New Building for

INNOVATIVE GLASS SOLUTIONS Permit #I-25-2589

Lot 6 Legacy Commercial Center - Cascade Court
Youngsville, NC 27596

ARCHITECTURAL

BURDETT & ASSOCIATES ARCHITECTURE, INC.
PROJECT ARCHITECT: DAVID BURDETT
PROJECT DESIGNER: GREG MONDIN
P.O. BOX 97216
RALEIGH, NC 27624
PHONE: 919.802.2511 / FAX: -

PLUMBING, MECHANICAL ELECTRICAL

KILLIAN ENGINEERING
CONTACT: - ELECTRICAL - MICHAEL W. KILLIAN, PE
CONTACT: - MECHANICAL - MICHAEL W. KILLIAN, PE
CONTACT: - PLUMBING - MICHAEL W. KILLIAN, PE
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HENDERSON, NC 27536
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CIVIL ENGINEERING

C3 DESIGN & ENGINEERING, PLLC
PROJECT DESIGNER: CHAD ABBOTT, PE
P.O. BOX361
CREEDMOOR, NC 27522
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OWNER / GENERAL CONTRACTOR

INNOVATIVE GLASS SOLUTIONS
OWNER CONTACT: KYLE WRAY
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WAKE FOREST, NC 27587
PHONE: 919.414.5320

STRUCTURAL PRE-ENGINEERED METAL BUILDING

NUCOR BUILDINGS GROUP
ENGINEER: RAJESH H BHAGNARI
200 WHETSTONE ROAD
SWANSEA, SC 27597
PHONE: 803.568.2100 / FAX:

STRUCTURAL ENGINEER

WILLIAM PERSON, PE
PROJECT MANAGER: WILLIAM PERSON, PE
213 HUGH MASSIE RD
WAYNESVILLE, NC 28786
PHONE: 919.496.5228 / FAX: 919.496.5228

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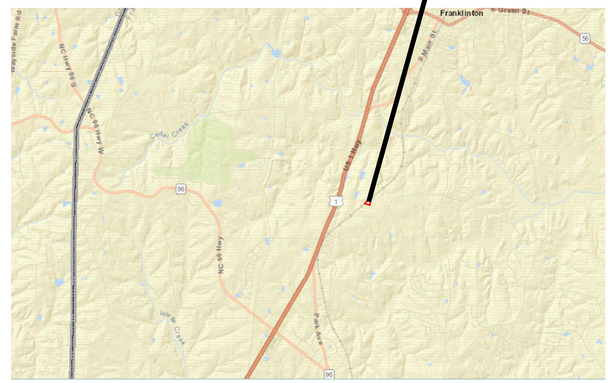
REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. --PFaulkner
10/17/2025 11:38:20 AM

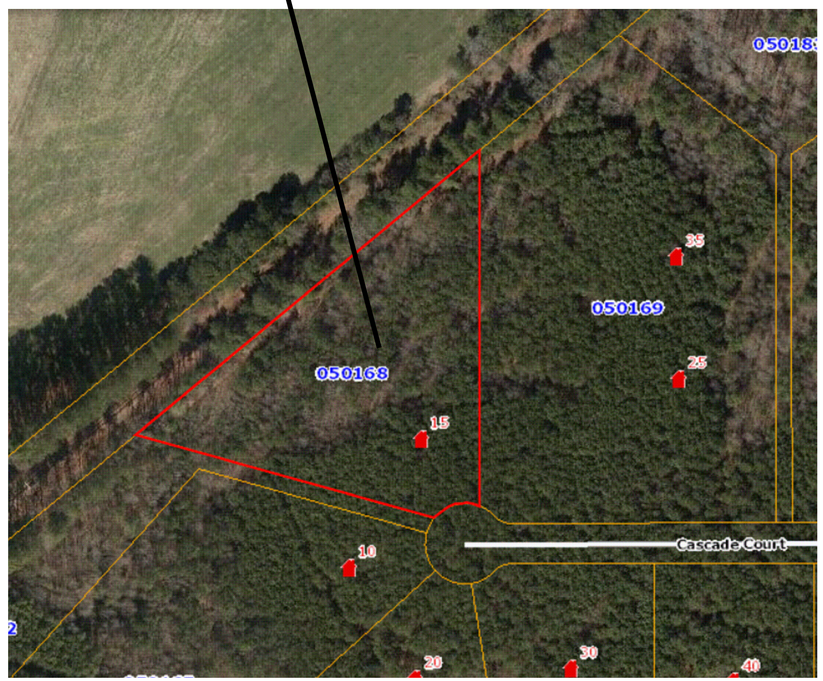
Coordinate with the field inspector for size and placement of portable fire extinguishers.

PROJECT LOCATION



1 VICINITY PLAN
Scale: NTS

PROJECT SITE LOCATION
(SEE CIVIL PLANS)



2 SITE AERIAL
Scale: NTS

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P.O. Box 97216
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Burdett and Associates Architecture, Inc.

01/09/25

New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MONDIN
CHK BY: DAVID BURDETT
DATE: Permit; Franklin Co, NC 07-08-25
REVISIONS:

TITLE: TITLE SHEET

SHEET NO. T001
PERMIT

GENERAL NOTES:

1. DIMENSIONS TAKE PRECEDENCE OVER SCALE. GENERAL CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING WITH THE WORK. THE ARCHITECT SHALL BE NOTIFIED OF ANY DIMENSIONS THAT ARE NOT CONSISTENT WITH THE CONTRACTOR'S MEASUREMENTS. DIMENSIONS ARE TO GRID LINES OR FACE OF FINISHES, U.O.N.

2. BEFORE STARTING WORK, THE CONTRACTOR AND THE SUBCONTRACTORS SHALL BECOME FAMILIAR WITH ALL APPLICABLE REQUIREMENTS OF CODE, LANDLORD CRITERIA, TENANT CRITERIA, AND THESE CONSTRUCTION DOCUMENTS. THE CONSTRUCTION DOCUMENTS CONSIST OF THESE DRAWINGS, AS ENUMERATED IN THE INDEX ON THE COVER T-1, AND IN THE FINAL TENANT LEASE AGREEMENT. GENERAL CONTRACTOR TO VERIFY THESE DOCUMENTS AND CONTENTS PRIOR TO CONSTRUCTION. ANY QUESTIONS CONCERNING THESE DOCUMENTS ARE TO BE BROUGHT TO THE ARCHITECTS OR LANDLORD REPRESENTATIVE'S ATTENTION.

3. THE DRAWINGS PRESENTED HERE HAVE BEEN PREPARED BASED ON THE BEST INFORMATION AVAILABLE TO THE TENANT AND DESIGNERS. THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY IF ANY MATTER ARISES DURING THE UNCOVERING OF EXISTING CONDITIONS NOT AVAILABLE AT THE TIME OF PLAN PREPARATION.

4. THE GENERAL CONTRACTOR SHALL COMPLETE ALL WORK IN A NEAT AND PROFESSIONAL MANNER, AND SHALL COORDINATE ALL EXISTING AND NEW CONDITIONS AS SHOWN ON THESE DOCUMENTS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND OPERATION OF ALL TRADES IN HIS SCOPE OF WORK.

5. THE GENERAL CONTRACTOR SHALL ABIDE BY AND PROVIDE FOR ALL SAFETY MEASURES REQUIRED BY LAW AND CODE IN THE WORK AREA.

6. THE GENERAL CONTRACTOR SHALL ABIDE BY THE REQUIREMENTS OF THE BUILDING LANDLORD FOR THE FOLLOWING.
   - 6.1. WORK HOURS
   - 6.2. STAGING AREAS
   - 6.3. LIFT/ELEVATOR REQUIREMENTS
   - 6.4. UTILITY COORDINATION
   - 6.5. ADJACENT TENANT, BUILDING SHELL, AND COMMON AREA COORDINATION
   - 6.6. TRASH DISPOSAL
   - 6.7. TIDINESS, EMPLOYEE BEHAVIOR, AND NOISE CONTROL
   - 6.8. WORK AREA, AND BUILDING SECURITY
   - 6.9. EMPLOYEE PARKING
   - 6.10. SHIPMENT RECEIPT

7. THE GENERAL CONTRACTOR SHALL RECEIVE AND MAINTAIN ALL NEW BUILDING MATERIALS IN GOOD ORDER AND SAFEGUARD AGAINST DAMAGE OR LOSS.

8. SUBSTITUTIONS: ALL SUBSTITUTIONS, WHICH ARE FOR MATERIALS OR SYSTEMS SHOWN ON THESE DRAWINGS, BUT NOT LISTED SPECIFICALLY BY PRODUCT NAME OR MODEL, SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW WITH REASONABLE TIME. AS NEEDED, THE ARCHITECT SHALL CONSULT WITH THE OTHER DESIGNERS, OWNER, AND TENANT, BEFORE DECIDING ON THE SUBSTITUTION. THE GENERAL CONTRACTOR SHALL PROVIDE ADEQUATE WRITTEN COPIES OF THE PROPOSED SUBSTITUTION'S SPECIFICATIONS.

9. SHOP DRAWINGS: THE CONTRACTOR SHALL PROVIDE, WITH REASONABLE NOTICE, INSTALATION BEGINS, ITEMS REQUIRING DETAILED FIELD VERIFICATION, SUCH AS EXISTING MILLWORK OR HIDDEN CONDITIONS, ARE THE RESPONSIBILITY OF THE CONTRACTOR.

10. ROOF PENETRATIONS: THE GENERAL CONTRACTOR SHALL NOTIFY THE LANDLORD OF ANY AND ALL PROPOSED ROOF PENETRATIONS, AND SHALL USE THE LANDLORD'S PREFERRED METHODS/CONTRACTOR (PER THE LANDLORD). THE LANDLORD SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY AND ALL WARRANTY MATTERS, AND THE CONTRACTOR SHALL ABIDE BY, AND NOT VOID, SAID WARRANTIES.

11. WARRANTIES: NEW MATERIAL WARRANTIES FOR ITEMS SHOWN IN THESE DOCUMENTS, EITHER SPECIFIED OR NOT, RESTS WITH THE GENERAL CONTRACTOR. THESE WARRANTIES, AND ALL OPERATIONS/MAINTENANCE MANUALS, SHALL BE PROVIDED TO THE TENANT UPON COMPLETION OF THE WORK.

12. ALL STRUCTURAL, ELECTRICAL, MECHANICAL, AND PIPING DRAWINGS ARE SUPPLEMENTAL TO THE ARCHITECTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL REVIEW THESE DRAWINGS. ANY QUESTIONS OR CONFLICTS RISING FROM THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION BEFORE WORK IS STARTED. ANY WORK PERFORMED IN CONFLICT WITH THE DRAWINGS SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.

13. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING COSTS, BONDING, AND INSURANCE.

ABBREVIATION GLOSSARY:

ACOUSTIC ..... ACST	CONSTRUCTION ..... CONST	GYPSUM ..... GYP	REFERENCE ..... REF	WEEP HOLE ..... WH
ACTUAL ..... ACT.	CONTRACTOR ..... CONTR	HALL ..... H	REFRIGERATOR ..... REF	WIDE FLANGE ..... WF
ADDITION ..... ADD.	COUNTER ..... CTR	HARDWARE ..... HDW	RISER ..... R	WINDOW ..... WDW
AGGREGATE ..... AGGR	COVER ..... AGGR	HARDWOOD ..... HDWD	ROAD ..... RD	WITH ..... w/
AIR CONDITIONING ..... AIR COND	AIR CONDITIONING ..... COV	HEAD ..... HD	ROOF ..... RF	WITHOUT ..... w/o
ALUMINUM ..... AL or ALUM	DETAIL ..... DET	HEIGHT ..... HT or HGT	ROOF DRAIN ..... RD	WOOD ..... WD
AMERICAN INSTITUTE OF ARCHITECTS ..... AIA	DIAMETER ..... DIA	HOLLOW METAL ..... HM	ROOFING ..... RFG	YEAR ..... YR
AMERICAN STANDARDS ASSOCIATION ..... ASA	DIMENSION ..... DIM	I BEAM ..... S or I	SCREW ..... SCR	ZINC ..... ZN
AMOUNT ..... AMT	DISTANCE ..... DIST	INCH ..... " or IN.	SECTION ..... SECT	_____ ..... ____
ANCHOR BOLT ..... AB	DOOR ..... DR	INSULATION ..... INSUL	SELF CLOSING ..... SC	_____ ..... ____
ANGLE ..... _____	DOUBLE HUNG ..... DH	INTERIOR ..... INT	SERVICE ..... SERV	_____ ..... ____
APPROXIMATE ..... APPROX	DOWEL ..... DWL	KITCHEN ..... K	SEWER ..... SEW.	_____ ..... ____
ARCHITECT[URAL] ..... ARCH	DOWNSPOUT ..... DS	KITCHEN CABINET ..... KC	SHEATHING ..... SHTHG	_____ ..... ____
ASPHALT ..... ASPH	DRAIN ..... DR	KITCHEN SINK ..... KS	SHOWER ..... SH	_____ ..... ____
ASSEMBLE ..... ASSEM	DRAWING ..... DWG	LABORATORY ..... LAB	SIDING ..... SDG	_____ ..... ____
ASSOCIATION ..... ASSOC	DRINKING FOUNTAIN ..... DF	LADDER ..... LAD	SINK ..... SK	_____ ..... ____
AUTOMATIC ..... AUTO	DRYER ..... D	LANDING ..... LDG	SOCKET ..... SOC	_____ ..... ____
AVERAGE ..... AVG	DUPLICATE ..... DUP	LAUNDRY ..... LAU	SOUH ..... S	_____ ..... ____
BALCONY ..... BALC	ELECTRIC ..... ELEC	LAUNDRY CHUTE LC	SPECIFICATION ..... SPEC	_____ ..... ____
BASEMENT ..... BASMT	ELEVATION ..... EL or ELEV	LAVATORY ..... LAV	SQUARE ..... SQ	_____ ..... ____
BATHROOM ..... B	ELEVATOR ..... ELEV	LEADER ..... LDR	SQUARE FOOT/FEET ..... SQ FT	_____ ..... ____
BEAM ..... BM	EMERGENCY ..... EMER	LEADER DRAIN ..... LD	STAIR ..... ST	_____ ..... ____
BEDROOM ..... BR	ENCLOSURE ..... ENCL	LENGTH ..... LGTH	STANDARD ..... STD	_____ ..... ____
BUILDING ..... BLDG	ENGINEER ..... ENGR	LEVEL ..... LEV	STEEL ..... STL	_____ ..... ____
CABINET ..... CAB.	ENTRANCE ..... ENT	LIBRARY ..... LIB	STREET ..... ST.	_____ ..... ____
CATCH BASIN ..... CB	EQUIPTMENT ..... EQUIP	LIGHT ..... LT	STRUCTURAL ..... STR	_____ ..... ____
CAULKING ..... CLKG	ESTIMATE ..... EST	LINEAR FOOT ..... LIN FT	SUPPLY ..... SUP	_____ ..... ____
CEILING ..... CLG	EXTERIOR ..... EXT	LINEN CLOSET ..... L CL	SURFACE ..... SUR	_____ ..... ____
CEMENT ..... CEM	FEET ..... or FT	LINOLEUM ..... LINO	SUSPENDED CEILING ..... SUSP CLG	_____ ..... ____
CEMENT FLOOR ..... CEM FL	FINISH ..... FIN	LIVING ROOM ..... LR	SYMBOL ..... SYM	_____ ..... ____
CENTER ..... CTR	FINISHED FLOOR ..... FIN FLR	LUMBER ..... LBR	SYSTEM ..... SYS	_____ ..... ____
CENTER LINE CL	FIRE EXTINGUISHER ..... F EXT	MASONRY OPENING ..... MO	TECHNICAL ..... TECH	_____ ..... ____
CHAMFER ..... CHAM	FIREPROOF ..... FP	MECHANICAL ..... MECH	TELEPHONE ..... TEL	_____ ..... ____
CHANNEL ..... C or [	FITTING ..... FTG	METAL ..... MTL	TELEVISION ..... TV	_____ ..... ____
CINDER BLOCK ..... CIN BL	FIXTURE ..... FIX.	MINIMUM ..... MIN	TEMPERATURE ..... TEMP	_____ ..... ____
CIRCUIT ..... CKT	FLANGE ..... FLG	MISCELLANEOUS ..... MISC	TERRA COTTA ..... TC	_____ ..... ____
CIRCUIT BREAKER ..... CIR BKR	FLASHING ..... FL	MOLDING ..... MLDG	THERMOSTAT ..... THERMO	_____ ..... ____
CLASS CL	FLOOR ..... FLR	NOMINAL ..... NOM	TONGUE AND GROOVE ..... T&G	_____ ..... ____
CLEANOUT ..... CO	FLOOR DRAIN ..... FD	NORTH ..... NORTH	TREAD ..... TR	_____ ..... ____
CLEAR ..... CLR	FLUORESCENT ..... FLUOR	ON CENTER ..... OC	TYPICAL ..... TYP	_____ ..... ____
CLOSET ..... CL or CLO	FOOTING ..... FTG	OVER HEAD ..... OVHD	UNFINISHED ..... UNFIN	_____ ..... ____
COLUMN ..... COL	FOUNDATION ..... FDN	PANEL ..... PNL	VENT or VENTILATOR V	_____ ..... ____
COMMON ..... COM	GALVANIZED ..... GALV	PARTITION ..... PTN	VERTICAL ..... VERT	_____ ..... ____
COMPANY ..... CO	GAUGE ..... GA	PEDESTAL ..... PED	VESTIBULE ..... VEST.	_____ ..... ____
CONCRETE ..... CONC	GLASS ..... GL	PLASTER ..... PLAS	VOLTS V	_____ ..... ____
CONCRETE BLOCK ..... CONC B	GLASS BLOCK ..... GL BL	PLATE GLASS ..... PL GL	WALL CABINET ..... W CAB	_____ ..... ____
CONCRETE FLOOR ..... CONC FLR	GLUE-LAMINATED ..... GLUELAM	PLATFORM ..... PLAT	WATER ..... W	_____ ..... ____
CONCRETE MASONRY UNIT .. CMU	GOVERNMENT ..... GOVT	PLUMBING ..... PLMB	WATER CLOSET ..... WC	_____ ..... ____
	GRADE ..... GR	PREFABRICATED ..... PREFAB	WATERPROOF ..... WP	_____ ..... ____
	GRATING ..... GRTG	RADIATOR ..... RAD	WEIGHT ..... WT	_____ ..... ____

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APPENDIX B
2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: NEW BUILDING for INNOVATIVE GLASS SOLUTIONS
Address: BERT WINSTON RD Zip Code 27596
Owner / [Authorized Agent?] Greg Mondin, Project Mgr Phone: 919.818.3496
Email: greg@burdettandassociates.com Fax:
Owned By: Innovative Glass Solutions ☐ City/County ☒ Privately ☐ State
Code Enforcement Jurisdiction: ☐ City ☒ County ☐ State
Name of Jurisdiction: : Franklin County, North Carolina

Contact: Greg J. Mondin; Burdett & Associates Architecture, Inc., cell 919.818.3496

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	EMAIL
Architectural:	BURDETT AND ASSOC. ARCH.	DAVID BURDETT	11059	919.802.2511	
Civil:	C3 DESIGN & ENGINEERING, PLLC	CHAD ABBOT, PE			
Electrical:	KILIAN ENGINEERING, INC	MICHAEL W KILIAN,PE	17304	252.438.8778	
Fire Alarm:	N/A				
Plumbing:	KILIAN ENGINEERING, INC	MICHAEL W KILIAN,PE	17304	252.438.8778	
Mechanical:	KILIAN ENGINEERING, INC	MICHAEL W KILIAN,PE	17304	252.438.8778	
Sprinkler -Standpipe:	N/A				
Structural:	NUCOR BUILDING GROUP	RAJESH H. BHAGNARI	24064	803.568.2100	
Precast:	N/A				
Trusses:	N/A				
Retaining Walls >5' High:	N/A				
Other: Slab Foundation - PERSON ENGINEERING WILLIAM PERSON, PE			13253	919.496.5228	

("Other" should includefirm's and individuals such as truss, precast, pre-engineered, intrior designers, etc.,)

PROJECT SUMMARY: NEW BUILDING
Building Description: NEW TYPE II-B SINGLE STORY "S2/B" PRE-ENGINEERED WAREHOUSE BUILDING. NON-SPRINKLERED, ACCESSIBLE , w/ PARKING, SITE ACCESS, NEW SEPTIC SYSTEM. TENANT INTERIOR COMPLETION WORK IS INCLUDED WITH THIS PROJECT.
Scope of Work: SCOPE INCLUDES SHELL CONSTRUCTION AND TENANT INTERIOR COMPLETION FOR CONSTRUCTION (GLAZING) COMPANY FOR STORAGE AND ASSEMLY OF GLAZING ASSEMBLIES/PARTS IN WAREHOUSE AND ASSOCIATED BUSINESS OFFICES.
OFFICE/WAREHOUSE) WORK SCOPE SHALL INCLUDE SITEWORK, SLAB, STRUCTURE, ROOFING, INSULATION, WALLS, DOORS, CEILINGS, FINISHES, RESTROOMS & NEW P, M, E.
No work to be performed inside building regulated by Section 406.6 (Repair Garages).

2018 NC BUILDING CODE ☒ New Building ☐ Addition ☐ Shell /Core ☐ Phased Construction - Shell Core ☒ First Time Interior Completion
2018 NC EXISTING BUILDING CODE (check all that apply) N/A ☐ Prescriptive ☐ Repair ☐ Chapter 14 ☐ Alteration Level I ☐ Alteration Level II ☐ Alteration Level III ☐ Historic Property ☐ Change of Use
CONSTRUCTED: (date) N/A CURRENT USE(S) (Ch. 3) N/A
RENOVATED: (date) N/A PROPOSED USE(S) (Ch. 3) STORAGE (S2)
OCCUPANCY CATEGORY (Table1604.6) Current: N/A Proposed: RISK CAT II

BASIC BUILDING DATA
Construction Type: ☐ I-A ☐ II-A ☐ III-A ☐ V ☐ V-A
(Check all that apply) ☐ I-B ☒ II-B ☐ III-B ☐ V-B
Sprinklers: ☒ No ☐ Partial ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13d
Standpipes: ☒ No Class: ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Primary Fire District: ☒ No ☐ Yes Flood Hazard: ☐ No ☐ Yes
Special Inspections Required: ☒ No ☐ Yes

GROSS BLDG AREA TABLE

Floor	Existing (sq ft)	New (sq ft)	Subtotal
3rd Floor	X	X	X
2nd Floor	X	X	X
Mezzanine	X	X	X
1st Floor	x	9,375 gsf	9,375 gsf
Basement	X	X	X
TOTAL	0 sf	9,375 gsf	9,375 gsf

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 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐ 1 ☐ 2
I-2 Condition ☐ 1 ☐ 2
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile ☐
Residential: ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage: ☐ S-1 Moderate ☒ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Accessory Occupancy Classification(s) BUSINESS - (B) 2,920 SF (28%)
Incidental Uses (Table 509): N/A
This separation is not exempt as a Nonseparated Use (see exceptions)
Special Uses (Chapter 4 - List Code Sections): N/A
Special Provisions (Chapter 5 - List Code Sections): N/A

NOTE: THERE IS TO BE NO HIGH-PILED COMBUSTIBLE STORAGE IN THIS FACILITY.
NOTE: THIS IS NOT TO BE A REPAIR FACILITY, VEHICLE , PARTS AND EQUIPMENT STORAGE ONLY.

Mixed Occupancy: ☐ No ☒ Yes Separation: N/A Hr Exception: (NON-SEPARETED MIXED OCCUPANCY)
☒ Non-separated Use (508.3)
☐ Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor areafor eahc use shall not exceed 1.

Select one

$$\frac{\text{Actual Area of Occupancy S1}}{\text{Allowable Area of Occupancy S1}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

$$\left(\frac{5,625}{30,625} = 0.18\right) + \left(\frac{3,000}{40,250} = 0.07\right) = 0.25 \leq 1$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2* AREA	(C) AREA FOR FRONTAGE INCREASE 1,2	(D) ALLOWABLE AREA PER STORY OR UNLIMITED 1,3
BLDG 1	S2	9,375	17,500	75 %	30,625
BLDG 1	B	9,375	23,000	75 %	40,250
ACTUAL 1	S2	5,625	17,500	75 %	30,625
ACTUAL 1	B	3,150	23,000	75 %	40,250

*SINGLE TENANT BUILDING ; TOTAL AREA = 9,375 gsf

1. Frontage area increases from from Section 506.2 are computed thus:
   a. Perimeter which fronts a public way or open space having 20 feet minimum width = 400' ft (F).
   b. Total Building Perimeter = 400' ft (P)
   c. Ratio (F/P) = 1.0 (F/P)
   d. W = Minimum width of public way = >30' ft (W)
2. Unlimited area applicable under conditions of Sections 507.
3. Maximum Building Area = total number of stories in the building X D (maximum 3 stories) (506.2).
4. The maximum area ofopen parking garagesmust comlpywith Table 406.5.4. The maximum area of air trafficcontrol towers must comply with Table 412.3.1.
5. Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

OCCUPANCY S1 MOST RESTRICTIVE	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	55'	19'	
Building Height in Stories (Table 504.4)	2	1	

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (feet)	RATING REQ'D	RATING PROVIDED (w/ ____ REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame including columns, girders, trusses		0 hr					
Bearing Walls							
Exterior							
North		N/A					
East		N/A					
West		N/A					
South		N/A					
Interior		N/A					
Nonbearing walls and partitions							
Exterior							
North	>60'	0 hr					
East	>50'	0 hr					
West	>60'	0 hr					
South	>60'	0 hr					
Interior		0 hr					
Floor construction, including supporting beams and joists	Slab on Grade	N/A					
Floor Ceiling Assembly		N/A					
Columns Supporting Floors		N/A					
Roof construction, including supporting beams and joists **		0 hr					
Roof / Ceiling Assembly		N/A					
Columns Supporting Roof		N/A					
Shafts - Exit Enclosures		N/A					
Shafts - Other (describe)		N/A					
Shafts - Other (describe)		N/A					
Corridor Separation		N/A					
Occupancy Separation		2 hr	N/A	1003	UL# U419		
Party/Fire Wall Separation		N/A					
Incidental Use Separation		N/A					
Dwelling/Sleeping unit Separation		N/A					
Smoke Barrier Separation		N/A					
Tenant Separation		N/A					

* Indicate section number permitting reduction.

