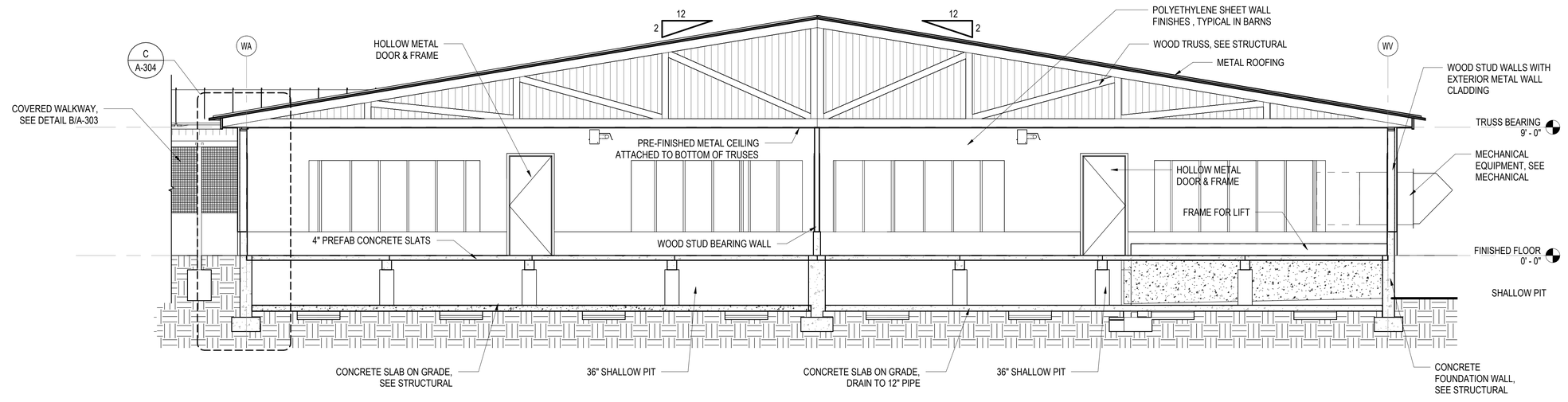


A Breeding/Gestation Building Section

SCALE: 1/4" = 1'-0" (A-104)



B Wean to Finish Building Section

SCALE: 1/4" = 1'-0" (A-105)

1/4" =1'-0" 0' 2' 4' 8'

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Drawing Title

Building Sections

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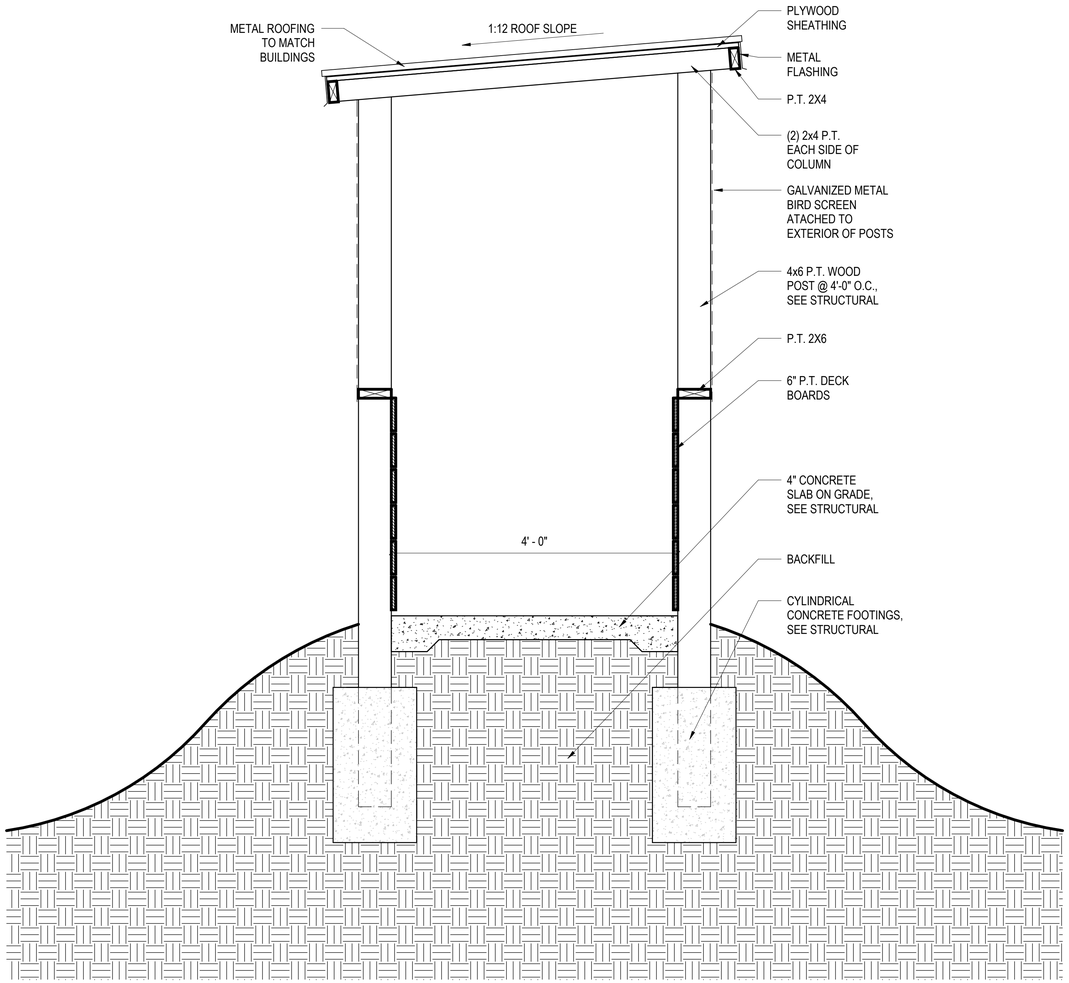
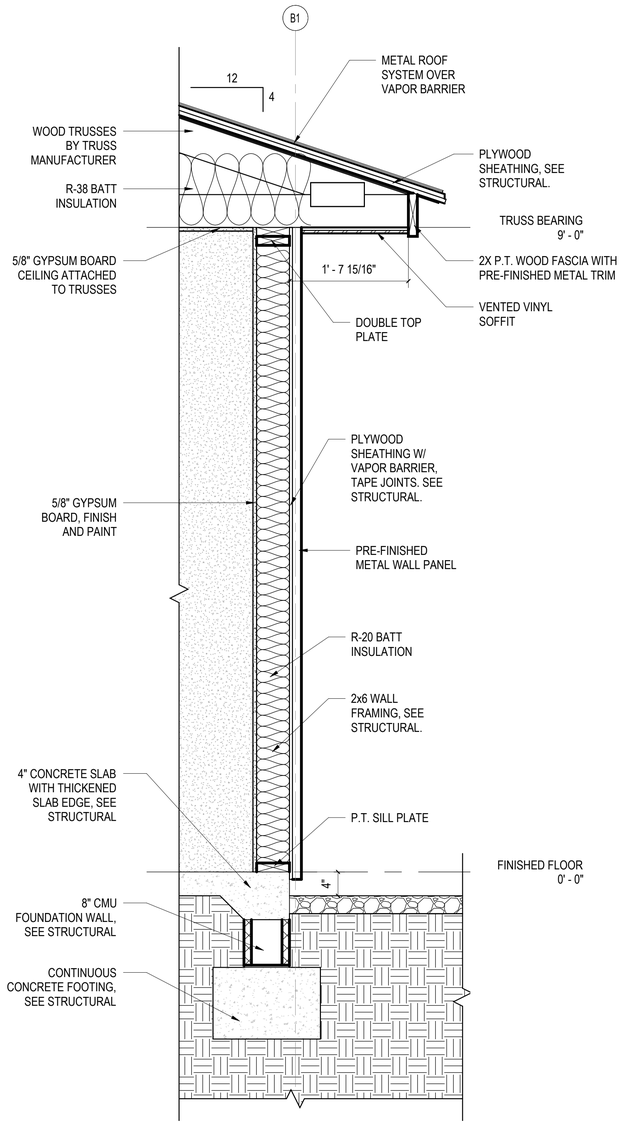
Drawing Number

A-302



B **Typical Walkway Section**
SCALE: 1" = 1'-0"



A **Biosecurity Building Section - Wall Section**
SCALE: 1" = 1'-0" (A-301)

3/4" =1'-0" 0' 1' 2' 3'

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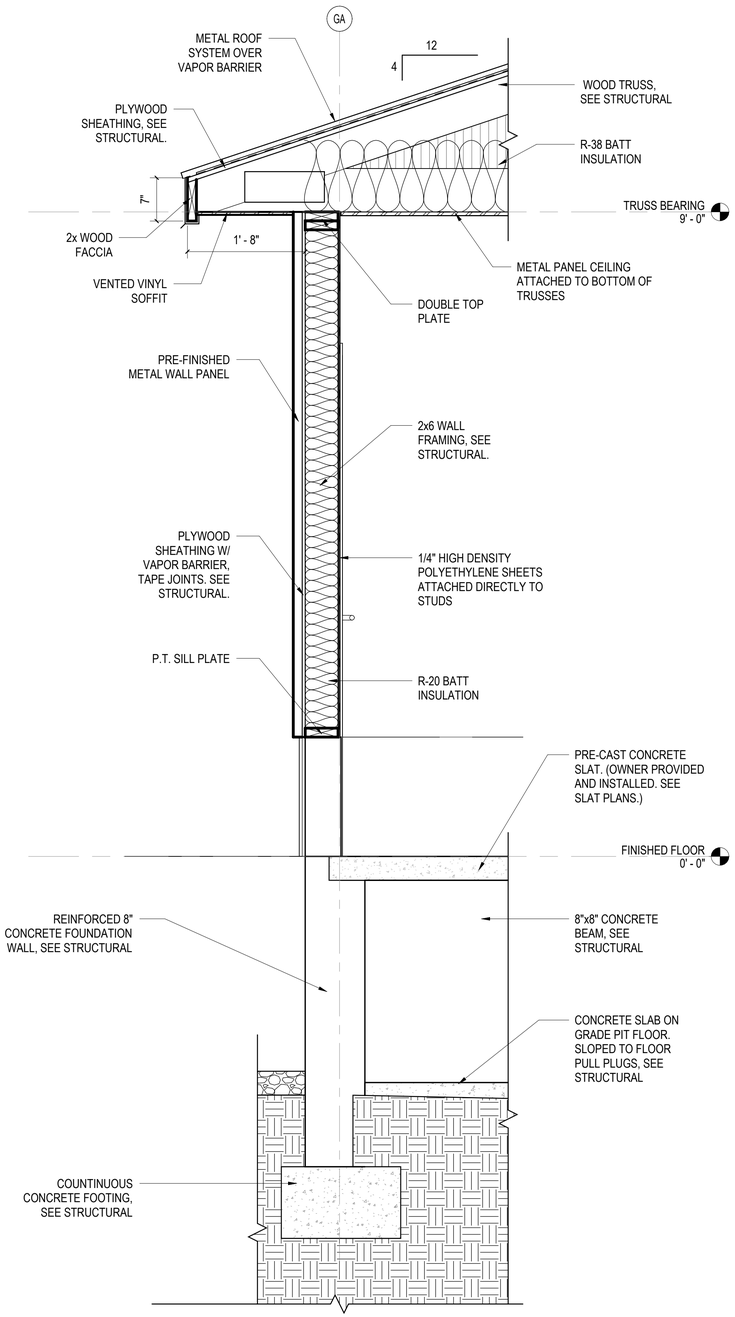
No. Date

Project Number **2212.HOGS**
Date **07/05/24**
Drawn **CBW**
Checked **BBW**
Scale **AS NOTED**
Drawing Title

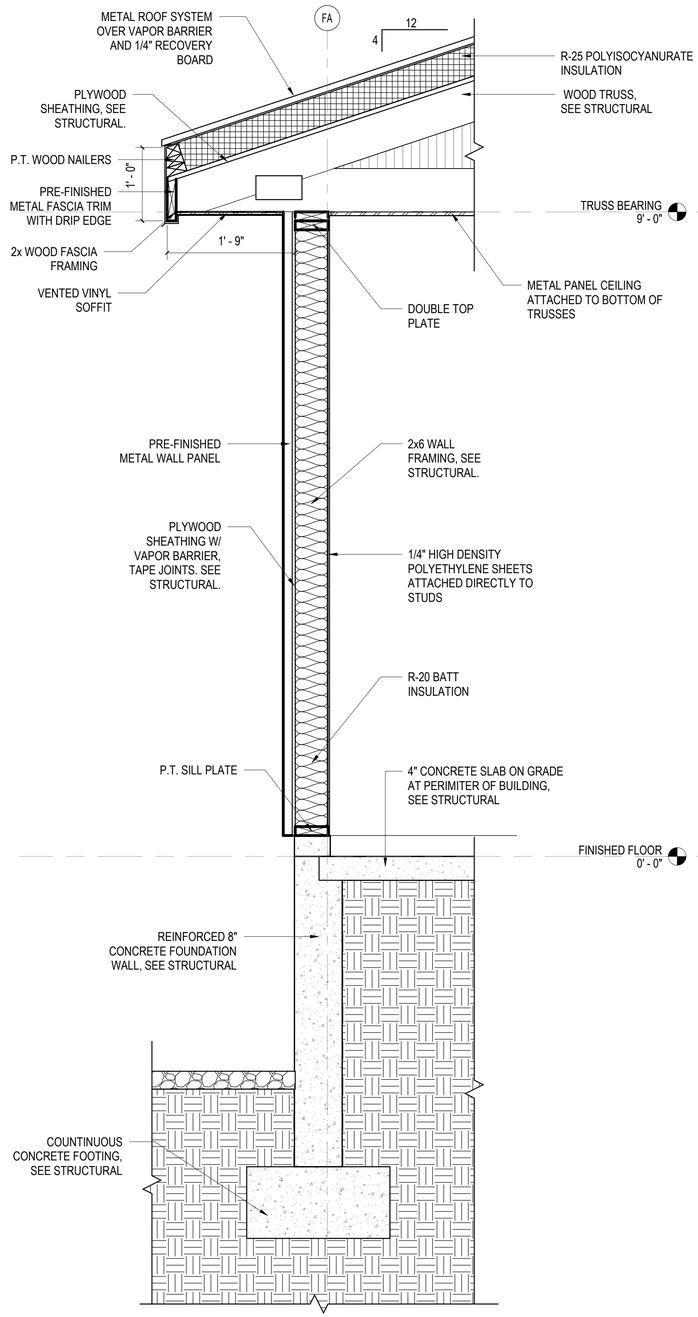
Biosecurity Wall Sections

Sheet Number 53 Of 139
Drawing Number **A-303**



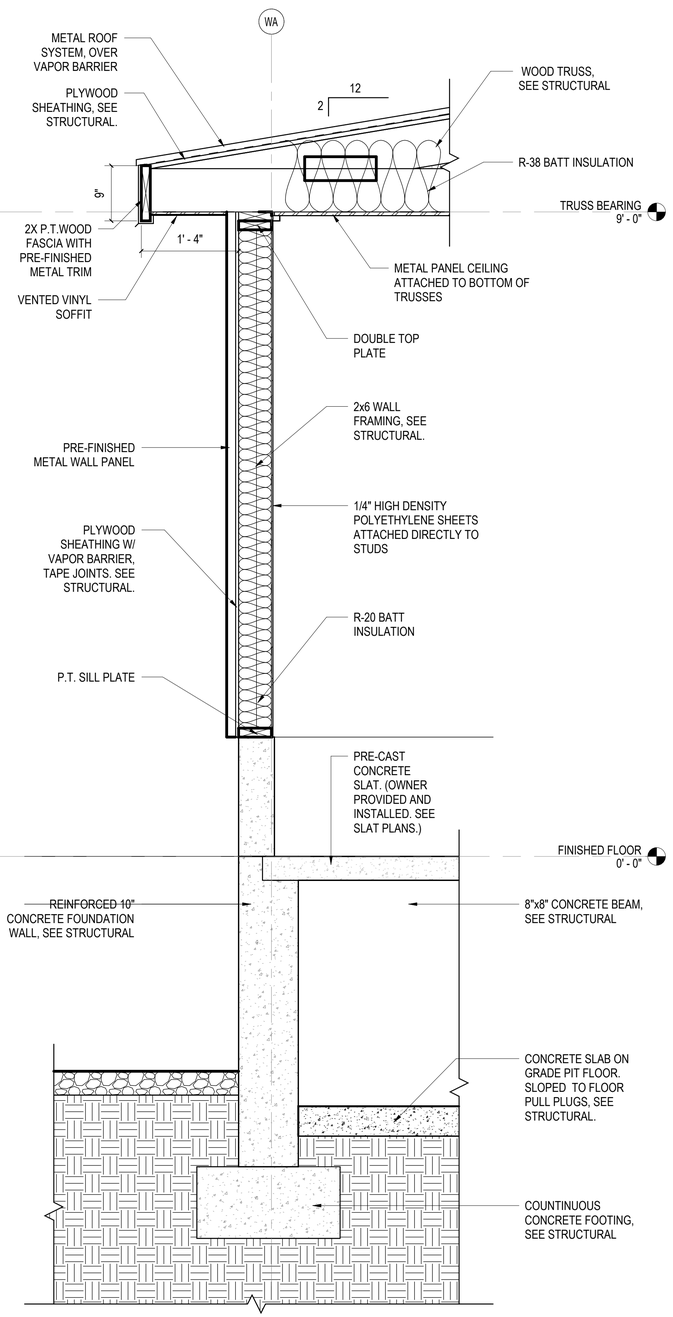
A Breeding/Gestation Building Wall Section

SCALE: 1" = 1'-0" (A-302)



B Farrowing Building Wall Section

SCALE: 1" = 1'-0" (A-301)



C Wean to Finish Wall Section

SCALE: 1" = 1'-0" (A-302)

1" =1'-0" 0' 6" 1' 2'

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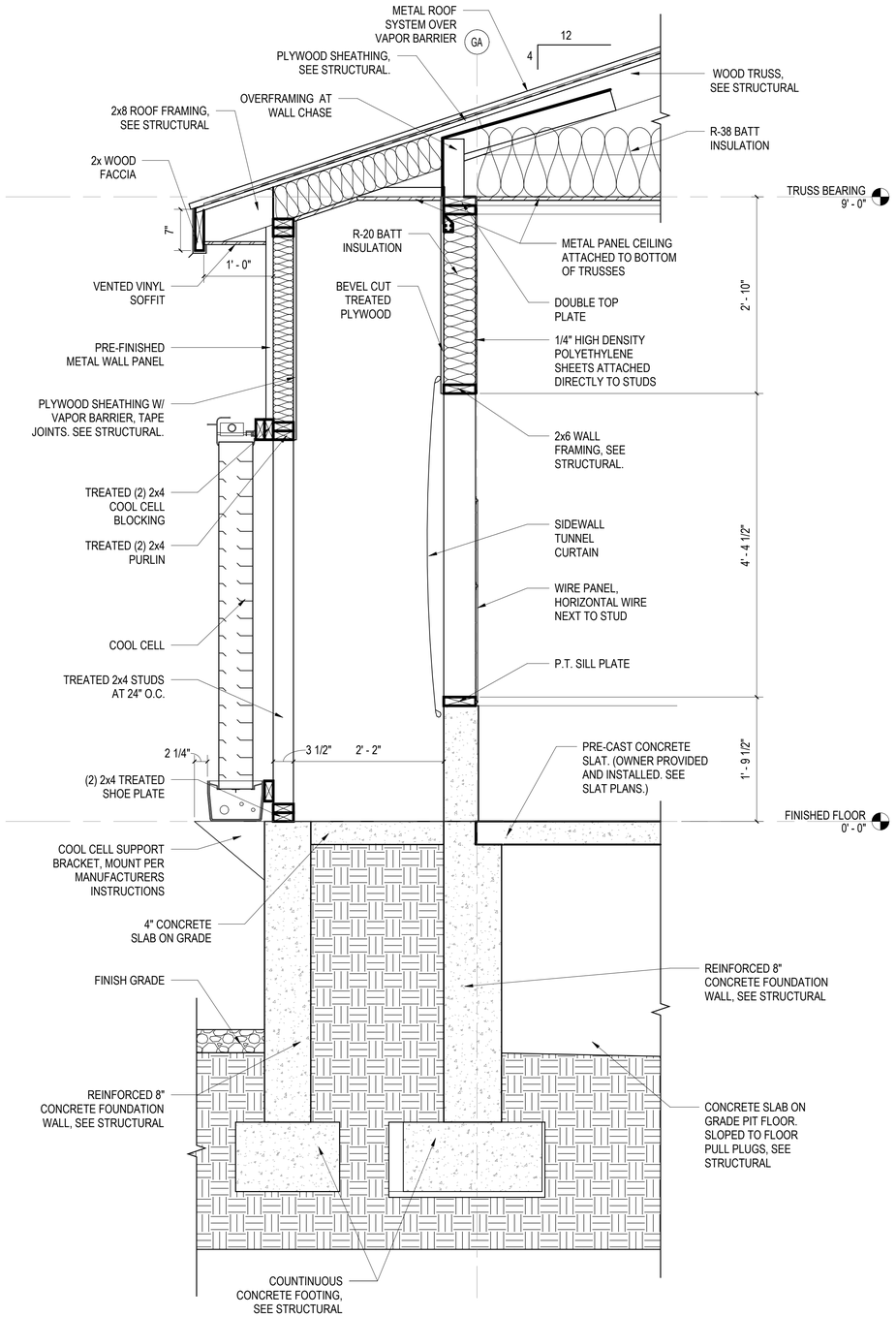
Scale AS NOTED

Drawing Title

Barn Wall Sections

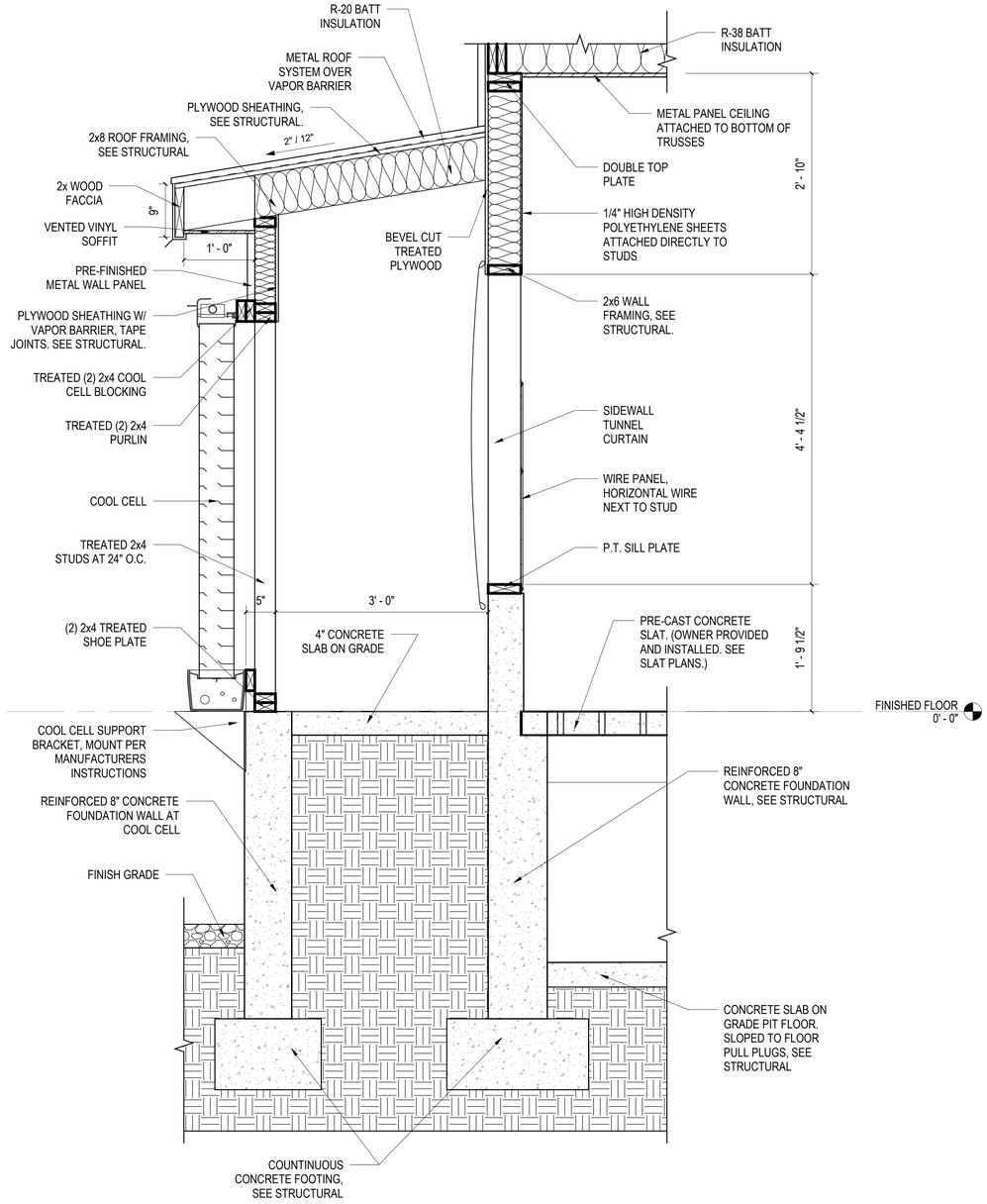
Sheet Number 54 Of 139

Drawing Number A-304



A Breeding/Gestation Building Cool Cell Eave End Chase Section

SCALE: 1" = 1'-0" (A-104)



B Breeding/Gestation Building Cool Cell Gable End Chase Section

SCALE: 1" = 1'-0" (A-104)

1" =1'-0" 0' 6" 1' 2'

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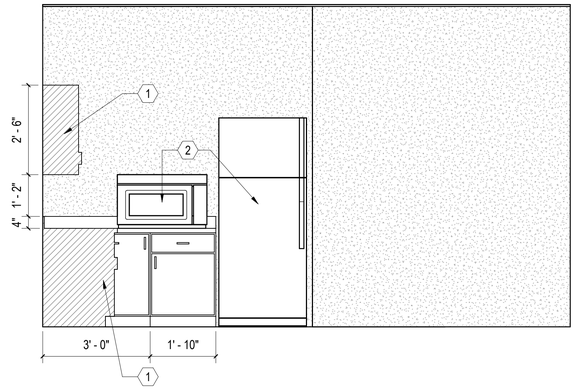
Drawing Title

Cool Cell Chase Sections

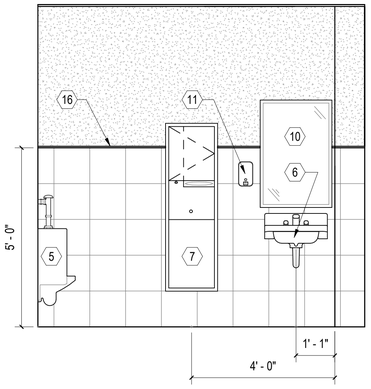
Sheet Number 55 Of 139

Drawing Number A-305



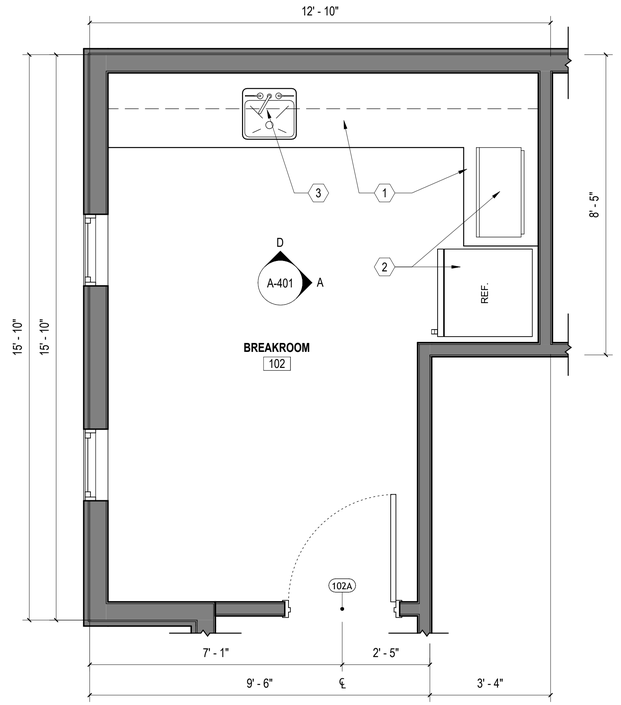
A Room 102 East Elevation

SCALE: 1/2" = 1'-0" (A-401)



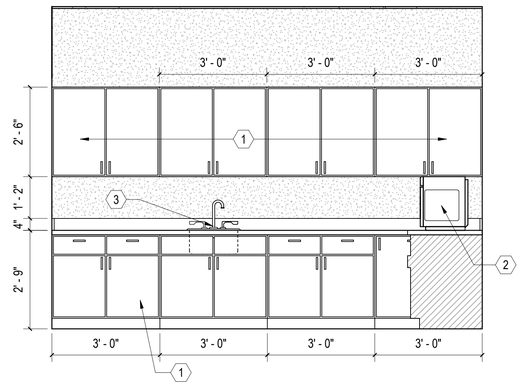
B Room 103 East Elevation

SCALE: 1/2" = 1'-0" (A-401)



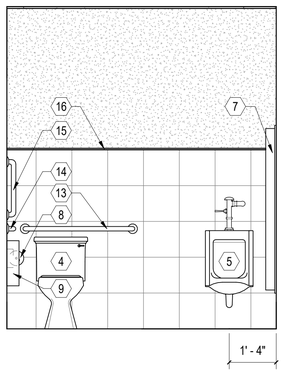
C Enlarged Breakroom 102 Floor Plan

SCALE: 1/2" = 1'-0" (A-102)



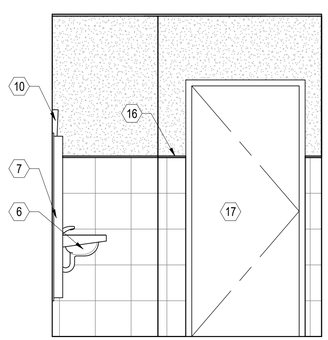
D Room 102 North Elevation

SCALE: 1/2" = 1'-0" (A-401)



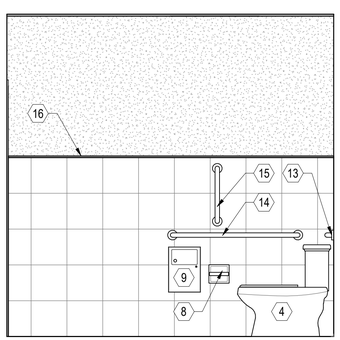
E Room 103 North Elevation

SCALE: 1/2" = 1'-0" (A-401)



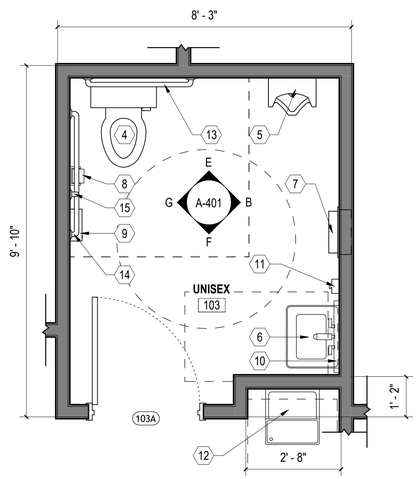
F Room 103 South Elevation

SCALE: 1/2" = 1'-0" (A-401)



G Room 103 West Elevation

SCALE: 1/2" = 1'-0" (A-401)



H Enlarged Unisex Bathroom Floor Plan

SCALE: 1/2" = 1'-0" (A-102)

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	BASE AND UPPER CABINETS WITH SOLID SURFACE COUNTERTOPS AND 4" BACKSPLASH. SEE DETAIL C/A-501 FOR ADDITIONAL INFORMATION.
2	APPLIANCES BY OWNER.
3	PLUMBING FIXTURES, SEE PLUMBING.
4	TANK TYPE ACCESSIBLE TOILET, SEE PLUMBING.
5	ACCESSIBLE WALL MOUNTED URINAL, SEE PLUMBING.
6	SINK WITH FAUCET. SEE B/A-501. SEE PLUMBING.
7	RECESSED PAPER TOWEL/WASTE COMBO, SEE B/A-501.
8	TOILET TISSUE DISPENSER, SEE B/A-501.
9	SANITARY NAPKIN DISPOSAL, SEE B/A-501.
10	24"Wx26"H MIRROR WITH STAINLESS STEEL FRAME. SEE B/A-501.
11	WALL MOUNTED SOAP DISPENSER, SEE B/A-501.
12	SINGLE HEIGHT ACCESSIBLE WATER FOUNTAIN.
13	36" GRAB BAR, SEE B/A-501.
14	42" GRAB BAR, SEE B/A-501.
15	18" GRAB BAR, SEE B/A-501.
16	ALUMINUM TILE EDGE TRIM.
17	DOOR AS SCHEDULED, SEE DOOR SCHEDULE.

GRAPHIC SCALE(S)

1/2" =1'-0" 0' 1' 2' 4'

WALKER the GROUP ARCHITECTURE incorporated
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252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

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No. Date

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Checked BBW

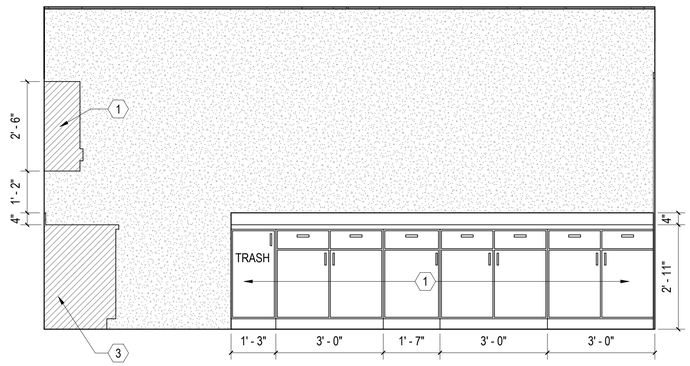
Scale AS NOTED

Drawing Title

Enlarged Floor Plan & Interior Elevation

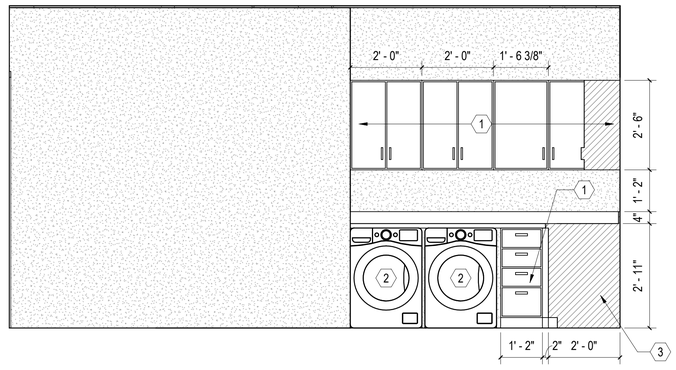
Sheet Number 56 Of 139

Drawing Number A-401



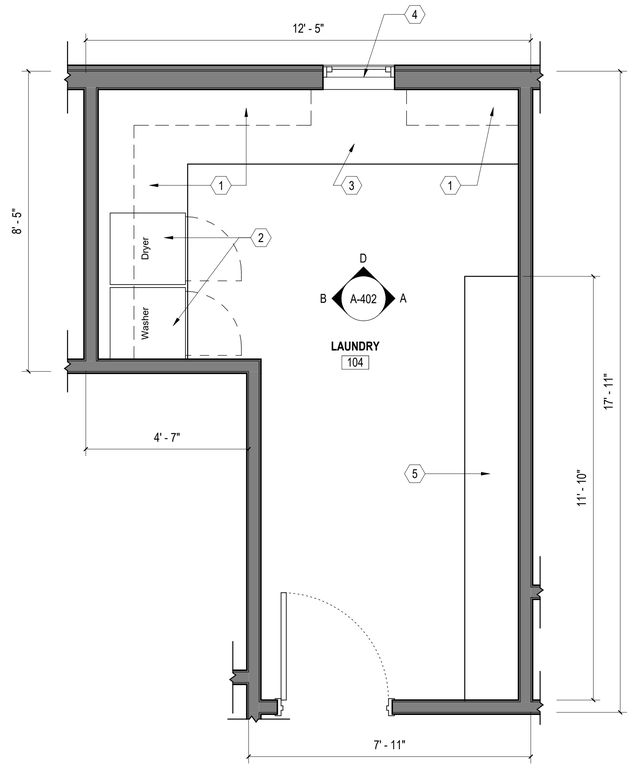
A Room 104 East Elevation

SCALE: 1/2" = 1'-0" (A-402)



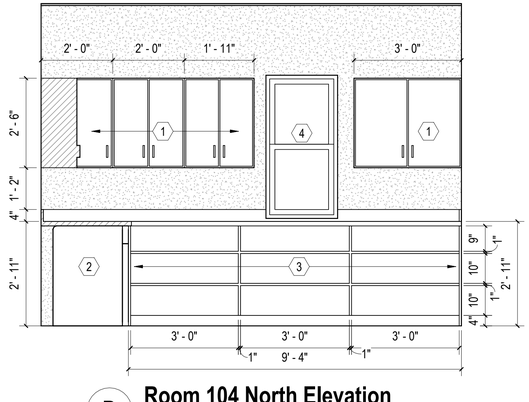
B Room 104 West Elevation

SCALE: 1/2" = 1'-0" (A-402)



C Enlarged Laundry 104 Floor Plan

SCALE: 1/2" = 1'-0" (A-102)



D Room 104 North Elevation

SCALE: 1/2" = 1'-0" (A-402)

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	BASE AND UPPER CABINETS WITH SOLID SURFACE COUNTERTOPS AND 4" BACKSPLASH. SEE DETAIL C/A-501 FOR ADDITIONAL INFORMATION.
2	APPLIANCES BY OWNER.
3	OPEN BASE CABINETS WITH SHELVES.
4	ALUMINUM WINDOW, SEE WINDOW SCHEDULE.
5	METAL SHELVING BY OWNER.

GRAPHIC SCALE(S)

1/2" =1'-0" 0' 1' 2' 4'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

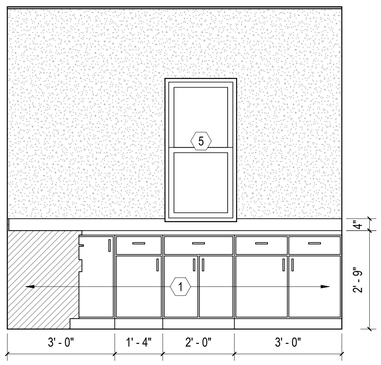
Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn CBW
Checked BBW
Scale AS NOTED
Drawing Title

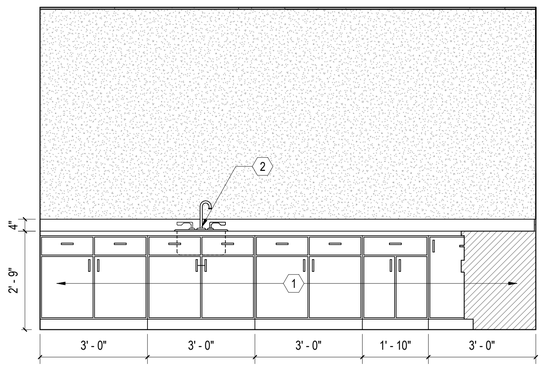
Enlarged Floor Plan & Interior Elevation

Sheet Number 57 Of 139
Drawing Number A-402



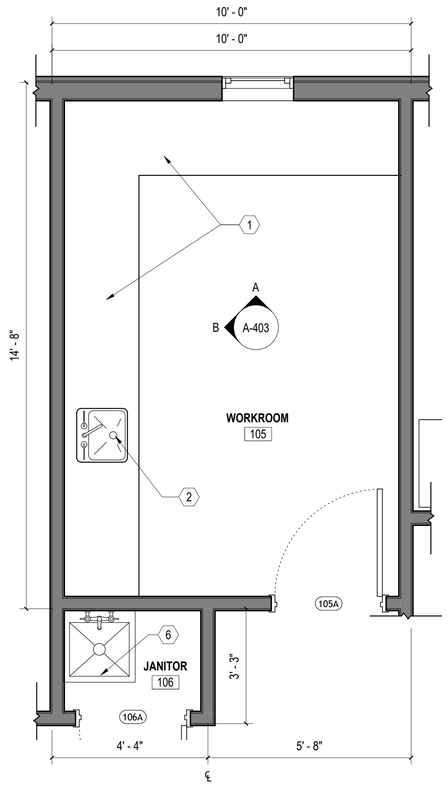
A Room 105 North Elevation

SCALE: 1/2" = 1'-0" (A-403)



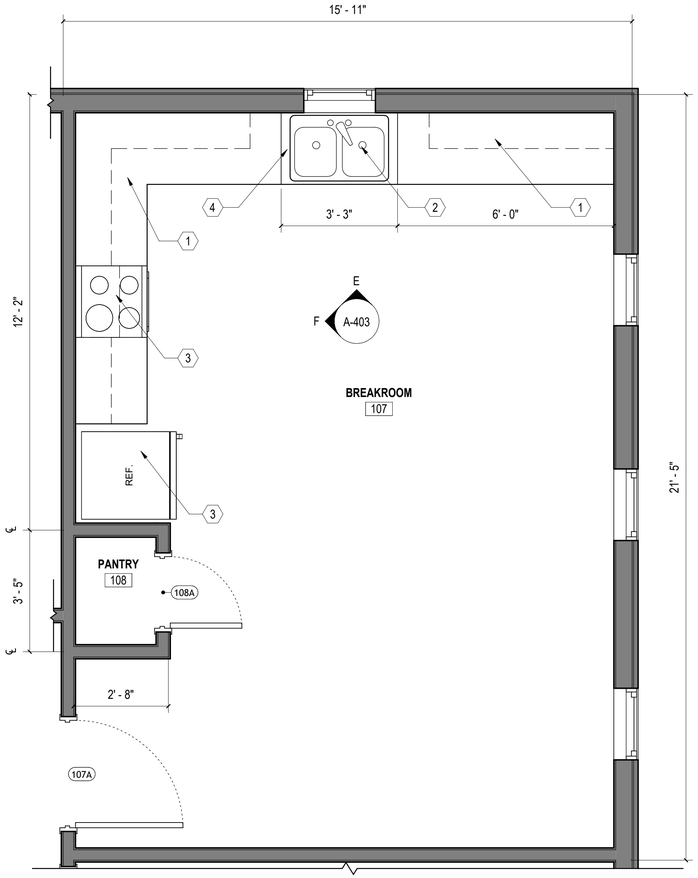
B Room 105 West Elevation

SCALE: 1/2" = 1'-0" (A-403)



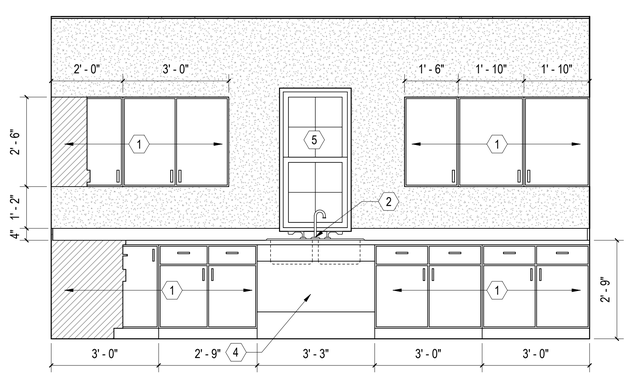
C Enlarged Workroom 105 Floor Plan

SCALE: 1/2" = 1'-0" (A-102)



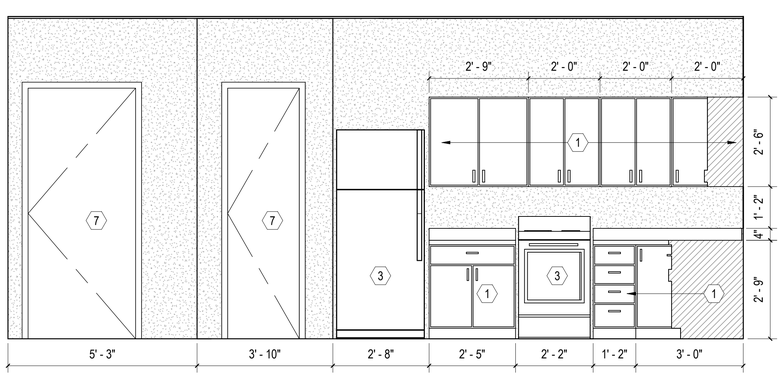
D Enlarged Breakroom 107 Floor Plan

SCALE: 1/2" = 1'-0" (A-102)



E Room 107 North Elevation

SCALE: 1/2" = 1'-0" (A-403)



F Room 107 West Elevation

SCALE: 1/2" = 1'-0" (A-403)

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	WOOD BASE AND UPPER CABINETS WITH SOLID SURFACE COUNTERTOPS AND 4" BACKSPLASH. SEE DETAIL C/A-501 FOR ADDITIONAL INFORMATION.
2	PLUMBING FIXTURES, SEE PLUMBING.
3	APPLIANCES BY OWNER.
4	ADA ACCESSIBLE SINK, SEE DETAIL A/A-501
5	ALUMINUM WINDOW, SEE WINDOW SCHEDULE.
6	MOP SINK, SEE PLUMBING.
7	DOOR AS SHEDULED, SEE DOOR SCHEDULE.

GRAPHIC SCALE(S)

1/2" =1'-0" 0' 1' 2' 4'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

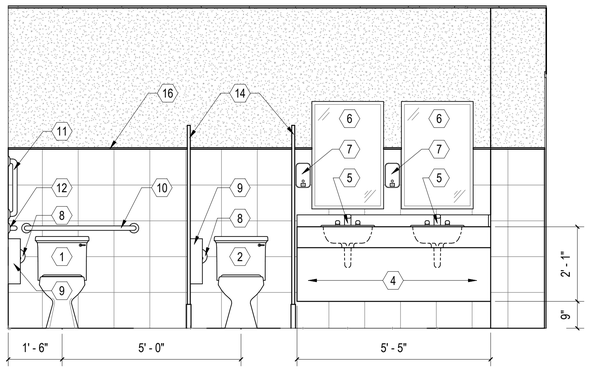
Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn CBW
Checked BBW
Scale AS NOTED
Drawing Title

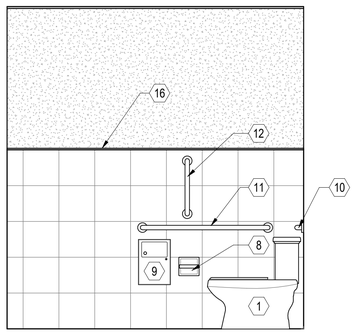
Enlarged Floor Plan & Interior Elevation

Sheet Number 58 Of 139
Drawing Number **A-403**



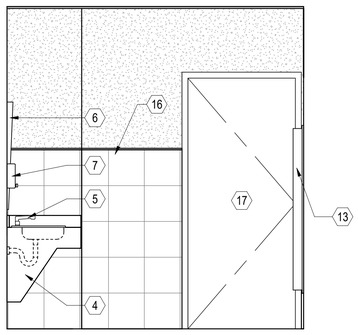
A Room 110 South Elevation

SCALE: 1/2" = 1'-0" (A-404)



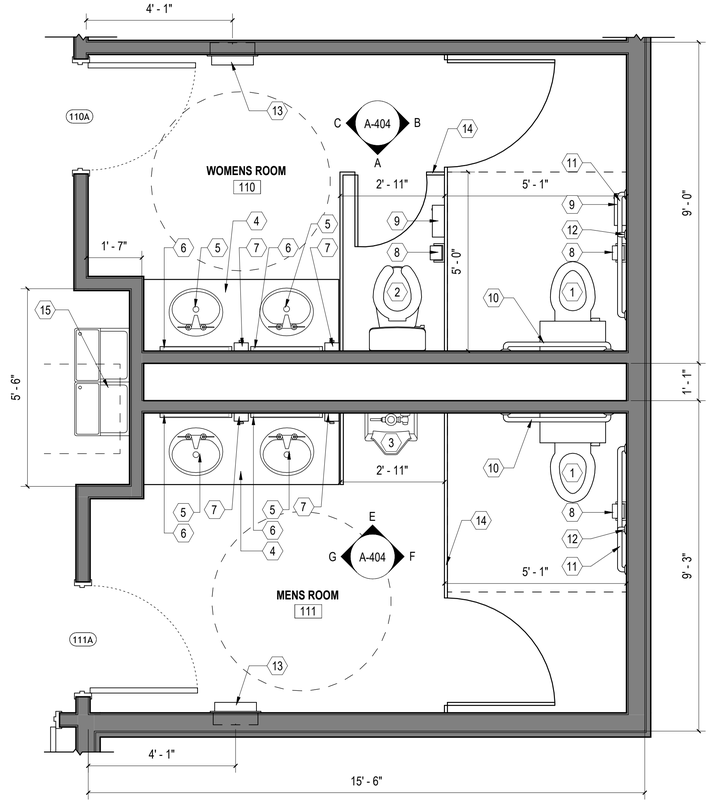
B Room 110 East Elevation

SCALE: 1/2" = 1'-0" (A-404)



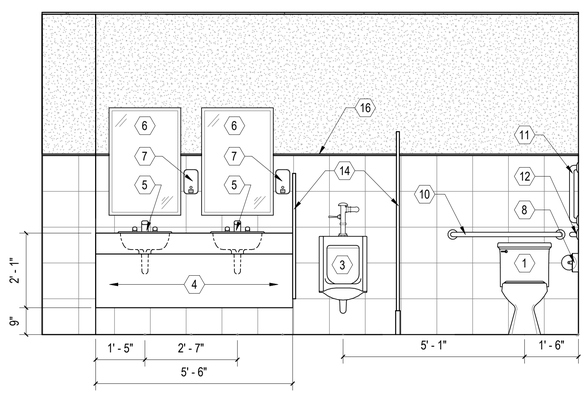
C Room 110 West Elevation

SCALE: 1/2" = 1'-0" (A-404)



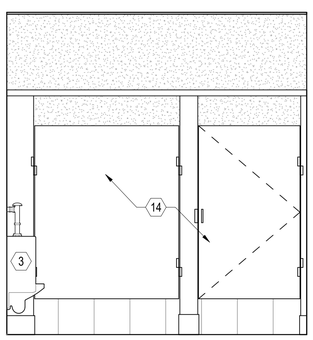
D Enlarged Bathroom 110 & 111 Floor Plan

SCALE: 1/2" = 1'-0" (A-102)



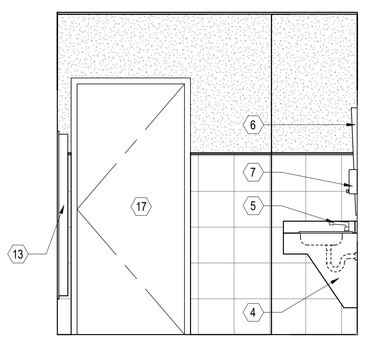
E Room 111 North Elevation

SCALE: 1/2" = 1'-0" (A-404)



F Room 111 East Elevation

SCALE: 1/2" = 1'-0" (A-404)



G Room 111 West Elevation

SCALE: 1/2" = 1'-0" (A-404)

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	TANK TYPE ACCESSIBLE TOILET, SEE PLUMBING.
2	TANK TYPE STANDARD TOILET, SEE PLUMBING.
3	ACCESSIBLE WALL MOUNTED URINAL, SEE PLUMBING.
4	PLASTIC LAMINATE CLAD WOOD ADA BASE WITH SOLID SURFACE COUNTERTOP, MOUNT COUNTERTOP AT 34" A.F.F. MAX. SEE A/A-501.
5	SINK WITH FAUCET. SEE B/A-501. SEE PLUMBING.
6	24"Wx26"H MIRROR WITH STAINLESS STEEL FRAME. SEE B/A-501.
7	WALL MOUNTED SOAP DISPENSER, SEE B/A-501.
8	TOILET TISSUE DISPENSER, SEE B/A-501.
9	SANITARY NAPKIN DISPOSAL, SEE B/A-501.
10	36" GRAB BAR, SEE B/A-501.
11	42" GRAB BAR, SEE B/A-501.
12	18" GRAB BAR, SEE B/A-501.
13	RECESSED PAPER TOWEL/WASTE COMBO, SEE B/A-501.
14	TOILET/URINEL PARTITIONS. SEE SPECIFICATIONS, CLEAR WIDTH AS SHOWN.
15	HI-LOW ADA ACCESSIBLE WATER FOUNTAIN. SEE DETAIL D/A-501.
16	ALUMINUM TILE EDGE TRIM.
17	DOOR AS SHEDULED, SEE DOOR SCHEDULE.

GRAPHIC SCALE(S)

1/2" =1'-0" 0' 1' 2' 4'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

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No.	Date

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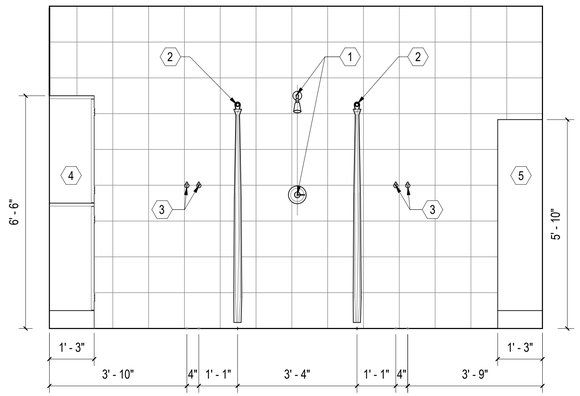
Drawn CBW
Checked BBW
Scale AS NOTED
Drawing Title

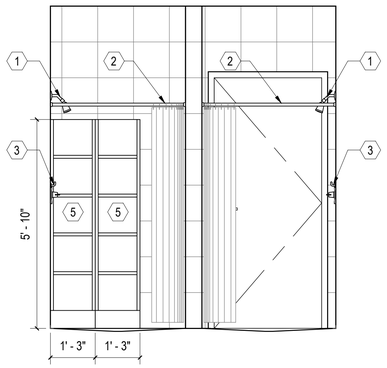
Enlarged Floor Plan & Interior Elevation

Sheet Number 59 Of 139
Drawing Number A-404



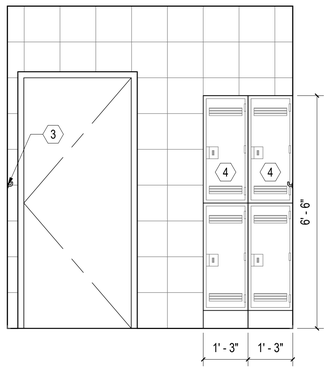
A Shower Room North Elevation (TYP.)

SCALE: 1/2" = 1'-0" (A-405)



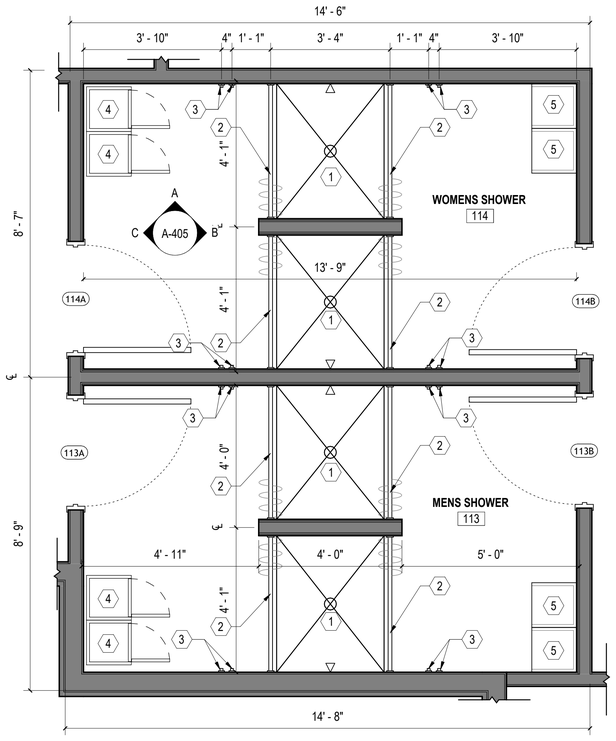
B Shower Room East Elevation (TYP.)

SCALE: 1/2" = 1'-0" (A-405)



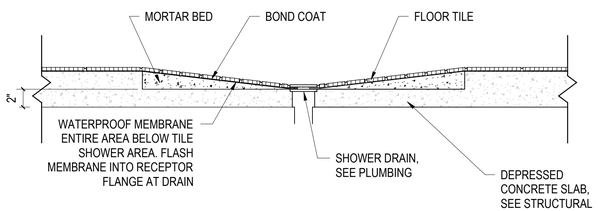
C Shower Room West Elevation (TYP.)

SCALE: 1/2" = 1'-0" (A-405)



D Enlarged Shower Room Floor Plans

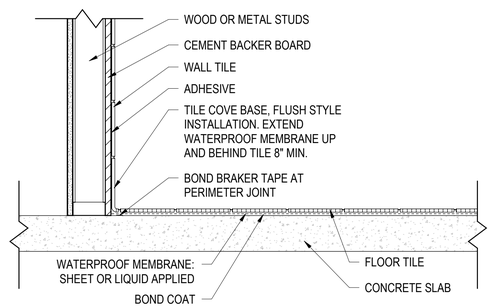
SCALE: 1/2" = 1'-0" (A-102)



E SHOWER BASE DETAIL

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

WALL TILE INSTALLATION: TCNA W223
FLOOR TILE INSTALLATION: TCNA F113
BASE/COVE: FLUSH STYLE INSTALLATION
PROVIDE CONTRACTION JOINTS AT 12' O.C. IN EACH DIRECTION AND GENERAL MOVEMENT JOINTS AT 24" O.C. IN EACH DIRECTION PER TCNA EJ171-03.



F Ceramic Tile Installation

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

GENERAL SHEET NOTES

1. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL NOTES.
2. SEE SCHEDULES FOR WALL TYPES, DOOR/FRAME/WINDOW TYPES AND SIZES, AND FLOOR/WALL/CEILING FINISHES.
3. PROTECT EXISTING ITEMS TO REMAIN.
4 SEE EQUIPMENT SCHEDULE FOR EQUIPMENT NOTES

(#) NEW WORK KEYNOTES

MARK	DESCRIPTION
1	BUILT IN TILE SHOWER, SEE E&F/A-405 FOR SHOWER PAN DETAILS. SEE PLUMBING FOR SHOWER CONTROLS.
2	SHOWER CURTAIN AND ROD, MOUNT AT 6' - 0" A.F.F. MIN.
3	CLOTHES HOOK, MOUNT AT 48" A.F.F. MIN.
4	DOUBLE TIER H.D.P.E LOCKER (15"Wx15"Dx78"H) (4) TOTAL
5	FIVE TIER H.D.P.E. SHELVES (15"Wx15"xDx70"H) (4) TOTAL

GRAPHIC SCALE(S)

1/2" =1'-0" 0' 1' 2' 4'

1 1/2" =1'-0" 0' 4" 8" 1'-4"

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

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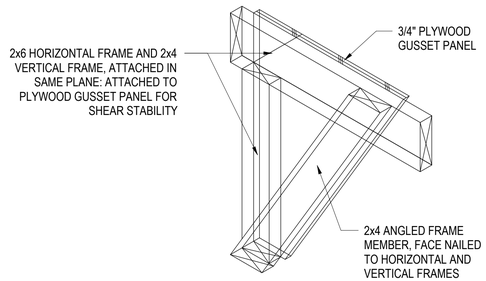
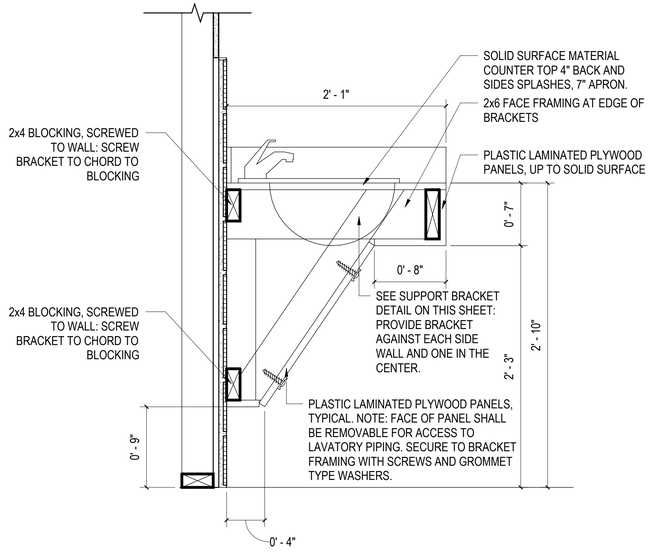
Drawing Title

Enlarged Floor Plan & Interior Elevation

Sheet Number 60 Of 139
Drawing Number A-405





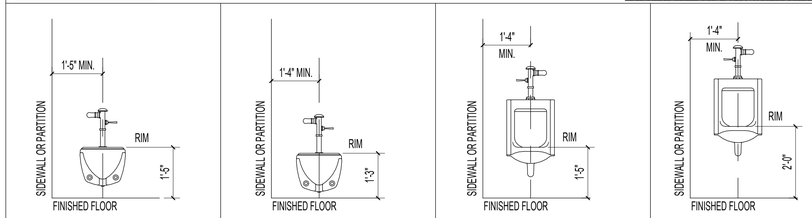
A Accessible Lavatory Countertop Detail

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

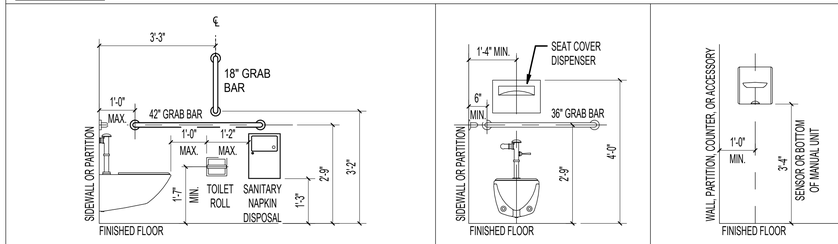
ACCESSIBLE FIXTURE MOUNTING HEIGHTS

TOILETS AND URINALS

NOTE: TOILET FIXTURE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. DISTANCES AND HEIGHTS REMAIN THE SAME REGARDLESS OF TYPE OR MOUNTING STYLE.

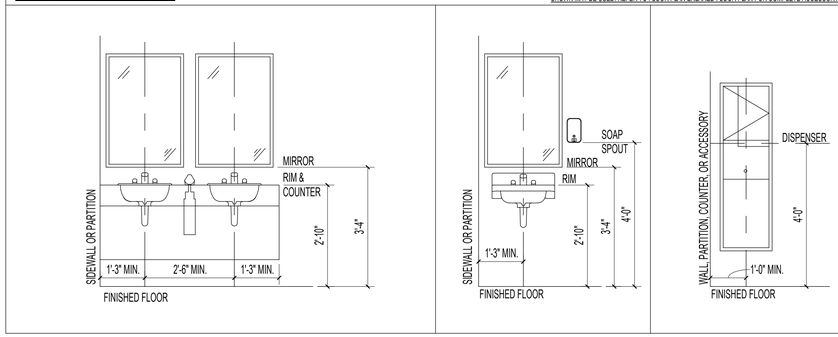


ACCESSORIES



SINKS AND ACCESSORIES

NOTE: FIXTURES AND ACCESSORIES SHOWN FOR GRAPHICAL PURPOSES ONLY. NOT ALL ACCESSORIES SHOWN MAY BE USED. REFER TO FLOOR PLAN ENLARED FLOOR PLAN FOR COMPLETE ACCESSORY LIST.

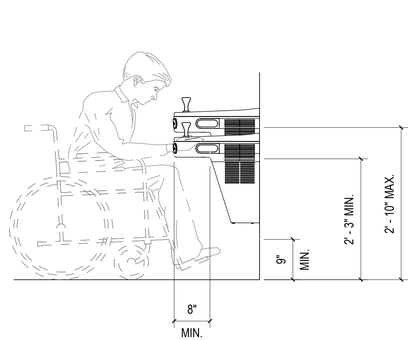


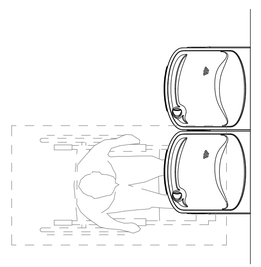
B Typical Accessible Accessory Mounting Height

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

C Typical Cabinet Detail

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





D Water Cooler Detail

SCALE: 3/4" = 1'-0"

3/4" =1'-0" 0' 1' 2' 3'

1 1/2" =1'-0" 0' 4" 8" 1'-4"

WALKER the GROUP ARCHITECTURE incorporated
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207 Research Station Rd. Plymouth, NC 27962

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No.	Date

Project Number 2212.HOGS

Date 07/05/24

Drawn CBW

Checked BBW

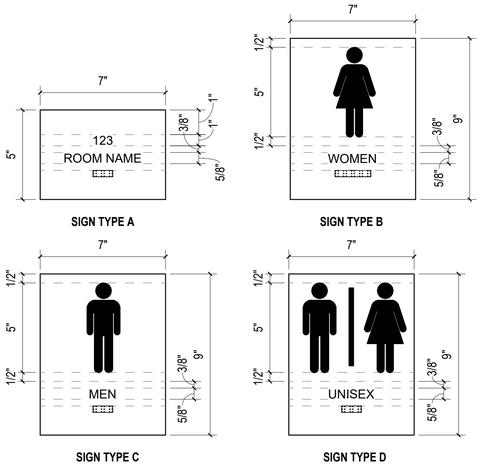
Scale AS NOTED

Drawing Title

Details

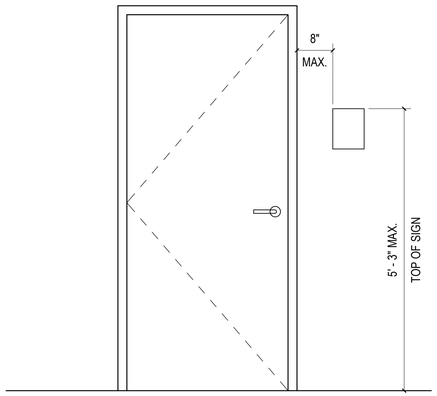
Sheet Number 61 Of 139

Drawing Number A-501



Door Signage Types

SCALE: 3" = 1'-0"



Signage Mounting Height

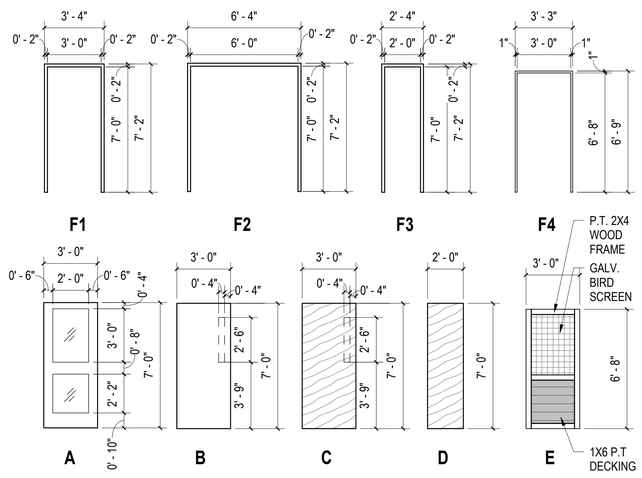
SCALE: 3/4" = 1'-0"

NOTE: FINAL ROOM NAMES & NUMBERS SHALL BE DETERMINED BY OWNER DURING CONSTRUCTION.

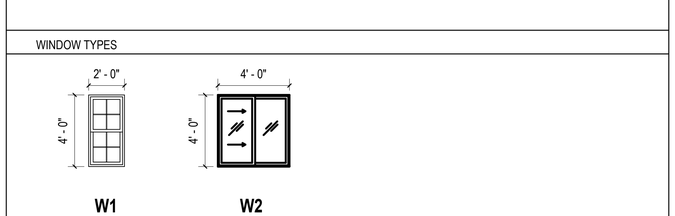
FINISH SCHEDULE

ROOM NUMBER	NAME	FINISHES				COMMENTS
		WALL	FLOOR	BASE	CEILING	
101	VESTIBULE	GYP.BD	EPOXY	EPOXY	GYP.BD	
102	BREAKROOM	GYP.BD	EPOXY	EPOXY	GYP.BD	
103	UNISEX	GYP.BD	TILE	TILE	GYP.BD	5' TILE WAINSCOT
104	LAUNDRY	GYP.BD	EPOXY	EPOXY	GYP.BD	
105	WORKROOM	GYP.BD	EPOXY	EPOXY	GYP.BD	
106	JANITOR	GYP.BD	EPOXY	EPOXY	GYP.BD	
107	BREAKROOM	GYP.BD	EPOXY	EPOXY	GYP.BD	
108	PANTRY	GYP.BD	EPOXY	EPOXY	GYP.BD	
109	CORRIDOR	GYP.BD	EPOXY	EPOXY	GYP.BD	
110	WOMENS ROOM	GYP.BD	TILE	TILE	GYP.BD	5' TILE WAINSCOT, PAINTED GYP. ABOVE
111	MENS ROOM	GYP.BD	TILE	TILE	GYP.BD	5' TILE WAINSCOT, PAINTED GYP. ABOVE
112	MUDROOM	GYP.BD	EPOXY	EPOXY	GYP.BD	
113	MENS SHOWER	TILE	TILE	TILE	GYP.BD	FULL HEIGHT TILE
114	WOMENS SHOWER	TILE	TILE	TILE	GYP.BD	FULL HEIGHT TILE
115	VESTIBULE	GYP.BD	EPOXY	EPOXY	GYP.BD	
116	OFFICE	GYP.BD	EPOXY	EPOXY	GYP.BD	
201	FARROWING ROOM 1	POLY. SH.	S.CONC.	-	METAL	SLATS , LINTELS, & METAL FLOOR BY OWNER
202	CORR.	POLY. SH.	S.CONC.	-	METAL	
203	FARROWING ROOM 2	POLY. SH.	S.CONC.	-	METAL	SLATS , LINTELS, & METAL FLOOR BY OWNER
204	CORRIDOR	POLY. SH.	S.CONC.	-	METAL	
205	STORAGE	POLY. SH.	S.CONC.	-	METAL	
206	MECH.	POLY. SH.	S.CONC.	-	METAL	
301	WEAN TO FINISH ROOM 1	POLY. SH.	SLATS	-	METAL	SLATS & LINTELS BY OWNER
302	WEAN TO FINISH ROOM 2	POLY. SH.	SLATS	-	METAL	SLATS & LINTELS BY OWNER
303	MECH.	POLY. SH.	S.CONC.	-	METAL	
401	BREEDING & GESTATION	POLY. SH.	SLATS	-	METAL	SLATS & LINTELS BY OWNER
402	MECH.	POLY. SH.	S.CONC.	-	METAL	
403	CHASE 1					
404	CHASE 2					
405	CHASE 3					
501	WELL HOUSE	POLY. SH.	S.CONC.	-	METAL	

DOOR TYPES



WINDOW TYPES



DOOR SCHEDULE

DOOR NO.	TYPE	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FRAME DETAILS HEAD	FRAME DETAILS JAMB	HARDWARE SET NO.	SIGNAGE TYPE	REMARKS
101A	A	3' - 0"	7' - 0"	ALUM	F1	HM	A/A-602	A/A-602	1	A	MEDIUM STILE ALUMINUM DOOR WITH SAFETY GLAZING
102A	C	3' - 0"	7' - 0"	WD	FI	HM	B/A-602	B/A-602	2	A	PROVIDE 4" X 30" WINDOW WITH SAFETY GLAZING
103A	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	3	D	
104A	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	2	A	PROVIDE 4" X 30" WINDOW WITH SAFETY GLAZING
105A	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	2	A	PROVIDE 4" X 30" WINDOW WITH SAFETY GLAZING
106A	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	2	A	
107A	C	3' - 0"	7' - 0"	WD	F1	HM	D/A-601	B/A-602	2	A	PROVIDE 4" X 30" WINDOW WITH SAFETY GLAZING
108A	D	2' - 0"	7' - 0"	WD	F3	HM	B/A-602	B/A-602	2	-	
109A	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	1	A	PROVIDE 4" X 30" WINDOW WITH SAFETY GLAZING
110A	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	4	B	
111A	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	4	C	
112A	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	6	A	PROVIDE 4" X 30" WINDOW WITH SAFETY GLAZING
112B	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	PROVIDE 4" X 30" WINDOW WITH SAFETY GLAZING
113A	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	4	A	
113B	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	4	A	
114A	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	4	A	
114B	C	3' - 0"	7' - 0"	WD	F1	HM	A/A-602	B/A-602	4	A	
115A	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	PROVIDE 4" X 30" WINDOW WITH SAFETY GLAZING
115B	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	2	A	PROVIDE 4" X 30" WINDOW WITH SAFETY GLAZING
116A	C	3' - 0"	7' - 0"	WD	F1	HM	B/A-602	B/A-602	5	A	PROVIDE 4" X 30" WINDOW WITH SAFETY GLAZING
201A	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	
201B	B	3' - 0"	7' - 0"	HM	F1	HM	B/A-602	B/A-602	7	A	
201C	B	3' - 0"	7' - 0"	HM	F1	HM	B/A-602	B/A-602	7	A	
202A	B	3' - 0"	7' - 0"	HM	F1	HM	B/A-602	B/A-602	7	A	
202B	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	7	A	
203A	B	3' - 0"	7' - 0"	HM	F1	HM	B/A-602	B/A-602	7	A	
203B	B	3' - 0"	7' - 0"	HM	F1	HM	B/A-602	B/A-602	7	A	
203C	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	
204A	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	7	A	
204B	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	
204C	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	
205A	B	6' - 0"	7' - 0"	HM	F2	HM	A/A-602	A/A-602	8	A	
206A	B	6' - 0"	7' - 0"	HM	F2	HM	A/A-602	A/A-602	8	A	
301A	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	7	A	
301B	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	
301C	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	
301D	B	3' - 0"	7' - 0"	HM	F1	HM	B/A-602	B/A-602	7	A	
302A	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	7	A	
302B	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	
302C	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	
303A	B	6' - 0"	7' - 0"	HM	F2	HM	A/A-602	A/A-602	8	A	
401A	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	7	A	
401B	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	
401C	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	7	A	
401D	B	3' - 0"	7' - 0"	HM	F1	HM	A/A-602	A/A-602	1	A	
402A	B	6' - 0"	7' - 0"	HM	F2	HM	A/A-602	A/A-602	8	A	
403A	D	2' - 0"	7' - 0"	HM	F3	HM	A/A-602	A/A-602	8	A	
404A	D	1' - 8"	7' - 0"	MH	F3	HM	A/A-602	A/A-602	8	A	
405A	D	2' - 0"	7' - 0"	HM	F3	HM	A/A-602	A/A-602	8	A	
501A	B	6' - 0"	7' - 0"	HM	F2	HM	A/A-602	A/A-602	8	A	
601A	E	3' - 0"	6' - 8"	WD	F4	WD	C/A-602	C/A-602	9	-	
601B	E	3' - 0"	6' - 8"	WD	F4	WD	C/A-602	C/A-602	9	-	
601C	E	3' - 0"	6' - 8"	WD	F4	WD	C/A-602	C/A-602	9	-	
601D	E	3' - 0"	6' - 8"	WD	F4	WD	C/A-602	C/A-602	9	-	
601E	E	3' - 0"	6' - 8"	WD	F4	WD	C/A-602	C/A-602	9	-	
601F	E	3' - 0"	6' - 8"	WD	F4	WD	C/A-602	C/A-602	9	-	
601G	E	3' - 0"	6' - 8"	WD	F4	WD	C/A-602	C/A-602	9	-	
601H	E	3' - 0"	6' - 8"	WD	F4	WD	C/A-602	C/A-602	9	-	

WINDOW SCHEDULE

MARK	WIDTH	HEIGHT	MATERIAL	FINISH	GLASS	HEAD	JAMB	SILL	COMMENTS
W1	2' - 0"	4' - 0"	ALUM	ANODIZED	1" INSUL.	D/A-602	D/A-602	D/A-602	SINGLE HUNG
W2	4' - 0"	4' - 0"	ALUM	ANODIZED	1" INSUL.	E/A-602	E/A-602	E/A-602	SLIDING WINDOW

3/4" =1'-0" 0' 1' 2' 3'

3" =1'-0" 0' 3" 6" 9"

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

Project Number
2212.HOGS

Date
07/05/24

Drawn
CBW

Checked
BBW

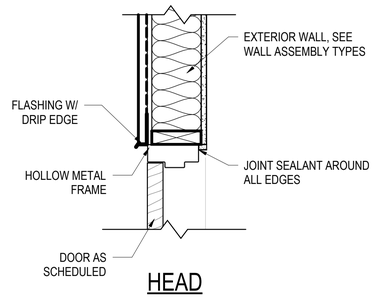
Scale
AS NOTED

Drawing Title

Schedules & Details

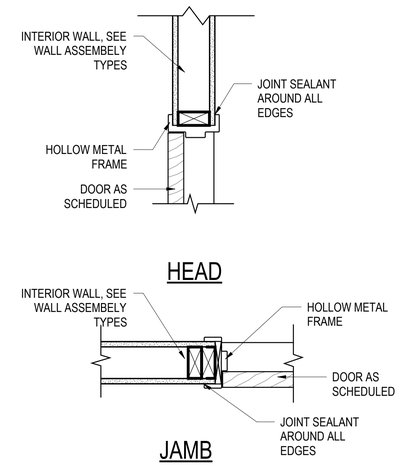
Sheet Number
62 Of 139

Drawing Number
A-601



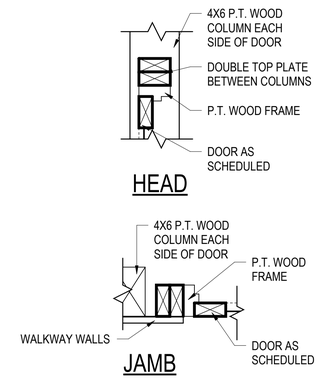
A Typical Door Detail @ Exterior Wall

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



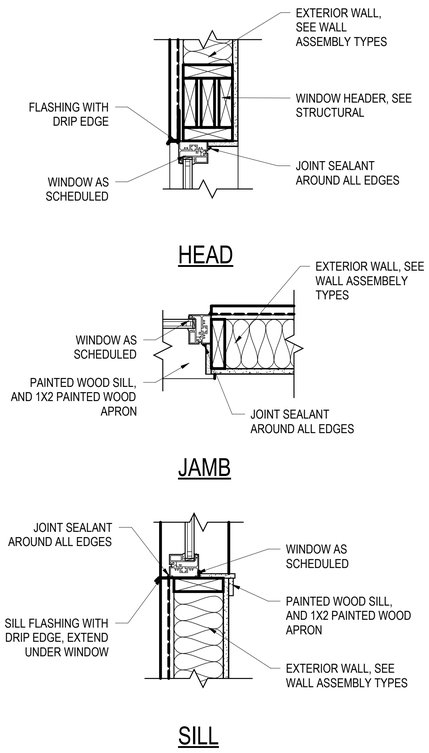
B Typical Door Detail @ Interior Wall

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



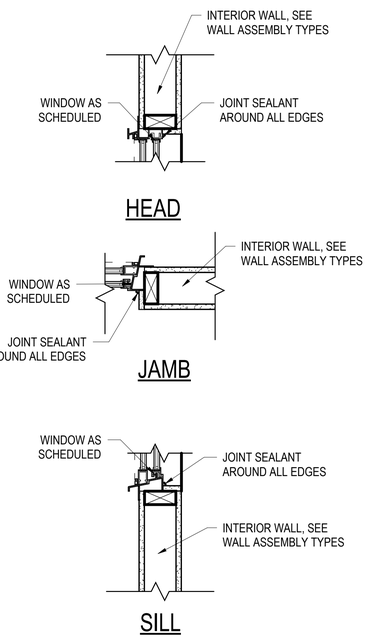
C Typical Door Detail @ Walkway

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



D Window Detail @ Exterior Wall

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



E Window Detail @ Interior Wall

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

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PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number **2212.HOGS**

Date **07/05/24**

Drawn **CBW**

Checked **BBW**

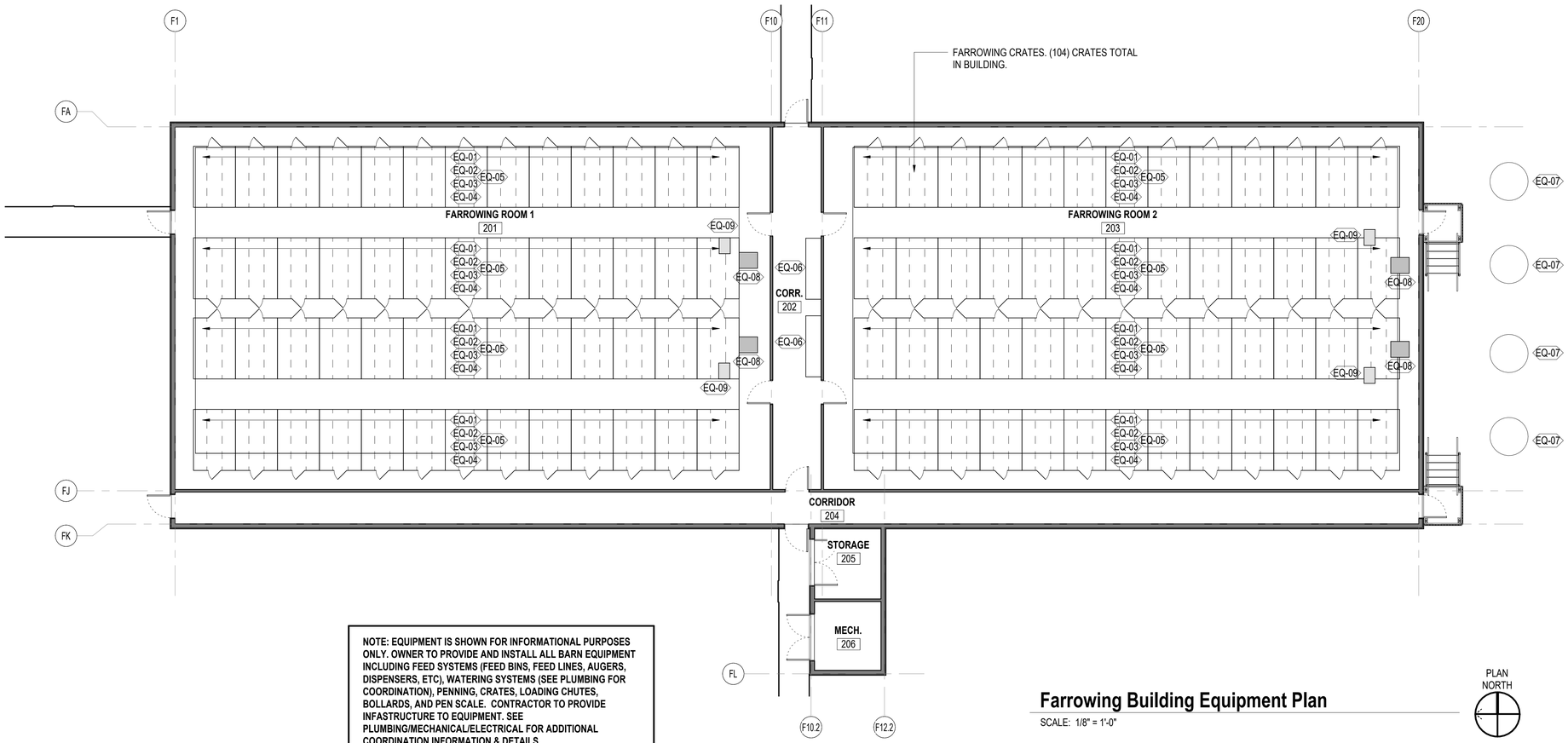
Scale **AS NOTED**

Drawing Title

Schedules Details

Sheet Number 63 Of 139

Drawing Number **A-602**



NOTE: EQUIPMENT IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. OWNER TO PROVIDE AND INSTALL ALL BARN EQUIPMENT INCLUDING FEED SYSTEMS (FEED BINS, FEED LINES, AUGERS, DISPENSERS, ETC), WATERING SYSTEMS (SEE PLUMBING FOR COORDINATION), PENNING, CRATES, LOADING CHUTES, BOLLARDS, AND PEN SCALE. CONTRACTOR TO PROVIDE INFASTRUCTURE TO EQUIPMENT. SEE PLUMBING/MECHANICAL/ELECTRICAL FOR ADDITIONAL COORDINATION INFORMATION & DETAILS.