LIFE SAFETY SYSTEM REQUIREMENTS

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

LIFE SAFETY PLAN REQUIREMENTS

N/A ☐ Fire and/or smoke rated wall locations (Chapter 7).
N/A ☐ Assumed and real property line locations (If not on the site plan). SEE SITE PLAN(S)
N/A ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8). N/A: >60' to all property lines
☒ Occupancy Use for for each area as it relates to occupant load calculation (Table 1004.1.2).
☒ Occupant loads for each area.
☒ Exit access travel distances (1017).
☒ Common path of travel distances (Tables 1006.2 & 1006.3.2(1)). 100' PERMITTED IN B & S2 USE - 75' & 0' PROVIDED RESPECTIVELY
☒ Dead end lengths (1020.4). N/A @ OFFICE AREAS - SINGLE EXIT SPACE,NO DEAD END AT STORAGE AREAS.
☒ Clear exit widths for each door **(ALSO SEE DOOR SCHEDULE)**
☒ Maximum calculated occupant load capacity each exist door can accomodate based on egress width (1005.3).
☒ Actual occupant load for each exit door. (SEE TABLE ON LIFE SAFETY PLAN SHEET)
N/A ☐ A separate schematic plan indicating where fire rated floor/ceiling and /or roof structure is provided for purposes of occupancy separation
N/A ☐ Location of doors with panic hardware (1010.1.10) (ALSO SEE DOOR SCHEDULE)
N/A ☐ Location of doors with delayed egress locks and the amount of the delay (1010.1.9.7).
N/A ☐ Location of doors with electromagnetic locks (1010.1.9.9).
N/A ☐ Location of doors equipped with hold-open devices.
N/A ☐ Location of emergency escape windows (1030).
N/A ☐ The square footage of each fire area. (202).
N/A ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5).
N/A ☐ Note any code exceptions or table notes tha may have been utilized regarding the items above.

ACCESSIBLE DWELLING UNITS
[SECTION 1107] N/A

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

ACCESSIBLE PARKING
[SECTION 1106] * ALSO SEE CIVIL BY OTHERS

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 11' ACCESS AISLE	8' ACCESS AISLE	
Employee Lot	19	21	0	0	1	1
TOTAL	19	21	0	0	1	1

**TOTAL SPACES REQUIRED = 19-23 SPACES
*PER FRANKLIN COUNTY U.D.O. SECTION 6.4.1. BASED ON WAREHUOSING AND WHOLESALING

✱ PLUMBING FIXTURE REQUIREMENTS
[SECTION 2902.1]

✱ OFFICE (B)

USE	WATER CLOSETS			URINALS	LAVATORIES			SHOWERS/ TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE	UNISEX		MALE	FE MALE	UNISEX		REGULAR	ACCESSIBLE
EXISTING	-	-	-	-	-	-	-	-	-	-
NEW REQUIRED	1	1	-	-	1	1	-	-	1	1
	1	1	-	-	1	1	-	-	1	1

✱ STORAGE (S-1)

USE	WATER CLOSETS			URINALS	LAVATORIES			SHOWERS/ TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE	UNISEX		MALE	FE MALE	UNISEX		REGULAR	ACCESSIBLE
EXISTING	-	-	-	-	-	-	-	-	-	-
NEW REQUIRED	-	-	1	-	-	-	1	-	-	-

✱ BASED ON - 12 OCCUPANTS:(6M, 6F) WAREHOUSE AREAS
✱ BASED ON - 30 OCCUPANTS:(15M, 15F) OFFICE AREAS
DERRIVED FROM S-1 USAGE TABLE 2902.1

SPECIAL APPROVALS

[Special approval: Local jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, describe below]

Franklin County - Stormwater, Erosion Control
NC DOT - Driveway Permit
Franklin County, NC Health Dept - Septic Permit

ENERGY SUMMARY N/A - NOT REQUIRED FOR PREDOMINANTLY STORAGE & FACTORY USES

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 informationfor the plan data sheet. If performance method, state the annual energy cost for the standard reference design versus the annual energy cost for the proposed design.

Existing building envelopencomplies with code: ☐ (If checked, the remainder of this sectionis not applicable.)
Exempt Building: ☐ Provide code or statutory reference _____
Climate Zone: ☐ 3A ☒ 4A ☐ 5A
Method of Compliance:
Energy Code: ☐ Prescriptive ☐ Performance
ASHSAE 90.1: ☐ Prescriptive ☐ Performance
Other: ☐ Performance (specify source) _____

THERMAL ENVELOPE

CONDITIONED OFFICE & UNCONDITIONED WAREHOUSE — Roof/ceiling Assembly (each assembly)
Description of assembly: PRE-ENGINEERED METAL ROOF PANELS OVER PURLINS w/ F.G. BATTS
R- Value of insulation: R-19' 6" F.G. BATTS & VAPOR BARRIER
U-Value of total assembly: 0.052
R- Value of insulation: R-19'
Skylights in each assembly
U-Value of skylight: N/A
Total square footage of skylights in each assembly: N/A

CONDITIONED OFFICE — Exterior Walls (each assembly)
Description of assembly: PRE-ENGINEERED METAL WALL PANELS, & HORIZ GIRTS w/ F.G. BATTS @ WALL PANELS & MTL STUDS w AIR GAP (R-11+R-15)
U-Value of total assembly: 0.058
R-Value of insulation: R-11+R-15
Openings (windows or doors with glazing)
U-Value of assembly: .38
Shading coefficient: 0.25
Projection factor: 0.0
Lowe-required, if applicable: YES: LOW -e, DOUBLE-PANE, THERMAL BREAK, TINTED
Door R -Values: R-3 MIN

UNCONDITIONED WAREHOUSE — Exterior Walls (each assembly)
Description of assembly: PRE-ENGINEERED METAL WALL PANELS, & HORIZ GIRTS w/ F.G. BATTS @ WALL PANELS & MTL STUDS w AIR GAP (R-11)
U-Value of total assembly: 0.090
R-Value of insulation: R-11
Openings (windows or doors with glazing)
U-Value of assembly: N/A
Shading coefficient: N/A
Projection factor: N/A
Lowe-required, if applicable: N/A
Door R -Values: R-3 MIN

CONDITIONED OFFICE — Walls adjacent to unconditioned space (each assembly)
Description of assembly: MTL STUD w/ GYP BD, R-15 F.G. BATTS w/ V.B. (NOTE: R-11 F.G. BATTS @ ADJACENT UNCOND. WAREHOUSE
U-Value of total assembly: 0.051
R-Value of insulation: R-15
Openings (windows or doors with glazing) N/A
U-Value of assembly: -
Lowe-required, if applicable: -
Door R -Values: R-2 (S.C. WOOD)

Walls below grade (each assembly)
Description of assembly: N/A
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: -

CONDITIONED OFFICE — Floors slab on grade (each assembly)
Description of assembly: 4" SLAB OVER 4" GRAVEL BASE & V.B.
U-Value of total assembly: N/A
R-Value of insulation: N/A
Horizontal/Vertical requirement: N/A
Slab heated: NO

UNCONDITIONED WAREHOUSE — Floors slab on grade (each assembly)
Description of assembly: 6" SLAB OVER 4" GRAVEL BASE & V.B.
U-Value of total assembly: N/A
R-Value of insulation: N/A
Horizontal/Vertical requirement: N/A
Slab heated: NO

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. ~PFaulkner
10/17/2025 11:38:20 AM

Emergency responder radio communication coverage is required in accordance with the fire code before the CO is issued.

btA Burdett and Associates Architecture, Inc.
P.O. Box 97216
Raleigh, NC 27624
TEL: (919) 802-2511
www.burdettandassociates.com

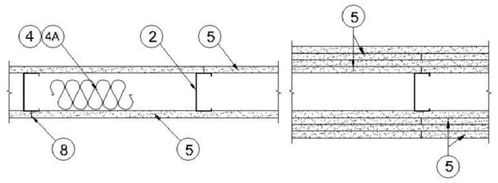
NORTH CAROLINA REGISTERED ARCHITECT 11059 PAUL DAVID BURDETT 10/09/25

New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MONDIN
CHK BY: DAVID BURDETT 07-09-25
DATE: Permit: Franklin Co, NC
REVISIONS:

TITLE: BUILDING DATA/ GEN NOTES

SHEET NO. T002
PERMIT



Design No. U419
April 21, 2010
Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5)

1. Floor and Ceiling Runners — (Not shown) — For use with Item 2 – Channel shaped, fabricated from min 25 MSG corrosion–protected steel, min depth to accommodate stud size, with min 1–1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.
1A. Framing Members* – Floor and Ceiling Runners — Not shown – In lieu of Item 1 — For use with Item 2A, proprietary channel shaped, min. 3–5/8 in. deep, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max. Effective thickness is 0.034 in.
CLARKWESTERN BUILDING SYSTEMS INC — UltraSTEEL®

DIETRICH INDUSTRIES INC — UltraSTEEL®
1B. Framing Members* – Floor and Ceiling Runners — (Not shown – In lieu of Item 1) — For use with Item 2A, proprietary channel shaped, min. 2–1/2 in. deep, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling fasteners 24 in. OC. max. Effective thickness is 0.034 in.
CLARKWESTERN BUILDING SYSTEMS INC — UltraSTEEL®

DIETRICH INDUSTRIES INC — UltraSTEEL®
1C. Framing Members* – Floor and Ceiling Runner — Not shown – In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 3–5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.
CALIFORNIA EXPANDED METAL PRODUCTS CO — ViperTrack™

CRACO MFG INC — SmartTrack™

MARINO\WARE A DIV OF WARE INDUSTRIES
INC — Viper25™ Track
1D. Framing Members* – Floor and Ceiling Runner — Not shown – In lieu of Item 1 — For use with Item 2D, proprietary channel shaped runners, 1–1/4 in. wide by 3–5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
MARINO\WARE A DIV OF WARE INDUSTRIES
INC — Viper20S™ Track, Viper20D™ Track
1E. Framing Members*— Floor and Ceiling Runners — (Not shown) — In lieu of Item 1 – Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME Framing System
CONSOLIDATED FABRICATORS CORP.
BUILDING PRODUCTS DIV — Type SUPREME Framing System
QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System
SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System
STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System
1F. Floor and Ceiling Runners — (Not shown)—For use with Item 2B– Channel shaped, fabricated from min 20 MSG corrosion–protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.
1G. Framing Members*— Floor and Ceiling Runners — (Not shown, As an alternate to Item 1) — For use with Item 2F and 5F or 5G only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.
CLARKWESTERN BUILDING SYSTEMS INC — CW ProTRAK
DIETRICH INDUSTRIES INC — DIETRICH ProTRAK
DMFCWBS L L C — ProTRAK
1H. Framing Members* – Floor and Ceiling Runner — Not shown – In lieu of Item 1 — For use with Item 2G, proprietary channel shaped runners, minimum width to accommodate stud size, with 1– 1/8 in. long legs fabricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
SUPER STUD BUILDING PRODUCTS — The Edge
2. Steel Studs — Channel shaped, fabricated from min 25 MSG corrosion–protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
2A. Framing Members* – Steel Studs — In lieu of Item 2 – Proprietary channel shaped studs, min. depth as indicated under Item 5, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Allowable use of studs is shown in the table below. For direct attachment of gypsum board only. Effective thickness is 0.034 in.
CLARKWESTERN BUILDING SYSTEMS INC — UltraSTEEL®

DIETRICH INDUSTRIES INC — UltraSTEEL®
2B. Steel Studs — (As an alternate to Item 2, For use with Items 5B & 5E) Channel shaped, fabricated from min 20 MSG corrosion–protected or galv steel, 3–1/2 in. min depth, spaced a max of 16 in. OC. Studs friction–fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.
2C. Framing Members* – Steel Studs — (As an alternate to Item 2, For use with Item 5C) – Proprietary channel shaped studs, 3–5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a ½ in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.
CALIFORNIA EXPANDED METAL PRODUCTS CO — ViperStud ™

CRACO MFG INC — SmartStud™

MARINO\WARE A DIV OF WARE INDUSTRIES
INC — Viper25™

2D. Framing Members* – Metal Studs — Not shown – In lieu of Item 2 — For use with Item 1D, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.020 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.
MARINO\WARE A DIV OF WARE INDUSTRIES
INC — Viper20S™, Viper20D™

2E. Framing Members*— Steel Studs — In lieu of Item 2 – For Use with Item 1E– Channel shaped studs, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME Framing System
CONSOLIDATED FABRICATORS CORP.
BUILDING PRODUCTS DIV — Type SUPREME Framing System
QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System
SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System
STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System
2F. Framing Members*— Steel Studs — (Not shown, As an alternate to Item 2) —For use with Item 1G and 5F or 5G only, channel shaped studs, min depth as indicated under Item 5F, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
CLARKWESTERN BUILDING SYSTEMS INC — CW ProSTUD
DIETRICH INDUSTRIES INC — DIETRICH ProSTUD
DMFCWBS L L C — ProSTUD
2G. Framing Members* – Metal Studs — Not shown – In lieu of Item 2 — For use with Item 1H, proprietary channel shaped steel studs, minimum width indicated under Item 5, 1–1/4 in. deep fabricated from min 0.015 in. (min bare metal thickness) galvanized steel. Studs 3/8 in. to 3/4 in. less in lengths than assembly heights.
SUPER STUD BUILDING PRODUCTS — The Edge
3. Wood Structural Panel Sheathing — (Optional, For use with Item 5 Only.)– (Not Shown) – 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP–108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat–head self–drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, fastener lengths for gypsum panels increased by min. 1/2 in.
4. Batts and Blankets* — (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.
4A. Batts and Blankets* — (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

5. Gypsum Board* — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Items 2, 2D, 2E, and 2G	Min Stud Depth, in. Item 2A	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 4)
1	3-1/2	3-5/8	1 layer, 5/8 in. thick	Optional
1	2-1/2	3-5/8	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	3-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2-1/2	2 layers, 1/2 in. thick	Optional
2	1-5/8	2-1/2	2 layers, 5/8 in. thick	Optional
2	3-1/2	3-5/8	1 layer, 3/4 in. thick	3 in.
3	1-5/8	2-1/2	3 layers, 1/2 in. thick	Optional
3	1-5/8	2-1/2	2 layers, 3/4 in. thick	Optional
3	1-5/8	2-1/2	3 layers, 5/8 in. thick	Optional
4	1-5/8	2-1/2	4 layers, 5/8 in. thick	Optional
4	1-5/8	2-1/2	4 layers, 1/2 in. thick	Optional
4	2-1/2	2-1/2	2 layers, 3/4 in. thick	2 in.

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP–X2, IPC–AR or WRC; 5/8 in. thick Type SCX, SHX, WRX, IP–X1, AR, C, WRC, FRX–G, IP–AR, IP–X2, IPC–AR ; 3/4 in. thick Types IP–X3 or ULTRACODE
USG MEXICO S A DE C V — 1/2 in. thick Type C, IP–X2, IPC–AR or WRC; 5/8 in. thick Type AR, C, IP–AR, IP–X1, IP–X2, IPC–AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP–X3 or ULTRACODE
When Item 7B, Steel Framing Members*, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3–1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.
5A. Gypsum Board* — (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.
CANADIAN GYPSUM COMPANY — Type SHX.
UNITED STATES GYPSUM CO — Type FRX–G, SHX.
USG MEXICO S A DE C V — Type SHX.
5B. Gypsum Board* — (Not Shown) — As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or ¾ in. thick products are specified. For direct attachment only to steel studs Item 2B, (not to be used with Item 3) – Nom 5/8 in. or ¾ in. may be used as alternate to all 5/8 in. or ¾ in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or ¾ in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2B with 1–1/4 in. long Type S–12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12).
RAY–BAR ENGINEERING CORP — Type RB–LBG
5C. Gypsum Board* — (For Use With Item 2C) Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) – The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) – The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory.
CANADIAN GYPSUM COMPANY — Type SCX.
UNITED STATES GYPSUM CO — Type SCX.
USG MEXICO S A DE C V — Type SCX.
5D. Gypsum Board* — (As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only.
UNITED STATES GYPSUM CO — Type USGX.
5E. Gypsum Board* — (Not Shown) – (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2B, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1–1/4 in. long Type S–12 (or No. 6 by 1–1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA
NELCO — Nelco
5F. Gypsum Board* — (As an alternate to Item 5) — For use with Items 1G and 2F and limited to 1 Hour Rating only, Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in. long Type S screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3–5/8 in.
UNITED STATES GYPSUM CO — Type SCX.
5G. Gypsum Board* — (As an alternate to Item 5) — For use with Items 1G and 2F only, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Item 2F	No. of Layers & Thickness of Panel	Min Thkns of Insulation (Item 4)
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP–X2, IPC–AR or; 5/8 in. thick Type SCX, SHX, IP–X1, AR, C, , FRX–G, IP–AR, IP–X2, IPC–AR ; 3/4 in. thick Types IP–X3 or ULTRACODE
USG MEXICO S A DE C V — 1/2 in. thick Type C, IP–X2, IPC–AR or; 5/8 in. thick Type AR, C, IP–AR, IP–X1, IP–X2, IPC–AR, SCX, SHX, or; 3/4 in. thick Types IP–X3 or ULTRACODE
6. Fasteners — (Not shown) — For use with Items 2 and 2F – Type S or S–12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1–1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Two layer systems: First layer– 1 in. long for 1/2 and 5/8 in. thick panels or 1–1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer– 1–5/8 in. long for 1/2 in., 5/8 in. thick panels or 2–1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. Three–layer systems: First layer– 1 in. long for 1/2 and 5/8 in. thick panels, spaced 16 in. OC starting 8 in. from each edge of the board with an additional screw placed 1–1/4 in. from each edge of the board. Second layer– 1–5/8 in. long for 1/2 in., 5/8 in. thick panels or 2–1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC starting 8 in. from each edge of the board with an additional screw placed 1–1/4 in. from each edge of the board with screws offset 8 in. from first layer. Third layer– 2–1/4 in. long for 1/2 in., 5/8 in. thick panels or 2–5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Four–layer systems: First layer– 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer– 1–5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer– 2–1/4 in. long for 1/2 in. thick panels or 2–5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Fourth layer– 2–5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. For all layers, an additional screw shall be placed 1–1/4 in. from each edge of the board.
7. Furring Channels — (Optional, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion–protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S–12 steel screws. Not for use with Item 5A and 5E.
7A. Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2–3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.
b. Steel Framing Members* — Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. RSIC–1 clips secured to studs with No. 8 x 1–1/2 in. minimum self–drilling, S–12 steel screw through the center grommet. RSIC–V clips secured to studs with No. 8 x 9/16 in. minimum self–drilling, S–12 steel screw through the center hole. Furring channels are friction fitted into clips.
PAC INTERNATIONAL INC — Types RSIC–1, RSIC–V.
7B. Framing Members* — (Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 5. Not for use with Item 5A and 5E.
b. Steel Framing Members* — Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2–1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax
7C. Framing Members* — Optional – Not Shown – Used as an alternate method to attach resilient channels (Item 7). Clips attached at each intersection of the resilient channel and the steel studs (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the steel stud with min. 1 in. long Type S–12 steel screws through the center hole of the clip and the resilient channel flange.
KEENE BUILDING PRODUCTS CO INC — Type RC Assurance.
8. Joint Tape and Compound — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and some heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.
9. Siding, Brick or Stucco — (Optional, not shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.
10. Caulking and Sealants* — (Optional, not shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.
UNITED STATES GYPSUM CO — Type AS
11. Lead Batten Strips — (Not Shown, For Use With Item 5B) – Lead batten strips, min 1–1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached with two min. 1 in. long min. Type S–8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ–L–201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.
12. Lead Discs or Tabs — (Not Shown, For Use With Item 5B) – Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations – Max 3/4 in. diam by max 0.125 in. thick lead discs compressed, friction fitted or adhered over steel screw heads or max 1/2 in. by 1–1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ–L–201f, Grade "C".
13. Lead Batten Strips — (Not Shown, For Use With Item 5E) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S–8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S–8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ–L–201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.
14. Lead Tabs — (Not Shown, For Use With Item 5E) 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction–fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ–L–201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.
*Bearing the UL Classification Mark

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. --PFaulkner
10/17/2025 11:38:20 AM

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P.O. Box 97216
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Burdett and Associates
Architecture, Inc.

NORTH CAROLINA REGISTERED ARCHITECT 10909 BRIAN K. BURDETT 10/09/25

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 52379 EIGHMY

New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MONDN
CHK BY: DAVID BURDETT
DATE: Permit, Franklin Co, NC 07-09-25
REVISIONS:

TITLE: TESTED ASSEMBLIES

SHEET NO. T003
PERMIT

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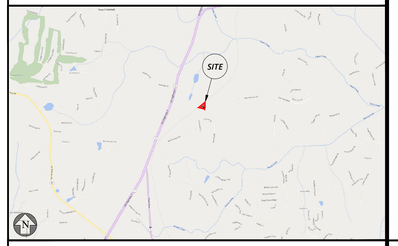
INNOVATIVE GLASS SOLUTIONS
15 CASCADE COURT,
YOUNGSVILLE, NC 27596

LOCATION MAP
SCALE 1"=100'

VICINITY MAP



PROJECT CONTACTS

CIVIL ENGINEER: C3 DESIGN & ENGINEERING, PLLC
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P.O. BOX 361
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919-625-7368 / chad@c3designeng.com

SURVEYOR: MICHAEL A MOSS (L-3794)
333 S. STREET PO BOX 1253
WAKE FOREST, NC 27588
919-556-3148

PLANNING: FRANKLIN COUNTY
SCOTT HAMMERBACHER
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LOUISBURG, NC 27549
919-496-2909 EXT. 1303 /
shammerbacher@franklincountync.us

STORMWATER: APPIAN CONSULTING ENGINEERS, PA
DAVID C. REVOIR, PE
2317 PROFESSIONAL DRIVE/ PO BOX 7966
ROCKY MOUNT, NC 27804
252-972-7703
drevoir@appianengineers.com

ELECTRIC: WAKE EMC
919-863-6300

INSPECTIONS: FRANKLIN COUNTY
PERRY FAULKNER
pfaulkner@franklincountync.gov

EC: NC DEMLR - RALEIGH REGIONAL OFFICE
3800 BARRETT DRIVE
RALEIGH, NC 27609
919-791-4200

SITE INFORMATION

CURRENT OWNER: INNOVATIVE GLASS SOLUTIONS LLC

OWNER ADDRESS: 7145 WINDING WAY
WAKE FOREST, NC 27587

PIN: 1854-53-2484
PROPERTY ADDRESS: 15 CASCADE COURT
YOUNGSVILLE, NC 27596

JURISDICTION: FRANKLIN COUNTY
STATE: NORTH CAROLINA

PARENT PARCEL INFORMATION:
REFERENCE: DB 2357 / PG 1270, FRANKLIN COUNTY GIS
PARCEL SIZE: ±100,037 SF / ±2.3 AC
ZONING: FCO GB

REQUIRED SETBACKS:
- *FRONT:* 50'
- *SIDE:* 10'
- *REAR* 25'

ALLOWED MAXIMUM BUILDING HEIGHT 60'

PROPOSED TRACT INFORMATION:

WATERSHED: CROOKED CREEK - TAR RIVER
RIVER BASIN: TAR-PAMLICO

EXISTING IMPERVIOUS : 0 SF (0.0AC)
PROPOSED SUBDIVISION:
- *LOT 6* 0 SF (0.0 AC)

PROPOSED IMPERVIOUS:
- *LOT 6* 41,548 SF (0.95 AC)

TOTAL PROPOSED IMPERVIOUS: 41,934 SF (0.96 AC)
(75% OF 56,000 IMPERV. ALLOWANCE)

TOTAL DISTURBED AREA: 74,727 SF (1.72 AC)
- *ONSITE DISTURBED AREA:* 73,985 SF (1.70 AC)
- *OFFSITE DISTURBED AREA:* 742 SF (0.02 AC)

CALCULATION OF PROJECT DENSITY - PER 15A NCAC 2H .1003
THE PROJECT DENSITY FOR THIS PROJECT IS: 42.02%

TOTAL PARKING REQUIRED: WAREHOUSING & WHOLESALING (PER UDO SEC. 6.4.1)
(PER UDO SEC. 6.4.1)

OFFICE REQUIREMENTS: (ALL OTHER OFFICE)
OFFICE SF: 3150 SF

OFFICE PARKING REQUIREMENTS:
MIN. REQUIREMENT - OFFICE (ALL OTHER OFFICE)
- *1 PER 300 SF, 3150 / 300 = 10.5 = 11*

MAX. REQUIREMENT - OFFICE (ALL OTHER OFFICE)
- *1 PER 250 SF, 3150 / 250 = 12.6 = 13*

WAREHOUSE REQUIREMENTS:
BUILDING OCCUPANCY: 4 EMPLOYEES & 6 TRUCKS

MIN. REQUIREMENT - WAREHOUSING
- *1 PER 2 EMPLOYEES DURING THE SHIFT OF MAXIMUM EMPLOYMENT PLUS 1 SPACE FOR EVERY TRUCK = 2÷6 = 8 SPACES*

MAX. REQUIREMENT - WAREHOUSING
- *1 PER EMPLOYEE DURING THE SHIFT OF MAXIMUM EMPLOYMENT PLUS 1 SPACE FOR EVERY TRUCK = 4÷6 = 10 SPACES*

TOTAL REQUIRED:
MIN. REQUIREMENT: TOTAL (OFFICE + WAREHOUSE) = 19
MAX. REQUIREMENT: TOTAL (OFFICE + WAREHOUSE) = 23

PROPOSED SPACES 21 (20 STANDARD, 1 VAN ACCESSIBLE)

3 *BICYCLE PARKING REQUIRED: OFFICE - WAREHOUSING: 2 SPACES*
BICYCLE PARKING PROVIDED: 2 SPACES

SEWER PROVIDER: CONVENTIONAL SEPTIC
WATER PROVIDER: FRANKLIN COUNTY PUBLIC UTILITIES

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 100 ft.