Farrowing Building Equipment Plan

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

PLAN NORTH

EQUIPMENT SCHEDULE (CONTRACTOR TO ONLY PROVIDE PLUMBING AND ELECTRICAL INFASTRUCTURE FOR EQUIPMENT- SEE MEP DRAWINGS)

MARK	COUNT	EQUIPMENT TYPE	LOCATION	POWER REQUIRMENTS	WATER REQUIREMENTS	NOTES
EQ-01	104	FARROWING CRATE	FARROWING	-	3/4"	8'L X 5-1/2'W
EQ-02	104	GESTAL SOLO FEEDER	FARROWING	110V, 30A	-	
EQ-03	104	HEAT PAD	FARROWING	110V	-	SINGLE SIDE FARROWING HEAT PAD 13.5" X 60"- HEAT PAD SHALL BE CONNECTED TO GESTAL EVO SYSTEM FOR POWER.
EQ-04	104	HEAT LAMP	FARROWING	110V	-	STANDARD FARROWING HEAT LAMP
EQ-05	104	STAINLESS STEEL CREEP PANELS	FARROWING	-	-	21-7/8"H CREEP PANELS AT EACH SIDE OF FARROWING CRATE
EQ-06	2	STAINLESS STEEL WORK TABLE	FARROWING	-	-	5'W X 36"H
EQ-07	18	FEED BIN	ALL BARNS	-	-	6' DIAMETER FEED BIN WITH 60 DEGREE HOPPER
EQ-08	22	FEED DISPENSING AUGER SYSTEM WITH MOTOR	ALL BARNS	110V, 1HP	-	-
EQ-09	12	FEED SYSTEM FOOD SELECTOR CHAIN DRIVE BOX	FARROWING/B&G	110V, 1.5HP	-	PROVIDE WITH ELECTRONIC CONTROLLER
EQ-10	260	FREE ACCESS STALL	B&G	-	3/4"	2'-0"W X 7'-0"L (LOCKABLE STALL)
EQ-11	98	FEEDING TROUGH	B&G	-	-	STAINLESS STEEL, SINGLE SIDED BOLT DOWN, 6"H X 8' L
EQ-12	30	METAL PENNING	B&G	-	-	40"H 6 ROD X 8'L SECTION
EQ-13	94	HORIZONTAL GATING PANEL	B&G/ W2F	-	-	40"H 6 ROD GATE
EQ-14	48	BOAR PEN	B&G	-	3/4" (1 IN PEN)	2'-4"W X 7'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-15	7	BOAR PEN (LARGE)	B&G	-	3/4" (1 IN PEN)	4'-0"W X 7'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-16	6	NATURAL/AI MATING PEN	B&G	-	-	8'-0"W X 8'-0"L- BUILT WITH 40"H 6 ROD PENNING & (2)3' GATES
EQ-17	71	METAL PENNING (WEEN TO FINISH)	W2F	-	3/4" (1 IN PEN)	36"H 8 ROD
EQ-18	12	BOAR HEAT CHECK STALL	W2F	-	-	3'-0"W X 8'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-19	4	ESTREUOS DETECTION PEN	W2F	-	-	16'-0"W X 18'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-20	24	NEDAP SYSTEM PEN	W2F	-	3/4"	12'-0"W X 18'-0"L- BUILT WITH 36"H 8 ROD PENNING & 2' GATE
EQ-21	48	NEDAP SYSTEM FEEDER/SCALE	W2F	110V	-	FEED INTAKE RECORDING EQUIPMENT FEEDER
EQ-22	2	LOADING CHUTE	B&G/ W2F	-	-	
EQ-23	64	WEEN TO FINISH FEEDER	W2F	-	-	STAINLESS STEEL DOUBLE SIDED
EQ-24	2	WEEN TO FINISH FEEDER (SINGLE)	W2F	-	-	STAINLESS STEEL SINGLE SIDED
EQ-25	8	FEED LINE WINCH FOR FEED DROP	B&G	-	-	MANUAL FEED LINE WINCH FOR DROPPING FEED FOR ENTIRE ROW OF STALLS
EQ-26	60	METAL BOLLARDS FOR ACCESS	B&G	-	-	40"H PROVIDE 1'-0" GAP BETWEEN BOLLARDS
EQ-27	1	FULL PEN ELECTRONIC CONTROLLED SCALE	W2F	110V	-	DIGITAL WEIGHT INDICATER, APPROPRIATE CAPACITY LOAD CELLS & MOUNTING PLATE, ADJUSTABLE FEET
EQ-28	44	GESTAL EVO QUATRO FEEDER	W2F	110V, 30A	-	-

1/8" =1'-0"

0' 4' 8' 16'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

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Plymouth, NC 27962

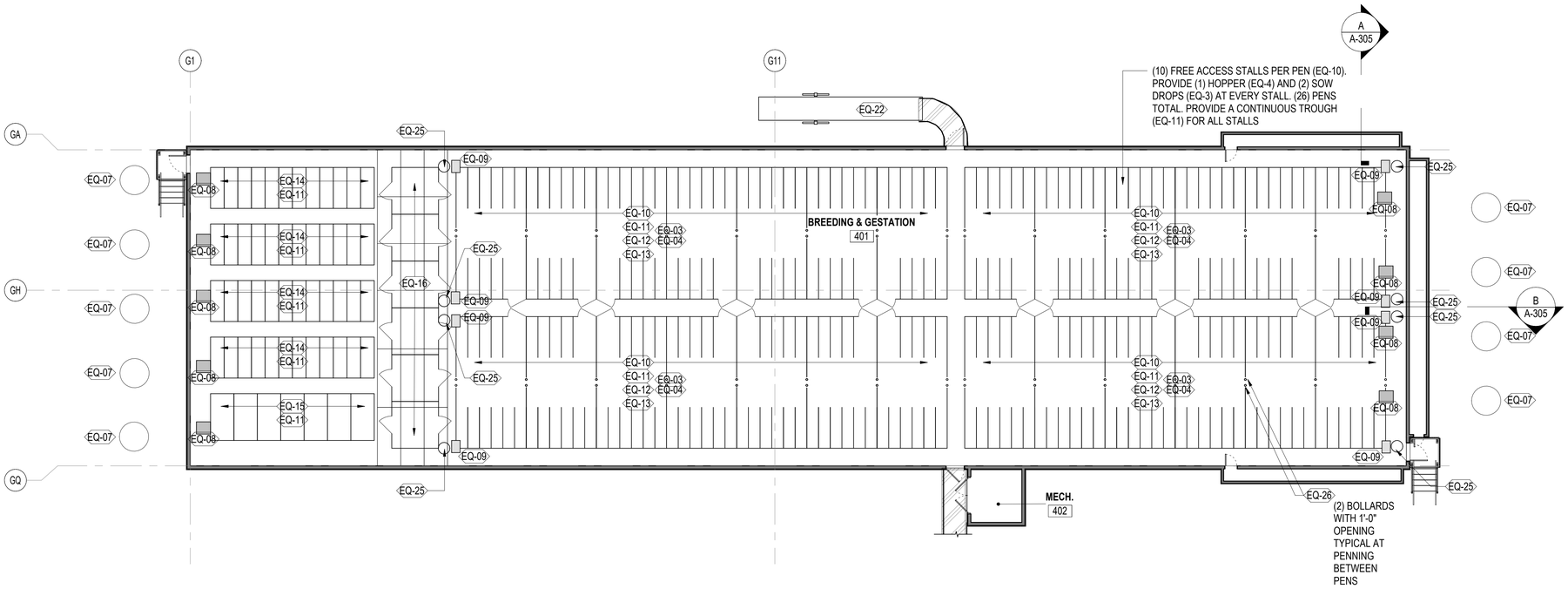
Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn CBW
Checked BBW
Scale AS NOTED
Drawing Title

Farrowing Building Equipment Plan

Sheet Number 64 Of 139
Drawing Number QA101



PLAN NORTH

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Breeding & Gestation Equipment Plan

SCALE: 3/32" = 1'-0"

EQUIPMENT SCHEDULE (CONTRACTOR TO ONLY PROVIDE PLUMBING AND ELECTRICAL INFASTRUCTURE FOR EQUIPMENT- SEE MEP DRAWINGS)

MARK	COUNT	EQUIPMENT TYPE	LOCATION	POWER REQUIRMENTS	WATER REQUIREMENTS	NOTES
EQ-01	104	FARROWING CRATE	FARROWING	-	3/4"	8'L X 5-1/2'W
EQ-02	104	GESTAL SOLO FEEDER	FARROWING	110V, 30A	-	
EQ-03	104	HEAT PAD	FARROWING	110V	-	SINGLE SIDE FARROWING HEAT PAD 13.5" X 60"- HEAT PAD SHALL BE CONNECTED TO GESTAL EVO SYSTEM FOR POWER.
EQ-04	104	HEAT LAMP	FARROWING	110V	-	STANDARD FARROWING HEAT LAMP
EQ-05	104	STAINLESS STEEL CREEP PANELS	FARROWING	-	-	21-7/8"H CREEP PANELS AT EACH SIDE OF FARROWING CRATE
EQ-06	2	STAINLESS STEEL WORK TABLE	FARROWING	-	-	5'W X 36"H
EQ-07	18	FEED BIN	ALL BARNS	-	-	6' DIAMETER FEED BIN WITH 60 DEGREE HOPPER
EQ-08	22	FEED DISPENSING AUGER SYSTEM WITH MOTOR	ALL BARNS	110V, 1HP	-	-
EQ-09	12	FEED SYSTEM FOOD SELECTOR CHAIN DRIVE BOX	FARROWING/B&G	110V, 1.5HP	-	PROVIDE WITH ELECTRONIC CONTROLLER
EQ-10	260	FREE ACCESS STALL	B&G	-	3/4"	2'-0"W X 7'-0"L (LOCKABLE STALL)
EQ-11	98	FEEDING TROUGH	B&G	-	-	STAINLESS STEEL, SINGLE SIDED BOLT DOWN, 6"H X 8' L
EQ-12	30	METAL PENNING	B&G	-	-	40"H 6 ROD X 8'L SECTION
EQ-13	94	HORIZONTAL GATING PANEL	B&G/ W2F	-	-	40"H 6 ROD GATE
EQ-14	48	BOAR PEN	B&G	-	3/4" (1 IN PEN)	2'-4"W X 7'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-15	7	BOAR PEN (LARGE)	B&G	-	3/4" (1 IN PEN)	4'-0"W X 7'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-16	6	NATURAL/AI MATING PEN	B&G	-	-	8'-0"W X 8'-0"L- BUILT WITH 40"H 6 ROD PENNING & (2)3' GATES
EQ-17	71	METAL PENNING (WEEN TO FINISH)	W2F	-	3/4" (1 IN PEN)	36"H 8 ROD
EQ-18	12	BOAR HEAT CHECK STALL	W2F	-	-	3'-0"W X 8'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-19	4	ESTREUOS DETECTION PEN	W2F	-	-	16'-0"W X 18'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-20	24	NEDAP SYSTEM PEN	W2F	-	3/4"	12'-0"W X 18'-0"L- BUILT WITH 36"H 8 ROD PENNING & 2' GATE
EQ-21	48	NEDAP SYSTEM FEEDER/SCALE	W2F	110V	-	FEED INTAKE RECORDING EQUIPMENT FEEDER
EQ-22	2	LOADING CHUTE	B&G/ W2F	-	-	
EQ-23	64	WEEN TO FINISH FEEDER	W2F	-	-	STAINLESS STEEL DOUBLE SIDED
EQ-24	2	WEEN TO FINISH FEEDER (SINGLE)	W2F	-	-	STAINLESS STEEL SINGLE SIDED
EQ-25	8	FEED LINE WINCH FOR FEED DROP	B&G	-	-	MANUAL FEED LINE WINCH FOR DROPPING FEED FOR ENTIRE ROW OF STALLS
EQ-26	60	METAL BOLLARDS FOR ACCESS	B&G	-	-	40"H PROVIDE 1'-0" GAP BETWEEN BOLLARDS
EQ-27	1	FULL PEN ELECTRONIC CONTROLLED SCALE	W2F	110V	-	DIGITAL WEIGHT INDICATER, APPROPRIATE CAPACITY LOAD CELLS & MOUNTING PLATE, ADJUSTABLE FEET
EQ-28	44	GESTAL EVO QUATRO FEEDER	W2F	110V, 30A	-	-

3/32" =1'-0" 0' 6' 12' 18'

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No.	Date

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Drawn CBW

Checked BBW

Scale AS NOTED

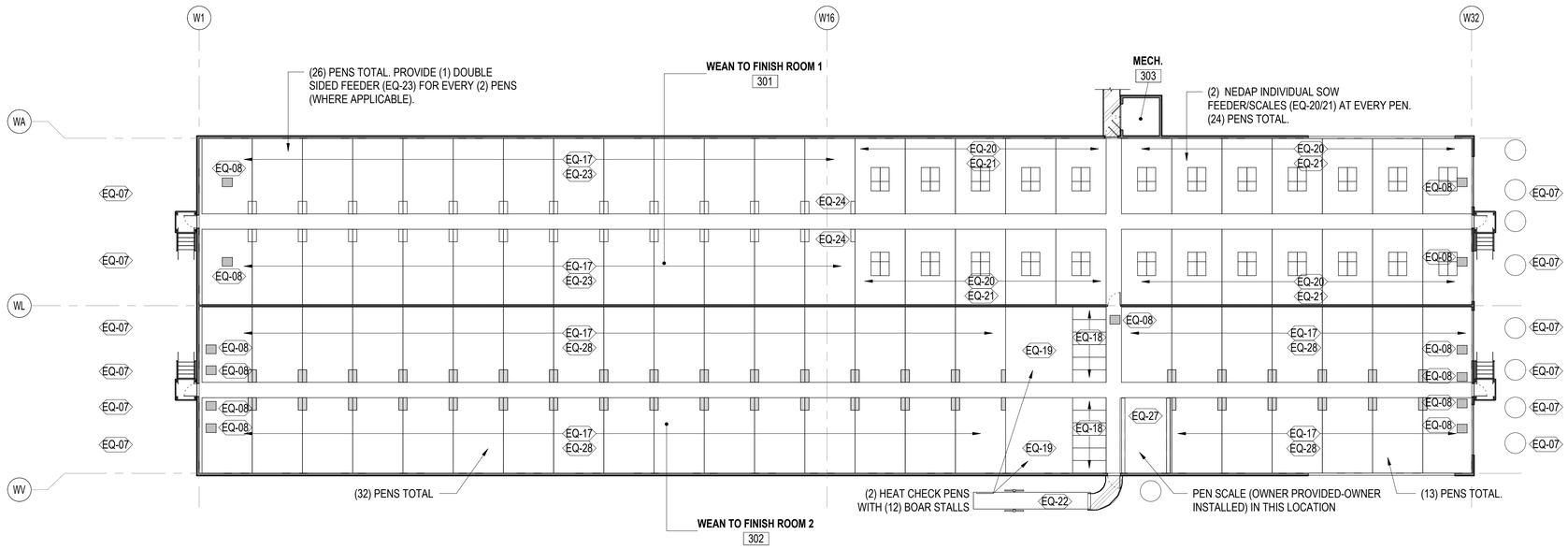
Drawing Title

Breeding/Gestation Building Equipment Plan

Sheet Number 65 Of 139

Drawing Number

QA102



NOTE: EQUIPMENT IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. OWNER TO PROVIDE AND INSTALL ALL BARN EQUIPMENT INCLUDING FEED SYSTEMS (FEED BINS, FEED LINES, AUGERS, DISPENSERS, ETC), WATERING SYSTEMS (SEE PLUMBING FOR COORDINATION), PENNING, CRATES, LOADING CHUTES, BOLLARDS, AND PEN SCALE. CONTRACTOR TO PROVIDE INFASTRUCTURE TO EQUIPMENT. SEE PLUMBING/MECHANICAL/ELECTRICAL FOR ADDITIONAL COORDINATION INFORMATION & DETAILS.

Wean to Finish Equipment Plan

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

PLAN NORTH

EQUIPMENT SCHEDULE (CONTRACTOR TO ONLY PROVIDE PLUMBING AND ELECTRICAL INFASTRUCTURE FOR EQUIPMENT- SEE MEP DRAWINGS)

MARK	COUNT	EQUIPMENT TYPE	LOCATION	POWER REQUIRMENTS	WATER REQUIREMENTS	NOTES
EQ-01	104	FARROWING CRATE	FARROWING	-	3/4"	8'L X 5-1/2'W
EQ-02	104	GESTAL SOLO FEEDER	FARROWING	110V, 30A	-	
EQ-03	104	HEAT PAD	FARROWING	110V	-	SINGLE SIDE FARROWING HEAT PAD 13.5" X 60"- HEAT PAD SHALL BE CONNECTED TO GESTAL EVO SYSTEM FOR POWER.
EQ-04	104	HEAT LAMP	FARROWING	110V	-	STANDARD FARROWING HEAT LAMP
EQ-05	104	STAINLESS STEEL CREEP PANELS	FARROWING	-	-	21-7/8"H CREEP PANELS AT EACH SIDE OF FARROWING CRATE
EQ-06	2	STAINLESS STEEL WORK TABLE	FARROWING	-	-	5'W X 36"H
EQ-07	18	FEED BIN	ALL BARNS	-	-	6' DIAMETER FEED BIN WITH 60 DEGREE HOPPER
EQ-08	22	FEED DISPENSING AUGER SYSTEM WITH MOTOR	ALL BARNS	110V, 1HP	-	-
EQ-09	12	FEED SYSTEM FOOD SELECTOR CHAIN DRIVE BOX	FARROWING/B&G	110V, 1.5HP	-	PROVIDE WITH ELECTRONIC CONTROLLER
EQ-10	260	FREE ACCESS STALL	B&G	-	3/4"	2'-0"W X 7'-0"L (LOCKABLE STALL)
EQ-11	98	FEEDING TROUGH	B&G	-	-	STAINLESS STEEL, SINGLE SIDED BOLT DOWN, 6"H X 8' L
EQ-12	30	METAL PENNING	B&G	-	-	40"H 6 ROD X 8'L SECTION
EQ-13	94	HORIZONTAL GATING PANEL	B&G/ W2F	-	-	40"H 6 ROD GATE
EQ-14	48	BOAR PEN	B&G	-	3/4" (1 IN PEN)	2'-4"W X 7'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-15	7	BOAR PEN (LARGE)	B&G	-	3/4" (1 IN PEN)	4'-0"W X 7'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-16	6	NATURAL/AI MATING PEN	B&G	-	-	8'-0"W X 8'-0"L- BUILT WITH 40"H 6 ROD PENNING & (2)3' GATES
EQ-17	71	METAL PENNING (WEEN TO FINISH)	W2F	-	3/4" (1 IN PEN)	36"H 8 ROD
EQ-18	12	BOAR HEAT CHECK STALL	W2F	-	-	3'-0"W X 8'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-19	4	ESTREUOS DETECTION PEN	W2F	-	-	16'-0"W X 18'-0"L- BUILT WITH 40"H 6 ROD PENNING & 2' GATE
EQ-20	24	NEDAP SYSTEM PEN	W2F	-	3/4"	12'-0"W X 18'-0"L- BUILT WITH 36"H 8 ROD PENNING & 2' GATE
EQ-21	48	NEDAP SYSTEM FEEDER/SCALE	W2F	110V	-	FEED INTAKE RECORDING EQUIPMENT FEEDER
EQ-22	2	LOADING CHUTE	B&G/ W2F	-	-	
EQ-23	64	WEEN TO FINISH FEEDER	W2F	-	-	STAINLESS STEEL DOUBLE SIDED
EQ-24	2	WEEN TO FINISH FEEDER (SINGLE)	W2F	-	-	STAINLESS STEEL SINGLE SIDED
EQ-25	8	FEED LINE WINCH FOR FEED DROP	B&G	-	-	MANUAL FEED LINE WINCH FOR DROPPING FEED FOR ENTIRE ROW OF STALLS
EQ-26	60	METAL BOLLARDS FOR ACCESS	B&G	-	-	40"H PROVIDE 1'-0" GAP BETWEEN BOLLARDS
EQ-27	1	FULL PEN ELECTRONIC CONTROLLED SCALE	W2F	110V	-	DIGITAL WEIGHT INDICATER, APPROPRIATE CAPACITY LOAD CELLS & MOUNTING PLATE, ADJUSTABLE FEET
EQ-28	44	GESTAL EVO QUATRO FEEDER	W2F	110V, 30A	-	-

1/16" =1'-0"

0' 8' 16' 32'

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Christopher B. Walker REGISTERED SEAL 15616 07.05.24 ARCHITECT NORTH CAROLINA

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS

Date 07/05/24

Drawn CBW

Checked BBW

Scale AS NOTED

Drawing Title

Wean to Finish Building Equipment Plan

Sheet Number 66 Of 139

Drawing Number QA103

GENERAL NOTES:

GENERAL NOTES:

1. ALL WORK MUST COMPLY WITH THE CODES LISTED BELOW AND IN THE SPECIFICATIONS.
2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE, 2015 EDITION, AS ADOPTED BY THE 2018 NORTH CAROLINA BUILDING CODE
3. VERIFY ALL DRAWINGS FOR COORDINATION BETWEEN TRADES, LOCATE SLOTS, SLEEVES AND TRENCHES AS REQUIRED FOR MECHANICAL TRADES. PROVIDE AND INSTALL ANCHORS, INSERTS, HANGERS, ETC. AS REQUIRED FOR VARIOUS TRADES.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY SAFEGUARDS, TO MAINTAIN ALL PARTS OF THE STRUCTURE IN A SAFE CONDITION AT ALL TIMES DURING THE PROCESS OF CONSTRUCTION.
5. SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR MUST CHECK ALL DIMENSIONS AND ACCEPT FULL RESPONSIBILITY FOR DIMENSIONAL CORRECTNESS.
6. UNDER NO CIRCUMSTANCES CAN THE REPRODUCTION OF CONTRACT DRAWINGS BE USED AS SHOP DRAWINGS.
7. PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED.
8. LOADING APPLIED TO THE STRUCTURE DURING THE PROCESS OF CONSTRUCTION MUST NOT EXCEED THE SAFE LOAD-CARRYING CAPACITY OF THE STRUCTURAL MEMBERS. THE LIVE LOADINGS USED IN THE DESIGN OF THIS STRUCTURE ARE INDICATED IN THE "DESIGN CRITERIA NOTES". DO NOT APPLY ANY CONSTRUCTION LOADS UNTIL ALL STRUCTURAL FRAMING IS PROPERLY CONNECTED TOGETHER AND UNTIL ALL TEMPORARY BRACING IS IN PLACE.
9. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITION OF JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK.
10. THE DUTY OF THE ARCHITECT IN CONDUCTING CONSTRUCTION REVIEW OF CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF ADEQUACY OF CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.
11. TYPICAL DETAILS AND GENERAL NOTES APPLY TO ALL PARTS OF THE JOB EXCEPT WHERE SPECIFICALLY DETAILED OR NOTED OTHERWISE.
12. STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL FRAMING. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR NON-STRUCTURAL ITEMS WHICH REQUIRE SPECIAL PROVISIONS DURING THE CONSTRUCTION OF THE STRUCTURAL FRAME.
13. INFORM THE PROFESSIONAL OF RECORD IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT RELIEVED OF THE RESPONSIBILITY OF SUCH DEVIATION BY THE PROFESSIONAL OF RECORD REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE PROFESSIONAL OF RECORD OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE PROFESSIONAL OF RECORD HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
14. MECHANICAL UNIT WEIGHTS AND LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR MUST VERIFY LOCATIONS AND WEIGHTS SHOWN AND REPORT DISCREPANCIES TO THE ARCHITECT.

FOUNDATION NOTES:

1. FOUNDATIONS FOR THIS STRUCTURE HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL ENGINEERING REPORT, PREPARED BY TERRACING AND DATED MAY 24, 2023.
2. PERFORM ALL EARTHWORK IN ACCORDANCE WITH THE SPECIFICATIONS.
3. THE ENTIRE STRUCTURE MUST BE FOUNDED ON VERY WELL COMPACTED STRUCTURAL FILL, UNDISTURBED SOIL, OR AGGREGATE BASE WITH A DESIGN NET BEARING PRESSURE OF 2,000 PSF
4. PRIOR TO PLACING FOUNDATION CONCRETE, ALL FOUNDATION EXCAVATIONS MUST BE INSPECTED BY THE GEOTECHNICAL ENGINEER TO VERIFY THE EXTENT OF ANY LOOSE, SOFT, OR UNSATISFACTORY SOIL AND TO VERIFY THE DESIGN BEARING PRESSURE. THE GEOTECHNICAL ENGINEER WILL PROVIDE DIRECTION FOR CORRECTIVE ACTION WHERE REQUIRED.
5. DO NOT INSTALL FOUNDATION WORK UNTIL IT HAS BEEN COORDINATED WITH ADJACENT UNDERGROUND UTILITIES. FOOTINGS MUST BE SLEEVED OR LOWERED WHERE REQUIRED. DO NOT INSTALL UTILITIES UNDER ISOLATED COLUMN FOOTINGS. INSTALL UTILITIES PERPENDICULAR TO WALL FOOTINGS.
6. DO NOT PUT IN UNBALANCED BACKFILL AGAINST FOUNDATION WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING.
7. TOP OF EXTERIOR FOUNDATIONS MUST BEAR A MINIMUM OF 16" BELOW FINAL GRADE. LOWER FOOTINGS AS REQUIRED TO MAINTAIN COVERAGE.

CAST IN PLACE CONCRETE NOTES:

1. CAST IN PLACE CONCRETE MUST COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (AI- 318-14), COMMENTARY, (ACI-318R-14), AND THE SPECIFICATIONS FOR STRUCTURAL CONCRETE (AI 301).
2. DETAILING OF ALL CONCRETE STEEL REINFORCEMENT MUST BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI-315).
3. ALL CONCRETE MUST BE NORMAL WEIGHT, UNLESS OTHERWISE NOTED, CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:
   A. SLAB ON GRADE 4,000 PSI
   B. FOUNDATION WALLS 4,000 PSI
   C. CONCRETE NOT OTHERWISE NOTED 3,000 PSI
   **CONCRETE EXPOSED TO WEATHER MUST BE AIR ENTRAINED
4. ALL REINFORCING MUST BE AS FOLLOWS:
   A. REINFORCING BARS - ATM A-615, GRADE 60
   B. WELDED REINFORCING BARS - ATM A706, GRADE 60
5. WELDED WIRE REINFORCEMENT MUST BE PROPERLY SUPPORTED PRIOR TO PLACING CONCRETE. HOOKING OF FABRIC IS NOT PERMITTED.
6. UNLESS OTHERWISE NOTED, REINFORCING STEEL MARKED CONTINUOUS (CONT.) MUST BE LAPPED PER THE REINFORCING LAP SCHEDULE ON SHEET S-501.
7. HOLD ALL REINFORCING STEEL SECURELY IN PLACE TO PREVENT DISLOCATION DURING THE POURING OPERATION. SUPPORT SLAB REINFORCING BARS ON HIGH CHAIRS AND BARSPACERS OF SUITABLE DESIGN, OR CONCRETE BLOCKS HAVING THE SAME MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SLAB.
8. DO NOT PLACE CONCRETE UNTIL ALL EMBEDDED WORK HAS BEEN INSTALLED, TESTED AND INSPECTED.
9. EXCEPT AS OTHERWISE SHOWN MINIMUM PROTECTION (CONCRETE COVER) FOR REINFORCING STEEL MUST BE AS FOLLOWS:

   CONCRETE SURFACES CAST AGAINST SOIL: 3"
   CONCRETE SURFACES EXPOSED TO EARTH OR WEATHER: 2"
   INTERIOR CONCRETE SURFACES: 1-1/2"

CONCRETE MASONRY NOTES:

1. MASONRY CONSTRUCTION MUST COMPLY WITH THE MASONRY SOCIETY "BUILDING CODE FOR MASONRY STRUCTURES" (TUMS 402-2016) AND "SPECIFICATION FOR MASONRY STRUCTURES" (TUMS 602-2016).
2. CONCRETE MASONRY UNITS MUST CONFORM TO ATM C90 AND BE MADE WITH LIGHTWEIGHT AGGREGATE. THE COMPRESSIVE STRENGTH OF MASONRY, F'm, EXPRESSED AS FORCE PER UNIT OF NET CROSS-SECTIONAL AREA, MUST BE 2,000 PSI AT 28 DAYS.
3. MORTAR MUST CONFORM TO ATM C270, TYPE S. AGGREGATE FOR MORTAR MUST COMPLY WITH ATM C144.
4. GROUT MUST CONFORM TO ATM C476 AND MUST HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,500 PSI. SLUMP AT POINT OF PLACEMENT MUST BE BETWEEN 8 AND 11 INCHES.
5. ALL REINFORCING BARS MUST CONFORM TO ATM A615, GRADE 60. SHOP FABRICATED BARS SHOWN TO BE BENT OR HOOKED. BARS MUST BE LAPPED AS FOLLOWS: #4-20", #5-30", #6-54", #7-63", #8-72", #9-81".
6. REBAR DOWELS MUST BE THE SAME SIZE AND SPACING AS VERTICAL REINFORCING FROM FOUNDATION. DOWELS MUST HAVE STANDARD AI HOOKS.
7. PROVIDE BAR POSITION FOR VERTICAL REINFORCING AT A MAXIMUM SPACING OF 200 BAR DIAMETERS, AT GROUT LIFT HEIGHTS, OR BAR SPLICE LOCATIONS, WHICHEVER IS LESS.
8. GROUTING MUST BE STOPPED 1-1/2" BELOW THE TOP OF A COURSE SO AS TO FORM A KEY AT THE POUR JOINT.
9. ALL BOLTS, ANCHORS, ETC. PLACED IN THE WALL, MUST BE GROUTED SOLID INTO POSITION.
10. GROUT ALL CELLS SOLID BELOW FINISHED FIRST FLOOR.
11. HORIZONTAL JOINT REINFORCING MUST BE STANDARD 9 GAGE LADDER TYPE IN CMU WALLS AT 16" ON-CENTER. JOINT REINFORCING MUST COMPLY WITH ATM A951.

POST-INSTALLED ANCHOR NOTES:

1. POST-INSTALLED ANCHORS MUST COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (AI- 318-14). SUBMIT CALCULATIONS DEMONSTRATING THAT THE PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES INDICATED IN THE DRAWINGS. PRODUCT MUST HAVE AN ICC ER SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE.
2. ANCHOR CAPACITY IS DEPENDENT ON SPACING BETWEEN ADJACENT ANCHORS AND EDGE DISTANCE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE DISTANCES INDICATED IN THE DRAWINGS.
3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
4. DRILL CORRECT HOLE SIZES FOR MECHANICAL ANCHORS WITH CARBIDE-TIPPED DRILL BITS MEETING THE DIAMETER REQUIREMENTS OF ANSI B212.15.
5. DRILL HOLES WITH A HAMMER DRILL UNLESS OTHERWISE NOTED.
6. DO NOT DISTURB OR APPLY LOAD TO ADHESIVE ANCHORS PRIOR TO FULL CURE OF THE ADHESIVE.

ROUGH CARPENTRY NOTES:

1. ROUGH CARPENTRY MUST COMPLY WITH THE NATIONAL FOREST PRODUCTS ASSOCIATION (FP) "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION".
2. UNLESS OTHERWISE NOTED, ALL NAILING MUST BE IN ACCORDANCE WITH THE "FASTENING SCHEDULE" SHOWN IN TABLE 2304.10.1 OF THE INTERNATIONAL BUILDING CODE.
3. ALL WOOD FRAMING MUST MEET THE REQUIREMENTS OF PS 20 "AMERICAN SOFTWOOD LUMBER STANDARD" AND THE FOLLOWING MINIMUM REQUIREMENTS:
   A. MOISTURE CONTENT - SEASONED, WITH 19% MAXIMUM MOISTURE CONTENT
   B. GRADE – NO.2
   C. SPECIES – SOUTHERN PINE GRADED UNDER SIB RULES
4. CONSTRUCTION PANELS MUST COMPLY WITH PS1 "U.S. PRODUCT STANDARD FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD" FOR PLYWOOD CONSTRUCTION PANELS AND THE FOLLOWING:
   A. EXTERIOR WALL AND SHEAR WALL SHEATHING: 15/32" APIA RATED OSB SHEATHING, EXPOSURE 1 DURABILITY CLASSIFICATION
   B. ROOF SHEATHING – 3/4" APIA RATED PLYWOOD SHEATHING, EXPOSURE 1 DURABILITY CLASSIFICATION
5. STAGGER ALL END JOINTS FOR SHEATHING 4'-0". ALL ROOF SHEATHING MUST BE PLACED PERPENDICULAR TO THE DIRECTION OF THE SUPPORTING MEMBER. ALL END JOINTS MUST BE MADE ON SUPPORTING MEMBERS.
6. ALL SHEATHING MUST BE NAILED AS FOLLOWS:
   A. ROOF SHEATHING - 8d NAILS @ 6" O/AC EDGE NAILING AND 12" O/AC FIELD NAILING
   B. SHEAR WALL SHEATHING - AS SPECIFIED IN THE SCHEDULE ON SHEET S-502.
7. STORE LUMBER AND PLYWOOD ON LEVEL RACKS AND KEEP FREE OF GROUND TO AVOID WARPING. STACK TO INSURE PROPER VENTILATION AND DRAINAGE.
8. PRESSURE TREAT ALL WOOD MEMBERS PERMANENTLY EXPOSED TO WEATHER, SILL PLATES AROUND THE BUILDING PERIMETER, OR ANY WOOD IN CONTACT WITH CONCRETE OR MASONRY IN ACCORDANCE WITH THE SPECIFICATIONS.
9. COORDINATE TRUSS LOCATIONS WITH PLUMBING, MECHANICAL AND ARCHITECTURAL REQUIREMENTS PRIOR TO INSTALLATION.
10. PROVIDE METAL FRAMING CONNECTORS OF SIZE TO FIT MEMBERS AND OF SUFFICIENT STRENGTH TO DEVELOP THE FULL STRENGTH OF THE SUPPORTED MEMBER, COMPLETE WITH SPECIAL NAILS AS REQUIRED.
11. AT A MINIMUM, PROVIDE GALVANIZED METAL FRAMING CONNECTORS IN ACCORDANCE WITH ATM A653, GRADE A (STRUCTURAL QUALITY). GALVANIZE METAL FRAMING CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD IN ACCORDANCE WITH ATM A 653 WITH A G185 COATING.
12. STEEL PLATE CONNECTORS MUST COMPLY WITH ATM A36 SPECIFICATIONS. BOLTS CONNECTING TO WOOD MEMBERS MUST COMPLY WITH ATM A307 AND MUST BE ¾" DIAMETER UNLESS OTHERWISE NOTED.
13. METAL FASTENERS (NAILS, BOLTS, SCREWS, ETC.) IN CONTACT WITH PRESSURE TREATED WOOD MUST BE GALVANIZED PER ATM A-153 WITH G185 COATING.
14. WHERE MULTIPLE FRAMING MEMBERS ARE INDICATED, SCAB CONTINGENT MEMBERS TOGETHER WITH 16d NAILS AT 12" ON CENTER, ALTERNATING AT 2 INCHES FROM EACH EDGE, UNLESS OTHERWISE NOTED.

STRUCTURAL ABBREVIATIONS LIST

AB	ANCHOR BOLT
ALT	ALTERNATE
ARCH	ARCHITECT, ARCHITECTURAL
BLDG	BUILDING
BOTT	BOTTOM
BRDG	BRIDGING
BRG	BEARING
CMU	CONCRETE MASONRY UNIT
CJ	CONTROL JOINT
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
COND	CONDITION
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
DIA	DIAMETER
DIAG	DIAGONAL
DWG	DRAWING
DWGS	DRAWINGS
ELEC	ELECTRICAL
ELEV	ELEVATION
EXIST	EXISTING
EXP	EXPANSION
FOUND	FOUNDATION
FNDN	FOUNDATION
FOB	FACE OF BRICK
FTG	FOOTING
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
HORIZ	HORIZONTAL
HS	HIGH STRENGTH
HT	HEIGHT
IAW	IN ACCORDANCE WITH
INSUL	INSULATION
ISO	ISOLATION
L	ANGLE
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MANUF	MANUFACTURED/MANUFACTURER
MAS	MASONRY
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
OPG	OPENING
OPP	OPPOSITE
PJF	PREMOLDED JOINT FILLER
PL	PLATE
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
AP	PRESSURE TREATED
REF	REFERENCE
REINF	REINFORCE,REINFORCING
REQ'D	REQUIRED
SCHED	SCHEDULE
SECT	SECTION
S	SAWED JOINT
SPECS	SPECIFICATIONS
STD	STANDARD
TYP	TYPICAL
UPON	UNLESS OTHERWISE NOTED
AVERT	VERTICAL
WW	WELDED WIRE FABRIC
NW/	WITH
NW/O	WITHOUT
CL	CENTERLINE
OCD	ON CENTER
O	DIAMETER
°	DEGREES
±	PLUS OR MINUS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 KEVIN M. ROONSBURG 07/05/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

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Revisions

No. Date

Project Number 23.029 | Date 07/05/24

Drawn PDM | Checked KMR

Scale AS NOTED

Drawing Title

GENERAL NOTES & STRUCTURAL ABBREVIATIONS

Sheet Number 67 Of 139

Drawing Number S-001

GENERAL NOTES (CONT.):

PREFABRICATED METAL PLATE CONNECTED WOOD TRUSS NOTES:

1. PREFABRICATED METAL PLATE CONNECTED WOOD TRUSSES MUST COMPLY WITH THE "NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION" (ANSI/AWC NDS-2018) AND THE TRUSS PLATE INSTITUTE "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION" (TPI 1-2014).
2. DESIGN TRUSSES TO WITHSTAND THE DEAD, LIVE & WIND LOADS INDICATED. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PREPARED BY A REGISTERED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA. INCLUDE DESIGN LOADINGS, CALCULATIONS, DESIGN DATA, AND REACTIONS APPLIED TO THE SUPPORTING STRUCTURE. CONSIDER SECONDARY BENDING STRESSES IN TRUSS TOP AND BOTTOM CHORDS DUE TO THE LOADINGS IN THE DESIGN.
3. WOOD MEMBERS USED FOR TRUSSES, TRUSS GIRDERS, AND OTHER MEMBERS MUST COMPLY WITH PS 20 "AMERICAN SOFTWOOD LUMBER STANDARD" AND THE FOLLOWING MINIMUM REQUIREMENTS:

   MOISTURE CONTENT - SEASONED, WITH 19% MAXIMUM MOISTURE CONTENT
   GRADE – NO.2
   SPECIES – SOUTHERN PINE GRADED UNDER SPIB RULES
4. PRE-FABRICATED WOOD TRUSSES MUST BE DESIGNED FOR THE FOLLOWING APPLIED LOADS IN ADDITION TO THE DEAD LOAD OF THE WOOD TRUSS SYSTEM.

   ROOF TRUSSES:
   TOP CHORD LIVE LOAD: 20 PSF
   TOP CHORD DEAD LOAD: 10 PSF
   BOTTOM CHORD LIVE LOAD: 10 PSF
   BOTTOM CHORD DEAD LOAD: 10 PSF
   WIND LOAD – AS INDICATED IN GENERAL NOTES
   SNOW LOAD – AS INDICATED IN GENERAL NOTES
5. IN ADDITION TO ANY TRUSS BRACING SHOWN, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND PERMANENT BRACING AS REQUIRED FOR SAFE ERECTION OF THE TRUSSES, OR AS RECOMMENDED BY THE TRUSS MANUFACTURER. THE GUIDELINES SET FORTH IN THE TPI "BRACING WOOD TRUSSES, COMMENTARY AND RECOMMENDATIONS" MUST BE CONSIDERED MINIMUM REQUIREMENTS.
6. FIT RIDGE & EAVE JOINT MEMBERS FOR BEARING.
7. REFER TO RELEVANT SECTIONS AND ARCHITECTURAL DETAILS FOR TRUSS DIMENSIONS, ELEVATIONS, WORKING POINTS, ETC.
8. WHERE MULTIPLE PLIES ARE INDICATED, FASTEN TOGETHER AS INDICATED BY THE TRUSS MANUFACTURER.
9. METAL CONNECTORS, WHERE USED, MUST BE OF SIZE TO FIT MEMBERS AND OF SUFFICIENT STRENGTH TO DEVELOP THE FULL STRENGTH OF THE SUPPORTED MEMBER, COMPLETE WITH SPECIAL NAILS AS REQUIRED.
10. PROVIDE GALVANIZED FRAMING CONNECTORS IN ACCORDANCE WITH ASTM A653, GRADE A (STRUCTURAL QUALITY) THAT ARE CAPABLE OF SUPPORTING THE REACTIONS SHOWN.
11. COORDINATE WEB CONFIGURATIONS / MECHANICAL AND ARCHITECTURAL REQUIREMENTS PRIOR TO FABRICATION.

STRUCTURAL DELEGATED DESIGNS AND DEFERRED SUBMITTALS NOTES:

1. STRUCTURAL DELEGATED DESIGNS AND SUBSEQUENT DEFERRED SUBMITTALS ARE FOR ELEMENTS, PARTS, OR PORTIONS OF THE OVERALL STRUCTURAL SYSTEM THAT ARE INDICATED OR REFERRED TO ON THESE DRAWINGS AND THAT ARE CRITICAL TO THE PERFORMANCE OF THE OVERALL STRUCTURAL SYSTEMS. DESIGN CRITERIA HAS BEEN PROVIDED FOR THESE ITEMS IN THE STRUCTURAL NOTES, PLANS, AND DETAILS.
2. STRUCTURAL DEFERRED SUBMITTALS ARE COMPLETE PACKAGES TO BE SUBMITTED FOR REVIEW THAT INCLUDE DRAWINGS AND CALCULATIONS FOR ALL DELEGATED DESIGN ITEMS AND THEIR CONNECTIONS. DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL REGISTERED IN THE STATE OF NORTH CAROLINA RESPONSIBLE FOR THEIR DESIGN.
3. THE STRUCTURAL ENGINEER OF RECORD WILL REVIEW STRUCTURAL DEFERRED SUBMITTALS TO VERIFY DESIGN CRITERIA IS COMPLIANT WITH THE CONSTRUCTIONS DOCUMENTS.
4. DESIGN RESPONSIBILITY FOR THE FOLLOWING ENGINEERED SYSTEMS AND COMPONENT PARTS IS DELEGATED TO A QUALIFIED DELEGATED REGISTERED PROFESSIONAL ENGINEER SELECTED BY THE CONTRACTOR. STRUCTURAL DELEGATED DESIGN ITEMS REQUIRING DEFERRED SUBMITTALS INCLUDE, BUT ARE NOT LIMITED TO:

   A. STEEL FRAMED STAIRS AND RAILINGS,

   B. METAL-PLATE-CONNECTED WOOD TRUSSES, BLOCKING, BRIDGING, BRIDGING CONNECTIONS, TEMPORARY BRACING, TRUSS HANGARS, AND RELATED COMPONENTS,

   C. ALUMINUM CANOPIES, TEMPORARY BRACING, CONNECTIONS, AND RELATED COMPONENTS.
5. INCLUDE SIGNED SEALS FOR WORK DESIGNED BY THE DELEGATED ENGINEER. DO NOT START FABRICATION OF THE DELEGATED SYSTEM OR COMPONENT PART OR FIELD CONSTRUCTION THAT MAY BE AFFECTED BY THE SYSTEM OR COMPONENT PART WITHOUT SUBMITTAL REVIEW BY THE STRUCTURAL ENGINEER OF RECORD.

DESIGN CRITERIA NOTES:

1. LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS:
2. UNIFORM LIVE LOADS:
   SLAB ON GRADE 100 PSF
   CORRIDORS ABOVE FIRST FLOOR (SWINE FLOORS) 80 PSF
   STAIRS AND EXITS 100 PSF
   ROOF 20 PSF
3. ROOF SNOW LOADS (BIO-SECURITY):
   GROUND SNOW LOAD Pg = 10 PSF
   SNOW EXPOSURE FACTOR Ce = 1.2
   SNOW LOAD IMPORTANCE FACTOR I =1.0
   THERMAL FACTOR Ct=1.0
   FLAT ROOF DESIGN SNOW LOAD = 8.4 PSF
   MINIMUM ROOF SNOW LOAD = 10.0 PSF
4. ROOF SNOW LOADS (SWINE BUILDINGS):
   GROUND SNOW LOAD Pg = 10 PSF
   SNOW EXPOSURE FACTOR Ce = 1.2
   SNOW LOAD IMPORTANCE FACTOR I =0.8
   THERMAL FACTOR Ct=1.0
   FLAT ROOF SNOW LOAD = 6.7 PSF
   MINIMUM ROOF SNOW LOAD = 8.0 PSF
5. WIND LOADS (BIO-SECURITY BUILDING):
   RISK CATEGORY = II
   ULTIMATE WIND SPEED = 122 MPH
   NOMINAL WIND SPEED (ASD) = 94.5 MPH
   EXPOSURE CATEGORY (MAIN WINDFORCE-RESISTING SYSTEM): C
   EXPOSURE CATEGORY (COMPONENTS AND CLADDING): C
   INTERNAL PRESSURE COEFFICIENT: +/- 0.18 (ENCLOSED)
6. WIND LOADS (SWINE BUILDINGS):
   RISK CATEGORY = I
   ULTIMATE WIND SPEED = 113 MPH
   NOMINAL WIND SPEED (ASD) = 87.5 MPH
   EXPOSURE CATEGORY (MAIN WINDFORCE-RESISTING SYSTEM): C
   EXPOSURE CATEGORY (COMPONENTS AND CLADDING): C
   INTERNAL PRESSURE COEFFICIENT: +/- 0.18 (ENCLOSED)
7. SEISMIC LOADS (BIO-SECURITY):
   RISK CATEGORY II
   IMPORTANCE FACTOR I = 1.00
   Ss = 10.20%g
   S1 = 5.30%g
   SOIL SITE CLASS D (ASSUMED)
   Sds = 0.109
   Sd1 = 0.085
   SEISMIC DESIGN CATEGORY B
   BASIC SEISMIC FORCE RESISTING SYSTEM: LIGHT FRAME WOOD WALLS WITH STRUCTURAL WOOD SHEAR PANELS
   RESPONSE MODIFICATION FACTOR, R=7.0
   SEISMIC RESPONSE COEFFICIENT, Cs = 0.016
   DESIGN BASE SHEAR: 0.016W
   ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE
8. SEISMIC LOADS (SWINE BUILDINGS):
   RISK CATEGORY I
   IMPORTANCE FACTOR I = 1.00
   Ss = 10.20%g
   S1 = 5.30%g
   SOIL SITE CLASS D (ASSUMED)
   Sds = 0.109
   Sd1 = 0.085
   SEISMIC DESIGN CATEGORY B
   BASIC SEISMIC FORCE RESISTING SYSTEM: LIGHT FRAME WOOD WALLS WITH STRUCTURAL WOOD SHEAR PANELS
   RESPONSE MODIFICATION FACTOR, R=7.0
   SEISMIC RESPONSE COEFFICIENT, Cs = 0.016
   DESIGN BASE SHEAR: 0.016W
   ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE

COMPONENTS AND CLADDING TABLE BIOSECURITY

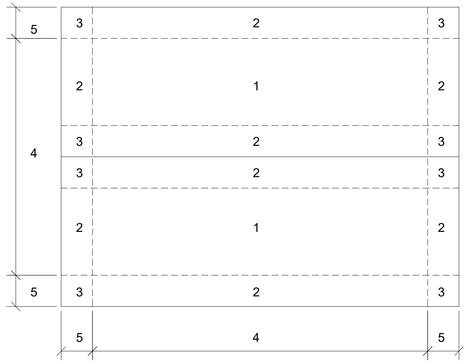
COMPONENTS AND CLADDING WIND PRESSURES										
AREA (SF)	ROOF ZONES						WALL ZONES			
	1		2		3		4		5	
A<10	+18.7	-29.7	+18.7	-51.7	+18.7	-76.4	+32.4	-35.2	+32.4	-43.4
A≥100	+16.0	-26.9	+16.0	-37.9	+16.0	-59.9	+27.6	-30.3	+27.6	-33.7

COMPONENTS AND CLADDING ULTIMATE WIND PRESSURES
INTERPOLATE BETWEEN AREAS INDICATED.
CORNER ZONES EQUAL 4.1 FEET.
REFER TO SKETCH BELOW FOR ZONE DEFINITIONS.

COMPONENTS AND CLADDING TABLE SWINE BLDGS

COMPONENTS AND CLADDING WIND PRESSURES										
AREA (SF)	ROOF ZONES						WALL ZONES			
	1		2		3		4		5	
A<10	+16.5	-26.2	+16.5	-45.6	+16.5	-67.5	+28.6	-31.1	+28.6	-38.3
A≥100	+16.0	-23.8	+16.0	-33.5	+16.0	-52.9	+24.4	-26.8	+24.4	-29.8

COMPONENTS AND CLADDING ULTIMATE WIND PRESSURES
INTERPOLATE BETWEEN AREAS INDICATED.
CORNER ZONES ARE AS FOLLOWS:
BREEDING AND GESTATION 5.6 FEET
FARROWING 5.4 FEET
WEAN TO FINISH 6.3 FEET
REFER TO SKETCH BELOW FOR ZONE DEFINITIONS.



ZONES

WALKER the GROUP ARCHITECTURE
incorporated
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 07/05/2024 KEVIN M. ROOMSBURG

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Revisions
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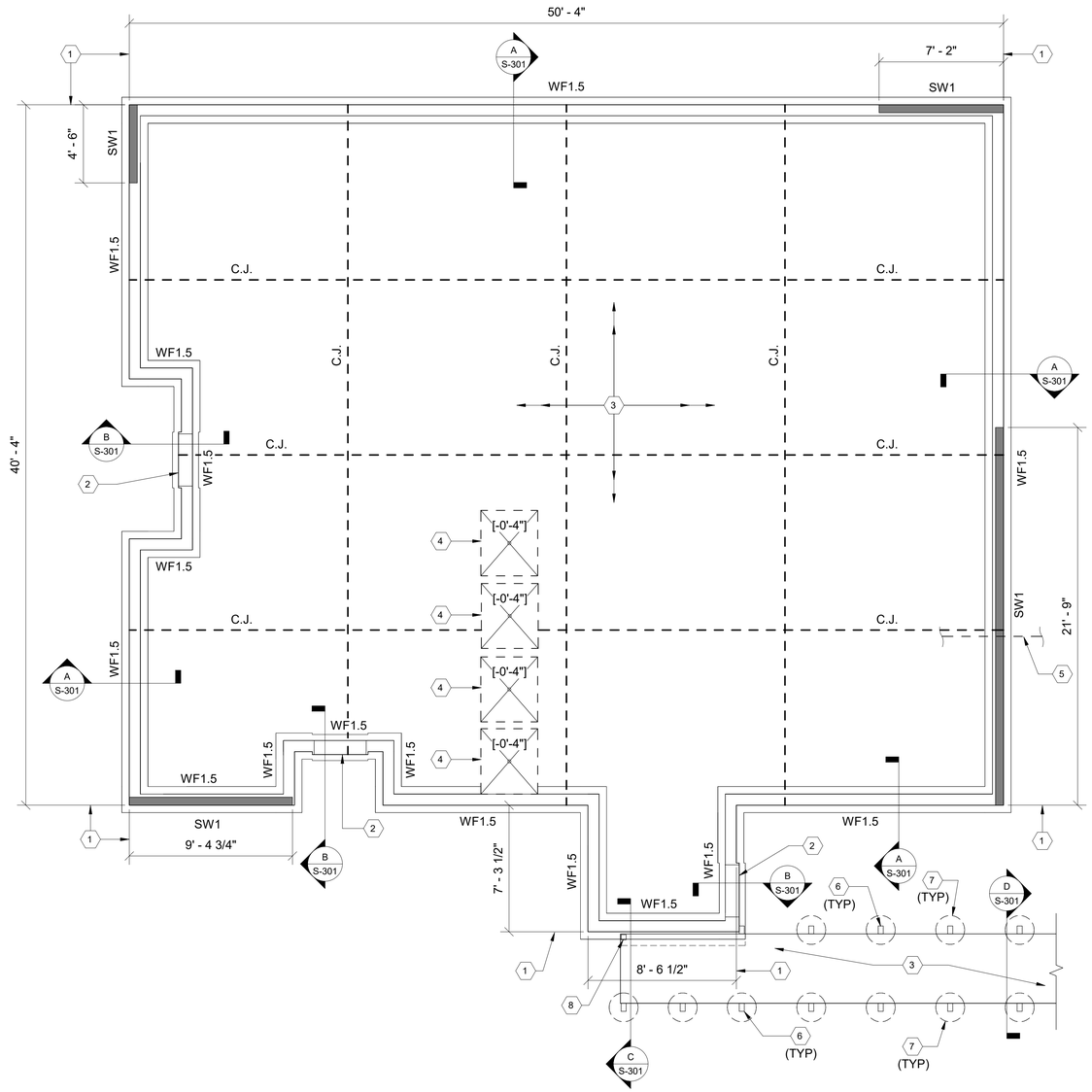
GENERAL NOTES (CONT.)

Sheet Number 68 Of 139
Drawing Number S-002



BIO-SECURITY BUILDING FOUNDATION PLAN

1/4" = 1'-0"

PLAN NORTH

WALL FOOTING SCHEDULE BIO-SECURITY							
	DIMENSIONS		REINFORCING				
			LONGITUDINAL		TRANSVERSE		
MARK	WIDTH	DEPTH	QUANTITY	SIZE	SIZE	SPACING	NOTES
WF1.5	1' - 6"	1' - 0"	2	5	5	1' - 0"	

GENERAL SHEET NOTES

1. DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS FINISHED FIRST FLOOR ELEVATION = 0'-0". FOR ACTUAL ELEVATION, REFER TO CIVIL DRAWINGS.
2. TOP OF CONCRETE SLAB IS AT +0'-0" UNLESS OTHERWISE INDICATED THUS [+____] ON PLAN.
3. WALL FOOTINGS ARE WF1.5 UNLESS OTHERWISE NOTED. FOR WALL FOOTING SCHEDULE, REFER TO THIS SHEET. WALL FOOTINGS ARE INDICATED (WFX.X).
4. UNLESS OTHERWISE NOTED PROVIDE 4" CONCRETE SLAB ON GRADE ON 10 MIL VAPOR RETARDER ON 4" POROUS FILL. REINFORCE SLAB WITH 6 x 6 - W2.9 x W2.9 WWF PLACED 1" CLEAR FROM TOP OF SLAB. TOP OF SLAB ELEVATION IS AT 0'-0" UNLESS OTHERWISE NOTED THUS [+____] ON PLAN.
5. THE SYMBOL 'CJ' INDICATES SLAB CONTROL JOINT. REFER TO TYPICAL SLAB CONTROL JOINT DETAILS ON SHEET S-501.
6. UNLESS NOTED THUS (-___), TOP OF ALL WALL FOOTINGS SHALL BE AT -1'-4" BELOW DATUM.
7. NO FOUNDATION WORK SHALL BE INSTALLED UNTIL ALL UNDERGROUND UTILITIES, ETC. HAVE BEEN COORDINATED WITH FOUNDATION LOCATIONS AND ELEVATIONS.
8. SHEARWALLS ARE DENOTED THUS (SWX) ON PLAN. REFER TO SHEAR WALL DETAIL ON SHEET S-502.
9. FOR GENERAL NOTES, REFER TO SHEET S-001 AND S-002. FOR TYPICAL DETAILS REFER TO SHEETS S-501 AND S-502.

(#) NEW WORK KEYNOTES

1. FACE OF STUD AND EDGE OF TURNDOWN SLAB EDGE.
2. FOR TURNDOWN EDGE AT DOOR SILL, REFER TO TYPICAL DETAIL ON SHEET S-501.
3. 4" CONCRETE SLAB-ON-GRADE. REINFORCE WITH 6 x 6 - W2.9 x W2.9 WWF PLACED 1" CLEAR FROM TOP OF SLAB.
4. DEPRESS SLAB IN SHOWERS. REFER TO TYPICAL DEPRESSED SLAB DETAIL ON SHEET S-501.
5. UTILITY LINE WITHIN THE BOUNDS OF THE FOOTING. REFER TO TYPICAL WALL FOOTING DETAIL AT PLUMBING / WATER LINES ON SHEET S-501.
6. PRESSURE TREATED 4x6 POSTS SPACED AT 4'-0" ON CENTERS (MAX).
7. 20" ⌀ REINFORCED CIRCULAR CONCRETE POST FOUNDATION AT EACH WALKWAY POST. REFER TO TYPICAL DETAIL ON SHEET S-502.
8. PRESSURE TREATED 4x4 POST AT THIS LOCATION ONLY. PROVIDE POST BASE CONNECTION TO TURNDOWN SLAB EDGE.

GRAPHIC SCALE(S)

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

0 2' 4' 8'

WALKER the GROUP ARCHITECTURE incorporated
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 07/05/2024 KEVIN M. ROOMSBURG

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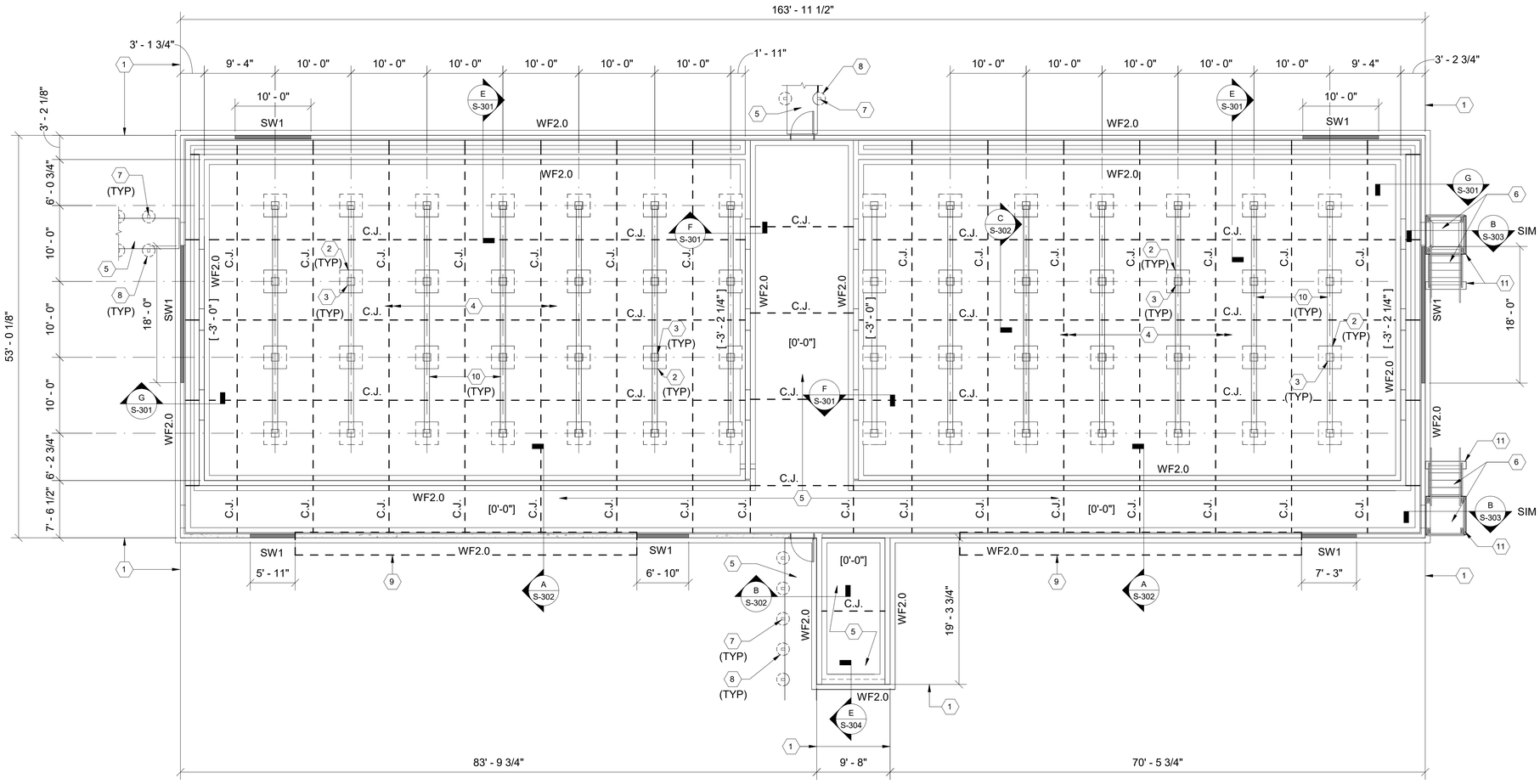
Drawing Title

BIOSECURITY BUILDING FOUNDATION PLAN

Sheet Number 69 Of 139

Drawing Number **S-101**



FARROWING BUILDING FOUNDATION PLAN

1/8" = 1'-0"

PLAN NORTH

GENERAL SHEET NOTES

1. DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS TOP OF PRECAST CONCRETE SLATS = 0'-0". FOR ACTUAL ELEVATION, REFER TO CIVIL DRAWINGS.
2. TOP OF CONCRETE BOTTOM SLAB VARIES, REFER TO ARCHITECTURAL DRAWINGS FOR SLOPE.
3. WALL FOOTINGS ARE WF2.0 UNLESS OTHERWISE NOTED. FOR WALL FOOTING SCHEDULE, REFER TO THIS SHEET. WALL FOOTINGS ARE INDICATED (WFX.X).
4. UNLESS OTHERWISE NOTED PROVIDE A 5" CONCRETE BOTTOM SLAB ON GRADE ON 6 TO 8-INCH LAYER OF WELL COMPACTED AGGREGATE BASE STONE (NCDOT AGGREGATE BASE COURSE, 'ABC'). REINFORCE SLAB WITH 6 x 6 - W2.9 x W2.9 WWF PLACED 2" CLEAR FROM TOP OF SLAB. TOP OF SLAB ELEVATIONS ARE SHOWN THUS [+/-_____] ON PLAN.
5. THE SYMBOL 'CJ' INDICATES THE RECOMMENDED LOCATION OF A CONSTRUCTION JOINT. NOTE, ANY FULL DEPTH JOINTS IN THE BOTTOM SLAB MUST BE CONSTRUCTED WITH A WATERSTOP. REFER TO THE TYPICAL CONTRACTION JOINT DETAIL ON SHEET S-501.
6. UNLESS NOTED THUS (-___), TOP OF ALL WALL FOOTINGS SHALL BE AT -4'-4" BELOW DATUM.
7. NO FOUNDATION WORK SHALL BE INSTALLED UNTIL ALL UNDERGROUND UTILITIES, ETC. HAVE BEEN COORDINATED WITH FOUNDATION LOCATIONS AND ELEVATIONS.
8. SHEARWALLS ARE DENOTED THUS (SWX) ON PLAN. REFER TO SHEAR WALL DETAIL ON SHEET S-502.
9. FOR GENERAL NOTES, REFER TO SHEET S-001 AND S-002. FOR TYPICAL DETAILS REFER TO SHEETS S-501 AND S-502.

(#) NEW WORK KEYNOTES

1. FACE OF STUD AND FOUNDATION WALL
2. 3'-0" x 3'-0" x 1'-0" THICKENED FOOTING BUILT MONOLITHICALLY WITH THE SLAB ON GRADE. REINFORCE WITH (4)-#5 BARS, BOTTOM, EACH WAY.
3. 1'-0" x 1'-0" CONCRETE PIER. REINFORCE WITH (4)-#6 VERTICAL BARS AND #4 TIES SPACED EVENLY AT 12" ON CENTERS.
4. 5" BOTTOM SLAB ON GRADE. SLAB SLOPES 1/4%.
5. 4" CONCRETE SLAB-ON-GRADE. REINFORCE WITH 6 x 6 - W2.9 x W2.9 WWF PLACED 1" CLEAR FROM TOP OF SLAB.
6. EXTERIOR METAL STAIRS, REFER TO ARCHITECTURAL DRAWINGS.
7. 4x6 PRESSURE TREATED POST (TYP) SPACE AT 4'-0" ON CENTERS MAX.
8. 20" ⌀ CONCRETE POST FOUNDATION AT EACH WALKWAY POST (TYP). REFER TO TYPICAL WALKWAY POST FOUNDATION DETAIL ON SHEET S-502.
9. EVAPORATIVE COOLER, REFER TO MECHANICAL DRAWINGS FOR LOCATIONS.
10. PRECAST CONCRETE LINTEL, OWNER PROVIDED/OWNER INSTALLED.
11. 4" SLAB ON GRADE WITH TURNDOWN EDGE (TYP).

WALL FOOTING SCHEDULE FARROWING

MARK	DIMENSIONS		REINFORCING				NOTES
			LONGITUDINAL		TRANSVERSE		
	WIDTH	DEPTH	QUANTITY	SIZE	SIZE	SPACING	
WF2.0	2' - 0"	1' - 0"	2	5	5	1' - 0"	

GRAPHIC SCALE(S)

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

0 4' 8' 16'

WALKER the GROUP ARCHITECTURE
incorporated
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 07/05/2024 KEVIN M. ROOMSBURG

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Revisions

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Project Number 23.029 | Date 07/05/24

Drawn PDM | Checked KMR

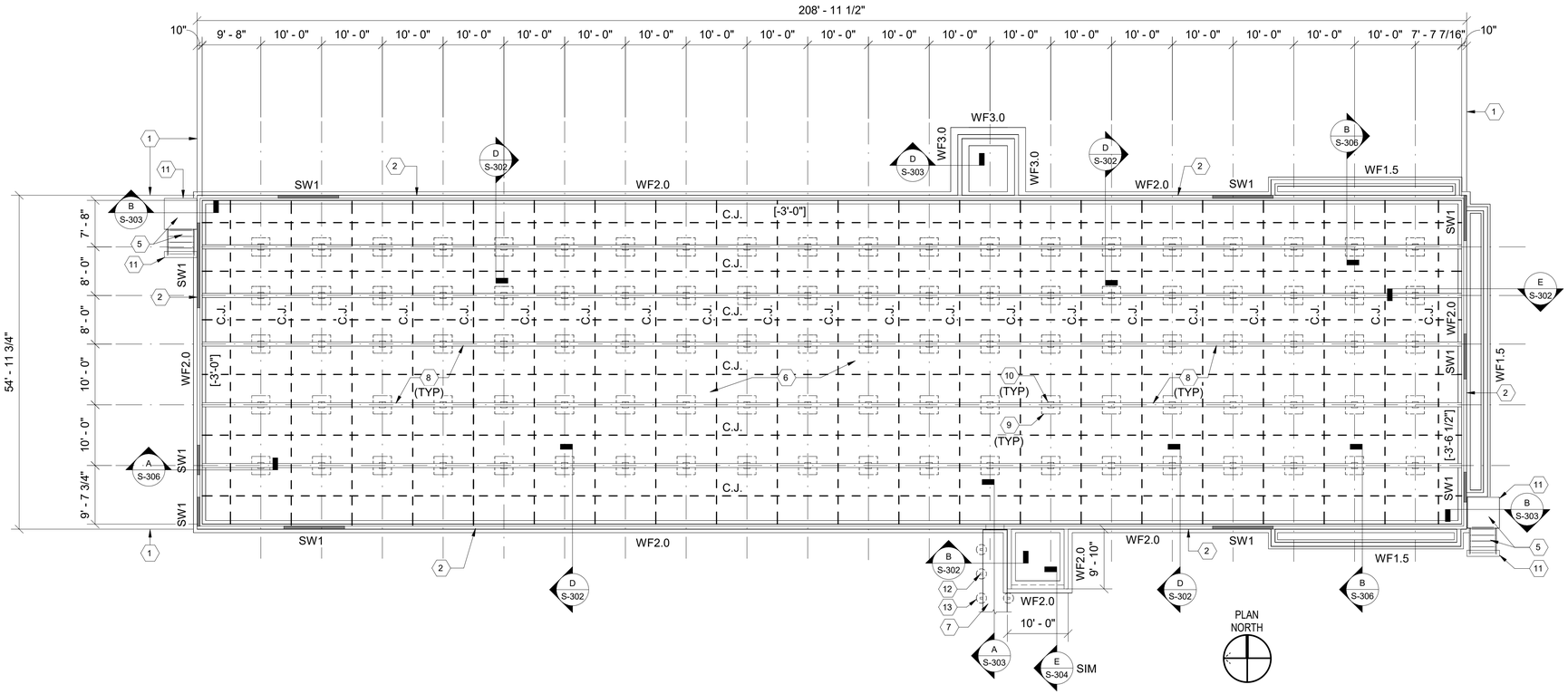
Scale AS NOTED

Drawing Title

FARROWING BUILDING FOUNDATION PLAN

Sheet Number 70 Of 139

Drawing Number **S-102**



BREEDING & GESTATION BUILDING FOUNDATION PLAN

3/32" = 1'-0"

WALL FOOTING SCHEDULE BREEDING AND GESTATION							
	DIMENSIONS		REINFORCING				
			LONGITUDINAL		TRANSVERSE		
MARK	WIDTH	DEPTH	QUANTITY	SIZE	SIZE	SPACING	NOTES
WF1.5	1' - 6"	1' - 0"	2	5	5	1' - 0"	
WF2.0	2' - 0"	1' - 0"	2	5	5	1' - 0"	
WF3.0	3' - 0"	1' - 0"	3	5	5	1' - 0"	TOP AND BOTTOM BOTH WAYS

GENERAL SHEET NOTES

1. DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS TOP OF WALKWAY SLATS = 0'-0". FOR ACTUAL ELEVATION, REFER TO CIVIL DRAWINGS.
2. TOP OF CONCRETE BOTTOM SLAB VARIES, REFER TO ARCHITECTURAL DRAWINGS FOR SLOPE.
3. WALL FOOTINGS ARE WF2.0 UNLESS OTHERWISE NOTED. FOR WALL FOOTING SCHEDULE, REFER TO THIS SHEET. WALL FOOTINGS ARE INDICATED (WFX.X).
4. UNLESS OTHERWISE NOTED PROVIDE A 5" CONCRETE BOTTOM SLAB ON GRADE ON 6 TO 8-INCH LAYER OF WELL COMPACTED AGGREGATE BASE STONE (NCDOT AGGREGATE BASE COURSE, 'ABC'). REINFORCE SLAB WITH 6 x 6 - W2.9 x W2.9 WWF PLACED 2" CLEAR FROM TOP OF SLAB. TOP OF BOTTOM SLAB ELEVATIONS ARE SHOWN THUS [+/-_____] ON PLAN INDICATING DISTANCE FROM DATUM.
5. UNLESS NOTED THUS (-___), TOP OF ALL WALL FOOTINGS SHALL BE AT -4'-4" BELOW DATUM.
6. TOP OF FOOTING ELEVATIONS ARE NOTED THUS (-____) ON PLAN INDICATING DISTANCE BELOW FINISHED FIRST FLOOR.
7. NO FOUNDATION WORK SHALL BE INSTALLED UNTIL ALL UNDERGROUND UTILITIES, ETC. HAVE BEEN COORDINATED WITH FOUNDATION LOCATIONS AND ELEVATIONS.
8. SHEARWALLS ARE DENOTED THUS (SWX) ON PLAN. REFER TO SHEAR WALL DETAIL ON SHEET S-502.
9. FOR GENERAL NOTES, REFER TO SHEET S-001 AND S-002. FOR TYPICAL DETAILS REFER TO SHEETS S-501 AND S-502.