Know what's below. Call before you dig.

CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NC811". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

INNOVATIVE GLASS SOLUTIONS, LLC
7145 WINDING WAY
WAKE FOREST, NC 27587
919.435.8437
kyle@divisionrightrentals.com

C3 DESIGN & ENGINEERING, PLLC
NC Firm License #: P-1764
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P.O. Box 361(MAILING)
Creedmoor, NC 27522-0361
chad@c3designeng.com
919.625.7368

NORTH CAROLINA PROFESSIONAL SEAL 036242 7/1/25 ENGINEER CHAD E. ABBOTT

	DATE	BY
6		
5		
4	7/1/25	DSF
3	6/17/25	DSF
2	5/22/25	DSF
1	3/18/25	DSF
	REVISIONS	

4 FRANKLIN COUNTY COMMENTS - JUNE 11TH, 2025
3 STORMWATER COMMENTS - APRIL 2ND, 2025
2 FRANKLIN COUNTY COMMENTS - MARCH 28TH, 2025
1 FIRST ISSUED

CONSTRUCTION DRAWINGS
INNOVATIVE GLASS SOLUTIONS
15 CASCADE CT, YOUNGSVILLE NC 27596
FRANKLIN COUNTY

COVER SHEET

C3 PROJECT #: 22-158

REVIEW PROJECT #: Z-25-343

SHEET #: **C-1.0**

G:\04-PROJECTS\2022\22-158\CIVIL - 22-158.dwg, 7/2/2025 11:47:15 AM, Daniel Hardy, DWG To PDF.pc3, 1:1

GRADING AND STORM DRAINAGE NOTES:

1. EXISTING TOPOGRAPHY & SITE CONDITIONS SURVEYED BY CMP PROFESSIONAL LAND SURVEYORS, MICHAEL A MOSS (L-3794) DATED DECEMBER 4, 2024.
2. ROOF DRAIN CONNECTIONS AND INLINE CATCH BASINS IN NON-TRAFFIC BEARING LOCATIONS MAY BE HDPE SYSTEMS SUCH AS "NYLOPLAST" BY ADS OR APPROVED EQUAL. (SEE DETAILS FOR USE AS STORM DRAINAGE SYSTEM)
3. ALL ON-SITE PIPE SHALL BE INSTALLED MEETING COVER, BACKFILL AND BEDDING REQUIREMENTS PER NCDOT OR THE MANUFACTURER'S RECOMMENDATIONS, WHICHEVER IS MOST STRINGENT.
4. SUBGRADE PREPARATION FOR BUILDING PAD AND PARKING AREAS SHALL BE CONSTRUCTED PER THE RECOMMENDATION AND DIRECTION OF AN ON-SITE GEOTECHNICAL TESTING FIRM (HIRED BY THE OWNER). TESTING AND INSPECTIONS SHALL BE REQUIRED FOR ALL AREAS OF BACKFILL, INCLUDING PIPE BACKFILL, PER THE GEOTECHNICAL REPORT, ONSITE TESTING FIRM'S DIRECTION OR MANUFACTURES REQUIREMENTS. CONTACT ENGINEER OF RECORD WITH ANY QUESTIONS ABOUT THESE REQUIREMENTS PRIOR TO SUBMITTING BIDS AND STARTING CONSTRUCTION
5. CONTRACTOR SHALL FIELD VERIFY THAT PROPOSED GRADES MATCH EXISTING PAVEMENT AT ALL CONNECTIONS/TIE-INS. CONTRACTOR SHALL NOTIFY ENGINEER IF DISCREPANCY OCCURS.
6. ALL WORK WITHIN NCDOT ROW SHALL COMPLY WITH MOST RECENT NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, NCDOT STANDARD DRAWINGS, AND THE MUTCD STANDARDS.
7. ADDITIONAL SPECIFICATIONS AND REQUIREMENTS FOR FOOTER AND BUILDING PAD PREPARATION AND COMPACTION MAY EXIST IN ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SHALL BE EXECUTED/IMPLEMENTED AS REQUIRED.
8. THE GRADE LINES DENOTE THE FINISHED ELEVATIONS OF THE PROPOSED SURFACE. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING, ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO PROVIDE A PROPER TIE-IN. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED INVERTS, FFE'S & FINISHED SURFACES TO ENSURE THAT MINIMUM SLOPE & COVER REQUIREMENTS ARE PROVIDED PRIOR TO INSTALLATION OF REFERENCED ITEMS. CONTACT ENGINEER WITH DISCREPANCIES.
9. THE EARTHWORK ON THIS PLAN DOES NOT NECESSARILY BALANCE; OFFSITE BORROW OR WASTE MAY BE REQUIRED AND SHALL BE INCLUDED IN CONTRACT PRICE/BID. OFFSITE BORROW/WASTE AREAS SHALL BE PERMITTED.
10. ALL PIPE INVERTS TO BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTING GRAVITY SYSTEMS AND SHALL BE ADJUSTED BY THE ENGINEER IF NECESSARY.
11. UNLESS OTHERWISE NOTED, SPILL CURB LOCATIONS SHALL BE FIELD DETERMINED BY THE CONTRACTOR TO ENSURE POSITIVE DRAINAGE THROUGHOUT THE PARKING LOTS AND DRIVE AISLES. NO "BIRD BATHS" OR LOW AREAS THAT WILL HOLD WATER SHALL BE ALLOWED WITHIN THE CURB AND GUTTER OR PAVED AREAS.

GENERAL LANDSCAPING NOTES:

1. LANDSCAPE CONTRACTOR SHALL HAVE ALL UNDERGROUND UTILITIES AND PROPOSED SITE LIGHTING POLE LOCATIONS LOCATED PRIOR TO INSTALLING PLANT MATERIAL.
2. CONTRACTOR SHALL COMPLY WITH SIZING AND GRADING STANDARDS OF THE LATEST EDITION OF THE "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN).
3. DISTURBED AREAS BEHIND PROPOSED BUILDING SHALL BE SEEDED.
4. CONTRACTOR SHALL AMEND ALL PROPOSED PLANT BEDS WITH ORGANIC SOIL AMENDMENT (COMPOST). ROTOTILL BEDS TO A DEPTH OF 8", ADD 2" OF COMPOST AND ROTOTILL AGAIN. REMOVE ALL EXIST. WEEDS, GRASS AND ROOTS.
5. CONTRACTOR SHALL RAKE SMOOTH AND APPLY 1" TO 2" TOPSOIL TO ALL LAWN AREAS RECEIVING SEED OR SOD. REMOVE ALL EXISTING WEEDS, GRASS AND ROOTS.
6. CONTRACTOR SHALL LAY SOD WITH STAGGERED JOINTS, TIGHTLY BUTTED WITH NO INEQUALITIES IN GRADE. PLANT ALL SOD IN ROWS AT RIGHT ANGLES TO SLOPES (WHERE APPLICABLE).
7. SOD SHALL BE A LOCALLY HARVESTED, WARM SEASON VARIETY GRASS SPECIES NATIVE TO THE YOUNGSVILLE, NC AREA.
8. CONTRACTOR SHALL MAINTAIN AND WATER SOD INSTALLATION UNTIL GRASS IS FIRMLY ESTABLISHED.
9. ALL PLANTINGS SHALL BE INSTALLED WITH THE SPECIFIED LAYER OF MULCH. REFERENCE DETAILS FOR DEPTH AND TYPE OF MULCH. ALL SHRUBS SHALL BE PLANTED IN MULCHED BEDS.
10. OWNERS OPTION: INSTALL $\frac{1}{8}$" THK. x 4" WIDE GREEN STEEL EDGING WITH STEEL STAKES BETWEEN PLANTING BEDS AND LAWN.
11. FINISHED GRADE IN LANDSCAPE ISLANDS SHALL BE INSTALLED SO THAT IT IS ONE INCH LOWER THAN THE TOP OF SURROUNDING CURBS. MULCH WITH 3" OF TRIPLE SHREDDED HARDWOOD MULCH FROM A REPUTABLE LOCAL SOURCE.
12. CONTRACTOR SHALL PROVIDE WATER PERMEABLE WEED MAT FOR ALL PLANTING BEDS.
13. CONTRACTOR SHALL SOD ALL LAWN AREAS IN FRONT OF BUILDING AND WITHIN 5' OF THE SIDES/REAR OF BUILDING AND AREAS WHERE GRADE SLOPE IS 1:4 OR GREATER.
14. ALL PLANTS SHALL HAVE A MINIMUM 2" CALIPER (MEASURE AT 6" ABOVE GROUND) AND A MINIMUM HEIGHT OF 8' (MEASURED ABOVE GROUND). ARTICLE 6.5.4.A.3
15. SHRUBS SHALL BE AT LEAST 3 GALLONS IN SIZE.
16. THE OWNER OF THE PROPERTY IS RESPONSIBLE FOR THE CONTINUED PROPER MAINTENANCE OF ALL LANDSCAPING MATERIALS AND SHOULD KEEP THEM IN A PROPER, NEAT, AND ORDERLY APPEARANCE, FREE FROM REFUSE AND DEBRIS. ALL DEAD OR UNHEALTHY PLANT MATERIAL SHOULD IMMEDIATELY BE REPLACED TO MAINTAIN THE QUALITY OF THE LANDSCAPING. (ARTICLE 6.5.3.A.4)
17. NO PARKING SPACE SHALL BE FURTHER THAN 50 FEET FROM A TREE. (ARTICLE 6.5.4.A.2)

1

18. ALL NEW PLANT MATERIAL SHOULD BE OF GOOD QUALITY, INSTALLED IN A SOUND, WORKMANSHIP-LIKE MANNER. (ARTICLE 6.5.3.A.1)
19. ALL TREES SHALL BE PROPERLY PLANTED AND ORGANICALLY MULCHED (3-4" LAYER) IN ACCORDANCE WITH ACCEPTED PRACTICES IN THE LANDSCAPE INDUSTRY (ANSI Z60 AMERICAN STANDARD FOR NURSERY STOCK, ANSI A-300 STANDARD PRACTICES FOR TREE CARE OPERATIONS- TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE, ANSI Z133 SAFETY REQUIREMENTS FOR TREE CARE OPERATIONS-PRUNING, TRIMMING, REPAIRING, MAINTAINING, AND REMOVING TREES AND CUTTING BRUSH), TO PREVENT WINDS FROM LOOSENING THE ROOTS. (ARTICLE 6.5.3.A.2)

SITE NOTES:

1. SURVEY DATA AND LOCATIONS PROVIDED BY CMP PROFESSIONAL LAND SURVEYORS, MICHAEL A MOSS (L-3794) DATED DECEMBER 4, 2024. FIELD VERIFY EXISTING CONDITIONS BY DETAILED SITE INSPECTION PRIOR TO SUBMITTING BID AND BEGINNING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH FRANKLIN COUNTY AND/OR NCDOT STANDARDS AND SPECIFICATIONS.
3. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL MAINTAIN ANY EXISTING ACCESSES TO ADJACENT RESIDENCES, BUSINESSES AND PROPERTIES AT ALL TIMES.
5. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PERMITS NECESSARY FOR CONSTRUCTION.
6. ALL STRIPING WITHIN THE ROW SHALL BE THERMOPLASTIC PER DOT STANDARDS UNLESS OTHERWISE NOTED.
7. CONTACT 811 PRIOR TO ANY SUBSURFACE WORK.
8. OBTAIN FINAL ZONING INSPECTION APPROVAL PRIOR TO USE/OCCUPANCY.
9. ALL FUTURE LIGHTING MUST ADHERE TO ARTICLE 6.8.2 OUTDOOR LIGHTING.
10. ALL OUTDOOR STORAGE SHALL BE SCREENED FROM PUBLIC VIEW BY OPAQUE FENCING, SCREENING, OR LANDSCAPING, LIMITED TO REAR AND SIDE OF THE PRINCIPAL BUILDING, IF HAZARDOUS AND/OR UNSAFE, SHALL MEET ALL LOCAL, STATE AND FEDERAL ENVIRONMENTAL REQUIREMENTS, AND MUST BE ON THE PREMISES OF THE BUSINESS.
11. OUTSIDE STORAGE (CONTAINERS, TRAILERS, PRODUCT, ETC.) IN THE DESIGNATED PARKING AREAS IS PROHIBITED.

UTILITY NOTES:

1. ALL NEW UTILITIES SHALL BE LOCATED UNDERGROUND UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PERMITS NECESSARY FOR CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF THE LOCATION AND/OR RELOCATION OF ALL EXISTING UTILITIES, IMPACTED BY THE PROJECT, WITH THE APPROPRIATE UTILITY, AGENCY OR COMPANY.
4. THE CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS AND DISTURBANCES WITH EXISTING USERS AND PROVIDERS SO THAT ANY SERVICE INTERRUPTIONS ARE MINIMAL.
5. ALL PIPE INVERTS, TAP LOCATIONS & AVAILABLE CLEARANCES TO BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTING STORM & UTILITY SYSTEMS AND SHALL BE ADJUSTED BY THE ENGINEER IF NECESSARY. IF THESE ITEMS ARE NOT VERIFIED AT THIS TIME, THE CONTRACTOR WILL BE WHOLLY RESPONSIBLE FOR THE FIELD REVISIONS AND ASSOCIATED DESIGN COSTS OF THE SOLUTIONS PROPOSED.
9. NO IRRIGATION SYSTEM WILL BE INSTALLED ON STATE ROW.
10. CONTACT 811 PRIOR TO ANY SUBSURFACE WORK.

DEMOLITION NOTES:

1. ALL DEMOLITION, TRANSPORT, AND DISPOSAL OF WASTE MATERIALS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE TOWN, COUNTY, STATE, AND FEDERAL REGULATIONS.
2. REGULATED MATERIALS SUCH AS ASBESTOS, LEAD, ETC. MAY EXIST ON SITE AND SHALL BE IDENTIFIED AND A PLAN FOR DEMOLITION AND DISPOSAL PRESENTED TO AND APPROVED BY THE TOWN, COUNTY, STATE, AND OWNERS PRIOR TO COMMENCING DEMOLITION ON CORRESPONDING STRUCTURES.
3. THE LOCATIONS OF ALL EXISTING FEATURES SHOWN ON THIS SHEET WERE PROVIDED BY OTHERS. OTHER UNIDENTIFIED UTILITIES OR SITE FEATURES, ESPECIALLY RELATED TO THE EXISTING STRUCTURE, MAY EXIST AND SPECIAL CARE SHALL BE EXERCISED DURING ANY SUBGRADE WORK OR DEMOLITION.
4. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PERMITS FOR WORK IN THE NCDOT RIGHTS-OF-WAY. ANY DAMAGED INFRASTRUCTURE IN THE RIGHTS-OF-WAY CAUSED BY CONSTRUCTION ACTIVITIES MUST BE REPAIRED TO NCDOT STANDARDS. THIS INCLUDES, BUT IS NOT LIMITED TO UTILITIES, SIDEWALKS, CURB & GUTTER, AND PAVEMENT.
5. CONTRACTOR SHALL IMPLEMENT TRAFFIC CONTROL PLAN PRIOR TO ANY WORK WITHIN THE NCDOT RIGHT-OF-WAY.
6. ALL UTILITIES TO BE REMOVED, DISPOSED OF, AND/OR ABANDONED PER THE CORRESPONDING SERVICE PROVIDERS GUIDELINES.
7. CONSTRUCTION WASTE SHALL NOT BE BURIED ON SITE.

EROSION CONTROL NOTES:

1. THIS SITE IS SUBJECT TO NCDEQ EROSION CONTROL AND STORMWATER REQUIREMENTS.
2. ALL EROSION CONTROL MEASURES SHALL BE PROVIDED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF NCDEQ.
3. ALL APPLICABLE LAWS AND REGULATIONS REQUIRING DUE CARE AND TREATMENT OF CONSTRUCTION RELATED SEDIMENT LADEN RUNOFF SHALL APPLY AND BE STRICTLY ADHERED TO.
4. SILT FENCE OUTLETS HAVE BEEN SHOWN AT LOCATIONS WHERE IT APPEARS SITE RUNOFF WILL POND OR DRAIN TO. ADDITIONAL OUTLETS SHALL BE PROVIDED AS NEEDED WHERE SITE CONDITIONS DIFFER AND STORMWATER PONDS DURING CONSTRUCTION.
5. SEE DETAIL SHEET C-2.3B FOR SEEDING REQUIREMENTS. ALL AREAS SHALL BE MULCHED OR OTHERWISE COVERED PER THE STABILIZATION CHART ON C-2.3C.
6. ALL SLOPES GREATER THAN 3:1 SHALL BE COVERED WITH NORTH AMERICAN GREEN (NAG) S75 OR APPROVED EQUAL. ALL OTHER AREAS SHALL BE COVERED/MATTED AS SPECIFIED ON THE PLANS.
7. CONTRACTOR SHALL MAINTAIN AND REPLENISH THE CONSTRUCTION ENTRANCE AS NEEDED TO MAINTAIN EFFECTIVENESS AT CLEANING TIRES OF CONSTRUCTION EQUIPMENT PRIOR TO EXITING THE SITE.
8. ANY BORROW MATERIAL BROUGHT ONTO THIS SITE MUST BE FROM A LEGALLY OPERATED MINE OR ANOTHER APPROVED SOURCE. ANY SOIL WASTE THAT LEAVES THIS SITE CAN BE TRANSPORTED TO A PERMITTED MINE OR SEPARATELY PERMITTED CONSTRUCTION SITES WITHOUT ADDITIONAL PERMITS UNDER NCGS 74-49(7)(D).

CONSTRUCTION SEQUENCE:

1. THOROUGHLY REVIEW PLANS AND EROSION CONTROL NOTES PRIOR TO STARTING WORK.
2. LOCATE A JOB SITE / INSPECTION BOX IN A SECURE PLACE ON SITE TO PROVIDE A PLACE FOR INSPECTORS TO LEAVE INSPECTION REPORTS, COMPLIANCE NOTICES, ETC. SITE PERSONEL SHOULD CHECK THE BOX DAILY FOR THIS CORRESPONDENCE. PROVIDE CONTACTING INFORMATION WITH NOTE TO "CONTACT C3 DESIGN AND ENGINEERING AT 919-230-0996 IF ANY ISSUES ARISE DURING THE CONSTRUCTION". CONTRACTOR SHALL BE RESPONSIBLE FOR NCDENR REPORTING THROUGHOUT CONSTRUCTION. PER NPDES, REQUIREMENTS, A RAIN GAUGE, SELF-INSPECTIONS RECORDS, PERMIT, CERTIFICATE OF COVERAGE, AND S&E PLAN ARE REQUIRED TO BE MAINTAINED ON SITE AND ACCESSIBLE DURING INSPECTION. IT IS RECOMMENDED THAT THESE ITEMS BE PLACED IN A PERMITS BOX AT THE BEGINNING OR ENTRANCE OF PROJECT.
3. SCHEDULE AND HOLD A PRECONSTUCTION CONFERENCE BEFORE STARTING ANY DEMOLITION, TIMBERING, CLEARING, OR GRADING WITH THE OWNER (OR REPRESENTATIVE), THE CONTRACTOR(S) RESPONSIBLE FOR THE DISTURBANCE AND EROSION CONTROL TO DISCUSS THE PROJECT AND THE EROSION CONTROL PLAN.
4. INSTALL SILT FENCE, SILT FENCE OUTLETS, CONSTRUCTION ENTRANCE / EXIT, BASIN, AND STRAW WATTLES AS SHOWN ON THE PLANS. NOTE, CONTRACTOR SHALL INSTALL ADDITIONAL OUTLETS AS NEEDED WHERE LOW AREAS EXIST OR DEVELOPED SITE CONDITIONS CREATE PLACES FOR SITE RUNOFF TO COLLECT / POND. ONLY CLEARING AND GRUBBING REQUIRED TO INSTALL THE EC MEASURES SHALL BE CONDUCTED AT THIS TIME.
5. UPON COMPLETED INSTALLATION OF EC MEASURES, BEGIN CLEARING AND DEMOLITION ACTIVITIES AS SHOWN.
6. BEGIN EARTHWORK AND EXCAVATION ACTIVITIES TO ACHIEVE THE BUILDING PAD AND SUBGRADE FOR PAVEMENT AS SOON AS POSSIBLE. ANY BORROW MATERIAL BROUGHT ONTO THIS SITE MUST BE FROM A LEGALLY OPERATED MINE OR ANOTHER APPROVED SOURCE. ANY SOIL WASTE THAT LEAVES THIS SITE CAN BE TRANSPORTED TO A PERMITTED MINE OR SEPARATELY PERMITTED CONSTRUCTION SITES WITHOUT ADDITIONAL PERMITS UNDER NCGS 74-49(7)(d).
7. SELF-INSPECTIONS FOR EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE PERFORMED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF EVERY RAIN EVENT OF GREATER THAN 1 INCH. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN MEASURES AS DESIGNED. ALL ESC MEASURES SHALL BE MAINTAINED AS SPECIFIED IN THE CONSTRUCTION DETAILS ON THIS PLAN. A RAIN GAUGE SHALL BE INSTALLED AT THE PROJECT SITE FOR MONITORING.
8. TEMPORARY SEED AND MULCH ALL AREAS DISTURBED WITHIN MINIMUM REQUIRED TIMEFRAME. SEE TEMPORARY SEEDING SCHEDULE AND THE STABILIZATION TIMEFRAME NOTED ON C-2.3B. GROUND STABILIZATION WILL BE APPLIED WITHIN 14 CALENDAR DAYS FROM LAST LAND DISTURBING ACTIVITY. FOR STEEP SLOPES, THAT AREA MUST BE STABILIZED WITHIN 7 CALENDAR DAYS". CUT, FILL, AND DIRT PILE SLOPES ARE TO BE TRACKED. ANY BARE SOILS BETWEEN THE TOE OF SLOPES AND THE LIMITS OF DISTURBANCE ARE TO BE SEEDED, MULCHED, AND TACKED. ALSO, SLOPES SHALL BE COVERED WITH A SUITABLE RECP AFTER SEEDING. SEE STABILIZATION INSET ON SHEET C-1.4 FOR GUIDANCE.
9. INSPECT AND MAINTAIN THE EROSION CONTROL DEVICES SO THEY CONTINUE TO FUNCTION PROPERLY. REFER TO THE EROSION CONTROL DETAILS FOR SPECIFIC INSTRUCTIONS FOR EACH DEVICE. THE PERSON RESPONSIBLE FOR EROSION CONTROL IS ALSO RESPONSIBLE FOR TAKING THE INITIATIVE IN INSPECTING AND MAINTAINING THESE DEVICES; DO NOT WAIT FOR THE EROSION CONTROL INSPECTOR TO POINT OUT THE NEED FOR MAINTENANCE REPAIRS. KEEP MUD AND DEBRIS OFF THE PUBLIC STREET AT ALL TIMES. IF MUD OR DEBRIS IS TRACKED FROM THE SITE, USE A SHOVEL AND BROOM TO REMOVE IT IMMEDIATELY.
10. DURING THE COURSE OF CONSTRUCTION, IF THE SIGNIFICANT SEDIMENT IS LEAVING THE SITE DESPITE PROPER IMPLEMENTATION AND MAINTENANCE OF THE APPROVED EROSION CONTROL PLAN, THE PERSON RESPONSIBLE FOR THE LAND-DISTURBING ACTIVITY IS OBLIGATED TO TAKE ADDITIONAL PROTECTIVE ACTION AND NOTIFY ENGINEER OF THE NEED FOR ADDITIONAL MEASURES.
11. INSTALL SITE UTILITIES OF CONDUITS AS CONSTRUCTION PERMITS.
12. ONCE SITE GRADING IS COMPLETE, PERMANENTLY STABILIZE ALL DISTURBED AREAS, INCLUDING THE REMOVAL OF THE CONSTRUCTION ENTRANCE TO INSTALL STONE BASE FOR PAVING.
13. ONCE STONE BASE IS APPLIED, PLACE TOPSOIL AND PERMANENTLY SEED OR OTHERWISE STABILIZE THE REMAINING LANDSCAPED AREAS PER THE PLANS. PERIMETER MEASURES MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. AFTER SITE IS PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEASURES HAVE BEEN REMOVED AND GROUND COVER IS NOT ADEQUATE.
14. ONCE ALL SITE IS FULLY STABILIZED, DECOMMISSION AND REMOVE THE SEDIMENT CONTROL MEASURES. PRIOR TO ANY SOIL REMOVAL FROM SITE, IF SOILS ARE OVERLY WET AND UNABLE TO BE TRANSPORTED, CONTRACTOR SHALL PROVIDE A SUITABLE AREA WHERE THE SOUPY SOILS CAN BE PLACED AND COMPLETELY SURROUNDED WITH SILT FENCE. SOILS SHALL BE DEPOSITED HERE AND ALLOWED TO DRAIN/DRY UNTIL THEY CAN BE LOADED INTO A TRUCK AND HAULED AWAY OR USED ON-SITE.
15. REGRADE AREA FOR THE FINAL SURFACE TREATMENTS AND SITE IMPROVEMENTS SHOWN. SUITABLE FILL SHALL BE USED TO ACHIEVE PERMANENT GRADES AS SHOWN. SUITABLE FILL AND PIPE BACKFILL TO BE CONFIRMED AND TESTED BY THIRD PARTY CMT FIRM.
16. SITE STABILIZATION IS REQUIRED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY. GRASS UTILIZED AS PERMANENT GROUND COVER MUST BE AT A MOWABLE HEIGHT THAT GENERALLY PROVIDES AT LEAST 80% COVERAGE THROUGHOUT THE SITE, WITH NO LARGE BARE PATCHES OR EVIDENCE OF EROSION. ANY BARE SOILS AND THE PERIMETER MEASURE WILL BE SEEDED AFTER SEEDBED PREP WITH SOIL AMENDMENTS, MULCH AND TACK. ALL BARE SOILS ARE TO BE STABILIZED BY THE END OF THE DAY.
17. PLACE TOPSOIL AND PERMANENTLY SEED OR OTHERWISE STABILIZE THE REMAINING DISTURBED AREAS PER THE PLANS.