(#) NEW WORK KEYNOTES

1. FACE OF STUD AND FOUNDATION WALL
2. 8" REINFORCED CONCRETE FOUNDATION WALL
3. NOT USED
4. NOT USED
5. EXTERIOR METAL STAIRS, REFER TO ARCHITECTURAL DRAWINGS.
6. 5" BOTTOM SLAB ON GRADE. SLOPE SLAB 1/4%.
7. SIDEWALK SLAB/COVERED WALKWAY
8. PRECAST CONCRETE LINTEL, OWNER PROVIDED/OWNER INSTALLED
9. 3'-0" x 3'-0" x 1'-0" THICKENED FOOTING BUILT MONOLITHICALLY WITH THE SLAB ON GRADE. REINFORCE WITH (4)-#5 BARS, BOTTOM, EACH WAY.
10. 1'-0" x 1'-0" CONCRETE PIER. REINFORCE WITH (4)-#6 VERTICAL BARS AND #4 TIES SPACED EVENLY AT 12" ON CENTERS.
11. 4" SLAB ON GRADE WITH TURNDOWN EDGE (TYP).
12. 4x6 PRESSURE TREATED POST (TYP) SPACE AT 4'-0" ON CENTERS MAX.
13. 20" ⌀ CONCRETE POST FOUNDATION AT EACH WALKWAY POST (TYP). REFER TO TYPICAL WALKWAY POST FOUNDATION DETAIL ON SHEET S-502.

GRAPHIC SCALE(S)

SCALE: 3/32"=1'-0"

0 8' 16' 24'

WALKER the GROUP ARCHITECTURE incorporated
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 07/05/2024 KEVIN M. ROOMSBURG

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Revisions

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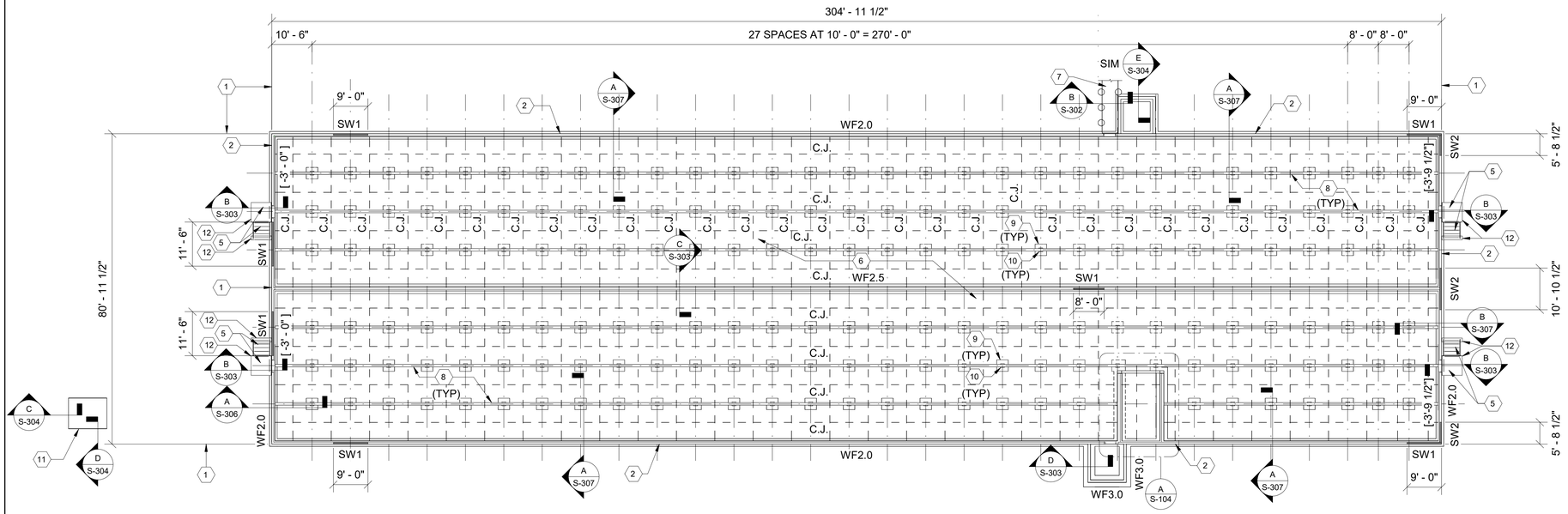
Scale AS NOTED

Drawing Title

BREEDING/GESTATION BUILDING FOUNDATION PLAN

Sheet Number 71 Of 139

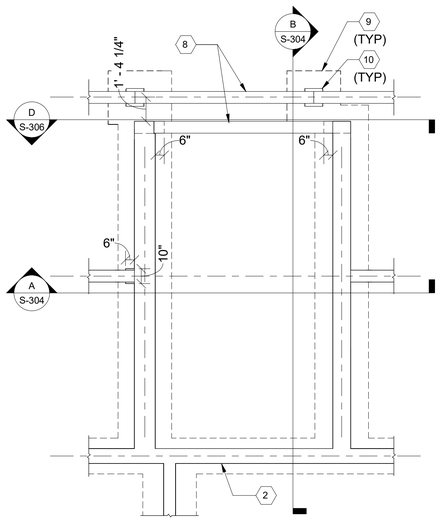
Drawing Number S-103



PLAN NORTH

WEAN TO FINISH BUILDING FOUNDATION PLAN

1/16" = 1'-0"



A ENLARGED FOUNDATION PLAN - PEN SCALE

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

WALL FOOTING SCHEDULE WEAN TO FINISH							
	DIMENSIONS		REINFORCING				
			LONGITUDINAL		TRANSVERSE		
MARK	WIDTH	DEPTH	QUANTITY	SIZE	SIZE	SPACING	NOTES
WF2.0	2' - 0"	1' - 0"	2	5	5	1' - 0"	
WF2.5	2' - 6"	1' - 0"	4	4	4	4' - 0"	
WF3.0	3' - 0"	1' - 0"	3	5	5	1' - 0"	TOP AND BOTTOM BOTH WAYS

GENERAL SHEET NOTES

1. DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS TOP OF WALKWAY SLATS = 0'-0". FOR ACTUAL ELEVATION, REFER TO CIVIL DRAWINGS.
2. TOP OF CONCRETE BOTTOM SLAB VARIES, REFER TO ARCHITECTURAL DRAWINGS FOR SLOPE.
3. WALL FOOTINGS ARE WF2.0 UNLESS OTHERWISE NOTED. FOR WALL FOOTING SCHEDULE, REFER TO THIS SHEET. WALL FOOTINGS ARE INDICATED (WFX.X).
4. UNLESS OTHERWISE NOTED PROVIDE A 5" CONCRETE BOTTOM SLAB ON GRADE ON 6 TO 8-INCH LAYER OF WELL COMPACTED AGGREGATE BASE STONE (NCDOT AGGREGATE BASE COURSE, 'ABC'). REINFORCE SLAB WITH 6 x 6 - W2.9 x W2.9 WWF PLACED 2" CLEAR FROM TOP OF SLAB. TOP OF SLAB ELEVATIONS ARE SHOWN THUS [+/-_____] ON PLAN.
5. THE SYMBOL 'CJ' INDICATES SLAB CONTROL JOINT. REFER TO TYPICAL SLAB CONTROL JOINT DETAILS ON SHEET S-501.
6. UNLESS NOTED THUS (-___), TOP OF ALL WALL FOOTINGS SHALL BE AT -4'-4" BELOW DATUM.
7. TOP OF FOOTING ELEVATIONS ARE NOTED THUS (-____) ON PLAN INDICATING DISTANCE BELOW FINISHED FIRST FLOOR.
8. NO FOUNDATION WORK SHALL BE INSTALLED UNTIL ALL UNDERGROUND UTILITIES, ETC. HAVE BEEN COORDINATED WITH FOUNDATION LOCATIONS AND ELEVATIONS.
9. SHEARWALLS ARE DENOTED THUS (SWX) ON PLAN. REFER TO SHEAR WALL DETAIL ON SHEET S-502.
10. FOR GENERAL NOTES, REFER TO SHEET S-001 AND S-002. FOR TYPICAL DETAILS REFER TO SHEETS S-501 AND S-502.

(#) NEW WORK KEYNOTES

1. FACE OF STUD AND FOUNDATION WALL
2. 10" REINFORCED CONCRETE FOUNDATION WALL
3. NOT USED
4. NOT USED
5. EXTERIOR METAL STAIRS, REFER TO ARCHITECTURAL DRAWINGS.
6. 5" BOTTOM SLAB ON GRADE. SLOPE SLAB 1/4%.
7. SIDEWALK SLAB/COVERED WALKWAY
8. PRECAST CONCRETE LINTEL, OWNER PROVIDED/OWNER INSTALLED.
9. 3'-0" x 3'-0" x 1'-0" THICKENED FOOTING BUILT MONOLITHICALLY WITH THE SLAB ON GRADE. REINFORCE WITH (4)-#5 BARS, BOTTOM, EACH WAY.
10. 1'-0" x 1'-0" CONCRETE PIER. REINFORCE WITH (4)-#6 VERTICAL BARS AND #4 TIES SPACED EVENLY AT 12" ON CENTERS.
11. WELL HOUSE. REFER TO SECTIONS C/S-304 AND D/S-304.
12. 4" SLAB ON GRADE WITH TURNDOWN EDGE (TYP).

GRAPHIC SCALE(S)

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

0 8' 16' 32'

WALKER the GROUP ARCHITECTURE
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 07/05/2024 KEVIN M. ROOMSBURG

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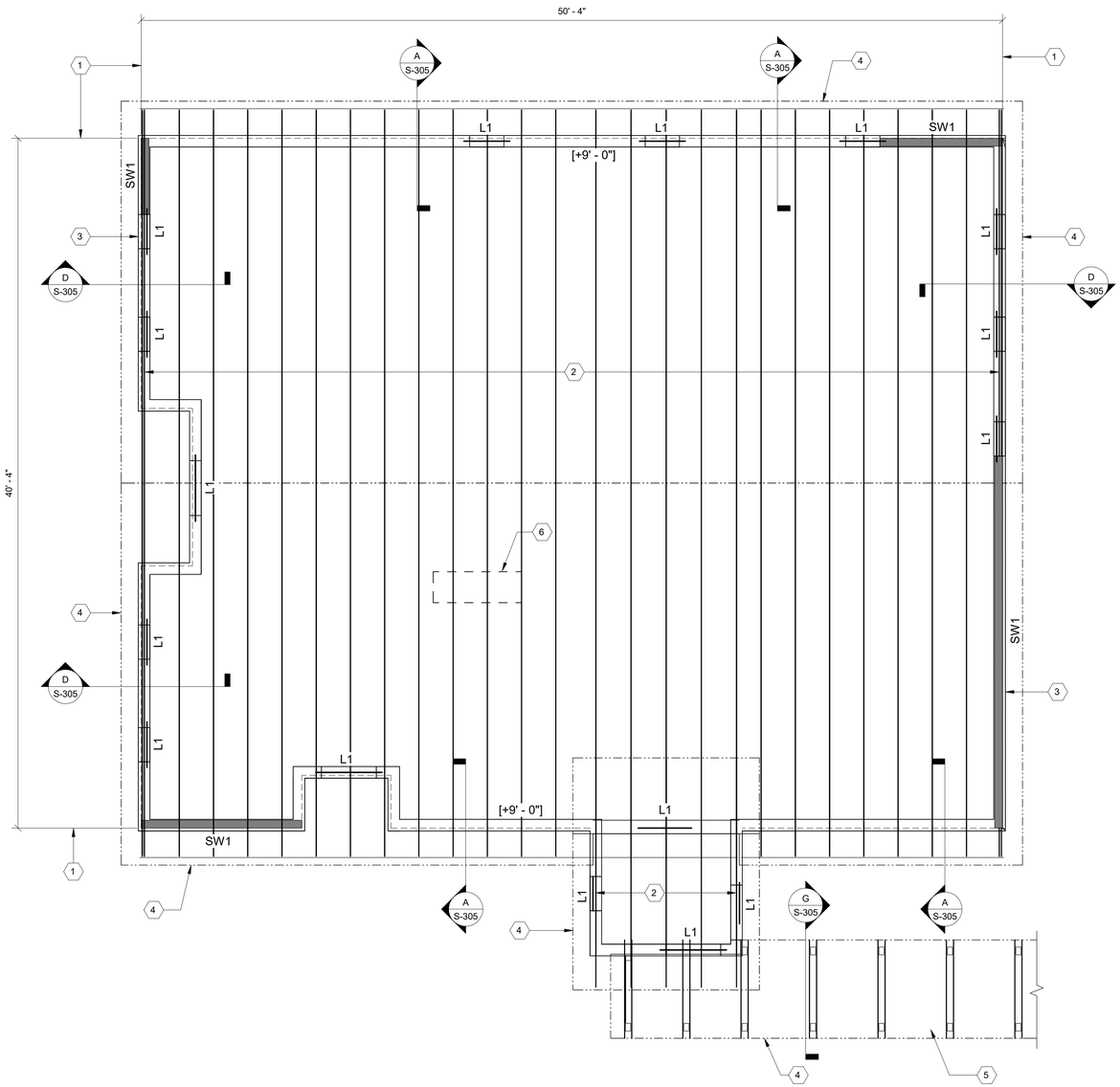
Drawing Title

WEAN TO FINISH BUILDING FOUNDATION PLAN

Sheet Number 72 Of 139

Drawing Number S-104



BIO-SECURITY BUILDING ROOF FRAMING PLAN

1/4" = 1'-0"

PLAN NORTH

GENERAL SHEET NOTES

1. DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS FINISHED FIRST FLOOR ELEVATION _____ = 0'-0".
2. THE TERM TRUSS BEARING ELEVATION INDICATES TOP OF DOUBLE TOP PLATE SUPPORTING TRUSS. TRUSS BEARING ELEVATIONS ARE INDICATED THUS [+_____] ON PLAN.
3. ROOF CONSTRUCTION IS 3/4" APA RATED SHEATHING SUPPORTED ON PRE-ENGINEERED TRUSSES BEARING ON WOOD STUD BEARING WALLS.
4. FOR LOCATION AND DIMENSIONS OF ROOF OPENINGS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
5. MECHANICAL UNITS SHALL BE SUPPORTED ON OR SUSPENDED FROM A MINIMUM OF 3 TRUSSES AND AT PANEL POINTS ONLY. PROVIDE STEEL SUB FRAMING IF REQUIRED.
6. FOR LINTEL SCHEDULE SEE TYPICAL DETAIL SHEET S-502. LINTELS ARE DENOTED THUS ('LX') ON PLAN. FOR EXACT LOCATION SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
7. SHEARWALLS ARE DENOTED THUS (SWX) ON PLAN. REFER TO SHEAR WALL DETAIL ON SHEET S-502.
8. FOR GENERAL NOTES, REFER TO SHEET S-001 AND S-002. FOR TYPICAL DETAILS REFER TO SHEETS S-501 AND S-502.

(#) NEW WORK KEYNOTES

1. FACE OF STUD
2. PRE-ENGINEERED METAL PLATE CONNECTED WOOD TRUSSES SPACED AT 24" ON CENTERS.
3. GABLE END WALL TRUSS
4. EDGE OF ROOF
5. COVERED WALKWAY TO BARNS
6. AHU IN ATTIC, WEIGHT = 170 LBS. THE TRUSS MANUFACTURER MUST ACCOUNT FOR THE AHU WEIGHT IN TRUSS DESIGN. CONTRACTOR MUST PROVIDE SUPPLEMENTAL FRAMING TO SUPPORT AHU. REFER TO MECHANICAL DRAWINGS FOR LOCATION AND ADDITIONAL REQUIREMENTS.

GRAPHIC SCALE(S)

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

0 2' 4' 8'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

NORTH CAROLINA PROFESSIONAL SEAL 022630 ENGINEER KEVIN M. ROOMSBURG 07/05/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

NRW ENGINEERING
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748 Lord Dunmore Drive, Suite 101
Virginia Beach, VA 23464
Phone 757-474-0612
Fax 757-474-0919
NC license C-1393

Revisions

No.	Date

Project Number 23.029 | Date 07/05/24

Drawn PDM | Checked KMR

Scale AS NOTED

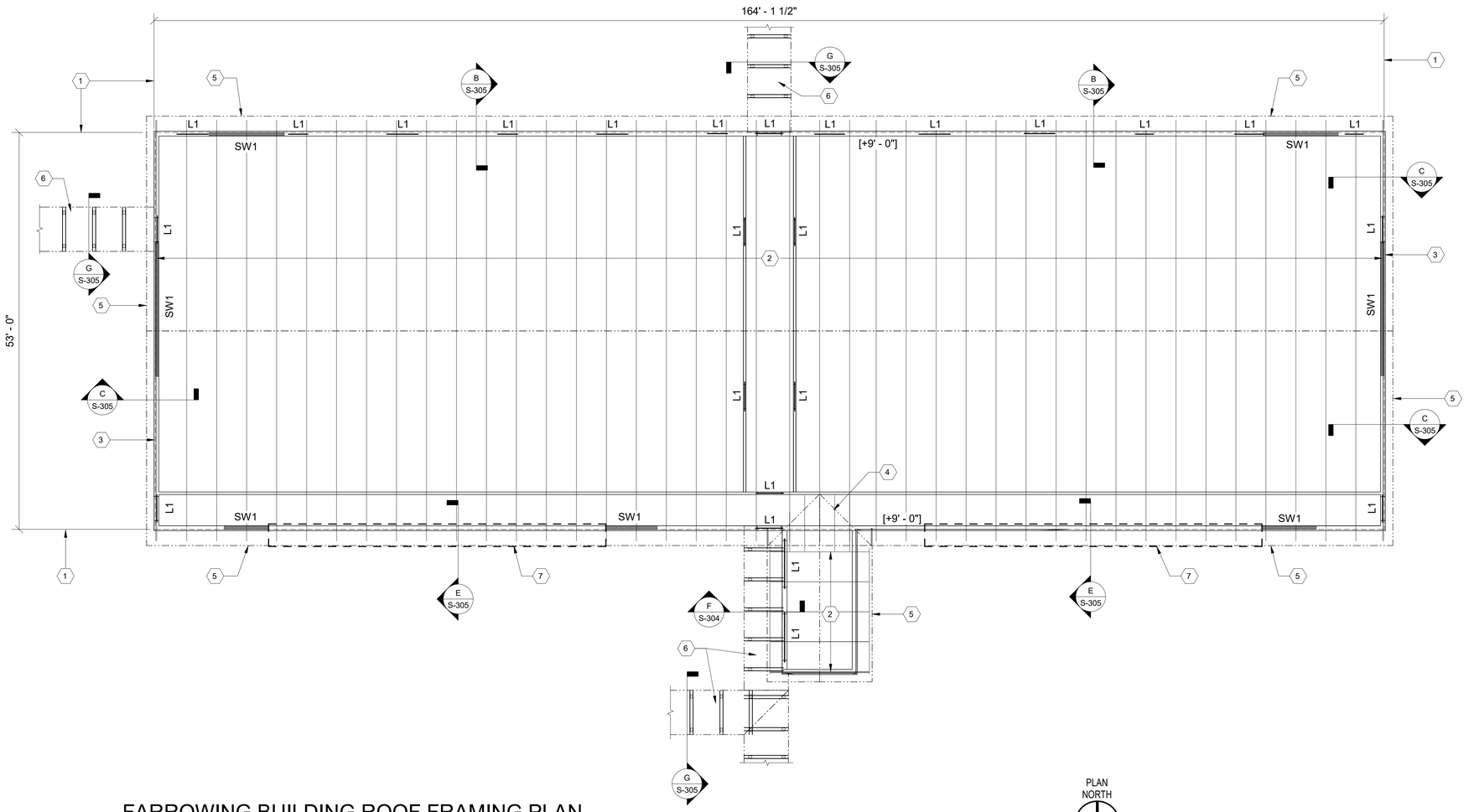
Drawing Title

BIOSECURITY BUILDING ROOF FRAMING PLAN

Sheet Number 73 Of 139

Drawing Number

S-110



FARROWING BUILDING ROOF FRAMING PLAN

1/8" = 1'-0"

PLAN NORTH

GENERAL SHEET NOTES

1. DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS FINISHED FIRST FLOOR ELEVATION _____ = 0'-0".
2. THE TERM TRUSS BEARING ELEVATION INDICATES TOP OF DOUBLE TOP PLATE SUPPORTING TRUSS. TRUSS BEARING ELEVATIONS ARE INDICATED THUS [+_____] ON PLAN.
3. ROOF CONSTRUCTION IS 3/4" APA RATED SHEATHING SUPPORTED ON PRE-ENGINEERED TRUSSES BEARING ON WOOD STUD BEARING WALLS.
4. FOR LOCATION AND DIMENSIONS OF ROOF OPENINGS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
5. FOR LINTEL SCHEDULE SEE TYPICAL DETAIL SHEET S-502. LINTELS ARE DENOTED THUS ('LX') ON PLAN. FOR EXACT LOCATION SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
6. SHEARWALLS ARE DENOTED THUS (SWX) ON PLAN. REFER TO SHEAR WALL DETAIL ON SHEET S-502.
7. FOR GENERAL NOTES, REFER TO SHEET S-001 AND S-002. FOR TYPICAL DETAILS REFER TO SHEETS S-501 AND S-502.

(#) NEW WORK KEYNOTES

1. FACE OF STUD
2. PRE-ENGINEERED METAL PLATE CONNECTED WOOD TRUSSES SPACED AT 48" ON CENTERS.
3. GABLE END WALL TRUSS
4. TRUSS OVERFRAMING BY TRUSS MANUFACTURER
5. EDGE OF ROOF
6. COVERED WALKWAY TO BARNS
7. EVAPORATIVE COOLER, REFER TO MECHANICAL DRAWINGS FOR LOCATIONS

GRAPHIC SCALE(S)

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

0 4' 8' 16'

WALKER the GROUP ARCHITECTURE incorporated
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252-636-8778

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 07/05/2024 KEVIN M. ROOMSBURG

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

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No.	Date

Project Number 23.029 | Date 07/05/24

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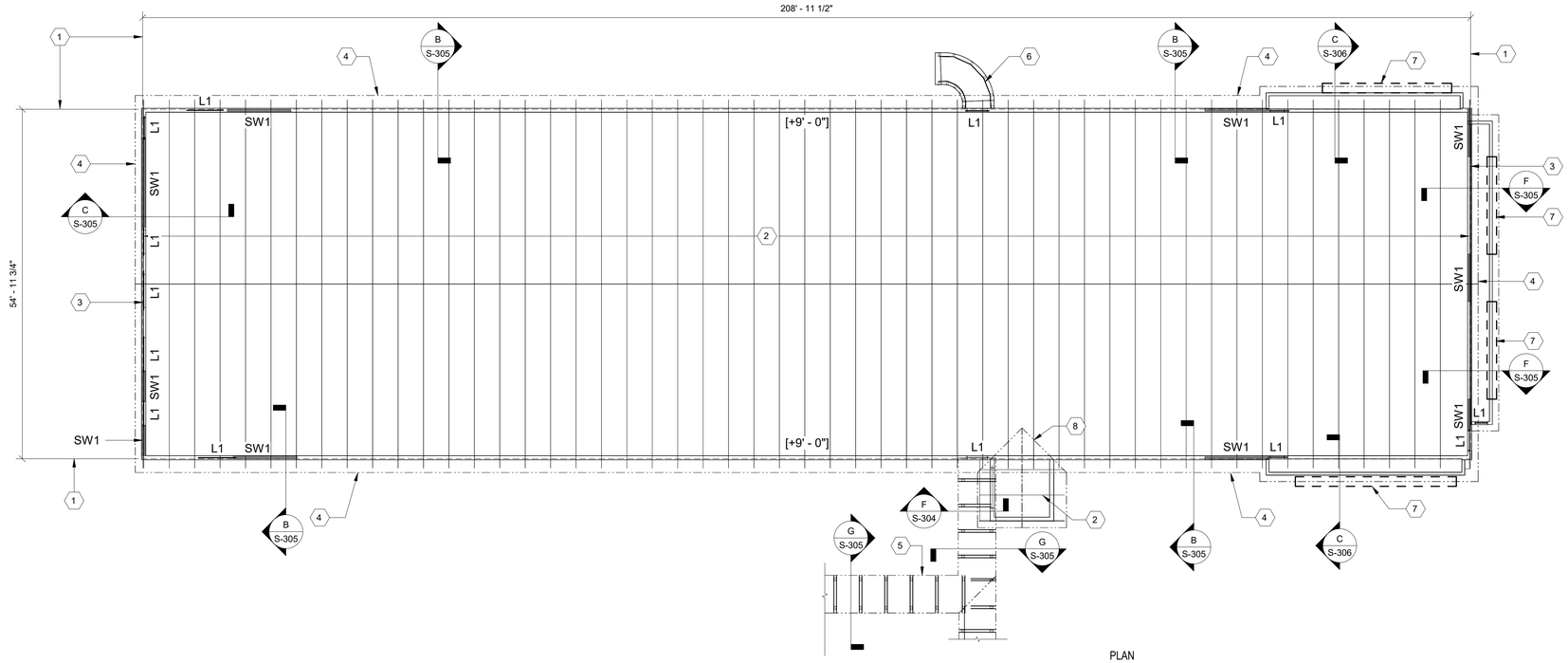
Scale AS NOTED

Drawing Title

FARROWING BUILDING ROOF FRAMING PLAN

Sheet Number 74 Of 139

Drawing Number **S-111**



PLAN NORTH

BREEDING & GESTATION ROOF FRAMING PLAN

3/32" = 1'-0"

GENERAL SHEET NOTES

1. DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS FINISHED FIRST FLOOR ELEVATION _____ = 0'-0".
2. THE TERM TRUSS BEARING ELEVATION INDICATES TOP OF DOUBLE TOP PLATE SUPPORTING TRUSS. TRUSS BEARING ELEVATIONS ARE INDICATED THUS [+_____] ON PLAN.
3. ROOF CONSTRUCTION IS 3/4" APA RATED SHEATHING SUPPORTED ON PRE-ENGINEERED TRUSSES BEARING ON WOOD STUD BEARING WALLS.
4. FOR LOCATION AND DIMENSIONS OF ROOF OPENINGS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
5. FOR LINTEL SCHEDULE SEE TYPICAL DETAIL SHEET S-502. LINTELS ARE DENOTED THUS ('LX') ON PLAN. FOR EXACT LOCATION SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
6. SHEARWALLS ARE DENOTED THUS (SWX) ON PLAN. REFER TO SHEAR WALL DETAIL ON SHEET S-502.
7. FOR GENERAL NOTES, REFER TO SHEET S-001 AND S-002. FOR TYPICAL DETAILS REFER TO SHEETS S-501 AND S-502.

(#) NEW WORK KEYNOTES

1. FACE OF STUD
2. PRE-ENGINEERED METAL PLATE CONNECTED WOOD TRUSSES SPACED AT 48" ON CENTERS.
3. GABLE END WALL TRUSS
4. EDGE OF ROOF
5. COVERED WALKWAY TO BARNS
6. COVERED WALKWAY AT CHUTE. FRAME IN ACCORDANCE WITH WALKWAY SECTIONS
7. EVAPORATIVE COOLER, REFER TO MECHANICAL DRAWINGS FOR LOCATIONS
8. TRUSS OVERFRAMING BY TRUSS MANUFACTURER

GRAPHIC SCALE(S)

SCALE: 3/32"=1'-0" 0 8' 16' 24'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 07/05/2024 KEVIN M. ROOMSBURG

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

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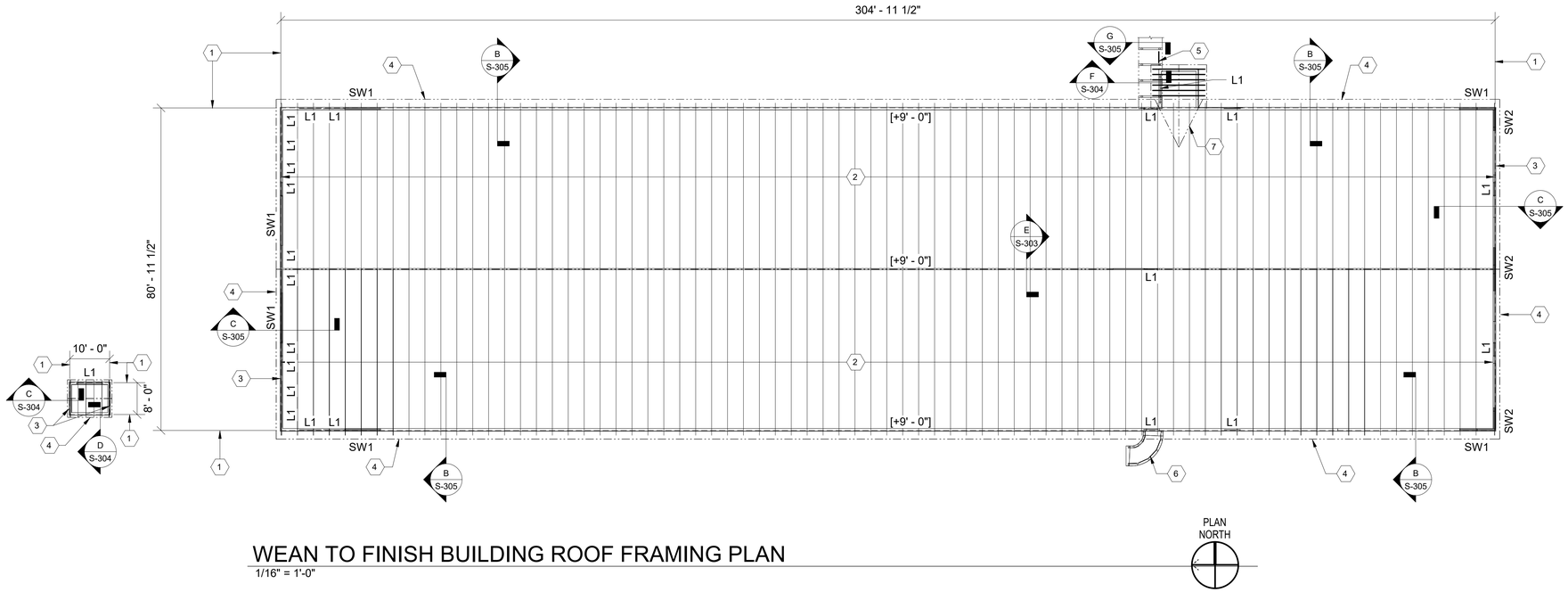
No.	Date

Project Number 23.029
Date 07/05/24
Drawn PDM
Checked KMR
Scale AS NOTED
Drawing Title

BREEDING/GESTATION BUILDING ROOF FRAMING PLAN

Sheet Number 75 Of 139

Drawing Number **S-112**



WEAN TO FINISH BUILDING ROOF FRAMING PLAN

1/16" = 1'-0"

PLAN NORTH

GENERAL SHEET NOTES

1. DATUM FOR ALL ELEVATIONS GIVEN ON THIS PLAN IS FINISHED FIRST FLOOR ELEVATION _____ = 0'-0".
2. THE TERM TRUSS BEARING ELEVATION INDICATES TOP OF DOUBLE TOP PLATE SUPPORTING TRUSS. TRUSS BEARING ELEVATIONS ARE INDICATED THUS [+_____] ON PLAN.
3. ROOF CONSTRUCTION IS 3/4" APA RATED SHEATHING SUPPORTED ON PRE-ENGINEERED TRUSSES BEARING ON WOOD STUD BEARING WALLS.
4. FOR LOCATION AND DIMENSIONS OF ROOF OPENINGS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
5. FOR LINTEL SCHEDULE SEE TYPICAL DETAIL SHEET S-502. LINTELS ARE DENOTED THUS ('LX') ON PLAN. FOR EXACT LOCATION SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
6. SHEARWALLS ARE DENOTED THUS (SWX) ON PLAN. REFER TO SHEAR WALL DETAIL ON SHEET S-502.
7. FOR GENERAL NOTES, REFER TO SHEET S-001 AND S-002. FOR TYPICAL DETAILS REFER TO SHEETS S-501 AND S-502.

(#) NEW WORK KEYNOTES

1. FACE OF STUD
2. PRE-ENGINEERED METAL PLATE CONNECTED WOOD TRUSSES SPACED AT 48" ON CENTERS.
3. GABLE END WALL TRUSS
4. EDGE OF ROOF
5. COVERED WALKWAY TO BARNS
6. COVERED WALKWAY AT CHUTE. FRAME IN ACCORDANCE WITH WALKWAY SECTIONS
7. TRUSS OVERFRAMING BY TRUSS MANUFACTURER

GRAPHIC SCALE(S)

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

0 8' 16' 32'

WALKER the GROUP ARCHITECTURE
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PO BOX 541, NEW BERN, NC 28563
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 07/05/2024 KEVIN M. ROOMSBURG

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

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Revisions

No. Date

Project Number 23.029

Date 07/05/24

Drawn PDM

Checked KMR

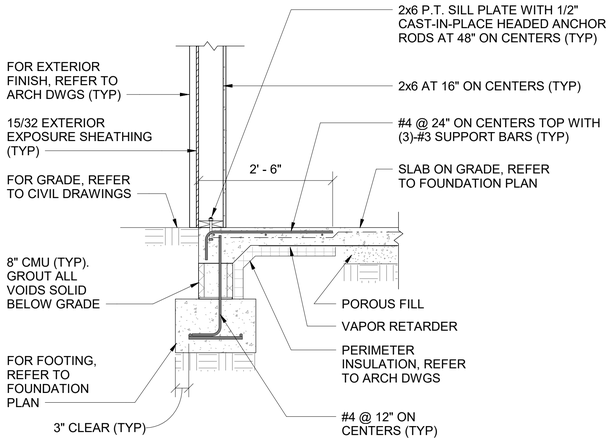
Scale AS NOTED

Drawing Title

WEAN TO FINISH BUILDING ROOF FRAMING PLAN

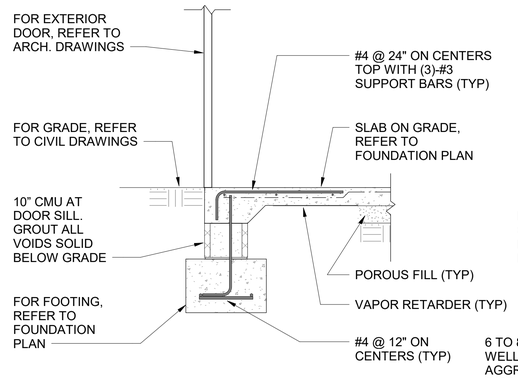
Sheet Number 76 Of 139

Drawing Number S-113



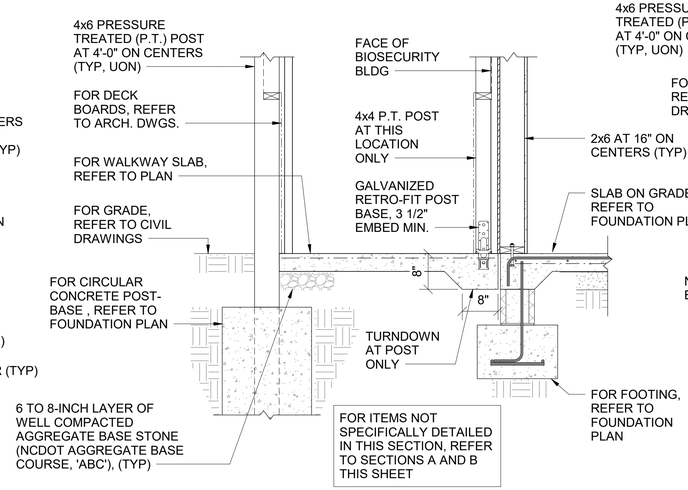
A SECTION

SCALE: 3/4" = 1'-0"



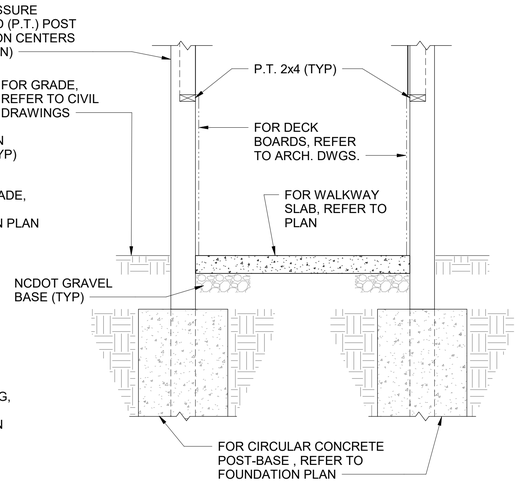
B SECTION

SCALE: 3/4" = 1'-0"



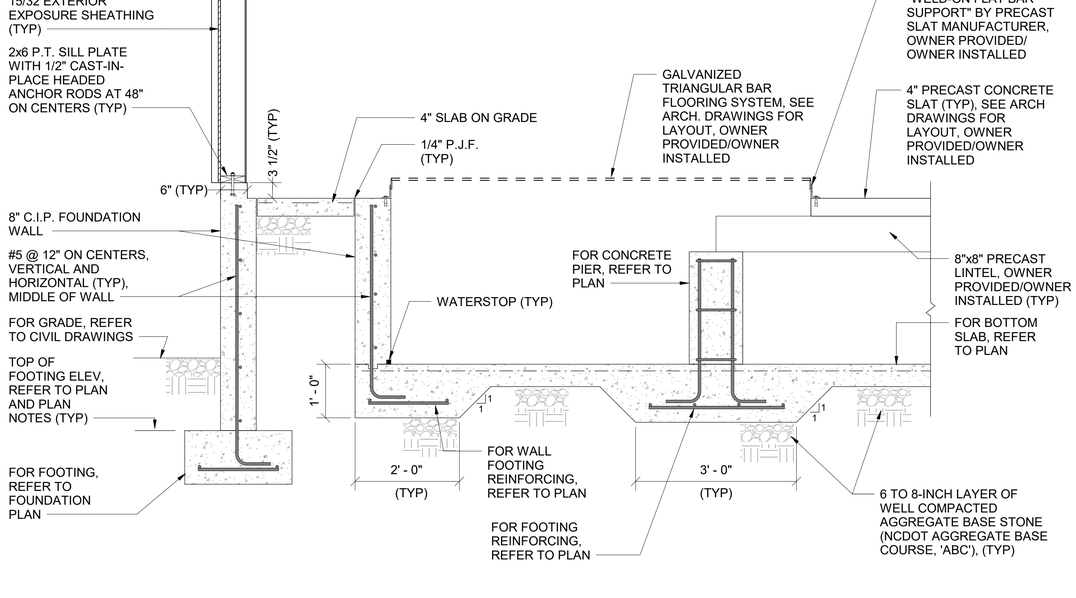
C SECTION

SCALE: 3/4" = 1'-0"



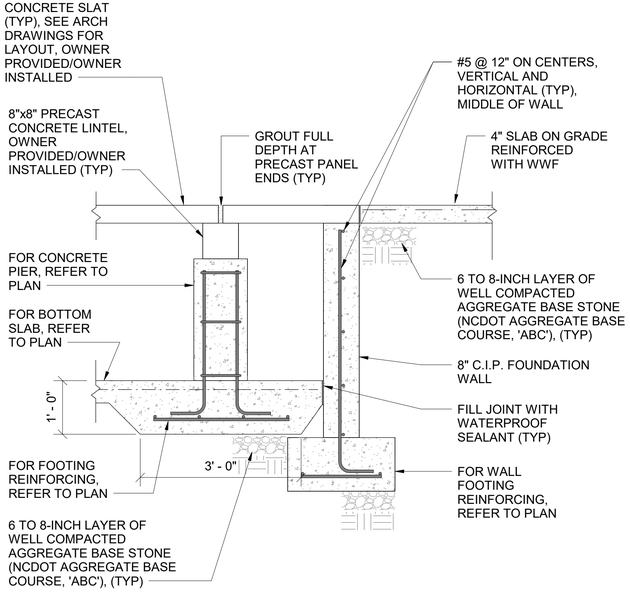
D SECTION

SCALE: 3/4" = 1'-0"



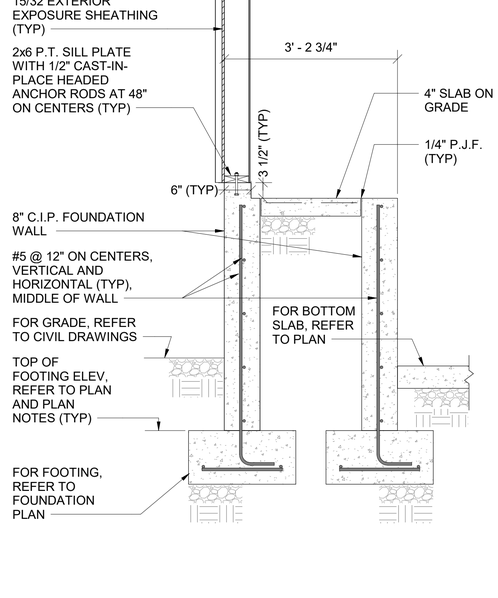
E SECTION

SCALE: 3/4" = 1'-0"



F SECTION

SCALE: 3/4" = 1'-0"



G SECTION

SCALE: 3/4" = 1'-0"

SCALE: 3/4"=1'-0" 0 1' 2' 3'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

NORTH CAROLINA REGISTERED PROFESSIONAL 022630 ENGINEER KEVIN M. ROOMSBURG 07/05/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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Revisions

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Project Number 23.029

Date 07/05/24

Drawn PDM

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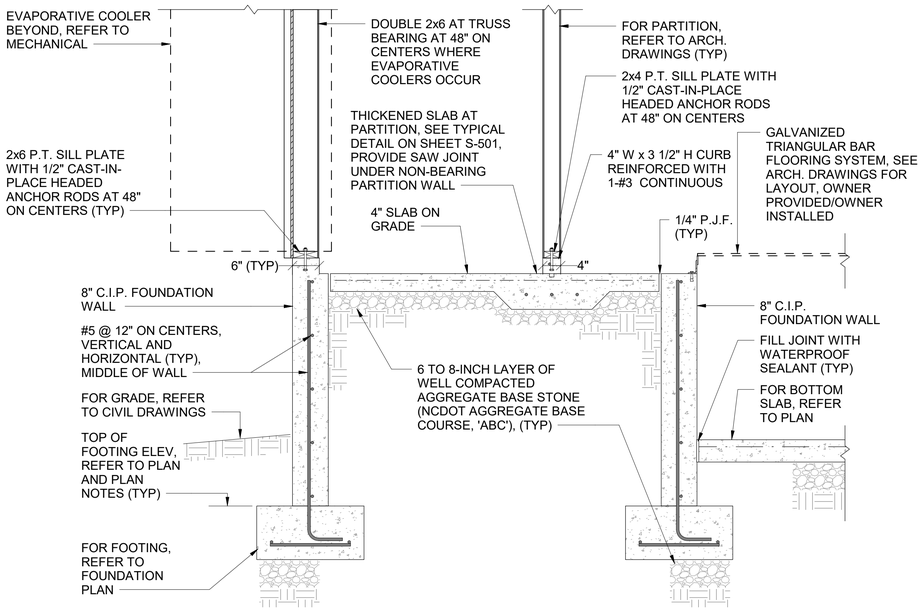
Scale AS NOTED

Drawing Title

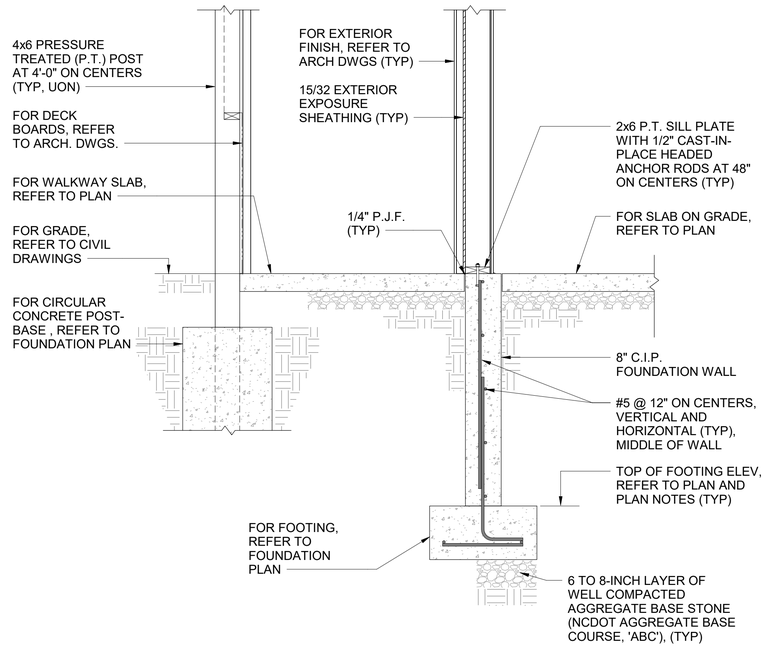
SECTIONS

Sheet Number 77 of 139

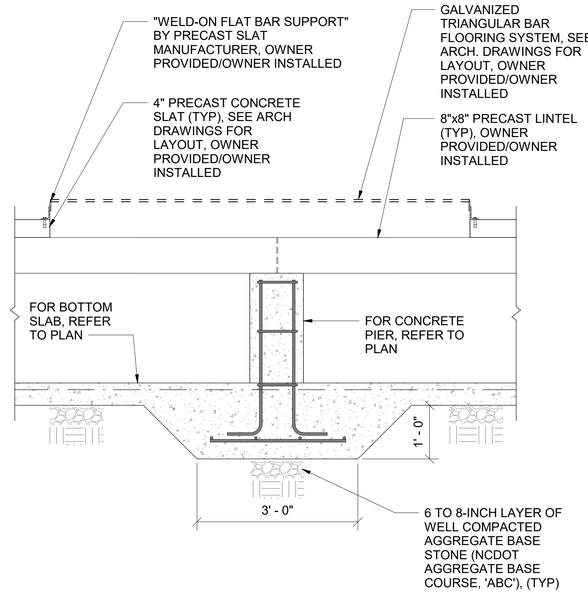
Drawing Number S-301



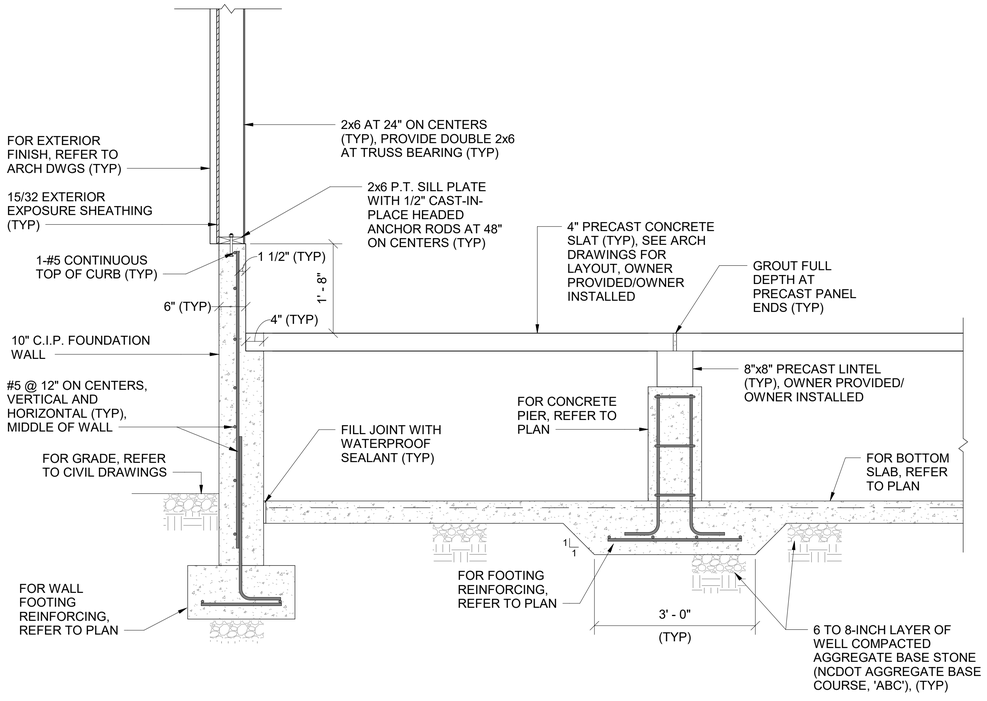
A **SECTION**
SCALE: 3/4" = 1'-0"



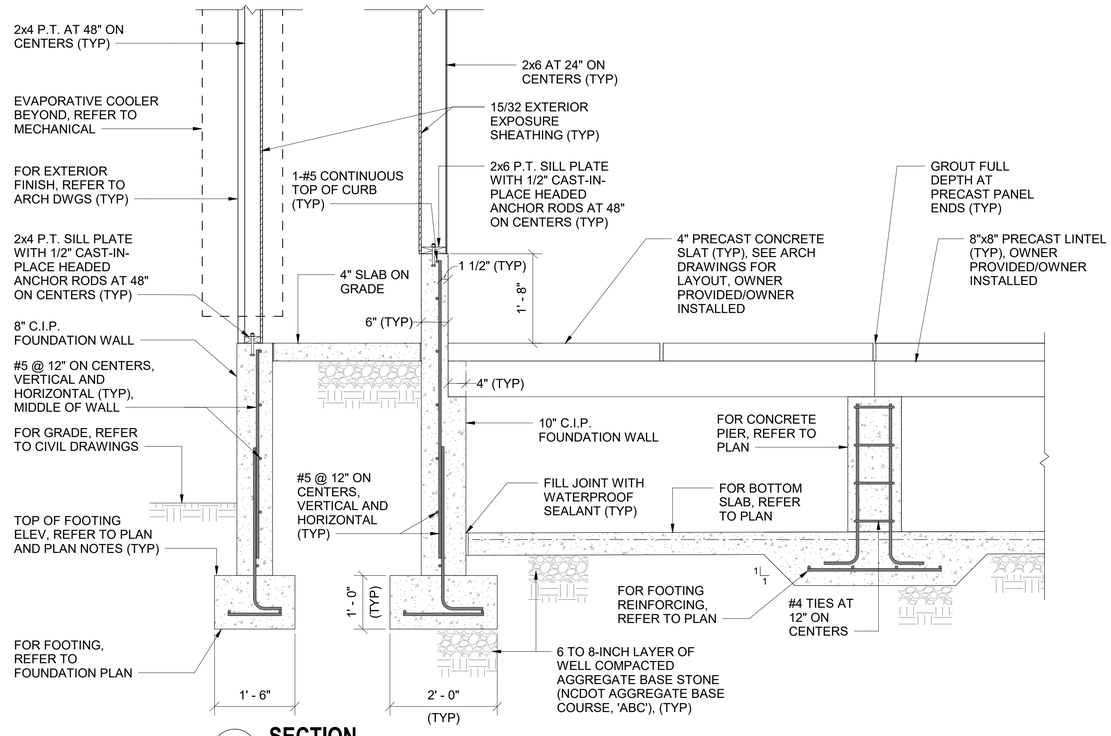
B **SECTION**
SCALE: 3/4" = 1'-0"



C **SECTION**
SCALE: 3/4" = 1'-0"



D **SECTION**
SCALE: 3/4" = 1'-0"



E **SECTION**
SCALE: 3/4" = 1'-0"

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 07/05/2024 KEVIN M. ROOMSBURG

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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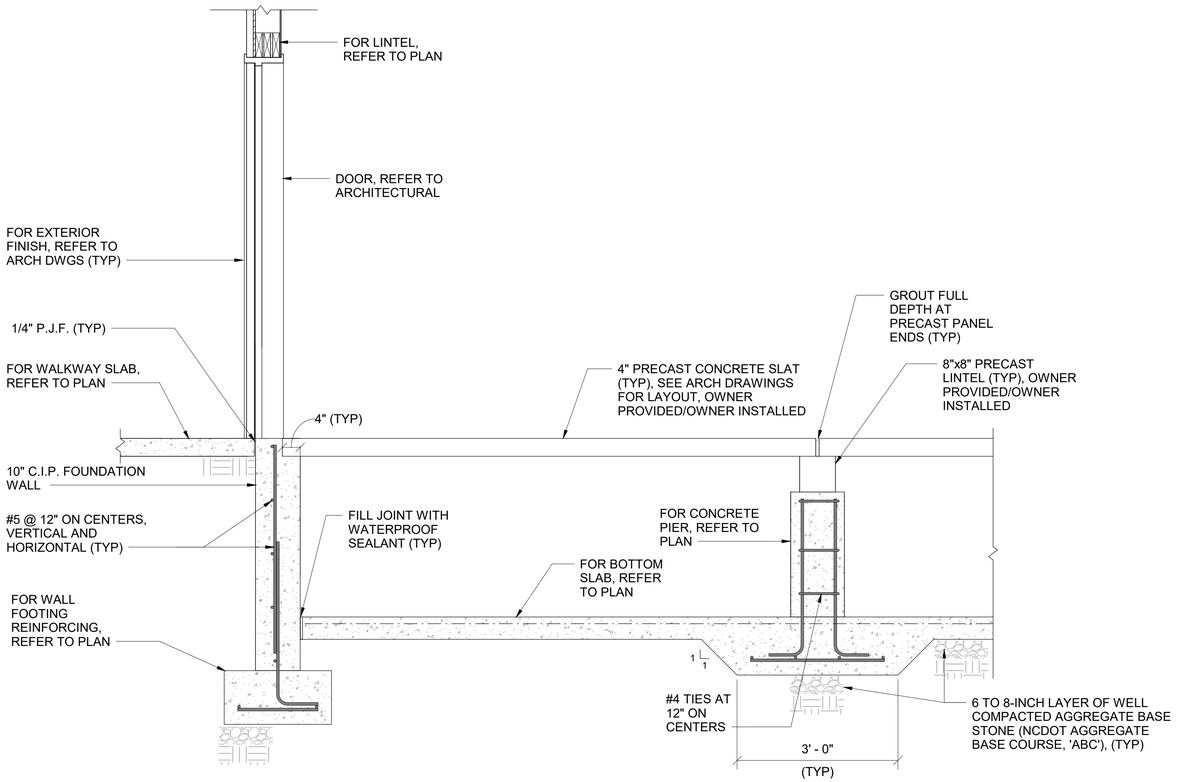
Revisions
No. Date

Project Number 23.029
Date 07/05/24
Drawn PDM
Checked KMR
Scale AS NOTED
Drawing Title

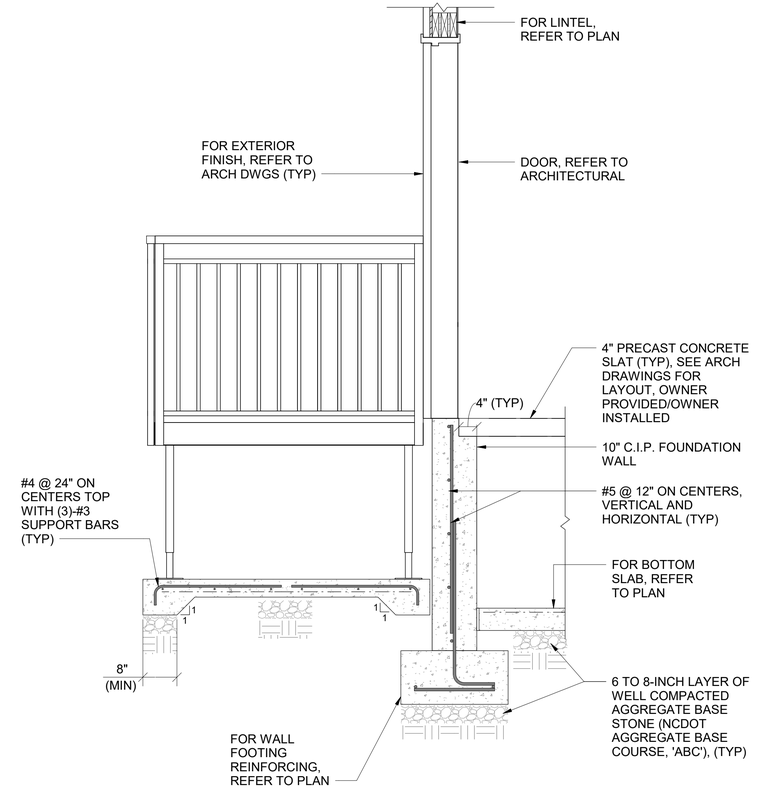
SECTIONS

Sheet Number 78 Of 139
Drawing Number S-302



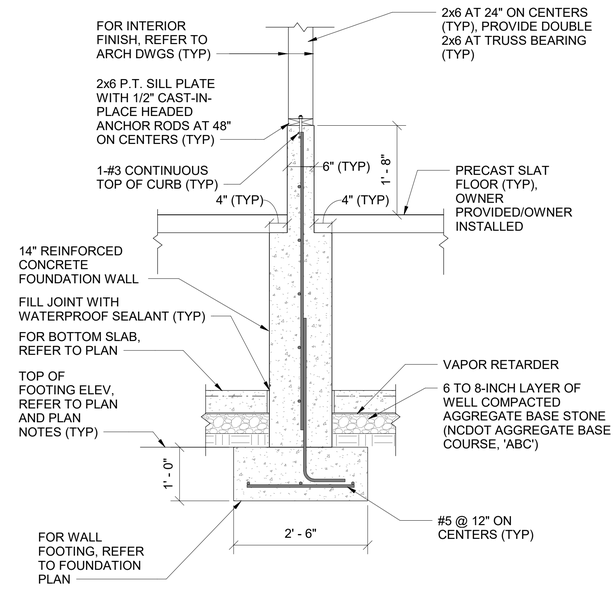
A SECTION

SCALE: 3/4" = 1'-0"



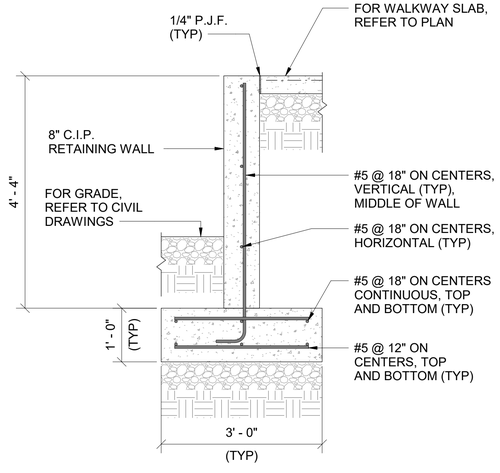
B SECTION

SCALE: 3/4" = 1'-0"



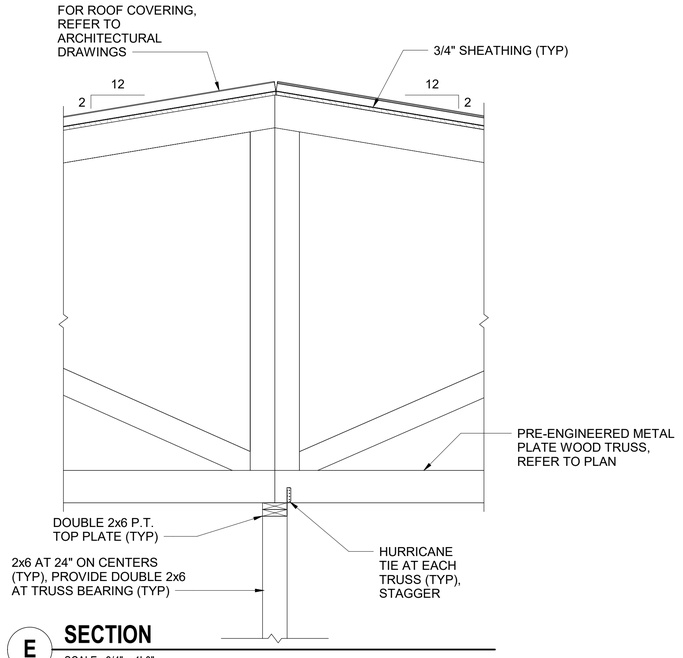
C SECTION

SCALE: 3/4" = 1'-0"



D SECTION

SCALE: 3/4" = 1'-0"



E SECTION

SCALE: 3/4" = 1'-0"

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

NORTH CAROLINA PROFESSIONAL
022630
ENGINEER
KEVIN M. ROOMSBURG
07/05/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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Revisions

No. Date

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Date 07/05/24
Drawn PDM
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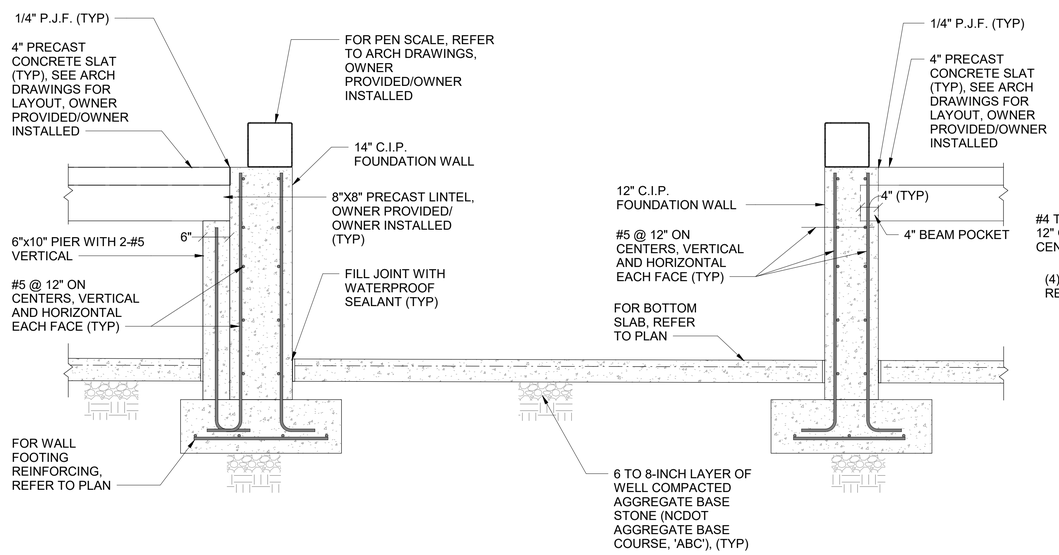
Scale AS NOTED
Drawing Title

SECTIONS

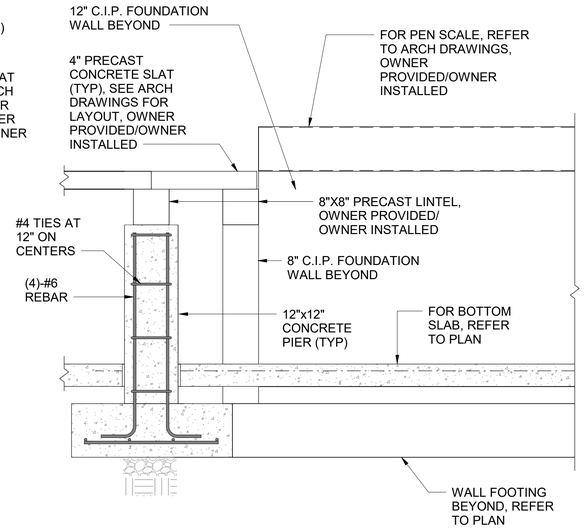
Sheet Number 79 Of 139

Drawing Number S-303



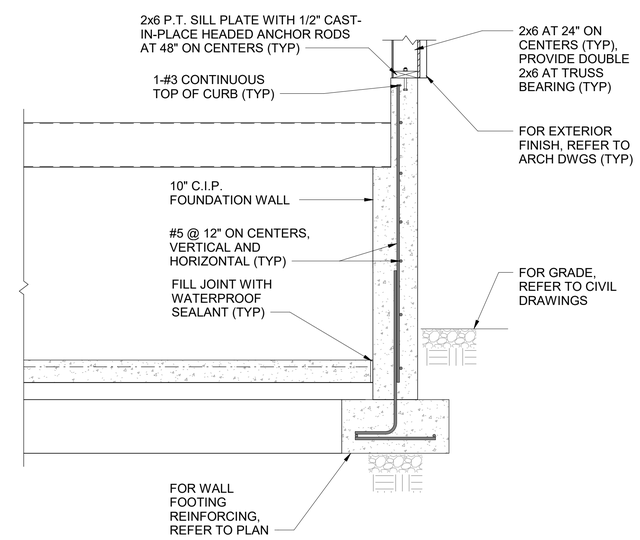
A SECTION

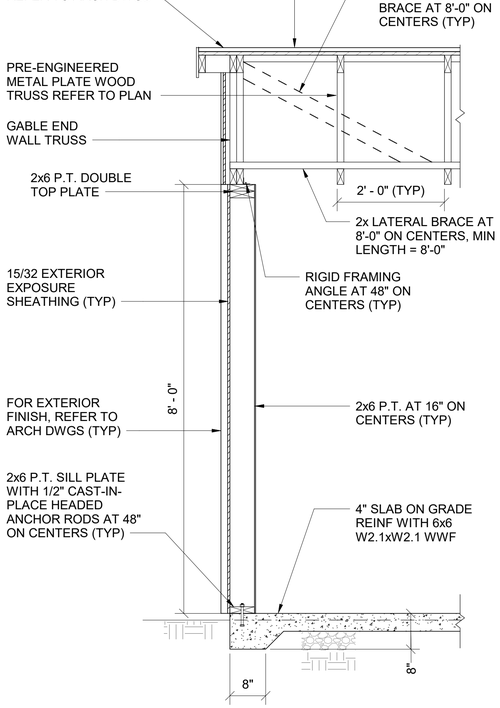
SCALE: 3/4" = 1'-0"



B SECTION

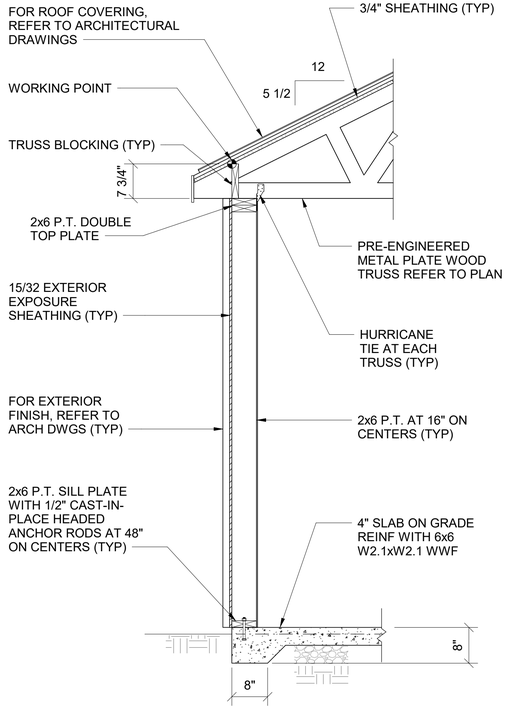
SCALE: 3/4" = 1'-0"





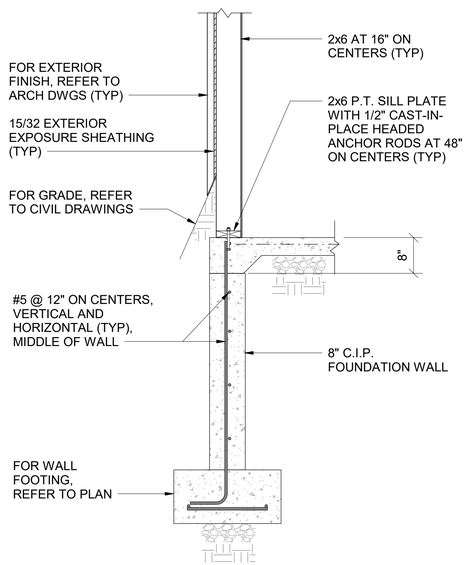
C SECTION

SCALE: 3/4" = 1'-0"



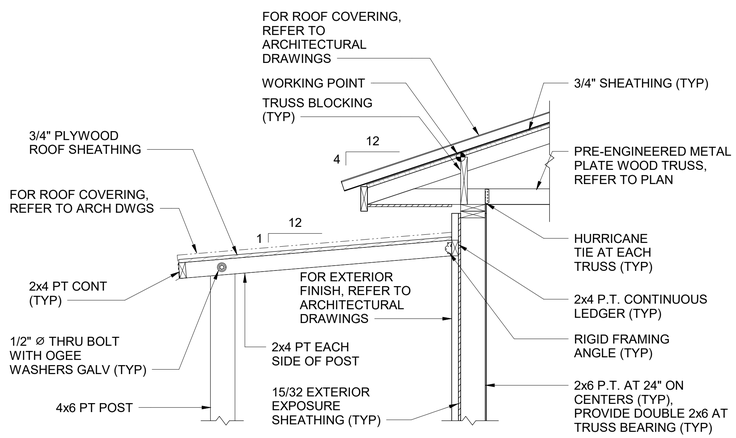
D SECTION

SCALE: 3/4" = 1'-0"



E SECTION

SCALE: 3/4" = 1'-0"



F SECTION

SCALE: 3/4" = 1'-0"

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022630 07/05/2024 KEVIN M. ROOMSBURG

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Revisions

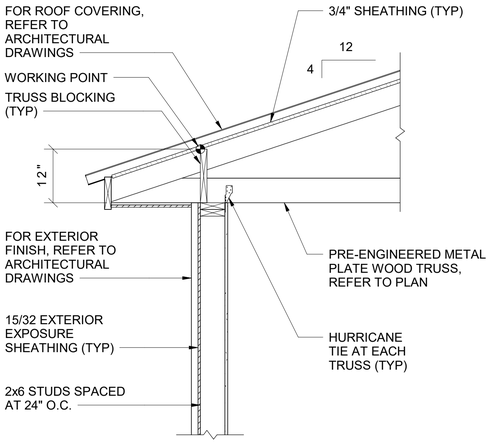
No.	Date

Project Number 23.029 | Date 07/05/24
Drawn PDM | Checked KMR
Scale AS NOTED
Drawing Title

SECTIONS

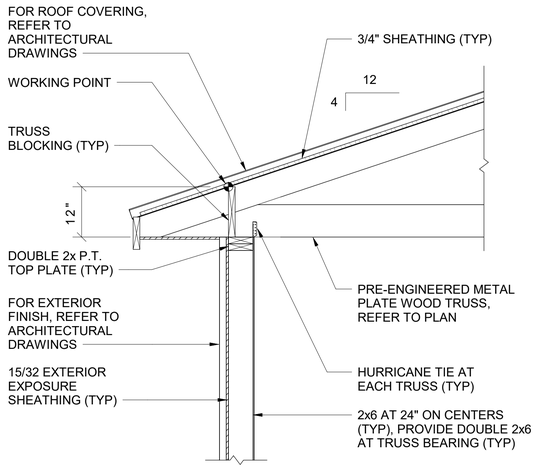
Sheet Number 80 Of 139

Drawing Number **S-304**



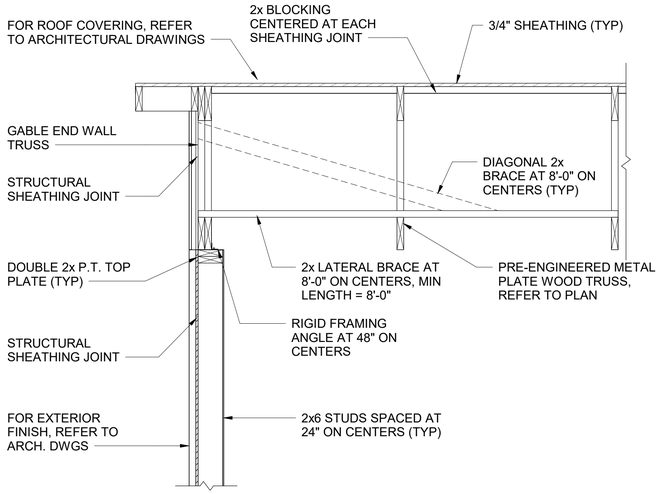
A SECTION

SCALE: 3/4" = 1'-0"



B SECTION

SCALE: 3/4" = 1'-0"



C SECTION

SCALE: 3/4" = 1'-0"

D SECTION

SCALE: 3/4" = 1'-0"

E SECTION

SCALE: 3/4" = 1'-0"

F SECTION

SCALE: 3/4" = 1'-0"

G SECTION

SCALE: 3/4" = 1'-0"

SCALE: 3/4"=1'-0" 0 1' 2' 3'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

NORTH CAROLINA PROFESSIONAL SEAL 022630 ENGINEER KEVIN M. ROOMSBURG 07/05/2024

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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Virginia Beach, VA 23464
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NC license C-1393

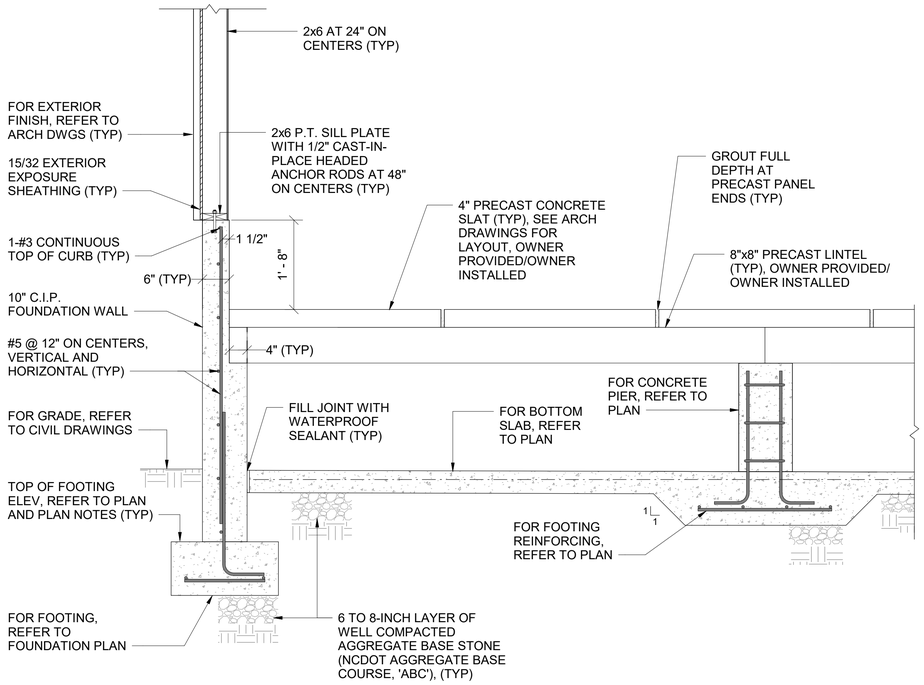
Revisions

No.	Date

Project Number 23.029 | Date 07/05/24
Drawn PDM | Checked KMR
Scale AS NOTED
Drawing Title

SECTIONS

Sheet Number 81 Of 139
Drawing Number S-305



A **SECTION**
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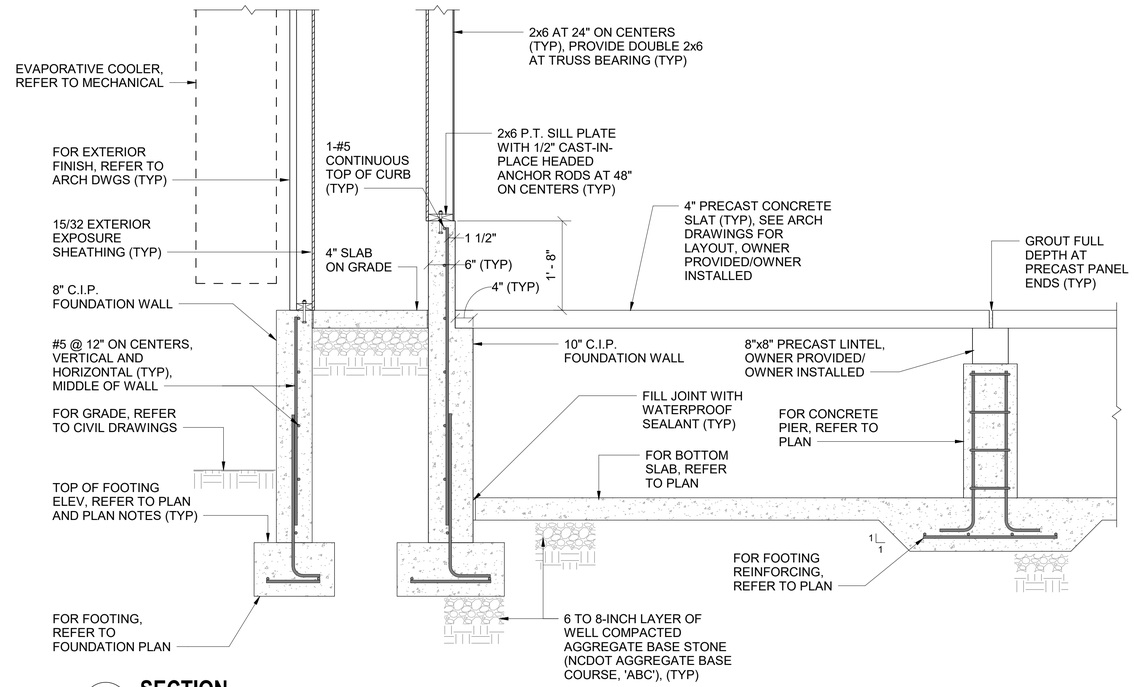

B **SECTION**
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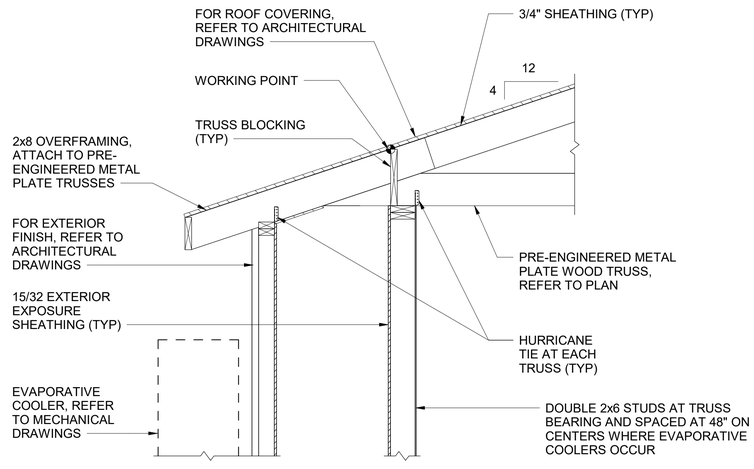

C **SECTION**
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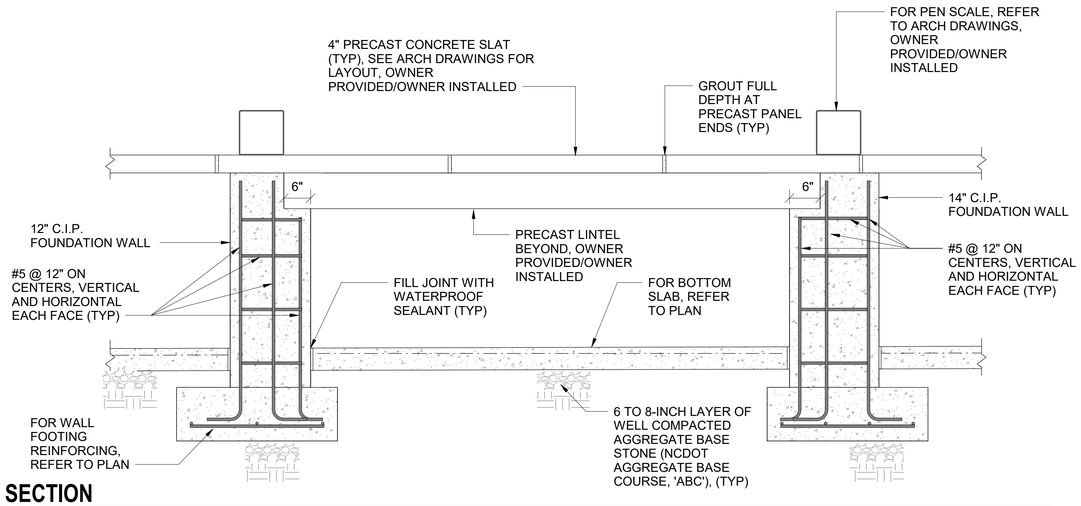

D **SECTION**
SCALE: 3/4" = 1'-0"

SCALE: 3/4"=1'-0" 0 1' 2' 3'

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Date 07/05/24
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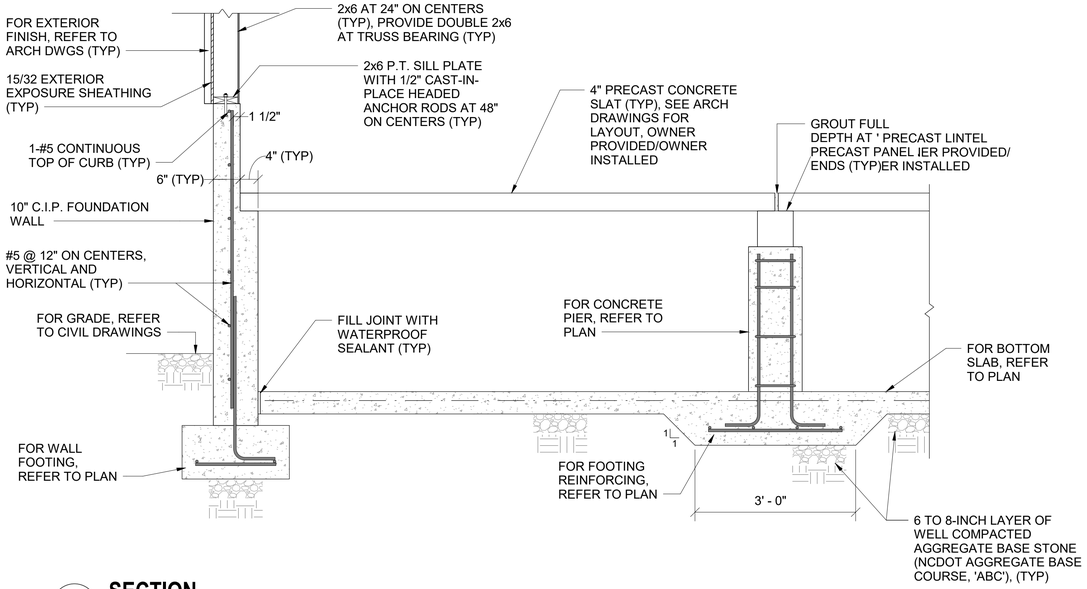
Checked KMR
Scale AS NOTED
Drawing Title

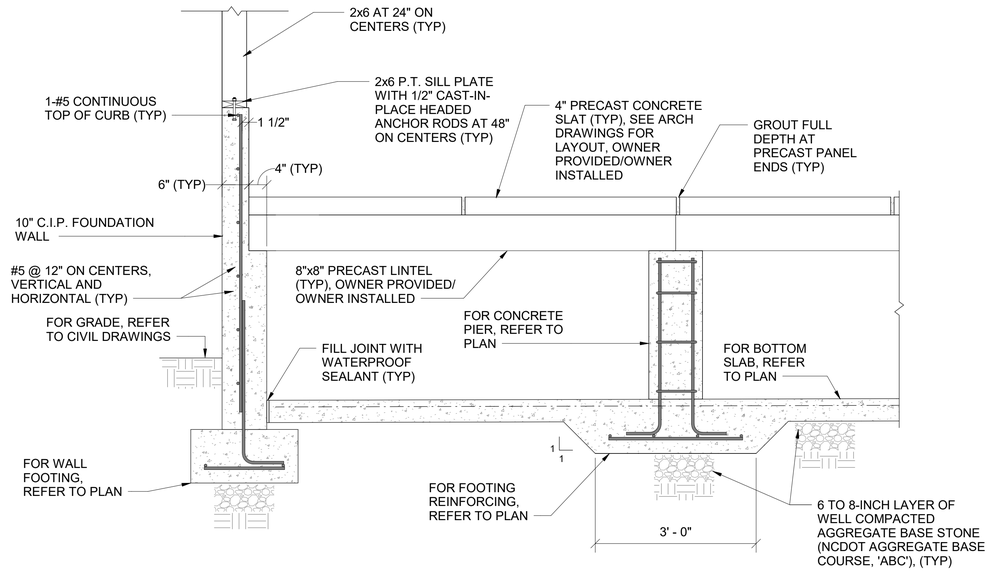
SECTIONS

Sheet Number 82 Of 139
Drawing Number S-306



A SECTION

SCALE: 3/4" = 1'-0"



B SECTION

SCALE: 3/4" = 1'-0"

SCALE: 3/4"=1'-0"

0 1' 2' 3'

WALKER the GROUP ARCHITECTURE
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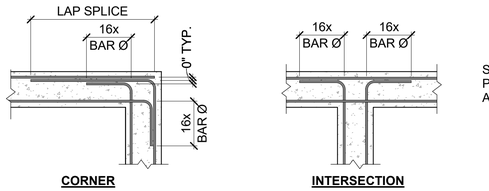
Scale AS NOTED

Drawing Title

SECTIONS

Sheet Number 83 Of 139

Drawing Number S-307

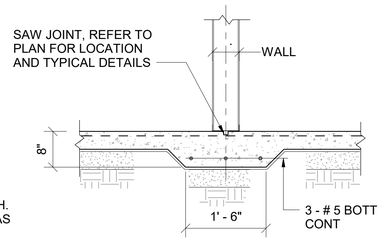


CORNER **INTERSECTION**

NOTES:
1. THIS DETAIL APPLIES TO CONCRETE AND MASONRY BOND BEAMS.
2. REFER TO CONCRETE MASONRY NOTES AND CONCRETE REINFORCEMENT LAP SPLICE SCHEDULE ON S-001 FOR SPLICE LENGTH.
3. WHERE THREE BARS OCCUR, CENTER BAR SHALL BE TREATED SAME AS INNER FACE BAR.

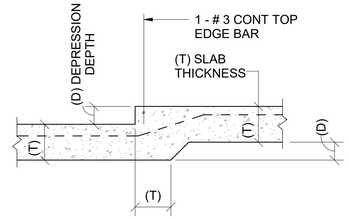
TYPICAL CONTINUOUS REINFORCEMENT AT CORNERS AND INTERSECTIONS

NOT TO SCALE



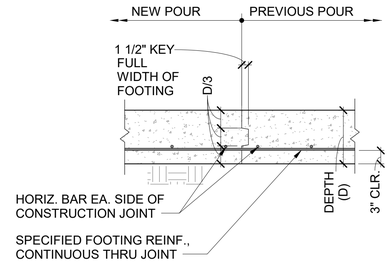
TYPICAL THICKENED SLAB DETAIL

NOT TO SCALE



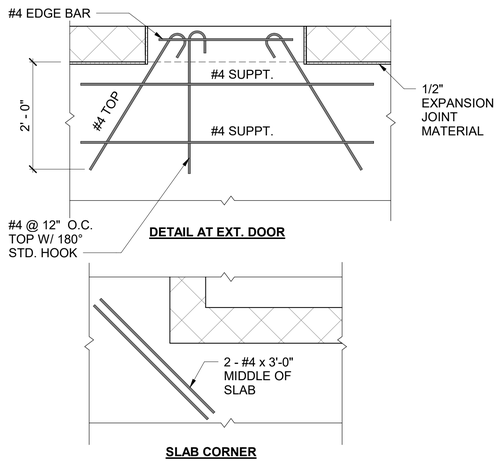
TYPICAL DEPRESSED SLAB

NOT TO SCALE



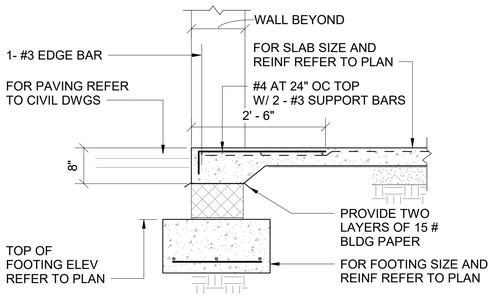
TYPICAL FOOTING CONSTRUCTION JOINT DETAIL

NOT TO SCALE



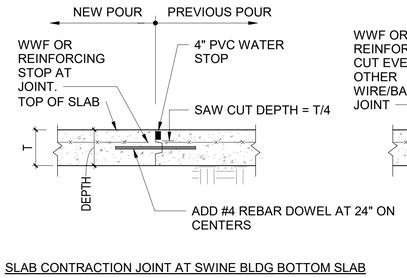
TYPICAL DETAIL SHOWING SLAB REINFORCING AT EXT. DOORS & CORNERS

NOT TO SCALE

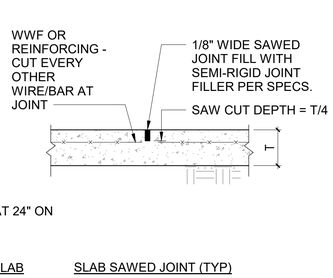


TYPICAL SILL DETAIL

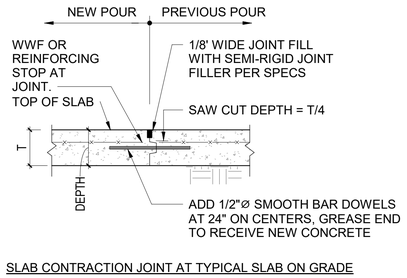
NOT TO SCALE



SLAB CONTRACTION JOINT AT SWINE BLDG BOTTOM SLAB



SLAB SAWED JOINT (TYP)

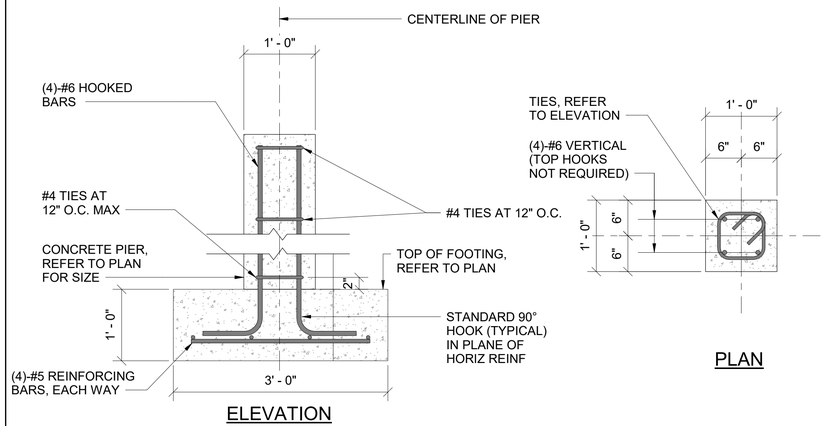


SLAB CONTRACTION JOINT AT TYPICAL SLAB ON GRADE

TYPICAL SLAB CONTROL JOINT DETAILS

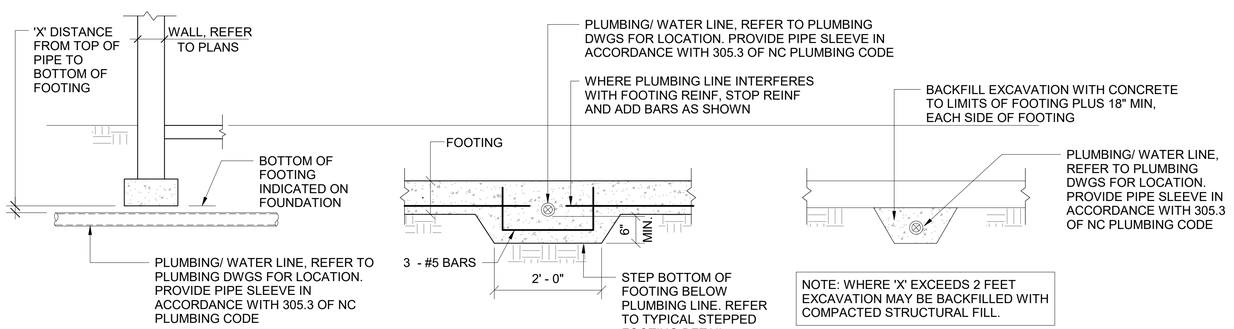
NOT TO SCALE

CONCRETE REINFORCEMENT LAP SPLICE SCHEDULE	
BAR SIZE	**LAP LENGTH**
#4	20"
#5	25"
#6	30"
#7	44"
#8	50"
#9	57"



TYPICAL CONCRETE PIER DETAILS

NOT TO SCALE



TYPICAL WALL FOOTING DETAIL AT PLUMBING / WATER LINES

NOT TO SCALE

WALKER the GROUP ARCHITECTURE
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PO BOX 541, NEW BERN, NC 28563
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Scale AS NOTED

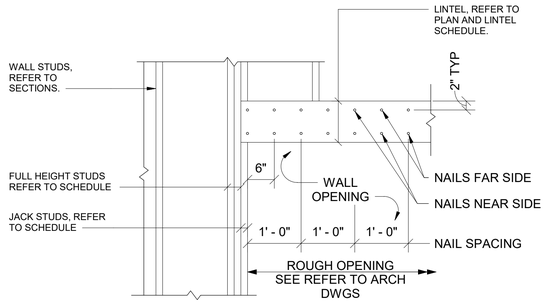
Drawing Title

TYPICAL DETAILS

Sheet Number 84 Of 139

Drawing Number

S-501



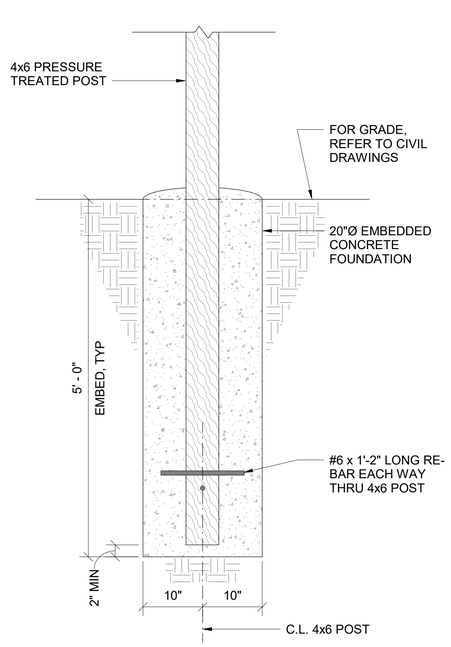
WOOD LINTEL SCHEDULE

CONSTRUCTION				
LINTEL MARK	WALL STUD SIZE	LINTEL	NUMBER OF FULL HEIGHT STUDS	NUMBER OF JACK STUDS
L1	2x6	(3) 2x6 W/ (2) - 15/32" APA RATED PLYWOOD FILLER.	2	1

WOOD LINTEL SCHEDULE NOTES:
1. LINTEL CONSTRUCTION NOTED ABOVE APPLIES TO LINTELS DENOTED ON PLAN.
2. FOR EXACT SIZE AND LOCATION OF ALL WALL OPENINGS, COORDINATE WITH ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.

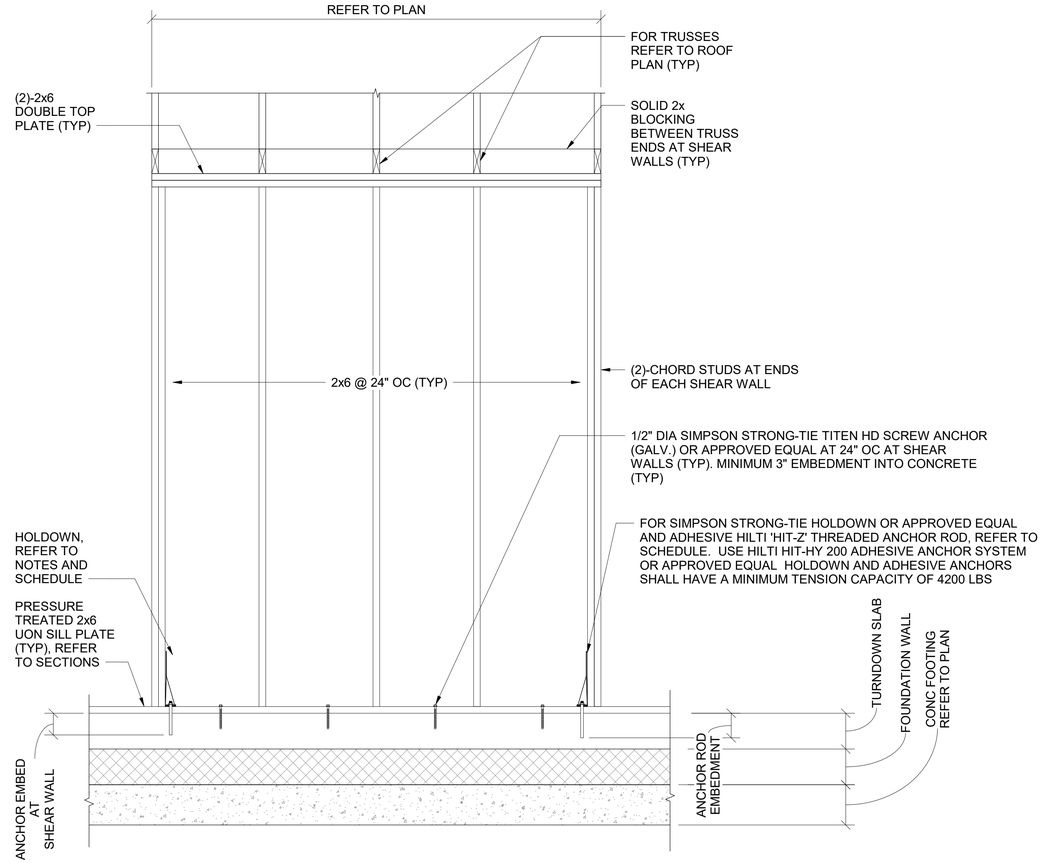
TYPICAL WOOD LINTEL DETAIL

NOT TO SCALE



TYPICAL COVERED WALKWAY POST DETAIL

NOT TO SCALE



SHEAR WALL SCHEDULE

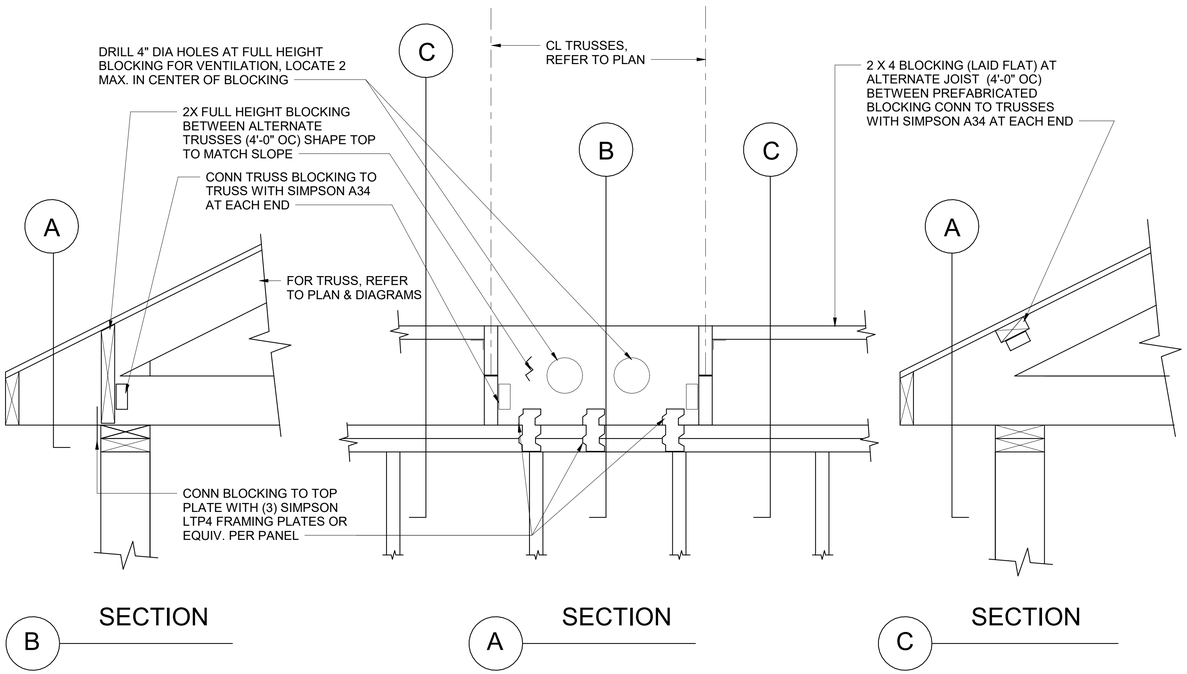
MARK	SHEATHING	FASTENER SPACING, PANEL EDGES	PANEL EDGE FASTENERS TYPE	CHORD STUDS	HOLDOWN TYPE	REQUIRED FASTENERS	HILTI HIT-Z THREADED ROD DIA	EMBEDMENT DEPTH
SW1	15/32	6"	8d	(2)-2x6	HTT4	18-SD #10 X 1 1/2"	5/8"	5"
SW2	15/32	4"	8d	(2)-2x6	HTT4	18-SD #10 X 1 1/2"	5/8"	5"

SHEAR WALL NOTES:

1. SHEAR WALLS SHALL BE SHEATHED WITH 15/32" OSB SHEATHING.
2. SHEAR WALL PANEL EDGE FASTENING SHALL BE PER THE SCHEDULE ON THIS SHEET.
3. SHEAR WALL FIELD FASTENING (NOT PANEL EDGES) SHALL BE 8d COMMON NAILS SPACED AT 12" OC ALONG SUPPORTS. REFER TO SHEAR WALL SCHEDULE FOR ADDITIONAL FASTENING REQUIREMENTS.
4. NAILS SHALL PENETRATE A MINIMUM OF 1-3/8" INTO STUDS, CHORDS OR BLOCKING.
5. SHEAR WALLS SHALL BE BLOCKED AT PANEL EDGES AND AT 4'-0" OC VERTICALLY FROM TOP OF FINISHED FIRST FLOOR.
6. CHORD STUDS SHALL BE SOUTHERN PINE No. 2 OR BETTER.
7. SHEAR WALL METAL CONNECTORS ARE BASED ON PRODUCTS BY SIMPSON STRONG-TIE. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. THE CONTRACTOR HAS THE OPTION TO USE "APPROVED EQUAL" METAL CONNECTORS. THE CONTRACTOR SHALL SUBMIT PRODUCT DATA FOR SIMPSON STRONG-TIE CONNECTORS OR APPROVED EQUAL PRIOR TO FABRICATION AND CONSTRUCTION FOR REVIEW BY THE ENGINEER OF RECORD.
8. FASTENERS SHALL BE PLACED NO CLOSER THAN 3/8" FROM PANEL EDGES.

TYPICAL DETAIL - WOOD SHEAR WALL

NOT TO SCALE



TYPICAL TRUSS BLOCKING PANEL DETAILS

NOT TO SCALE

WALKER the GROUP ARCHITECTURE
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Revisions
No. Date

Project Number 23.029
Date 07/05/24
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TYPICAL DETAILS

Sheet Number 85 Of 139
Drawing Number **S-502**

FIXTURE HW DISCHARGE TEMPERATURES

PLUMBING FIXTURE	MAXIMUM DISCHARGE TEMPERATURE	REFERENCE STANDARD
PUBLIC HAND-WASHING FACILITIES	>85°F & <110°F	ASSE 1070
INDIVIDUAL SHOWER VALVES	≤120°F	ASSE 1016 OR CSA B125

NOTE: PROIVDE LISTED TEMPERING DEVICE FOR EACH FIXTURE PER TABLE.

PLUMBING COORDINATION NOTE:

CONTRACTOR SHALL COORDINATE CLOSELY WITH ALL TRADES TO ENSURE PLUMBING IS INSTALLED WITHOUT CONFLICTING WITH OTHER BUILDING SYSTEMS.

CONTRACTOR SHALL VERIFY AND COORDINATE THE EXACT LOCATION OF ALL MECHANICAL, ELECTRICAL, PLUMBING, AND STRUCTURAL SYSTEMS AND COMPONENTS (EXISTING AND NEW) PRIOR TO COMMENCING WORK. REFER TO ARCHITECTURAL DRAWINGS FOR CONSTRUCTION DETAILS.

CONTRACTOR SHALL VERIFY ALL POINTS OF CONNECTION TO EXISTING SYSTEMS, PRIOR TO BEGINNING ANY WORK. THE FAILURE TO COMPLY WITH THESE DIRECTIONS SHALL NOT CONSTITUTE THE BASIS FOR A CHANGE ORDER SHOULD REWORK BE REQUIRED.

ANY CONDITIONS FOUND THAT WILL PROHIBIT MAKING THE FINAL CONNECTIONS(S) OR EXECUTIONS OF THE WORK SHALL BE REPORTED TO THE A/E IMMEDIATELY.

CONTRACTOR TO FIELD COORDINATE ALL PIPING LOCATIONS. WHERE THE EXACT LOCATIONS OF SANITARY PIPING NOT KNOWN, CONTRACTOR TO FIELD TRACE EXACT ROUTING PRIOR TO ANY SAW CUTTING.

ANY SHUT DOWNS OR INTERRUPTIONS IN SERVICE SHALL BE APPROVED BY THE OWNER AT LEAST 7 DAYS BEFORE THE WORK IS TO BE EXECUTED. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DELAYS TO THE PROJECT THAT ARISE DUE TO HIS FAILURE TO COMPLY WITH THESE REQUIREMENTS.

SFU NOTE:

THE BIOSECURITY BUILDING OF THIS PROJECT ADDS 96.6 SFU's TO THE DOMESTIC WATER SYSTEM.

THE FARROWING BUILDING OF THIS PROJECT ADDS 36.3 SFU's TO THE DOMESTIC WATER SYSTEM.

THE BREEDING & GESTATION BUILDING OF THIS PROJECT ADDS 36.3 SFU's TO THE DOMESTIC WATER SYSTEM.

THE WEAN TO FINISH BUILDING OF THIS PROJECT ADDS 36.3 SFU's TO THE DOMESTIC WATER SYSTEM.

THIS PROJECT ADDS 204.6 SFU's TOTAL TO THE DOMESTIC WATER SYSTEM.

DFU NOTE:

THE BIOSECURITY BUILDING OF THIS PROJECT ADDS 77.5 DFU's TO THE SANITARY WASTE SYSTEM.

THE FARROWING BUILDING OF THIS PROJECT ADDS 2,179 DFU's TO THE SANITARY WASTE SYSTEM.

THE BREEDING & GESTATION BUILDING OF THIS PROJECT ADDS 3,160 DFU's TO THE SANITARY WASTE SYSTEM.

THE WEAN TO FINISH BUILDING OF THIS PROJECT ADDS 3,404 DFU's TO THE SANITARY WASTE SYSTEM.

THIS PROJECT ADDS 8,821 DFU's TOTAL TO THE SANITARY WASTE SYSTEM.

ENERGY CODE COMPLIANCE PATH:

- ☐ ASHRAE 90.1
- ☒ NCECC CHAPTER 4 - PRESCRIPTIVE
- ☐ NCECC CHAPTER 4 - PERFORMANCE

GENERAL NOTES

ALL PLUMBING VENTS IN EXTERIOR WALLS SHALL BE OFFSET A MINIMUM OF 3'-0" AT ROOF BEFORE ROOF PENETRATION.

ALL PLUMBING VENTS WITHIN A 10'-0" RADIUS OF EXHAUST VENTS SHALL BE EXTENDED TO A HEIGHT OF 2'-0" ABOVE EXHAUST VENT CROWN.

ALL PLUMBING VENTS WITHIN A 10'-0" RADIUS OF ANY ROOF TOP UNIT SHALL BE EXTENDED TO A HEIGHT OF 3'-0" ABOVE THE FRESH AIR INTAKE.

ALL PLUMBING & PLUMBING MATERIALS SHALL MEET THE REQUIREMENTS OF THE STATE & LOCAL PLUMBING CODES.

ALL HOSE BIBBS SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.

ALL WALL HYDRANTS SHALL BE MOUNTED 24" ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED.

SLOPES & INVERT ELEVATIONS OF ALL INTERIOR PIPING SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED, IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. ALL PIPING SHALL BE RUN TO AVOID CONFLICTS WITH OTHER TRADES.

COORDINATE WITH ARCHITECTURAL WORKING DRAWINGS BEFORE ROUGHING-IN PLUMBING FIXTURES.

MAKE PROPER HOT & COLD WATER, HOT WATER RECIRCULATING, WASTE, VENT, & GAS, ETC., PIPING CONNECTIONS TO ALL FIXTURES & EQUIPMENT EVEN THOUGH ALL BRANCHES, FITTINGS & CONNECTIONS ARE NOT SHOWN.

COORDINATE LOCATION OF ALL EQUIPMENT, FIXTURES & PIPING WITH STRUCTURAL & ALL OTHER TRADES. PIPING RUN AC SHALL BE RUN AS HIGH AS POSSIBLE.

ALL OPENINGS IN CEILINGS & PLENUM WALLS FOR PLUMBING PIPES SHALL BE SEALED AIR TIGHT.

SEE SITE PLAN FOR EXTENT OF ALL PIPING LEAVING & ENTERING BUILDING.

ALL HOT & COLD WATER PIPING INDICATED TO RUN ABOVE FINISHED CEILINGS OR IN EXTERIOR WALLS SHALL BE INSTALLED ON THE CONDITIONED SPACE SIDE OF THE BUILDING INSULATION.

SLOPES & INVERT ELEVATIONS OF EXTERIOR SEWERS, MANHOLES, ETC., SHALL BE ESTABLISHED & VERIFIED BY PLUMBING CONTRACTOR BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED & NECESSARY INVERT ELEVATIONS OBTAINED.

PROVIDE ASSE 1072 TRAP SEAL DEVICE FOR ALL FLOOR DRAINS.

IT IS THE INTENTION OF THESE DRAWINGS TO COVER ALL WORK & MATERIAL FOR A COMPLETE FIRST CLASS INSTALLATION. ANY EQUIPMENT, PLUMBING FIXTURE, TRIM HARDWARE &/OR DEVICES USUALLY UTILIZED IN THE CLASS OF WORK, THOUGH NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, BUT WHICH MAY BE NECESSARY FOR THE SATISFACTORY COMPLETION OF THE WORK (AS DETERMINED BY THE ARCHITECT) SHALL BE FURNISHED & INSTALLED BY THE CONTRACTOR AS PART OF HIS TOTAL WORK.

VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT, PIPING, FIXTURES, ETC.

SEAL AROUND ALL WALL PENETRATIONS AIR TIGHT AT MECHANICAL ROOM, & FILL ANY VOIDS WITH MORTAR.

INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS & ALL APPLICABLE LISTING REQUIREMENTS.

SANITARY WASTE PIPE SERVING KITCHEN AREAS THAT RECEIVES 140°F OR ABOVE DISCHARGE WATER FROM KITCHEN EQUIPMENT SHALL BE CAST IRON.

INTERDISCIPLINARY COORDINATION

IF THIS CONTRACTOR SHOULD ELECT TO PROPOSE ANY EQUIPMENT THAT HAS DIFFERENT PHYSICAL OR ELECTRICAL CHARACTERISTICS, ETC. WHEN COMPARED TO THE BASIS OF DESIGN EQUIPMENT, THIS CONTRACTOR IS RESPONSIBLE FOR COORDINATING THESE CHANGES WITH THE OTHER TRADES PRIOR TO ORDERING OF EQUIPMENT. IF THERE SHOULD BE ANY ADDITIONAL WORK INCURRED BY THE OTHER TRADES AS A RESULT OF THIS CONTRACTOR'S EQUIPMENT SELECTION, ALL COSTS ASSOCIATED WITH THE ADDITIONAL WORK SHALL BE BORNE BY THIS CONTRACTOR.

LEGENDS & ABBREVIATIONS

- F — FIRE PROTECTION PIPING
- DOMESTIC COLD WATER (CW)
- DOMESTIC HOT WATER (HW)
- HP — HP — HIGH PRESSURE DOMESTIC HOT WATER (HPHW)
- DOMESTIC HOT WATER RETURN (HWR)
- RW — RECIRCULATED SANITARY WASTE (RW)
- S — STORM PIPE (S)
- SANITARY WASTE PIPE (WP)
- SANITARY VENT PIPE (VP)
- PIPE SLEEVE
- SMOKE PARTITION
- 1 HOUR FIRE RATED WALL
- 1 HOUR FIRE & SMOKE RATED WALL
- 2 HOUR FIRE RATED WALL
- 2 HOUR FIRE & SMOKE RATED WALL
- PIPE TURN UP
- PIPE TURN DOWN (DN)
- PIPE CAPPED
- HOSE BIBB (HB)
- WALL HYDRANT (WH)
- CLEAN OUT (CO)
- WALL CLEAN OUT (WCO)
- REDUCED PRESSURE BACKFLOW PREVENTER (RPBP)
- DOUBLE CHECK BACKFLOW PREVENTER (DCBP)
- BALANCING VALVE (BV)
- BALL VALVE (BV)
- CHECK VALVE (CV)
- GATE VALVE (GV)
- PRESSURE REGULATOR (PR)
- SOLENOID VALVE (SV)
- STRAINER
- M — WATER METER WITH BALL VALVES
- M — WATER METER WITH GATE VALVES
- FLOOR CLEAN OUT (FCO) GROUND CLEAN OUT (GCO)
- FLOOR DRAIN (FD)
- FLOOR SINK (FS)
- ACCESS PANEL (AP)
- VENT THROUGH ROOF (VTR)
- NEW WORK NOTE DESIGNATION
- DETAIL/RISER/ENLARGED PLAN
- SHEET WHERE SHOWN/CUT

AC	ABOVE CEILING
ADA	AMERICANS WITH DISABILITIES ACT COMPLIANT
AF	ABOVE FLOOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ASSE	AMERICAN SOCIETY OF SANITARY ENGINEERING
BF	BELOW FLOOR
BFF	BELOW FINISH FLOOR
BG	BELOW GRADE
BLDG	BUILDING
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
DFU	DRAINAGE FIXTURE UNIT
DOMW	DOMESTIC WATER
EBC	EXPOSED BELOW CEILING
ET-#	EXPANSION TANK MARK
EXLP	EXPANSION LOOP
F	FAHRENHEIT
FLR	FLOOR
GAL	GALLON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSE POWER
HWRP-#	HOT WATER RECIRCULATION PUMP MARK
IN W.C.	INCH WATER COLUMN
INV	INVERT
KW	KILOWATTS
MAX	MAXIMUM
MIN	MINIMUM
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
P-#	PLUMBING FIXTURE MARK
PG	PRESSURE GAUGE
PSI	POUNDS PER SQUARE INCH
PW-#	PRESSURE WASHER UNIT MARK
RSDM	RISER DIAGRAM
SANR	SANITARY
SFU	SUPPLY FIXTURE UNIT
TEMP	TEMPERATURE
TG	TRAP GUARD
TYP	TYPICAL
W/	WITH
WH-#	WATER HEATER MARK
WHA	WATER HAMMER ARRESTOR
WS	WASTE STACK
°	DEGREE

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 07/29/2024 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn ADB
Checked DBB
Scale AS NOTED
Drawing Title

LEGEND, NOTES AND ABBREVIATIONS

Sheet Number 106 or 159
Drawing Number P001

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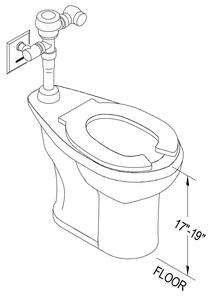


SPECIFICATIONS:
1. VITREOUS CHINA ADA COMPLIANT FLOOR MOUNTED FLUSH VALVE WATER CLOSET WITH FULLY GLAZED 2-1/8" TRAPWAY, ELONGATED SIPHON JET BOWL, 1.28 GALLONS PER FLUSH.
2. CHROME PLATED CAST BRASS EXPOSED ADA COMPLIANT SENSOR OPERATED, HARD WIRED FLUSH VALVE WITH ADJUSTABLE TAILPIECE, TRANSFORMER, SCREWDRIVER ANGLE STOP, & VANDAL RESISTANT STOP CAP. MATERIALS SHALL BE CHLORAMINE RESISTANT. AS MANUFACTURED BY SLOAN.
3. WHITE SOLID PLASTIC OPEN FRONT ELONGATED SEAT WITH EXTERNAL CHECK HINGES, INTEGRAL BUMPERS, LESS COVER.

DETAIL BASED ON AMERICAN STANDARD, "MADERA" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-1	ADA - FLUSH VALVE WATER CLOSET	INTEGRAL	-	1"	4"	2"	FLOOR

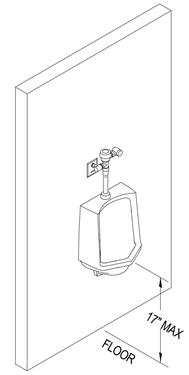
ADA - WATER CLOSET

SPECIFICATIONS:
1. VITREOUS CHINA FLOOR MOUNTED FLUSH VALVE WATER CLOSET WITH FULLY GLAZED 2-1/8" TRAPWAY, ELONGATED SIPHON JET BOWL, 1.28 GALLONS PER FLUSH. FLUSH HANDLE LOCATED ON WIDE SIDE OF STALL.
2. CHROME PLATED CAST BRASS EXPOSED SENSOR OPERATED, HARD WIRED FLUSH VALVE WITH ADJUSTABLE TAILPIECE, TRANSFORMER, SCREWDRIVER ANGLE STOP, & VANDAL RESISTANT STOP CAP. MATERIALS SHALL BE CHLORAMINE RESISTANT. AS MANUFACTURED BY SLOAN.
3. WHITE SOLID PLASTIC OPEN FRONT ELONGATED SEAT WITH EXTERNAL CHECK HINGES, INTEGRAL BUMPERS, LESS COVER.

DETAIL BASED ON AMERICAN STANDARD, "MADERA" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-2	FLUSH VALVE WATER CLOSET	INTEGRAL	-	1"	4"	2"	FLOOR

WATER CLOSET

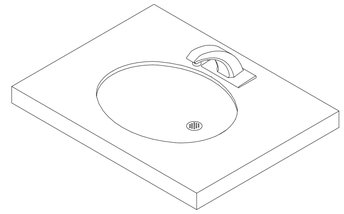


SPECIFICATIONS:
1. VITREOUS CHINA ADA COMPLIANT WALL MOUNTED FLUSH VALVE URINAL WITH FULLY GLAZED 2" TRAPWAY, 0.125 GALLON PER FLUSH.
2. CHROME PLATED CAST BRASS EXPOSED ADA COMPLIANT SENSOR OPERATED, HARD WIRED FLUSH VALVE WITH ADJUSTABLE TAILPIECE, TRANSFORMER, SCREWDRIVER ANGLE STOP, AND VANDAL RESISTANT STOP CAP. MATERIALS SHALL BE CHLORAMINE RESISTANT. AS MANUFACTURED BY SLOAN.
3. CONCEALED FLOOR MOUNT SUPPORT. WALL BRACKETS SHALL NOT BE USED.

DETAIL BASED ON AMERICAN STANDARD, "WASHBROOK" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-3	ADA - FLUSH VALVE URINAL	INTEGRAL	-	3/4"	2"	1-1/2"	WALL

ADA - URINAL

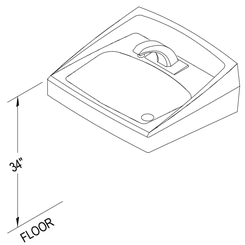


SPECIFICATIONS:
1. VITREOUS CHINA ADA COMPLIANT UNDER MOUNT LAVATORY WITH FRONT OVERFLOW.
2. CHROME PLATED SOLID BRASS HARD WIRED ELECTRONIC FAUCET WITH PROXIMITY OPERATION SENSORS, POLISH CHROME PLATED FINISH, CERAMIC VALVE, 0.5 GPM VANDAL RESISTANT AERATOR, INTEGRATED STRAINER TO PROTECT SOLENOID VALVE & AERATOR, LESS POP-UP. SLOAN MODEL ETF-80 OR EQUAL, WITH BELOW DECK THERMOSTATIC MIXING VALVE SET AT 110°F MAX (ASSE 1070) & TRANSFORMER.
3. CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. OFFSET GRID STRAINER & ADJUSTABLE 'P'-TRAP WITH ANSI & ADA APPROVED, VINYL MOLDED INSULATION WITH NYLON FASTENER KITS, PAINTED AS DIRECTED BY THE ARCHITECT.

DETAIL BASED ON AMERICAN STANDARD, "OVALYN" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-4	ADA - UNDERMOUNT LAVATORY	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	UNDER MOUNT

ADA - UNDERMOUNT LAVATORY

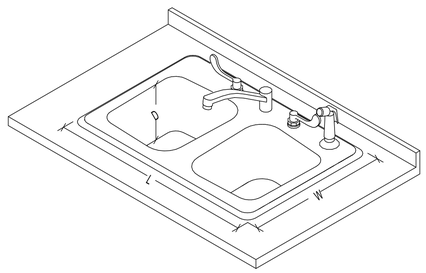


SPECIFICATIONS:
1. VITREOUS CHINA ADA COMPLIANT WALL MOUNTED LAVATORY WITH FRONT OVERFLOW & FAUCET HOLES ON 4" CENTERS & SELF DRAINING DECK.
2. CHROME PLATED SOLID BRASS HARD WIRED ELECTRONIC FAUCET WITH PROXIMITY OPERATION SENSORS, POLISH CHROME PLATED FINISH, CERAMIC VALVE, 0.5 GPM VANDAL RESISTANT AERATOR, INTEGRATED STRAINER TO PROTECT SOLENOID VALVE & AERATOR, LESS POP-UP. SLOAN MODEL ETF-80 OR EQUAL, WITH BELOW DECK THERMOSTATIC MIXING VALVE SET AT 110°F MAX (ASSE 1070). & TRANSFORMER.
3. CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. OFFSET GRID STRAINER AND ADJUSTABLE 'P'-TRAP WITH ANSI AND ADA APPROVED, VINYL MOLDED INSULATION WITH NYLON FASTENER KITS, PAINTED AS DIRECTED BY THE ARCHITECT.
4. CONCEALED FLOOR MOUNT SUPPORT. WALL BRACKETS SHALL NOT BE USED.

DETAIL BASED ON AMERICAN STANDARD, "LUCERNE" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-5	ADA - WALL MOUNTED LAVATORY	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	WALL MOUNTED

ADA - WALL MOUNTED LAVATORY

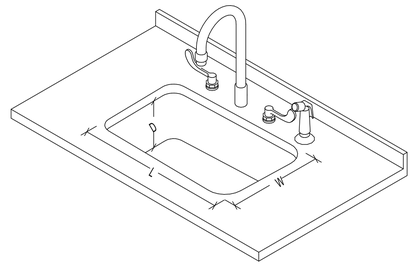


SPECIFICATIONS:
1. SEAMLESS DIE DRAWN 18 GAUGE STAINLESS STEEL ADA COMPLIANT SINK WITH EXPOSED SURFACE POLISHED TO A NON-POROUS FINISH. FULLY COATED UNDERSIDE INSULATED FOR SOUND AND CONDENSATE.
2. 8" CENTER, TWO HANDLE BELOW DECKMOUNT FAUCET, POLISHED CHROME PLATED FINISH TRIM, CAST BRASS BODIES, BRASS SPOUT AND TRIM, WALL FORM SWING SPOUT, STANDARD 2.2 GPM FLOW CONTROL AERATOR, 4" BLADE HANDLES, COLOR INDEX METAL HANDLES WITH VANDAL RESISTANT SCREWS, BELOW DECK THERMOSTATIC MIXTING VALVE SET AT 120°F, AND WITH HOSE SPRAY, AS MANUFACTURED BY DELTA.
3. CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. OFFSET GRID STRAINER AND ADJUSTABLE 'P'-TRAP WITH ANSI AND ADA APPROVED, VINYL MOLDED INSULATION WITH NYLON FASTENER KITS, PAINTED AS DIRECTED BY THE ARCHITECT.

DETAIL BASED ON JUST, "STYLIST" GROUP

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-6	ADA - KITCHEN SINK (2 OMPARTMENT) 16"Wx33"Lx6-1/2"D	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	COUNTER TOP

ADA - KITCHEN SINK COUNTER TOP

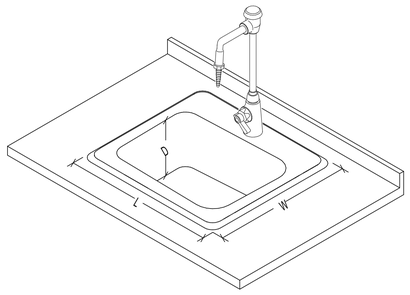


SPECIFICATIONS:
1. SEAMLESS DIE DRAWN 18 GAUGE STAINLESS STEEL ADA COMPLIANT SINK WITH EXPOSED SURFACE POLISHED TO A NON-POROUS FINISH. FULLY COATED UNDERSIDE INSULATED FOR SOUND AND CONDENSATE.
2. 8" CENTER, TWO HANDLE BELOW DECKMOUNT FAUCET, POLISHED CHROME PLATED FINISH TRIM, CAST BRASS BODIES, BRASS SPOUT AND TRIM, HEAVY DUTY RIGID/SWIVEL GOOSENECK SPOUT, STANDARD 2.2 GPM FLOW CONTROL AERATOR, 4" BLADE HANDLES, COLOR INDEX METAL HANDLES WITH VANDAL RESISTANT SCREWS, BELOW DECK THERMOSTATIC MIXING VALVE SET 120°F, AND WITH HOSE SPRAY, AS MANUFACTURED BY DELTA.
3. CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. OFFSET GRID STRAINER AND ADJUSTABLE 'P'-TRAP.

DETAIL BASED ON JUST, "STYLIST" GROUP

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-7	ADA - KITCHEN SINK 18"Wx15"Lx6-1/2"D	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	UNDER MOUNT

ADA - KITCHEN SINK UNDER MOUNT



SPECIFICATIONS:
1. SEAMLESS DIE DRAWN 18 GAUGE STAINLESS STEEL SINK WITH EXPOSED SURFACE POLISHED TO A NON-POROUS FINISH. FULLY COATED UNDERSIDE INSULATED FOR SOUND AND CONDENSATE.
2. DECK MOUNTED SINGLE LABORATORY FAUCET WITH SWING VACUUM BREAKER SPOUT, INDEXED LEVER HANDLE, AND SERRATED HOSE NOZZLE. POLISHED CHROME PLATED FINISH. STANDARD 2.2 GPM FLOW CONTROL AERATOR, COLOR INDEX METAL HANDLES, BELOW DECK THERMOSTATIC MIXING VALVE SET 120°F, AND WITH VANDAL RESISTANT SCREWS, AS MANUFACTURED BY CHICAGO FAUCETS (MODEL # 928-369).
3. CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. OFFSET GRID STRAINER AND ADJUSTABLE 'P'-TRAP WITH ANSI AND ADA APPROVED, VINYL MOLDED INSULATION WITH NYLON FASTENER KITS, PAINTED AS DIRECTED BY THE ARCHITECT.

DETAIL BASED ON JUST, "UNDERMOUNT" GROUP

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-8	LAB SINK [18"Wx30"Lx12"D]	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	COUNTER TOP

LAB SINK COUNTER TOP

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

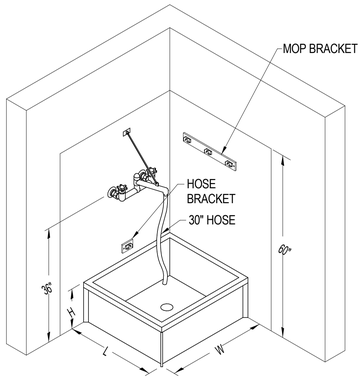
207 Research Station Rd. Plymouth, NC 27962

Revisions
No. Date

Project Number 2212.HOGS
Date 07/05/24
Drawn ADB
Checked DBB
Scale AS NOTED
Drawing Title

FIXTURE PLATES

Sheet Number 107 of 159
Drawing Number P002

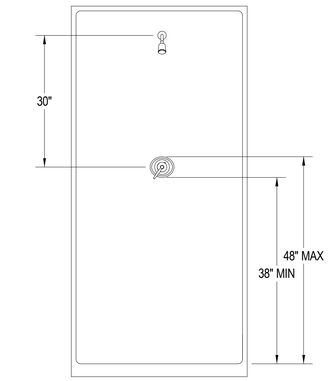


SPECIFICATIONS:
1. MOP BASIN SHALL BE 24"Wx24"Lx10"H SINGLE PIECE MOLDED STONE.
2. FAUCET SHALL BE EXPOSED YOKE WALL MOUNT UTILITY FAUCET WITH CAST BRASS BODY, 1/4 TURN CERAMIC VALVE CARTRIDGES, INTEGRAL VACUUM BREAKER & WALL BRACE. PROVIDE WITH OFFSET SHANKS WITH INTEGRAL STOPS.
3. MOUNT FAUCET 36" AFF.
4. PROVIDE WALL MOUNTED MOP BRACKET, STAINLESS STEEL STRAINER, QUICK DRAIN CONNECTIONS, 30" HOSE & HOSE BRACKET.
5. FRP SHALL EXTEND 2'-0" PAST EDGE OFF FIXTURE.

DETAIL BASED ON FIAT, "MOLDED STONE" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-9	FLOOR MOUNTED MOP BASIN	'P'-TRAP	1/2"	1/2"	3"	1-1/2"	FLOOR

MOP BASIN

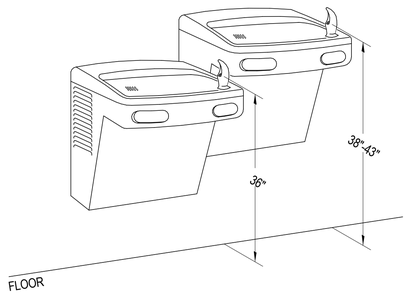


SPECIFICATIONS:
1. PROVIDE PRESSURE BALANCING VALVE & SWIVEL SHOWER HEAD. PRESSURE BALANCING VALVE SHALL RATED AT A WATER TEMPERATURE NOT MORE THAN 120°F (ASSE 1016).

DETAIL BASED ON AQUA BATH

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-10	TRANSFER SHOWER	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	FRAMED ENCLOSURE

SHOWER

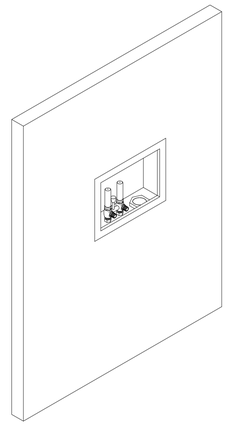


SPECIFICATIONS:
1. DUAL BASIN UNIT SHALL DELIVER 8.0 GPH OF 50°F WATER @ 90°F AMBIENT TEMPERATURE. TO INCLUDE FRONT AND SIDE PUSH PADS. UNIT SHALL BE POWDER COATED GALVANIZED STEEL.
2. CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. GRID STRAINER & ADJUSTABLE 'P'-TRAP.
3. MOUNT PER MANUFACTURERS INSTRUCTIONS FOR ADA COMPLIANCE.

DETAIL BASED ON OASIS, "VERSACOOLER II" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-11	ADA - DUAL BASIN ELECTRIC WATER COOLER	'P'-TRAP	-	1/2"	1-1/2"	1-1/2"	WALL MOUNTED

ADA - DUAL BASIN WATER COOLER

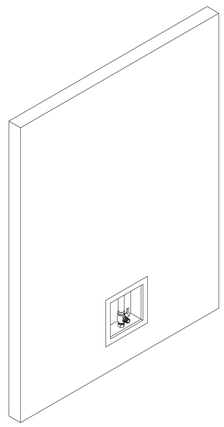


SPECIFICATIONS:
1. GALVANIZED STEEL RECESSED WALL BOX WITH PRIMER COAT AND HAMMER ARRESTERS. (2) 3/4" HOSE BIBBS & 2" STANDPIPE CONNECTION.

DETAIL BASED ON GUY GRAY

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-12	WASHER WALL BOX	'P'-TRAP	3/4"	3/4"	2"	1-1/2"	WALL

WASHER WALL BOX

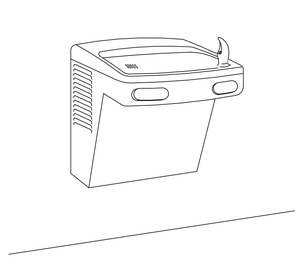


SPECIFICATIONS:
1. SPACE SAVER RECESSED VALVE BOX WITH 1/2" ANGLE STOP WITH 1/4" COMPRESSION CONNECTION AND INTEGRAL WATER HAMMER ARRESTOR.
2. G90 HOT DIPPED GALVANIZED STEEL BOX. PAINT AS DIRECTED BY ARCHITECT.
3. BOTTOM OF BOX 6"-12" AFF BUT ABOVE BASEBOARD.

DETAIL BASED ON GUY GRAY

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-13	METAL ICE MAKER WALL BOX	-	-	1/2"	-	-	WALL

METAL ICE MAKER WALL BOX

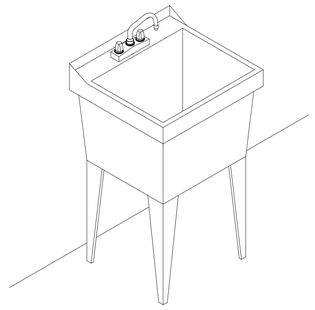


SPECIFICATIONS:
1. SINGLE BASIN UNIT SHALL DELIVER 8.0 GPH OF 50°F WATER @ 90°F AMBIENT TEMPERATURE. TO INCLUDE FRONT AND SIDE PUSH PADS. UNIT SHALL BE POWDER COATED GALVANIZED STEEL.
2. CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. GRID STRAINER & ADJUSTABLE 'P'-TRAP.
3. MOUNT PER MANUFACTURERS INSTRUCTIONS.

DETAIL BASED ON OASIS, "VERSACOOLER II" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-14	SINGLE BASIN ELECTRIC WATER COOLER	'P'-TRAP	-	1/2"	1-1/2"	1-1/2"	WALL MOUNTED

SINGLE BASIN WATER COOLER



SPECIFICATIONS:
1. SOLID, CONTINUOUS MOLDED STONE SINK WITH 4" FAUCET LEDGE.
2. WHITE BAKED ENAMEL LEGS WITH LEVELING FEET.
3. 2 HANDLED SOLID BRASS FAUCET WITH CHROME FINISH, SPOUT WITH AERATOR.
4. CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. GRID STRAINER & ADJUSTABLE 'P'-TRAP.

DETAIL BASED ON FIAT, "SERV-A-SINK"

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-15	UTILITY SINK	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	FLOOR

UTILITY SINK

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED SEAL 049349 PROFESSIONAL ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
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Drawn ADB
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Drawing Title

FIXTURE PLATES

Sheet Number 108 of 159
Drawing Number P003

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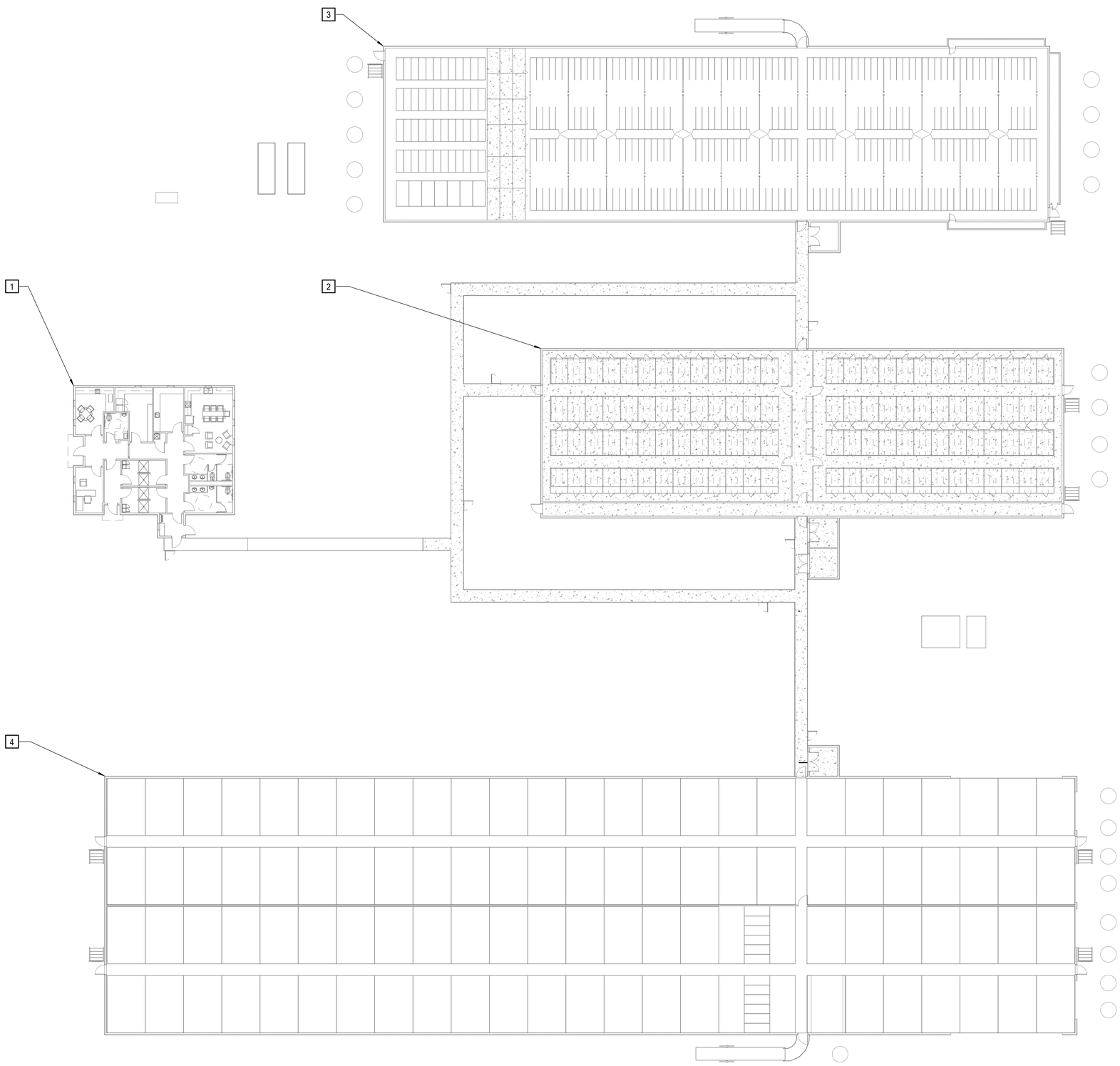

NOTES THIS SHEET

1. SEE SHEET P102 FOR BIOSECURITY BUILDING DOMESTIC WATER FLOOR PLAN.
2. SEE SHEET P103 FOR FARROWING BUILDING DOMESTIC WATER FLOOR PLAN.
3. SEE SHEET P104 FOR BREEDING & GESTATION BUILDING DOMESTIC WATER FLOOR PLAN.
4. SEE SHEET P105 FOR WEAN TO FINISH BUILDING DOMESTIC WATER FLOOR PLAN.

OVERALL PLAN - DOMESTIC WATER
SCALE: 1/16" = 1'-0"

GRAPHIC SCALE:
1/16" = 1'-0"
5' 0' 5' 10' 20' 30' 50'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn ADB
Checked DBB
Scale AS NOTED
Drawing Title

OVERALL PLAN - DOMW

Sheet Number 109 of 159
Drawing Number **P101**

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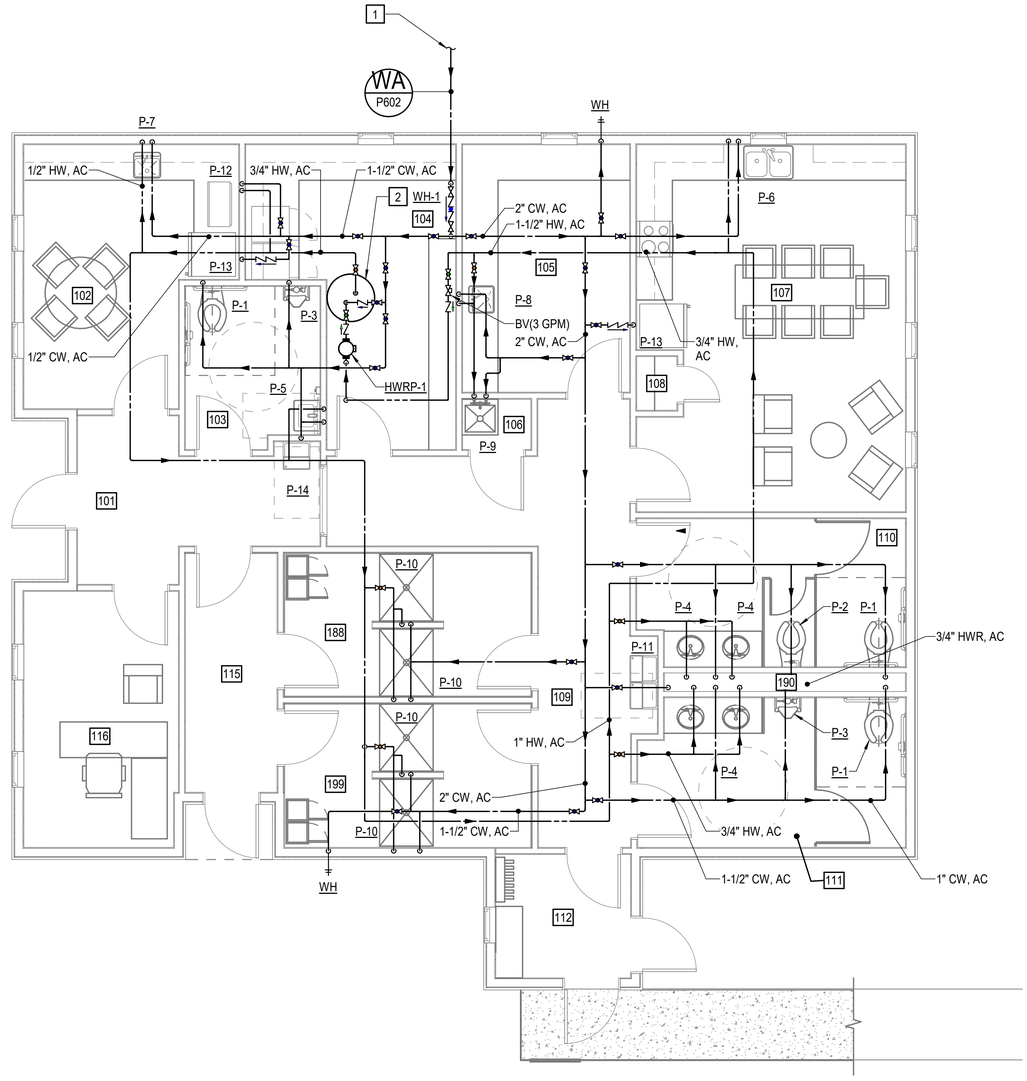

BIOSECURITY BUILDING FLOOR - DOMESTIC WATER

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

NOTES THIS SHEET

1. 2" COLD WATER SERVICE; SEE CIVIL DRAWINGS FOR CONTINUATION.
2. FLOOR MOUNTED ELECTRIC WATER HEATER; SEE DETAIL ON SHEET P-501.

1ST FLOOR ROOM SCHEDULE

ROOM #	ROOM NAME
101	VESTIBULE
102	BREAKROOM
103	UNISEX
104	LAUNDRY
105	WORKROOM
106	JANITOR
107	BREAKROOM
108	PANTRY
109	CORRIDOR
110	WOMENS ROOM
111	MENS ROOM
112	MUDROOM
115	VESTIBULE
116	OFFICE
148	VESTIBULE
149	OFFICE
150	BREAKROOM
151	LAUNDRY/STORAGE
152	UNISEX
153	VESTIBULE
154	WOMENS SHOWER
155	MENS SHOWER
156	CORRIDOR
157	JANITOR
158	LAB
159	BREAKROOM
160	WOMENS RESTROOM
161	MENS RESTROOM
162	MUDROOM
163	PANTRY
206	MECH.

GRAPHIC SCALE:

1/4" = 1'-0" (5' 0' 5' 10')

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No. Date

Project Number 2212.HOGS
Date 07/05/24
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BIOSECURITY BULDG FLR PLAN - DOMW

Sheet Number 110 or 159

Drawing Number **P102**

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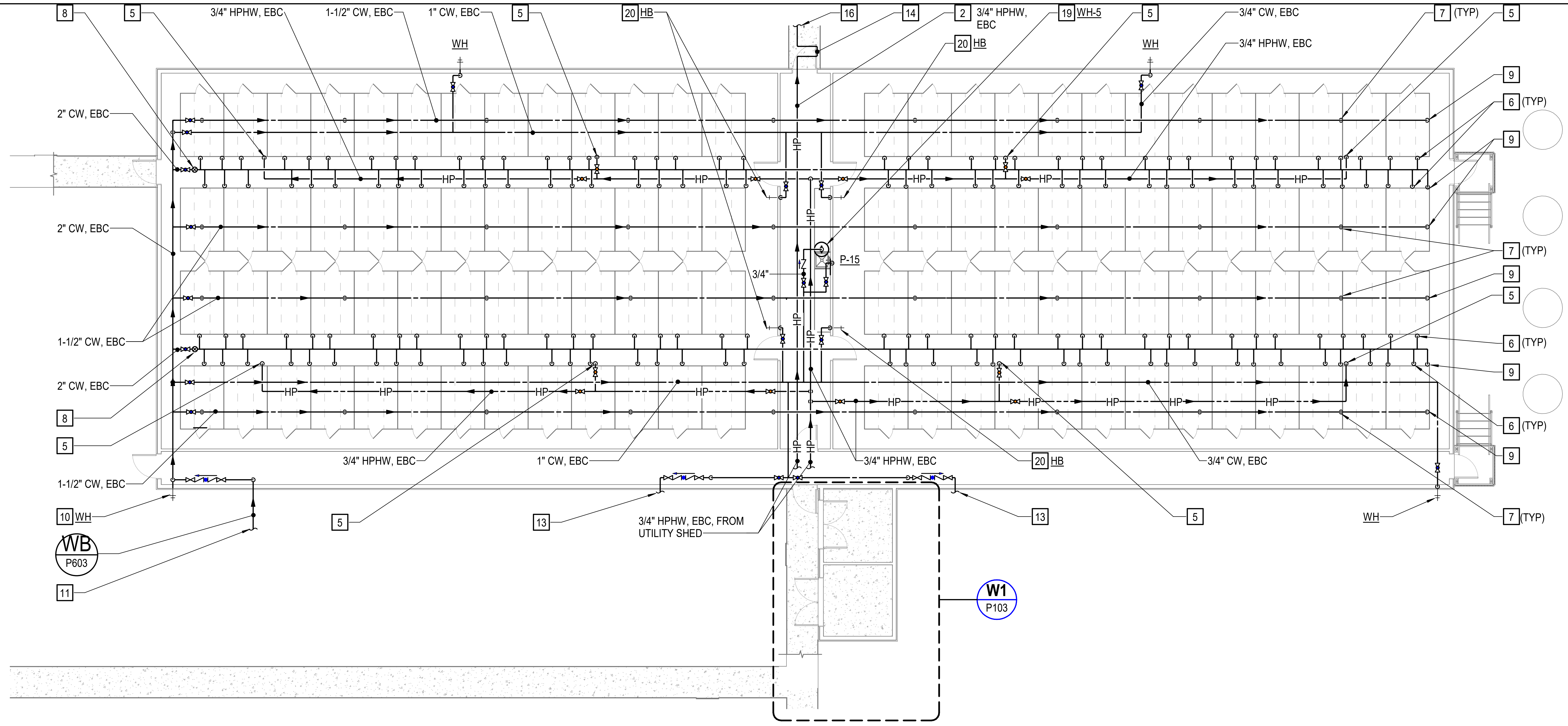
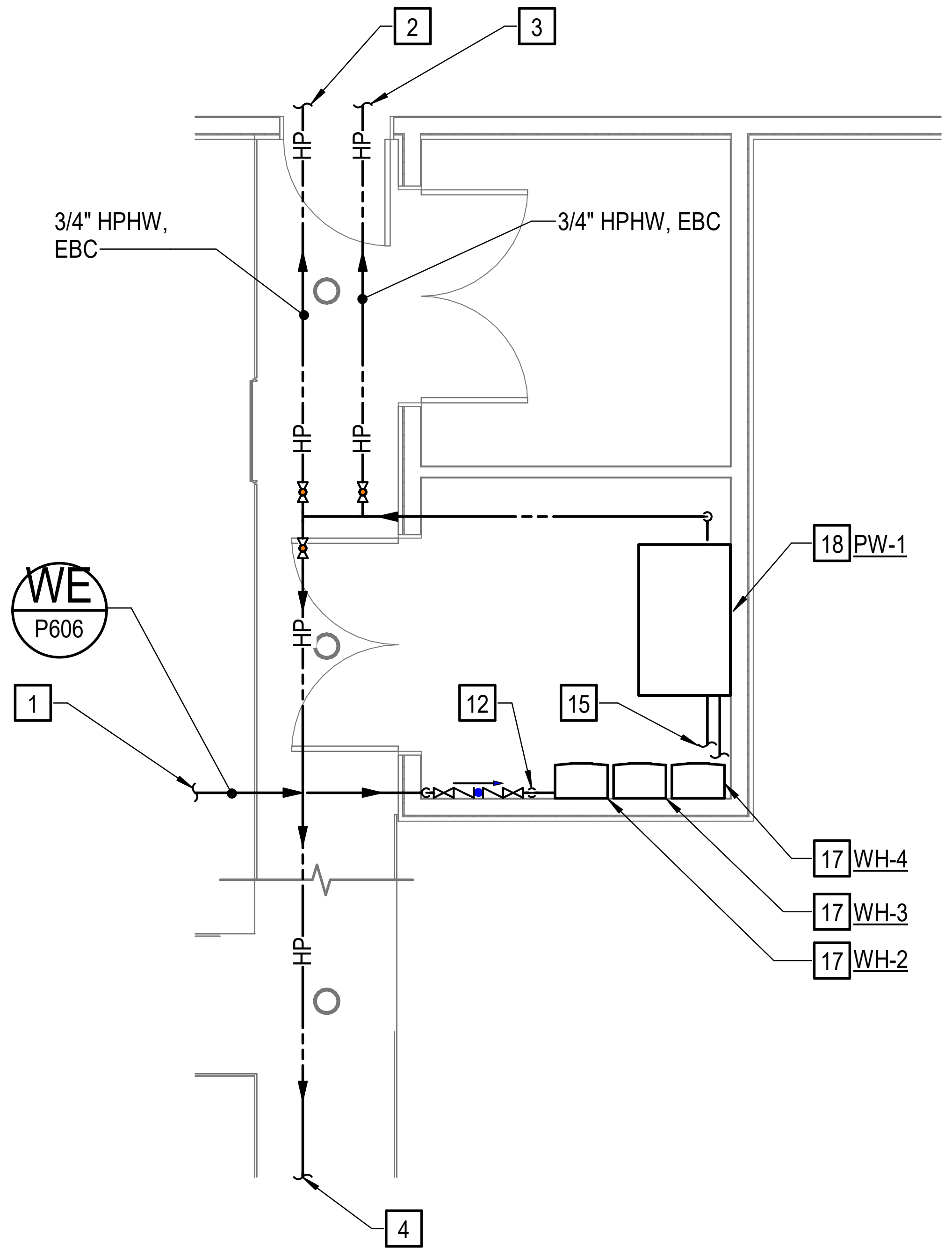


FARROWING BUILDING FLOOR PLAN - DOMESTIC WATER

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



W1 UTILITY SHED ENLARGED FLOOR PLAN - DOMESTIC WATER

P103

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

NOTES THIS SHEET

1 3/4" CW SERVICE TO UTILITY SHED, SEE CIVIL DRAWINGS FOR CONTINUATION.

2 ROUTE 3/4" HPHW EXPOSED BELOW CEILING THROUGH FARROWING BUILDING AND ENCLOSED WALKWAY TO BREEDING & GESTATION BUILDING AS SHOWN ON SHEET P104.

3 ROUTE 3/4" HPHW EXPOSED BELOW CEILING OF ENCLOSED WALKWAY TO FARROWING BUILDING AS SHOWN ON THIS SHEET.

4 ROUTE 3/4" HPHW EXPOSED BELOW CEILING OF ENCLOSED WALKWAY TO WEAN TO FINISH BUILDING SHOWN ON SHEET P105.

5 PROVIDE 3/4" HPHW DROP WITH 3/4"x1/2" REDUCER AND 1/2" HPHW QUICK CONNECT HOSE FITTING AT 4'-0" AFF.

6 OWNER FURNISHED CONTRACTOR INSTALLED FEEDER TEE AND DRIP FEEDERS. TWO OWNER FURNISHED CONTRACTOR INSTALLED DRIP FEEDERS PER FEEDER TEE.

7 OWNER FURNISHED CONTRACTOR INSTALLED WET DOWN SPRINKLER HEADS 18'-0" ON CENTER. PROVIDE 3/4" CW SUPPLY WITH 3/4"x1/2" REDUCER TO CONNECT WITH OWNER FURNISHED WET DOWN SPRINKLER HEAD.

8 PROVIDE 2" CW PRESSURE REGULATOR AND PRESSURE GAUGE FOR EACH DRINKING WATER MAIN.

9 COLD WATER DRAIN DISCHARGE PIPE. ROUTE PIPING DOWN TO PIT AND PROVIDE ISOLATION VALVE UPSTREAM OF PIT DISCHARGE. SEE DETAIL ONS SHEET P501.

10 PROVIDE VERTICAL ISOLATION VALVE AT 2'-3" AFF MINIMUM UPSTREAM OF WALL HYDRANTS.

11 2" CW SERVICE TO FARROWING BUILDING, SEE CIVIL DRAWINGS FOR CONTINUATION .

12 ROUTE 3/4" CW BELOW GAS TANKLESS WATER HEATER HEADER TO PRESSURE WASHER UNIT.

13 CONNECT 3/4" CW TO PUMP SUCTION PIPING AT OWNER FURNISHED EVAPORATIVE COOLER PUMP. COORDINATE FINAL LOCATION OF MAKE-UP WATER CONNECTION WITH MECHANICAL CONTRACTOR.

14 PROVIDE 3/4" HPHW EXPANSION LOOP AT INDICATED LOCATION; SEE DETAIL FOR DIMENSIONS AND APPURTENANCES.

15 ROUTE 3/4" HW FROM GAS TANKLESS WATER HEATER HEADER TO PRESSURE WASHER UNIT. PROVIDE REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER UPSTREAM OF PRESSURE WASHER UNIT.

16 ROUTE 3/4" HPHW EXPOSED BELOW CEILING OF ENCLOSED WALKWAY TO BREEDING & GESTATION BUILDING AS SHOWN ON SHEET P104.

17 WALL MOUNTED TANKLESS WATER HEATER; SEE DETAIL ON SHEET P502. MOUNT ON WALL 3'-0" AFF MINIMUM.

18 FLOOR MOUNTED PRESSURE WASHER UNIT; SEE DETAIL ON SHEET P502.

19 ROUTE 3/4" HW TO UTILITY SINKS. SEE WALL MOUNTED WATER HEATER DETAIL.

20 MOUNT HOSE BIBBS AT 4'-0" AFF.

NONPOTABLE WATER NOTE

CONTRACTOR SHALL LABEL ALL DOMESTIC WATER PIPING AS NOT POTABLE.

HEAT TRACE CABLE NOTE

ALL HIGH PRESSURE HOT WATER PIPE MUST BE PROVIDED WITH SELF REGULATING HEAT TRACE CABLE RATED AT 5 WATTS PER LINEAR FOOT OF PIPE WITH 2" THICK CLOSED CELL FIBERGLASS INSULATION AND EXTERIOR RATED JACKET.

DOMESTIC COLD WATER DRAIN NOTE:

ALL DOMESTIC COLD WATER PIPING MUST BE SLOPED AT 1/8" PER LINEAR FOOT TOWARDS LOW POINT DRAINS.

HIGH PRESSURE WATER PIPE NOTE:

HIGH PRESSURE WATER PIPING SHALL BE SCHEDULE 40 STAINLESS STEEL WITH SWAGELOCK RATED FOR A MINIMUM OF 2,000 PSI, INSULATED, ROUTED AS HIGH AS POSSIBLE WITHIN THE FACILITY.