LEGEND & NOMENCLATURE

LINETYPES

X	Ex. Fence
W	Ex. Waterline
SS	Ex. Sewerline
G	Ex. Gas
OHE	Ex. Overhead Electric
T	Ex. Telephone
SD	Ex. Storm Drain
SF	Silt Fence
LD	Limited disturbance
SD	Prop. storm drain
SS	Prop. Sewerline
G	Prop. Gas
OHE	Prop. Overhead Electric
W	Prop. Water
	Extents of Clearing/ New Tree Line
	Existing Tree Line
	Baffles
	Diversion
	Temporary Slope Drain

NOTES SYMBOLS

CE	Construction Entrance/Exit
DD	Temporary Diversion Ditch
PD	Permanent Diversion Ditch
IP	Inlet Protection
SB	Slope Blanket
SF	Silt Fence
SFO	Silt Fence Outlet
SW	Straw Wattle (12" see details)
TS	Temporary Seeding
PS	Permanent Seeding
TP	Tree Protection Fence
CW	Concrete Washout Area
DW	Silt Bag Dewatering
BM	Blanket Matting
OP	Outlet Protection/Plunge Pool
CD	Check dam

ABBREVIATIONS

ERB	EXISTING REBAR FOUND
NRB	NEW REBAR SET
EIP	EXISTING IRON PIPE OR PIN FOUND
NIP	NEW IRON PIPE OR PIN SET
ESF	EXISTING STONE FOUND
EAF	EXISTING IRON AXLE FOUND
EMN	EXISTING MAGNETIC NAIL FOUND
NMN	NEW MAGNETIC NAIL SET
ECS	EXISTING COTTON SPINDLE SPIKE FOUND
NCS	NEW COTTON SPINDLE SPIKE SET
ERS	EXISTING RAILROAD SPIKE FOUND
NRS	NEW RAILROAD SPIKE SET
ECM	EXISTING CONCRETE MONUMENT FOUND
NCM	NEW CONCRETE MONUMENT SET
ENL	EXISTING NAIL FOUND
NNL	NEW NAIL SET
CP	COMPUTED POINT (NOT ON THE GROUND)
CPM	COMPUTED POINT AT LEANING ECM
CPP	CORRUGATED PLASTIC PIPE
CL	CENTERLINE
CO	CLEAN OUT
ETB	ELECTRIC TRANSFORMER BOX
FH	FIRE HYDRANT
IV	IRRIGATION VALVE
MBL	MINIMUM BUILDING LIMITS
MHC	MANHOLE COVER
N/F	NOW OR FOMERLY
OHL	OVERHEAD UTILITY LINE(S)
PL	PROPERTY LINE
R/W	RIGHT-OF-WAY
SSL	SANITARY SEWER LINE(S)
TP	TELEPHONE PEDESTAL
TVP	TELEVISION PEDESTAL
UP	UTILITY POLE
WM	WATER METER
WV	WATER VALVE
WS	WATER SPIKET

SYMBOLS

- Drainage inlet (w/ grate)
- Light Pole
- WM Water Meter
- Water Valve
- Fire Hydrant
- Straw Wattle
- Silt Fence Outlet
- Inlet Protection (Block & Gravel or Hardware Cloth)
- L W1 W2 Outlet Protection/ Plunge Pool Riprap
- Impermeable Liner
- Curb Inlet
- Bollard
- D Manhole
- CHECK DAM

INNOVATIVE GLASS SOLUTIONS, LLC
7145 WINDING WAY
WAKE FOREST, NC 27587
919.435.8437
kyle@divisioneightrentals.com

C3 DESIGN & ENGINEERING, PLLC
NC Firm License #: P-1764
2537 E LYON STATION RD, STE 102(PHYSICAL)
P.O. Box 361(MAILING)
Creedmoor, NC 27522-0361
chad@c3designeng.com
919.625.7368

NORTH CAROLINA PROFESSIONAL SEAL 036242 ENGINEER CHAD E. ABBOTT 5/22/25

REVISIONS

#	DESCRIPTION	DATE	BY
6			
5			
4			
3			
2	FRANKLIN COUNTY COMMENTS - MARCH 28TH, 2025	5/22/25	DSF
1	FIRST ISSUED	3/18/25	DSF

CONSTRUCTION DRAWINGS
INNOVATIVE GLASS SOLUTIONS
15 CASCADE CT, YOUNGSVILLE NC 27596
FRANKLIN COUNTY

LEGEND & NOTES

C3 PROJECT #: 22-158
REVIEW PROJECT #: Z-25-343
SHEET #: **C-1.1**

J:\DD-PROJECTS\2022\22-158\CIVIL - 22-158\Current Drawings\22-158_Notes & Legends.dwg, 6/4/2025 12:43:10 PM, Daniel Fenton, DWG To PDF.pc3, 1:1

Docusign Envelope ID: BA6C0787-C6CB-48DB-B042-A7EF7B289913

I, MICHAEL A. MOSS CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY PERFORMED UNDER MY SUPERVISION FROM REFERENCES AS NOTED HEREON; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION SHOWN IN THE REFERENCES; THAT HORIZONTAL POSITIONAL ACCURACY AS CALCULATED .05'; THAT THE GLOBAL NAVIGATION SATELLITE SYSTEM(GNSS) SURVEY OBSERVATIONS WERE PERFORMED TO THE GEOSPATIAL POSITIONAL ACCURACY STANDARDS, PART 2: STANDARDS FOR GEODETIC NETWORKS AT THE 1-CENTIMETER ACCURACY CLASSIFICATION (95% CONFIDNCE) USING REAL TIME KINEMATIC FIELD PROCEDURES; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGIONAL SIGNATURE, LICENSE NUMBER AND SEAL

THIS 4TH DAY OF DECEMBER A.D. 2024.

CLASS OF SURVEY: AA
POSITIONAL ACCURACY: HORIZONTAL 0.05 US SURVEY FEET
TYPE OF GPS FIELD PROCEDURE: REAL TIME KINEMATICS NETWORK (VRS)
DATES OF SURVEY:
DATUM/EPOCH: NAD 83(2011) 2010.00
PUBLISHED/FIXED CONTROL USE: RALEIGH DOT CORS ARP
LAT: 35°45'49.50795"
LONG: 78°34'44.39448"
GEOID MODEL: GEOID12B
COMBINED GRID FACTORS: 1.00003174956193
UNITS: US SURVEY FOOT

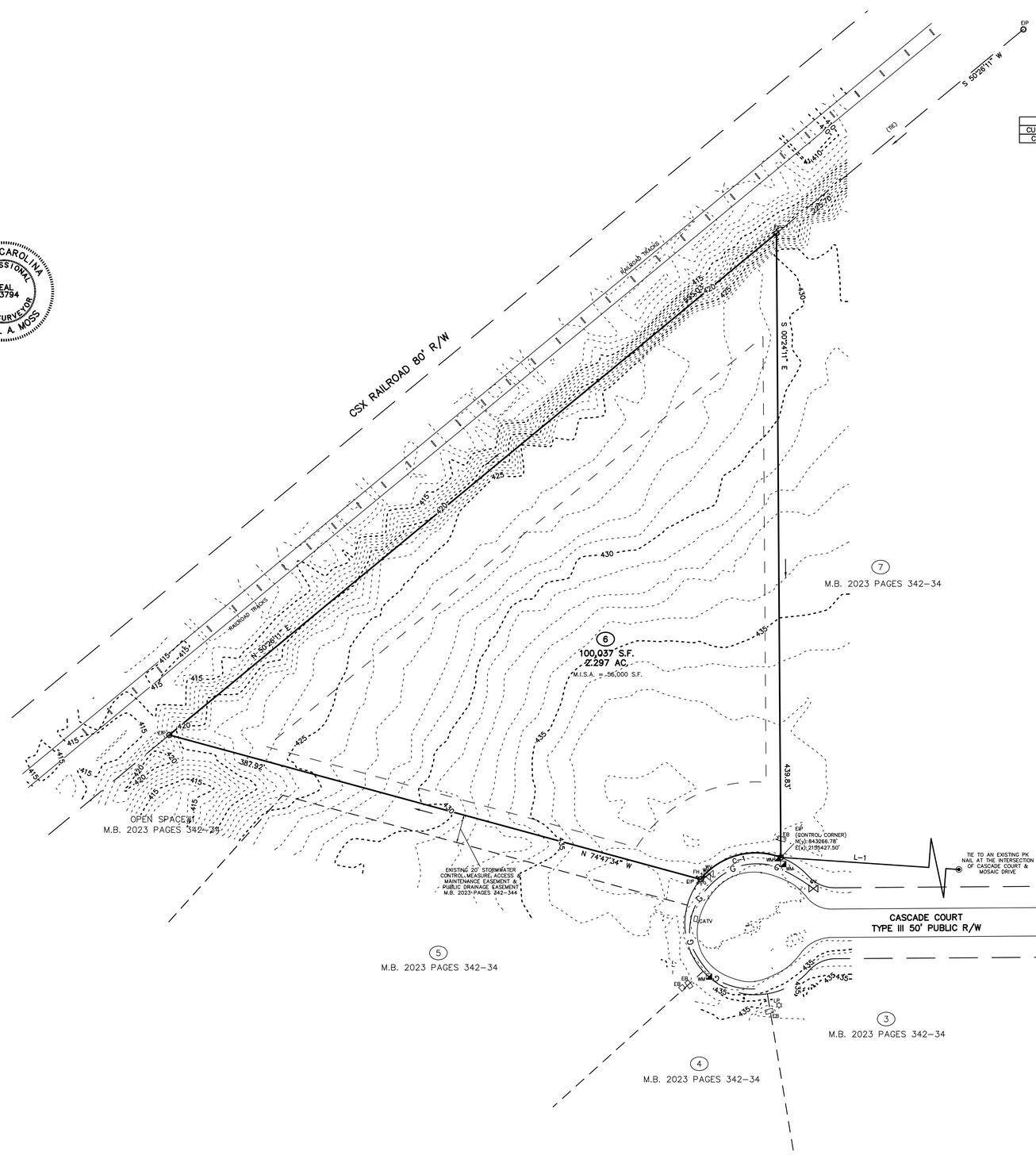
THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED, WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL

THIS 4TH DAY OF DECEMBER A.D. 2024.

DocuSigned by:
Michael A. Moss
83D1931732004 11

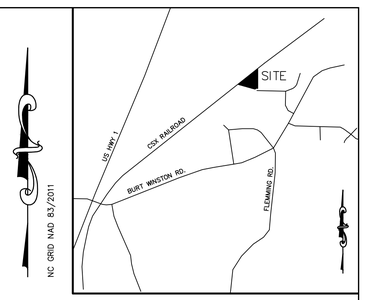
L-3794
PROFESSIONAL LAND SURVEYOR LICENSE NUMBER

NORTH CAROLINA PROFESSIONAL SEAL L-3794 LAND SURVEYOR MICHAEL A. MOSS



LINE TABLE		
LINE	BEARING	DISTANCE
L-1	S 86°07'10" E	639.47'

CURVE TABLE				
CURVE	ARC LENGTH	RADIUS	CHORD LENGTH	CHORD BEARING
C-1	62.75'	50.00'	58.71'	S 74°44'11" W



VICINITY MAP
(NOT TO SCALE)

MINIMUM BUILDING SETBACKS

FRONT	50'
REAR	35'
SIDE	10'

LEGEND:

NIP – EXISTING IRON PIPE
EIB – EXISTING IRON BAR
BNIP – BENT IRON PIPE
BEIB – BENT IRON BAR
CM – CONCRETE MONUMENT
EPK – EXISTING PK NAIL
SPK – SET PK NAIL
NIP – NEW IRON PIPE SET
R/W – RIGHT OF WAY
CATV – CABLE TV BOX
EB – ELECTRIC BOX
TEL – TELEPHONE PEDESTAL
PP – POWER POLE
OHL – OVERHEAD LINE
LP – LIGHT POLE
WM – WATER METER
WV – WATER VALVE
CO – SEWER CLEAN-OUT
CC – CONCRETE
CB – CATCH BASIN
MH – MANHOLE
FH – FIRE HYDRANT
GV – GAS VALVE

NOTES:

1. THIS PLAT SUBJECT TO ALL EASEMENTS, AGREEMENTS AND RIGHTS OF WAY OF RECORD PRIOR TO THE DATE OF THIS PLAT.
2. NO UNDERGROUND UTILITIES HAVE BEEN MARKED OR LOCATED FOR THIS PLAT.
3. ALL BEARINGS AND DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS
4. ALL ELEVATIONS ARE BASED ON NAVD 88
5. ALL CONTOURS ARE AT 1' INTERVALS HIGHLIGHTED EVERY 5'.

LINE TYPE LEGEND

PROPERTY LINE – LINE SURVEYED
RIGHT-OF-WAY
ADJOINING LINE – LINE NOT SURVEYED
OVERHEAD LINE
BUILDING SETBACK
EASEMENT
BUFFER
FLOOD HAZARD SOILS
GAS LINE

TOPOGRAPHIC SURVEY FOR

LEGACY COMMERCIAL CENTER LOT 6

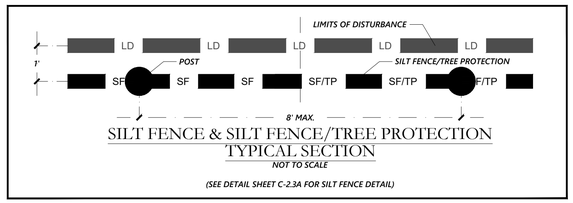
15 CASCADE COURT
OWNER: INNOVATIVE GLASS SOLUTIONS, LLC
REF: D.B. 2357 PAGE 1270
REF: M.B. 2023 PAGES 342-344
YOUNGSVILLE TOWNSHIP
FRANKLIN COUNTY, NORTH CAROLINA

40 20 0 40 80
SCALE 1"=40'

NOVEMBER 18, 2024
ZONED GB
PIN #1854-53-2484

CMP PROFESSIONAL LAND SURVEYORS, C-1525, 333 S. WHITE STREET, P.O. BOX 1253, WAKE FOREST N.C., 27588, (919) 556-3148

(X:\Projects\LEGACY COMMERCIAL-6 - JC)



SILT FENCE & SILT FENCE/TREE PROTECTION
TYPICAL SECTION
NOT TO SCALE

(SEE DETAIL SHEET C-2.3A FOR SILT FENCE DETAIL)

ON-SITE DISTURBED AREA
73,985 SF (1.70 AC)
OFF-SITE DISTURBED AREA
742 SF (0.02 AC)
TOTAL DISTURBED AREA
74,727 SF (1.72 AC)

STABILIZATION TIMEFRAMES

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones

AREA TO BE DEMOLISHED OR REMOVED

NOTES SYMBOLS

- (CE) Construction Entrance/Exit
- (DD) Temporary Diversion Ditch
- (PD) Permanent Diversion Ditch
- (IP) Inlet Protection
- (SB) Slope Blanket
- (SF) Silt Fence
- (SFO) Silt Fence Outlet
- (SW) Straw Wattle (12" see details)
- (TS) Temporary Seeding
- (PS) Permanent Seeding
- (TP) Tree Protection Fence
- (CW) Concrete Washout Area
- (DW) Silt Bag Dewatering
- (BM) Blanket Matting
- (OP) Outlet Protection/Plunge Pool

PATRICIA W. DILLON
PARCEL ID 006562
PIN 1854-55-3341
DB 2358 PG 1943
FRANKLIN COUNTY
ZONING: FCO GB
SIZE: 287 AC
EXIST. LAND USE: VACANT

+/- 17,218 SF SEPTIC SOILS
SEPTIC SYSTEM DESIGNED
BY OTHERS

CSX RAILROAD
80' R/W

CONTRACTOR TO CLEAR MINIMALLY TO ESTABLISHED FUNCTIONAL EROSION CONTROL BASIN BEFORE DISTURBING/CLEARING REMAINDER OF SITE TO LIMITS SHOWN. SEE SHEET C-1.2C FOR FURTHER BASIN INFORMATION

TSB#1

LOT 7
RJ SERVICE SOLUTION LLC
PARCEL ID 050169
PIN 1854-53-6312
DB 2382 PG 432
FRANKLIN COUNTY
ZONING: FCO GB
SIZE: 4.51 AC
EXIST. LAND USE: VACANT

APPROXIMATELY 1.7 ACRES TO BE CLEARED. PROVIDE TREE PROTECTION FENCE IN AREAS SHOWN (SILT FENCE MAY BE SUBSTITUTED FOR TREE PROTECTION FENCE AS APPROPRIATE) SEE SHEET C-2.5 FOR DETAIL

LIMITS OF LAND DISTURBANCE

CONTRACTOR TO CLEAR THIS AREA AFTER INSTALLATION OF SILT FENCE AND OUTLETS AS SHOWN. SCHEDULE DISTURBANCE SUCH THAT MINIMUM SEDIMENT RUNOFF OCCURS AND THAT AREAS DRAINING TO HAVE STABILIZED BY MINIMUM OF 7 DAYS.

LOT 6
INNOVATIVE GLASS SOLUTIONS LLC
PARCEL ID 050168
PIN 1854-53-2484
DB 2357 PG 1270
FRANKLIN COUNTY
ZONING: FCO GB
SIZE: 2.3 AC
EXIST. LAND USE: VACANT

SFO TYP.
SF TYP.
TP TYP.
CW (SEE SHT. C-2.3 FOR DETAIL)
EXISTING 1" WATER METER
EXISTING EDGE OF PAVEMENT
CASCADE COURT
50' PUBLIC R/W
CE LAT: 36.0658, LONG: -78.4742
EXISTING FIRE HYDRANT
EXISTING SCM
EXISTING 20' STORMWATER CONTROL MEASURE ACCESS & MAINTENANCE EASEMENT & PUBLIC DRAINAGE EASEMENT M.B. 2023 PAGES 342-344

LK BUILDING LLC
PARCEL ID 050182
PIN 1854-43-7191
DB ---- PG --- (GIS WEBSITE, NOT SHOWN)
FRANKLIN COUNTY
ZONING: FCO GB
SIZE: 1.95 AC
EXIST. LAND USE: VACANT

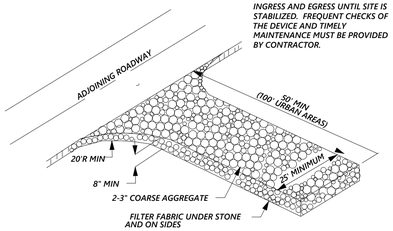
LOT 5
94 CYPRESS PARTNERS LLC
PARCEL ID 050167
PIN 1854-43-9031
DB 2377 PG 521
FRANKLIN COUNTY
ZONING: FCO GB
SIZE: 4.9 AC
EXIST. LAND USE: VACANT

LOT 4
FPI AT LEGACY LLC
PARCEL ID 050166
PIN 1854-52-2973
DB 2355 PG 689
FRANKLIN COUNTY
ZONING: FCO GB
SIZE: 2.65 AC
EXIST. LAND USE: VACANT

LOT 3
LK BUILDING LLC
PARCEL ID 050165
PIN 1854-53-5050
DB ---- PG --- (GIS WEBSITE, NOT SHOWN)
FRANKLIN COUNTY
ZONING: FCO GB
SIZE: 1.84 AC
EXIST. LAND USE: VACANT

NOTES:

APPLICABLE AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED BY CONTRACTOR.



NOTES:

WASHED STONE PAD TO BE 50'L X 25'W X 6"TH MINIMUM (100'L MIN IN URBAN AREAS). IF THE ADJOINING ROADWAY IS WIDER THAN 25', THEN THE WASHED STONE SHALL BE AS WIDE AS THE ADJOINING ROADWAY.

TURNING RADIUS OF 20' MINIMUM TO ACCOMMODATE LARGE TRUCKS SHALL BE PROVIDED.

ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM USE BY ALL CONSTRUCTION VEHICLES.

MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO ADJACENT STREETS.

PERIODIC TOP DRESSING WITH STONE (2" THICK) WILL BE NECESSARY. ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP IMMEDIATELY.

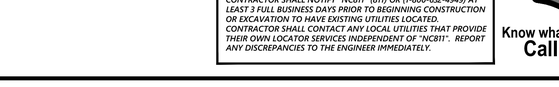
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE / EXIT

NOT TO SCALE

NOTES:

1) EXISTING CONDITION SURVEYED 12/4/24 BY CMP PROFESSIONAL LAND SURVEYORS, PC. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BY DETAILED SITE INSPECTION PRIOR TO SUBMITTING BID AND BEGINNING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
2) REFER TO SHEET C-1.2A FOR BOUNDARY INFORMATION.

***REFER TO SHEET C-1.1 FOR SPECIFIC EROSION CONTROL NOTES & C-2.3A-C FOR ADDITIONAL EROSION CONTROL DETAILS**



NOTES:

1. INSTALL CONCRETE WASHOUT PIT AT LOCATION(S) SHOWN ON PLANS.
2. LINE PIT WITH IMPERVIOUS FABRIC OR POLYETHYLENE SHEET. ANCHOR FABRIC INTO GROUND OUTSIDE PIT AS SHOWN.
3. MAXIMUM WATER AND SEDIMENT DEPTH IS 12". PIT MUST BE EXCAVATED AND RE-LINED WHEN DEPTH OF SEDIMENT REACHES 12" OR COMBINED WATER/SEDIMENT DEPTH EXCEEDS 12" FOLLOWING WASHOUT OF CONCRETE TRUCK.
4. ALLOW WATER TO EVAPORATE COMPLETELY PRIOR TO EXCAVATING PIT.
5. WASHOUT PIT MAY BE LOCATED NO CLOSER THAN 50' TO DRAINS, INLETS, OR SURFACE WATERS.

CONCRETE WASHOUT PIT

HANDLING OF CONCRETE NOTES:

1. CONCRETE MATERIALS ONSITE, INCLUDING EXCESS CONCRETE MUST BE CONTROLLED AND MANAGED TO AVOID CONTACT WITH SURFACE WATERS, WETLANDS OR BUFFERS. NO CONCRETE OR CEMENT SLURRY SHALL BE DISCHARGED FROM THE SITE.
2. ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING, OR SIMILAR-STRENGTH MATERIAL, AND FREE OF HOLES OR TEARS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
3. ALL WASHOUT OPERATIONS MUST BE AT LEAST 50 FEET FROM STORM DRAINS OR WATERBODIES UNLESS INDIVIDUAL SITE DIFFICULTIES MAKE THIS REQUIREMENT IMPRACTICAL. A REDUCTION OF THIS DISTANCE REQUIREMENT WILL BE ALLOWED ON A CASE-BY-CASE BASIS IF THE PERMITTING AUTHORITY DETERMINES THAT THE WASHOUT FACILITY WITH A REDUCED BUFFER WILL ADEQUATELY PROTECT THE WATER QUALITY IN ADJACENT STREAMS.
4. WASHOUT OF CONCRETE TRUCKS SHALL BE PERFORMED IN DESIGNATED AREAS ONLY.
5. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS ABOUT THE REQUIREMENT TO USE THE FACILITY.
6. THE HARDENED RESIDUE FROM THE CONCRETE WASHOUT WILL BE DISPOSED OF IN THE SAME MANNER AS OTHER NON-HAZARDOUS CONSTRUCTION WASTE MATERIALS OR MAY BE BROKEN UP AND USED ON SITE AS DEEMED APPROPRIATE BY THE CONTRACTOR. MAINTENANCE OF THE WASHOUT IS TO INCLUDE REMOVAL OF HARDENED CONCRETE. FACILITY SHALL HAVE SUFFICIENT VOLUME TO CONTAIN ALL THE CONCRETE WASTE RESULTING FROM WASHOUT AND A MINIMUM FREEBOARD OF 12 INCHES. FACILITY SHALL NOT BE FILLED BEYOND 95% CAPACITY AND SHALL BE CLEANED OUT ONCE 75% FULL UNLESS A NEW FACILITY IS CONSTRUCTED.
7. PORTABLE, REMOVABLE CONTAINERS MAY BE USED AS ABOVE GRADE CONCRETE WASHOUTS PROVIDED TRUCK OPERATORS ARE ABLE TO WASH INDIVIDUAL CHUTE SECTIONS OUT OVER THE WASHOUT.
8. IF STORED LIQUIDS HAVE NOT EVAPORATED AND THE WASHOUT IS NEARING CAPACITY, THE LIQUIDS MAY BE VACUUMED AND DISPOSED OF OFF-SITE IN A LEGALLY ACCEPTABLE MANNER OR DISPOSED OF ON-SITE IN A MANNER AND LOCATION THAT IT WILL NOT REACH STREAMS AND OTHER BODIES OF WATER. ON-SITE PITS AND OTHER INFILTRATION DEVICES WILL BE ACCEPTABLE IF THE DEVICE IS DESIGNED TO INFILTRATE THE ANTICIPATED VOLUME OF WATER AND APPROVED PRIOR TO ITS USE BY THE PERMITTING AUTHORITY.

GRAPHIC SCALE
15 0 7.5 15 30 60
(IN FEET)
1 inch = 30 ft.

CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NC811". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

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NORTH CAROLINA PROFESSIONAL SEAL 036242 ENGINEER CHAD E. ABBOTT 5/22/25

BY	DATE	REVISIONS
DSF	5/22/25	6
DSF	3/18/25	5 FRANKLIN COUNTY COMMENTS - MARCH 28TH, 2025
		4
		3
		2
		1 FIRST ISSUED

CONSTRUCTION DRAWINGS
INNOVATIVE GLASS SOLUTIONS
15 CASCADE CT, YOUNGSVILLE NC 27596
FRANKLIN COUNTY

EX. CONDITIONS & DEMO.

C3 PROJECT #: 22-158
REVIEW PROJECT #: Z-25-343
SHEET #: C-1.2B

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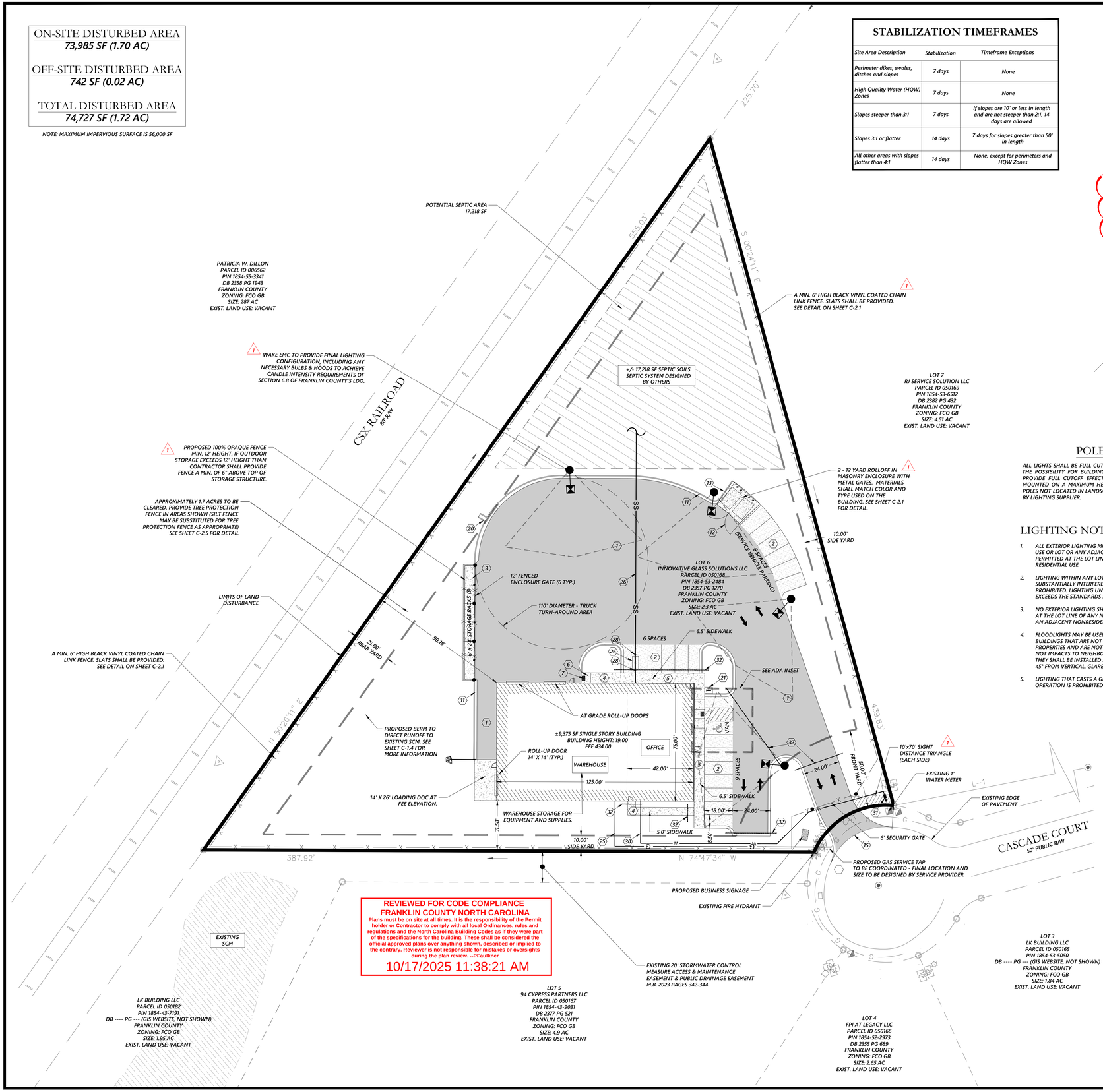
ON-SITE DISTURBED AREA
73,985 SF (1.70 AC)

OFF-SITE DISTURBED AREA
742 SF (0.02 AC)

TOTAL DISTURBED AREA
74,727 SF (1.72 AC)

NOTE: MAXIMUM IMPERVIOUS SURFACE IS 56,000 SF



REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. --PFaulkner
10/17/2025 11:38:21 AM

STABILIZATION TIMEFRAMES

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones

PARKING SPACE CALCS

(PER UDO SEC. 6.4.1)

OFFICE REQUIREMENTS: (ALL OTHER OFFICE)
OFFICE SF: 3150 SF

OFFICE PARKING REQUIREMENTS:
MIN. REQUIREMENT - OFFICE (ALL OTHER OFFICE)
- *1 PER 300 SF, 3150 / 300 = 10.5 = 11*

MAX. REQUIREMENT - OFFICE (ALL OTHER OFFICE)
- *1 PER 250 SF, 3150 / 250 = 12.6 = 13*

WAREHOUSE REQUIREMENTS:
BUILDING OCCUPANCY: 4 EMPLOYEES & 6 TRUCKS

MIN. REQUIREMENT - WAREHOUSING
- *1 PER 2 EMPLOYEES DURING THE SHIFT OF MAXIMUM EMPLOYMENT PLUS 1 SPACE FOR EVERY TRUCK = 2+6 = 8 SPACES*

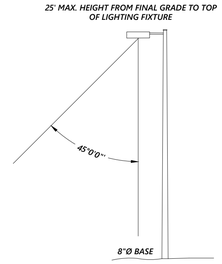
MAX. REQUIREMENT - WAREHOUSING
- *1 PER EMPLOYEE DURING THE SHIFT OF MAXIMUM EMPLOYMENT PLUS 1 SPACE FOR EVERY TRUCK = 4+6 = 10 SPACES*

TOTAL REQUIRED:
MIN. REQUIREMENT: TOTAL (OFFICE + WAREHOUSE) = 19
MAX. REQUIREMENT: TOTAL (OFFICE + WAREHOUSE) = 23

PROPOSED SPACES 21 (20 STANDARD, 1 VAN ACCESSIBLE)

3 *BICYCLE PARKING REQUIRED: OFFICE - WAREHOUSING: 2 SPACES*
BICYCLE PARKING PROVIDED: 2 SPACES

25' MAX. HEIGHT FROM FINAL GRADE TO TOP OF LIGHTING FIXTURE



POLE MOUNTED PARKING LIGHT

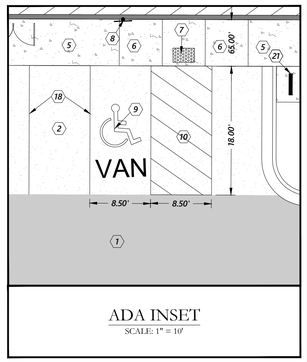
ALL LIGHTS SHALL BE FULL CUT OFF FIXTURES AND APPROVED BY PLANNING PRIOR TO INSTALLATION. THERE IS THE POSSIBILITY FOR BUILDING LIGHTING WITH A GOOSENECK FIXTURE IF NEEDED WITH RECESSED BULBS TO PROVIDE FULL CUTOFF EFFECTS. ANY FUTURE SITE LIGHTING WILL BE RECTANGULAR SHOEBOX AREA LIGHT, MOUNTED ON A MAXIMUM HEIGHT OF 25' POLE. PROVIDE 18" DIA. X 48" HGT. CONCRETE PEDESTAL FOR ANY POLES NOT LOCATED IN LANDSCAPE ISLANDS. POLE FOUNDATION AND/OR PEDESTAL DESIGN SHALL BE PROVIDED BY LIGHTING SUPPLIER.

LIGHTING NOTES (PER FRANKLIN LDO) 1

1. *ALL EXTERIOR LIGHTING MUST BE SHIELDED OR DIRECTED AWAY FROM ANY ADJACENT USE OR LOT OR ANY ADJACENT PUBLIC STREET. A MAXIMUM OF 0.2 FOOTCANDLES IS PERMITTED AT THE LOT LINE OF ANY RESIDENTIAL ZONING DISTRICT PROPERTY OR RESIDENTIAL USE.*
2. *LIGHTING WITHIN ANY LOT THAT UNNECESSARILY ILLUMINATES ANY OTHER LOT AND SUBSTANTIALLY INTERFERES WITH THE USE OR ENJOYMENT OF SUCH OTHER LOT IS PROHIBITED. LIGHTING UNNECESSARILY ILLUMINATES ANOTHER LOT IF IT CLEARLY EXCEEDS THE STANDARDS SET FORTH IN THIS SECTION.*
3. *NO EXTERIOR LIGHTING SHALL CAUSE ILLUMINATION IN EXCESS OF ONE-FOOT CANDLE AT THE LOT LINE OF ANY NONRESIDENTIAL ZONING DISTRICT PROPERTY WHICH ABUTS AN ADJACENT NONRESIDENTIAL ZONED PROPERTY.*
4. *FLOODLIGHTS MAY BE USED IN THE REAR OF NONRESIDENTIAL OR MIXED-USE BUILDINGS THAT ARE NOT ADJACENT TO RESIDENTIAL USES OR RESIDENTIALLY ZONED PROPERTIES AND ARE NOT VISIBLE FROM PUBLIC OR PRIVATE ROADWAYS IF THERE ARE NOT IMPACTS TO NEIGHBORING PROPERTIES. WHERE FLOODLIGHTS ARE NECESSARY, THEY SHALL BE INSTALLED SUCH THAT THE FIXTURE SHALL BE AIMED DOWN AT LEAST 45° FROM VERTICAL. GLARE SHIELDS MUST BE ADDED TO REDUCE GLARE.*
5. *LIGHTING THAT CASTS A GLARE OR CREATES ANY INTERFERENCE WITH VEHICLE OPERATION IS PROHIBITED.*

KEY NOTES:

1. *HEAVY DUTY ASPHALT PAVING: (DRIVE AISLES)* — *REFER TO DETAIL SHEET C-2.1.*
2. *STANDARD DUTY ASPHALT PAVING: (PARKING SPACES)* — *REFER TO DETAIL SHEET C-2.1.*
3. *CONCRETE PAVING:* — *REFER TO DETAIL SHEET C-2.2.*
4. *CONCRETE SIDEWALK:* — *REFER TO DETAIL SHEET C-2.1.*
5. *TURNDOWN CONCRETE SIDEWALK:* — *REFER TO DETAIL SHEET C-2.1.*
6. *CURB RAMP:* — *REFER TO DETAIL ON SHEET C-1.4*
7. *ACCESSIBLE WARNING DOMES:* — *REFER TO DETAIL SHEET C-2.1.*
8. *ACCESSIBLE PARKING SIGN: MOUNTED TO BUILDING AT APPROPRIATE HEIGHT* — *REFER TO DETAIL SHEET C-2.1.*
9. *ACCESSIBLE PARKING SYMBOL:* — *REFER TO DETAIL SHEET C-2.1.*
10. *ACCESSIBLE ACCESS UNLOADING ZONE: SLOPE 2% MAX. EACH WAY (ADA COMPLIANT) AND STRIPE AS SHOWN.*
11. *18" CONCRETE CURB & GUTTER:* — *REFER TO DETAIL SHEET C-2.2.*
12. *DUMPSTER ENCLOSURE GATE:* — *REFER TO DETAIL SHEET C-2.2.*
13. *DUMPSTER ENCLOSURE:* — *REFER TO DETAIL SHEET C-2.2.*
14. *PARKING LOT LIGHTING: NOT USED.*
15. *LIMITS OF NEW PAVING:*
16. *TURNDOWN / ROLL DOWN CURB:* — *REFER TO DETAIL SHEET C-2.1.*
17. *STANDING CURB:* — *REFER TO DETAIL SHEET C-2.1.*
18. *STRIPING: PROVIDE 4" WIDE PARKING LOT STRIPING AS SHOWN. USE HIGHWAY MARKING PAINT - WHITE (2 COATS).*
19. *SIGN LOCATION: (TBD) ALL SIGNS TO BE PERMITTED SEPARATELY*
20. *CONCRETE FLUME:* — *REFER TO DETAIL SHEET C-2.1.*
21. *BIKE RACK:* — *REFER TO DETAIL SHEET C-2.1* 1
22. *UNDERGROUND ELECTRIC (PRIMARY): COORD. WITH WAKE EMC FOR EXACT TIE LOCATION.*
23. *UNDERGROUND ELECTRIC (SECONDARY) & TELEPHONE LINES : SEE BUILDING PLANS BY OTHERS. CONTRACTOR SHALL COORDINATE W/ PME PLANS FOR LOCATIONS W/ IN 5' OF BUILDING*
24. *TRANSFORMER: PAD MOUNTED*
25. *GAS LINE (UNDERGROUND): TO BE DESIGNED BY UTILITY PROVIDER - TAP TO METER*
26. *4" SCH. 40 PVC SEWER SERVICE LINE: SEPTIC TANK TO BE DESIGNED BY OTHERS*
27. *SEPTIC SYSTEM TO BE DESIGNED BY OTHERS*
28. *SS CLEANOUT: ADDITIONAL CLEANOUTS TO BE LOCATED BY OTHERS*
29. *1" METER: COORDINATE WITH FRANKLIN COUNTY PUBLIC UTILITIES*
30. *1" PE WATER LINE:*
31. *2" RPZ BACKFLOW IN ABOVE GROUND ASSEMBLY HEATED ENCLOSURE:*
32. *2 - 2" PVC CONDUITS FOR IRRIGATION LINES AND SITE LIGHTING WIRING (SEE UTILITY PLAN)*



ADA INSET
SCALE 1" = 10'

GRAPHIC SCALE
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(IN FEET)
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NORTH CAROLINA PROFESSIONAL SEAL 036242 7/1/25 ENGINEER CHAD E. ABBOTT

	DATE	BY
6		
5		
4	7/1/25	DSF
3	6/17/25	DSF
2	5/22/25	DSF
1	3/18/25	DSF
	DATE	BY

REVISIONS
FIRST ISSUED
FRANKLIN COUNTY COMMENTS - MARCH 28TH, 2025
STORMWATER COMMENTS - APRIL 2ND, 2025
FRANKLIN COUNTY COMMENTS - JUNE 11TH, 2025

CONSTRUCTION DRAWINGS
INNOVATIVE GLASS SOLUTIONS
15 CASCADE CT, YOUNGSVILLE NC 27596
FRANKLIN COUNTY

SITE & UTILITY PLAN 1

C3 PROJECT #: 22-158
REVIEW PROJECT #: Z-25-343
SHEET #: C-1.3

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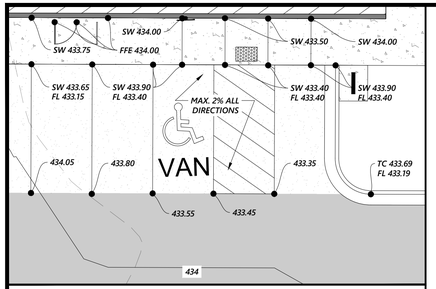

ADA INSET

SCALE: 1" = 10'

ON-SITE DISTURBED AREA
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OFF-SITE DISTURBED AREA
742 SF (0.02 AC)
TOTAL DISTURBED AREA
74,727 SF (1.72 AC)

NOTE: MAXIMUM IMPERVIOUS SURFACE IS 56,000 SF

STABILIZATION TIMEFRAMES

Site Area Description	Stabilization	Timeframe Exceptions
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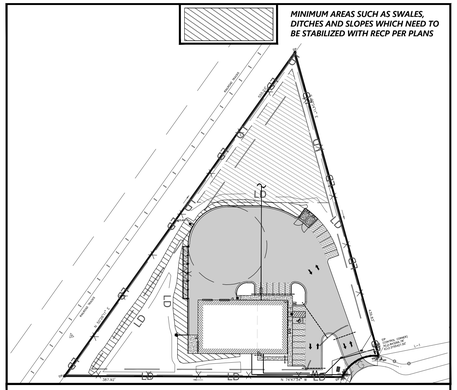
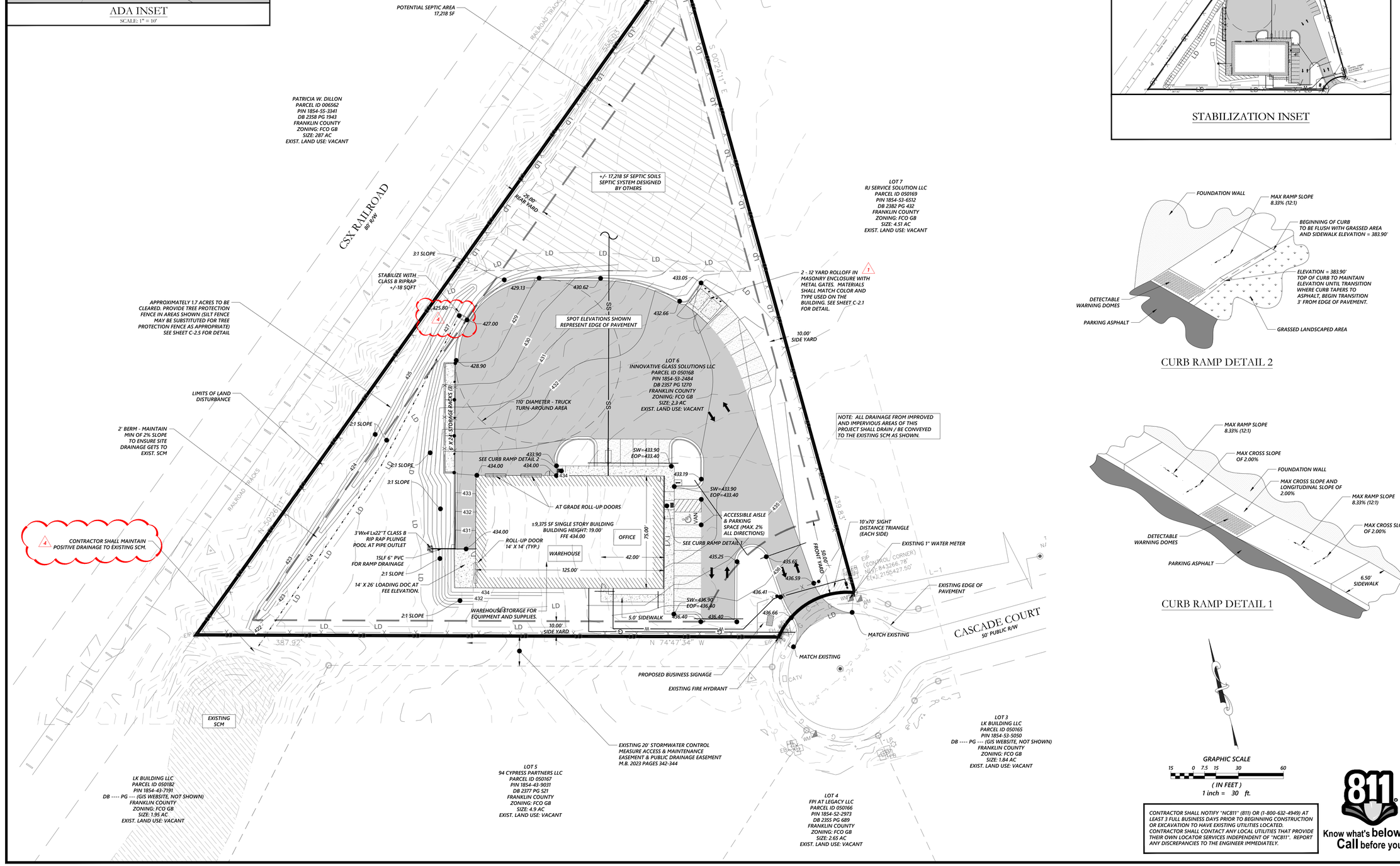
*REFER TO SHEET C-1.1 FOR GRADING NOTES.



STABILIZATION INSET



CURB RAMP DETAIL 2

CURB RAMP DETAIL 1

GRAPHIC SCALE

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(IN FEET)

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NORTH CAROLINA PROFESSIONAL SEAL 036242 ENGINEER CHAD E. ABBOTT

6			
5	STORMWATER COMMENTS - JULY 2ND, 2025	7/25/25	DSF
4	STORMWATER COMMENTS - JUNE 11TH, 2025	7/1/25	DSF
3	FRANKLIN COUNTY COMMENTS - APRIL 2ND, 2025	6/17/25	DSF
2	STORMWATER COMMENTS - MARCH 28TH, 2025	5/22/25	DSF
1	FRANKLIN COUNTY COMMENTS	3/18/25	DSF
	FIRST ISSUED	DATE	BY
	REVISIONS		

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FRANKLIN COUNTY

GRADING & STORM DRAINAGE PLAN

C3 PROJECT #: 22-158

REVIEW PROJECT #: Z-25-343

SHEET #: C-1.4

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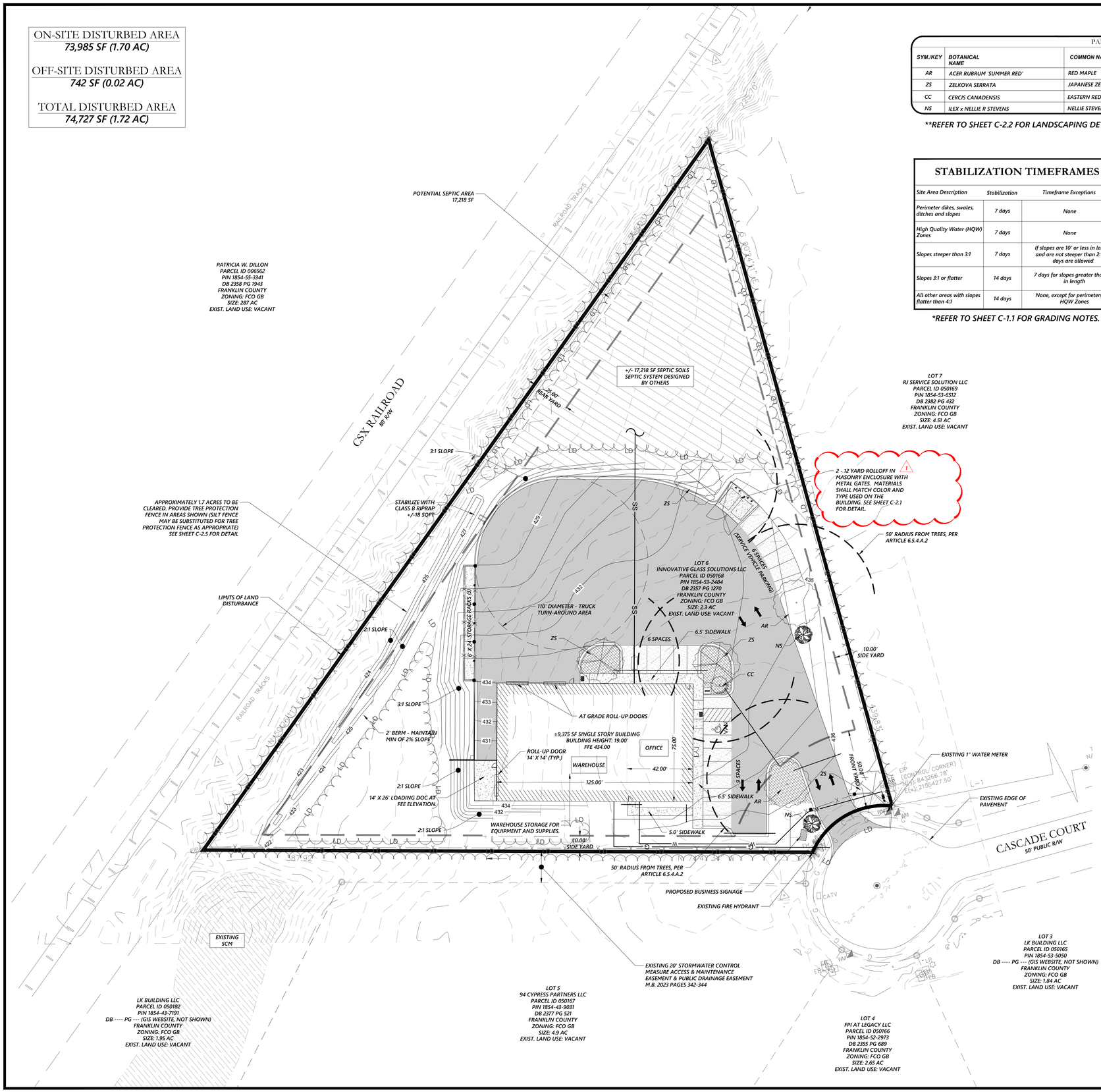

PARKING LOT & STREET TREES - PLANTING SCHEDULE

SYM./KEY	BOTANICAL NAME	COMMON NAME	QUANTITY	SPECIFICATION						
				CALIPER	PLANTING HGT	MATURE HGT	ROOT	SPACING	SYMBOL	NOTES
AR	ACER RUBRUM 'SUMMER RED'	RED MAPLE	2	2"	8' - 10'	40' - 70'	B&B	AS SHOWN		DEC. CANOPY
ZS	ZELKOVA SERRATA	JAPANESE ZELKOVA	4	2"	8' - 10'	50' - 80'	B&B	AS SHOWN		DEC. CANOPY
CC	CERCIS CANADENSIS	EASTERN REDBUD	1		8'	15' - 30'	3 GAL	AS SHOWN		DEC. US
NS	ILEX x NELLIE R STEVENS	NELLIE STEVENS HOLLY	2		4' - 6'	15' - 25'	3 GAL	AS SHOWN		EG US

**REFER TO SHEET C-2.2 FOR LANDSCAPING DETAILS*

STABILIZATION TIMEFRAMES

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones

**REFER TO SHEET C-1.1 FOR GRADING NOTES.*

LANDSCAPING STANDARDS

PARKING LOT LANDSCAPING (SECTION 6.5.4)
1. REQUIRED PLANTINGS:
   A. CANOPY: (1/20 SPACES) 21 / 20 = 1 TREES
   B. UNDERSTORY: (2/20 SPACES) 21 / 20 = 1.05 * 2 = 2 TREE
2. PROPOSED PLANTINGS:
   A. CANOPY: 5 TREE
   B. UNDERSTORY: 2 TREE

STREET TREES (SECTION 6.5.5)
PER M.B. 2023 PAGE 344 "THE LANDSCAPING PLAN WILL BE IN ACCORDANCE WITH ARTICLE 6.5.5 STREET TREES OF THE FRANKLIN COUNTY UNIFIED DEVELOPMENT ORDINANCE."
3. REQUIRED PLANTINGS: FRONTAGE =38 LF
   A. CANOPY: (1/40 LF) 38 LF / 40 LF = 1 TREES
   B. UNDERSTORY: (1/30 LF) 38 LF/ 30 LF = 1 TREES
   TO BE MET BY STREET YARD BUFFERING (SEE BELOW)

STREET YARD BUFFERING (SECTION 6.6.1)
1. REQUIRED PLANTINGS: FRONTAGE =38 LF
   A. CANOPY: (1/40 LF) 38 LF / 40 LF = 1 TREES
   B. UNDERSTORY: (1/30 LF) 38 LF/ 30 LF = 1 TREES
2. PROPOSED PLANTINGS: SEE NOTE BELOW*
   A. CANOPY: 1 TREES
   B. UNDERSTORY: 1 TREES

PERIMETER BUFFERING (SECTION 6.6.2)
FIGURE 6-8, GB - GB = 0

NOTE:
1. THE OWNER OF THE PROPERTY IS RESPONSIBLE FOR THE CONTINUED PROPER MAINTENANCE OF ALL LANDSCAPING MATERIALS AND SHOULD KEEP THEM IN A PROPER, NEAT, AND ORDERLY APPEARANCE, FREE FROM REFUSE AND DEBRIS. ALL DEAD OR UNHEALTHY PLANT MATERIAL SHOULD IMMEDIATELY BE REPLACED TO MAINTAIN THE QUALITY OF THE LANDSCAPING. (ARTICLE 6 NOTATE ON THE SITE PLAN: ALL PLANTS SHALL HAVE A MINIMUM 2" CALIPER (MEASURE AT 6" ABOVE GROUND) AND A MINIMUM HEIGHT OF 8' (MEASURED ABOVE GROUND). ARTICLE 6.5.4.A.3.5.3.A.4)

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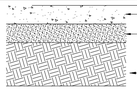
	DATE	BY
1	FRANKLIN COUNTY COMMENTS - MARCH 28TH, 2025	5/22/25	DSF
2	FIRST ISSUED	3/18/25	DSF
3			
4			
5			
6			
	REVISIONS		

CONSTRUCTION DRAWINGS
INNOVATIVE GLASS SOLUTIONS
15 CASCADE CT, YOUNGSVILLE NC 27596
FRANKLIN COUNTY

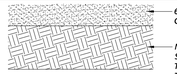
LANDSCAPE PLAN

C3 PROJECT #: 22-158
REVIEW PROJECT #: Z-25-343
SHEET #: C-1.6

C:\DWG\ACTIVE\2022\22-158\COS - 22-158\Current Drawings\22-158 - Landscape Plan.dwg, 5/19/2025 1:13:45 PM, Daniel Hosier, DWG To PDF.pc3, 1:1

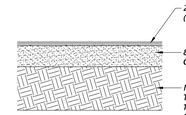


CONCRETE

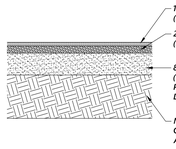


GRAVEL PARKING DETAIL

NOT TO SCALE



LIGHT DUTY ASPHALT

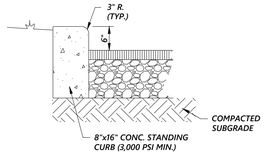


HEAVY DUTY ASPHALT

PAVING DETAILS

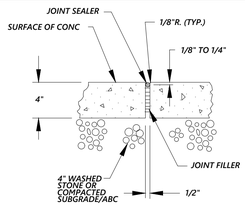
NOT TO SCALE

NOTE: PAVING DETAILS PROVIDED WITHOUT GEOTECHNICAL RECOMMENDATIONS. SECTIONS MAY NEED TO BE REVISED UPON CONSTRUCTION PER ONSITE GEOTECH RECOMMENDATIONS.