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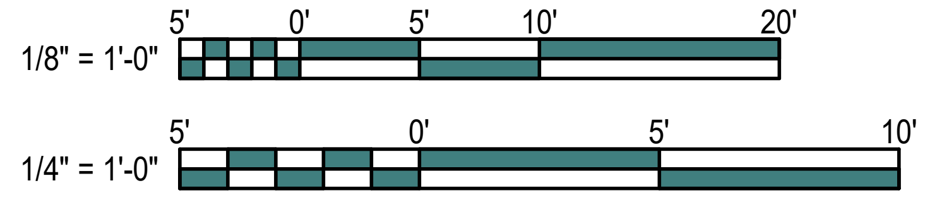
GRAPHIC SCALE:



WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
252-636-8778

SEAL
049349
07/05/2024
TAYLOR C. JONES
23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

**207 Research Station Rd.
Plymouth, NC 27962**

Revisions

No.	Date

Project Number
2212.HOGS

Date
07/05/24

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ADB

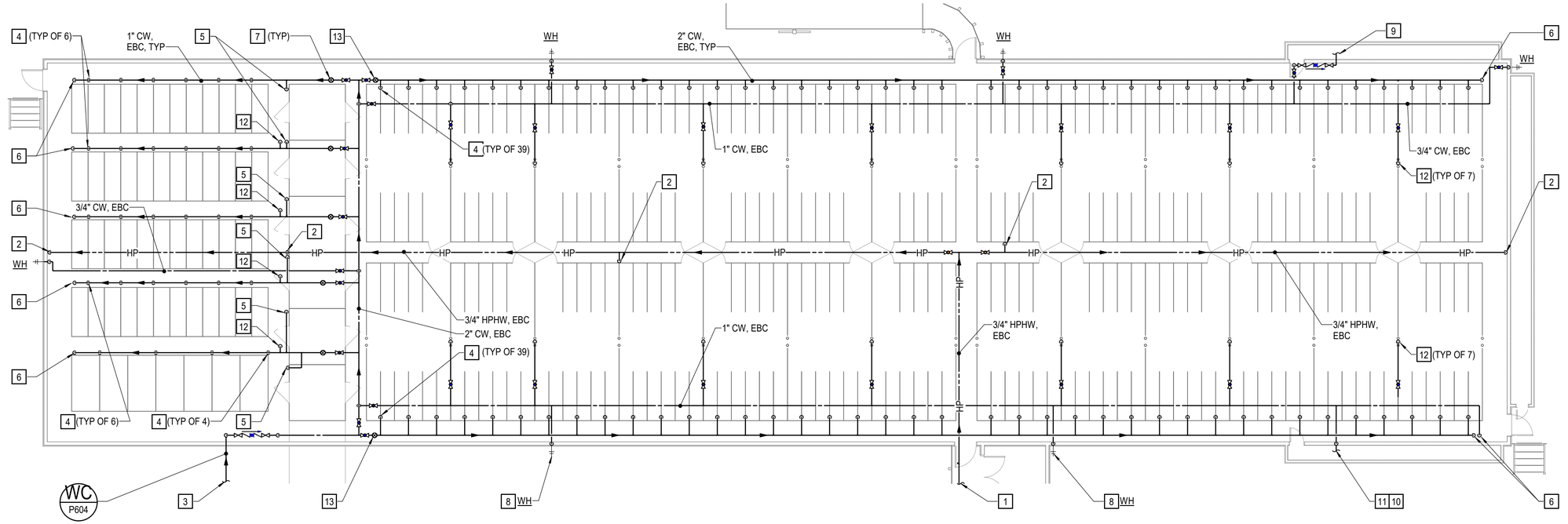
Checked
JBH

Scale
AS NOTED

Drawing Title
FARROWING BLDG FLR PLAN - DOMW

Sheet Number
111 of 159

Drawing Number
P103



BREEDING & GESTATION BUILDING FLOOR PLAN - DOMESTIC WATER

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

NOTES THIS SHEET

1. ROUTE 3/4" HPHW EXPOSED BELOW CEILING OF ENCLOSED WALKWAY FROM FARROWING BUILDING AS SHOWN ON SHEET P103.
2. PROVIDE 3/4" HPHW DROP WITH 3/4"x1/2" REDUCER AND 1/2" HPHW QUICK CONNECT HOSE FITTING AT 4'-0" AFF.
3. 2" CW SERVICE; SEE CIVIL DRAWINGS FOR CONTINUATION (TO BE COORDINATED WITH CIVIL).
4. OWNER FURNISHED CONTRACTOR INSTALLED FEEDER TEE AND DRIP FEEDERS. TWO OWNER FURNISHED CONTRACTOR INSTALLED DRIP FEEDERS PER FEEDER TEE.
5. OWNER FURNISHED CONTRACTOR INSTALLED FEEDER TEE AND DRIP FEEDERS. ONE OWNER FURNISHED CONTRACTOR INSTALLED DRIP FEEDER PER FEEDER TEE.
6. COLD WATER DRAIN DISCHARGE PIPE. ROUTE PIPING DOWN TO PIT AND PROVIDE ISOLATION VALVE UPSTREAM OF PIT DISCHARGE. SEE DETAIL ON SHEET P501.
7. PROVIDE 1" CW PRESSURE REGULATOR AND PRESSURE GAUGE FOR EACH DRINKING WATER MAIN.
8. PROVIDE VERTICAL ISOLATION VALVE WITH ACCESS PANEL AT 4'-0" AFF UPSTREAM OF WALL HYDRANTS.
9. CONNECT 3/4" CW TO PUMP SUCTION PIPING AT OWNER FURNISHED EVAPORATIVE COOLER PUMP. COORDINATE FINAL LOCATION OF MAKE-UP WATER CONNECTION WITH MECHANICAL CONTRACTOR.
10. PROVIDE 3/4" CW RPBP AT INDICATED PIPE SEGMENT. 3/4" RPBP NOT SHOWN FOR PIPE ROUTING CLARITY.
11. CONNECT 3/4" CW WITH 3/4" RPBP TO PUMP SUCTION PIPING AT OWNER FURNISHED EVAPORATIVE COOLER PUMP. LOCATE 3/4" RPBP WITHIN BUILDING AND PROVIDE VERTICAL ISOLATION VALVE 4'-0" UPSTREAM OF 3/4" RPBP. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
12. OWNER FURNISHED CONTRACTOR INSTALLED 1" CW CAM LOCK SPIGOT AT INDICATED LOCATIONS.
13. PROVIDE 2" CW PRESSURE REGULATOR AND PRESSURE GAUGE FOR EACH DRINKING WATER MAIN.

NONPOTABLE WATER NOTE

CONTRACTOR SHALL LABEL ALL DOMESTIC WATER PIPING AS NOT POTABLE.

HEAT TRACE CABLE NOTE

ALL HIGH PRESSURE HOT WATER PIPE MUST BE PROVIDED WITH SELF REGULATING HEAT TRACE CABLE RATED AT 5 WATTS PER LINEAR FOOT OF PIPE WITH 2" THICK CLOSED CELL FIBERGLASS INSULATION AND EXTERIOR RATED JACKET.

DOMESTIC COLD WATER DRAIN NOTE:

ALL DOMESTIC COLD WATER PIPING MUST BE SLOPED AT 1/8" PER LINEAR FOOT TOWARDS LOW POINT DRAINS.

HIGH PRESSURE WATER PIPE NOTE:

HIGH PRESSURE WATER PIPING SHALL BE SCHEDULE 40 STAINLESS STEEL WITH SWAGELOCK RATED FOR A MINIMUM OF 2,000 PSI, INSULATED, ROUTED AS HIGH AS POSSIBLE WITHIN THE FACILITY.

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GRAPHIC SCALE:

1/8" = 1'-0"

5' 0' 5' 10' 20'

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

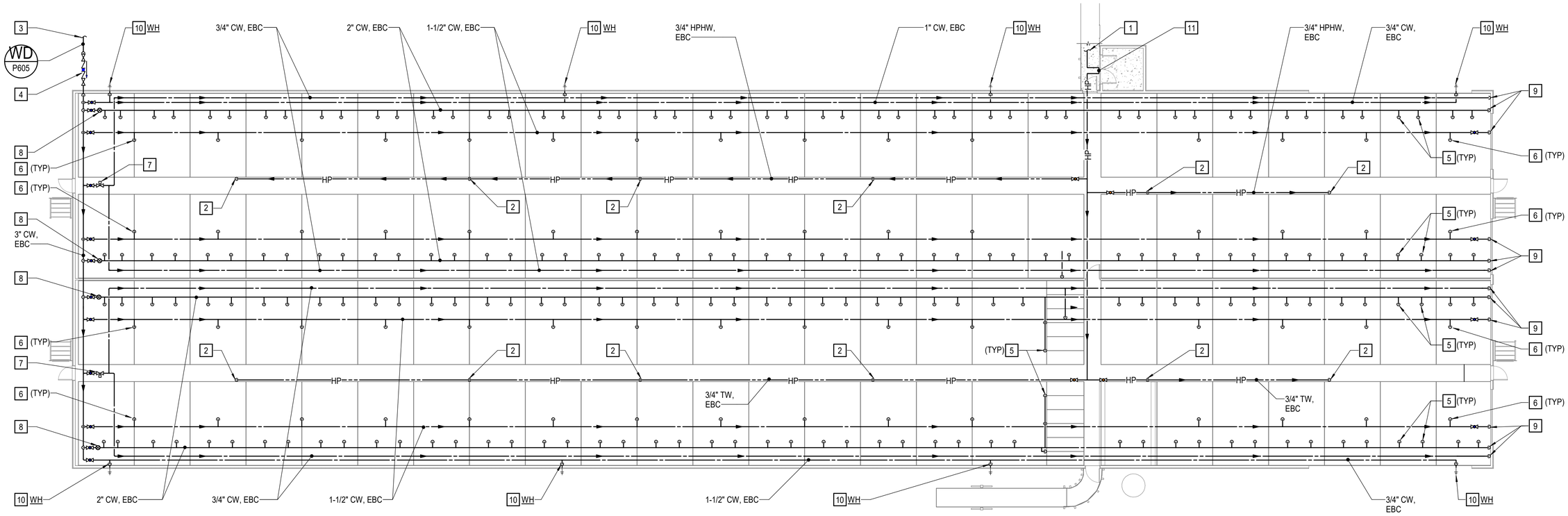
Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn ADB
Checked JBH
Scale AS NOTED
Drawing Title

BREEDING & GESTATN BLDG FLR PLAN - DOMW

Sheet Number 112 of 159
Drawing Number P104



WEAN TO FINISH BUILDING FLOOR PLAN - DOMESTIC WATER

SCALE: 3/32" = 1'-0"

NONPOTABLE WATER NOTE

CONTRACTOR SHALL LABEL ALL DOMESTIC WATER PIPING AS NOT POTABLE.

HEAT TRACE CABLE NOTE

ALL HIGH PRESSURE HOT WATER PIPE MUST BE PROVIDED WITH SELF REGULATING HEAT TRACE CABLE RATED AT 5 WATTS PER LINEAR FOOT OF PIPE WITH 2" THICK CLOSED CELL FIBERGLASS INSULATION AND EXTERIOR RATED JACKET.

DOMESTIC COLD WATER DRAIN NOTE:

ALL DOMESTIC COLD WATER PIPING MUST BE SLOPED AT 1/8" PER LINEAR FOOT TOWARDS LOW POINT DRAINS.

HIGH PRESSURE WATER PIPE NOTE:

HIGH PRESSURE WATER PIPING SHALL BE SCHEDULE 40 STAINLESS STEEL WITH SWAGELOCK RATED FOR A MINIMUM OF 2,000 PSI, INSULATED, ROUTED AS HIGH AS POSSIBLE WITHIN THE FACILITY.

NOTES THIS SHEET

1. ROUTE 3/4" HPHW EXPOSED BELOW CEILING OF ENCLOSED WALKWAY FROM UTILITY SHED AS SHOWN ON SHEET P103.
2. PROVIDE 3/4" HPHW DROP WITH 3/4"x1/2" REDUCER AND 1/2" HPHW QUICK CONNECT HOSE FITTING AT 4'-0" AFF.
3. 2" CW SERVICE SEE CIVIL DRAWINGS FOR CONTINUATION .
4. PROVIDE REDUCE PRESSURE PRINCIPLE BACKFLOW PREVENTER WITH HEATED AND INSULATED ENCLOSURE.
5. OWNER FURNISHED CONTRACTOR INSTALLED FEEDER TEE AND DRIP FEEDERS. TWO OWNER FURNISHED CONTRACTOR INSTALLED DRIP FEEDERS PER FEEDER TEE.
6. OWNER FURNISHED CONTRACTOR INSTALLED WET DOWN SPRINKLER HEADS. PROVIDE 3/4" CW SUPPLY WITH 3/4"x1/2" REDUCER TO CONNECT WITH OWNER FURNISHED WET DOWN SPRINKLER HEAD.
7. PROVIDE 3/4" CW SOLENOID VALVE AND TIME CLOCK TO CONTROL 3/4" CW PVC FOGGER DISCHARGE PIPES. PROVIDE 3/32" HOLE PER PEN ANGLED AT 30 DEGREES.
8. PROVIDE 2" CW PRESSURE REGULATOR AND PRESSURE GAUGE FOR EACH DRINKING WATER MAIN.
9. COLD WATER DRAIN DISCHARGE PIPE. ROUTE PIPING DOWN TO PIT AND PROVIDE ISOLATION VALVE UPSTREAM OF PIT DISCHARGE. SEE DETAIL ON SHEET P501.
10. PROVIDE VERTICAL ISOLATION VALVE AT 4'-0" AFF UPSTREAM OF WALL HYDRANTS.
11. PROVIDE 3/4" HPHW EXPANSION LOOP AT INDICATED LOCATION; SEE DETAIL FOR DIMENSIONS AND APPURTENANCES.

GRAPHIC SCALE:

3/32" = 1'-0" 5' 0' 5' 10' 20' 30'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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No.	Date

Project Number 2212.HOGS
Date 07/05/24
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Drawing Title

WEAN TO FINISH BLDG FLR PLAN - DOMW

Sheet Number 113 of 159
Drawing Number P105

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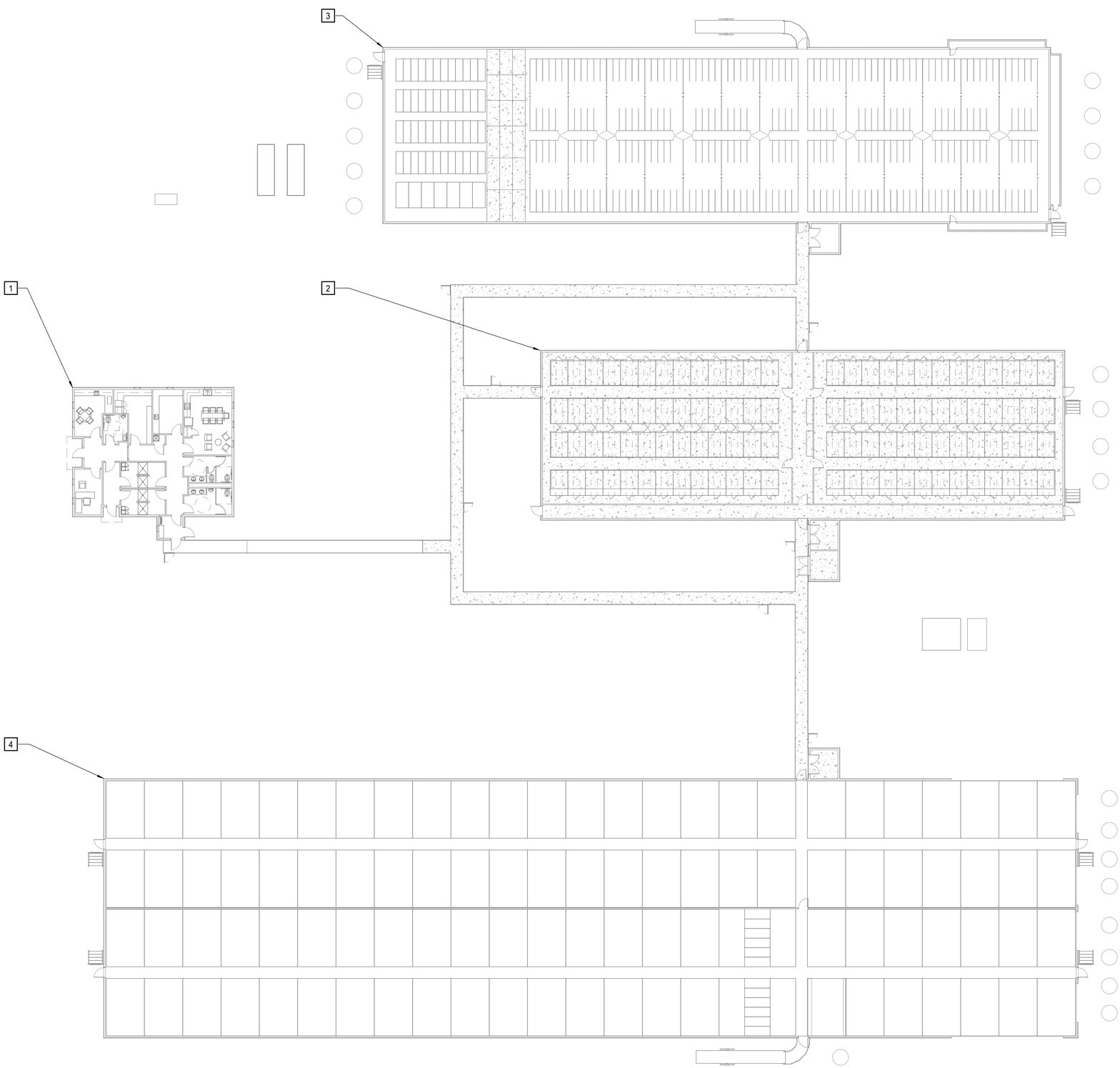

NOTES THIS SHEET

1. SEE SHEET P202 FOR BIOSECURITY BUILDING SANITARY FLOOR PLAN.
2. SEE SHEET P203 FOR FARROWING BUILDING SANITARY FLOOR PLAN.
3. SEE SHEET P204 FOR BREEDING & GESTATION BUILDING SANITARY FLOOR PLAN.
4. SEE SHEE P205 FOR WEAN TO FINISH SANITARY FLOOR PLAN.

OVERALL PLAN - SANITARY

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

GRAPHIC SCALE:

1/16" = 1'-0"

5' 0' 5' 10' 20' 30' 50'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

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No.	Date

Project Number 2212.HOGS
Date 07/05/24
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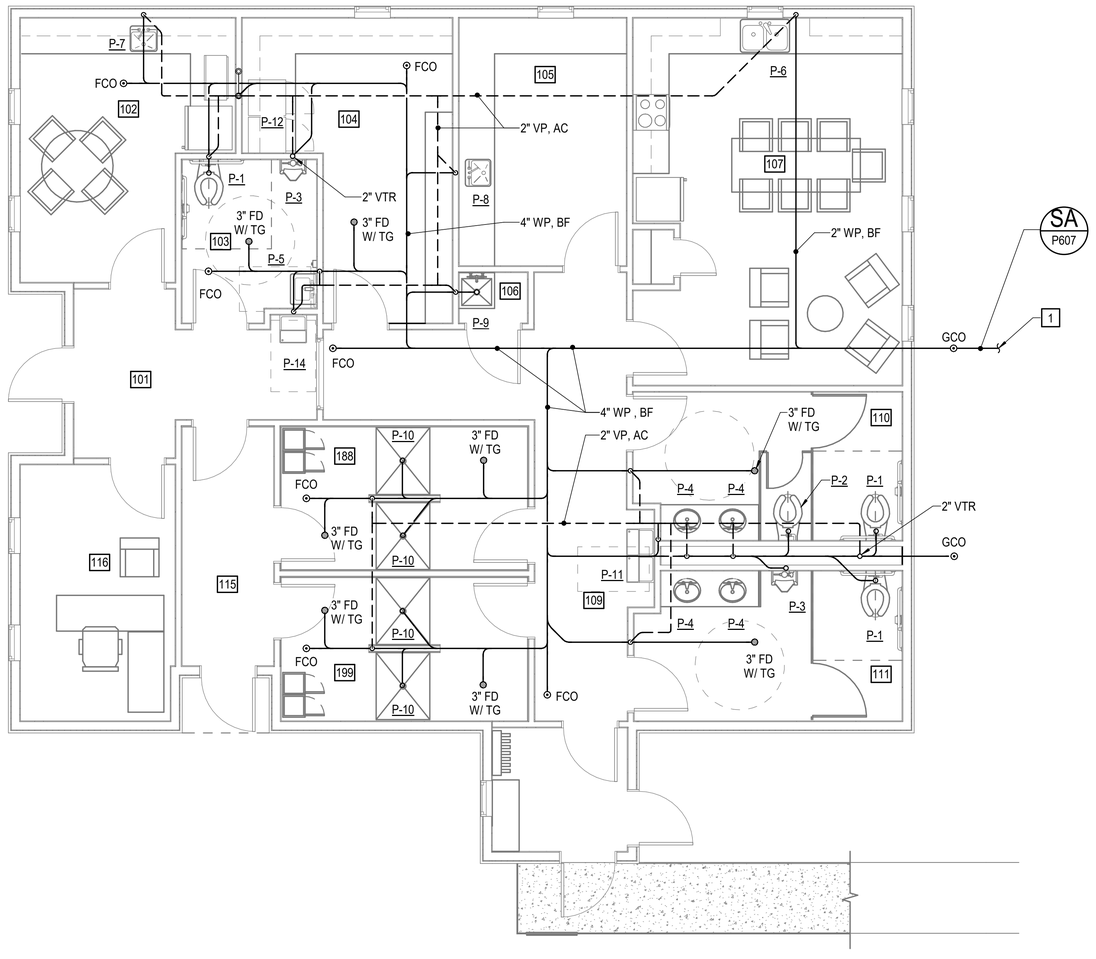
Checked DBB
Scale AS NOTED
Drawing Title

OVERAL PLAN - SANITARY

Sheet Number 114 of 159
Drawing Number P201

NOTES THIS SHEET

1 4" WP, INV = 2'-6" BFF, SEE CIVIL DRAWINGS FOR CONTINUATION.



BIOSECURITY BUILDING FLOOR PLAN - SANITARY
SCALE: 1/4" = 1'-0"

1ST FLOOR ROOM SCHEDULE

ROOM #	ROOM NAME
101	VESTIBULE
102	BREAKROOM
103	UNISEX
104	LAUNDRY
105	WORKROOM
106	JANITOR
107	BREAKROOM
108	PANTRY
109	CORRIDOR
110	WOMENS ROOM
111	MENS ROOM
112	MUDROOM
115	VESTIBULE
116	OFFICE
148	VESTIBULE
149	OFFICE
150	BREAKROOM
151	LAUNDRY/STORAGE
152	UNISEX
153	VESTIBULE
154	WOMENS SHOWER
155	MENS SHOWER
156	CORRIDOR
157	JANITOR
158	LAB
159	BREAKROOM
160	WOMENS RESTROOM
161	MENS RESTROOM
162	MUDROOM
163	PANTRY
206	MECH.

GRAPHIC SCALE:

1/4" = 1'-0" 5' 0' 5' 10'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions
No. Date

Project Number 2212.HOGS
Date 07/05/24
Drawn ADB
Checked DBB
Scale AS NOTED
Drawing Title

BIOSECURITY BUILDING FLOOR PLAN - SANITARY

Sheet Number 115 or 159
Drawing Number P202

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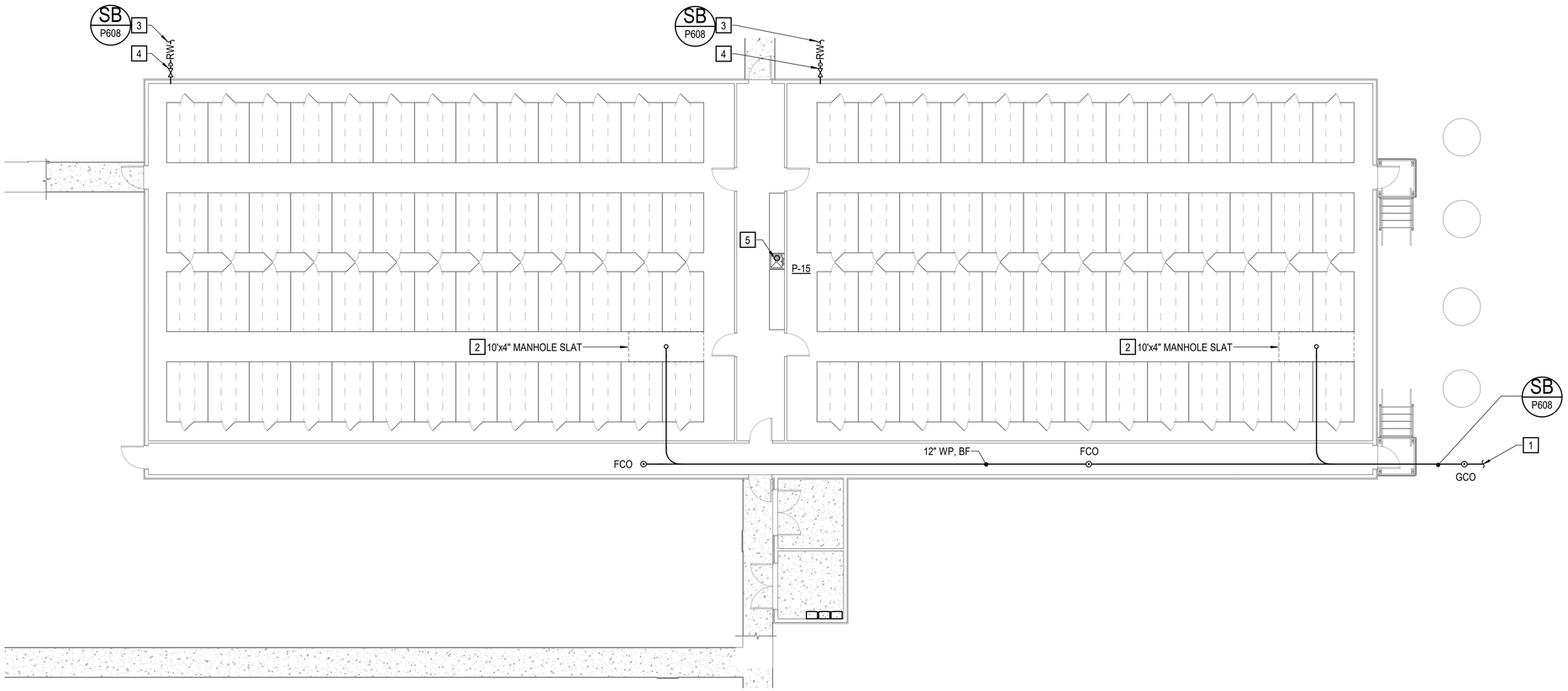

NOTES THIS SHEET

1. 12" WP, INV = 3'-3" BFG (6'-3" BFF). SEE CIVIL DRAWINGS FOR CONTINUATION.
2. PROVIDE SANITARY WASTE PIT DRAIN PLUGS AT INDICATED LOCATIONS; SEE DETAIL FOR ADDITIONAL APPURTENANCES.
3. 4" RW, BG; SEE CIVIL DRAWINGS FOR CONTINUATION.
4. PROVIDE 4" RW GATE VALVE AT 2'-0" AFG (1'-0" BFF).
5. ROUTE 1-1/2" WP FROM UTILITY SINK TO DISCHARGE INDIRECTLY TO 3" FD BELOW. 3" FD TO DISCHARGE TO PIT.

FARROWING BUILDING FLOOR PLAN - SANITARY

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

GRAPHIC SCALE:

1/8" = 1'-0" 5' 0' 5' 10' 20'

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn ADB
Checked JBH
Scale AS NOTED
Drawing Title

FARROWING BLDG FLR PLAN - SANR

Sheet Number 116 of 159
Drawing Number **P203**

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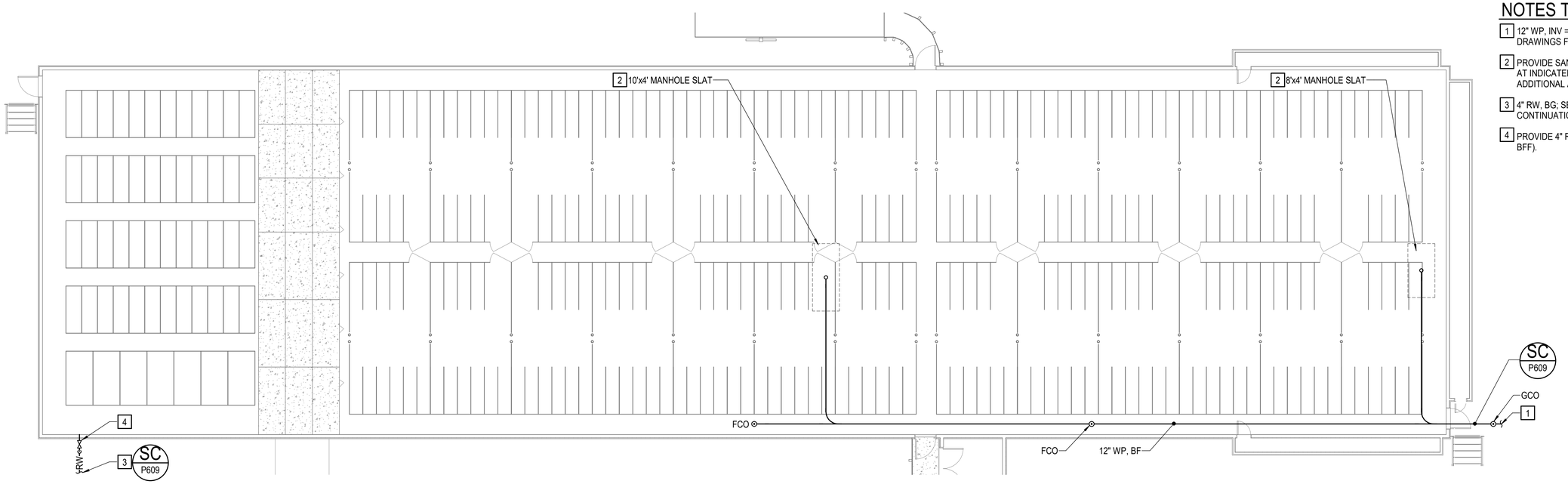

NOTES THIS SHEET

1. 12" WP, INV = 3'-6 BFG (6'-6 BFF). SEE CIVIL DRAWINGS FOR CONTINUATION.
2. PROVIDE SANITARY WASTE PIT DRAIN PLUGS AT INDICATED LOCATIONS; SEE DETAIL FOR ADDITIONAL APPURTENANCES.
3. 4" RW, BG; SEE CIVIL DRAWINGS FOR CONTINUATION.
4. PROVIDE 4" RW GATE VALVE AT 2'-0" AFG (1'-0" BFF).

BREEDING & GESTATION BUILDING FLOOR PLAN - SANITARY

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

GRAPHIC SCALE:

1/8" = 1'-0"

5' 0' 5' 10' 20'

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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No.	Date

Project Number 2212.HOGS

Date 07/05/24

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Scale AS NOTED

Drawing Title

BREEDING & GESTATION BLDG FLR PLAN - SANR

Sheet Number 117 of 159

Drawing Number

P204

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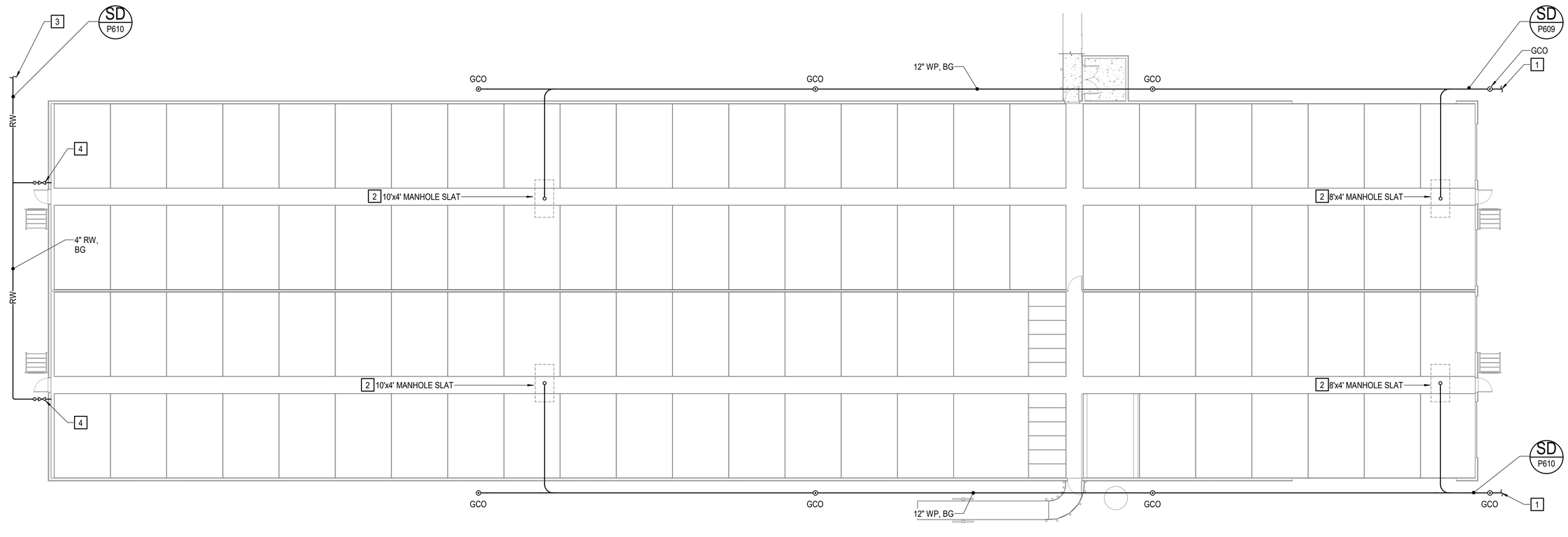

WEAN TO FINISH FLOOR PLAN - SANITARY
SCALE: 3/32" = 1'-0"

NOTES THIS SHEET

1. 12" WP, INV = 4'-6" BFG (7'-6" BFF). SEE CIVIL DRAWINGS FOR CONTINUATION.
2. PROVIDE SANITARY WASTE PIT DRAIN PLUGS AT INDICATED LOCATIONS; SEE DETAIL FOR ADDITIONAL APPURTENANCES.
3. 4" RW, BG; SEE CIVIL DRAWINGS FOR CONTINUATION.
4. PROVIDE 4" RW GATE VALVE AT 2'-0" AFG (1'-0" BFF).

GRAPHIC SCALE:

3/32" = 1'-0" 5' 0' 5' 10' 20' 30'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED SEAL 049349 PROFESSIONAL ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
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Scale AS NOTED
Drawing Title

WEAN TO FINISH BLDG FLR PLAN - SANR

Sheet Number 118 of 159
Drawing Number **P205**

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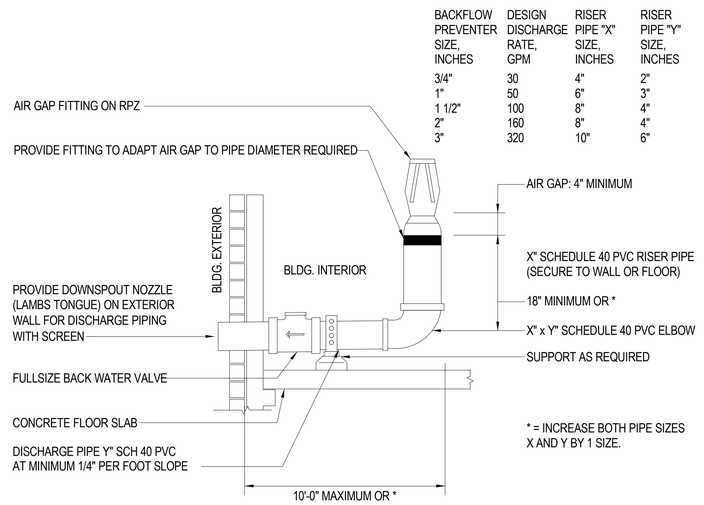
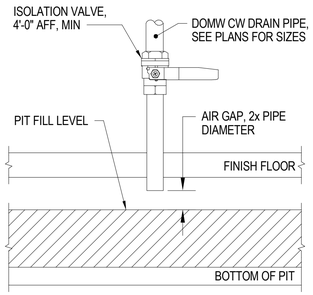


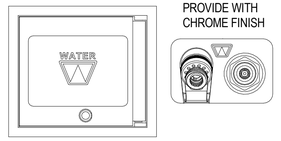
BACKFLOW PREVENTER DISCHARGE PIPING DETAIL

NO SCALE



DOMESTIC WATER DRAIN PIPE DETAIL

NO SCALE



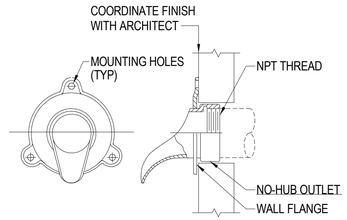
SPECIFICATIONS:

1. FREEZELESS WALL HYDRANT WITH ENCLOSURE BOX, DOOR AND LOOSE KEY.
2. SELF DRAINING WITH VACUUM BREAKER, 3/4" HOSE THREADS, ASSE 1052 APPROVED.

DETAIL BASED ON WOODFORD, MODEL B65 - BOX TYPE
INSTALL PER MANUFACTURER'S INSTRUCTIONS

FREEZELESS WALL HYDRANT DETAIL

NO SCALE



DETAIL BASED ON "JAY R. SMITH", MODEL 1771
INSTALL PER MANUFACTURER'S INSTRUCTIONS

DOWNSPOUT NOZZLE DETAIL

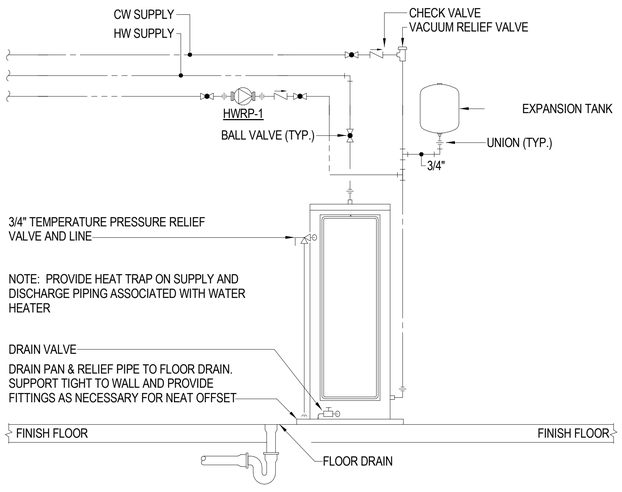
NO SCALE

NOTES:

1. NO DEVICES OR BRANCH LINES, ETC. SHALL BE INSTALLED BETWEEN BACKFLOW PREVENTER ASSEMBLY AND THE MAIN WATER LINE. PROVIDE COLD WATER REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER WITH ISOLATION VALVE, WATER METER, AND STRAINER. PROVIDE REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER UPSTREAM OF EQUIPMENT WITH ISOLATION VALVE AND STRAINER.
2. VERIFY DISCHARGE PIPE LENGTH AND SLOPE BEFORE COORDINATING FINAL BACKFLOW PREVENTER HEIGHT TO ENSURE PROPER FIT OF ALL COMPONENTS. PER SECTION 608.15 OF THE 2018 VPC, MOUNTING HEIGHT SHALL BE BETWEEN 12" AND 60" ABOVE GRADE, IF MANUFACTURER'S LISTED INSTALLATION HEIGHT CONFLICTS WITH THIS REQUIREMENT, THE MANUFACTURER'S LISTED HEIGHT SHALL APPLY.

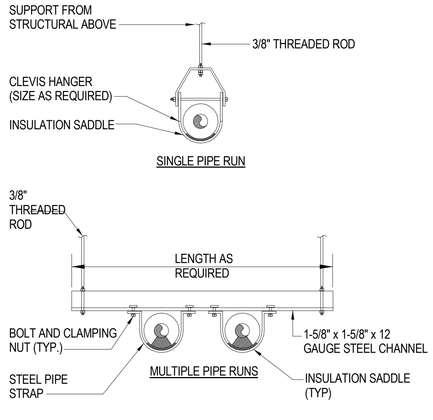
REDUCED PRESSURE BACKFLOW PREVENTER INSTALLATION DETAIL

NO SCALE



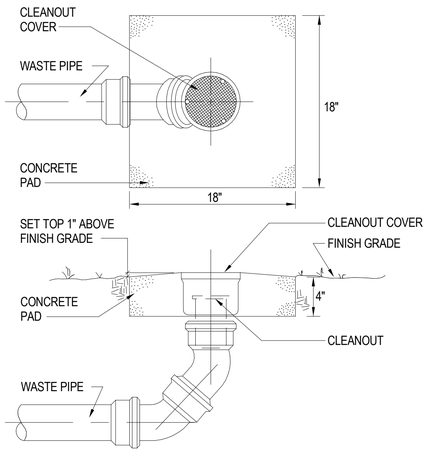
FLOOR MOUNTED ELECTRIC WATER HEATER DETAIL

NO SCALE



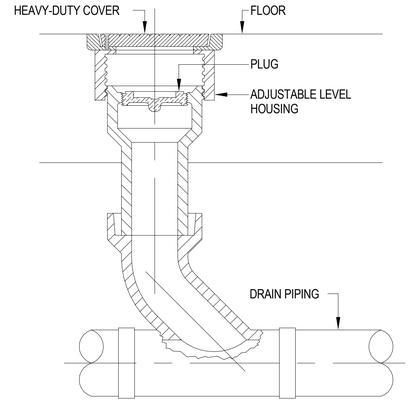
PIPE SUPPORT DETAILS

NO SCALE



GRADE CLEANOUT DETAIL

NO SCALE



FLOOR CLEANOUT DETAIL

NO SCALE

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions
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Drawing Title

DETAILS

Sheet Number 119 or 159
Drawing Number P501

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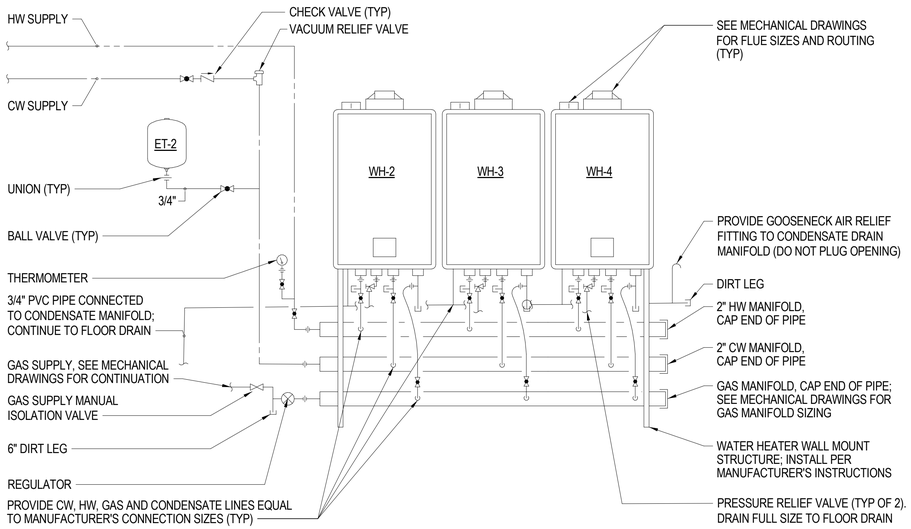
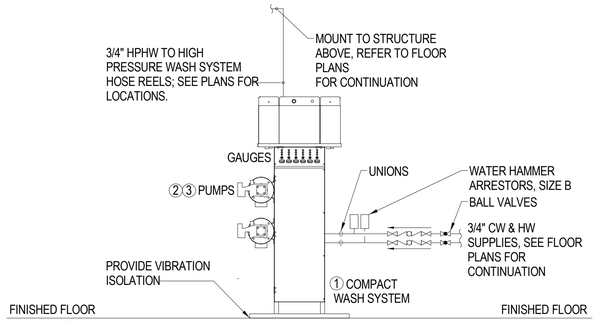
NOTES:
WATER HEATER: SEE GAS WATER HEATER SCHEDULE THIS SHEET.
EXPANSION TANK (ET): SEE GAS WATER HEATER SCHEDULE THIS SHEET.

PROVIDE INSTALLATION COMPLETE AS REQUIRED BY THE MANUFACTURER.



WALL MOUNTED TANKLESS GAS WATER HEATER DETAIL
NO SCALE

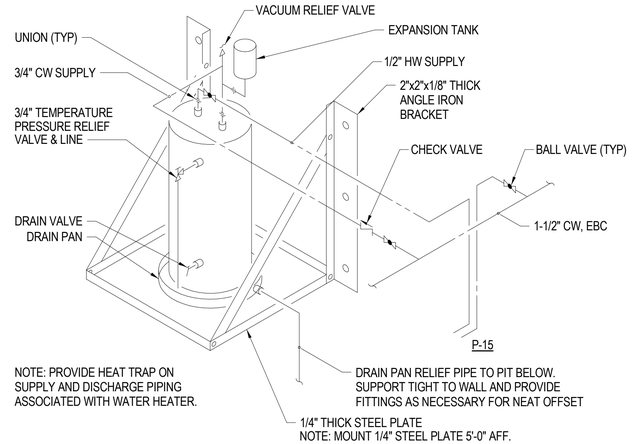


NOTE: 1 STAINLESS STEEL"DIRECT DRIVE" WASH SYSTEM WITH TWO PUMPS IN PARALELL, HIGH PRESSURE SOAP TANK, COLD AND HOT WATER RINSE TANK, AND WAX TANK ASSEMBLIES.

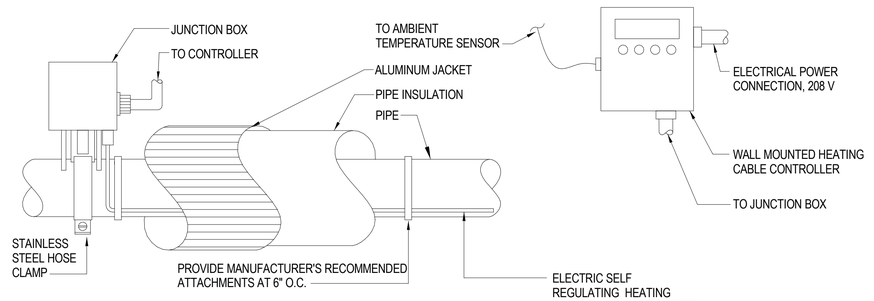
2 PROVIDE 240 VOLT, SINGLE PHASE FOR 5HP HIGH PRESSURE DIRECT DRIVE PUMPS. EACH PUMP SHALL SUPPLY 4 GPM AT 2000 PSI.

3 REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR EXACT CONNECTION REQUIREMENTS AND LOCATIONS.

PRESSURE WASHER UNIT PIPING DETAIL (PW-1)
NO SCALE

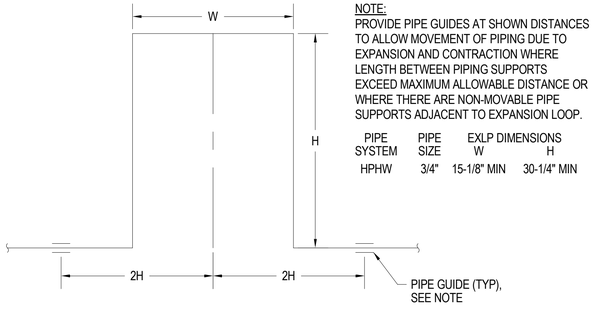


WALL HUNG WATER HEATER DETAIL
NOT TO SCALE



NOTES:
1. HEAT TRACE CABLE BASED ON THERMON FLX.
2. PROVIDE CONTROLLER WITH STATUS AND ALARM INDICATORS. PROVIDE WITH CAPABILITY TO CONNECT TO CLOUD BASED PLATFORM TO MONITOR AND CONTROL HEAT TRACE SYSTEM. BASED ON FRIO S1 HEAT TRACE CONTROLLER.

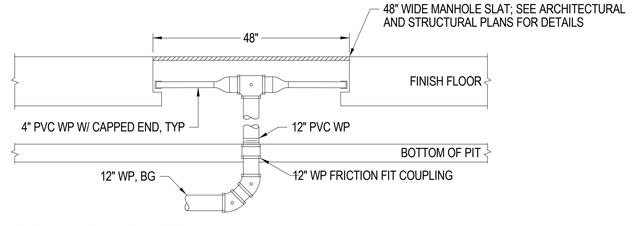
HEATING CABLE DETAIL
NO SCALE



NOTE:
PROVIDE PIPE GUIDES AT SHOWN DISTANCES TO ALLOW MOVEMENT OF PIPING DUE TO EXPANSION AND CONTRACTION WHERE LENGTH BETWEEN PIPING SUPPORTS EXCEED MAXIMUM ALLOWABLE DISTANCE OR WHERE THERE ARE NON-MOVABLE PIPE SUPPORTS ADJACENT TO EXPANSION LOOP.

PIPE SYSTEM	PIPE SIZE	EXLP DIMENSIONS W	H
HPHW	3/4"	15-1/8" MIN	30-1/4" MIN

PIPE EXPANSION LOOP DETAIL
NO SCALE



DRAIN PLUG DETAIL
NO SCALE

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DACS- Tidewater Reseach Station- Swine Unit Replacement

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207 Research Station Rd.
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Project Number 2212.HOGS
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DETAILS

Sheet Number 120 of 159
Drawing Number P502

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ELECTRIC WATER HEATER SCHEDULE

TAG	TYPE	LOCATION	STORAGE (GAL)	RECOVERY (GPH) 80°F	RECOVERY (GPH) 100°F	ELECTRICAL DATA KILOWATTS	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PHASE	EXPANSION TANK TAG	EXPANSION TANK TOTAL VOLUME (GAL)	EXPANSION TANK ACCEPTANCE VOLUME (GAL)	MOUNTING	REMARKS
WH-1	TANK	BIOSECURITY LAUNDRY/STORAGE	150	77	62	15	240	1	ET-1	5.1	2.2	FLOOR	SEE NOTES
WH-5	TANK	FARROWING	20	15	12	3.0	240	1	ET-3	0.5	0.2	WALL	SEE NOTES

NOTES:

1. INSTALL PER MANUFACUTURER'S RECOMMENDATIONS.
2. ALL WATER HEATERS WITH AN INPUT OF 58.6 KW OR STORAGE VOLUME OF 120 GALLONS OR LARGER SHALL BEAR ASME STAMP.
3. WH-1 MUST DISTRIBUTE DOMESTIC HOT WATER AT A MAXIMUM OF140˚F.
4. WH-5 MUST DISTRIBUTE DOMESTIC HOT WATER AT A MINIMUM OF120˚F.

GAS WATER HEATER SCHEDULE

TAG	TYPE	LOCATION	HW DEMAND (GPM)	RECOVERY (GPH) 80°F	RECOVERY (GPH) 100°F	INPUT (BTUH)	GAS INLET PRESSURE (IN. W.C.)	VENT SIZE INTAKE/ EXHAUST	EXPANSION TANK MARK	EXPANSION TANK TOTAL VOLUME (GAL)	EXPANSION TANK ACCEPTANCE VOLUME (GAL)	MOUNTING	REMARKS
WH-2	TANKLESS	UTILITY SHED	2.7	-	-	199,000	8 - 13.5	2				WALL	SEE NOTES
WH-3	TANKLESS	UTILITY SHED	2.7	-	-	199,000	8 - 13.5	2	ET-2	1.1	0.5	WALL	SEE NOTES
WH-4	TANKLESS	UTILITY SHED	2.7	-	-	199,000	8 - 13.5	2				WALL	SEE NOTES

NOTES:

1. ALL WATER HEATERS WITH AN INPUT OF 200,000 BTUH OR STORAGE VOLUME OF 120 GALLONS OR LARGER SHALL BEAR ASME STAMP.
2. PROVIDE WITH MANUFACTURER'S CONDENSATE NEUTRALIZATION AND CONCENTRIC VENT KITS.
3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS
4. REFER TO MECHANICAL DRAWINGS FOR VENTING & GAS PIPING ROUTING. EXHAUST VENTING SHALL BE CPVC.
5. DISTRIBUTE HOT WATER AT A MAXIMUM OF 190˚F.

DOMESTIC HOT WATER RECIRCULATING PUMP SCHEDULE

TAG	TYPE	GPM	HEAD (FT)	LOCATION	HP	VOLTS	PHASE	REMARKS
HWRP-1	INLINE CIRCULATOR	3	10	BIOSECURITY LAUNDRY/STORAGE	1/12	115	1	SEE NOTES

NOTES:

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS
2. DOMESTIC HOT WATER CIRCULATION PUMPS SHALL BE CONTROLLED WITH AN AQUASTAT. PUMP SHALL BE ENERGIZED IF TEMPERATURE FALLS 10°F BELOW WATER HEATER SETPOINT. PUMP SHALL BE DE-ENERGIZED IF TEMPERATURE EXCEEDS 5°F BELOW WATER HEATER SETPOINT. PROVIDE 7-DAY PROGRAMMABLE TIME CLOCK TO TURN PUMP OFF DURING NON OCCUPIED HOURS AND ON DURING OCCUPIED HOURS.

WATER HAMMER ARRESSTOR SCHEDULE

MARK	A	B	C	D	E	F	REMARKS
FIXTURE UNITS	1 - 11	12 - 32	-	-	-	-	SEE NOTES

NOTES:

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

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NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES 23086

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SCHEDULES

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Drawing Number P601

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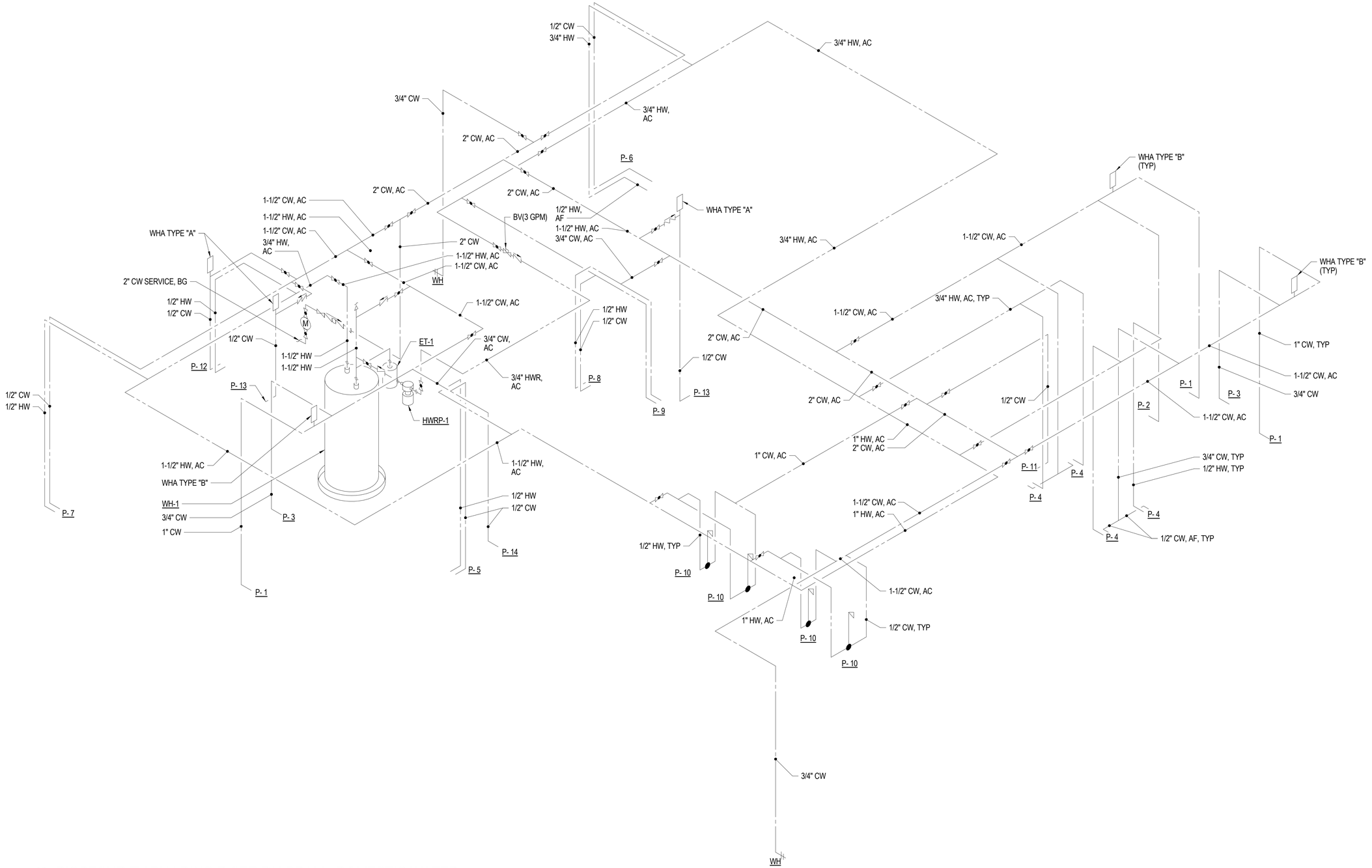

WA BIOSECURITY BUILDING RISER DIAGRAM - DOMESTIC WATER

P102 NO SCALE

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2526368778

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049349 TAYLOR C. JONES 23086

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Project Number 2212.HOGS

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Drawing Title

BIOSECURITY BLDG RSDM - DOMW

Sheet Number 122 of 159

Drawing Number P602

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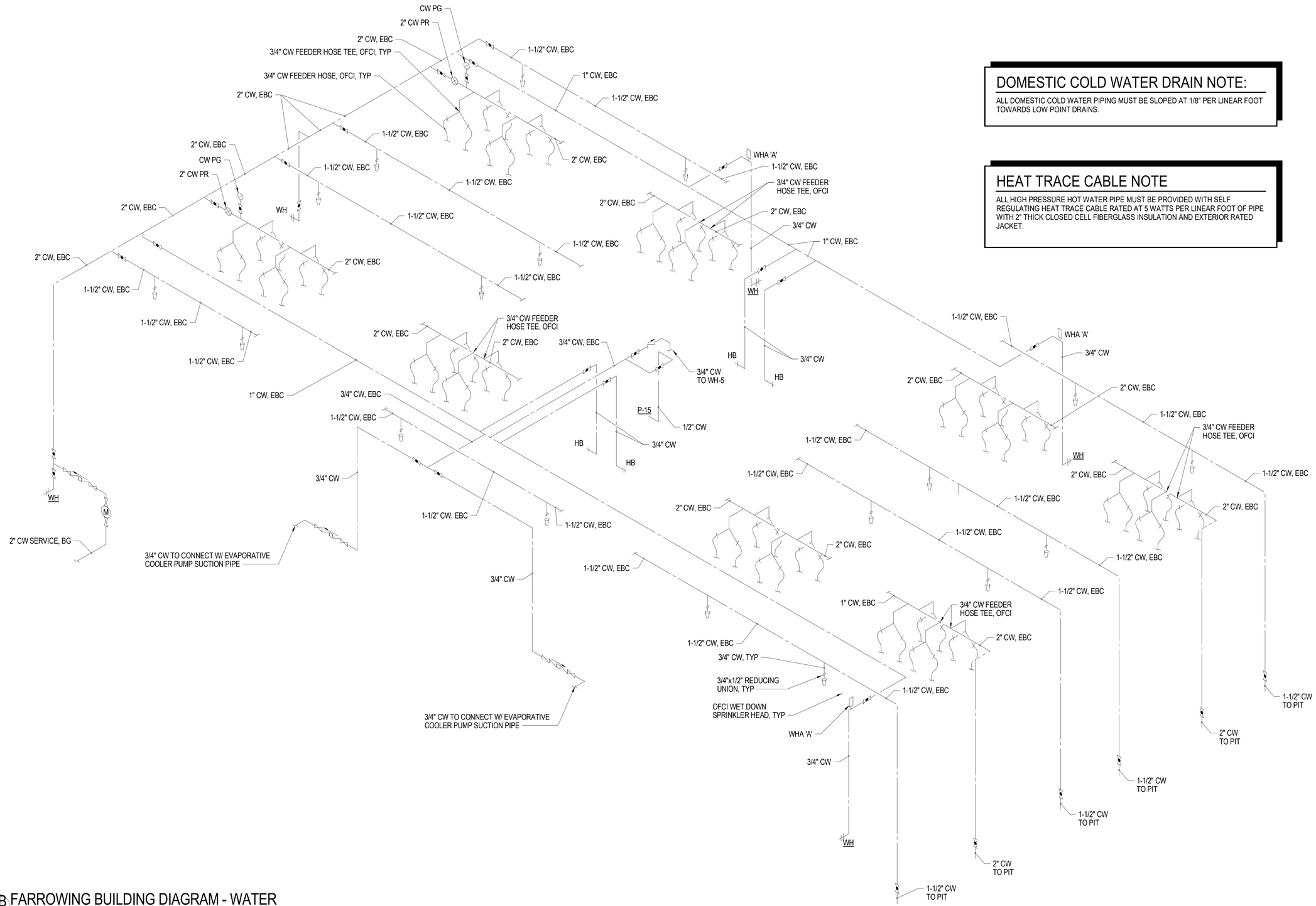

DOMESTIC COLD WATER DRAIN NOTE:

ALL DOMESTIC COLD WATER PIPING MUST BE SLOPED AT 1/8" PER LINEAR FOOT TOWARDS LOW POINT DRAINS.

HEAT TRACE CABLE NOTE

ALL HIGH PRESSURE HOT WATER PIPE MUST BE PROVIDED WITH SELF REGULATING HEAT TRACE CABLE RATED AT 5 WATTS PER LINEAR FOOT OF PIPE WITH 2" THICK CLOSED CELL FIBERGLASS INSULATION AND EXTERIOR RATED JACKET.

WB P103 FARROWING BUILDING DIAGRAM - WATER

NO SCALE

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2526368778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES 23086

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FARROWING BLDG RSDM - DOMW

Sheet Number 123 of 159
Drawing Number P603

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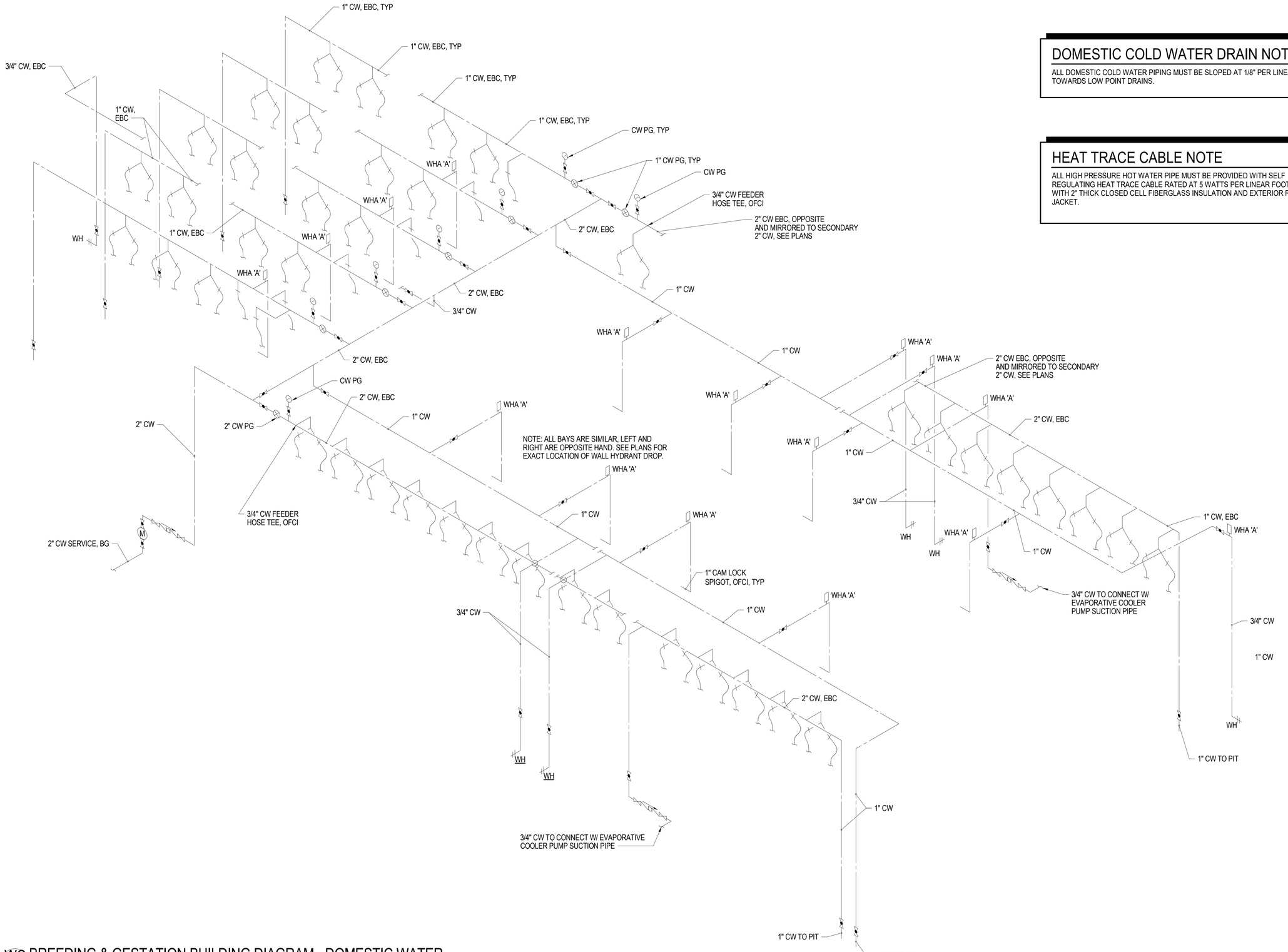

DOMESTIC COLD WATER DRAIN NOTE:

ALL DOMESTIC COLD WATER PIPING MUST BE SLOPED AT 1/8" PER LINEAR FOOT TOWARDS LOW POINT DRAINS.

HEAT TRACE CABLE NOTE

ALL HIGH PRESSURE HOT WATER PIPE MUST BE PROVIDED WITH SELF REGULATING HEAT TRACE CABLE RATED AT 5 WATTS PER LINEAR FOOT OF PIPE WITH 2" THICK CLOSED CELL FIBERGLASS INSULATION AND EXTERIOR RATED JACKET.

WC P104 BREEDING & GESTATION BUILDING DIAGRAM - DOMESTIC WATER

NO SCALE

WALKER the GROUP ARCHITECTURE incorporated
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2526368778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES 23086

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BREEDING & GESTATION BLDG RSDM - DOMW

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Drawing Number P604

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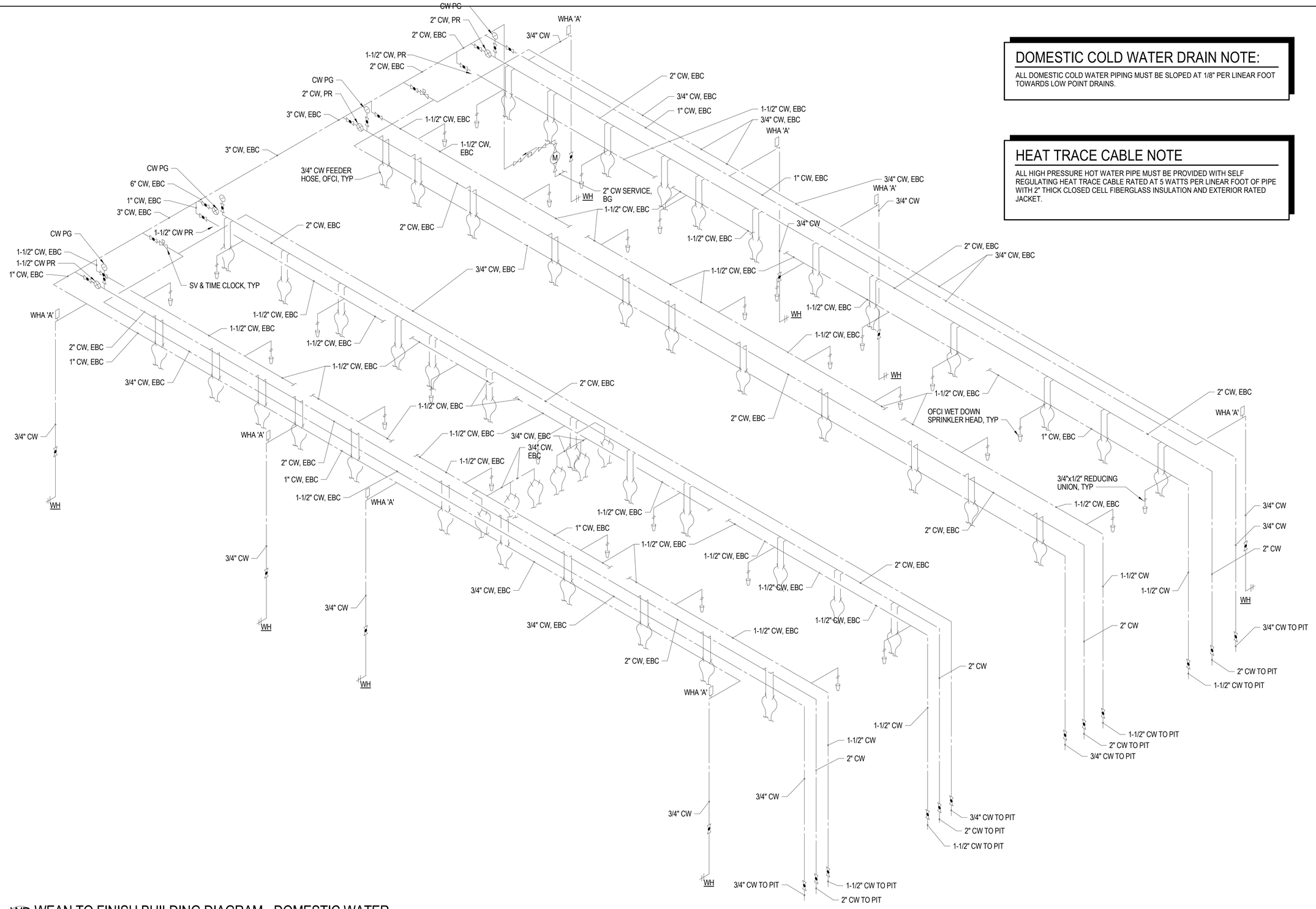

DOMESTIC COLD WATER DRAIN NOTE:

ALL DOMESTIC COLD WATER PIPING MUST BE SLOPED AT 1/8" PER LINEAR FOOT TOWARDS LOW POINT DRAINS.

HEAT TRACE CABLE NOTE

ALL HIGH PRESSURE HOT WATER PIPE MUST BE PROVIDED WITH SELF REGULATING HEAT TRACE CABLE RATED AT 5 WATTS PER LINEAR FOOT OF PIPE WITH 2" THICK CLOSED CELL FIBERGLASS INSULATION AND EXTERIOR RATED JACKET.

WD P105 WEAN TO FINISH BUILDING DIAGRAM - DOMESTIC WATER

NO SCALE

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WEAN TO FINISH BLDG RSDM - DOMW

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Drawing Number P605

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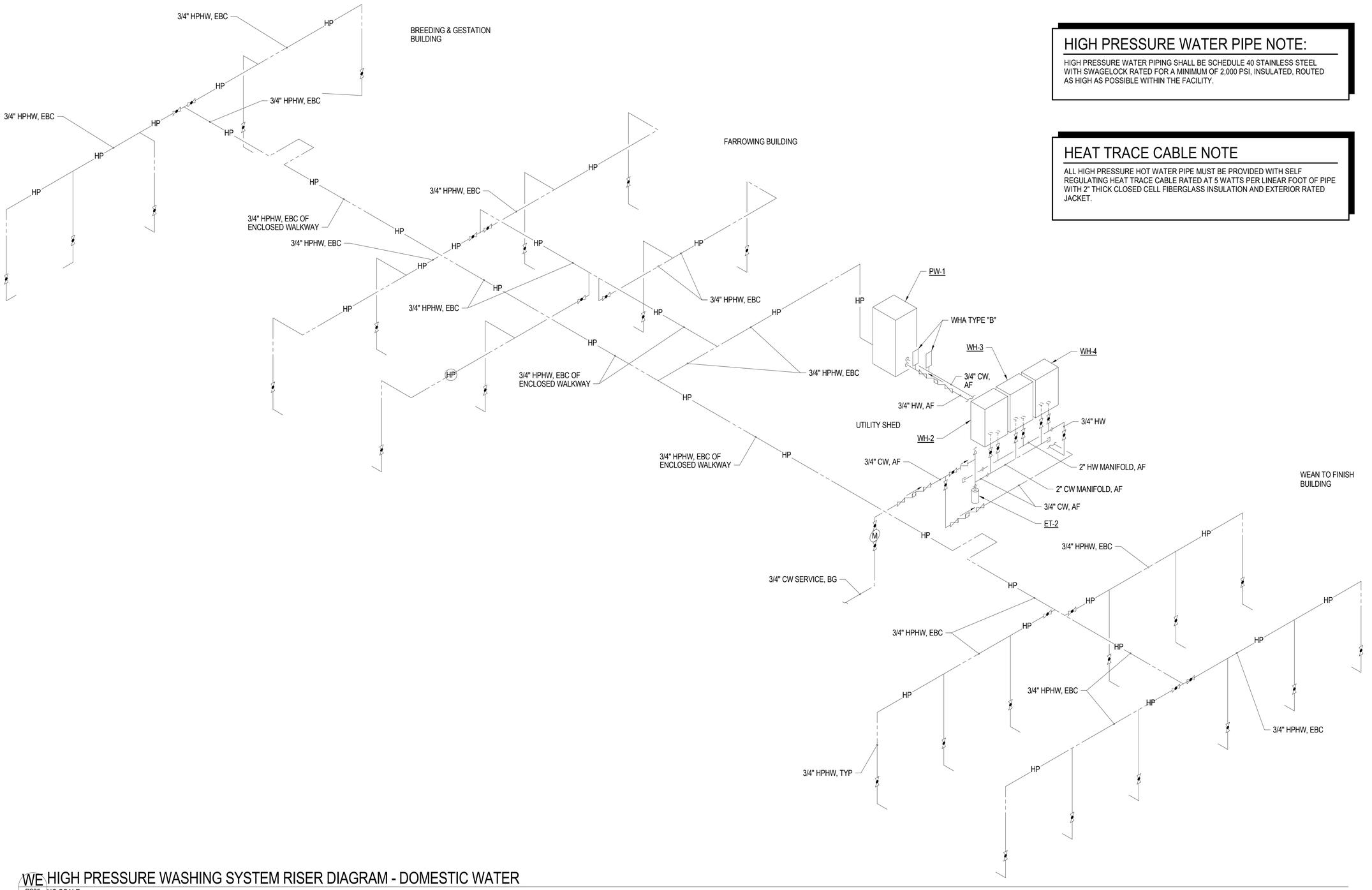

HIGH PRESSURE WATER PIPE NOTE:

HIGH PRESSURE WATER PIPING SHALL BE SCHEDULE 40 STAINLESS STEEL WITH SWAGELOCK RATED FOR A MINIMUM OF 2,000 PSI, INSULATED, ROUTED AS HIGH AS POSSIBLE WITHIN THE FACILITY.

HEAT TRACE CABLE NOTE

ALL HIGH PRESSURE HOT WATER PIPE MUST BE PROVIDED WITH SELF REGULATING HEAT TRACE CABLE RATED AT 5 WATTS PER LINEAR FOOT OF PIPE WITH 2" THICK CLOSED CELL FIBERGLASS INSULATION AND EXTERIOR RATED JACKET.

WE P605 HIGH PRESSURE WASHING SYSTEM RISER DIAGRAM - DOMESTIC WATER

NO SCALE

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 ENGINEER TAYLOR C. JONES 23086

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HIGH PRESSURE WASHING SYSTEM RSDM - DOMW

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Drawing Number P606

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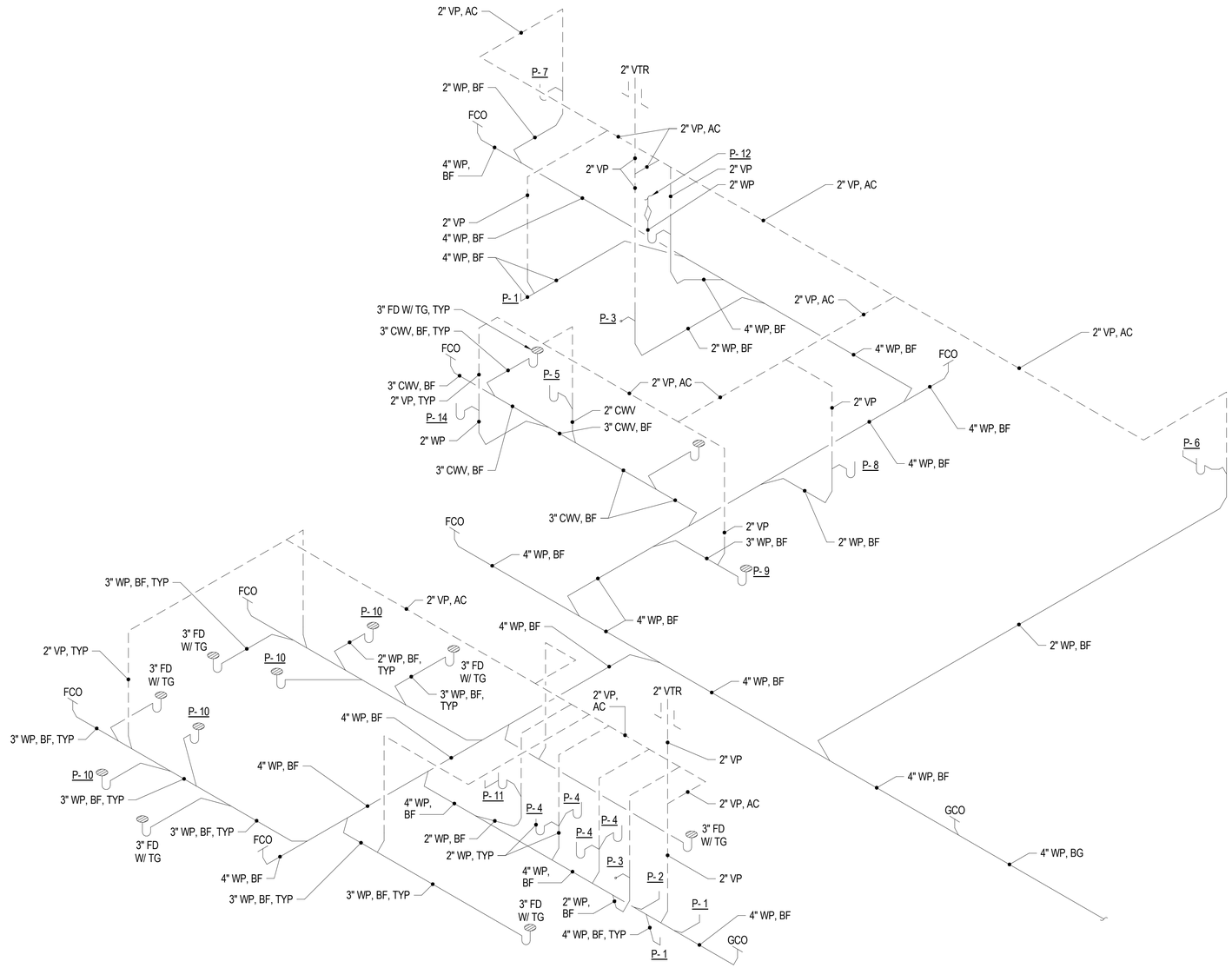

SA P202 BIOSECURITY BUILDING RISER DIAGRAM - SANITARY

NO SCALE

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BIOSECURITY BLDG RSDM - SANR

Sheet Number 127 of 159
Drawing Number P607

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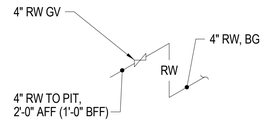

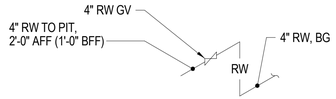

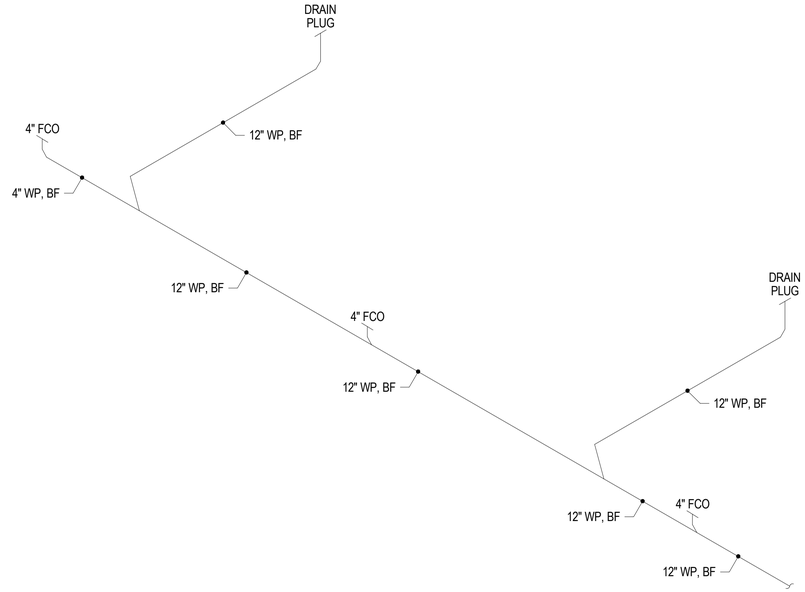

SB P203 FARROWING BUILDING RISER DIAGRAM - SANITARY
NO SCALE

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P608

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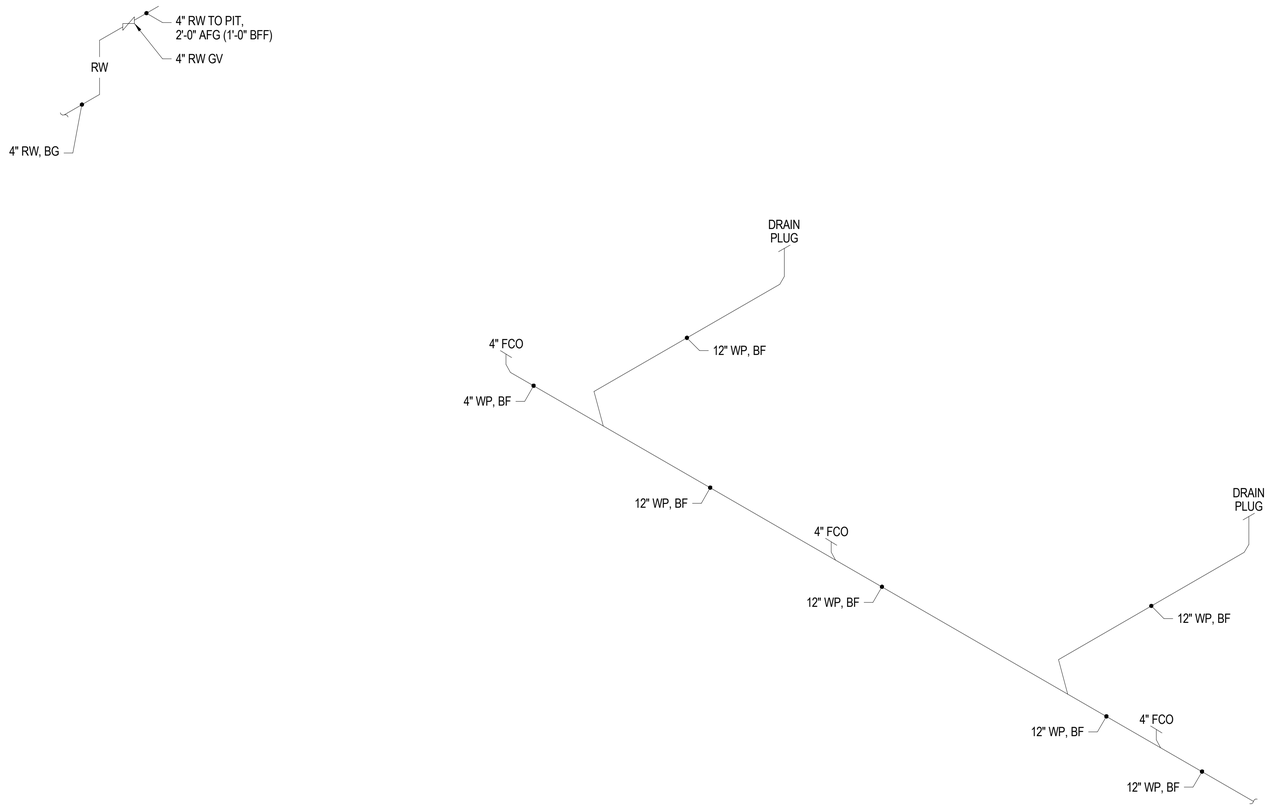

SC P204 BREEDING & GESTATION BUILDING RISER DIAGRAM - SANITARY

NO SCALE

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES
23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn ADB
Checked JBH
Scale AS NOTED
Drawing Title

BREEDING & GESTATION BLDG RSDM - SANR

Sheet Number 129 of 159
Drawing Number P609

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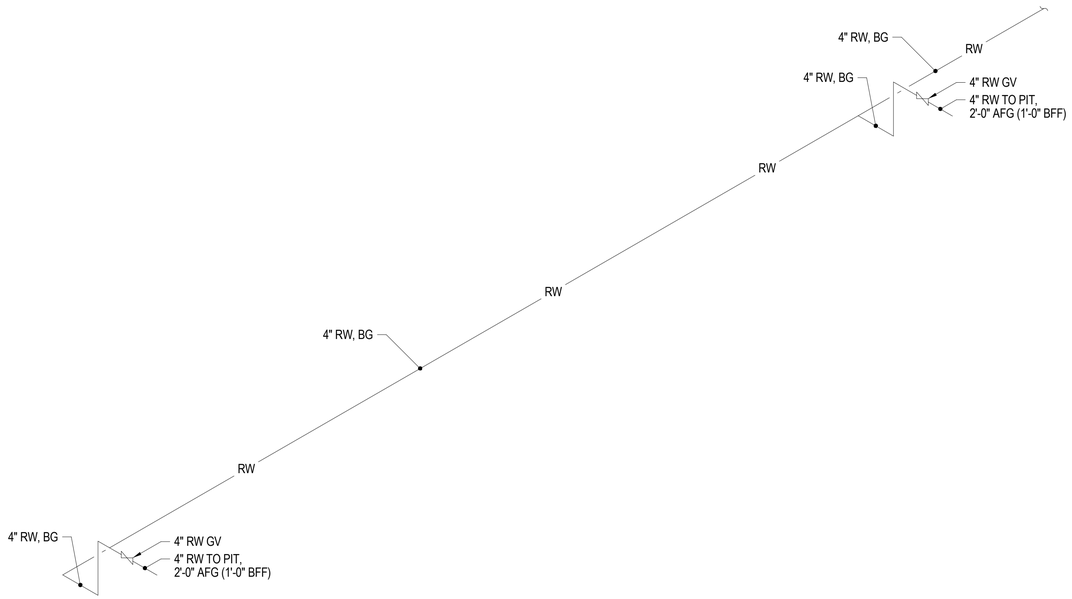

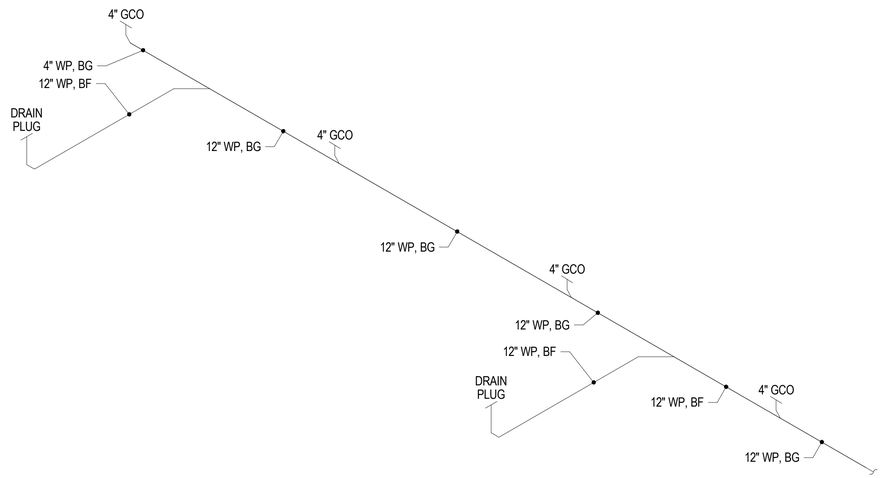

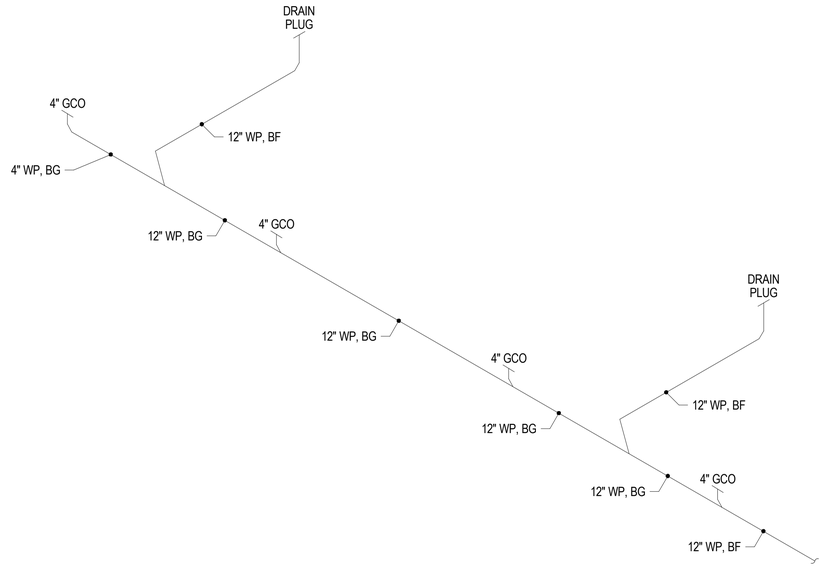

SD P205 WEAN TO FINISH BUILDING RISER DIAGRAM - SANITARY
NO SCALE

WALKER the GROUP ARCHITECTURE
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2526368778

NORTH CAROLINA REGISTERED SEAL 049349 ENGINEER TAYLOR C. JONES
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WEAN TO FINISH BLDG RSDM - SANR

Sheet Number 130 or 159
Drawing Number P610

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GENERAL NOTES

GENERAL ITEMS

ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE 2018 NORTH CAROLINA MECHANICAL CODE.

GENERAL NOTES ON THIS DRAWING ARE APPLICABLE TO EACH HVAC DRAWING OF THIS SET. SEE EACH DRAWING FOR SPECIFIC NOTES APPLICABLE TO THAT DRAWING.

COORDINATE THAT OUTSIDE AIR INTAKE OPENINGS FOR VENTILATION AIR ARE LOCATED AT LEAST 10 FEET MEASURED IN ANY DIRECTION FROM ANY HAZARDOUS OR NOXIOUS CONTAMINANT SOURCE SUCH AS FLUES, VENTS, CHIMNEYS, GAS METERS, GAS REGULATORS, PLUMBING VENTS, ETC., UNLESS TOP OF SUCH INTAKE OPENING IS 3 FEET OR GREATER BELOW ANY OF THE LISTED ITEMS.

OVERHEAD PIPING IN SPACES WITHOUT HUNG CEILINGS SHALL BE RUN AS CLOSE TO ROOF DECK AS PRACTICAL, AS CLOSE TO PARALLEL JOISTS AS POSSIBLE AND ABOVE LIGHTING FIXTURES TO CONCEAL PIPING.

OVERHEAD DUCTWORK AND PIPING IN SPACES WITH CEILINGS SHALL BE CONCEALED UNLESS OTHERWISE NOTED.

PROVIDE PIPE SLEEVES LARGE ENOUGH TO ALLOW FOR REQUIRED LATERAL MOVEMENT OF PIPING.

COORDINATE LOCATION OF GRILLES, REGISTERS, DIFFUSERS, THERMOSTATS AND OTHER WALL OR CEILING MOUNTED HVAC ACCESSORIES WITH REFLECTED CEILING PLAN, LIGHTING FIXTURE LAYOUT AND ACCESSORIES INSTALLED BY OTHER TRADES SO AS TO PRESENT A NEAT AND ATTRACTIVE INSTALLATION THROUGHOUT THE ENTIRE BUILDING. IT IS THE INTENT FOR GRILLES, REGISTERS AND DIFFUSERS TO BE INSTALLED IN THE CENTER OF CEILING PANELS.

THE DIAMETER OF THE SUPPLY PIPE AT PROPANE FIRED EQUIPMENT SHALL NOT BE OF A SMALLER SIZE THAN THE INLET CONNECTION TO THE EQUIPMENT.

ARRANGE PIPING AND DUCTWORK, PARTICULARLY ABOVE CEILING AS REQUIRED TO CLEAR STRUCTURE, DUCTS, CONDUITS, ETC. ALLOWING SPACE FOR PIPE HANGERS, EXPANSION LOOPS AND ACCESS TO VALVES, FILTERS, AND MAINTENANCE OF EQUIPMENT.

CONTRACTOR SHALL VERIFY REQUIRED REFRIGERANT PIPE SIZES AND QUANTITIES WITH EQUIPMENT MANUFACTURER FOR THE INDICATED INSTALLATION.

COORDINATE LOCATION AND INSTALLATION OF EQUIPMENT WITH OTHER TRADES.

DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF DOORS, WINDOWS, ETC.

THERMOSTATS AND SENSORS SHALL BE LOCATED IN THE ROOMS INDICATED. INSTALL AT APPROX. 46" ABOVE FINISH FLOOR TO MATCH THE HEIGHT OF WALL SWITCHES OR OTHER WALL MOUNTED DEVICES.

PIPING, DUCTWORK, VENTS, ETC., EXTENDING THROUGH EXTERIOR WALLS AND ROOF SHALL BE FLASHED AND COUNTER FLASHED IN A WEATHERPROOF MANNER.

EXTEND DRAIN LINES AS INDICATED. ROUTING SHALL NOT INTERFERE WITH PASSAGEWAYS AND MAINTENANCE. DRAINS FROM AIR CONDITIONING CONDENSATE DRAIN PANS SHALL BE TRAPPED. SLOPE CONDENSATE DRAIN PIPING AT 1/4" PER FOOT. VERIFY INVERT IS ESTABLISHED AFTER AIR HANDLING UNIT IS INSTALLED BUT PRIOR TO DUCTWORK INSTALLATION.

INDOOR MECHANICAL EQUIPMENT CONTAINING AIR CONDITIONING COILS SHALL BE OUTFITTED WITH A MOISTURE SENSOR LOCATED IN THE DRAIN P-TRAP. THE SENSOR SHALL BE WIRED TO DE-ENERGIZE THE EQUIPMENT IF WATER RISES ABOVE THE DRAIN OUTLET.

PIPING AND DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH NON-RATED FLOORS, WALLS, ROOF AND PARTITIONS, UNLESS OTHERWISE INDICATED.

NO PIPING SHALL BE SMALLER THAN 3/4" UNLESS OTHERWISE NOTED.

FOR PIPE SIZES NOT INDICATED ON PLANS, SEE FLOW DIAGRAMS.

PROVIDE UNION OR FLANGED CONNECTIONS AT EACH PIECE OF EQUIPMENT AND ON BOTH SIDES ON CONTROL VALVES AND PRESSURE REGULATING VALVES. PROVIDE SHUT-OFF VALVES ON BOTH SIDES OF AUTOMATIC VALVES.

PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS. ADDITIONAL SUPPORTS OR HANGERS SHALL BE ADJACENT TO ELBOWS, TO PREVENT WEIGHT OF PIPING BEING PLACED ON THE EQUIPMENT.

CORRECT SETTING ON BALANCING FITTINGS SHALL BE PERMANENTLY MARKED.

INSTALL ANCHORS AND EXPANSION LOOPS WHERE INDICATED AND WHERE REQUIRED TO ALLOW FOR EXPANSION.

LOCATE AND SIZE CONCRETE PADS AND CURBS FOR MECHANICAL EQUIPMENT IN ACCORDANCE WITH ACTUAL EQUIPMENT PURCHASED.

FOR LOCATION OF MOTOR STARTERS, SEE ELECTRICAL DRAWINGS.

SHEET METAL

PROVIDE ACCESS DOORS IN DUCTWORK WHERE INDICATED OR REQUIRED FOR ACCESS TO SYSTEM COMPONENTS INCLUDING THE FOLLOWING:
- DAMPER MOTORS AND/OR MOTOR OPERATED DAMPERS
- FILTERS
- BOTH SIDES OF HEATING AND COOLING COILS

INSTALL CEILING REGISTERS A MINIMUM OF 4" FROM EXTERIOR WALL.

PROVIDE A MINIMUM OF THREE TIMES THE FAN DIAMETER OF STRAIGHT DUCTWORK OFF THE SUPPLY AIR FAN DISCHARGE BEFORE ANY TAKEOFFS OR ELBOWS.

DUCTWORK SHALL BE CONSTRUCTED TO THE SMACNA STATIC PRESSURE CLASSIFICATION OF 2 IN. WG AND SEAL CLASS "A".

PROVIDE EXTENDED VOLUME DAMPER CONTROL RODS SO THAT HANDLES ARE WELL CLEAR OF DUCT INSULATION.

MAINTENANCE

EQUIPMENT WITH FILTERS SHALL BE INSTALLED SO THAT FILTERS CAN BE EASILY REMOVED AND REPLACED.

EQUIPMENT INSTALLED ABOVE CEILINGS SHALL BE MOUNTED APPROX. 12" ABOVE CEILING (UON) FOR MAINTENANCE ACCESS.

INSTALL PIPE RUNS AT LEAST 6" ABOVE CEILING TILES. WHERE PRACTICAL INSTALL VALVES, AND OTHER MAINTAINABLE DEVICES LOW ENOUGH TO REACH WITH A 6' LADDER.

PROVIDE ACCESS TO ANY INSPECTION OR MAINTAINABLE DEVICE, EQUIPMENT, ETC. - ACCESS OR ACCESS DOOR SHALL BE OF ADEQUATE SIZE TO WORK ON DEVICE.

EXAMINE MANUFACTURER'S LITERATURE TO DETERMINE RECOMMENDED CLEARANCES. THESE CLEARANCES, IN ADDITION TO MINIMUM CLEARANCES REQUIRED BY THE NATIONAL ELECTRICAL CODE, SHALL BE ESTABLISHED AND MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THESE REQUIREMENTS WITH ALL OTHER TRADES.

INTERDISCIPLINARY COORDINATION

IF THIS CONTRACTOR SHOULD ELECT TO PROPOSE ANY EQUIPMENT THAT HAS DIFFERENT PHYSICAL OR ELECTRICAL CHARACTERISTICS, ETC. WHEN COMPARED TO THE BASIS OF DESIGN EQUIPMENT, THIS CONTRACTOR IS RESPONSIBLE FOR COORDINATING THESE CHANGES WITH THE OTHER TRADES PRIOR TO BID AND AGAIN AFTER ORDERING OF EQUIPMENT. IF THERE SHOULD BE ANY ADDITIONAL WORK INCURRED BY THE OTHER TRADES AS A RESULT OF THIS CONTRACTOR'S EQUIPMENT SELECTION, ALL COSTS ASSOCIATED WITH THE ADDITIONAL WORK SHALL BE BORNE BY THIS CONTRACTOR.

LEGENDS AND ABBREVIATIONS

	NEW WORK NOTE DESIGNATION
	DETAIL/RISER/ENLARGED PLAN SHEET WHERE SHOWN/CUT
AHU-1	AIR HANDLING UNIT DESIGNATION
EC-1	EVAPORATIVE COOLER
EF-1	EXHAUST FAN DESIGNATION
HP-1	HEAT PUMP DESIGNATION
LV-1	LOUVER DESIGNATION
RV-1	ROOF VENT DESIGNATION
UH-1	UNIT HEATER DESIGNATION
T	WALL THERMOSTAT/CEILING TEMPERATURE SENSOR
BDD	BACKDRAFT DAMPER
M	MOTORIZED DAMPER
	VOLUME DAMPER
X / XXX	GRILLE, REGISTER, OR DIFFUSER MARK (CFM AS INDICATED)
	SUPPLY AIR/OUTSIDE AIR DUCT SECTION
	RETURN AIR AIR DUCT SECTION
	EXHAUST AIR DUCT SECTION
	SUPPLY AIR/OUTSIDE AIR DUCT SECTION THROUGH ROOF
	RETURN AIR DUCT SECTION THROUGH ROOF
	EXHAUST AIR DUCT SECTION THROUGH ROOF
	DUCT TURNING UP
	DUCT TURNING DOWN
	CEILING DIFFUSER WITH FLEXIBLE DUCTWORK
	RETURN REGISTER WITH DUCTWORK
	EXHAUST GRILLE WITH DUCTWORK
	MITERED ELBOW WITH TURNING VANES
	FLEXIBLE DUCT CONNECTOR
	GATE VALVE
	PIPE TURNING UP
	PIPE TURNING DOWN
D	CONDENSATE DRAIN PIPING
G	LP GAS PIPING
RL	REFRIGERANT LIQUID PIPING
RS	REFRIGERANT SUCTION PIPING

AFF	ABOVE FINISHED FLOOR
APPROX	APPROXIMATELY
BDD	BACK DRAFT DAMPER
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB TEMPERATURE
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB TEMPERATURE
EER	ENERGY EFFICACY RATIO
EWB	ENTERING WET BULB TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
FLA	FULL LOAD AMPS
FT	FEET
HP	HORSEPOWER
IN	INCH
KW	KILOWATT
LDB	LEAVING DRY BULB TEMPERATURE
LWB	LEAVING WET BULB TEMPERATURE
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
NC	NOISE CRITERIA
NO	NUMBER
OA	OUTSIDE AIR
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PD	PRESSURE DROP
SENS	SENSIBLE
SF	SQUARE FEET
UON	UNLESS OTHERWISE NOTED
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WG	WATER GAUGE
WxH	WIDTH BY HEIGHT
°F	DEGREE FAHRENHEIT
Ø	PHASE/DIAMETER

WALKER the GROUP ARCHITECTURE incorporated
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DACS- Tidewater Reseach Station- Swine Unit Replacement

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207 Research Station Rd. Plymouth, NC 27962

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Drawing Title

LEGEND, NOTES, AND ABBREVIATIONS

Sheet Number 131 of 159

Drawing Number **M-001**

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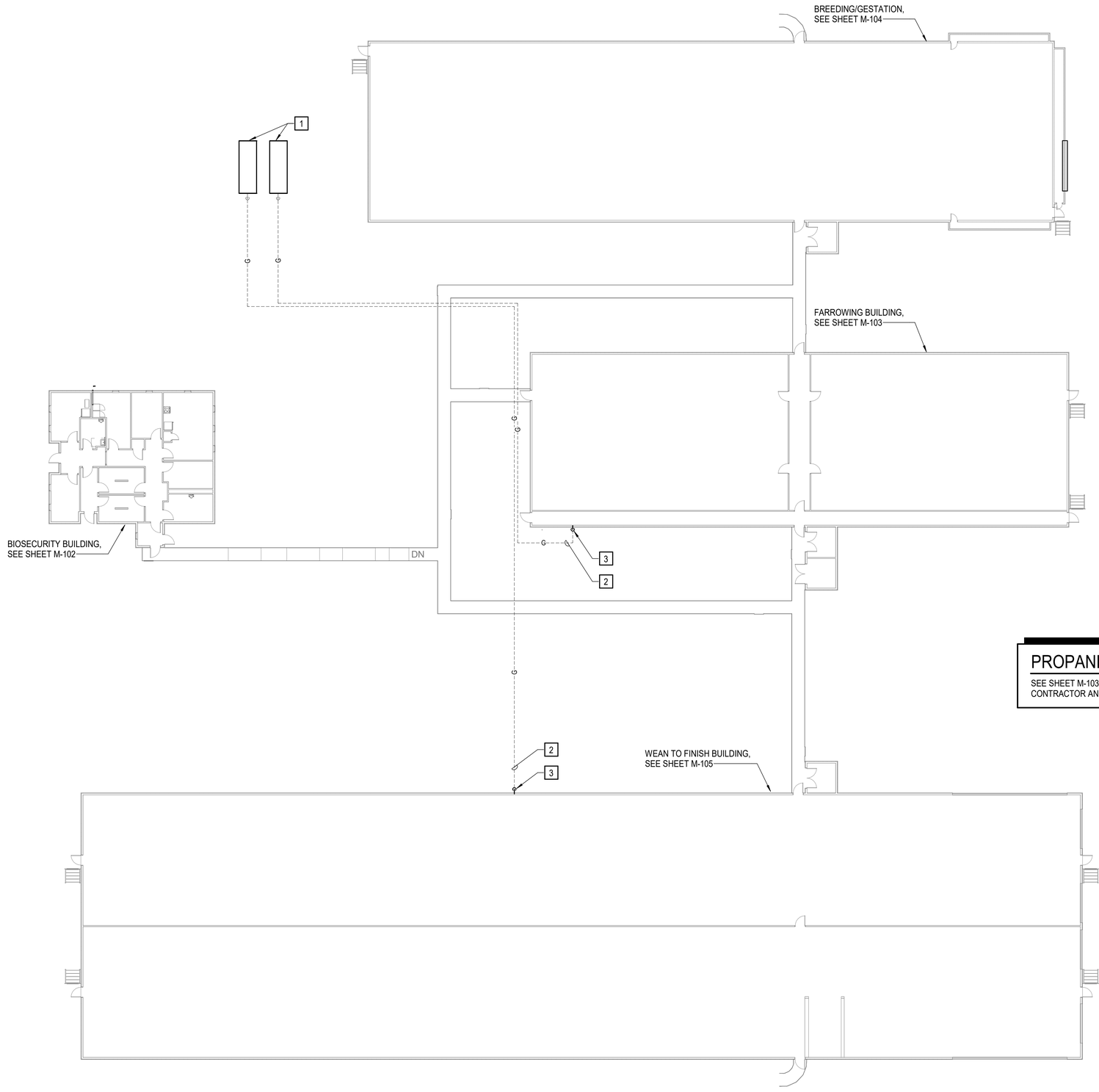
NOTES THIS SHEET

1. PROVIDE PROPANE TANK, 1ST STAGE REGULATOR, PIPING, AND ASSOCIATED APPURTENANCES COMPLETE.
2. PROVIDE UNDERGROUND PIPING COMPLETE.
3. PROVIDE SECOND STAGE REGULATOR AND ASSOCIATED APPURTENANCES COMPLETE.



PROPANE NOTE:

SEE SHEET M-103 AND M-105 FOR DELINEATION OF SCOPE BETWEEN THE CONTRACTOR AND PROPANE PROVIDER.

OVERALL SITE PLAN

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

GRAPHIC SCALE:

1/16" = 1'-0"

5' 0' 5' 10' 20' 30' 50'

WALKER the GROUP ARCHITECTURE incorporated
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2526368778

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OVERALL SITE PLAN

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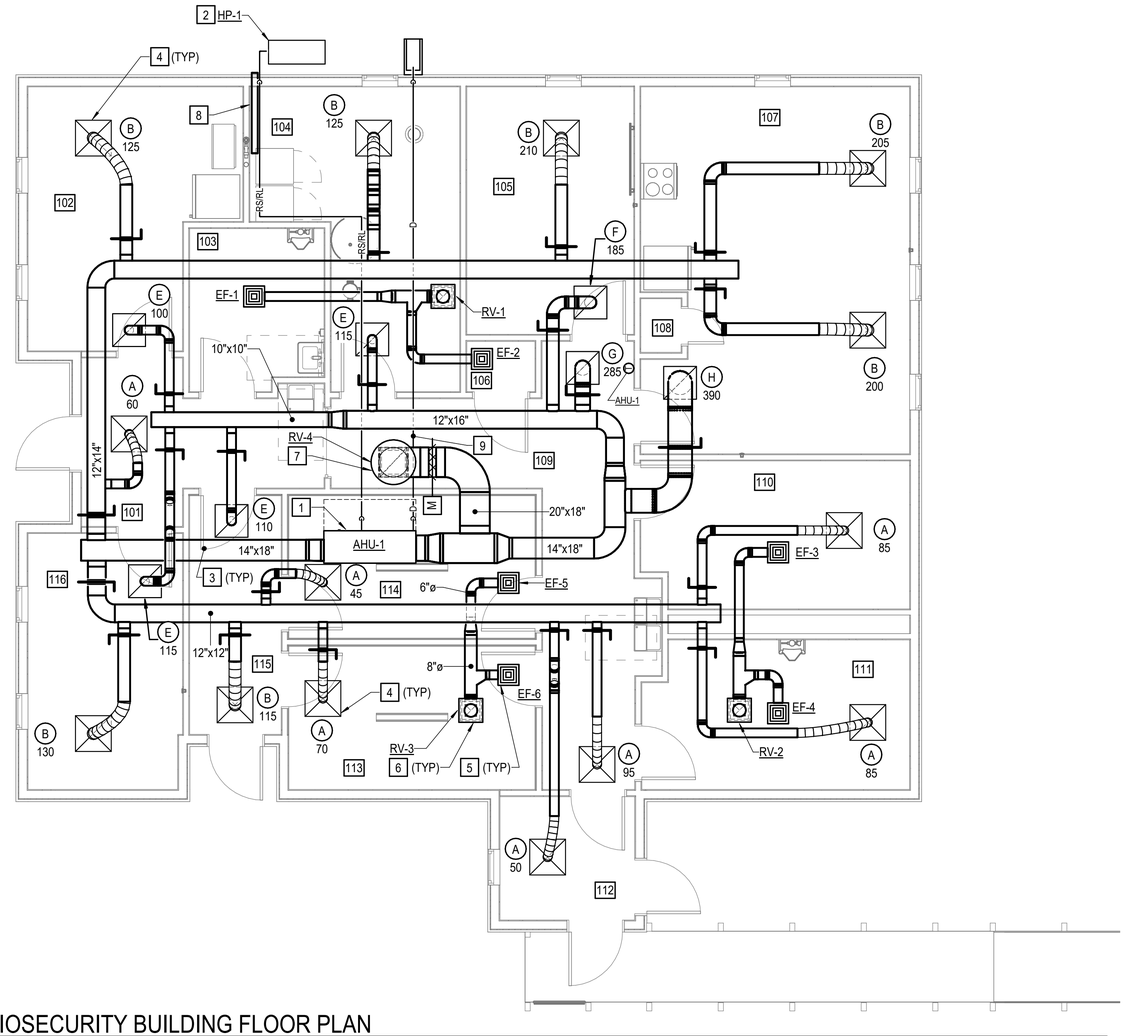
Sheet Number 132 of 159
Drawing Number M-101



BIOSECURITY BUILDING FLOOR PLAN

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

NOTES THIS SHEET

1. PROVIDE SPLIT SYSTEM HEAT PUMP INDOOR UNIT, AUXILIARY DRAIN PAN, HANGERS, SUPPORTS, AND ALL ASSOCIATED APPURTENANCES COMPLETE. PROVIDE FLEXIBLE DUCTWORK CONNECTIONS TO THE AHU.
2. PROVIDE SPLIT SYSTEM HEAT PUMP OUTDOOR UNIT, CONCRETE EQUIPMENT PAD, REFRIGERANT PIPING, AND ALL ASSOCIATED APPURTENANCES COMPLETE.
3. PROVIDE DUCTWORK, INSULATION, HANGERS, AND SUPPORTS COMPLETE.
4. PROVIDE DIFFUSER/GRILLE, RUNOUT, BALANCING DAMPER, TAKEOFF, INSULATION, HANGERS AND SUPPORTS COMPLETE.
5. PROVIDE CABINET EXHAUST FAN, DUCTWORK, HANGERS AND SUPPORTS COMPLETE. FAN SHALL BE SWITCHED WITH LIGHTS. COORDINATE WITH ELECTRICAL CONTRACTOR.
6. PROVIDE DUCTWORK UP TO ROOF VENT. PROVIDE ROOF VENT AND ALL ASSOCIATED APPURTENANCES COMPLETE.
7. 20"x18" DUCT UP TO ROOF VENT. PROVIDE ROOF VENT, ROOF CURB, AND ALL ASSOCIATED APPURTENANCES COMPLETE.
8. PROVIDE 4"ø DRYER EXHAUST DUCT, HANGERS, AND SUPPORTS COMPLETE. AT EXTERIOR WALL CAP WITH BACKDRAFT DAMPER.
9. PROVIDE 3/4" CONDESATE DRAIN PIPING, INSULATION, JACKETING, AND SUPPORTS COMPLETE. TERMINATE AT CONCRETE SPLASH BLOCK.

AHU-1 SEQUENCE OF OPERATION

AIR HANDLING UNIT:

GENERAL: UNIT SHALL BE CONTROLLED BY MANUFACTURER'S 7 DAY PROGRAMMABLE THERMOSTAT.

OCCUPIED MODE: WHEN THE SYSTEM IS INDEXED TO OCCUPIED OR SYSTEM IS MANUALLY INDEXED FROM UNOCCUPIED TO OCCUPIED MODE BY OVERRIDE BUTTON INTEGRAL TO SPACE THERMOSTAT, THE DX COIL SHALL CYCLE TO MAINTAIN RESPECTIVE PROGRAMMED TEMPERATURE SETTINGS (75°F COOLING, 68°F HEATING, ADJ). THE SUPPLY FAN SHALL RUN CONTINUOUSLY. THE OUTSIDE AIR DAMPER SHALL BE OPEN.

UNOCCUPIED MODE: WHEN THE SYSTEM IS INDEXED TO UNOCCUPIED, THE UNIT WILL BE DE-ENERGIZED UNTIL SPACE TEMPERATURE RISES ABOVE OR FALLS BELOW PROGRAMMED SETBACK TEMPERATURES (80°F COOLING, 60° HEATING). THE RESPECTIVE DX COIL SHALL BE DE-ENERGIZED. THE OUTSIDE AIR DAMPER SHALL BE CLOSED.

COOLING-OCCUPIED: THE SUPPLY FAN SHALL BE ENERGIZED WHEN THE SYSTEM IS INDEXED TO OCCUPIED. IF THE SPACE TEMPERATURE RISES ABOVE THE COOLING SETPOINT (75°F, ADJ.) THEN THE DX COIL SHALL CYCLE TO MAINTAIN SETPOINT. WHEN THE SPACE TEMPERATURE DROPS BELOW THE SETPOINT, THE OPPOSITE SHALL OCCUR.

HEATING-OCCUPIED: THE SUPPLY FAN SHALL BE ENERGIZED WHEN THE SYSTEM IS INDEXED TO OCCUPIED. IF THE SPACE TEMPERATURE DROPS BELOW THE HEATING SETPOINT (68°F) THEN THE HEAT PUMP AND AUXILIARY ELECTRIC HEATING COIL SHALL ENERGIZE TO MAINTAIN SETPOINT. WHEN THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT, THE OPPOSITE SHALL OCCUR.

CONDENSATE HIGH LEVEL PROTECTION: IF CONDENSATE HIGH LEVEL SWITCH IS ACTIVATED, UNIT SHALL BE DE-ACTIVATED AND AN ALARM INITIATED.

1ST FLOOR ROOM SCHEDULE

ROOM #	ROOM NAME
101	VESTIBULE
102	BREAKROOM
103	UNISEX
104	LAUNDRY
105	WORKROOM
106	JANITOR
107	BREAKROOM
108	PANTRY
109	CORRIDOR
110	WOMENS ROOM
111	MENS ROOM
112	MUDROOM
113	MENS SHOWER
114	WOMENS SHOWER
115	VESTIBULE
116	OFFICE

TRUSS COORDINATION:

COORDINATE ALL CLEARANCES REQUIRED FOR MECHANICAL EQUIPMENT, DUCTWORK, ETC. WITH TRUSS MANUFACTURER.

CONTROLS COMPONENTS FOR COMPLETE AND OPERABLE SYSTEM:

PROVIDE ALL REQUIRED INTERLOCK WIRING, CONTROL RELAYS, TRANSFORMERS, SENSORS, ETC. NECESSARY TO PERFORM SEQUENCE OF OPERATIONS. ALL WIRING SHALL BE CONCEALED IN CONDUIT IN ACCORDANCE WITH DIVISION 26 SPECIFICATIONS. COORDINATE ALL REQUIREMENTS (INCLUDING ADDITIONAL POWER CIRCUITS) WITH EQUIPMENT MANUFACTURERS AND ELECTRICAL CONTRACTOR.

GRAPHIC SCALE:

1/4" = 1'-0"

5' 0' 5' 10'

WALKER the GROUP ARCHITECTURE
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2526368778

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BIOSECURITY BUILDING FLOOR PLAN

Sheet Number 133 of 159
Drawing Number **M-102**

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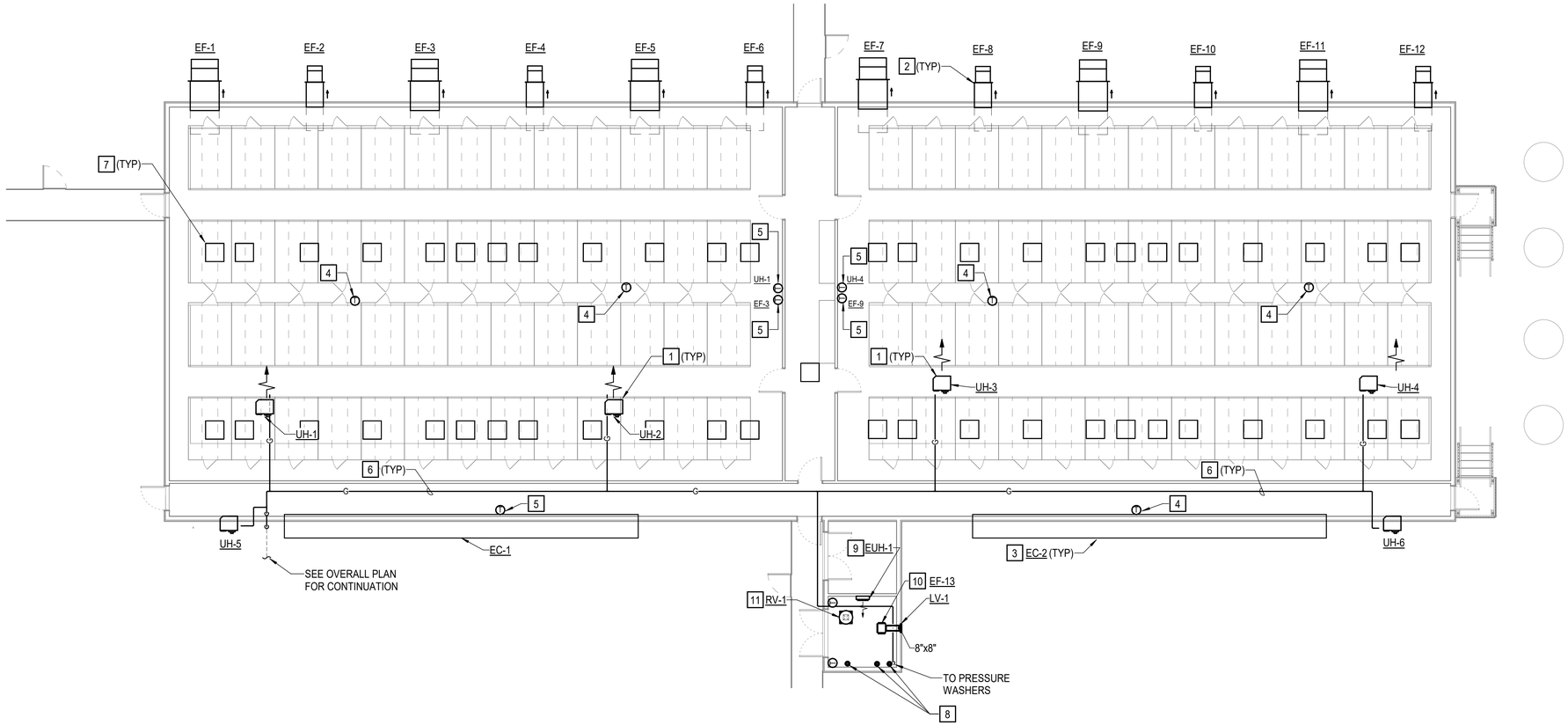


FARROWING BUILDING FLOOR PLAN

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

NOTES THIS SHEET

1. INSTALL OWNER FURNISHED UNIT HEATER. PROVIDE NECESSARY HANGERS AND SUPPORTS COMPLETE.
2. INSTALL OWNER FURNISHED SIDEWALL EXHAUST FAN. PROVIDE NECESSARY HANGERS AND SUPPORTS COMPLETE.
3. INSTALL OWNER FURNISHED EVAPORATIVE COOLER, PUMP, AND ASSOCIATED APPURTENANCES. PROVIDE NECESSARY HANGERS AND SUPPORTS COMPLETE.
4. INSTALL OWNER FURNISHED CEILING TEMPERATURE SENSOR, CONDUIT AND ASSOCIATED APPURTENANCES COMPLETE. TEMPERATURE SENSOR SHALL REPORT TO BUILDING CONTROLLER.
5. INSTALL OWNER FURNISHED EMERGENCY THERMOSTAT, CONDUIT AND ASSOCIATED APPURTENANCES COMPLETE. REFER TO ELECTRICAL DOCUMENTS FOR WIRING REQUIREMENTS. COORDINATE FINAL LOCATION OF THERMOSTAT WITH OWNER.
6. PROVIDE LP PIPING, HANGERS, AND SUPPORTS COMPLETE. PIPING MATERIAL SHALL BE SUITABLE FOR A WET ENVIRONMENT
7. INSTALL OWNER FURNISHED INSULATED MECHANICALLY ACTUATED TWO-DOOR CEILING INLETS AND ASSOCIATED APPURTENANCES COMPLETE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION. INLETS ARE APPROXIMATELY 27"X25.5".
8. PROVIDE 2" VENTILATION AND COMBUSTION PIPING FROM WATER HEATER TO CONCENTRIC VENT COMPLETE. CONCENTRIC VENTS SHALL PENETRATE ROOF ABOVE WATER HEATER.
9. PROVIDE WALL MOUNTED UNIT HEATER, SUPPORTS, AND THERMOSTAT COMPLETE. MOUNT HEATER APPROXIMATELY 7' AFF. HEATER SHALL ENERGIZE WHEN SPACE TEMPERATURE FALLS BELOW 50 DEGREES (ADJUSTABLE).
10. PROVIDE INLINE EXHAUST FAN, DUCTWORK, LOUVER, AND THERMOSTAT COMPLETE. MOUNT TIGHT TO CEILING STRUCTURE. THERMOSTAT SHALL ENERGIZE FAN WHEN SPACE TEMPERATURE RISES ABOVE 85 DEGREES (ADJUSTABLE).
11. PROVIDE ROOF VENT, AND ASSOCIATED APPURTENANCES COMPLETE. ROUTE DUCTWORK APPROXIMATELY 6" BELOW CEILING.

GAS CONNECTION SCHEDULE (FARROWING BUILDING)

QUANTITY	EQUIPMENT	INPUT CONSUMPTION (EACH) (M.B.H.)	TOTAL CONSUMPTION (M.B.H.)	PRESSURE (IN. W.C.)
MECHANICAL EQUIPMENT				
6	UNIT HEATER	250	1500	7-14"
PLUMBING EQUIPMENT				
3	PRESSURE WASHER	200	600	7-14"
		TOTAL =	2100	

CONVERSION NOTE:

1 M.B.H. = 1,000 B.T.U.H.

EVAPORATIVE COOLER SCHEDULE (OFCI)

TAG	LENGTH	HEIGHT	REMARKS
EC-1	45' - 0"	3'-0"	SEE NOTES
EC-2	45' - 0"	3'-0"	SEE NOTES

THE FOLLOWING NOTES ARE TYPICAL UNLESS OTHERWISE NOTED:

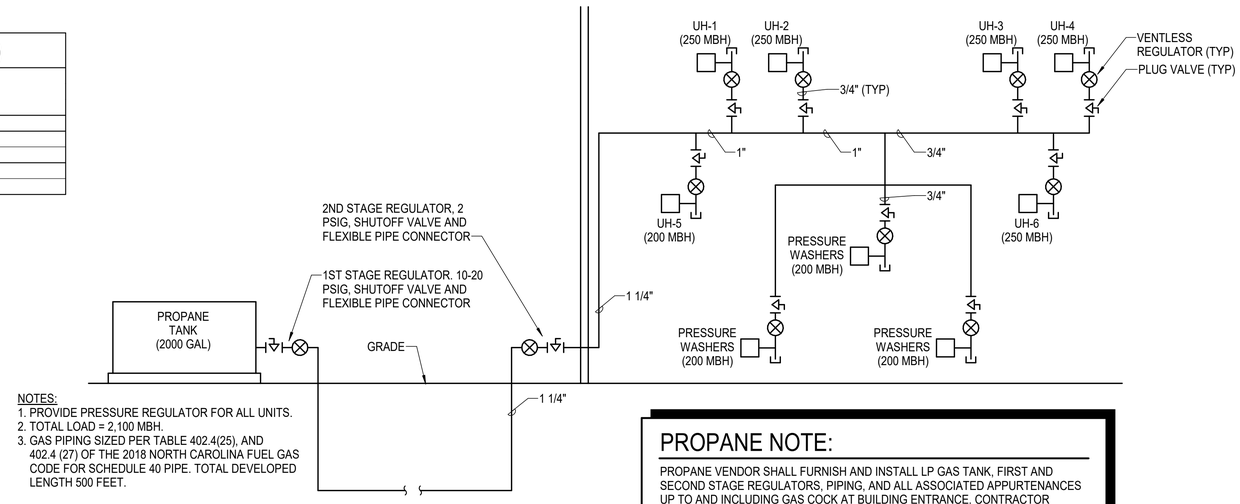
1. PROVIDE EC-1 AND EC-2 WITH 208V/1ø EVAPORATIVE COOLER MANUFACTURER'S 3/4 HP PUMP.
2. DIMENSIONS INDICATED ABOVE ARE APPROXIMATE. COORDINATE ACTUAL DIMENSIONS WITH HOGSLAT.

SEQUENCE OF OPERATION (FARROWING BUILDING)

(FOR REFERENCE ONLY)

THE COOLING SEQUENCE SHALL BE ENERGIZED WHEN THE SPACE TEMPERATURE REACHES 74 DEGREES F. DURING A CALL FOR COOLING, THE CEILING INLETS SHALL MODULATE OPEN, AND ONE EXHAUST FAN SHALL ENERGIZE. AS SPACE TEMPERATURE INCREASES, CEILING INLET OPENINGS SHALL INCREASE AND ADDITIONAL EXHAUST FANS SHALL ENERGIZE. EVAPORATIVE COOLERS SHALL BE ENERGIZED WHEN SPACE TEMPERATURE REACHES 84 DEGREES. AS SPACE TEMPERATURE DECREASES, THE OPPOSITE SHALL OCCUR.

THE HEATING SEQUENCE OF OPERATION SHALL BE ENERGIZED WHEN THE SPACE TEMPERATURE REACHES 71 DEGREES F. DURING A CALL FOR HEATING, MINIMUM VENTILATION EXHAUST FAN SHALL BE ENERGIZED, CEILING INLETS SHALL MODULATE PARTIALLY OPEN, AND SPACE HEATERS SHALL BE ENERGIZED.



NOTES:
1. PROVIDE PRESSURE REGULATOR FOR ALL UNITS.
2. TOTAL LOAD = 2,100 MBH.
3. GAS PIPING SIZED PER TABLE 402.4(25), AND 402.4 (27) OF THE 2018 NORTH CAROLINA FUEL GAS CODE FOR SCHEDULE 40 PIPE. TOTAL DEVELOPED LENGTH 500 FEET.

PROPANE NOTE:

PROPANE VENDOR SHALL FURNISH AND INSTALL LP GAS TANK, FIRST AND SECOND STAGE REGULATORS, PIPING, AND ALL ASSOCIATED APPURTENANCES UP TO AND INCLUDING GAS COCK AT BUILDING ENTRANCE. CONTRACTOR SHALL FURNISH CONCRETE PAD SIZED IN ACCORDANCE WITH ACTUAL PROPANE TANK PROVIDED, AND INSTALL GAS PIPING AND NECESSARY CONNECTIONS FROM GAS COCK TO INDOOR EQUIPMENT. SEE GAS RISER DIAGRAM THIS SHEET.

FARROWING BUILDING GAS RISER DIAGRAM

NO SCALE

GRAPHIC SCALE:

1/8" = 1'-0"

5' 0' 5' 10' 20'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

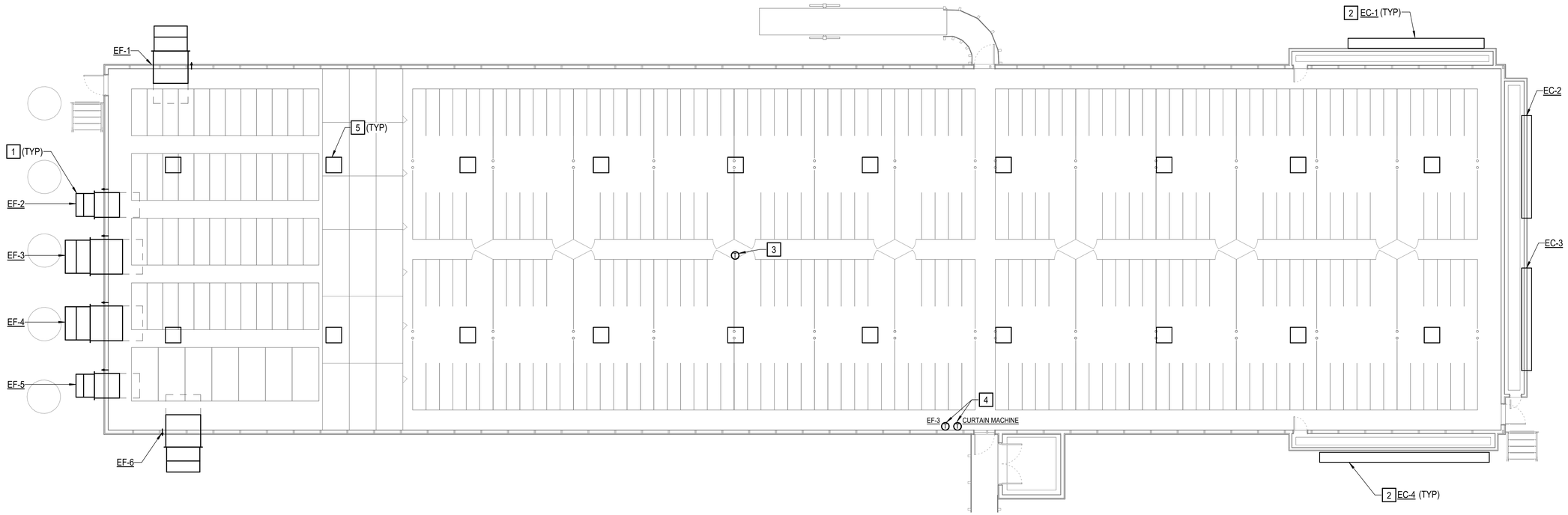
No. Date

Project Number 2212.HOGS
Date 07/05/24
Drawn CML
Checked TNH
Scale AS NOTED
Drawing Title

FARROWING BUILDING FLOOR PLAN

Sheet Number 134 of 159

Drawing Number **M-103**



BREEDING & GESTATION BUILDING FLOOR PLAN

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

EVAPORATIVE COOLER SCHEDULE (OFCI)

TAG	LEGTH	HEIGHT	REMARKS
EC-1	20' - 4"	5'-0"	SEE NOTES
EC-2	15' - 4"	5'-0"	SEE NOTES
EC-3	15' - 4"	5'-0"	SEE NOTES
EC-4	20' - 4"	5'-0"	SEE NOTES

THE FOLLOWING NOTES ARE TYPICAL UNLESS OTHERWISE NOTED:

1. PROVIDE EC-1 AND EC-4 WITH 208V/1ø EVAPORATIVE COOLER MANUFACTURER'S 3/4 HP PUMP.
2. DIMENSIONS INDICATED ABOVE ARE APPROXIMATE. COORDINATE ACTUAL DIMENSIONS WITH HOGSLAT.

SEQUENCE OF OPERATION (BREEDING & GESTATION BUILDING)

(FOR REFERENCE ONLY)

THE COOLING SEQUENCE SHALL BE ENERGIZED WHEN THE SPACE TEMPERATURE REACHES 68 DEGREES F. DURING A CALL FOR COOLING, THE CEILING INLETS SHALL MODULATE OPEN, AND ONE EXHAUST FAN SHALL ENERGIZE. AS SPACE TEMPERATURE INCREASES, CEILING INLET OPENINGS SHALL INCREASE AND ADDITIONAL EXHAUST FANS SHALL ENERGIZE. EVAPORATIVE COOLERS SHALL BE ENERGIZED WHEN SPACE TEMPERATURE REACHES 82 DEGREES. AS SPACE TEMPERATURE DECREASES, THE OPPOSITE SHALL OCCUR.

NOTES THIS SHEET

1. INSTALL OWNER FURNISHED SIDEWALL EXHAUST FAN. PROVIDE NECESSARY HANGERS AND SUPPORTS COMPLETE.
2. INSTALL OWNER FURNISHED EVAPORATIVE COOLER, PUMP, AND ASSOCIATED APPURTENANCES. PROVIDE NECESSARY HANGERS AND SUPPORTS COMPLETE. PUMP SHALL BE MOUNTED ON LOW END OF THE SYSTEM. PROVIDE PIPING TO CONNECT SPRAY BARS AND TROUGHS OF EC-1, EC-2, AND EC-3. COORDINATE MOUNTING HEIGHTS WITH HOGSLAT.
3. INSTALL OWNER FURNISHED CEILING TEMPERATURE SENSOR, CONDUIT AND ASSOCIATED APPURTENANCES COMPLETE. TEMPERATURE SENSOR SHALL REPORT TO BUILDING CONTROLLER.
4. INSTALL OWNER FURNISHED EMERGENCY THERMOSTAT, CONDUIT AND ASSOCIATED APPURTENANCES COMPLETE. REFER TO ELECTRICAL DOCUMENTS FOR WIRING REQUIREMENTS. COORDINATE FINAL LOCATION OF THERMOSTAT WITH OWNER.
5. INSTALL OWNER FURNISHED INSULATED MECHANICALLY ACTUATED TWO-DOOR CEILING INLETS AND ASSOCIATED APPURTENANCES COMPLETE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.

GRAPHIC SCALE:

1/8" = 1'-0"

5' 0' 5' 10' 20'

WALKER the GROUP ARCHITECTURE incorporated
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2526368778

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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Drawing Title

BREEDING/ GESTATION BUILDING FLR PLN

Sheet Number 135 of 159
Drawing Number M-104

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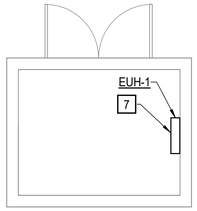
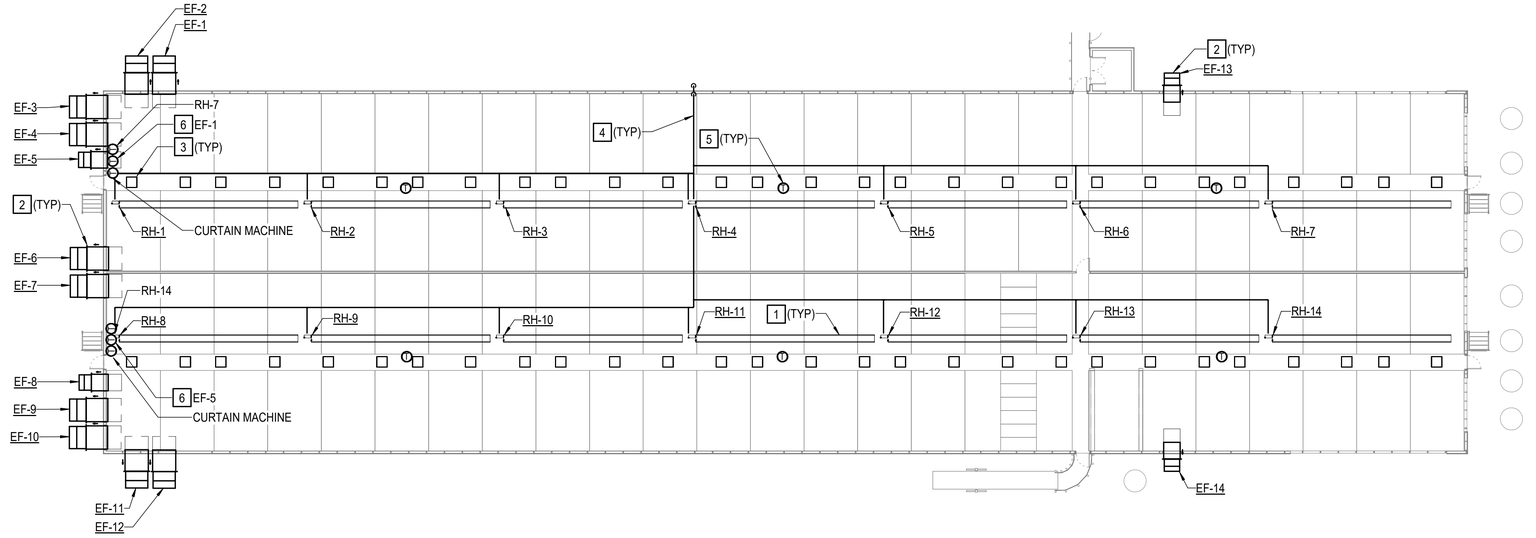


WELL HOUSE
SCALE: 1/4" = 1'-0"



WEAN TO FINISH BUILDING FLOOR PLAN
SCALE: 1/16" = 1'-0"

SEQUENCE OF OPERATION (WEAN TO FINISH BUILDING)

(FOR REFERENCE ONLY)

THE COOLING SEQUENCE SHALL BE ENERGIZED WHEN THE SPACE TEMPERATURE REACHES 68 DEGREES F. DURING A CALL FOR COOLING, THE CEILING INLETS SHALL MODULATE OPEN, AND ONE EXHAUST FAN SHALL ENERGIZE. AS SPACE TEMPERATURE INCREASES, CEILING INLET OPENINGS SHALL INCREASE AND ADDITIONAL EXHAUST FANS SHALL ENERGIZE.

THE HEATING SEQUENCE OF OPERATION SHALL BE ENERGIZED WHEN THE SPACE TEMPERATURE REACHES 65 DEGREES F. DURING A CALL FOR HEATING, MINIMUM VENTILATION EXHAUST FAN SHALL BE ENERGIZED, CEILING INLETS SHALL MODULATE PARTIALLY OPEN, AND SPACE HEATERS SHALL BE ENERGIZED.

GAS CONNECTION SCHEDULE (WEAN TO FINISH BUILDING)

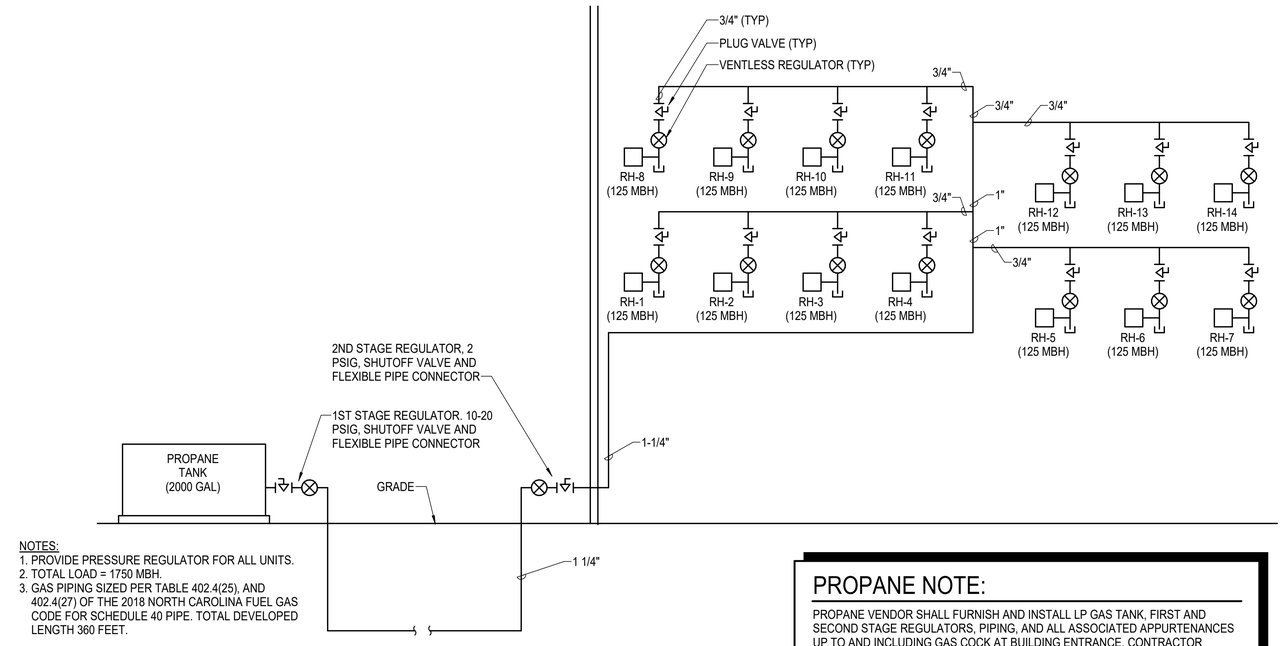
QUANTITY	EQUIPMENT	INPUT CONSUMPTION (EACH) (M.B.H.)	TOTAL CONSUMPTION (M.B.H.)	PRESSURE (IN. W.C.)
MECHANICAL EQUIPMENT				
14	RADIANT HEATER	125	1750	7-14"
		TOTAL =	1750	

CONVERSION NOTE:

1 M.B.H. = 1,000 B.T.U.H.

NOTES THIS SHEET

1. INSTALL OWNER FURNISHED RADIANT HEATER. PROVIDE NECESSARY HANGERS AND SUPPORTS COMPLETE. PROVIDE COMBUSTION INTAKE PIPING TO ATTIC SPACE.
2. INSTALL OWNER FURNISHED SIDEWALL EXHAUST FAN. PROVIDE NECESSARY HANGERS AND SUPPORTS COMPLETE.
3. INSTALL OWNER FURNISHED INSULATED MECHANICALLY ACTUATED TWO-DOOR CEILING INLETS AND ASSOCIATED APPURTENANCES COMPLETE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
4. PROVIDE LP PIPING, HANGERS, AND SUPPORTS COMPLETE. PIPING MATERIAL SHALL BE SUITABLE FOR A WET ENVIRONMENT.
5. INSTALL OWNER FURNISHED CEILING TEMPERATURE SENSOR, CONDUIT AND ASSOCIATED APPURTENANCES COMPLETE. TEMPERATURE SENSOR SHALL REPORT TO BUILDING CONTROLLER.
6. INSTALL OWNER FURNISHED EMERGENCY THERMOSTAT, CONDUIT AND ASSOCIATED APPURTENANCES COMPLETE. REFER TO ELECTRICAL DOCUMENTS FOR WIRING REQUIREMENTS. COORDINATE FINAL LOCATION OF THERMOSTAT WITH OWNER.
7. PROVIDE ELECTRIC UNIT HEATER AND ALL ASSOCIATED APPURTENANCES COMPLETE.



NOTES:
1. PROVIDE PRESSURE REGULATOR FOR ALL UNITS.
2. TOTAL LOAD = 1750 MBH.
3. GAS PIPING SIZED PER TABLE 402.4(25), AND 402.4(27) OF THE 2018 NORTH CAROLINA FUEL GAS CODE FOR SCHEDULE 40 PIPE. TOTAL DEVELOPED LENGTH 360 FEET.

WEAN TO FINISH BUILDING GAS RISER DIAGRAM
NO SCALE

PROPANE NOTE:

PROPANE VENDOR SHALL FURNISH AND INSTALL LP GAS TANK, FIRST AND SECOND STAGE REGULATORS, PIPING, AND ALL ASSOCIATED APPURTENANCES UP TO AND INCLUDING GAS COCK AT BUILDING ENTRANCE. CONTRACTOR SHALL FURNISH CONCRETE PAD SIZED IN ACCORDANCE WITH ACTUAL PROPANE TANK PROVIDED, AND INSTALL GAS PIPING AND NECESSARY CONNECTIONS FROM GAS COCK TO INDOOR EQUIPMENT. SEE GAS RISER DIAGRAM THIS SHEET.

GRAPHIC SCALE:

1/16" = 1'-0" — 5' 0' 5' 10' 20' 30' 50'

1/4" = 1'-0" — 5' 0' 5' 10'

WALKER the GROUP ARCHITECTURE
incorporated
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2526368778

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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No.	Date

Project Number 2212.HOGS
Date 07/05/24
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Scale AS NOTED
Drawing Title

WEAN TO FINISH BUILDING FLOOR PLAN

Sheet Number 137 of 159
Drawing Number M-105

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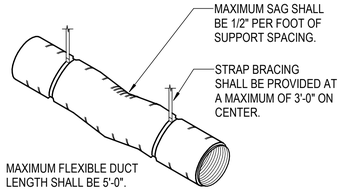
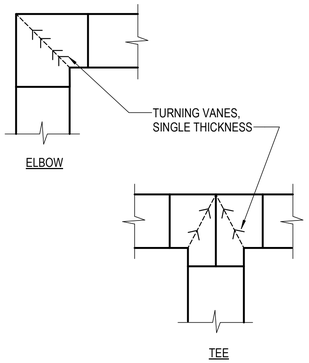
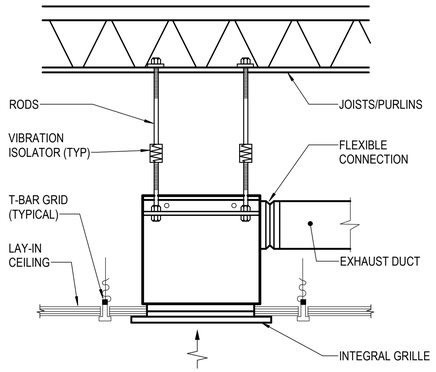


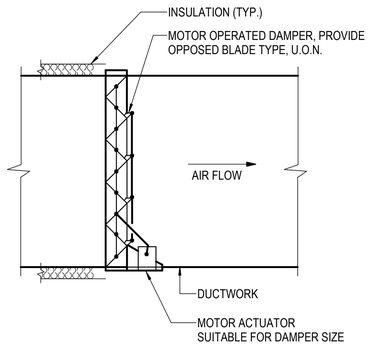
INSULATED FLEXIBLE DUCTWORK DETAIL
NO SCALE



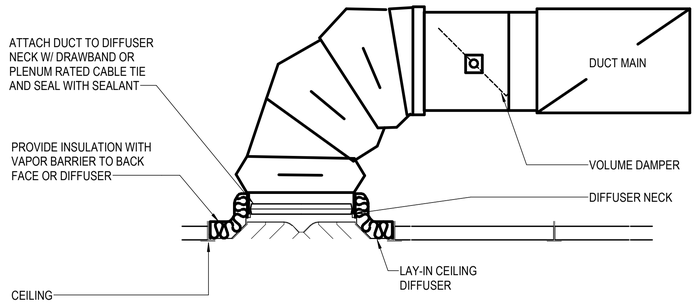
DUCTWORK FITTING DETAILS
NO SCALE



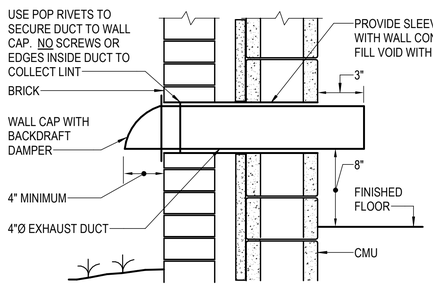
CABINET EXHAUST FAN DETAIL
NO SCALE



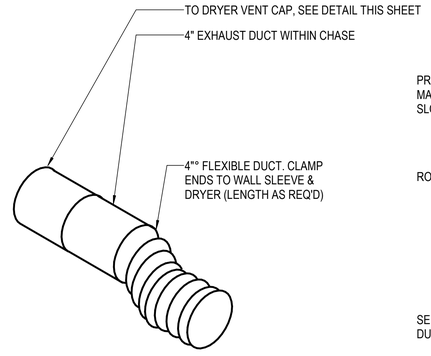
MOTORIZED DAMPER DETAIL
NO SCALE



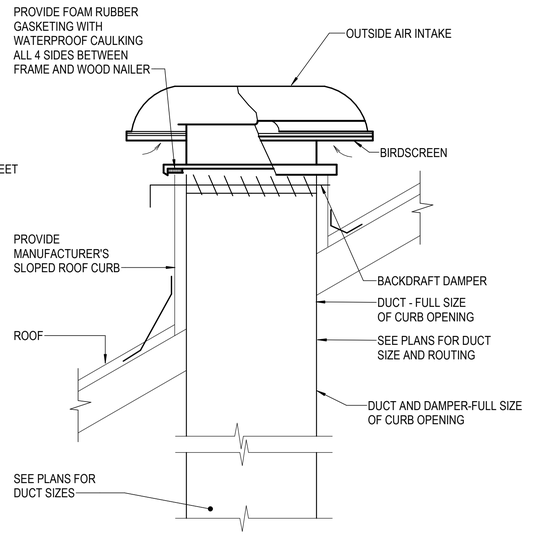
LAY-IN SUPPLY DIFFUSER DETAIL
NO SCALE



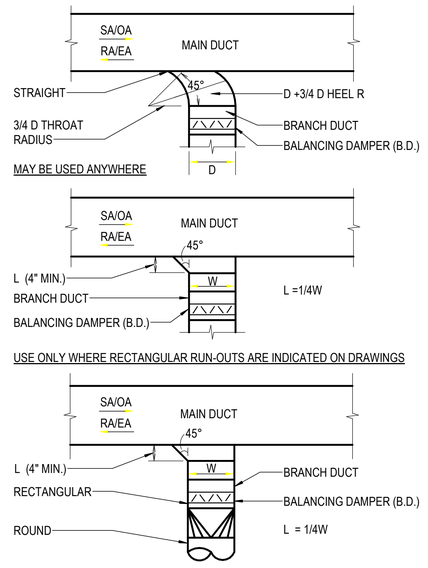
DRYER VENT CAP TYPICAL DETAIL
NO SCALE



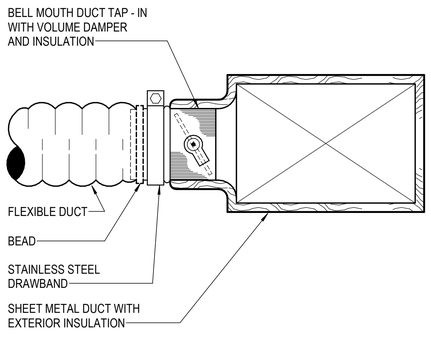
DRYER VENT HOOK-UP DETAIL
NO SCALE



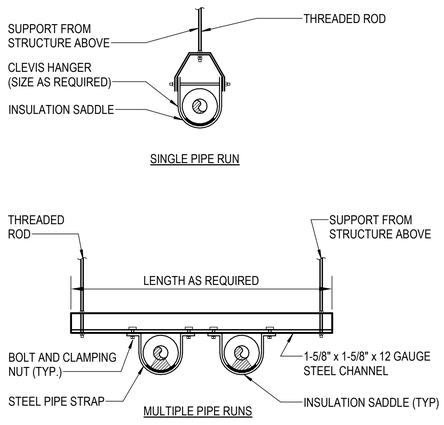
OUTSIDE AIR INTAKE DETAIL
NO SCALE



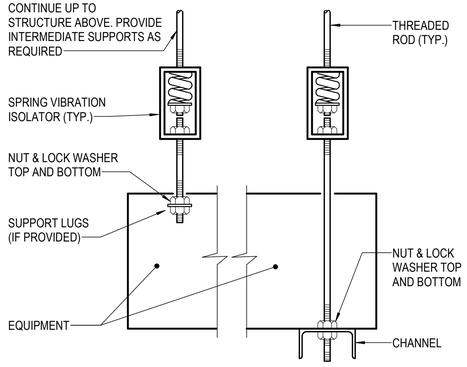
BRANCH CONNECTION DETAILS
NO SCALE



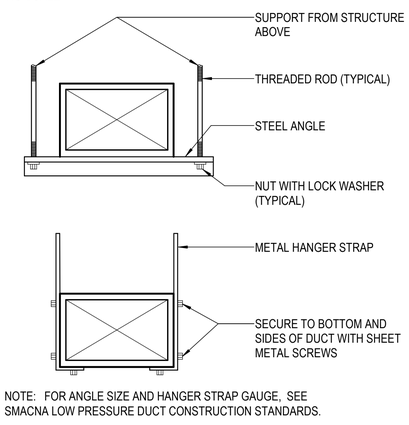
FLEXIBLE DUCT INSTALLATION DETAIL
NO SCALE



PIPE SUPPORT DETAILS
NO SCALE



SUSPENDED EQUIPMENT SUPPORT DETAIL
NO SCALE



NOTE: FOR ANGLE SIZE AND HANGER STRAP GAUGE, SEE SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS.

DUCT SUPPORT DETAIL
NO SCALE

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
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DETAILS

Sheet Number 138 of 159
Drawing Number M-501

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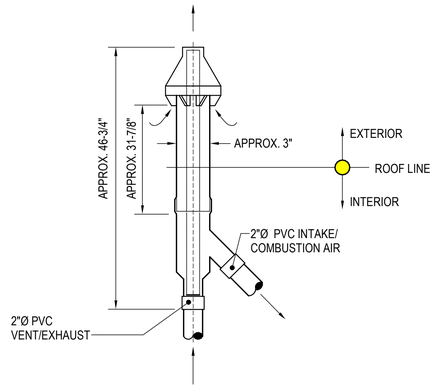
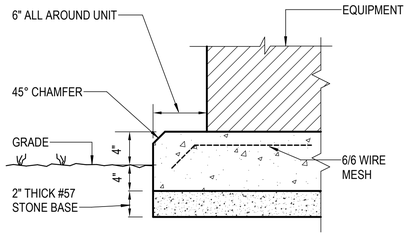


NOTE: FOR ROOF PENETRATION DETAILS SEE ARCHITECTURAL SHEETS.

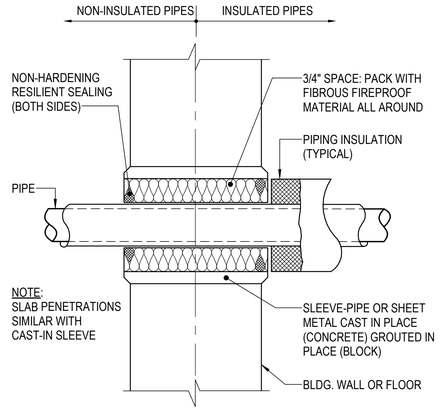
PROVIDE APPROXIMATELY A 12" MINIMUM SPACING BETWEEN ROOF LINE AND CONCENTRIC VENT TERMINATION.

CONCENTRIC VENT DETAIL
NO SCALE



NOTE: CONCRETE SHALL BE 3,500 PSI WITH A MAX W/C RATIO OF 0.58 AND AN AIR CONTENT OF 5-7%

CONCRETE PAD DETAIL - EXTERIOR
NO SCALE



WALL PENETRATION DETAIL - PIPING
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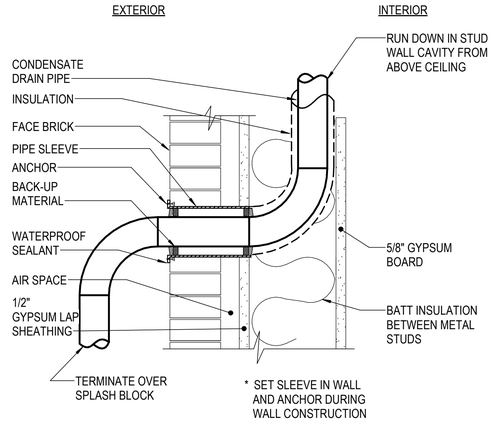
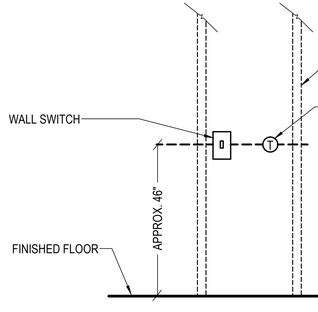
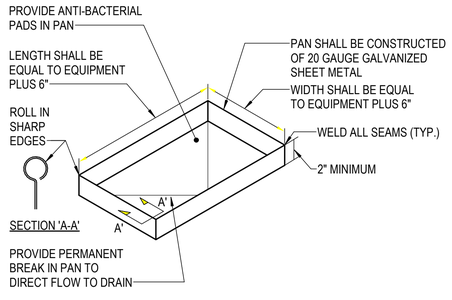


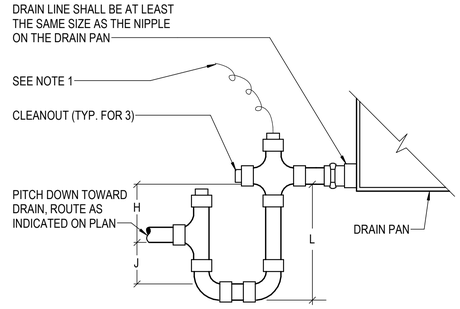
CONDENSATE DRAIN PIPE THRU EXTERIOR WALL DETAIL
NO SCALE



SWITCH/THERMOSTAT MOUNTING HEIGHT DETAIL
NO SCALE



AUXILIARY DRAIN PAN DETAIL
NO SCALE



DRAIN PAN TRAPPING FOR SECTION UNDER NEGATIVE PRESSURE:

L = H + J + PIPE DIAMETER WHERE:

H = 1 INCH FOR EACH INCH OF NEGATIVE PRESSURE PLUS 1 INCH

J = 1/2 H

DRAIN PAN TRAPPING FOR SECTION UNDER POSITIVE PRESSURE:

L = H + J + PIPE DIAMETER WHERE:

H = 1/2 INCH (MINIMUM)

J = 1/2 INCH PLUS THE UNIT POSITIVE STATIC PRESSURE AT COIL DISCHARGE (LOADED FILTERS)

NOTES:

1. FOR INDOOR AIR HANDLING UNITS AND UNITARY AIR CONDITIONERS, PROVIDE RECTORSEAL EZ TRAP 83230 EXT-230 WITH INTEGRAL OVERFLOW SENSOR, OR APPROVED EQUAL.