STANDING CURB

NOT TO SCALE

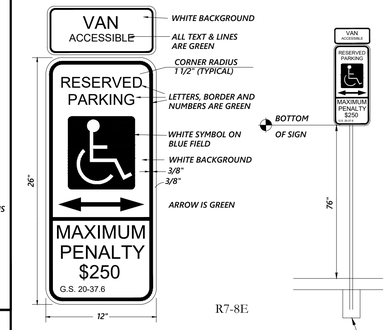


NOTES:

- *A GROOVE JOINT 1" DEEP W/ 1/8" RADIUS SHALL BE REQUIRED IN THE CONC. SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.*
- *FINISHED SURFACE OF SIDEWALK TO BE BROOM FINISHED, PERPENDICULAR TO TRAFFIC FLOW.*
- *CONCRETE MIX DESIGN TO MEET/EXCEED NCDOT REQUIREMENTS. (CLASS A)*

SIDEWALK DETAIL

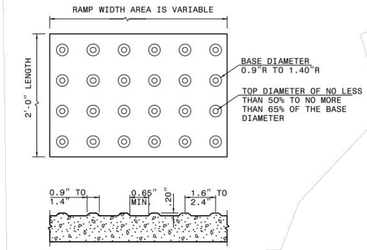
NOT TO SCALE



ADA PARKING SIGN

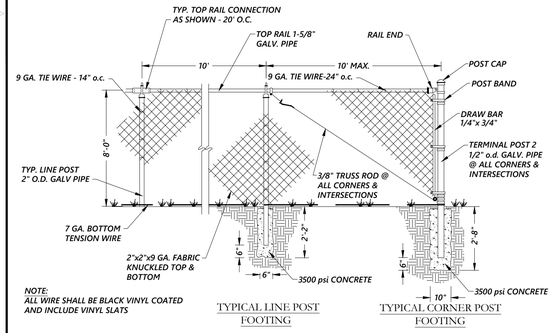
NOT TO SCALE

NOTES:
1. DETECTABLE WARNING DOMES WILL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
2. DETECTABLE WARNING DOMES WILL CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



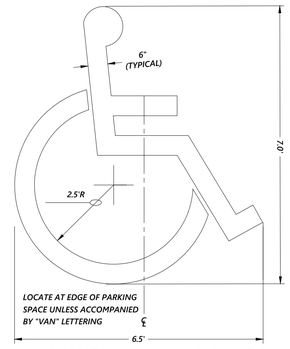
DETECTABLE WARNING DOME

NOT TO SCALE



CHAIN LINK FENCE DETAIL

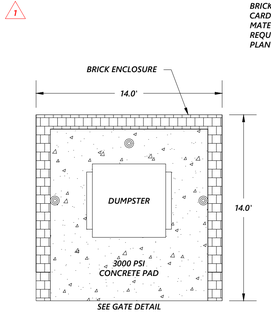
NOT TO SCALE



ACCESSIBLE PARKING SYMBOL

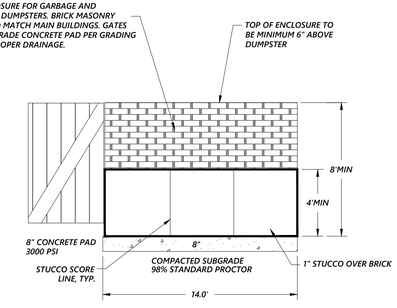
NOT TO SCALE

7



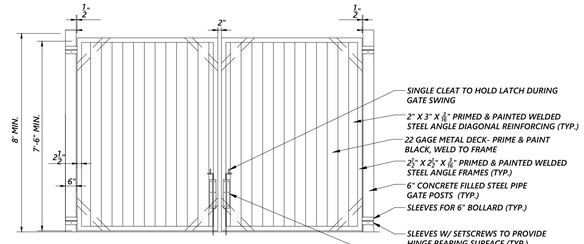
DUMPSTER PLAN

NOT TO SCALE



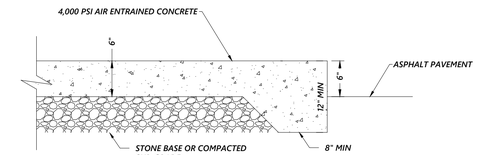
DUMPSTER ENCLOSURE ELEVATION

NOT TO SCALE



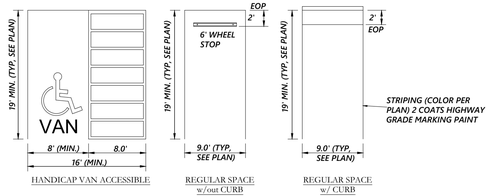
DUMPSTER GATE ELEVATION

NOT TO SCALE



TURN DOWN SIDEWALK

NOT TO SCALE



*NOTE: MIN. OF 24' TWO-WAY AISLE WIDTH

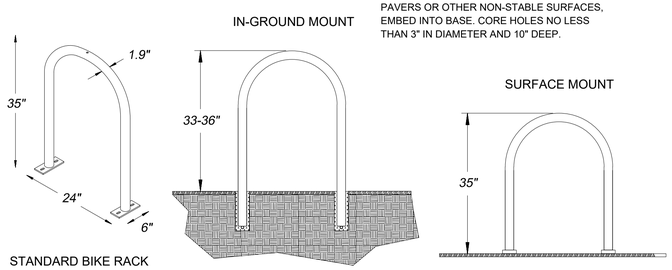
PARKING SPACES - TYPICAL

NOT TO SCALE

BIKE RACK INSTALLATION:

SURFACE MOUNT - WHEN INSTALLED ON CONCRETE SURFACE, USE 3/8" ANCHORS TO PLATE MOUNT. SHIM AS NECESSARY TO ENSURE VERTICAL PLACEMENT.

IN-GROUND MOUNT - WHEN INSTALLED ON PAVERS OR OTHER NON-STABLE SURFACES, EMBED INTO BASE. CORE HOLES NO LESS THAN 3" IN DIAMETER AND 10" DEEP.



BIKE RACK DETAIL

NOT TO SCALE

INNOVATIVE GLASS SOLUTIONS, LLC
7145 WINDING WAY
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919.435.8437
kyle@divisionsightrentals.com

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Creedmoor, NC 27522-0361
chad@c3designeng.com
919.625.7368

NORTH CAROLINA PROFESSIONAL SEAL 036242 ENGINEER CHAD E. ABBOTT 5/22/25

6			
5			
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3			
2	FRANKLIN COUNTY COMMENTS - MARCH 28TH, 2025	5/22/25	DSF
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CONSTRUCTION DRAWINGS
INNOVATIVE GLASS SOLUTIONS
15 CASCADE CT, YOUNGSVILLE NC 27596
FRANKLIN COUNTY

SITE & UTILITY DETAILS

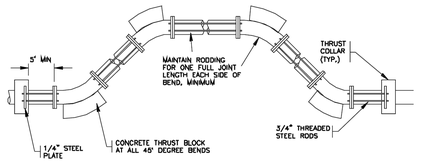
C3 PROJECT #: 22-158

REVIEW PROJECT #: Z-25-343

SHEET #: **C-2.1**

z:\00-PROJECTS\2022\22-158\CAD\L - 22-158 Current Drawings\22-158_D-Dwg, 8/5/2025 4:18:37 PM, Daniel Hanes, DWG To PDF.pc3, 1:1

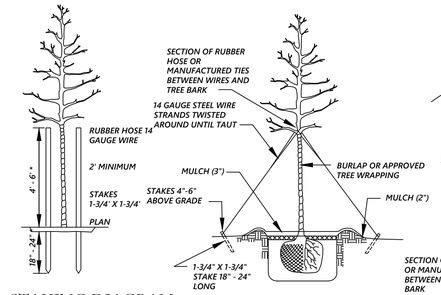
REVISIONS			
SYM.	DESCRIPTION	DATE	BY



STATIC THRUST SIZE OF 45° BEND	NUMBER OF IN POUNDS	NUMBER OF RODS REQUIRED
6"	4,328	2
8"	7,694	2
12"	17,312	2
16"	30,779	4
20"	48,091	6
24"	69,252	8

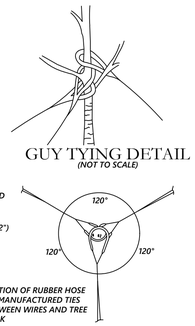
NOTES:
1. ONCE INSTALLED AND TIGHT, THE STEEL RODS AND BOLTS SHALL BE COATED WITH 2 COATS OF BITUMINOUS BASE PAINT.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.

FRANKLIN COUNTY PUBLIC UTILITIES	
DRAWING #	
W-8	VERTICAL BENDS



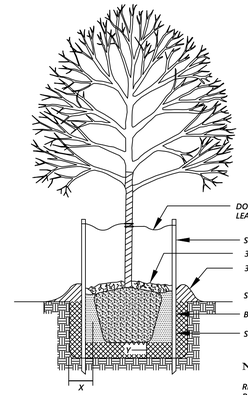
STAKING DIAGRAM
FOR TREES 6' TO 10' LARGER (NOT TO SCALE)

TREE GUYING DIAGRAM
FOR TREES 10' OR LARGER (NOT TO SCALE)



GUY TYING DETAIL
(NOT TO SCALE)

GUY SPACING DETAIL
(NOT TO SCALE)



SCHEDULE FOR PLANT HOLE SIZE

BARE ROOT, CONTAINER OR BALL SIZE	X	Y
5" TO 30"	8"	4"
30" OR GREATER	12"	6"

NOTES

REMOVE BURLAP FROM TOP OF ROOT BALL BEFORE BACKFILLING AROUND BALL IS COMPLETED

ALL TREES WHICH ARE SMOOTH BARKED AT THE TIME OF PLANTING AND HAVE MORE THAN 2' OF CLEAR TRUNK SHALL BE WRAPPED

ALL TREE WRAPPING SHALL EXTEND FROM THE TOP OF THE BACKFILL TO THE LOWERMOST TREE BRANCHES

TREE PLANTING AND STAKING

STAKING - TREES WILL BECOME STRONGER FASTER WHEN THE TOP 2/3 OF THE TREE IS FREE TO SWAY. TIE THE TRUNK LOOSELY WITH WIDE STRIPS OF RUBBER OR CLOTH ABOUT 1/3 UP THE TRUNK AND TIE TO THREE STAKES POSITIONED EVENLY AROUND THE TRUNK. STAKES SHOULD BE DRIVEN DEEPLY INTO THE GROUND TO PREVENT DISLODGING. CHECK AT LEAST EVERY THREE MONTHS FOR BINDING OR OTHER PROBLEMS. STAKES AND TIES SHOULD BE REMOVED SIX MONTHS TO ONE YEAR AFTER PLANTING.

WRAPPING - WRAP ONLY THIN BARKED TREES IF THEY HAVE BEEN REMOVED FROM SHADE TO WHERE THE TRUNK IS EXPOSED TO DIRECT SUNLIGHT DURING THE DAY. WRAPPING SHOULD BEGIN AT THE BOTTOM AND WORK UP. WRAPPING MATERIAL SHOULD NOT TRAP OR HOLD WATER.

PRUNING - CLEANLY PRUNE DAMAGED BRANCHES AND ROOTS AT THIS TIME. ADDITIONAL PRUNING SHOULD BE ONLY FOR SHAPING PURPOSES.

PLANTING - ALL SYNTHETIC MATERIALS SHALL BE CLEARED FROM THE ROOTS, TRUNK AND CROWN OF THE PLANT. THE ROOT BALL MEDIUM SHOULD BE SHAKEN GENTLY FROM THE ROOT BALL IF IT IS A SOILESS MIXTURE. LOOSEN AND SPREAD THE ROOTS IN THE PLANTING HOLE. DAMAGED ROOTS AND ROOTS WHICH ENCIRCLE THE TRUNK SHOULD BE CLEANLY PRUNED. SET THE PLANT SO THAT IT WILL BE AT ITS ORIGINAL DEPTH OR SLIGHTLY ABOVE EXISTING GRADE. BACKFILL WITH SOIL FROM THE HOLE. TAMP AND WATER THE SOIL TO PREVENT AIR POCKETS. DO NOT AMEND THE SOIL AT THIS POINT EXCEPT TO AMEND THE PH.

WATERING - THE BACKFILL AND ROOTS OF ALL NEWLY SET PLANTS SHOULD BE WATERED AS BACKFILLING IS BEING DONE SO THAT THE SOIL AND ROOTS ARE THOROUGHLY SOAKED.

TREE PLANTING AND STAKING DETAIL
NTS

INNOVATIVE GLASS SOLUTIONS, LLC
7145 WINDING WAY
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919.435.8437
kyle@divisionrightrentals.com

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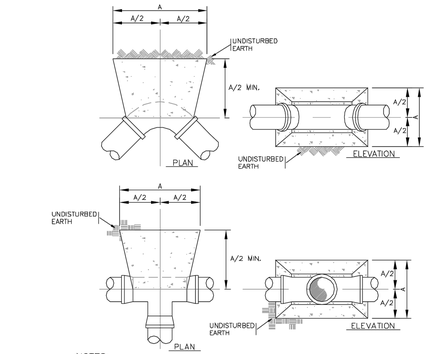
info@c3engineering.com
919.625.7368

NORTH CAROLINA PROFESSIONAL SEAL 036242 ENGINEER CHAD E. ABBOTT 5/22/25

REVISIONS			
SYM.	DESCRIPTION	DATE	BY



NOTES:
1. THRUST BLOCKS SHALL BE CONSTRUCTED OF 2500 P.S.I. CONCRETE
2. INSTALL TAR PAPER AROUND BEND OR FITTING TO PREVENT BONDING OF CONCRETE.
3. PRESSURE TEST AT 200 P.S.I.

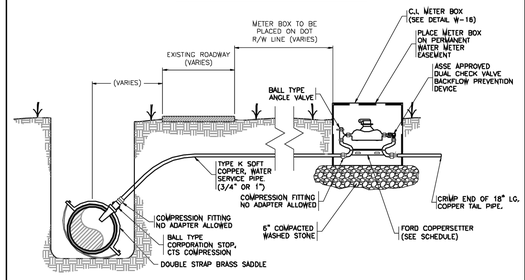
BEND / FITTING	DIMENSION A (FEET) PIPE SIZE (NOM. DIA. IN INCHES)								
	4	6	8	10	12	16	18	20	24
90° BEND	1.4	2.0	2.7	3.4	4.0	5.4	6.0	6.7	8.0
45° BEND	1.0	1.5	2.0	2.5	3.0	4.0	4.5	5.0	5.9
22 1/2° BEND	0.8	1.1	1.5	1.8	2.2	2.9	3.2	3.6	4.3
11 1/4° BEND	0.5	0.8	1.0	1.3	1.5	2.0	2.3	2.5	3.0
TEE BRANCH/DEAD END	1.2	1.7	2.3	2.9	3.4	4.5	5.1	5.7	6.8

CONCRETE THRUST BLOCK DETAIL FOR PRESSURE MAIN HORIZONTAL BENDS AND TEES
N.T.S.

FRANKLIN COUNTY PUBLIC UTILITIES	
DRAWING #	
W-6	CONCRETE THRUST BLOCKING

REVISIONS			
SYM.	DESCRIPTION	DATE	BY

FORD CATALOG NO'S.	
5/8" X 3/4" COPPERSETTER	VH47Z-12W-41-33G
1" COPPERSETTER	VH47A-12W-41-44G
3/4" CORPORATION STOP	FB1000-3G
1" CORPORATION STOP	FB1000-4G
SADDLE	STYLE 202B

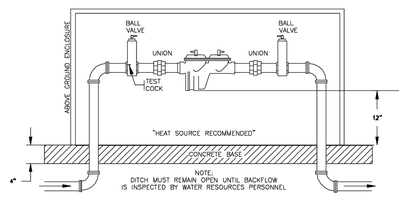


3/4" OR 1" TYPICAL RESIDENTIAL SERVICE CONNECTION
N.T.S.

NOTES:
1. DOUBLE STRAP BRASS SADDLE REQUIRED FOR PVC PIPE.
2. DUCTILE IRON PIPE MAY BE DIRECT TAPPED.
3. ALL FITTINGS CTS COMPRESSION TYPE.
4. METERS SHALL BE 3/4":1" AMCO, NEPTUNE OR APPROVED EQUAL, REGISTRATION IN US GALLONS.

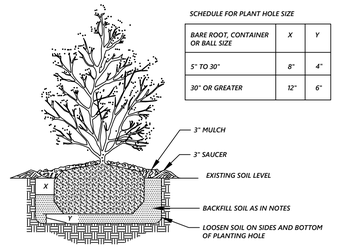
FRANKLIN COUNTY PUBLIC UTILITIES	
DRAWING #	
W-13	3/4" OR 1" TYPICAL RESIDENTIAL SERVICE CONNECTION

REVISIONS			
SYM.	DESCRIPTION	DATE	BY



1. THE BACKFLOW DEVICE SHALL BE WITHIN 5' OF AND ON THE PROPERTY SIDE OF THE METER. – FOR DOMESTIC IRRIGATION THE BACKFLOW DEVICE SHALL BE WITHIN 5' OF THE METER.
2. ALL REDUCED PRESSURE BACKFLOW DEVICES SHALL BE INSTALLED ABOVE GROUND IN A HORIZONTAL POSITION.
3. SHUT OFF VALVES SHALL BE FULL PORT, LINE SIZE, LEVER TYPE, AND 1/4 TURN BRONZE BALL VALVES.
4. DEVICES SHALL HAVE TWO RESILIENT SEAT BRONZE UNIONS BETWEEN THE SHUT OFF VALVES FOR REMOVAL OF THE DEVICE.
5. THE DEVICE SHALL HAVE 4 TEST COCKS WITH ONE BEING INSTALLED ON THE CITY SIDE OF THE INLET BALL VALVE.
6. APPROVED UNITS: WILKINS, WATTS, FEBCO, CONBRACO
7. APPROVED ABOVE GROUND ENCLOSURES: "HOT BOX". HYDROCOIL, SWL OR BFP PRODUCTS MOD. BOX MUST HAVE DRAIN.
8. TANDEM BACKFLOWS REQUIRED IF SERVING MULTIPLE USERS OR SERVICE CANNOT BE INTERRUPTED.
9. MUST BE TESTED UPON INSTALLATION OR PRIOR TO PUBLIC USE.

FRANKLIN COUNTY PUBLIC UTILITIES	
DRAWING #	
W-20	3/4" - 2" REDUCED PRESSURE BACKFLOW PREVENTER



SCHEDULE FOR PLANT HOLE SIZE

BARE ROOT, CONTAINER OR BALL SIZE	X	Y
5" TO 30"	8"	4"
30" OR GREATER	12"	6"

SHRUB PLANTING NOTES

PRUNING - CLEANLY PRUNE DAMAGED BRANCHES AND ROOTS AT THIS TIME. ADDITIONAL PRUNING SHOULD BE ONLY FOR SHAPING PURPOSES.

PLANTING - ALL SYNTHETIC MATERIALS SHOULD BE REMOVED FROM THE ROOTS, TRUNK OR CROWN OF THE PLANT. THE ROOT BALL MEDIUM SHOULD BE SHAKEN GENTLY FROM THE ROOT BALL IF IT IS A SOILESS MIXTURE. LOOSEN AND SPREAD THE ROOTS IN THE PLANTING HOLE. DAMAGED ROOTS AND ROOTS WHICH ENCIRCLE THE TRUNK SHOULD BE CLEANLY PRUNED. SET THE PLANT SO THAT IT WILL BE AT ITS ORIGINAL DEPTH OR SLIGHTLY ABOVE THE EXISTING GRADE. BACKFILL WITH SOIL FROM THE HOLE. TAMP AND WATER THE SOIL TO PREVENT AIR POCKETS. DO NOT AMEND THE SOIL AT THIS POINT EXCEPT TO AMEND THE PH.

STAKING - STAKE ONLY LARGER PLANTS THAT WILL CATCH THE WIND. EVERGREENS MAY NEED ATTENTION WHERE DECIDUOUS PLANTS DO NOT.

WATERING - THE BACKFILL AND ROOTS OF ALL NEWLY SET PLANT MATERIAL SHOULD BE WATERED AS BACKFILLING IS DONE SO THAT THE SOIL AND ROOTS ARE THOROUGHLY SOAKED.

SHRUB PLANTING DETAIL

6								
5								
4								
3								
2								
1	FRANKLIN COUNTY COMMENTS - MARCH 28TH, 2025						5/22/25	DSF
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CONSTRUCTION DRAWINGS
INNOVATIVE GLASS SOLUTIONS
15 CASCADE CT. YOUNGSVILLE NC 27596
FRANKLIN COUNTY

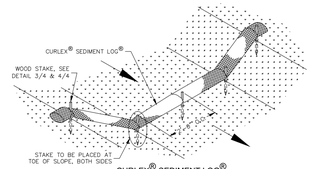
LANDSCAPING DETAILS

C3 PROJECT #: 22-158

REVIEW PROJECT #: Z-25-343

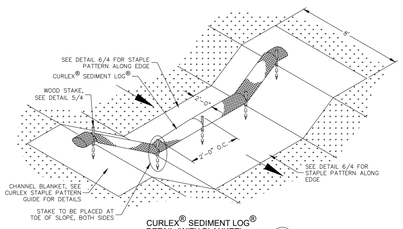
SHEET #: C-2.2

G:\DWG\JOBS\2022\220600_15 CASCADE CT\Construction Drawings\01-CAD\Sheets\220600_15 CASCADE CT_C-2.2 LANDSCAPING DETAILS.dwg, 5/22/2025 1:28:40 PM, Daniel Proctor, DWG To PDF.pc3, 1:1



CURLEX® SEDIMENT LOG® DETAIL (NO BLANKET) 1/4

NO SCALE



CURLEX® SEDIMENT LOG® DETAIL (WITH BLANKET) 2/4

NO SCALE

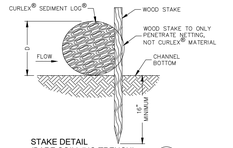
NOTES:
1) CURLEX® SEDIMENT LOG® SHALL BE OVERLAPPED IN CHANNELS REQUIRING MORE THAN ONE UNIT ACROSS THE CHANNEL WIDTH (SEE DETAIL 7/4).
2) OVERLAPS SHALL NOT BE LOCATED IN CRITICAL AREAS SUCH AS CHANNEL CENTER, SIDE SLOPE CHANNEL BOTTOM INTERFACE, ETC.