CONDENSATE DRAIN TRAP DETAIL
NO SCALE

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 ENGINEER TAYLOR C. JONES 23086

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Sheet Number 138 of 159
Drawing Number M-502

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SPLIT SYSTEM HEAT PUMP SCHEDULE - AIR TO AIR - BIOSECURITY BUILDING

	FAN DATA				COOLING DATA							HEATING DATA		SUPPLEMENTAL ELECTRIC HEATER		ELECTRICAL DATA INDOOR UNIT					ELECTRICAL DATA OUTDOOR UNIT					
TAG	TOTAL C.F.M.	O.A. CFM	E.S.P. IN. W.G.	MOTOR H.P.	TOTAL M.B.H.	SENS. M.B.H.	E.D.B. (°F)	E.W.B. (°F)	L.D.B. (°F)	L.W.B. (°F)	MIN. S.E.E.R.	TOTAL M.B.H.	HSPF	SIZE KW	STAGES	M.C.A.	M.O.C.P.	VOLTS	PHASE	TAG	M.C.A.	M.O.C.P.	VOLTS	PHASE	REMARKS
AHU-1/HP-1	1600	300	0.5	0.75	52.7	36.5	80.5	67.7	59.4	57.4	15.6	45.0	8.20	13.0	1	78.5	80.0	230	1	HP-1	37.0	50.0	230	1	SEE NOTES

NOTES:
1. SELECTION BASED ON YORK.
2. COOLING CAPACITY BASED ON 95°F AMBIENT AIR TEMPERATURE.
3. HEATING CAPACITY BASED ON E.A.T. = 61.6°F DB AND 47°F. AMBIENT AIR TEMPERATURE.
4. SUPPLEMENTAL ELECTRIC HEATER F.L.A. INCLUDED. ONE DISCONNECT SWITCH FOR INDOOR UNIT.
5. EXTERNAL STATIC PRESSURE INCLUDES SUPPLY, RETURN AND OUTSIDE AIR DISTRIBUTION SYSTEMS.
6. LEAVING AIR TEMPERATURE IS TO BE PROVIDED AT THE UNIT DISCHARGE, TOTAL AND SENSIBLE CAPACITIES ARE "NET" VALUES TO BE PROVIDED DOWNSTREAM OF THE SUPPLY FAN.
7. PROVIDE INDOOR AHU WITH ECM MOTOR. REFER TO SEQUENCE OF OPERATION ON SHEET M-102 FOR ADDITIONAL INFORMATION.

RADIANT HEATER SCHEDULE - WEAN TO FINISH BUILDING

TAG	INPUT MBH	INLET PRESSURE (IN WC)	OUTPUT MBH	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PHASE	REMARKS
RH-1	125	14	100	120	1	SEE NOTES
RH-2	125	14	100	120	1	SEE NOTES
RH-3	125	14	100	120	1	SEE NOTES
RH-4	125	14	100	120	1	SEE NOTES
RH-5	125	14	100	120	1	SEE NOTES
RH-6	125	14	100	120	1	SEE NOTES
RH-7	125	14	100	120	1	SEE NOTES
RH-8	125	14	100	120	1	SEE NOTES
RH-9	125	14	100	120	1	SEE NOTES
RH-10	125	14	100	120	1	SEE NOTES
RH-11	125	14	100	120	1	SEE NOTES
RH-12	125	14	100	120	1	SEE NOTES
RH-13	125	14	100	120	1	SEE NOTES
RH-14	125	14	100	120	1	SEE NOTES

NOTES:
1. SCHEDULE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EQUIPMENT SHALL BE OWNER FURNISHED AND CONTRACTOR INSTALLED.

FAN SCHEDULE - BIOSECURITY BUILDING

TAG	LOCATION	FAN TYPE	C.F.M.	E.S.P. (IN. WG.)	DRIVE	WATTS	VOLTS	PHASE	MODEL NO.	REMARKS
EF-1	115 UNISEX	CABINET	140	0.50	DIRECT	125	115	1	SP	SEE NOTES
EF-2	113 JANITOR	CABINET	50	0.50	DIRECT	12	115	1	SP	SEE NOTES
EF-3	109 WOMENS	CABINET	140	0.50	DIRECT	125	115	1	SP	SEE NOTES
EF-4	108 MENS	CABINET	140	0.50	DIRECT	125	115	1	SP	SEE NOTES
EF-5	104 WOMENS	CABINET	100	0.50	DIRECT	22	115	1	SP	SEE NOTES
EF-6	108 MENS	CABINET	100	0.50	DIRECT	22	115	1	SP	SEE NOTES

NOTES:
1. SELECTIONS BASED ON GREENHECK.
2. PROVIDE DIRECT DRIVE FANS WITH ELECTRONIC SPEED CONTROLLER.
3. PROVIDE CABINET CEILING FANS WITH CHATTERPROOF BDD, INTEGRAL ELECTRICAL DISCONNECT, DUCT FLANGE, AND INTEGRAL OFF-WHITE ALUMINUM INTAKE GRILLE.

GRILLE, REGISTER & DIFFUSER SCHEDULE - BIOSECURITY BUILDING

TAG	TYPE	SERVICE	C.F.M. RANGE	NECK SIZE	MAX. P.D.	REMARKS
A	DIFFUSER	SUPPLY	1-110	6"	0.1	LAY-IN, 24x24 PANEL, 4-WAY BLOW PATTERN
B	DIFFUSER	SUPPLY	115-230	8"	0.1	LAY-IN, 24x24 PANEL, 4-WAY BLOW PATTERN
C	DIFFUSER	SUPPLY	235-380	10"	0.1	LAY-IN, 24x24 PANEL, 4-WAY BLOW PATTERN
D	DIFFUSER	SUPPLY	385-550	12"	0.1	LAY-IN, 24x24 PANEL, 4-WAY BLOW PATTERN
E	GRILLE	RETURN	5-120	6"	0.1	LAY-IN, 24x24 PANEL, 35° DEFLECTION, 1/2" BLADE SPACING
F	GRILLE	RETURN	125-250	8"	0.1	LAY-IN, 24x24 PANEL, 35° DEFLECTION, 1/2" BLADE SPACING
G	GRILLE	RETURN	255-400	10"	0.1	LAY-IN, 24x24 PANEL, 35° DEFLECTION, 1/2" BLADE SPACING
H	GRILLE	RETURN	405-1050	16"	0.1	LAY-IN, 24x24 PANEL, 35° DEFLECTION, 1/2" BLADE SPACING

THE FOLLOWING NOTES ARE TYPICAL UNLESS OTHERWISE NOTED:
1. SELECTIONS BASED ON TITUS.
2. PROVIDE ALUMINUM DIFFUSERS AND REGISTERS WITH OPPOSED BLADE VOLUME DAMPERS, BAKED STANDARD WHITE ENAMEL FINISH (INCLUDING HEAD OF SCREWS), MAXIMUM NC=25 AT HIGHEST CFM AND PROVIDE SQUARE TO ROUND TRANSITION AS REQUIRED.
3. PROVIDE 4-WAY PATTERN CEILING DIFFUSERS, U.O.N. ON PLANS OR SCHEDULE.
4. MAXIMUM PRESSURE DROP SHALL INCLUDE VOLUME DAMPER WHERE DAMPER IS PROVIDED.

PROPANE FIRED UNIT HEATER SCHEDULE - FARROWING BUILDING

TAG	INPUT CAPACITY MAX/MIN (C.F.H.)	MOTOR H.P.	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PHASE	ELECTRICAL DATA AMPS	REMARKS
UH-1	250 / 65	1/3	120	1	12.2	SEE NOTES
UH-2	250 / 65	1/3	120	1	12.2	SEE NOTES
UH-3	250 / 65	1/3	120	1	12.2	SEE NOTES
UH-4	250 / 65	1/3	120	1	12.2	SEE NOTES
UH-5	250 / 65	1/3	120	1	12.2	SEE NOTES
UH-6	250 / 65	1/3	120	1	12.2	SEE NOTES

NOTES:
1. SCHEDULE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EQUIPMENT SHALL BE OWNER FURNISHED AND CONTRACTOR INSTALLED.

ELECTRIC UNIT HEATER SCHEDULE FARROWING

TAG	NOMINAL CFM	WATTS	NO. OF STEPS	VOLTS	PHASE	REMARKS
EUH-1	-	500	1	120	1	SEE NOTES

NOTES:
1. SELECTION BASED ON MARKEL RPH SERIES PUMP HOUSE
2. PROVIDE WITH INTEGRAL TAMPER RESISTANT THERMOSTAT.

ELECTRIC UNIT HEATER SCHEDULE WELL HOUSE

TAG	NOMINAL CFM	WATTS	NO. OF STEPS	VOLTS	PHASE	REMARKS
EUH-1	100	2000	1	240.0	1	

NOTES:
1. SELECTION BASED ON MARKEL 305.
2. PROVIDE WITH INTEGRAL TAMPER RESISTANT THERMOSTAT, INTEGRAL ELECTRICAL DISCONNECT AND BLOWER.

FAN SCHEDULE - WEAN TO FINISH BUILDING

TAG	FAN TYPE	SIZE	DRIVE	ELECTRICAL DATA H.P.	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PHASE	MODEL NO.	REMARKS
EF-1	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-2	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-3	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-4	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-5	SIDEWALL	36	DIRECT	1/2	230	1	AS-36	SEE NOTES
EF-6	SIDEWALL	54	DIRECT	1/2	230	1	AS-36	SEE NOTES
EF-7	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-8	SIDEWALL	36	DIRECT	1/2	230	1	AS-36	SEE NOTES
EF-9	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-10	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-11	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-12	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-13	SIDEWALL	36	DIRECT	1/2	230	1	AS-36	SEE NOTES
EF-14	SIDEWALL	36	DIRECT	1/2	230	1	AS-36	SEE NOTES

NOTES:
1. SCHEDULE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EQUIPMENT SHALL BE OWNER FUNISHED AND CONTRACTOR INSTALLED.

FAN SCHEDULE - GESTATION BUILDING

TAG	FAN TYPE	SIZE	DRIVE	ELECTRICAL DATA H.P.	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PHASE	MODEL NO.	REMARKS
EF-1	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-2	SIDEWALL	36	DIRECT	0.5	230	1	AS-36	SEE NOTES
EF-3	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-4	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES
EF-5	SIDEWALL	36	DIRECT	0.5	230	1	AS-36	SEE NOTES
EF-6	SIDEWALL	54	BELT	1.5	230	1	AS-54	SEE NOTES

NOTES:
1. SCHEDULE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EQUIPMENT SHALL BE OWNER FUNISHED AND CONTRACTOR INSTALLED.

ROOF VENT SCHEDULE - BIOSECURITY BUILDING

TAG	SERVICE	SIZE (IN.) WxH	THROAT AREA (SF)	C.F.M.	MAX PD	SERVES	REMARKS
RV-1	EXHAUST	0.35	0.35	190	0.1	EF-1, EF-2	SEE NOTES
RV-2	EXHAUST	0.35	0.35	280	0.1	EF-3,EF-4	SEE NOTES
RV-3	EXHAUST	0.35	0.35	200	0.1	EF-5, EF-6	SEE NOTES
RV-4	INTAKE	38.25	3	300	0.1	AHU-1	SEE NOTES

NOTES:
1. PROVIDE WITH MFGR'S ROOF CURB, BIRDSCREEN, AND BACKDRAFT DAMPER.

ROOF VENT SCHEDULE - FARROWING

TAG	SERVICE	SIZE (IN.) WxH	THROAT AREA (SF)	C.F.M.	SERVES	REMARKS
RV-1	INTAKE	8X8	0.4	145	EF-13	SEE NOTES

NOTES:
1. PROVIDE WITH MFGR'S ROOF CURB, BIRDSCREEN, AND BACKDRAFT DAMPER.

FAN SCHEDULE - FARROWING BUILDING

TAG	FAN TYPE	SIZE	DRIVE	ELECTRICAL DATA H.P.	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PHASE	MODEL NO.	REMARKS
EF-1	SIDEWALL	36	DIRECT	0.5	230	1	AS-36	SEE NOTE 1
EF-2	SIDEWALL	18	DIRECT	0.33	230	1	AS-18	SEE NOTE 1
EF-3	SIDEWALL	36	DIRECT	0.5	230	1	AS-36	SEE NOTE 2
EF-4	SIDEWALL	18	DIRECT	0.33	230	1	AS-18	SEE NOTE 3
EF-5	SIDEWALL	36	DIRECT	0.5	230	1	AS-36	SEE NOTE 4
EF-6	SIDEWALL	18	DIRECT	0.33	230	1	AS-18	SEE NOTE 5
EF-7	SIDEWALL	36	DIRECT	0.5	230	1	AS-36	SEE NOTE 6
EF-8	SIDEWALL	18	DIRECT	0.33	230	1	AS-18	SEE NOTE 7
EF-9	SIDEWALL	36	DIRECT	0.5	230	1	AS-36	SEE NOTE 8
EF-10	SIDEWALL	18	DIRECT	0.33	230	1	AS-18	SEE NOTE 9
EF-11	SIDEWALL	36	DIRECT	0.5	230	1	AS-36	SEE NOTE 10
EF-12	SIDEWALL	18	DIRECT	0.33	230	1	AS-18	SEE NOTE 11
EF-13	INLINE	-	DIRECT	0.03	115	1	CSP	SEE NOTES 2, 3

NOTES:
1. SCHEDULE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EQUIPMENT SHALL BE OWNER FUNISHED AND CONTRACTOR INSTALLED.
2. PROVIDE DIRECT DRIVE FANS WITH ELECTRONIC SPEED CONTROLLER.
3. PROVIDE INLINE FANS WITH CHATTERPROOF BDD, INTEGRAL ELECTRIC DISCONNECT, DUCT FLANGES, AND 4 POINT VIBRATION HANGER SYSTEM.

LOUVER SCHEDULE - FARROWING

TAG	SERVICE	SIZE (IN.) WxH	FREE AREA (SF)	C.F.M.	MAX P.D. (IN WG)	SERVES	REMARKS
LV-1	EXHAUST	12X12	0.2	145	0.1	EF-13	SEE NOTES

NOTES:
1. SELECTIONS BASED ON GREENHECK.
2. PROVIDE WITH BIRDSCREEN.
3. PROVIDE ALUMINUM STORMPROOF CONSTRUCTION.
4. PROVIDE COLOR CHART FOR FINISH SELECTION BY ARCHITECT.
5. PROVIDE "KYNAR" FINISH OR EQUAL.
6. LOUVER SHALL BE LISTED FOR AMCA 550 HIGH VELOCITY WIND-DRIVEN RAIN RESISTANCE.

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 049349 ENGINEER TAYLOR C. JONES 23086

DACS- Tidewater Reseach Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions
No. Date

Project Number 2212.HOGS
Date 07/05/24
Drawn CML
Checked TNH
Scale AS NOTED
Drawing Title

SCHEDULES

Sheet Number 139 of 159
Drawing Number M-601

GENERAL NOTES

GENERAL: UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL WORK SHOWN ON ELECTRICAL DRAWINGS IS NEW WORK TO BE PROVIDED UNDER THIS CONTRACT.

COORDINATION: COORDINATE AND COOPERATE WITH ALL TRADES ON THE PROJECT. THE CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS INCLUDING CIVIL, STRUCTURAL, ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL COORDINATE AND ADJUST ACCORDINGLY AS DIRECTED BY THE ENGINEER.

AS-BUILT DRAWINGS: SECURE AN EXTRA SET OF ELECTRICAL DRAWINGS TO BE KEPT ON SITE AND MARK, DAILY, THE DRAWINGS IN RED AS THE PROJECT PROGRESSES IN ORDER TO KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK SHOWN ON THE DRAWINGS AND THE WORK WHICH IS ACTUALLY INSTALLED. THESE MARKED DRAWINGS SHALL REFLECT ANY AND ALL CHANGES AND REVISIONS TO THE ORIGINAL DESIGN WHICH EXISTS IN THE COMPLETED WORK. DELIVER THE MARKED DRAWINGS TO THE OWNER AT PROJECT CLOSE-OUT.

TESTS: TEST ALL WIRING FOR CONTINUITY AND GROUNDS BEFORE CONNECTING ANY FIXTURES OR DEVICES. PERFORM INSULATION RESISTANCE TESTS ON ALL WIRING #6 OR LARGER TO ENSURE THAT ALL PORTIONS ARE FREE FROM SHORT-CIRCUITS AND GROUNDS.

INSPECTIONS: ARRANGE ALL NECESSARY INSPECTIONS. DELIVER ALL REQUIRED INSPECTION CERTIFICATES TO THE OWNER.

ELECTRICAL SERVICE: PROVIDE THE ELECTRICAL SERVICE. COMMUNICATE WITH THE LOCAL POWER COMPANY, VERIFY ALL REQUIREMENTS, AND COORDINATE ALL EFFORTS.

GROUNDING: PROVIDE GROUNDING IN ACCORDANCE WITH THE NEC FOR THE ENTIRE ELECTRICAL SYSTEM INCLUDING EQUIPMENT FRAMES, CONDUITS, SWITCHES, CONTROLLERS, WIRE-WAYS, NEUTRAL CONDUCTORS, AND OTHER EQUIPMENT. PROVIDE A GROUNDING CONDUCTOR IN ALL POWER CONDUITS.

SHORT CIRCUIT AND COORDINATION STUDY: CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A SHORT CIRCUIT AND COORDINATION STUDY COMPLETED FOR THE AS-BUILT ELECTRICAL DISTRIBUTION SYSTEM BASED UPON ACTUAL EQUIPMENT AND FEEDER LENGTHS INSTALLED. THE STUDY SHALL BE COMPLETED WITH STANDARD COMMERCIAL SOFTWARE, AND INCLUDE RECOMMENDED SETTINGS FOR ALL ADJUSTABLE DEVICES. THE STUDY SHALL BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER.

LABELS: PROVIDE LABELS FOR ALL PANELBOARDS, CABINETS, SAFETY SWITCHES, MOTOR-DISCONNECT SWITCHES, AND MOTOR CONTROLLERS. LABELS SHALL BE MACHINE ENGRAVED, LAMINATED PLASTIC, PERMANENTLY ATTACHED WITH SELF-TAPPING SCREWS OR RIVETS. DO NOT USE SELF-ADHESIVE LABELS. LABEL SHALL INDICATE EQUIPMENT DESIGNATION AND ASSOCIATED PANEL AND CIRCUIT THAT SERVES IT.

J-BOX LABELING: LABEL ALL JUNCTION BOXES WITH PERMANENT MARKER IDENTIFYING CIRCUIT NUMBER AND PANELBOARD OF CIRCUITS WITHIN.

WIRING DEVICES: LABEL ALL WIRING DEVICES WITH PANELBOARD AND CIRCUIT DESIGNATION PERMANENTLY ATTACHED WITH BLACK TYPED DESIGNATION ON CLEAR TAPE.

PANEL DIRECTORY: PROVIDE TYPEWRITTEN PANELBOARD DIRECTORY CARD IN EACH PANELBOARD WITH CIRCUIT LOAD INFORMATION AND ROOM NUMBER CLEARLY IDENTIFIED. USE ACTUAL ROOM NUMBERS IN THE BUILDING, NOT THE ROOM NUMBERS SHOWN ON THE CONTRACT DRAWINGS, AS THEY ARE OFTEN DIFFERENT.

MOTOR COORDINATION: MOTORS, MOTOR STARTERS, CONTROLLERS, INTEGRAL DISCONNECT SWITCHES, AND CONTACTORS SHALL BE PROVIDED WITH THEIR RESPECTIVE PIECES OF EQUIPMENT BY THE EQUIPMENT SUPPLIER. COMMUNICATE WITH THE TRADES PROVIDING THE EQUIPMENT, VERIFYING ALL REQUIREMENTS, PROVIDE ALL ELECTRICAL CONNECTIONS REQUIRED THEREIN, AND INSTALL MOTOR STARTERS.

MOTOR DISCONNECTS: ALL MOTORS SHALL HAVE DISCONNECTING MEANS.

MOTOR CONTROLLERS: ALL 3-PHASE MOTORS SHALL HAVE MAGNETIC MOTOR CONTROLLERS WITH SOLID STATE OVERLOAD RELAY PROTECTION. THE SOLID STATE OVERLOAD RELAY SHALL HAVE PHASE LOSS AND PHASE OVERCURRENT PROTECTION WITH AUTOMATIC RESET UPON RETURN OF NORMAL POWER.

MOTOR FUSE PROTECTION: WHERE FUSE PROTECTION IS SPECIFICALLY REQUIRED BY THE EQUIPMENT MANUFACTURER, PROVIDE FUSED SWITCHES IN LIEU OF NON-FUSED SWITCHES OR IN LIEU OF ENCLOSED CIRCUIT BREAKERS, OR OTHER DEVICES INDICATED.

CONNECTION DETAILS: SECURE APPROVED SHOP DRAWINGS SHOWING WIRING DIAGRAMS, ROUGH-IN AND HOOK UP DETAILS FROM OTHER INVOLVED CONTRACTORS FOR EQUIPMENT WHICH MUST BE CONNECTED ELECTRICALLY.

COORDINATION DETAILS: MECHANICAL EQUIPMENT WILL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE. COORDINATE WITH THE MECHANICAL CONTRACTOR TO DETERMINE THE EXACT LOCATION OF EACH PIECE OF EQUIPMENT AND DETERMINE THE EXACT ROUGH-IN AND CONNECTION REQUIREMENTS.

WORKING CLEARANCE: COORDINATE FINAL LOCATIONS OF ELECTRICAL EQUIPMENT WITH MECHANICAL DUCTWORK, PIPING ETC. AND ASSURE WORKING CLEARANCE REQUIRED BY NEC WILL BE MET. SUFFICIENT ACCESS AND WORKING SPACE SHALL BE PROVIDED AND MAINTAINED AROUND ELECTRICAL EQUIPMENT AS REQUIRED BY THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL COORDINATE FINAL LOCATION OF EQUIPMENT PROVIDED AND INSTALLED BY OTHER TRADES.

STARTER MOUNTING: WHERE AN INDIVIDUALLY MOUNTED SAFETY SWITCH, STARTER OR CIRCUIT BREAKER IS SHOWN ADJACENT TO ITS RESPECTIVE LOAD AND NOT MOUNTED ON A WALL, PROVIDE ALL SUPPORTS, BRACKETS, ANCHORING, ETC. NECESSARY TO PROPERLY SUPPORT THE DEVICE.

LIGHTING ARRANGEMENT: ARRANGE LIGHTING FIXTURES IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS.

LIGHTING COORDINATION: COORDINATE LIGHTING FIXTURES WITH GRILLES, DIFFUSERS, SPRINKLER HEADS, AND ACCESS PANELS, ETC. PROVIDE FIXTURE MOUNTING BRACKETS, ACCESSORIES, PLASTER FRAMES, ETC.. SUITABLE FOR THE CEILING TYPES INDICATED ON THE ARCHITECTURAL PLANS.

LIGHTING CONTROL TESTING: UPON COMPLETION OF THE INSTALLATION OF ALL LIGHTING SYSTEMS AND CONTROL DEVICES, CONTRACTOR SHALL CONFIRM PROPER OPERATION OF ALL LIGHTING CONTROLS, AND DEMONSTRATE PROPER OPERATION TO THE OWNER AND/OR ENGINEER.

MATERIAL COORDINATION: VERIFY CEILING AND WALL CONSTRUCTION AND MATERIAL PRIOR TO ORDERING LIGHT FIXTURES OR OTHER DEVICES TO ENSURE PROPER FIXTURE OR DEVICE IS FURNISHED TO MATCH CONSTRUCTION.

MOUNTING HEIGHTS: MOUNTING HEIGHTS INDICATED ARE FROM THE FINISHED FLOOR TO THE CENTERLINE OF THE WIRING DEVICE UNLESS OTHERWISE NOTED. MOUNTING HEIGHTS OF LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURE UNLESS OTHERWISE NOTED.

DEVICE LOCATIONS: COORDINATE LOCATIONS OF SWITCHES, RECEPTACLES, AND TELE/DATA OUTLETS WITH OTHER WALL MOUNTED DEVICES SUCH AS THERMOSTATS AND CONTROL STATIONS.

EWC RECEPTACLES: RECEPTACLES FOR ELECTRIC WATER COOLERS (EWC) SHALL BE INSTALLED OUT OF VIEW AND BEHIND THE EWC ENCLOSURE. VERIFY THE MOUNTING HEIGHT WITH THE EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.

DEVICE COORDINATION: THOROUGHLY REVIEW AND COORDINATE ALL CASEWORK AND CABINET DRAWINGS AND ARCHITECTURAL ELEVATIONS WITH DEVICE LOCATIONS PRIOR TO ROUGH-IN OF OUTLET BOXES.

MULTI-GANG JUNCTION BOXES: WHERE OUTLETS AND SWITCHES ARE SHOWN ON PLAN TO BE INSTALLED ADJACENT TO EACH OTHER AND AT THE SAME MOUNTING HEIGHT, THE DEVICES SHALL BE INSTALLED IN A MULTI-GANG OUTLET BOX, UON. THE SIZE OF THE OUTLET BOX SHALL BE DETERMINED BY THE NUMBER OF DEVICES AND CONDUCTORS THAT SHALL BE INSTALLED IN THE MULTI-GANG OUTLET BOX.

FIRE STOPPING: FOR ANY WALL OR FLOOR PENETRATIONS THROUGH FIRE-RATED STRUCTURES PROVIDE FIRE-STOPPING TO SEAL ALL THE PENETRATIONS AFTER THE CONDUIT HAS BEEN INSTALLED. FIRE STOPPING FOR PENETRATIONS SHALL BE UL APPROVED PER THE PENETRATION MADE IN ORDER TO MAINTAIN FIRE-RATED INTEGRITY OF THE STRUCTURE.

CLEAN UP: ON PROJECT CLOSE-OUT CLEAN ALL ELECTRICAL DEVICES, LIGHTING FIXTURES, AND LENSES, AND REMOVE ALL PAINT SPATTERS FROM DEVICES, FIXTURES AND PLATES. REPLACE ALL INOPERATIVE FIXTURES.

GROUND FAULT PROTECTION: RECEPTACLES LOCATED WITHIN 6'-0" OF THE EDGE OF SINKS SHALL BE PROVIDED WITH GROUND FAULT PROTECTION WHETHER SHOWN OR NOT.

LEGEND

LIGHTING

SUBSCRIPT 'x' INDICATES LIGHTING FIXTURE CONTROLLED AND ASSOCIATED CONTROL DEVICE(S).

- LIGHTING FIXTURE
- EMERGENCY LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK - CONNECT EMERGENCY PACK AHEAD OF LOCAL SWITCH.
- DOWNLIGHT OR PENDANT MOUNTED FIXTURE
- WALL MOUNTED LIGHTING FIXTURE
- EXIT LIGHTING FIXTURE, WITH DIRECTIONAL ARROWS AS INDICATED WITH EMERGENCY BATTERY PACK - CONNECT EMERGENCY PACK AHEAD OF LOCAL SWITCH.
- (A) LIGHTING FIXTURE TYPE SYMBOL. SEE LIGHTING FIXTURE DETAILS.
- S SINGLE POLE SWITCH, 20A, 120/277V, 46" AFF UON
- S_{WP} SINGLE POLE WEATHER PROOF SWITCH, 20A, 120/277V, 46" AFF UON
- S_3 THREE-WAY SWITCH, 20A, 120/277V, 46" AFF UON
- S_4 FOUR-WAY SWITCH, 20A, 120/277V, 46" AFF UON
- (P) PHOTOCELL, 1500W, 120V SPST, MOUNT ON ROOF, AIM NORTH
- (O) CEILING MOUNTED DUAL TECHNOLOGY ULTRASONIC/PASSIVE INFRARED OCCUPANCY SENSOR.
- S_O WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR WITH SINGLE POLE SWITCH, 120/277V, MOUNT 46"AFF.
- (V) CEILING MOUNTED DUAL TECHNOLOGY ULTRASONIC/PASSIVE INFRARED VACANCY SENSOR.
- S_V WALL MOUNTED DUAL TECHNOLOGY VACANCY SENSOR WITH SINGLE POLE SWITCH, 120/277V, MOUNT 46"AFF.
- S_L WALL MOUNTED LOW VOLTAGE MOMENTARY CONTACT SWITCH, 24VDC, MOUNT 46"AFF.
- S_{3WP} THREE-WAY WEATHER PROOF SWITCH, 20A, 120/277V, 46" AFF UON
- S_{4WP} FOUR-WAY WEATHER PROOF SWITCH, 20A, 120/277V, 46" AFF UON

POWER

THE FOLLOWING SUBSCRIPTS SHALL APPLY TO RECEPTACLES WHERE USED:

- GFI: GROUND FAULT INTERRUPTING TYPE RECEPTACLE
- +XX": DEVICE MOUNTING HEIGHT DESIGNATION ABOVE FINISHED FLOOR IF OTHER THAN 18" OR 46".
- WP: WEATHER RESISTANT GFI RECEPTACLE WITH WEATHERPROOF WHILE-IN USE COVER.
- EWC: ELECTRIC WATER COOLER RECEPTACLE, PROVIDE GROUND FAULT INTERRUPTING TYPE BREAKER. LOCATE BEHIND THE EWC PER MANUFACTURER'S RECOMMENDATIONS.
- C: RECEPTACLE SURFACE MOUNTED TO CEILING STRUCTURE WITH FACE OF RECEPTACLE ORIENTED VERTICALLY.

- DUPLEX CONVENIENCE RECEPTACLE 20A, 120V, 18" AFF, UON
- TWO DUPLEX RECEPTACLES IN COMMON BOX, EACH 20A, 120V, 18" AFF, UON
- DUPLEX CONVENIENCE RECEPTACLE 20A, 120V, 46" AFF, UON (OR 6" ABOVE COUNTER AS APPLICABLE)
- SPECIAL RECEPTACLE, AS NOTED ON PLANS
- GFI HEAT TAPE CONNECTION, CLASS B GFI DEVICE WITH PUSH TO TEST AND RESET BUTTONS WITH WEATHER PROOF COVER. CONNECT AHEAD OF HEAT TRACE THERMOSTAT.
- XXX-# MECHANICAL UNIT CONNECTION - SEE SCHEDULE. "XXX" INDICATES UNIT TYPE. "#" INDICATES UNIT NUMBER.
- (E) EQUIPMENT CONNECTION
- (J) JUNCTION BOX
- MOTOR CONNECTION
- S_M MOTOR RATED SWITCH WITH THERMAL OVERLOADS 20A, 120V, UON, MOUNTED WITHIN SIGHT OF MOTOR.
- MMC MAIN MAXIMUS CONTROL PANEL, VFCI
- MSC MAXIMUS SUB CONTROL PANEL, VFCI
- GDC GROW DISC CONTROLLER
- IM INLET MACHINE - REFER TO DETAIL 10 ON SHEET E601
- CM CURTAIN MACHINE - REFER TO DETAIL 11 ON SHEET E601
- IR PLUMBING FIXTURE IR SENSOR CONNECTION, 120V. COORDINATE EXACT CONNECTION DETAILS WITH PLUMBING CONTRACTOR.

POWER (CONT.)

- GDDM GROW DISC DRIVE MOTOR. PROVIDE WITH 30A-2P, NF DISCONNECT - REFER TO DETAIL 9 ON SHEET E601 FOR DETAILS.
- AM AUGER MOTOR, 1HP, 208V, 1Ø. PROVIDE WITH 30A-2P, NF DISCONNECT - REFER TO DETAIL 9 ON SHEET E601 FOR DETAILS.
- AC AUGER CONTROLLER
- IFC INFRARED FEED CONTROLLER
- (T) THERMOSTATE. REFER TO MECHANICAL DRAWINGS FOR DETAILS AND EXACT LOCATIONS
- PD POWER DROP CURTAIN DROP, VFCI
- SAFETY SWITCH, 60A-3P, FU @ 30A, 3R
  - SWITCH RATING
  - NUMBER OF POLES
  - FUSE RATING (NF INDICATES NON-FUSED)
  - NEMA ENCLOSURE IF OTHER THAN NEMA 1
- ELECTRICAL PANELBOARD
- FLUSH-MOUNT ELECTRICAL PANELBOARD
- T PAD MOUNTED TRANSFORMER
  - INDICATES FRONT
- AND ELECTRICAL CIRCUIT RUN IN CONDUIT AND CIRCUIT HOMERUN TO PANELBOARD (PANEL AND CIRCUIT DESIGNATION AS INDICATED). AS A MINIMUM CONDITION, EACH SINGLE PHASE CIRCUIT SHALL HAVE 1 #12 PHASE CONDUCTOR, 1 #12 NEUTRAL CONDUCTOR AND 1 #12 GROUNDING CONDUCTOR IN 1/2" CONDUIT. PROVIDE ADDITIONAL PHASE CONDUCTORS AS REQUIRED FOR "MULTIPLE PHASED" ELECTRICAL LOADS. PROVIDE NEUTRAL CONDUCTOR TO ALL WALL SWITCH OUTLET BOXES WHETHER REQUIRED OR NOT. PROVIDE ADDITIONAL "SWITCH LEG" CONDUCTORS TO PROVIDE THE LIGHT FIXTURE CONTROL INDICATED. MULTIPLE SINGLE PHASE CONDUCTORS MAY BE GROUPED TOGETHER IN A COMMON CONDUIT IN ACCORDANCE WITH THE NEC AND AT THE CONTRACTOR'S DISCRETION. GROUNDING CONDUCTORS MAY BE SHARED AS ALLOWED BY THE NEC. NEUTRAL CONDUCTORS SHALL NOT BE SHARED. MULTI-POLE BREAKERS SHALL BE PROVIDED IN ACCORDANCE WITH THE NEC WHERE MULTI-WIRE BRANCH CIRCUITS ARE REQUIRED. CONDUIT LARGER THAN 1/2" AND CONDUCTORS LARGER THAN #12 SHALL BE AS INDICATED.
- PB PULL BOX DIRECT BURIED, TOP FLUSH WITH GRADE, QUAZITE, 18"X24" UON, WITH "ELECTRIC" OR "COMM" IN TOP AS APPLICABLE

TELECOMMUNICATIONS

- TELE/DATA OUTLET, 4"X4"X2 1/8"D BOX WITH SINGLE GANG PLASTER RING AND SINGLE GANG COVERPLATE TO MATCH ELECTRICAL OUTLET COVERPLATE MATERIAL AND COLOR, 18" AFF, UON, WITH 1"C WITH PULL STRING, STUBBED ABOVE ACCESSIBLE CEILING AND TERMINATED WITH BUSHING. WHERE OUTLET IS ADJACENT TO A POWER RECEPTACLE, MOUNT AT SAME ELEVATION AS POWER RECEPTACLE, UON.
- TELPED, TELEPHONE PEDESTAL - EXISTING
- W WIRELESS ACCESS POINT OUTLET, 4"X4"X2 1/8"D BOX WITH SINGLE GANG PLASTER RING AND SINGLE GANG COVERPLATE, MOUNTED ABOVE ACCESSIBLE CEILING WITH 1"C. WITH PULL STRING AND TERMINATED WITH BUSHING.
- JB JUNCTION BOX, REFER TO PLANS FOR SIZE AND LOCATIONS
- TELECOMMUNICATIONS BACKBOARD - 4'W x 8'H x 3/4"THICK TYPE AC FIRE RETARDANT PLYWOOD.
- TMGB TELECOMUNICATIONS MAIN GROUND BUS BAR, SEE DETAIL SHEET E502 FOR ADDITIONAL INFORMATION
- ---UC--- UNDERGROUND COMMUNICATION CONDUIT

GENERAL

- DETAIL OR SECTION NOTATION
  - ENUMERATION: A = DETAIL, 1 = SECTION
  - SHEET WHERE SECTION IS SHOWN
  - SHEET WHERE SECTION IS CUT
- 1 NEW WORK NOTE SYMBOL

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BFG	BELOW FINISHED GRADE
C	CONDUIT
CAT	CATEGORY
CB	CIRCUIT BREAKER
DE	DOMINION ENERGY
EC	EMPTY CONDUIT
E	EMERGENCY
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER
FLA	FULL LOAD AMPS
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
HP	HORSE POWER/HEAT PUMP
HWRP	HOT WATER RECIRCULATION PUMP
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY
KVA	KILO-VOLT-AMPERES
KW	KILO-WATTS
LF	LINEAR FEET
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVER-CURRENT PROTECTION
MTD	MOUNTED
N	NORMAL
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON-FUSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
OC	ON CENTER
Ø	PHASE
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
SE	SERVICE ENTRANCE
SEC	SECONDARY
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BAR
TYP	TYPICAL
UFC	UNIFIED FACILITIES CRITERIA
UON	UNLESS OTHERWISE NOTED
V	VOLT
VAV	VARIABLE AIR VOLUME
VCC	VIRGINIA CONSTRUCTION CODE
VFCI	VENDOR FURNISHED, CONTRACTOR INSTALLED
VUSBC	VIRGINIA UNIFORM STATEWIDE BUILDING CODE
W	WATTS/WIRE
WH	WATER HEATER
WP	WEATHERPROOF

ENERGY CODE COMPLIANCE PATH:

- ☐ ASHRAE 90.1
- ☒ NCECC CHAPTER 4 - PRESCRIPTIVE
- ☐ NCECC CHAPTER 4 - PERFORMANCE

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P MEARS 23086

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn BWS
Checked KPM
Scale AS NOTED
Drawing Title

LEGEND, NOTES AND ABBREVIATIONS

Sheet Number 140 of 159
Drawing Number E-001

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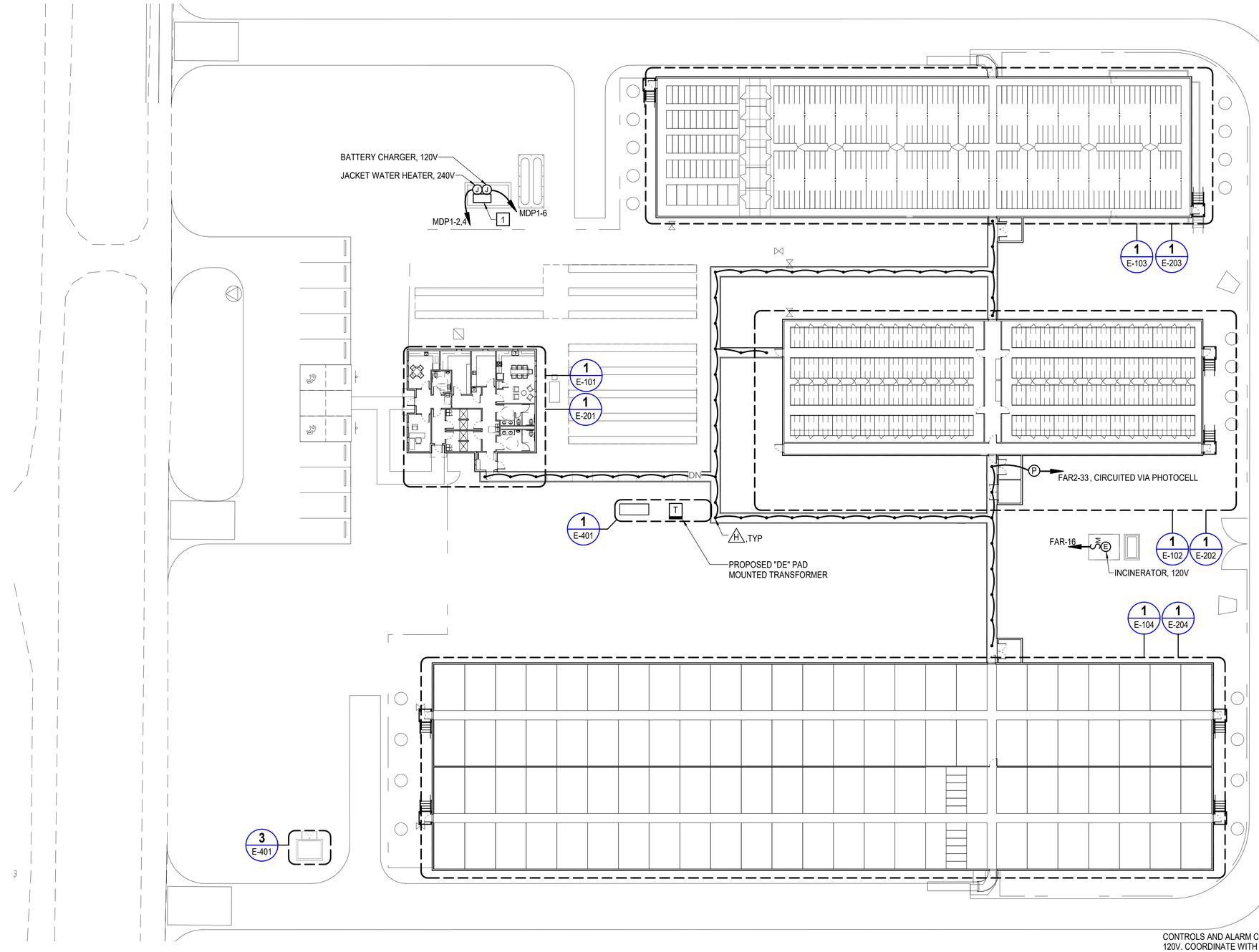
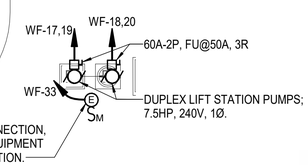
NOTES THIS SHEET

1 500 KW, 240/120V, 1Ø, 3W DIESEL GENERATOR WITH SOUND ATTENUATED WEATHERPROOF ENCLOSURE





SITE PLAN
SCALE: 1" = 20'-0"

GRAPHIC SCALE:

1" = 20'-0" 20' 10' 0' 20' 40' 80'

WALKER the GROUP ARCHITECTURE incorporated
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2526368778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEANS 23086

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SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
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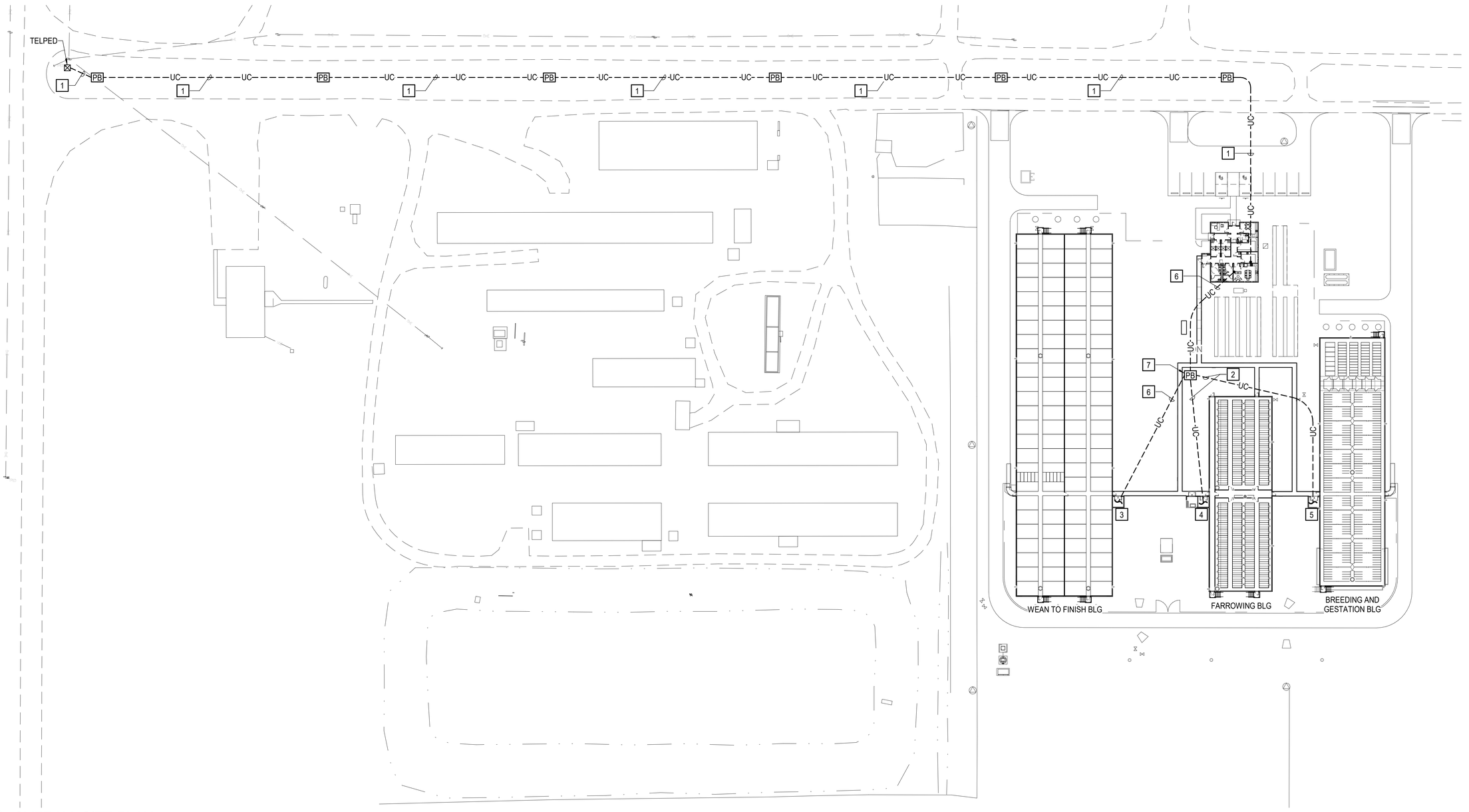
Scale AS NOTED
Drawing Title

SITE PLAN

Sheet Number 141 of 159
Drawing Number **E-002**



OVERALL SITE PLAN
SCALE: 1" = 40'-0"

NOTES THIS SHEET

1. (1) 2"C. SCHEDULE 40 PVC CONDUIT, DIRECT BURIED, MINIMUM 24" BFG. REFER TO "DUCTBANK DETAIL" SHEET E-502 FOR ADDITIONAL INFORMATION.
2. (1) 2"C. SCHEDULE 40 PVC CONDUIT, DIRECT BURIED, MINIMUM 24" BFG. REFER TO "DUCTBANK DETAIL" SHEET E-502 FOR ADDITIONAL INFORMATION.
3. SEE SHEET E204 FOR CONTINUATION.
4. SEE SHEET E202 FOR CONTINUATION.
5. SEE SHEET E203 FOR CONTINUATION.
6. (1) 2"C. AND (1) 3"C. SCHEDULE 40 PVC CONDUIT, DIRECT BURIED, MINIMUM 24" BFG
7. PROVIDE 24" X 36" X 36" DEEP QUAZITE PULL BOX THIS LOCATION

GRAPHIC SCALE:
1" = 40'-0"
40' 20' 0' 40' 80' 120'

WALKER the GROUP ARCHITECTURE incorporated
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2526366778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEYEN P. MEANS
23086

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SCO# 22-25072-01A

207 Research Station Rd.
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No. Date

Project Number 2212.HOGS
Date 07/05/24
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Drawing Title

OVERALL SITE PLAN

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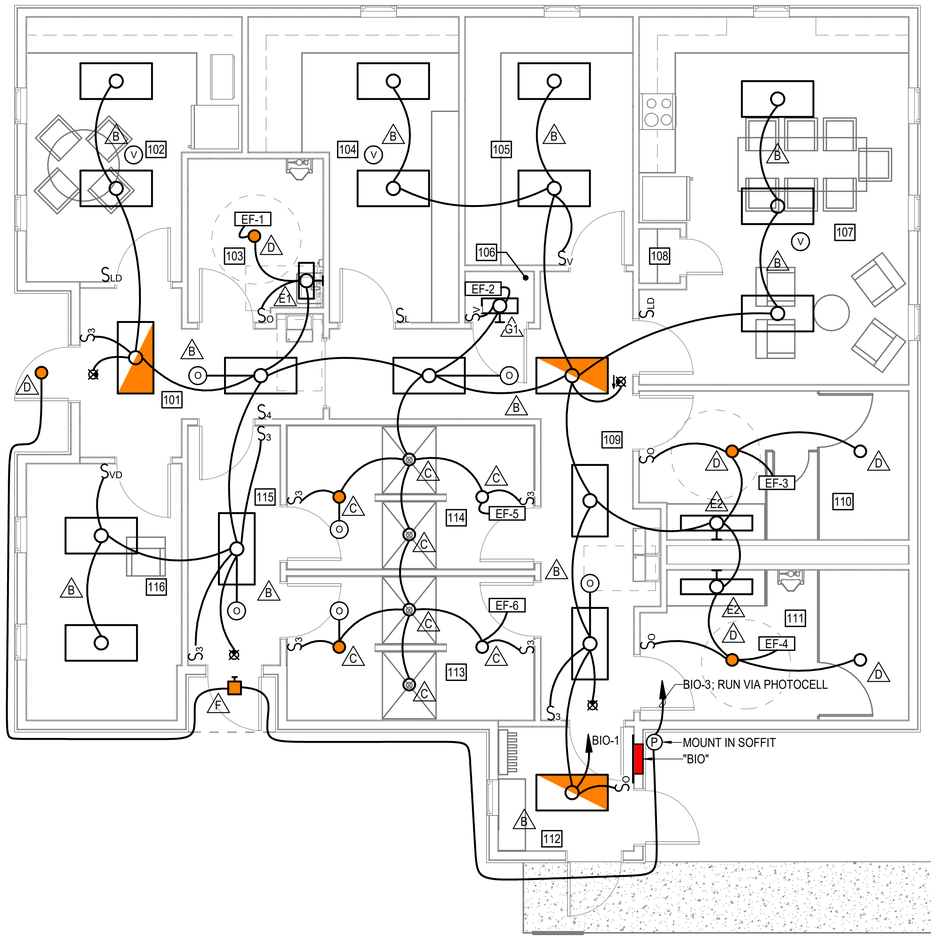
Sheet Number 142 of 159
Drawing Number E-003



1 E-002 BIOSECURITY BUILDING FLOOR PLAN - LIGHTING
SCALE: 1/4" = 1'-0"

1ST FLOOR ROOM SCHEDULE

ROOM #	ROOM NAME
101	VESTIBULE
102	BREAKROOM
103	UNISEX
104	LAUNDRY
105	WORKROOM
106	JANITOR
107	BREAKROOM
108	PANTRY
109	CORRIDOR
110	WOMENS ROOM
111	MENS ROOM
112	MUDROOM
113	MENS SHOWER
114	WOMENS SHOWER
115	VESTIBULE
116	OFFICE

GRAPHIC SCALE:
1/4" = 1'-0" 5' 0' 5' 10'

WALKER the GROUP ARCHITECTURE incorporated
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No. Date

Project Number 2212.HOGS
Date 07/05/24
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Drawing Title
BIOSECURITY BUILDING FLOOR PLAN - LIGHTING
Sheet Number 143 of 159
Drawing Number E-101

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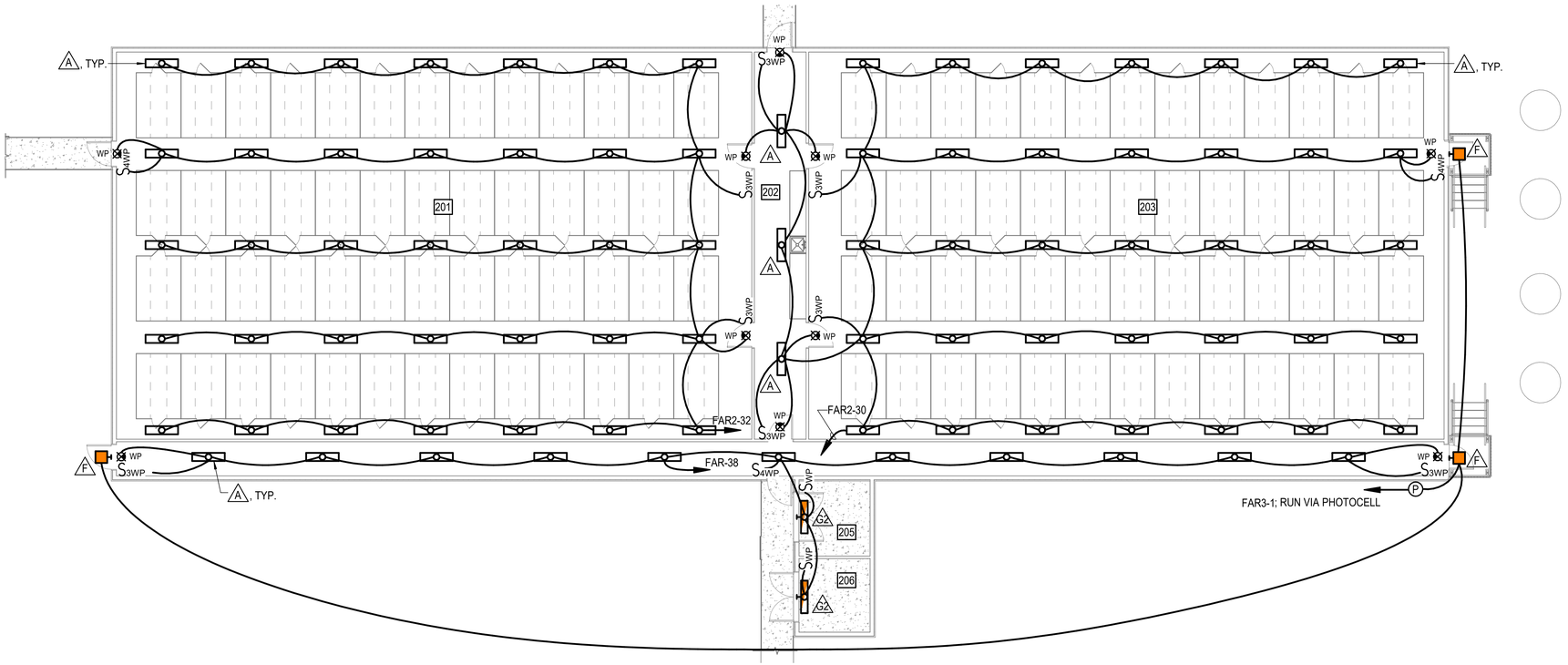

1 E-002 FARROWING BUILDING FLOOR PLAN - LIGHTING

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

GRAPHIC SCALE:

1/8" = 1'-0" 5' 0' 5' 10' 20'

WALKER the GROUP ARCHITECTURE incorporated
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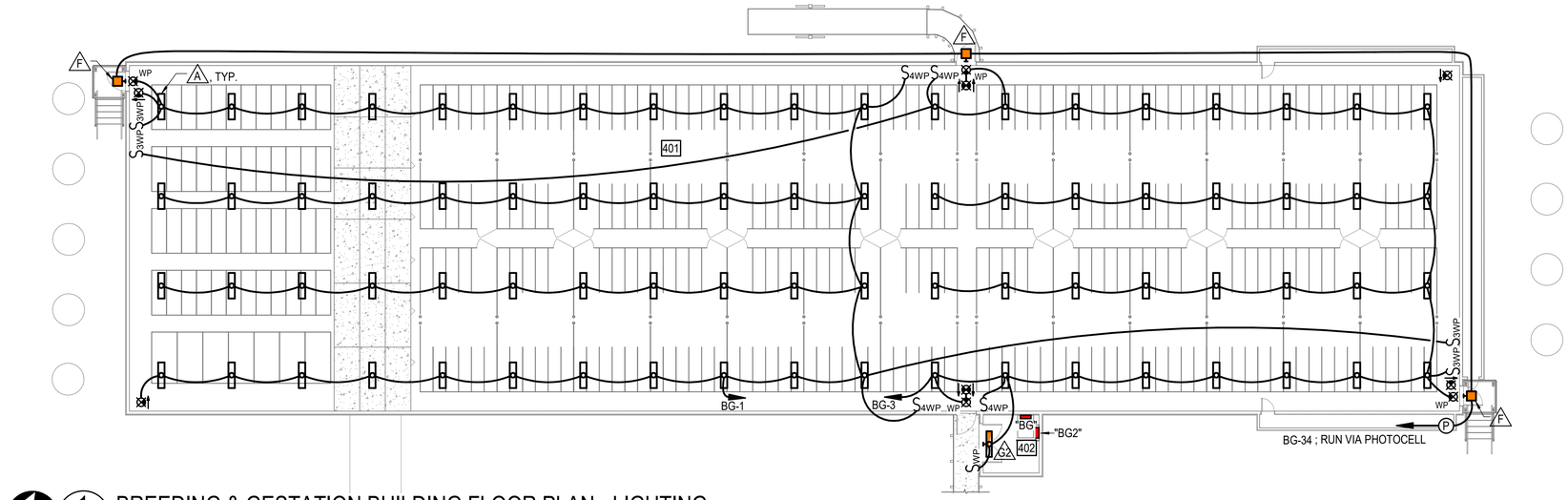
Drawing Title

FARROWING BUILDING FLOOR PLAN - LIGHTING

Sheet Number 144 or 159

Drawing Number

E-102



1 E-002 BREEDING & GESTATION BUILDING FLOOR PLAN - LIGHTING

SCALE: 3/32" = 1'-0"

GRAPHIC SCALE:

3/32" = 1'-0" 5' 0' 5' 10' 20' 30'

WALKER the GROUP ARCHITECTURE
incorporated
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Project Number 2212.HOGS

Date 07/05/24

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Scale AS NOTED

Drawing Title

BREEDING & GESTATION BLDG FLR PLN - LIGHTING

Sheet Number 145 of 159

Drawing Number

E-103

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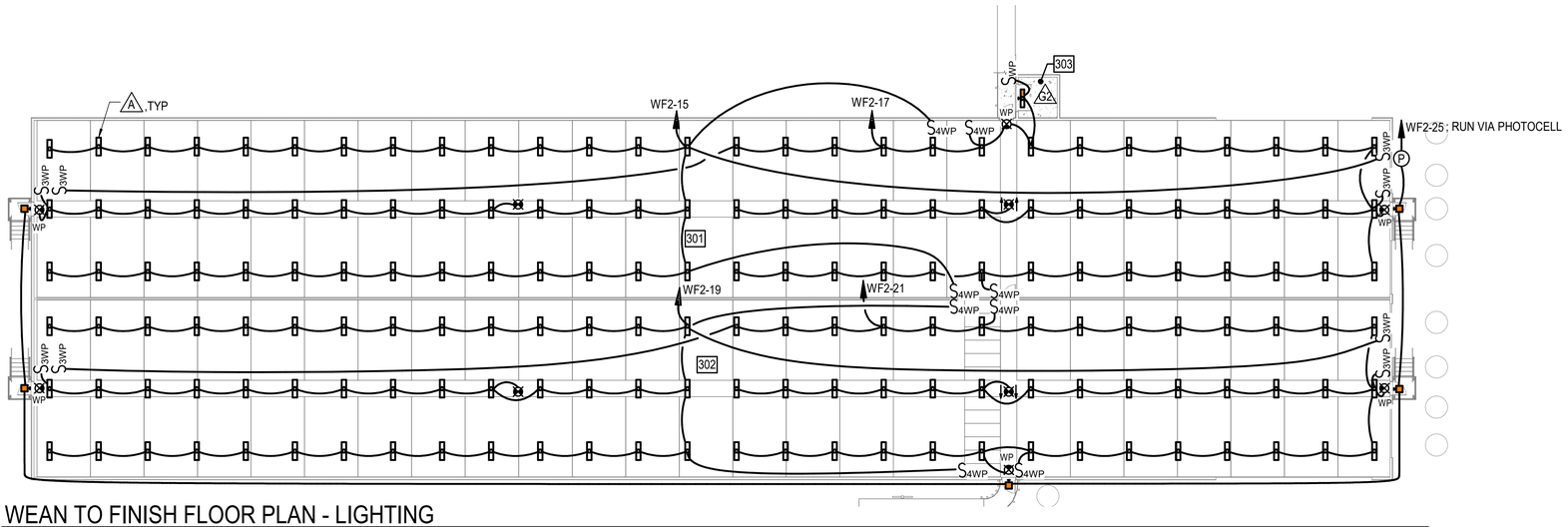

1 E-002 WEAN TO FINISH FLOOR PLAN - LIGHTING

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

GRAPHIC SCALE:

1/16" = 1'-0"

5' 0' 5' 10' 20' 30' 50'

WALKER the GROUP ARCHITECTURE
incorporated
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SCO# 22-25072-01A

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Project Number 2212.HOGS

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Scale AS NOTED

Drawing Title

WEAN TO FINISH BLG FLR PLN - LIGHTING

Sheet Number 146 of 159

Drawing Number

E-104

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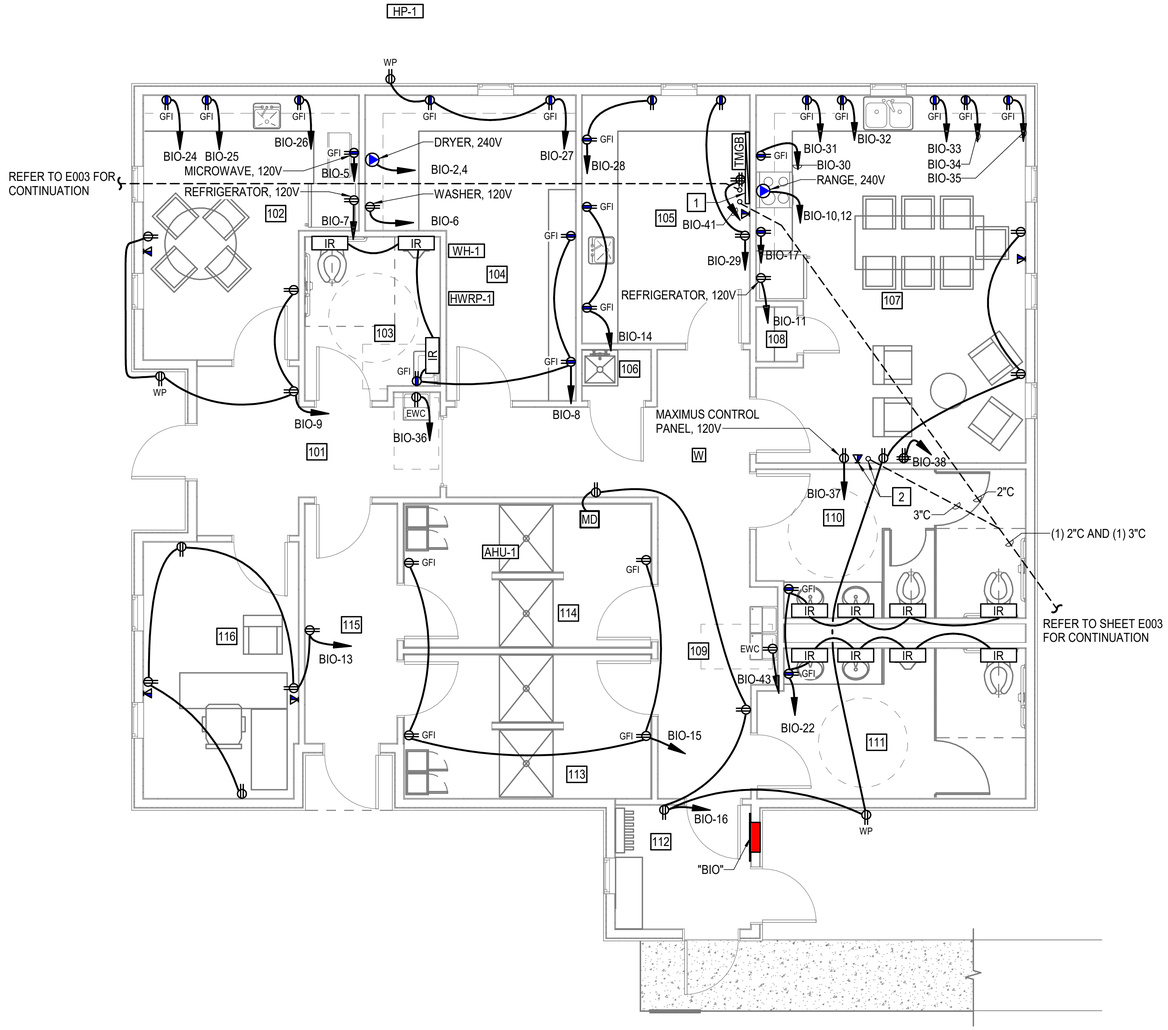

1 BIOSECURITY BUILDING FLOOR PLAN - POWER AND SPECIAL SYSTEMS

E-002

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

ELECTRICAL CONNECTION SCHEDULE - BIOSECURITY

TAG	LOAD	FLA	MOCP	VOLTAGE	Ø	CKT#	CONNECTION	NOTES
AHU-1		68 A	80A	240 V	1Ø	BIO-18,20	100A-2P, NF	1
EF-1		1 A	20A	120 V	1Ø	BIO-1	INTEGRAL DISCONNECT	1, 2
EF-2		0 A	20A	120 V	1Ø	BIO-1	INTEGRAL DISCONNECT	1, 2
EF-3		1 A	20A	120 V	1Ø	BIO-1	INTEGRAL DISCONNECT	1, 2
EF-4		1 A	20A	120 V	1Ø	BIO-1	INTEGRAL DISCONNECT	1, 2
EF-5		0 A	20A	120 V	1Ø	BIO-1	INTEGRAL DISCONNECT	1, 2
EF-6		0 A	20A	120 V	1Ø	BIO-1	INTEGRAL DISCONNECT	1, 2
HP-1		29 A	50A	240 V	1Ø	BIO-19,21	60A-2P, NF	
HWRP-1	1/12 HP	3 A	20A	120 V	1Ø	BIO-39	MOTOR RATED SWITCH	1
WH-1		63 A	80A	240 V	1Ø	BIO-40,42	100A-2P, NF	1

NOTES:
1. COORDINATE CONNECTION DETAILS WITH MECHANICAL CONTRACTOR OR VENDOR PROVIDING EQUIPMENT.
2. REFER TO SHEET E-101 FOR CIRCUITING AND CONTROLS.

NOTES THIS SHEET

1 PROPOSED LOCATION OF OWNER FURNISHED/OWNER INSTALLED IT EQUIPMENT CABINET. COORDINATE WITH OWNER/OWNERS VENDOR PRIOR TO INSTALLATION. SEE SHEET E-003 FOR ADDITIONAL INFORMATION. STUB CONDUITS 12" AFF AND PROVIDE CONDUIT CAP.

2 PROPOSED LOCATION OF MAXIMUS MASTER CONTROL PANEL. COORDINATE THE LOCATION OF THE TELE/DATA OUTLET WITH OWNER/OWNERS VENDOR PRIOR TO INSTALLATION.

1ST FLOOR ROOM SCHEDULE

ROOM #	ROOM NAME
101	VESTIBULE
102	BREAKROOM
103	UNISEX
104	LAUNDRY
105	WORKROOM
106	JANITOR
107	BREAKROOM
108	PANTRY
109	CORRIDOR
110	WOMENS ROOM
111	MENS ROOM
112	MUDROOM
113	MENS SHOWER
114	WOMENS SHOWER
115	VESTIBULE
116	OFFICE

GRAPHIC SCALE:

1/4" = 1'-0" 5' 0' 5' 10'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEARS 23086

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

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No.	Date

Project Number 2212.HOGS
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BIOSECURITY BUILDING FLOOR PLAN - POWER

Sheet Number 147 of 159
Drawing Number E-201

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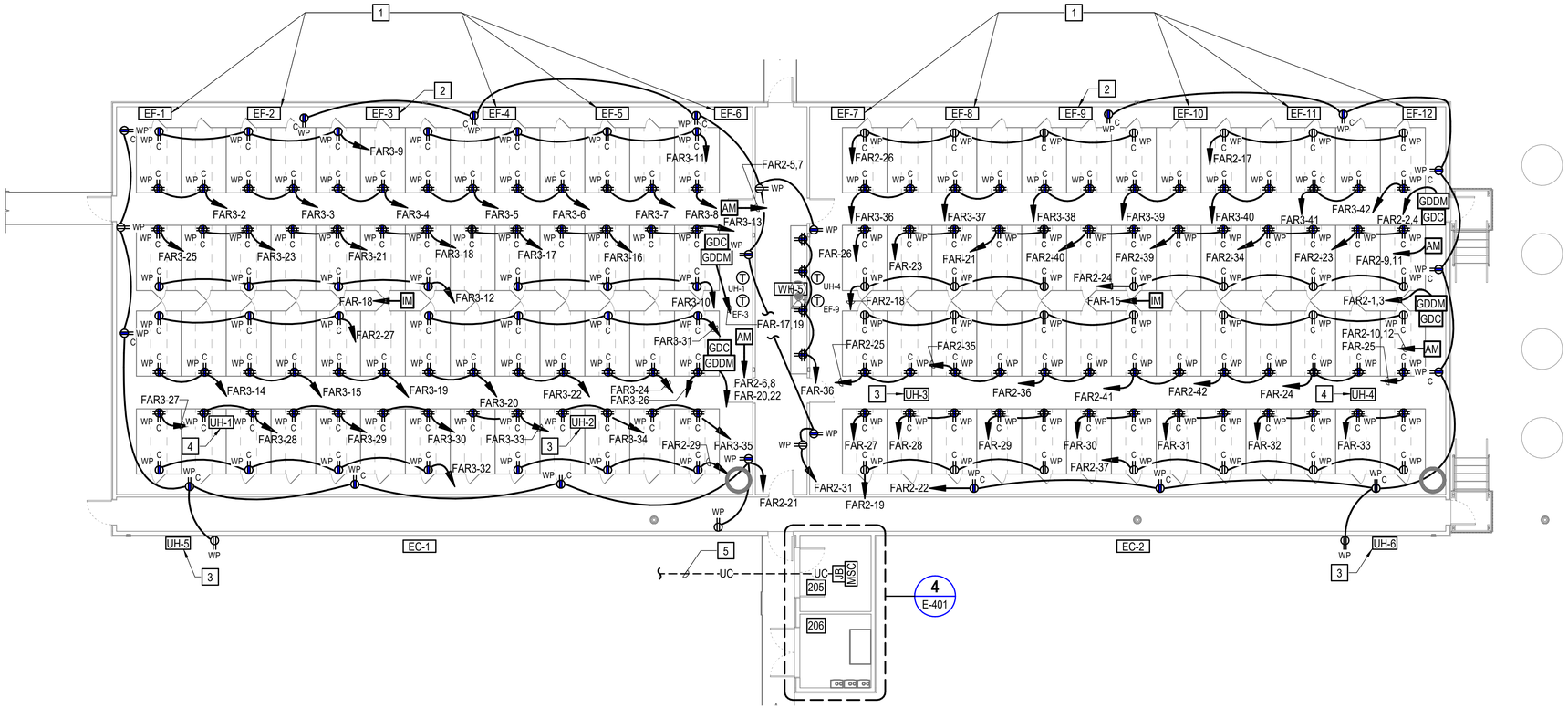

1 E-002 FARROWING BUILDING FLOOR PLAN - POWER AND SPECIAL SYSTEMS

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

NOTES THIS SHEET

1. REFER TO DETAIL 1 ON SHEET E601 FOR CONNECTION DETAILS.
2. REFER TO DETAIL 2 ON SHEET E601 FOR CONNECTION DETAILS.
3. REFER TO DETAIL 5 ON SHEET E601 FOR CONNECTION DETAILS.
4. REFER TO DETAIL 6 ON SHEET E601 FOR CONNECTION DETAILS.
5. SEE SHEET E003 FOR CONTINUATION.
6. PRESSURE WASH PUMP CONNECTION; 5HP, 240V, 1Ø

ELECTRICAL CONNECTION SCHEDULE - FARROWING

TAG	LOAD	FLA	MOCP	VOLTAGE	Ø	CKT#	CONNECTION	NOTES
EC-1	3/45 HP	1 A	20A	120 V	1Ø	FAR-34	20A-2P MOTOR RATED SWITCH, 3R	1
EC-2	3/45 HP	1 A	20A	120 V	1Ø	FAR-34	20A-2P MOTOR RATED SWITCH, 3R	1
EF-1	1/2 HP	5 A	20A	240 V	1Ø	FAR-7,9	20A-2P MOTOR RATED SWITCH, 3R	1
EF-2	1/3 HP	4 A	20A	240 V	1Ø	FAR-7,9	20A-2P MOTOR RATED SWITCH, 3R	1
EF-3	1/2 HP	5 A	20A	240 V	1Ø	FAR-7,9	20A-2P MOTOR RATED SWITCH, 3R	1
EF-4	1/3 HP	4 A	20A	240 V	1Ø	FAR-8,10	20A-2P MOTOR RATED SWITCH, 3R	1
EF-5	1/2 HP	5 A	20A	240 V	1Ø	FAR-8,10	20A-2P MOTOR RATED SWITCH, 3R	1
EF-6	1/3 HP	4 A	20A	240 V	1Ø	FAR-8,10	20A-2P MOTOR RATED SWITCH, 3R	1
EF-7	1/2 HP	5 A	20A	240 V	1Ø	FAR-11,13	20A-2P MOTOR RATED SWITCH, 3R	1
EF-8	1/3 HP	4 A	20A	240 V	1Ø	FAR-11,13	20A-2P MOTOR RATED SWITCH, 3R	1
EF-9	1/2 HP	5 A	20A	240 V	1Ø	FAR-11,13	20A-2P MOTOR RATED SWITCH, 3R	1
EF-10	1/3 HP	4 A	20A	240 V	1Ø	FAR-12,14	20A-2P MOTOR RATED SWITCH, 3R	1
EF-11	1/2 HP	5 A	20A	240 V	1Ø	FAR-12,14	20A-2P MOTOR RATED SWITCH, 3R	1
EF-12	1/3 HP	4 A	20A	240 V	1Ø	FAR-12,14	20A-2P MOTOR RATED SWITCH, 3R	1
EF-13	1/30 HP	2 A	20A	120 V	1Ø	FAR-39	20A-2P MOTOR RATED SWITCH, 3R	1
EUH-1		8 A	20A	240 V	1Ø	FAR-40,42	20A-2P MOTOR RATED SWITCH, 3R	1
UH-1	1/3 HP	12 A	20A	120 V	1Ø	FAR-1	20A-2P MOTOR RATED SWITCH, 3R	1
UH-2	1/3 HP	12 A	20A	120 V	1Ø	FAR-2	20A-2P MOTOR RATED SWITCH, 3R	1
UH-3	1/3 HP	12 A	20A	120 V	1Ø	FAR-3	20A-2P MOTOR RATED SWITCH, 3R	1
UH-4	1/3 HP	12 A	20A	120 V	1Ø	FAR-4	20A-2P MOTOR RATED SWITCH, 3R	1
UH-5	1/3 HP	12 A	20A	120 V	1Ø	FAR-5	20A-2P MOTOR RATED SWITCH, 3R	1
UH-6	1/3 HP	12 A	20A	120 V	1Ø	FAR-6	20A-2P MOTOR RATED SWITCH, 3R	1
WH-2		4 A	20A	120 V	1Ø	FAR-41	30A-2P, NF	1
WH-3		4 A	20A	120 V	1Ø	FAR-41	30A-2P, NF	1
WH-4		4 A	20A	120 V	1Ø	FAR-41	30A-2P, NF	1
WH-5		13 A	20A	240 V	1Ø	FAR-35,37	30A-2P, NF	1

NOTES:
1. COORDINATE CONNECTION DETAILS WITH MECHANICAL CONTRACTOR OR VENDOR PROVIDING EQUIPMENT.

1ST FLOOR ROOM SCHEDULE

ROOM #	ROOM NAME
201	FARROWING ROOM 1
202	CORR.
203	FARROWING ROOM 2
204	CORRIDOR
205	STORAGE
206	MECH.

GRAPHIC SCALE:

1/8" = 1'-0" 5' 0' 5' 10' 20'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEARS 23086

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
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FARROWING BUILDING FLOOR PLAN - POWER

Sheet Number 148 of 159
Drawing Number **E-202**

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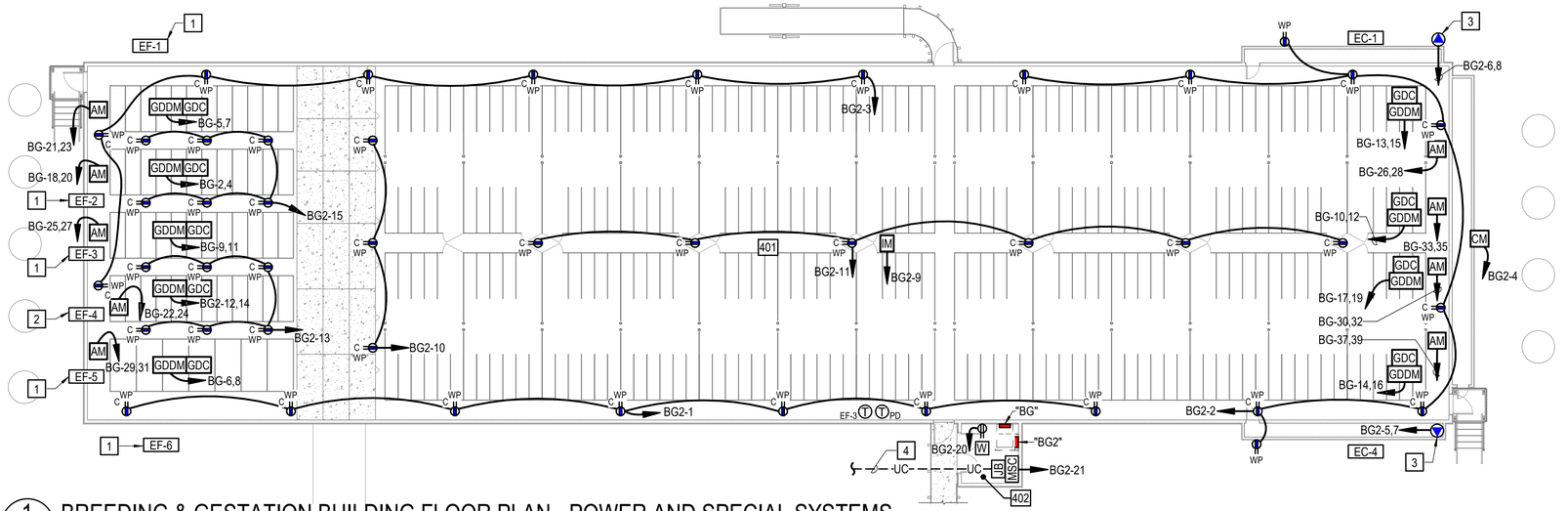

1 E-002 BREEDING & GESTATION BUILDING FLOOR PLAN - POWER AND SPECIAL SYSTEMS

SCALE: 3/32" = 1'-0"

ELECTRICAL CONNECTION SCHEDULE - BREEDING & GESTATION

TAG	LOAD	FLA	MOCP	VOLTAGE	Ø	CKT#	CONNECTION	NOTES
EC-1	3/45 HP	1 A	20A	240 V	1Ø	BG2-17,19	20A-2P MOTOR RATED SWITCH, 3R	1
EC-4	3/45 HP	1 A	20A	240 V	1Ø	BG2-16,18	20A-2P MOTOR RATED SWITCH, 3R	1
EF-1	1 1/2 HP	10 A	20A	240 V	1Ø	BG-40,42	20A-2P MOTOR RATED SWITCH, 3R	1
EF-2	1/2 HP	5 A	20A	240 V	1Ø	BG-36,38	20A-2P MOTOR RATED SWITCH, 3R	1
EF-3	1 1/2 HP	10 A	20A	240 V	1Ø	BG-41,43	20A-2P MOTOR RATED SWITCH, 3R	1
EF-4	1 1/2 HP	10 A	20A	240 V	1Ø	BG-44,46	20A-2P MOTOR RATED SWITCH, 3R	1
EF-5	1/2 HP	5 A	20A	240 V	1Ø	BG-36,38	20A-2P MOTOR RATED SWITCH, 3R	1
EF-6	1 1/2 HP	10 A	20A	240 V	1Ø	BG-45,47	20A-2P MOTOR RATED SWITCH, 3R	1

NOTES:
1. COORDINATE CONNECTION DETAILS WITH MECHANICAL CONTRACTOR OR VENDOR PROVIDING EQUIPMENT.

NOTES THIS SHEET

1. REFER TO DETAIL 1 ON SHEET E601 FOR CONNECTION DETAILS.
2. REFER TO DETAIL 2 ON SHEET E601 FOR CONNECTION DETAILS.
3. POWER DROP CURTAIN DROP, 240V, NEMA 6-20R WITH WHILE IN USE COVER. REFER TO DETAIL 7 ON SHEET E601 FOR CONNECTION DETAILS.
4. SEE SHEET E003 FOR CONTINUATION.

1ST FLOOR ROOM SCHEDULE

ROOM #	ROOM NAME
401	BREEDING & GESTATION
402	MECH.

GRAPHIC SCALE:

3/32" = 1'-0" (5' 0' 5' 10' 20' 30')

WALKER the GROUP ARCHITECTURE incorporated
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2526366778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEARS 23086

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

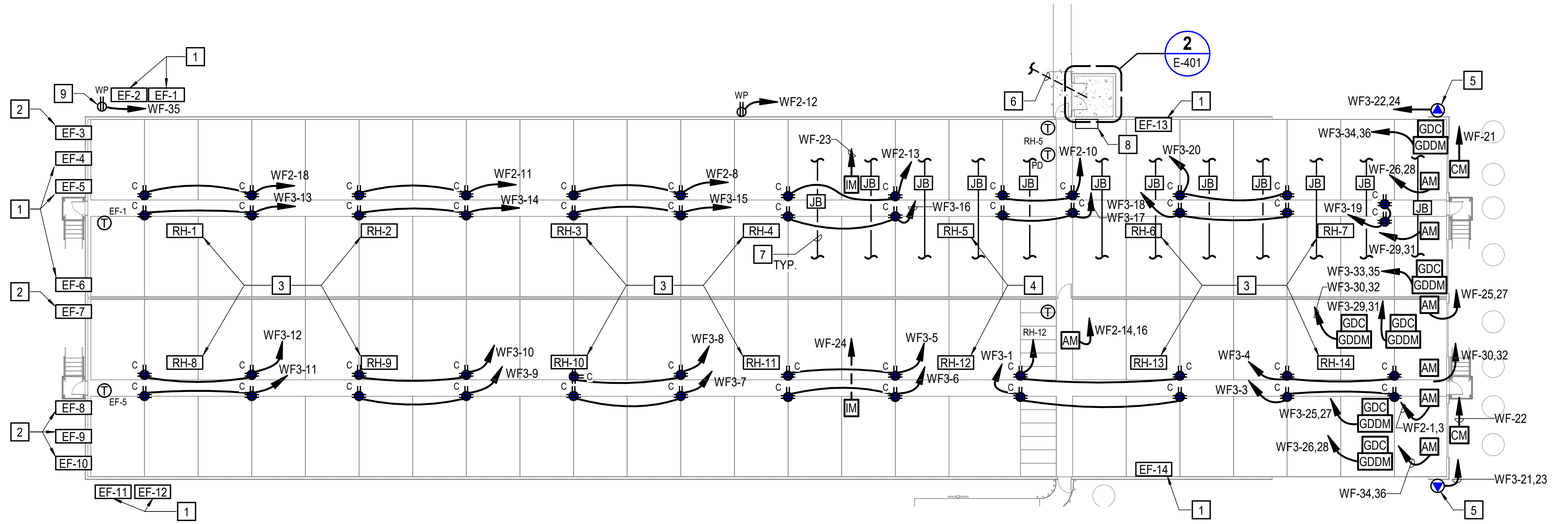
No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn BWS
Checked KPM
Scale AS NOTED
Drawing Title

BREEDING & GESTATION BLG FLR PLN - POWER

Sheet Number 149 of 159
Drawing Number **E-203**

PACE COLLABORATIVE MECHANICAL ELECTRICAL ENGINEERS WWW.PACE-ENGINEERING.COM



1 E-002 WEAN TO FINISH BUILDING FLOOR PLAN - POWER AND SPECIAL SYSTEMS

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

ELECTRICAL CONNECTION SCHEDULE - WEAN TO FINISH

TAG	LOAD	FLA	MOCP	VOLTAGE	Ø	CKT#	CONNECTION	NOTES
EF-1	1 1/2 HP	10 A	20A	240 V	1Ø	WF-1,3	20A-2P MOTOR RATED SWITCH, 3R	1
EF-2	1 1/2 HP	10 A	20A	240 V	1Ø	WF-2,4	20A-2P MOTOR RATED SWITCH, 3R	1
EF-3	1 1/2 HP	10 A	20A	240 V	1Ø	WF-5,7	20A-2P MOTOR RATED SWITCH, 3R	1
EF-4	1 1/2 HP	10 A	20A	240 V	1Ø	WF-6,8	20A-2P MOTOR RATED SWITCH, 3R	1
EF-5	1/2 HP	5 A	20A	240 V	1Ø	WF-9,11	20A-2P MOTOR RATED SWITCH, 3R	1
EF-6	1/2 HP	5 A	20A	240 V	1Ø	WF-9,11	20A-2P MOTOR RATED SWITCH, 3R	1
EF-7	1 1/2 HP	10 A	20A	240 V	1Ø	WF-13,15	20A-2P MOTOR RATED SWITCH, 3R	1
EF-8	1/2 HP	5 A	20A	240 V	1Ø	WF-10,12	20A-2P MOTOR RATED SWITCH, 3R	1
EF-9	1 1/2 HP	10 A	20A	240 V	1Ø	WF-10,12	20A-2P MOTOR RATED SWITCH, 3R	1
EF-10	1 1/2 HP	10 A	20A	240 V	1Ø	WF-14,16	20A-2P MOTOR RATED SWITCH, 3R	1
EF-11	1 1/2 HP	10 A	20A	240 V	1Ø	WF2-2,4	20A-2P MOTOR RATED SWITCH, 3R	1
EF-12	1 1/2 HP	10 A	20A	240 V	1Ø	WF2-20,22	20A-2P MOTOR RATED SWITCH, 3R	1
EF-13	1/2 HP	5 A	20A	240 V	1Ø	WF2-27,29	20A-2P MOTOR RATED SWITCH, 3R	1
EF-14	1/2 HP	5 A	20A	240 V	1Ø	WF2-24,26	20A-2P MOTOR RATED SWITCH, 3R	1
EUH-1		8 A	20A	240 V	1Ø	WF2-31,33	60A-2P, FU@35A, 3R	1
RH-1		1 A	20A	120 V	1Ø	WF2-5	20A-1P RATED SWITCH, 3R	1
RH-2		1 A	20A	120 V	1Ø	WF2-5	20A-1P RATED SWITCH, 3R	1
RH-3		1 A	20A	120 V	1Ø	WF2-5	20A-1P RATED SWITCH, 3R	1
RH-4		1 A	20A	120 V	1Ø	WF2-5	20A-1P RATED SWITCH, 3R	1
RH-5		1 A	20A	120 V	1Ø	WF2-6	20A-1P RATED SWITCH, 3R	1
RH-6		1 A	20A	120 V	1Ø	WF2-6	20A-1P RATED SWITCH, 3R	1
RH-7		1 A	20A	120 V	1Ø	WF2-6	20A-1P RATED SWITCH, 3R	1
RH-8		1 A	20A	120 V	1Ø	WF2-5	20A-1P RATED SWITCH, 3R	1
RH-9		1 A	20A	120 V	1Ø	WF2-5	20A-1P RATED SWITCH, 3R	1
RH-10		1 A	20A	120 V	1Ø	WF2-5	20A-1P RATED SWITCH, 3R	1
RH-11		1 A	20A	120 V	1Ø	WF2-6	20A-1P RATED SWITCH, 3R	1
RH-12		1 A	20A	120 V	1Ø	WF2-6	20A-1P RATED SWITCH, 3R	1
RH-13		1 A	20A	120 V	1Ø	WF2-6	20A-1P RATED SWITCH, 3R	1
RH-14		1 A	20A	120 V	1Ø	WF2-6	20A-1P RATED SWITCH, 3R	1

NOTES:
1. COORDINATE CONNECTION DETAILS WITH MECHANICAL CONTRACTOR OR VENDOR PROVIDING EQUIPMENT.

NOTES THIS SHEET

1. REFER TO DETAIL 1 ON SHEET E601 FOR CONNECTION DETAILS.
2. REFER TO DETAIL 2 ON SHEET E601 FOR CONNECTION DETAILS.
3. REFER TO DETAIL 3 ON SHEET E601 FOR CONNECTION DETAILS.
4. REFER TO DETAIL 4 ON SHEET E601 FOR CONNECTION DETAILS.
5. POWER DROP CURTAIN DROP, 240V, NEMA 6-20R WITH WHILE IN USE COVER. REFER TO DETAIL 7 ON SHEET E601 FOR CONNECTION DETAILS.
6. SEE SHEET E003 FOR CONTINUATION.
7. SEE TELECOMMUNICATIONS RISER DIAGRAM ON SHEET E601 FOR ADDITIONAL INFORMATION.
8. PROPOSED VPU FEEDER PANEL(S) LOCATION. COORDINATE WITH OWNER FOR EXACT LOCATION PRIOR TO INSTALLATION.
9. HOT BOX CONNECTION, 120V. MOUNT INSIDE OF HOT BOX.

1ST FLOOR ROOM SCHEDULE

ROOM #	ROOM NAME
301	WEAN TO FINISH ROOM 1
302	WEAN TO FINISH ROOM 2
303	MECH.

GRAPHIC SCALE:

1/16" = 1'-0" 5' 0' 5' 10' 20' 30' 50'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEARS 23086

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

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WEAN TO FINISH BLG FLR PLN - POWER

Sheet Number 150 of 159
Drawing Number **E-204**

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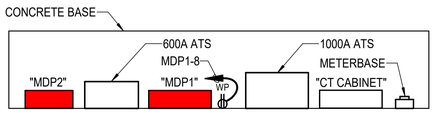
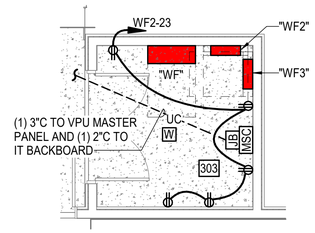
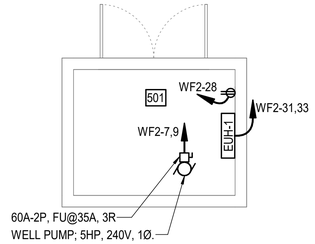


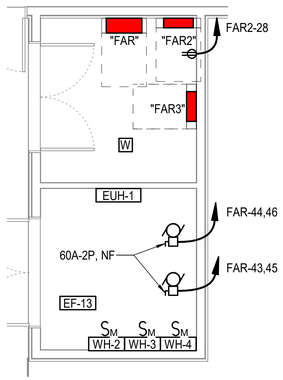
1 E-002 ENLARGED PLAN - ELECTRICAL RACK
SCALE: 1/4" = 1'-0"



2 E-204 ENLARGED PLAN - WEAN TO FINISH ELECTRICAL ROOM
SCALE: 1/4" = 1'-0"



3 E-002 ENLARGED PLAN - WELL HOUSE
SCALE: 1/4" = 1'-0"



4 E-202 ENLARGED PLAN - FARROWING ELECTRICAL AND MECHANICAL ROOMS
SCALE: 1/4" = 1'-0"

GRAPHIC SCALE:

1/4" = 1'-0" 5' 0' 5' 10'

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEANS 23086

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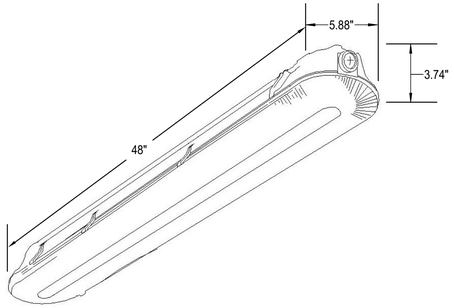
ENLARGED PLANS

Sheet Number 151 of 159
Drawing Number E-401



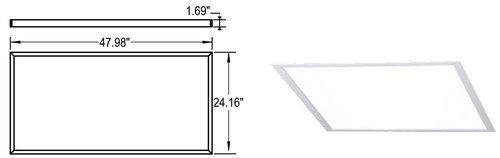
LUMINAIRE DESCRIPTION:

1. HOUSE: ONE-PIECE 5VA RATED FIBERGLASS.
2. DRIVER: HIGH PERFORMANCE LED.
3. LENS: .080" THICK ACRYLIC.
4. FIXTURE SHALL BE FULLY GASKETED.
5. MOUNTING: PROVIDE WITH STAINLESS STEEL MOUNTING BRACKETS.
6. UL LISTED FOR WET LOCATIONS AND RATE IP65 AND IP66.

DETAIL BASED ON COLUMBIA LIGHTING, "LXEM" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
A	4,500	3500K LED	42	120	PENDANT, 7' 6" AFF

VAPOR TIGHT



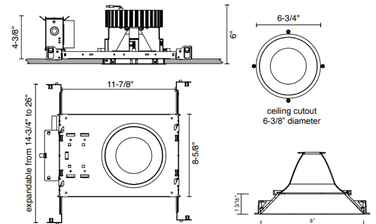
LUMINAIRE DESCRIPTION:

1. HOUSE: EXTRUDED ALUMINUM.
2. FINISH: MATTE WHITE.
3. LENS: FROSTED ACRYLIC.
4. UL 1598 LISTED.
5. DIMMING: 0-10V.
6. PROVIDE BATTERY BACK-UP WHERE INDICATED.

DETAIL BASED ON COLUMBIA LIGHTING, "CFP24" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
B	3,197	3500K LED	30	120-277	SURFACED, CEILING

2X4 LED FLAT PANEL



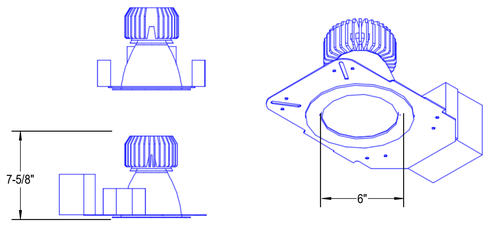
LUMINAIRE DESCRIPTION:

1. HOUSING SHALL BE 16 GAUGE COLD ROLLED STEEL.
2. REFLECTOR IS DIE-FORMED OF 0.40 LOW IRIDESCENT ALUMINUM AND SELF-FLANGED.
3. FIXTURE TRIM AND BEZEL SHALL BE WHITE.
4. FIXTURE SHALL HAVE 60° HIGH EFFICIENCY DIFFUSED LENS.
5. HIGH-EFFICIENCY, INTEGRAL ELECTRONIC LED DRIVER. PROVIDE WITH 0-10VDC DIMMING TO 10%.
6. FIXTURE SHALL BE UL LISTED, IC LISTED SUITABLE FOR WET LOCATION.
7. PROVIDE BATTERY BACK-UP WHERE INDICATED.

DETAIL BASED ON ALPHABET, "NU6RD" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
C	2,540	3500K LED	26	120	RECESSED, CEILING

RECESSED 6" LED LENSED SHOWER DOWNLIGHT



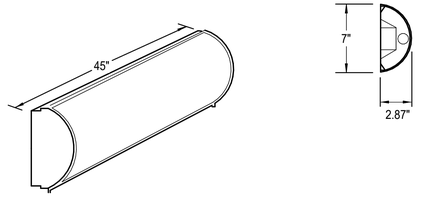
LUMINAIRE DESCRIPTION:

1. RECESSED DOWNLIGHT THAT PROVIDES VOLUMETRIC LIGHTING.
2. 18-GAUGE STEEL MOUNTING PAN AND YOKE ASSEMBLY.
3. REFLECTOR IS DIE-FORMED OF 0.40 LOW IRIDESCENT ALUMINUM AND SELF FLANGED.
4. GALVANIZED STEEL JUNCTION BOX WITH BOTTOM-HINGED ACCESS COVERS AND SPRING LATCHES. TWO COMBINATIONS 1/2" - 3/4" AND THREE 1/2" KNOCKOUTS FOR STRAIGHT-THROUGH CONDUIT RUNS. CAPACITY 8 (4 IN, 4 OUT) NO. 12 AWG CONDUCTORS, RATED FOR 90°C.
5. UTILIZES HIGH-BRIGHTNESS LEDS MOUNTED TO A METAL CORE CIRCUIT BOARD, ENSURING COOL-RUNNING OPERATION, CRI > 80.
6. HIGH-EFFICIENCY, INTEGRAL ELECTRONIC LED DRIVER. PROVIDE DIMMABLE DRIVER WHERE SHOWN CONTROLLED BY DIMMABLE SWITCH.
7. CERTIFICATION: UL LISTED, ILC RATED AND DAMP LOCATION RATED AND TESTED IN ACCORDANCE WITH IESNA LM-79 AND LM-80 STANDARDS.

DETAIL BASED ON PHILLIPS LIGHTING, "CALCULITE" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
D	2,000	3500K LED	25	120/277	RECESSED, CEILING

RECESSED 6" LED OPEN DOWNLIGHT



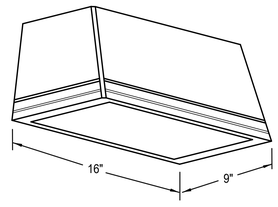
LUMINAIRE DESCRIPTION:

1. HOUSING SHALL BE PAINTED OR PLATED SOLID ALUMINUM WITH A 1/8" MATTE WHITE EXTRUDED ACRYLIC PANEL
2. FIXTURE SHALL UTILIZE AN ELECTRONIC DRIVER
3. THE LENS SHALL BE HIGH IMPACT PEARLESCENT ACRYLIC. SMOOTH EXTERIOR, LINEAR PRISMATIC INTERIOR. NOMINAL THICKNESS .156". LENS SHALL LOCK IN PLACE WITH TAMPER-RESISTANT STAINLESS STEEL POSIGRIP FASTENERS.
4. FIXTURE SHALL BE UL LISTED FOR DAMP LOCATIONS.
5. FIXTURE TYPE E1 SHALL BE 2' AND TYPE E2 SHALL BE 4'.

DETAIL BASED ON KENALL LIGHTING, "RHL7" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
E1	2,702	3500K LED	30	120	SURFACE MOUNT, WALL
E2	4,731	3500K LED	48	120	SURFACE MOUNT, WALL

4' LED VANITY



LUMINAIRE DESCRIPTION:

1. FIXTURE SHALL BE DIE-CAST ALUMINUM HOUSING.
2. FINISH SHALL BE SELECTED BY ARCHITECT.
3. FIXTURE SHALL HAVE TYPE IV DISTRIBUTION.
4. FIXTURE SHALL BE UL LISTED FOR WET LOCATIONS.
5. PROVIDE INTEGRAL BATTERY BACK-UP WHERE INDICATED. BATTERY BACK-UP SHALL HAVE INDEPENDENT SECONDARY DRIVER TO COMPLY WITH NEC 700.16

DETAIL BASED ON SPAULDING LIGHTING, "TRP" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
F	3,958	4000K LED	34	120	SURFACE, WALL, 10'-0" AFG

LED WALLPACK

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEANS 23086

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DETAILS

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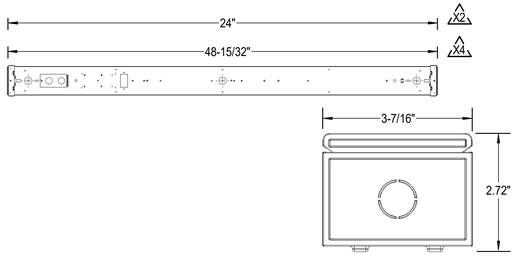


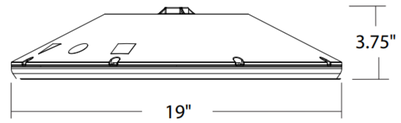
LUMINAIRE DESCRIPTION:

1. CHANNEL AND COVER ARE CODE GAUGE, COLD-ROLLED STEEL CONSTRUCTION. HOUSING AND LENS ENDOCARPS ARE MOLDED PLASTIC. FIXTURE SHALL HAVE A HIGH-GLOSS, BAKED, WHITE POLYESTER FINISH.
2. FIXTURE SHALL HAVE A FLAT DIFFUSE, ACRYLIC LENS.
3. LENS DRIVER SHALL BE STANDARD EFFICIENCY, ELECTRONIC, MULTIVOLT, DIMMABLE AT 0-10V, AND A MINIMUM OF CRI 80.
4. CSA CERTIFIED TO U.S. AND CANADIAN STANDARDS AND LISTED FOR USE IN DAMP LOCATIONS.
5. FIXTURE TYPE G1 SHALL BE 2'
6. FIXTURE TYPE G2 SHALL BE 4'

DETAIL BASED ON LITHONIA LIGHTING, "CDS" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
G1	2,500	4000K LED	18.5	120	SURFACE, WALL 6" ABOVE DOOR
G2	5,000	4000K LED	32.9	120	SURFACE, WALL 6" ABOVE DOOR

LED LENSED STRIP



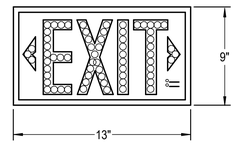
LUMINAIRE DESCRIPTION:

1. HOUSING SHALL BE DIE-CAST ALUMINUM.
2. LENS SHALL BE PRISMATIC ACRYLIC LENS.
3. DRIVER SHALL BE HIGH PERFORMANCE LED DRIVER.
4. FINISH SHALL POWDER COATED PAINTED.
5. FIXTURE SHALL BE IP 66 RATED.
6. PROVIDE FIXTURE WITH INTEGRAL MOTION SENSOR THAT DIMS THE TOTAL LIGHT OUTPUT OF THE FIXTURE BY 50%.
7. FIXTURE SHALL NOT HAVE ANY WIRELESS CONTROL.

DETAIL BASED ON LITHONIA LIGHTING, "VCPG" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
H	3,827	4000K LED	27	120/277	SURFACE, CEILING

CANOPY LIGHT



LUMINAIRE DESCRIPTION:

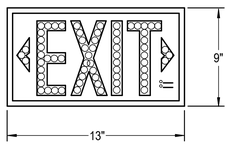
1. UV STABLE THERMOPLASTIC HOUSING AND LETTERS.
2. 6" TALL LETTERS.
3. RED ILLUMINATION PROVIDE BY LIGHT EMITTING DIODES (LED). APPROXIMATELY 100 LED'S PER FACE.
4. POWER FAILURE PROTECTION, BROWN OUT PROTECTION, AND SURGE PROTECTION.
5. SEALED, MAINTENANCE FREE, NICKEL CADMIUM BATTERY WITH SOLID STATE CHARGER AND OVERCHARGE PROTECTION.
6. UNIVERSAL ARROWS AND BLANK OFF PLATES.
7. SINGLE OR DOUBLE FACED AS INDICATED.
8. UNIVERSAL MOUNTING.
9. TEST BUTTON IN BOTTOM OF HOUSING.
10. INDICATOR LIGHTS TO INDICATE WHEN UNIT IS ON NORMAL POWER OR ON BATTERY POWER.
11. WHITE FINISH.

INDICATES CEILING MOUNT.
INDICATES WALL MOUNT 6" ABOVE DOOR TO BOTTOM OF FIXTURE.

DETAIL BASED ON DUAL-LITE LIGHTING, "EVE" SERIES

TYPE	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	LED	5	120	CEILING

EXIT LIGHT



LUMINAIRE DESCRIPTION:

1. POLYCARBONATE WEATHERPROOF HOUSING AND LETTERS WITH POLYMADE FASTENERS AND POLYURETHANE GASKETING.
2. 6" TALL LETTERS.
3. POWER FAILURE PROTECTION, BROWN OUT PROTECTION, AND SURGE PROTECTION.
4. SEALED, MAINTENANCE FREE, NICKEL CADMIUM BATTERY WITH SOLID STATE CHARGER AND OVERCHARGE PROTECTION.
5. DIRECTIONAL ARROWS ARE SNAP-IN CHEVRON TYPE.
6. SINGLE OR DOUBLE FACED AS INDICATED.
7. UNIVERSAL MOUNTING.
8. TEST BUTTON IN BOTTOM OF HOUSING.
9. INDICATOR LIGHTS TO INDICATE WHEN UNIT IS ON NORMAL POWER OR ON BATTERY POWER.
10. WHITE FINISH.
11. UL LISTED AND LABELED FOR WET LOCATION WITH AN IP RATING OF NEMA 4X.

DETAIL BASED ON DUAL-LITE LIGHTING, "EVE4X" SERIES

TYPE	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
WP	LED	5	120/277	CEILING

WEATHERPROOF EXIT LIGHT

WALKER the GROUP ARCHITECTURE incorporated
PO BOX 541, NEW BERN, NC 28563
2526368778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEANS 23086

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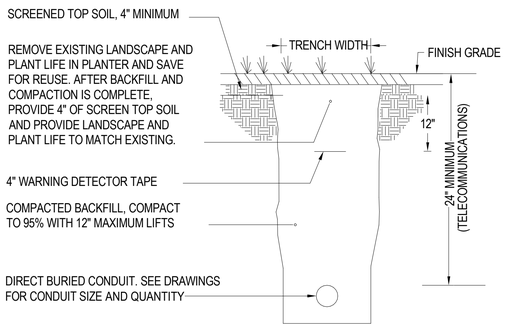
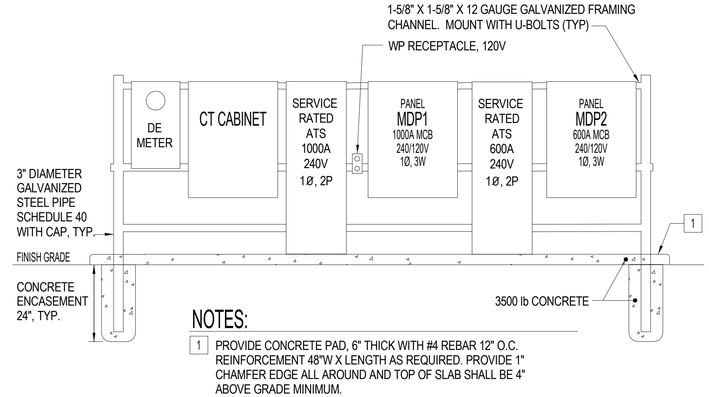


CONDUIT TRENCH DETAIL

NO SCALE

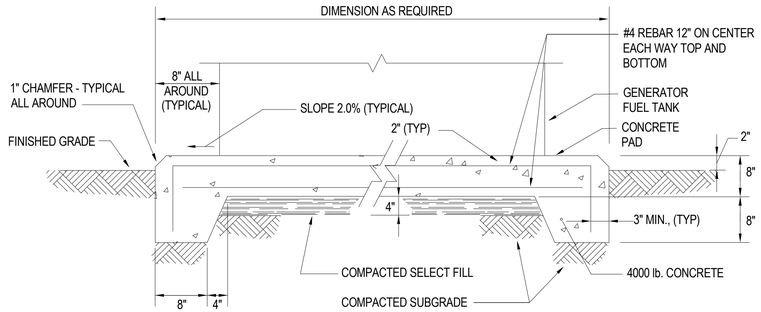


ELECTRICAL RACK DETAIL - NEW WORK

NO SCALE

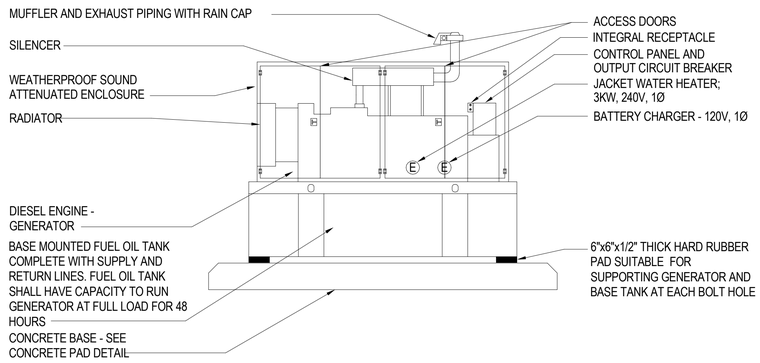
NOTES:

1 PROVIDE CONCRETE PAD, 6" THICK WITH #4 REBAR 12" O.C. REINFORCEMENT 48"W X LENGTH AS REQUIRED. PROVIDE 1" CHAMFER EDGE ALL AROUND AND TOP OF SLAB SHALL BE 4" ABOVE GRADE MINIMUM.



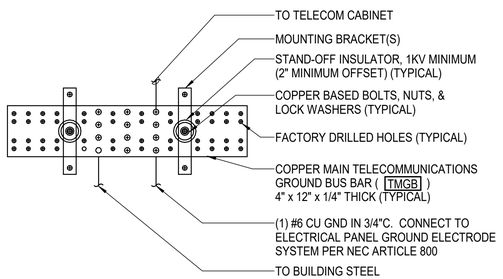
CONCRETE PAD DETAIL

NO SCALE



DIESEL ENGINE GENERATOR DETAIL

NO SCALE



TELECOMMUNICATION MAIN GROUNDING BUSBAR

NO SCALE

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2526368778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEANS 23086

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

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No.	Date

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Date 07/05/24
Drawn Author
Checked Checker
Scale AS NOTED
Drawing Title

DETAILS

Sheet Number 154 of 159
Drawing Number E-503

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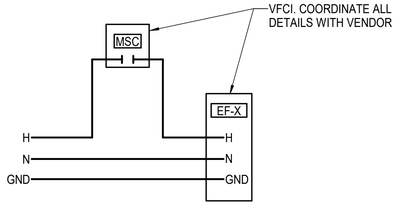
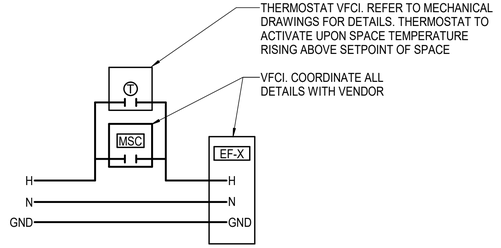
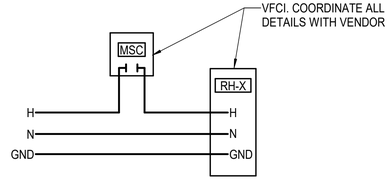


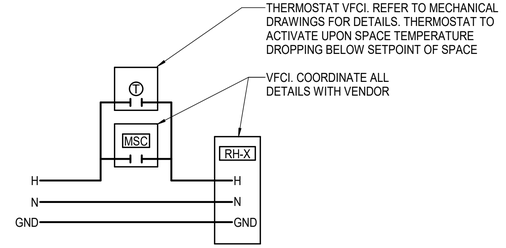
1 TYPICAL EXHAUST FAN WIRING DIAGRAM
NO SCALE



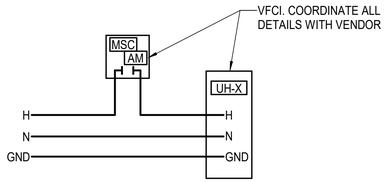
2 EXHAUST FAN EMERGENCY WIRING DIAGRAM
NO SCALE



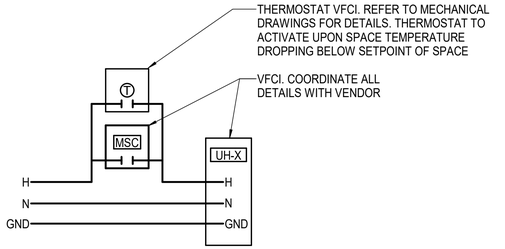
3 TYPICAL RADIANT HEATER WIRING DIAGRAM
NO SCALE



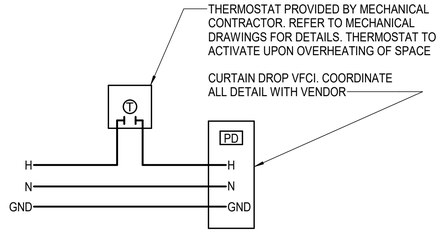
4 RH-5,12 EMERGENCY WIRING DIAGRAM
NO SCALE



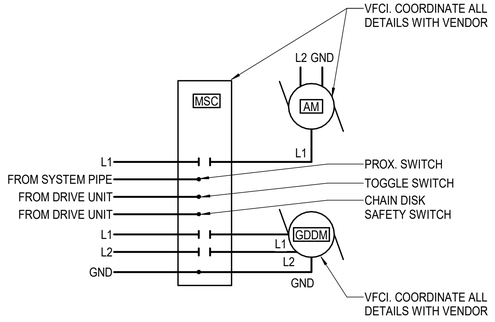
5 TYPICAL UNIT HEATER WIRING DIAGRAM
NO SCALE



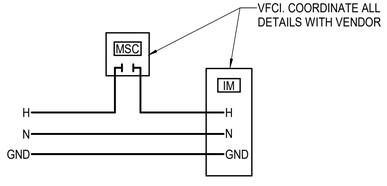
6 UH-1,4 EMERGENCY WIRING DIAGRAM
NO SCALE



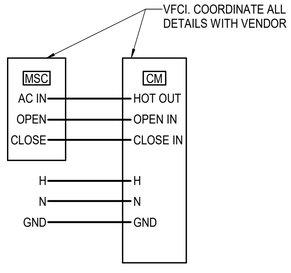
7 POWER DROP CURTAIN DROP WIRING DIAGRAM
NO SCALE



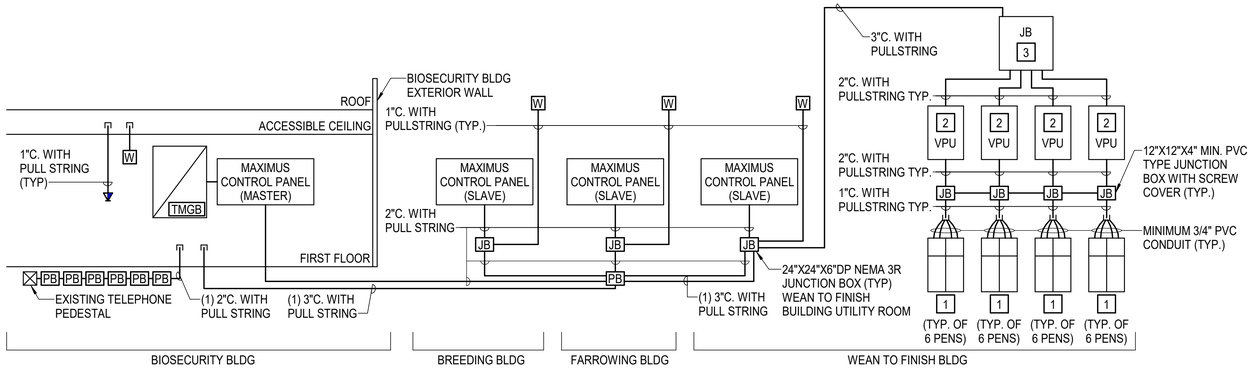
9 FEED SYSTEM WIRING DIAGRAM WITH GROW DISC1
NO SCALE



10 TYPICAL INLET MACHINE WIRING DIAGRAM
NO SCALE



11 TYPICAL CURTAIN MACHINE WIRING DIAGRAM
NO SCALE



TELECOMMUNICATIONS RISER DIAGRAM
NO SCALE

NOTES:

1. EACH HOG PEN WILL CONTAIN (2) FEEDERS FOR A TOTAL OF 48 FEEDERS. EACH FEEDER REQUIRES (2) CABLES (TOTAL OF (4) CABLES PER HOG PEN FROM THE VPU). CONTRACTOR SHALL FURNISH/INSTALL A COMPLETE RACEWAY SYSTEM. OWNERS CABLING VENDOR TO FURNISH, INSTALL, CONNECT AND TEST ALL REQUIRED CABLING.
2. EACH VPU CAN ACCEPT CONNECTION TO (12) FEEDERS.
3. EACH MASTER UNIT CAN ACCEPT CONNECTION FROM (4) VPU'S.

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NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEANS 23086

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

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No. Date

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Drawing Title

RISER AND WIRING DIAGRAMS

Sheet Number 155 of 159
Drawing Number E-601

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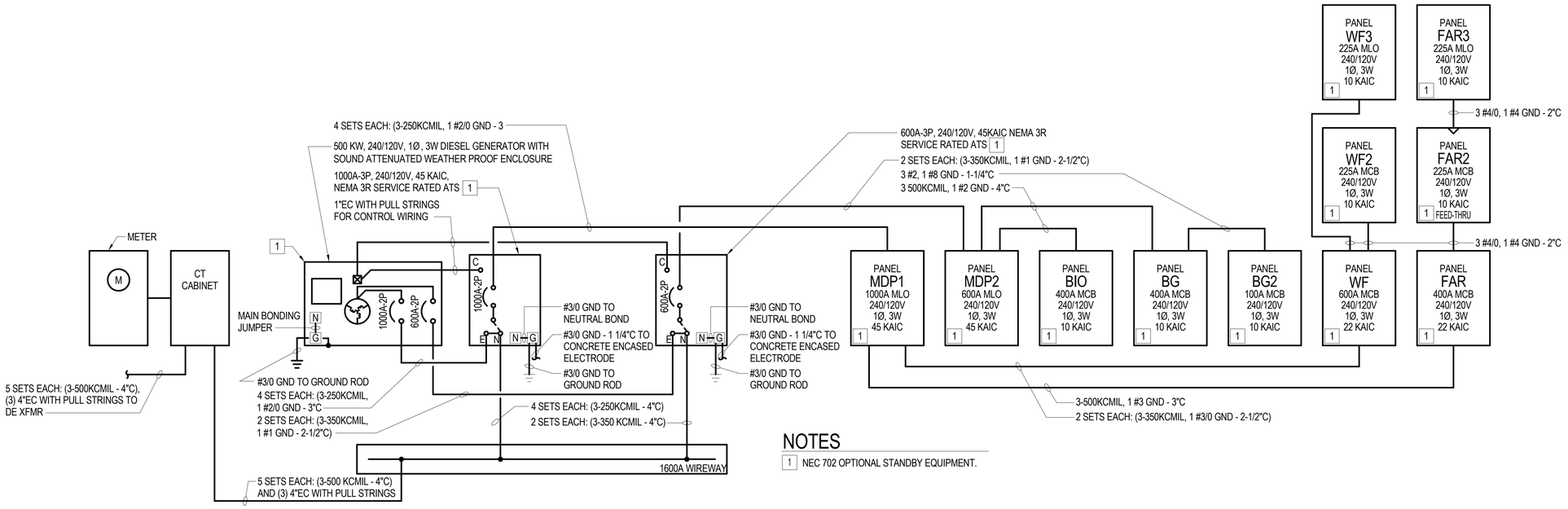

POWER RISER
NO SCALE

NOTES
1 NEC 702 OPTIONAL STANDBY EQUIPMENT.

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Checked Checker
Scale AS NOTED
Drawing Title

RISER DIAGRAM

Sheet Number 156 of 159
Drawing Number E-602

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PANELBOARD MDP1 SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
FAR RM. 205	400 A	2	1	- SEE POWER RISER -	429 A		12 A		2-#10, 1-#10 GND - 1"C	2	2	20 A	JACKET WATER HEATER
			3			430 A		12 A		4			
WF RM. 303	600 A	2	5	- SEE POWER RISER -	493 A		12 A		1-#6, 1-#6, 1-#6 GND - 1"C	6	1	20 A	BATTERY CHARGER
			7			507 A		2 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	8	1	20 A	RECEPTACLE
			9	-					-	10			
			11	-					-	12			
			13	-					-	14			
			15	-					-	16			
			17	-					-	18			
			19	-					-	20			
			21	-					-	22			
			23	-					-	24			
			25	-					-	26			
			27	-					-	28			
			29	-					-	30			

TOTAL CONNECTED AMPS: A: 946 A B: 951 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
AIR CONDITIONING	240 VA	100.00%	240 VA		
LIGHTING	11718 VA	100.00%	11718 VA	**Total Conn. Load:**	227591 VA
Other	6612 VA	100.00%	6612 VA	**Total Est. Demand:**	192769 VA
RECEPTACLES	54720 VA	59.14%	32360 VA	**Total Conn. Current:**	948 A
EXTERIOR LIGHTING	238 VA	100.00%	238 VA	**Total Est. Demand Current:**	803 A
HEATING	12463 VA	0.01%	1 VA		
VENTILATION	39720 VA	100.00%	39720 VA		

Notes:

PANELBOARD MDP2 SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
BIO RM. 112	225 A	2	1	- SEE POWER RISER -	284 A		301 A		- SEE POWER RISER -	2	2	225 A	BG RM. 402
			3			284 A		305 A		4			
			5	-					-	6			
			7	-					-	8			
			9	-					-	10			
			11	-					-	12			
			13	-					-	14			
			15	-					-	16			
			17	-					-	18			
			19	-					-	20			
			21	-					-	22			
			23	-					-	24			
			25	-					-	26			
			27	-					-	28			
			29	-					-	30			

TOTAL CONNECTED AMPS: A: 585 A B: 589 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
AIR CONDITIONING	16800 VA	100.00%	16800 VA		
LIGHTING	4345 VA	100.00%	4345 VA	**Total Conn. Load:**	140906 VA
Other	8604 VA	100.00%	8604 VA	**Total Est. Demand:**	128086 VA
RECEPTACLES	35640 VA	64.03%	22820 VA	**Total Conn. Current:**	587 A
EXTERIOR LIGHTING	136 VA	100.00%	136 VA	**Total Est. Demand Current:**	534 A
VENTILATION	12382 VA	100.00%	12382 VA		
WATER HEATER	15000 VA	100.00%	15000 VA		

Notes:

PANELBOARD BG SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
LIGHTING RM. 401	20 A	1	1	1-#6, 1-#6, 1-#6 GND - 3/4"C	16 A		12 A		2-#10, 1-#10 GND - 1/2"C	2	2	20 A	GDDM RECS RM. 401
LIGHTING RM. 401, 402	20 A	1	3	1-#10, 1-#10, 1-#10 GND - 1/2"C		12 A		12 A		4			
GDDM RM. 401	20 A	2	5	2-#10, 1-#10 GND - 1/2"C	12 A		12 A		2-#12, 1-#12 GND - 1/2"C	6	2	20 A	GDDM RECS RM. 401
			7			12 A		12 A		8			
GDDM RM. 401	20 A	2	9	2-#10, 1-#10 GND - 1/2"C	12 A		12 A		2-#12, 1-#12 GND - 1/2"C	10	2	20 A	GDDM RECS RM. 401
			11			12 A		12 A		12			
GDDM RM. 401	20 A	2	13	2-#12, 1-#12 GND - 1/2"C	12 A		12 A		2-#12, 1-#12 GND - 1/2"C	14	2	20 A	GDDM RECS RM. 401
			15			12 A		12 A		16			
GDDM RM. 401	20 A	2	17	2-#12, 1-#12 GND - 1/2"C	12 A		10 A		2-#10, 1-#10 GND - 1/2"C	18	2	20 A	AM RM. 401
			19			12 A		10 A		20			
AM RM. 401	20 A	2	21	2-#10, 1-#10 GND - 1/2"C	10 A		10 A		2-#12, 1-#12 GND - 1/2"C	22	2	20 A	AM RM. 401
			23			10 A		10 A		24			
AM RM. 401	20 A	2	25	2-#10, 1-#10 GND - 1/2"C	10 A		10 A		2-#12, 1-#12 GND - 1/2"C	26	2	20 A	AM RM. 401
			27			10 A		10 A		28			
AM RM. 401	20 A	2	29	2-#12, 1-#12 GND - 1/2"C	10 A		10 A		2-#12, 1-#12 GND - 1/2"C	30	2	20 A	AM RM. 401
			31			10 A		10 A		32			
AM RM. 401	20 A	2	33	2-#12, 1-#12 GND - 1/2"C	10 A		1 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	34	1	20 A	EXTERIOR LIGHTING
			35			10 A		10 A		36			
AM RM. 401	20 A	2	37	2-#12, 1-#12 GND - 1/2"C	10 A		10 A		2-#10, 1-#10, 1-#10 GND - 1/2"C	38	2	20 A	VENTILATION
			39			10 A		10 A		40			
VENTILATION	20 A	2	41	2-#10, 1-#10, 1-#10 GND - 1/2"C	10 A		10 A		2-#10, 1-#10, 1-#10 GND - 1/2"C	42	2	20 A	VENTILATION
			43			10 A		10 A		44			
VENTILATION	20 A	2	45	2-#12, 1-#12, 1-#12 GND - 1/2"C	10 A		10 A		2-#12, 1-#12, 1-#12 GND - 1/2"C	46	2	20 A	VENTILATION
			47			10 A		0 A	--	48	1	20 A	SPARE
SPARE	20 A	1	49	--	0 A		0 A		--	50	1	20 A	SPARE
SPARE	20 A	1	51	--		0 A		58 A	- SEE POWER RISER -	52	2	70 A	BG2
SPARE	20 A	1	53	--	0 A		49 A			54			

TOTAL CONNECTED AMPS: A: 301 A B: 305 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
AIR CONDITIONING	480 VA	100.00%	480 VA		
LIGHTING	3260 VA	100.00%	3260 VA	**Total Conn. Load:**	72674 VA
Other	0 VA	0.00%	0 VA	**Total Est. Demand:**	72674 VA
RECEPTACLES	9000 VA	100.00%	9000 VA	**Total Conn. Current:**	303 A
EXTERIOR LIGHTING	102 VA	100.00%	102 VA	**Total Est. Demand Current:**	303 A
VENTILATION	11952 VA	100.00%	11952 VA		

Notes:

PANELBOARD BG2 SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
RECS RM. 401	20 A	1	1	1-#8, 1-#8, 1-#8 GND - 3/4"C	11 A		14 A		1-#8, 1-#8, 1-#8 GND - 1/2"C	2	1	20 A	RECS RM. 401
RECS RM. 401	20 A	1	3	1-#8, 1-#8, 1-#8 GND - 3/4"C		11 A		2 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	4	1	20 A	CURTAIN MACHINE
POWER DROP CURTAIN DROP	20 A	2	5	2-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		2 A		2-#12, 1-#12, 1-#12 GND - 1/2"C	6	2	20 A	POWER DROP CURTAIN DROP
			7			2 A		2 A		8			
IM RM. 401	20 A	1	9	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		5 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	10	1	20 A	RECS RM. 401
RECS RM. 401	20 A	1	11	1-#10, 1-#10, 1-#10 GND - 1/2"C		9 A		12 A	2-#10, 1-#10, 1-#10 GND - 1/2"C	12	2	20 A	GDDM RM. 401
RECS RM. 401	20 A	1	13	1-#8, 1-#8, 1-#8 GND - 3/4"C	9 A		12 A			14			
RECS RM. 401	20 A	1	15	1-#8, 1-#8, 1-#8 GND - 3/4"C		9 A		1 A	2-#12, 1-#12, 1-#12 GND - 1/2"C	16	2	20 A	EC-4 RM. 401
EC-3 RM. 401	20 A	2	17	2-#12, 1-#12, 1-#12 GND - 1/2"C	1 A		1 A			18			
			19			1 A		2 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	20	1	20 A	REC RM. 402
MAXIMUS SUB CONTROL PANEL	20 A	1	21	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A				-	22			
SPARE	20 A	1	23	--		0 A		0 A	--	24	1	20 A	SPARE
SPARE	20 A	1	25	--	0 A		0 A		--	26	1	20 A	SPARE
SPARE	20 A	1	27	--		0 A		0 A	--	28	1	20 A	SPARE
SPARE	20 A	1	29	--	0 A		0 A		--	30	1	20 A	SPARE
SPARE	20 A	1	31	--		0 A		0 A	--	32	1	20 A	SPARE
SPARE	20 A	1	33	--	0 A		0 A		--	34	1	20 A	SPARE
SPARE	20 A	1	35	--		0 A		0 A	--	36	1	20 A	SPARE
SPARE	20 A	1	37	--	0 A		0 A		--	38	1	20 A	SPARE
SPARE	20 A	1	39	--		0 A		0 A	--	40	1	20 A	SPARE
SPARE	20 A	1	41	--	0 A		0 A		--	42	1	20 A	SPARE
SPARE	20 A	1	43	--		0 A		0 A	--	44	1	20 A	SPARE
SPARE	20 A	1	45	--	0 A		0 A		--	46	1	20 A	SPARE
SPARE	20 A	1	47	--		0 A		0 A	--	48	1	20 A	SPARE
SPARE	20 A	1	49	--	0 A		0 A		--	50	1	20 A	SPARE
SPARE	20 A	1	51	--		0 A		0 A	--	52	1	20 A	SPARE
SPARE	20 A	1	53	--	0 A		0 A		--	54	1	20 A	SPARE

TOTAL CONNECTED AMPS: A: 58 A B: 49 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
AIR CONDITIONING	480 VA	100.00%	480 VA		
RECEPTACLES	9000 VA	100.00%	9000 VA	**Total Conn. Load:**	12720 VA
				Total Est. Demand:	12720 VA
				Total Conn. Current:	53 A
				Total Est. Demand Current:	53 A

Notes:

WALKER the GROUP ARCHITECTURE
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PO BOX 541, NEW BERN, NC 28563
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NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEANS 23086

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

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PANELBOARD SCHEDULES

Sheet Number 157 of 159
Drawing Number E-603

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PANELBOARD BIO SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
LTG & EF-1,3,4 RM. 101-107,109-116	20 A	1	1	1-#10, 1-#10, 1-#10 GND - 1/2"C	12 A		24 A		2-#10, 1-#10 GND - 1/2"C	2	2	30 A	DRYER RM. 104
EXTERIOR LIGHTING	20 A	1	3	1-#12, 1-#12, 1-#12 GND - 1/2"C		0 A		24 A		4			
MICROWAVE RM. 102	20 A	1	5	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		2 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	6	1	20 A	WASHER RM. 104
REFRIGERATOR RM. 102 *	20 A	1	7	1-#12, 1-#12, 1-#12 GND - 1/2"C		2 A		8 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	8	1	20 A	REC RM. 103, 104
REC RM. 102, 101	20 A	1	9	1-#12, 1-#12, 1-#12 GND - 1/2"C	6 A		40 A		2-#6, 1-#10 GND - 1/2"C	10	2	50 A	RANGE RM. 107
REFRIGERATOR RM. 107 *	20 A	1	11	1-#12, 1-#12, 1-#12 GND - 1/2"C		2 A		40 A		12			
REC RM 116, 115	20 A	1	13	1-#12, 1-#12, 1-#12 GND - 1/2"C	8 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	14	1	20 A	REC RM. 105
RECS RM. 114	20 A	1	15	1-#12, 1-#12, 1-#12 GND -		6 A		12 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	16	1	20 A	REC RM. 107, 110, 111, 112
REC RM. 107	20 A	1	17	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		68 A		2-#3, 1-#8 GND - 3/4"C	18	2	80 A	AHU-1 RM. 114
HP-1	50 A	2	19	2-#6, 1-#6, 1-#10 GND - 1/2"C		29 A		68 A		20			
			21		29 A		11 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	22	1	20 A	RECS RM. 111
			23	-				2 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	24	1	20 A	REC RM. 102
RECS RM. 102	20 A	1	25	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		2 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	26	1	20 A	REC RM. 102
RECS RM. 104	20 A	1	27	1-#12, 1-#12, 1-#12 GND - 1/2"C		5 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	28	1	20 A	REC RM. 105
RECS RM. 105	20 A	1	29	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		2 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	30	1	20 A	REC RM. 107
RECS RM. 107	20 A	1	31	1-#12, 1-#12, 1-#12 GND - 1/2"C		2 A		2 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	32	1	20 A	REC RM. 107
RECS RM. 107	20 A	1	33	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		2 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	34	1	20 A	REC RM. 107
RECS RM. 107	20 A	1	35	1-#12, 1-#12, 1-#12 GND - 1/2"C		2 A		8 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	36	1	20 A	EWC REC RM. 101 *
MAXIMUS CONTROL PANEL	20 A	1	37	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	38	1	20 A	RECS RM. 102
HWRP-1 RM. 104	20 A	1	39	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		63 A	2-#3, 1-#3, 1-#8 GND - 1 1/4"C	40	2	80 A	WH-1 RM. 104
REC RM. 105	20 A	1	41	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		63 A			42			
EWC REC RM. 109	20 A	1	43	1-#12, 1-#12, 1-#12 GND - 1/2"C		8 A			-	44			
			45	-					-	46			
			47	-					-	48			
			49	-					-	50			
			51	-					-	52			
			53	-					-	54			

TOTAL CONNECTED AMPS: A: 284 A B: 284 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
AIR CONDITIONING	16320 VA	100.00%	16320 VA		
LIGHTING	1085 VA	100.00%	1085 VA	**Total Conn. Load:**	68232 VA
Other	8604 VA	100.00%	8604 VA	**Total Est. Demand:**	59912 VA
RECEPTACLES	26640 VA	68.77%	18320 VA	**Total Conn. Current:**	284 A
EXTERIOR LIGHTING	34 VA	100.00%	34 VA	**Total Est. Demand Current:**	250 A
VENTILATION	430 VA	100.00%	430 VA		
WATER HEATER	15000 VA	100.00%	15000 VA		

Notes:
* PROVIDE GFI TYPE CIRCUIT BREAKER

PANELBOARD FAR SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
UH-1 RM. 201	20 A	1	1	1-#10, 1-#10, 1-#10 GND - 1/2"C	12 A			12 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	2	1	20 A	UH-2 RM. 201
UH-3 RM. 203	20 A	1	3	1-#12, 1-#12, 1-#12 GND - 1/2"C		12 A		12 A	1-#10, 1-#10, 1-#10 GND - 1/2"C	4	1	20 A	UH-4 RM. 203
UH-5 RM. 204	20 A	1	5	1-#10, 1-#10, 1-#10 GND - 1/2"C	12 A			12 A	1-#10, 1-#10, 1-#10 GND - 1/2"C	6	1	20 A	UH-6 RM. 203
EF-1,2,3 RM. 201	20 A	2	7	2-#10, 1-#10, 1-#10 GND - 1/2"C		13 A		12 A	2-#12, 1-#12, 1-#12 GND - 1/2"C	8	2	20 A	EF-4,5,6 RM. 201
			9		13 A		12 A			10			
EF-7,8,9 RM. 201	20 A	2	11	2-#12, 1-#12, 1-#12 GND - 1/2"C		13 A		12 A	2-#12, 1-#12, 1-#12 GND - 1/2"C	12	2	20 A	EF-10,11,12 RM. 201
			13		13 A		12 A			14			
IM RM. 203	20 A	1	15	1-#12, 1-#12, 1-#12 GND - 1/2"C		2 A		12 A	1-#10, 1-#10, 1-#10 GND - 1"C	16	1	20 A	INCINERATOR
GDDM RM. 201	20 A	2	17	2-#12, 1-#12 GND - 1/2"C	12 A		2 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	18	1	20 A	IM RM. 201
			19			12 A		12 A		20	2	20 A	GDDM RM. 201
RECS FAR RM. 203	20 A	1	21	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		12 A		2-#12, 1-#12 GND - 1/2"C	22			
RECS FAR RM. 203	20 A	1	23	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	24	1	20 A	RECS FAR RM. 203
RECS FAR RM. 203	20 A	1	25	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		2 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	26	1	20 A	RECS FAR RM. 203
RECS FAR RM. 203	20 A	1	27	1-#12, 1-#12, 1-#12 GND - 1/2"C		2 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	28	1	20 A	RECS FAR RM. 203
RECS FAR RM. 203	20 A	1	29	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	30	1	20 A	RECS FAR RM. 203
RECS FAR RM. 203	20 A	1	31	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	32	1	20 A	RECS FAR RM. 203
RECS FAR RM. 203	20 A	1	33	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		2 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	34	1	20 A	EC-1,2 EXTERIOR
WH-5 RM. 201	20 A	2	35	2-#12, 1-#12, 1-#12 GND - 1/2"C		13 A		6 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	36	1	20 A	RECEPTACLES CORR. 202
			37		13 A		4 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	38	1	20 A	LIGHTING RM. 204, 205, 206
EF-13	20 A	1	39	1-#12, 1-#12, 1-#12 GND - 1/2"C		2 A		8 A	2-#12, 1-#12, 1-#12 GND - 1/2"C	40	2	20 A	EUH-1
WH-2,3,4	20 A	1	41	1-#12, 1-#12, 1-#12 GND - 1/2"C	12 A			8 A		42			
PRESSURE WASH PUMP RM. 203	50 A	2	43	2-#6, 1-#6, 1-#10 GND - 3/4"C		28 A		28 A	2-#6, 1-#6, 1-#10 GND - 3/4"C	44	2	50 A	PRESSURE WASH PUMP RM. 206
			45		28 A		28 A			46			
SPARE	20 A	1	47	--		0 A		0 A	--	48	1	20 A	SPARE
SPARE	20 A	1	49	--	0 A		0 A		--	50	1	20 A	SPARE
SPARE	20 A	1	51	--		0 A		217 A	- SEE POWER RISER -	52	2	225 A	FAR2 RM. 205
SPARE	20 A	1	53	--	0 A		193 A			54			

TOTAL CONNECTED AMPS: A: 429 A B: 430 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
AIR CONDITIONING	240 VA	100.00%	240 VA		
LIGHTING	4604 VA	100.00%	4604 VA	**Total Conn. Load:**	103108 VA
Other	6612 VA	100.00%	6612 VA	**Total Est. Demand:**	82225 VA
RECEPTACLES	34200 VA	64.62%	22100 VA	**Total Conn. Current:**	430 A
EXTERIOR LIGHTING	68 VA	100.00%	68 VA	**Total Est. Demand Current:**	343 A
HEATING	8784 VA	0.01%	1 VA		
VENTILATION	12240 VA	100.00%	12240 VA		

Notes:

PANELBOARD FAR2 SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
GDDM RM. 205	20 A	2	1	2-#12, 1-#12 GND - 1/2"C	12 A		12 A		2-#12, 1-#12 GND - 1/2"C	2	2	20 A	GDDM RM. 203
			3			12 A		12 A		4			
AM RM. 201	20 A	2	5	2-#12, 1-#12 GND - 1/2"C	10 A		10 A		2-#12, 1-#12 GND - 1/2"C	6	2	20 A	AM RM. 201
			7			10 A		10 A		8			
AM RM. 203	20 A	2	9	2-#12, 1-#12 GND - 1/2"C	10 A		10 A		2-#12, 1-#12 GND - 1/2"C	10	2	20 A	AM RM. 203
			11			10 A		10 A		12			
SPARE	20 A	1	13	--	0 A		0 A		--	14	1	20 A	SPARE
SPARE	20 A	1	15	--		0 A		0 A	--	16	1	20 A	SPARE
RECS RM. 203	20 A	1	17	1-#12, 1-#12, 1-#12 GND - 1/2"C	5 A		5 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	18	1	20 A	RECS RM. 203
RECS RM. 203	20 A	1	19	1-#12, 1-#12, 1-#12 GND - 1/2"C		5 A		5 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	20	1	20 A	RECS RM 203
RECS RM. 201, 204	20 A	1	21	1-#8, 1-#8, 1-#8 GND - 3/4"C	14 A		14 A		1-#8, 1-#8, 1-#8 GND - 3/4"C	22	1	20 A	RECS RM 203
RECS RM. 203	20 A	1	23	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		6 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	24	1	20 A	RECS RM 203
RECS RM. 203	20 A	1	25	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		6 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	26	1	20 A	RECS RM 203
RECS RM. 201	20 A	1	27	1-#12, 1-#12, 1-#12 GND - 1/2"C		5 A		2 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	28	1	20 A	RECS RM. 205
RECS RM. 201	20 A	1	29	1-#12, 1-#12, 1-#12 GND - 1/2"C	5 A		13 A		1-#8, 1-#8, 1-#8 GND - 1/2"C	30	1	20 A	LIGHTING RM. 202-203
RECS RM. 201-203	20 A	1	31	1-#8, 1-#8, 1-#8 GND - 3/4"C		12 A		12 A	1-#8, 1-#8, 1-#8 GND - 3/4"C	32	1	20 A	LIGHTING RM. 201, 204-206
EXTERIOR CANOPY LTG	20 A	1	33	1-#8, 1-#8, 1-#8 GND - 3/4"C	8 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	34	1	20 A	RECS RM. 203
RECS RM. 203	20 A	1	35	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	36	1	20 A	RECS RM. 203
RECS RM. 203	20 A	1	37	1-#12, 1-#12, 1-#12 GND - 1/2"C	6 A		6 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	38	1	20 A	RECS RM. 203
RECS RM. 203	20 A	1	39	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	40	1	20 A	RECS RM. 203
RECS RM. 203	20 A	1	41	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A			3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	42	1	20 A	RECS RM. 203

TOTAL CONNECTED AMPS: A: 217 A B: 193 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	4086 VA	100.00%	4086 VA		
RECEPTACLES	29700 VA	66.84%	19850 VA	**Total Conn. Load:**	49214 VA
EXTERIOR LIGHTING	68 VA	100.00%	68 VA	**Total Est. Demand:**	39364 VA
				Total Conn. Current:	205 A
				Total Est. Demand Current:	164 A

Notes:

PANELBOARD FAR3 SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
EXTERIOR LIGHTING	20 A	1	1	1-#12, 1-#12, 1-#12 GND - 1/2"C	1 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	2	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	3	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	4	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	5	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	6	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	7	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		2 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	8	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	9	1-#12, 1-#12, 1-#12 GND - 1/2"C	5 A		5 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	10	1	20 A	RECS RM 201
RECS RM. 201	20 A	1	11	1-#12, 1-#12, 1-#12 GND - 1/2"C		6 A		6 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	12	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	13	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	14	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	15	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	16	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	17	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	18	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	19	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	20	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	21	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		2 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	22	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	23	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	24	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	25	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		2 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	26	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	27	1-#12, 1-#12, 1-#12 GND - 1/2"C		2 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	28	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	29	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	30	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	31	1-#12, 1-#12, 1-#12 GND - 1/2"C		6 A		6 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	32	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	33	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	34	1	20 A	RECS RM. 201
RECS RM. 201	20 A	1	35	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	36	1	20 A	RECS RM. 203
RECS RM. 203	20 A	1	37	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A		3 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	38	1	20 A	RECS RM. 203
RECS RM. 203	20 A	1	39	1-#12, 1-#12, 1-#12 GND - 1/2"C		3 A		3 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	40	1	20 A	RECS RM. 203
RECS RM. 203	20 A	1	41	1-#12, 1-#12, 1-#12 GND - 1/2"C	3 A			2 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	42	1	20 A	RECS RM. 203

TOTAL CONNECTED AMPS: A: 61 A B: 69 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
RECEPTACLES	15480 VA	82.30%	12740 VA		
EXTERIOR LIGHTING	68 VA	100.00%	68 VA	**Total Conn. Load:**	15548 VA
				Total Est. Demand:	12808 VA
				Total Conn. Current:	65 A
				Total Est. Demand Current:	53 A

Notes:

WALKER the GROUP ARCHITECTURE
incorporated
PO BOX 541, NEW BERN, NC 28563
2526366778

NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEARS 23086

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd. Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn BWS
Checked KPM
Scale AS NOTED
Drawing Title

PANELBOARD SCHEDULES

Sheet Number 158 or 159
Drawing Number E-604

Pace COLLABORATIVE
MECHANICAL ELECTRICAL ENGINEERS
WWW.PACE-ENGINEERING.COM

PANELBOARD WF SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
EF-1 RM. 301	20 A	2	1	2-#10, 1-#10, 1-#10 GND - 1/2"C	10 A		10 A		2-#10, 1-#10, 1-#10 GND - 1/2"C	2	2	20 A	EF-2 RM. 301
			3			10 A		10 A		4			
EF-3 RM. 301	20 A	2	5	2-#10, 1-#10, 1-#10 GND - 1/2"C	10 A		10 A		2-#10, 1-#10, 1-#10 GND - 1/2"C	6	2	20 A	EF-4 RM. 301
			7			10 A		10 A		8			
EF-5,6 RM. 301	20 A	2	9	2-#10, 1-#10, 1-#10 GND - 1/2"C	10 A		15 A		2-#6, 1-#6, 1-#6 GND - 1/2"C	10	2	20 A	EF-8,9 RM 301
			11			10 A		15 A		12			
EF-7 RM. 301	20 A	2	13	2-#10, 1-#10, 1-#10 GND - 1/2"C	10 A		10 A		2-#8, 1-#8, 1-#8 GND - 3/4"C	14	2	20 A	EF-10 RM. 301
			15			10 A		10 A		16			
DUPLEX LIFT STATION PUMP	70 A	2	17	2-#4, 1-#8 GND - 1"C	40 A		40 A		2-#4, 1-#8 GND - 1"C	18	2	70 A	DUPLEX LIFT STATION PUMP
			19			40 A		40 A		20			
CM	20 A	1	21	1-#12, 1-#12, 1-#12 GND - 1/2"C	2 A		2 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	22	1	20 A	CM
IM RM. 301	20 A	1	23	1-#12, 1-#12, 1-#12 GND - 1/2"C		2 A		2 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	24	1	20 A	IM RM. 302
AM RM. 302	20 A	2	25	2-#12, 1-#12 GND - 3/4"C	10 A		10 A		2-#12, 1-#12 GND - 1/2"C	26	2	20 A	AM RM. 301
			27			10 A		10 A		28			
AM RM. 301	20 A	2	29	2-#12, 1-#12 GND - 1/2"C	10 A		10 A		2-#12, 1-#12 GND - 1/2"C	30	2	20 A	AM RM. 302
			31			10 A		10 A		32			
LIFT STATION CONTROLS	20 A	1	33	1-#10, 1-#10, 1-#10 GND - 1/2"C	4 A		10 A		2-#12, 1-#12 GND - 1/2"C	34	2	20 A	AM RM. 302
HOT BOX	20 A	1	35	1-#10, 1-#10, 1-#10 GND -		6 A		10 A		36			
SPARE	20 A	1	37	--	0 A		0 A		--	38	1	20 A	SPARE
SPARE	20 A	1	39	--		0 A		0 A	--	40	1	20 A	SPARE
SPARE	20 A	1	41	--	0 A		0 A		--	42	1	20 A	SPARE
SPARE	20 A	1	43	--		0 A		0 A	--	44	1	20 A	SPARE
SPARE	20 A	1	45	--	0 A		0 A		--	46	1	20 A	SPARE
SPARE	20 A	1	47	--		0 A		0 A	--	48	1	20 A	SPARE
SPARE	20 A	1	49	--	0 A		0 A		--	50	1	20 A	SPARE
WF3	20 A	2	51	- SEE POWER RISER -		134 A		149 A	- SEE POWER RISER -	52	2	225 A	WF2
			53		134 A		138 A			54			

TOTAL CONNECTED AMPS: A: 493 A B: 507 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	7114 VA	100.00%	7114 VA		
RECEPTACLES	20340 VA	74.58%	15170 VA	**Total Conn. Load:**	119983 VA
EXTERIOR LIGHTING	170 VA	100.00%	170 VA	**Total Est. Demand:**	111134 VA
HEATING	3679 VA	0.01%	0 VA	**Total Conn. Current:**	500 A
VENTILATION	27480 VA	100.00%	27480 VA	**Total Est. Demand Current:**	463 A

Notes:

PANELBOARD WF2 SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
AM RM. 302	20 A	2	1	2-#12, 1-#12 GND - 1/2"C	10 A		10 A		2-#8, 1-#8, 1-#8 GND - 3/4"C	2	2	20 A	EF-2 RM. 301
			3			10 A		10 A		4			
RH-5-7,11-14 RM. 301,302	20 A	1	5	1-#8, 1-#8, 1-#8 GND - 3/4"C	7 A		7 A		1-#10, 1-#10, 1-#10 GND - 1/2"C	6	1	20 A	RH-1-4,8-10 RM. 301,302
WELL PUMP	35 A	2	7	2-#4, 1-#4 GND - 3/4"C		28 A		6 A	1-#10, 1-#10, 1-#10 GND - 1/2"C	8	1	20 A	RECS RM. 301
			9		28 A		6 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	10	1	20 A	RECS RM. 301
RECS WF RM. 301	20 A	1	11	1-#10, 1-#10, 1-#10 GND - 1/2"C		6 A		2 A	1-#12, 1-#12, 1-#12 GND - 3/4"C	12	1	20 A	RECS RM. 301
RECS WF RM. 301	20 A	1	13	1-#12, 1-#12, 1-#12 GND - 1/2"C	6 A		10 A		2-#12, 1-#12, 1-#12 GND - 1/2"C	14	2	20 A	AM RM. 302
LIGHTING RM. 301	20 A	1	15	1-#4, 1-#4, 1-#4 GND - 1"C		15 A		10 A		16			
LIGHTING RM. 301,303	20 A	1	17	1-#8, 1-#8, 1-#8 GND - 3/4"C	15 A		6 A		1-#10, 1-#10, 1-#10 GND - 1/2"C	18	1	20 A	RECS RM. 301
LIGHTING RM. 302	20 A	1	19	1-#4, 1-#4, 1-#4 GND - 1"C		15 A		10 A	2-#8, 1-#8, 1-#8 GND - 3/4"C	20	2	20 A	EF-12 RM. 302
LIGHTING RM. 302	20 A	1	21	1-#6, 1-#6, 1-#6 GND - 3/4"C	15 A		10 A			22			
RECS RM. 303	20 A	1	23	1-#12, 1-#12, 1-#12 GND - 1/2"C		8 A		5 A	2-#12, 1-#12, 1-#12 GND - 1/2"C	24	2	20 A	EF-14 RM. 302
EXTERIOR LIGHTING	20 A	1	25	1-#12, 1-#12, 1-#12 GND - 1/2"C	1 A		5 A			26			
EF-13 RM. 301	20 A	2	27	2-#12, 1-#12, 1-#12 GND - 1/2"C		5 A		2 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	28	1	20 A	REC RM. 501
			29		5 A		0 A		--	30	1	20 A	SPARE
EUH-1 RM.501	20 A	2	31	2-#8, 1-#8, 1-#8 GND - 3/4"C		8 A		0 A	--	32	1	20 A	SPARE
			33		8 A		0 A		--	34	1	20 A	SPARE
SPARE	20 A	1	35	--		0 A		0 A	--	36	1	20 A	SPARE
SPARE	20 A	1	37	--	0 A		0 A		--	38	1	20 A	SPARE
SPARE	20 A	1	39	--		0 A		0 A	--	40	1	20 A	SPARE
SPARE	20 A	1	41	--	0 A		0 A		--	42	1	20 A	SPARE

TOTAL CONNECTED AMPS: A: 149 A B: 138 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	7114 VA	100.00%	7114 VA		
RECEPTACLES	4860 VA	100.00%	4860 VA	**Total Conn. Load:**	34495 VA
EXTERIOR LIGHTING	170 VA	100.00%	170 VA	**Total Est. Demand:**	30816 VA
HEATING	3679 VA	0.01%	0 VA	**Total Conn. Current:**	144 A
VENTILATION	7152 VA	100.00%	7152 VA	**Total Est. Demand Current:**	128 A

Notes:

PANELBOARD WF3 SCHEDULE

SEE POWER RISER DIAGRAM FOR RATINGS

LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
RECS RM. 302	20 A	1	1	1-#12, 1-#12, 1-#12 GND - 1/2"C	6 A		6 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	2	1	20 A	RECS RM. 302
RECS RM. 302	20 A	1	3	1-#12, 1-#12, 1-#12 GND - 1/2"C		6 A		6 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	4	1	20 A	RECS RM. 302
RECS RM. 302	20 A	1	5	1-#12, 1-#12, 1-#12 GND - 1/2"C	6 A		6 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	6	1	20 A	RECS RM. 302
RECS RM. 302	20 A	1	7	1-#10, 1-#10, 1-#10 GND - 1/2"C		6 A		6 A	1-#10, 1-#10, 1-#10 GND - 1/2"C	8	1	20 A	RECS RM. 302
RECS RM. 302	20 A	1	9	1-#10, 1-#10, 1-#10 GND - 1/2"C	6 A		6 A		1-#10, 1-#10, 1-#10 GND - 1/2"C	10	1	20 A	RECS RM. 302
RECS RM. 302	20 A	1	11	1-#8, 1-#8, 1-#8 GND - 3/4"C		6 A		6 A	1-#8, 1-#8, 1-#8 GND - 3/4"C	12	1	20 A	RECS RM. 302
RECS RM. 301	20 A	1	13	1-#8, 1-#8, 1-#8 GND - 3/4"C	6 A		6 A		1-#10, 1-#10, 1-#10 GND - 1/2"C	14	1	20 A	RECS RM. 301
RECS RM. 301	20 A	1	15	1-#10, 1-#10, 1-#10 GND - 1/2"C		6 A		6 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	16	1	20 A	RECS RM. 301
RECS RM. 301	20 A	1	17	1-#12, 1-#12, 1-#12 GND - 1/2"C	6 A		6 A		1-#12, 1-#12, 1-#12 GND - 1/2"C	18	1	20 A	RECS RM. 301
RECS RM. 301	20 A	1	19	1-#12, 1-#12, 1-#12 GND - 1/2"C		6 A		6 A	1-#12, 1-#12, 1-#12 GND - 1/2"C	20	1	20 A	RECS RM. 301
PD EXTERIOR	20 A	2	21	2-#12, 1-#12, 1-#12 GND - 1/2"C	1 A		1 A		2-#12, 1-#12, 1-#12 GND - 1/2"C	22	2	20 A	PD EXTERIOR
			23			1 A		1 A		24			
GDDM RM. 302	20 A	2	25	2-#10, 1-#10, 1-#10 GND - 1/2"C	12 A		12 A		2-#10, 1-#10, 1-#10 GND - 1/2"C	26	2	20 A	GDDM RM. 302
			27			12 A		12 A		28			
GDDM RM. 302	20 A	2	29	2-#12, 1-#12, 1-#12 GND - 1/2"C	12 A		12 A		2-#12, 1-#12, 1-#12 GND - 1/2"C	30	2	20 A	GDDM RM. 302
			31			12 A		12 A		32			
GDDM RM. 301	20 A	2	33	2-#12, 1-#12, 1-#12 GND - 1/2"C	12 A		12 A		2-#12, 1-#12, 1-#12 GND - 1/2"C	34	2	20 A	GDDM RM. 301
			35			12 A		12 A		36			
SPARE	20 A	1	37	--	0 A		0 A		--	38	1	20 A	SPARE
SPARE	20 A	1	39	--		0 A		0 A	--	40	1	20 A	SPARE
SPARE	20 A	1	41	--	0 A		0 A		--	42	1	20 A	SPARE

TOTAL CONNECTED AMPS: A: 134 A B: 134 A C: 0 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
RECEPTACLES	14760 VA	83.88%	12380 VA		
				Total Conn. Load:	32040 VA
				Total Est. Demand:	29660 VA
				Total Conn. Current:	134 A
				Total Est. Demand Current:	124 A

Notes:

WALKER the GROUP ARCHITECTURE
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NORTH CAROLINA PROFESSIONAL SEAL 053623 ENGINEER KEVEN P. MEANS
07/29/2024
23086

DACS- Tidewater Research Station- Swine Unit Replacement

SCO# 22-25072-01A

207 Research Station Rd.
Plymouth, NC 27962

Revisions

No.	Date

Project Number 2212.HOGS
Date 07/05/24
Drawn BWS
Checked KPM
Scale AS NOTED

Drawing Title

PANELBOARD SCHEDULES

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