Curlex® Sediment Log® - Recommended Spacing in Channelized Flow Applications

Channel Gradient (%)	Spacing Between Products (ft)			
	6 in Curlex Sediment Log	9 in Curlex Sediment Log	12 in Curlex Sediment Log	20 in Curlex Sediment Log
0.5	91.7	136.7	183.3	250.0
1	45.8	68.3	91.7	125.0
1.5	30.6	45.6	61.1	83.3
2	22.9	34.2	45.8	62.5
2.5	18.3	27.3	36.7	50.0
3	15.3	22.8	30.6	41.7
3.5	13.1	19.5	26.2	35.7
4	11.5	17.1	22.9	31.3
4.5	10.2	15.2	20.4	27.8
5	9.2	13.7	18.3	25.0
5.5	8.3	12.4	16.7	22.7
6	7.6	11.4	15.3	20.8
6.5	7.1	10.5	14.1	19.2
7	6.5	9.8	13.1	17.9
7.5	6.1	9.1	12.2	16.7
8	5.7	8.5	11.5	15.6
8.5	5.4	8.0	10.8	14.7
9	5.1	7.6	10.2	13.9
9.5	4.8	7.2	9.6	13.2
10	4.6	6.8	9.2	12.5
11	4.2	6.2	8.3	11.4
12	3.8	5.7	7.6	10.4
13	3.5	5.3	7.1	9.6
14	3.3	4.9	6.5	8.9
15	3.1	4.6	6.1	8.3
16	2.9	4.3	5.7	7.8
17	2.7	4.0	5.4	7.4
18	2.5	3.8	5.1	6.9
19	2.4	3.6	4.8	6.6
20	2.3	3.4	4.6	6.3
25	1.8	2.7	3.7	5.0
30	1.5	2.3	3.1	4.2
35	1.3	2.0	2.6	3.6
40	1.1	1.7	2.3	3.1
45	1.0	1.5	2.0	2.8
50	0.9	1.4	1.8	2.5

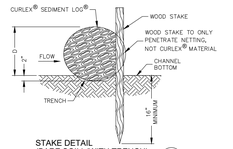
Notes:

1. Spacing of Curlex Sediment Logs is calculated by:
[Distance between channel bottom and top of installed Curlex Sediment Log(ft)/Channel gradient (%)]*100=Curlex Sediment Log Spacing (ft)
2. Minimum installed heights used for determining spacing values in table. Minimum installed heights of 6 in, 9 in, 12 in, and 20 in Curlex Sediment Logs are 5.5 in, 8.2 in, 11.0 in, and 15.0 in, respectively.



STAKE DETAIL (BARE SOIL) (NO TRENCH) 3/4

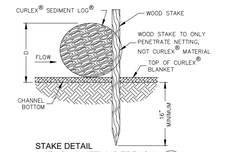
NO SCALE



STAKE DETAIL (BARE SOIL) (WITH TRENCH) 4/4

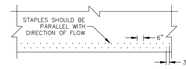
NO SCALE

NOTE: TRENCH OPTION IS MOST APPLICABLE IN LOOSE, UNCONSOLIDATED SOILS



STAKE DETAIL (WITH BLANKET) (NO TRENCH) 5/4

NO SCALE

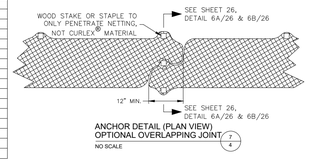


CHANNEL TERMINATION PLAN 6/4

NO SCALE

DISTANCE BETWEEN CHANNEL BOTTOM AND TOP OF INSTALLED CURLEX® SEDIMENT LOG® (D)(ft) / CHANNEL GRADIENT (%) X 100 = CURLEX® SEDIMENT LOG® SPACING (ft)

RECOMMENDED PLACEMENT INTERVAL BETWEEN CURLEX® SEDIMENT LOG®

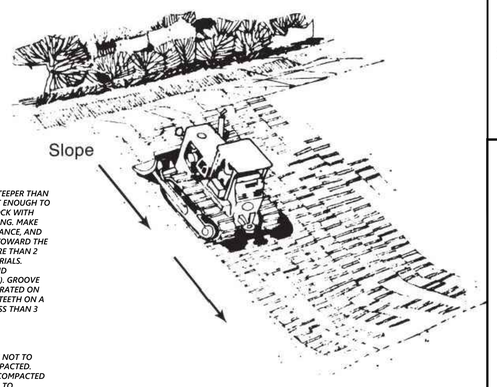


ANCHOR DETAIL (PLAN VIEW) OPTIONAL OVERLAPPING JOINT 7/4

NO SCALE

AMERICAN EXCELSIOR COMPANY ARLINGTON, TEXAS	SHEET DESCRIPTION: CURLEX® SEDIMENT LOG® DITCH/CHANNEL APPLICATION DETAIL	DATE	DRAWN BY
		SCALE	PROJECT NO. / SHEET NO.

Figure 6.03a Bulldozer treads create grooves perpendicular to the slope. The slope face should not be back-bladed during the final grading operation (source: Va SWCC).



SLOPE TRACK / SURFACE ROUGHENING

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

CUT SLOPE ROUGHENING FOR AREAS NOT TO BE MOWED:

STAIR-STEP GRADE OR GROOVE CUT SLOPE WITH A GRADIENT STEEPER THAN 3:1. USE STAIR-STEP GRADING ON ANY ERODIBLE MATERIAL SOFT ENOUGH TO BE RIPPED WITH A BULLDOZER. SLOPES CONSISTING OF SOFT ROCK WITH SOME SUBSOIL ARE PARTICULARLY SUITED TO STAIR-STEP GRADING. MAKE THE VERTICAL CUT DISTANCE LESS THAN THE HORIZONTAL DISTANCE, AND SLIGHTLY SLOPE THE HORIZONTAL POSITION OF THE "STEP" IN TOWARD THE VERTICAL WALL. DO NOT MAKE INDIVIDUAL VERTICAL CUTS MORE THAN 2 FEET IN SOFT MATERIALS OR MORE THAN 3 FEET IN ROCKY MATERIALS. GROOVING USES MACHINERY TO CREATE A SERIES OF RIDGES AND DEPRESSIONS THAT RUN ACROSS THE SLOPE (ON THE CONTOUR). GROOVE USING ANY APPROPRIATE IMPLEMENT THAT CAN BE SAFELY OPERATED ON THE SLOPE, SUCH AS DISKS, TILLERS, SPRING HARROWS, OR THE TEETH ON A FRONT-END LOADER BUCKET. DO NOT MAKE SUCH GROOVES LESS THAN 3 INCHES DEEP NOR MORE THAN 15 INCHES APART.

FILL SLOPE ROUGHENING FOR AREAS NOT TO BE MOWED:

PLACE FILL SLOPES WITH A GRADIENT STEEPER THAN 3:1 IN LIFTS NOT TO EXCEED 9 INCHES, AND MAKE SURE EACH LIFT IS PROPERLY COMPACTED. ENSURE THAT THE FACE OF THE SLOPE CONSISTS OF LOOSE, UNCOMPACTED FILL 4 TO 6 INCHES DEEP. USE GROOVING, AS DESCRIBED ABOVE, TO ROUGHEN THE FACE OF THE SLOPES, IF NECESSARY. DO NOT BLADE OR SCRAPE THE FINAL SLOPE FACE.

CUTS, FILLS, AND GRADED AREAS THAT WILL BE MOWED:

MAKE MOWED SLOPES NO STEEPER THAN 3:1. ROUGHTEN THESE AREAS TO SHALLOW GROOVES BY NORMAL TILLING, DISKING, HARROWING, OR USE OF CULTIPACKER-SEEDER. MAKE THE FINAL PASS OF ANY SUCH TILLAGE IMPLEMENT ON THE CONTOUR. MAKE GROOVES, FORMED BY SUCH IMPLEMENTS, CLOSE TOGETHER (LESS THAN 10 INCHES) AND NOT LESS THAN 1 INCH DEEP. EXCESSIVE ROUGHNESS IS UNDESIRABLE WHERE MOWING IS PLANNED.

ROUGHENING WITH TRACKED MACHINERY:

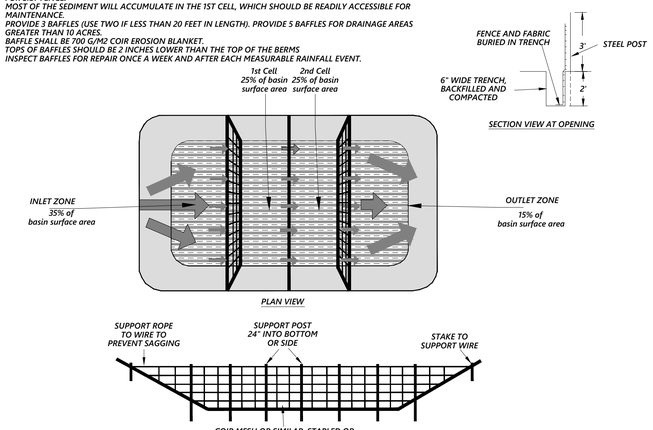
LIMIT ROUGHENING WITH TRACKED MACHINERY TO SANDY SOILS TO AVOID UNDUE COMPACTION OF THE SOIL SURFACE. TRACKING IS GENERALLY NOT AS EFFECTIVE AS THE OTHER ROUGHENING METHODS DESCRIBED. OPERATE TRACKED MACHINERY UP AND DOWN THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS IN THE SOIL. DO NOT BACK-BLADE DURING THE FINAL GRADING OPERATION.

MAINTENANCE FOR WATTLES / SEDIMENT LOGS:

- *INSPECT FOR LOOSE SECTIONS AND RESTAKE AS NEEDED*
- *INSPECT AFTER RAIN EVENTS TO ENSURE THAT WATER IS NOT UNDERMINING THE WATTLE / LOG. IF SO, FILL IN THE SCOURED AREAS, INSTALL DITCH MATTING, RE-INSTALL WATTLE AND RESEED DISTURBED AREAS. CONTACT ENGINEER TO CONFIRM THAT ADDITIONAL MEASURES ARE NOT NECESSARY TO PREVENT FUTURE WASHOUTS.*
- *CHECK FOR SEDIMENT BUILDUP IN FRONT OF THE LOG AND REMOVE ONCE IT REACHES ½ THE WATTLE HEIGHT*
- *ADD ADDITIONAL STAKES AS NEEDED IF FLOWS APPEAR TO CAUSE THE WATTLE TO BE LOOSE OR UNSTABLE*

NOTES:

1. *BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.*
2. *MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST CELL, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.*
3. *PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.*
4. *BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.*
5. *TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS*
6. *INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH MEASURABLE RAINFALL EVENT.*



CONSTRUCTION SPECIFICATIONS:

1. *GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.*
2. *INSTALL THE COIR FIBER BAFFLES IMMEDIATELY UPON EXCAVATION OF THE BASINS.*
3. *INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP (PRACTICE 6.62, SEDIMENT FENCE).*
4. *STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES AND SPACED A MAXIMUM OF 4 FEET APART. THE TOP OF THE FABRIC SHOULD BE A MINIMUM OF 6 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE A MINIMUM OF 2 INCHES LOWER THAN THE TOP OF THE EARTHEN EMBANKMENT.*
5. *INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES.*
6. *ATTACH A 9 GAUGE HIGH TENSION WIRE STRAND TO THE STEEL POSTS AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION WITH PLASTIC TIES OR WIRE FASTENERS TO PREVENT SAGGING. IF THE TEMPORARY SEDIMENT BASIN WILL BE CONVERTED TO A PERMANENT STORMWATER BASIN OF A GREATER DEPTH, THE BAFFLE HEIGHT SHOULD BE BASED ON THE POOL DEPTH DURING USE AS A TEMPORARY SEDIMENT BASIN.*
7. *EXTEND 9 GAUGE MINIMUM HIGH TENSION WIRE STRAND TO SIDE OF BASIN OR INSTALL STEEL T-POSTS TO ANCHOR BAFFLE TO SIDE OF BASIN AND SECURE TO VERTICAL END POSTS AS SHOWN IN FIGURE 6.65B.*
8. *DRAPE THE COIR FIBER MAT OVER THE WIRE STRAND MOUNTED AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION. SECURE THE COIR FIBER MAT TO THE WIRE STRAND WITH PLASTIC TIES OR WIRE FASTENERS. ANCHOR THE MATTING TO THE SIDES AND FLOOR OF THE BASIN WITH 12 INCH WIRE STAPLES, APPROXIMATELY 1 FT APART, ALONG THE BOTTOM AND SIDE SLOPES OF THE BASIN.*
9. *DO NOT SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE BASIN*
10. *ADJUSTMENTS MAY BE REQUIRED IN THE STAPLING REQUIREMENTS TO FIT INDIVIDUAL SITE CONDITIONS.*

MAINTENANCE:

INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL, TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT, AND REPLACE IF DAMAGED DURING CLEANOUT OPERATIONS. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.

POROUS BAFFLES DETAIL

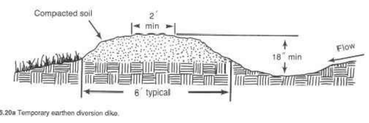


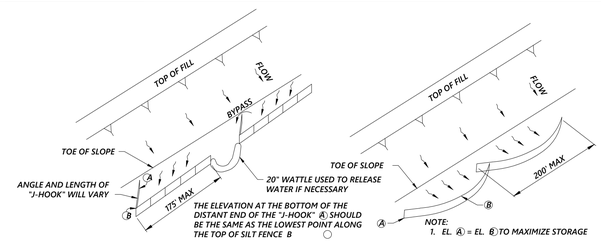
Figure 6.20a Temporary earthen diversion dike.

6.20 TEMPORARY DIVERSIONS:
CONSTRUCTION STANDARDS:
1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.
2. ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT.
4. PROVIDE SUFFICIENT ROOM AROUND DIVERSIONS TO PERMIT MACHINE REGRADING AND CLEANOUT.
5. VEGETATE THE RIDGE IMMEDIATELY AFTER CONSTRUCTION, UNLESS IT WILL REMAIN IN PLACE LESS THAN 30 WORKING DAYS.

MAINTENANCE:
INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY
REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY
CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS
PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE
NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

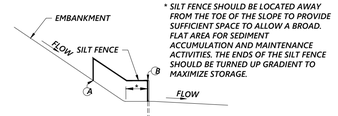
DIVERSION DETAIL

NOT TO SCALE



"J-HOOK" SILT FENCE APPLICATION

"SMILE-CONFIGURATION" SILT FENCE APPLICATION



* SILT FENCE SHOULD BE LOCATED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE SUFFICIENT SPACE TO ALLOW A BROAD, FLAT AREA FOR SEDIMENT ACCUMULATION AND MAINTENANCE ACTIVITIES. THE ENDS OF THE SILT FENCE SHOULD BE TURNED UP GRADIENT TO MAXIMIZE STORAGE.

SILT FENCE SECTION AT TOE OF FILL AND J-HOOK INSTALLATION

CONSTRUCTION STANDARDS:

1. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT MEASURES BELOW BASIN AS NEEDED.

2. ENSURE THAT FILL MATERIAL FOR THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER, AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVER FILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.

3. SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SWIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.

4. PLACE THE BARREL (TYPICALLY 4-INCH SCHEDULE 40 PVC PIPE) ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES.

PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.

5. ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURERS INSTRUCTIONS, OR AS DESIGNED.

6. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.

7. EARTHEN SPILLWAYS - INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS. (ADAPTED FROM "A MANUAL FOR DESIGNING, INSTALLING AND MAINTAINING SKIMMER SEDIMENT BASINS." FEBRUARY, 1999, J.W. FAIRCLOTH & SON.).

8. INLETS - DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY (REFERENCES: RUNOFF CONTROL MEASURES AND OUTLET PROTECTION).

9. EROSION CONTROL - CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION (REFERENCES: SURFACE STABILIZATION).

10. INSTALL POROUS BAFFLES AS SPECIFIED IN PRACTICE 6.65, POROUS BAFFLES.

11. AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND STABILIZE PROPERLY (REFERENCES: SURFACE STABILIZATION).

MAINTENANCE:

INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.

REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM

IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.

IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

CHECK THE FABRIC LINES SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.

FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

AT THE LOWER LEFT (A) IS THE FLEXIBLE JOINT THAT CONNECTS TO A 4-INCH OUTLET PIPE THAT GOES THROUGH THE DAM OF THE BASIN OR CONNECTS TO A RISER VIA A SPECIFIED PIPE INSERT OR CORED HOLE. A RIGID PIPE (B) CONNECTS THE FLEXIBLE JOINT TO THE SKIMMER INLET (C), WHICH IS SUSPENDED BELOW THE SQUARE FLOAT (D).

INSIDE THE SKIMMER INLET IS A PLUG WITH A CIRCULAR OPENING SIZED TO DRAIN A FULL BASIN IN 3-5 DAYS DEPENDING UPON THE DESIGN CALCULATIONS. AN ACCESS PANEL (E) ALLOWS EASY ACCESS TO THE OPENING, AND THE OPENING SIZE CAN BE ADJUSTED TO MATCH BASIN VOLUME.

IF ONE SKIMMER CANNOT DRAIN A BASIN IN THE TIME DESIRED, MULTIPLE SKIMMERS CAN BE USED. THE FLOAT ACTS AS A TRASH GUARD, AND THE INLET IS SCREENED TO PREVENT CLOGGING.

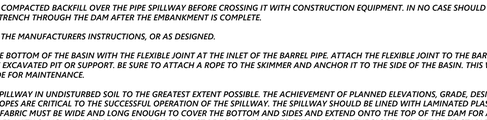


FIGURE 1: SKIMMER

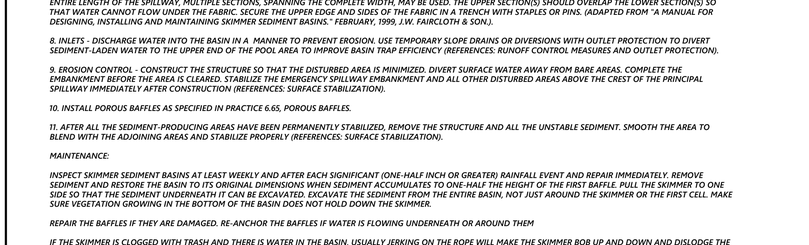


FIGURE 2: SKIMMER BASIN

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kyle@divisionsightrentals.com

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NORTH CAROLINA PROFESSIONAL SEAL 036242 ENGINEER CHAD E. ABBOTT 5/22/25

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2	5/22/25	DSF
1	3/18/25	DSF
FIRST ISSUED	2025 MARCH 18TH	BY
REVISIONS		

FRANKLIN COUNTY COMMENTS

CONSTRUCTION DRAWINGS
INNOVATIVE GLASS SOLUTIONS
15 CASCADE CT, YOUNGSVILLE NC 27596
FRANKLIN COUNTY

EROSION CONTROL DETAILS

C3 PROJECT #: 22-158

REVIEW PROJECT #: Z-25-343

SHEET #: **C-2.3A**

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PERMANENT SEEDING IN NORTH CAROLINA (TABLE 6.11C)

SEEDING MIXTURE SPECIES	RATE (LB/ACRE)
SWITCH GRASSES (PANICUM VIRGATUM)	3.5
INDIAN GRASSES (SORGHASTRUM NUTANS)	7.0
BROOMSEDGE (ANDROPOGON VIRGINICUS)	7.0
LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM)	7.0

SEEDING NOTES
1. IT IS IMPERATIVE THAT THE PRIMARY CROP DEVELOP AND BECOME AN EFFECTIVE PROTECTIVE COVER.
2. ADDITIONAL NURSE CROP SPECIES MUST BE INCLUDED TO PROVIDE IMMEDIATE STATILIZATION AND AN ADEQUATE GROUND COVER

NURSE PLANTS
BETWEEN MAY 1 AND AUGUST 15, ADD 10 LB/ACRE GERMAN MILLET OR 15LB/ACRE SUDANGRASS. PRIOR TO MAY 1 OR AFTER AUGUST 15 ADD 40 LB/ACRE RYE (GRAIN).

SEEDING DATES

BEST	POSSIBLE
DECEMBER 1 - APRIL 1	NOVEMBER 25 - MAY 1

SOIL AMENDMENTS
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 4,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS FULLY ADEQUATE. MAY BE MOWED ONCE OR TWICE A YEAR, BUT MOWING IS NOT NECESSARY. RESEED, FERTILIZE AND MULCH DAMAGED AREAS IMMEDIATELY.

SEEDING SCHEDULE

1.) CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2.) RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
3.) REMOVE ALL LOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4.) APPLY AGRICULTURAL LIME, FERTILIZER, AND UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).
5.) CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES
6.) SEED ON A FRESHLY PREPARED SEEDBED AND SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK
7.) MULCH IMMEDIATELY AFTER SEEDING
8.) INSPECT ALL SEEDED AREAS AND MAKE NECESSARY RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH WITH ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9.) CONSULT CONSERVATION INSPECTOR ON MAINTENANCE AND FERTILIZATION AFTER PERMANENT COVER IS STABILIZED.

* APPLY:
AGRICULTURAL LIMESTONE - 2 TONS/ ACRES (3 TONS/ ACRE IN CLAY SOILS)
FERTILIZER - 1,000 lbs. / ACRE -10-10-10
SUPERPHOSPHATE- 500 lbs> / ACRE -20% ANALYSIS
MLCH -2 TONS / ACRE (5000 LBS/AC FOR STEEP SLOPES) - SMALL GRAIN STRAW
ANOTHER - ASPHALT EMULSION @ 400 GALS./ ACRE

NOTE:
THE ASPHALT EMULSION APPLICATION RATE IS 400 GALLONS PER ACRE. IF DISK BLADE/CRIMPING IS TO BE USED, APPLY 1/2 OF THE MULCH, THEN CRIMP, AND INSTALL THE OTHER HALF.

SEEDBED PREPARATION

MAINTENANCE:
NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS ANG GULLIES DEVELOP, THEY MUST BE FILLED, RE-SEEDED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD. DAMAGE TO VEGETATION FROM DISEASE, INSECTS, TRAFFIC, ETC., CAN OCCUR AT ANY TIME. HERBICIDES AND REGULAR MOWING MAY BE NEEDED TO CONTROL WEEDS. DUST AND SPRAYS MAY BE NEEDED TO CONTROL INSECTS.
WEEK OR DAMAGED SPOTS MUST BE RELIMED, FERTILIZED, MULCHED, AND RESEEDED AS PROMPTLY AS POSSIBLE.

BLOCK AND GRAVEL DROP INLET PROTECTION

CONSTRUCTION STANDARDS:

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2 X 4 WOOD STUDS THROUGH BLOCK OPENINGS.

2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH $\frac{1}{2}$ - INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.

3. USE CLEAN GRAVEL, $\frac{3}{4}$ TO $\frac{1}{2}$ - INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.

4. IF ONLY STONE AND GRAVEL ARE USED, KEEP THE SLOPE TOWARD THE INLET NO STEEPER THAN 3:1. LEAVE A MINIMUM 1-FOOT WIDE LEVEL STONE AREA BETWEEN THE STRUCTURE AND AROUND THE INLET TO PREVENT GRAVEL FROM ENTERING INLET. ON THE SLOPE TOWARD THE INLET, USE STONE 3 INCHES IN DIAMETER OR LARGER. ON THE SLOPE AWAY FROM THE INLET USE $\frac{1}{2}$ - $\frac{3}{4}$ - INCH GRAVEL (NCDOT #57 WASHED) AT A MINIMUM THICKNESS OF 1 FOOT.

MAINTENANCE:

INSPECT THE BARRIER AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT ($\frac{1}{2}$ INCH OR GREATER) RAINFALL AND MAKE REPAIRS AS NEEDED. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

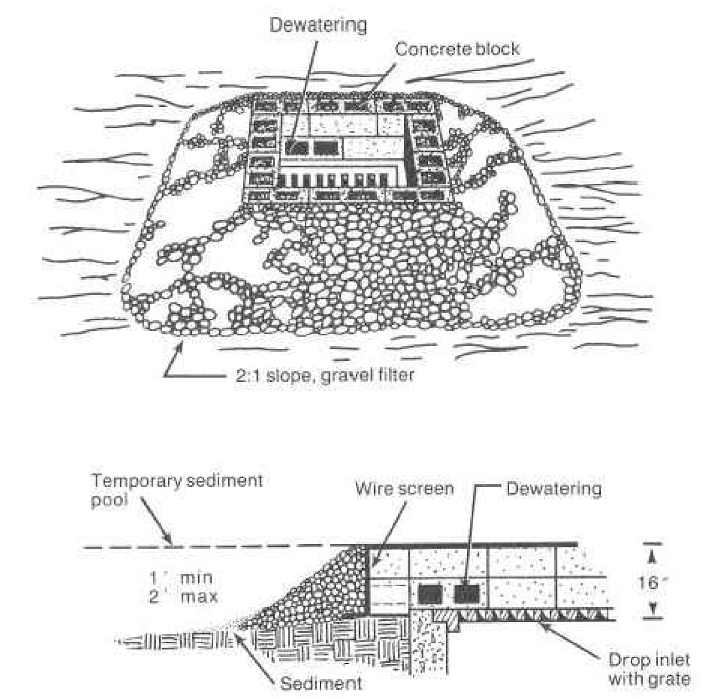
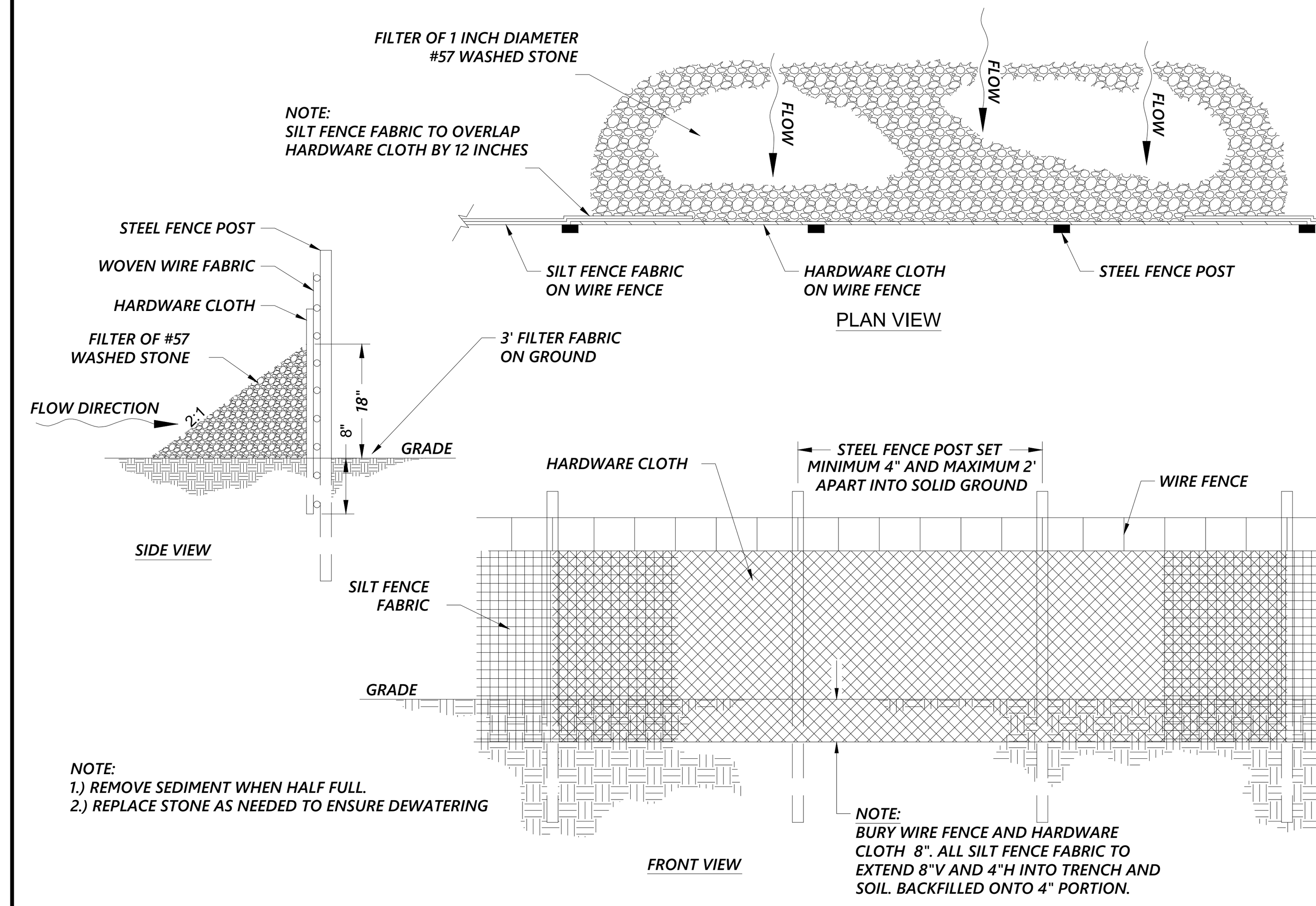


Figure 6.52a Block and gravel drop inlet protection.

STANDARD SILT FENCE OUTLET



NOTE:
1.) REMOVE SEDIMENT WHEN HALF FULL.
2.) REPLACE STONE AS NEEDED TO ENSURE DEWATERING

STANDARD SILT FENCE OUTLET
NTS

CONSTRUCTION STANDARDS:
1. ENSURE THAT THE SUBGRADE FOR THE FILTER AND RIPRAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIPRAP THICKNESS.

2. THE RIPRAP AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIES GRADING LIMITS SHOWN ON THE PLANS. FILTER CLOTH, WHEN USED, MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGE BY REMOVING THE RIPRAP AND PLACING ANOTHER PIECE OF FILTER CLOTH OVER THE DAMAGED AREA. ALL CONNECTING JOINTS SHOULD OVERLAP SO THE TOP LAYER IS ABOVE THE DOWNSTREAM LAYER A MINIMUM OF 1 FOOT. IF THE DAMAGE IS EXTENSIVE, REPLACE THE ENTIRE FILTER CLOTH.

3. RIPRAP MAY BE PLACED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE FILTER.

4. THE MINIMUM THICKNESS OF THE RIPRAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER.

5. RIPRAP MAY BE FIELD STONE OR ROUGH QUARRY STONE. IT SHOULD BE HARD, ANGULAR, HIGHLY WEATHER-RESISTANT AND WELL GRADED.

6. CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVERFILL AT THE END. MAKE THE TOP OF THE RIPRAP AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.

7. ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PREFERABLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT SITE CONDITIONS, PLACE IT IN THE UPPER SECTION OF THE APRON.

8. IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION (PRACTICES 6.10, TEMPORARY SEEDING, AND 6.11 PERMANENT SEEDING).

MAINTENANCE:
INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT ($\frac{1}{2}$ INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

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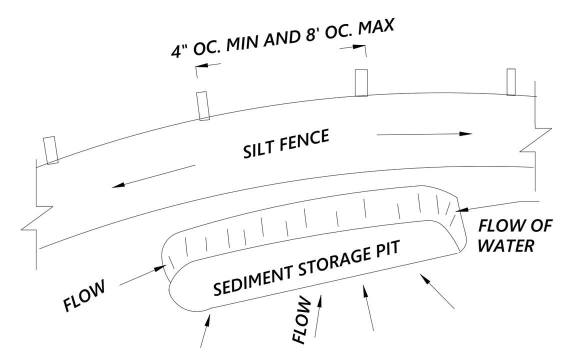
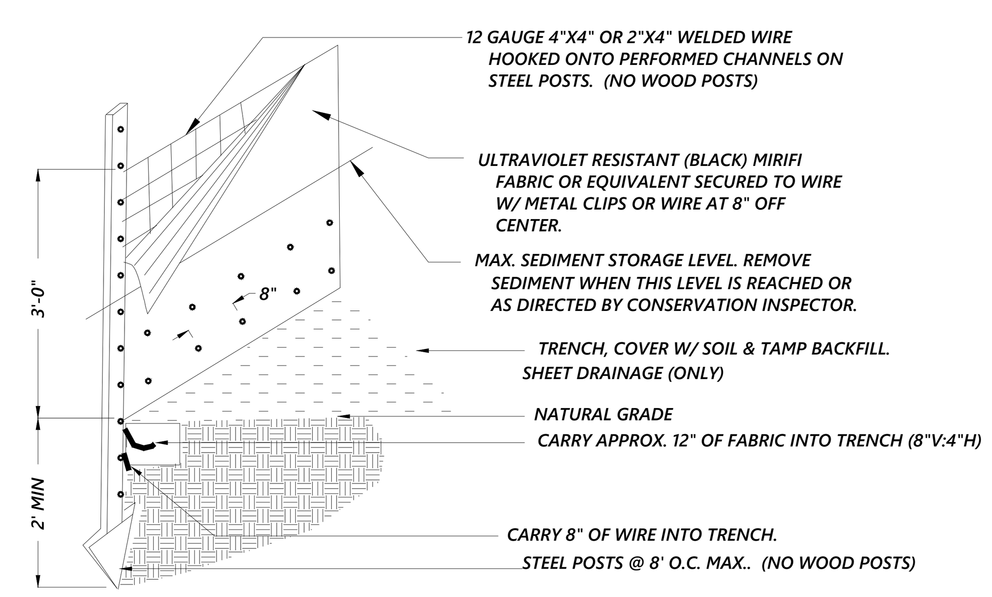
SILT FENCE



NOTES:
1) TOTAL DRAINAGE AREA FLOWING TO THE FENCE MAY NOT EXCEED 1 ACRE.
2) SILT FENCES SHOULD NOT BE USED AT PIPE OUTLETS OR IN AREAS OF CONCENTRATED FLOW (CREEKS, DITCHLINES, SWALES ETC.)

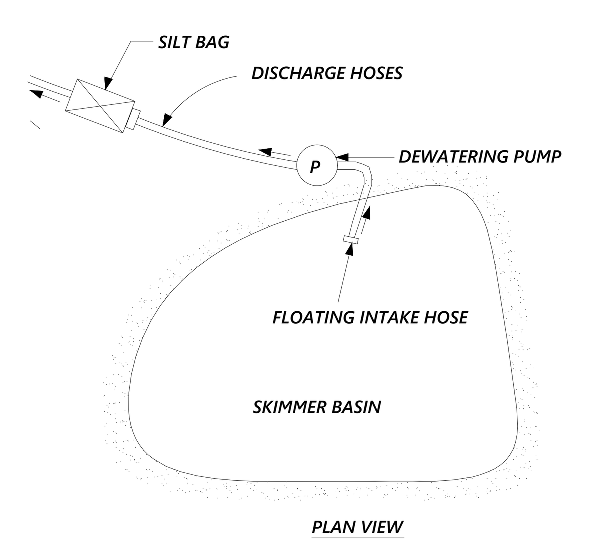
TO INCREASE STORAGE CAPACITY AND PROLONG THE LIFE OF THE SILT FENCE, IT IS GENERALLY ADVISABLE TO DIG A SEDIMENT PIT IN FRONT OF YOUR SILT FENCE WHENEVER POSSIBLE.



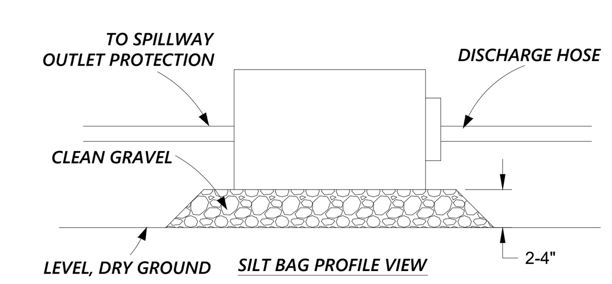
MAINTENANCE:
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPLY. REPLACE BURLAP EVERY 60 DAYS. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE.TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALSAND UNSTABLE SEDIMENT DEPOSITS AND BRING THE ARE TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SKIMMER BASIN DEWATERING

RECOMMENDATION: USE 10OZ. OF NON-WOVEN GEOTEXTILE WITH PUMP RATE AT 60 GPM/SF



NOTE: ESTIMATED MINIMUM PUMP SIZE NEEDED FOR BASE FLOW IS 2" PUMP. CONTRACTOR IS RESPONSIBLE FOR SIZING PUMP AND MAINTAINING WORK "IN THE DRY".



NOTE: REMOVE GRAVEL AND SEED WHEN PUMP AROUND OPERATION IS COMPLETED.

SILT BAG MAINTENANCE

1. INSPECT INLET PIPE AND BAG FOR DAMAGE AND BLOCKAGE.
2. REPLACE BAG WHEN 3/4 FULL OF SEDIMENT.

SKIMMER BASIN DEWATERING
NTS

HORSESHOE PIPE INLET PROTECTION:

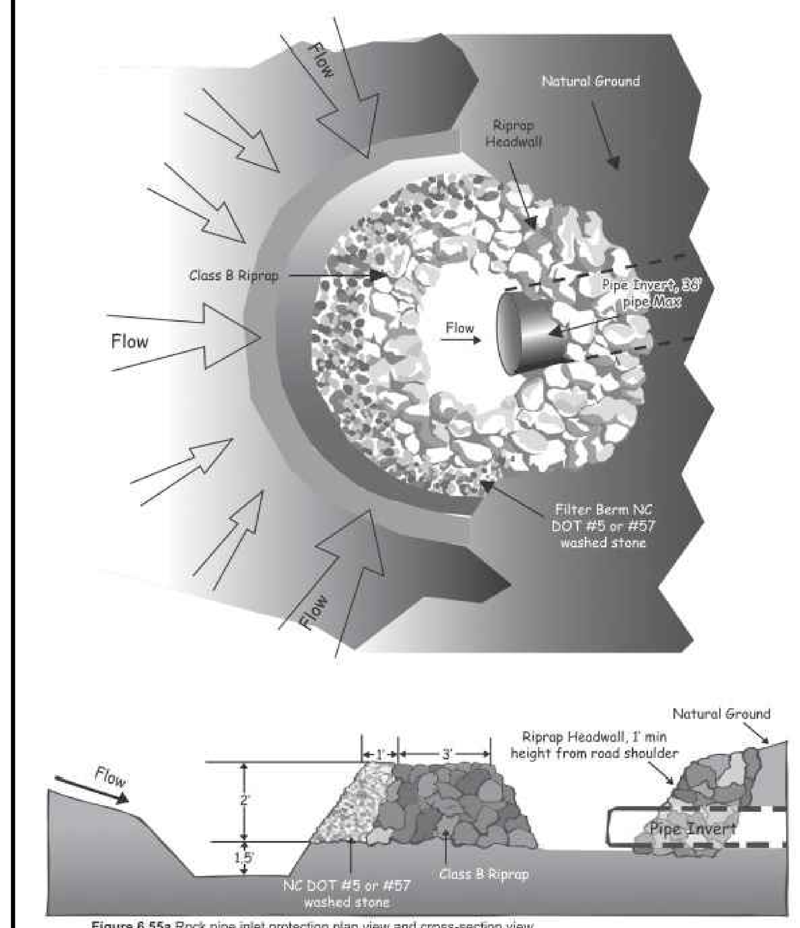


Figure 6.55a Rock pipe inlet protection plan view and cross-section view

6.55.2 Rev. 6/06

CONSTRUCTION STANDARDS:

1. CLEAR THE AREA OF ALL DEBRIS THAT MIGHT HINDER EXCAVATION AND DISPOSAL OF SPOIL.

2. INSTALL CLASS B OR CLASS I RIPRAP IN A SEMI-CIRCLE AROUND THE PIPE INLET. THE STONE SHOULD BE BUILT UP HIGHER ON EACH END WHERE IT TIES INTO THE EMBANKMENT. THE MINIMUM CREST WIDTH OF THE RIPRAP SHOULD BE 3 FEET, WITH A MINIMUM BOTTOM WIDTH OF 11 FEET. THE MINIMUM HEIGHT SHOULD BE 2 FEET, BUT ALSO 1 FOOT LOWER THAN THE SHOULDER OF THE EMBANKMENT OR DIVERSIONS.

3. A 1 FOOT THICK LAYER OF NC DOT #5 OR #57 STONE SHOULD BE PLACED ON THE OUTSIDE SLOPE OF THE RIPRAP.

4. THE SEDIMENT STORAGE AREA SHOULD BE EXCAVATED AROUND THE OUTSIDE OF THE STONE HORSESHOE 18 INCHES BELOW NATURAL GRADE.

5. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, FILL DEPRESSION AND ESTABLISH FINAL GRADING ELEVATIONS, COMPACT AREA PROPERLY, AND STABILIZE WITH GROUND COVER.

MAINTENANCE:

INSPECT ROCK PIPE INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT ($\frac{1}{2}$ INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING. CHECK THE STRUCTURE FOR DAMAGE. ANY RIPRAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY. AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND PROVIDE PERMANENT GROUND STABILIZATION.

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1	FRANKLIN COUNTY COMMENTS - MARCH 28TH, 2025	5/22/25	DSF
	FIRST ISSUED	3/18/25	DSF
	REVISIONS	DATE	BY

TEMPORARY SEEDING IN NORTH CAROLINA

	SEEDING MIXTURE SPECIES	RATE (LB/ACRE)
LATE WINTER & EARLY SPRING	RYE (GRAIN)	120
	ANNUAL LESPEDEZA (KOBE IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	50
SUMMER	GERMAN MILLET	40
	OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUNDAGRASS	
FALL	RYE (GRAIN)	120
	IS NOT TO EXTEND BEYOND JUNE. MAY BE SUBSTITUED AT A RATE OF 50 LB/ACRE.	

SEEDING DATES:

LATE WINTER & EARLY SPRING	MOUNTAINS - ABOVE 2500 ft: FEB. 15 - MAY 15; BELOW 2500 ft: FEB. 1 - MAY 1 PIEDMONT - JAN. 1 - MAY 1 COASTAL PLAIN - DEC. 1 - APR. 15
SUMMER	MOUNTAINS - MAY 15 - AUG. 15 PIEDMONT - MAY 1 - AUG. 15 COASTAL PLAIN - APR. 15 - AUG. 15
FALL	MOUNTAINS - AUG. 15 - DEC. 15 COASTAL PLAIN AND PIEDMONT - AUG. 15 - DEC. 30

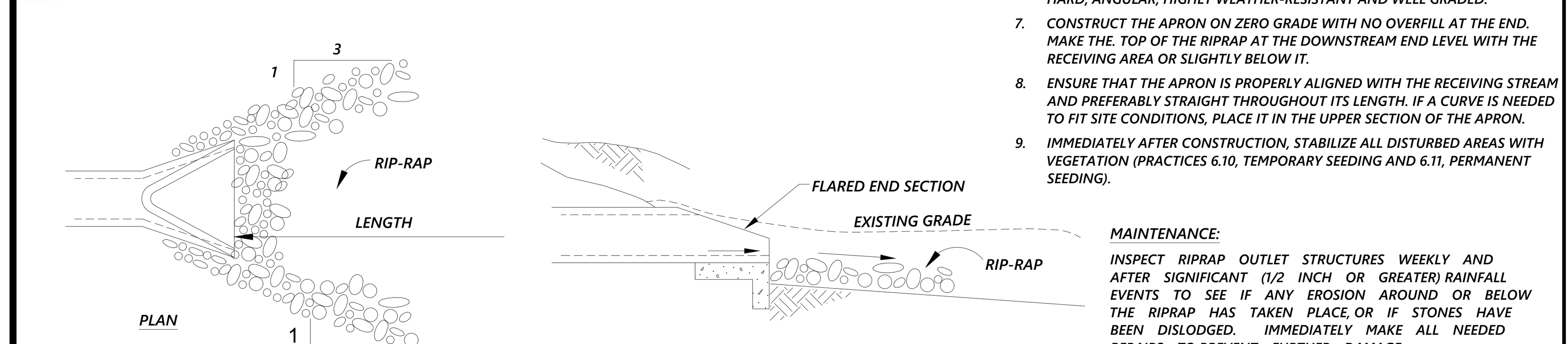
SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LBS/ACRE 10-10-10 FERTILIZER

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL. THE ASPHALT EMULSION APPLICATION RATE IS 400 GALLONS PER ACRE. IF DISK BLADE/CRIMPING IS TO BE USED, APPLY 1/2 OF THE MULCH, THEN CRIMP, AND INSTALL THE OTHER HALF.

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

RIP RAP OUTLETS

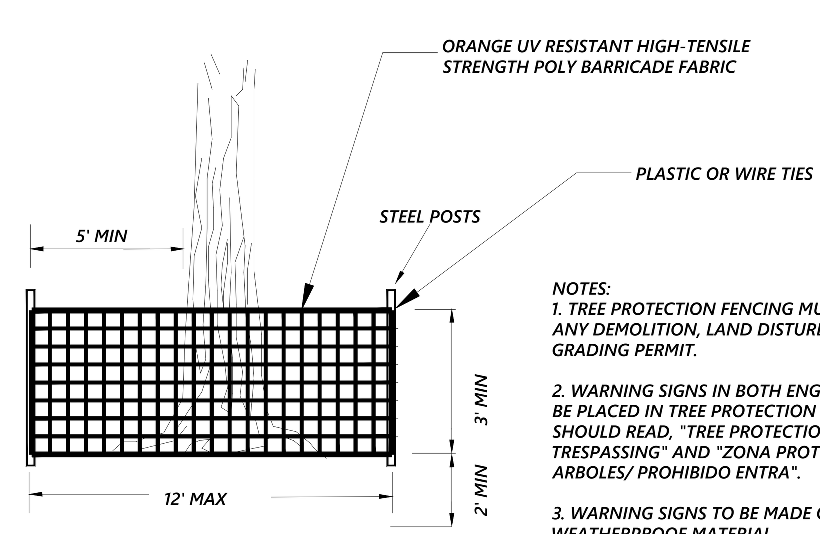
CONSTRUCTION STANDARDS:
1. ENSURE THAT THE SUBGRADE FOR THE FILTER AND RIPRAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIPRAP THICKNESS.
2. THE RIPRAP AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS.
3. FILTER CLOTH, WHEN USED, MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGE BY REMOVING THE RIPRAP AND PLACING ANOTHER PIECE OF FILTER CLOTH OVER THE DAMAGED ALL CONNECTING JOINTS SHOULD OVERLAP SO THE TOP LAYER IS ABOVE THE DOWNSTREAM LAYER A MINIMUM OF 1 FOOT. IF THE DAMAGE IS EXTENSIVE, REPLACE THE ENTIRE FILTER CLOTH.
4. RIPRAP MAY BE PLACED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE FILTER.
5. THE MINIMUM THICKNESS OF THE RIPRAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER.
6. RIPRAP MAY BE FIELD STONE OR ROUGH QUARRY STONE. IT SHOULD BE HARD, ANGULAR, HIGHLY WEATHER-RESISTANT AND WELL GRADED.
7. CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVERFILL AT THE END. MAKE THE. TOP OF THE RIPRAP AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.
8. ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PREFERABLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT SITE CONDITIONS, PLACE IT IN THE UPPER SECTION OF THE APRON.
9. IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION (PRACTICES 6.10, TEMPORARY SEEDING AND 6.11, PERMANENT SEEDING).



MAINTENANCE:
INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

MAINTENANCE:
INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT ($\frac{1}{2}$ INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

TREE PROTECTION FENCE



NOTES:
1. TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE OR ISSUANCE OF A GRADING PERMIT.

2. WARNING SIGNS IN BOTH ENGLISH AND SPANISH SHALL BE PLACED IN TREE PROTECTION AREAS @ 50'. THE SIGNS SHOULD READ, "TREE PROTECTION AREA/NO TRESPASSING" AND "ZONA PROTECTORA PARA LOS ARBOLES/ PROHIBIDO ENTRA".

3. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.

4. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.

5. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.

6. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.

7. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.

8. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT

9. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF RALEIGH INSPECTIONS DEPARTMENT BASED ON ACTUAL FIELD CONDITIONS.

CONSTRUCTION SPECS:
1. ERECT TPZ FENCES. RESTRICT ACCESS TO TPZs, WITH TALL, BRIGHT, PROTECTIVE FENCING. MOST FENCING IS INEXPENSIVE AND DURABLE ENOUGH TO LAST THROUGHOUT MOST CONSTRUCTION PROJECTS. TEMPORARY TREE PROTECTION FENCING SHOULD BE ERECTED BEFORE CLEARING, DELIVERIES AND OTHER CONSTRUCTION ACTIVITIES BEGIN ON THE SITE.
2. PROHIBIT OR RESTRICT ACCESS TO TPZs. ALL ON-SITE WORKERS SHOULD BE AWARE OF THE TPZs AND THE RESTRICTIONS ON ACTIVITIES WITHIN THE ZONES. USE THESE TPZ GUIDELINES FOR THE BEST EFFECT:
- POST "KEEP OUT" SIGNS ON ALL SIDES OF FENCING. DO NOT STORE CONSTRUCTION EQUIPMENT OR MATERIALS IN TPZs.
- PROHIBIT CONSTRUCTION ACTIVITIES NEAR THE MOST VALUABLE TRESS, AND RESTRICT ACTIVITIES AROUND OTHERS.
- ASSESS CREW AND CONTRACTOR PENALTIES, IF NECESSARY, TO KEEP THE TPZs INTACT.

3. MONITOR TREES. VIGILANCE IS REQUIRED TO PROTECT TREES ON CONSTRUCTION SITES. USE A TREE PROFESSIONAL OR TRAIN YOUR STAFF TO MONITOR TREE HEALTH DURING AND AFTER CONSTRUCTION ON A REGULAR, FREQUENT BASIS. WATCH FOR SIGNS OF TREE STRESS, SUCH AS DIEBACK, LEAF LOSS, OR GENERAL DECLINE IN TREE HEALTH OR APPEARANCE.
4. MONITOR TPZ FENCES. ASSIGN A CREWMEMBER THE WEEKLY RESPONSIBILITY OF CHECKING THE INTEGRITY OF TPZ FENCES. REPAIR AND REPLACE TPZ FENCING AS NEEDED.
5. OPTIMIZE TREE HEALTH. ASSIGN A TRAINED CREWMEMBER OR HIRE A PROFESSIONAL TO COMPLETE REGULAR TREE MAINTENANCE TASKS, INCLUDING WATERING, FERTILIZATION, AND MULCHING TO PROTECT TREE ROOTS. CONSULT A TREE PROFESSIONAL FOR ADVICE ON THESE PRACTICES IF NEEDED. SURVIVAL OF PROTECTED TREES WILL INCREASE IF THESE PRACTICES CONTINUE DURING CONSTRUCTION. HEALTHY TREES REQUIRE UNDISTURBED HEALTHY SOILS. DO NOT CAUSE INJURIES TO TREES AND ROOTS. DO NOT CHANGE THE SOIL, GRADE, DRAINAGE, OR AERATION WITHOUT PROTECTING PRIORITY TREES.

MAINTENANCE:

CONTINUE TO CARE FOR THE SITE UNTIL THE NEW OWNER TAKES POSSESSION. TAKE THESE STEPS AFTER ALL MATERIALS AND EQUIPMENT HAVE BEEN REMOVED FROM THE SITE:
- REMOVE TREE PROTECTION ZONE FENCES.
- PRUNE ANY DAMAGED TREES. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, REPAIR ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM IMMEDIATELY.
- REPAIR ROOTS BY CUTTING OFF THE DAMAGES AREAS AND PAINTING THEM WITH TREE PAINT. SPREAD PEAT MOSS OR MOIST TOPSOIL OVER EXPOSED ROOTS.
- REPAIR DAMAGE TO BARK BY TRIMMING AROUND THE THE DAMAGED AREA AS SHOWN IN FIGURE 6.05D, TAPER THE CUT TO PROVIDE DRAINAGE, AND PAINT WITH TREE PAINT.
- CUT OFF ALL DAMAGES TREE LIMBS ABOVE THE TREE COLLAR AT THE TRUNK OR MAIN BRANCH. USE THREE SEPARATE CUTS AS SHOWN IN FIGURE 6.05D TO AVOID PEELING BARK FROM HEALTHY AREAS OF THE TREE.
- CONTINUE MAINTENANCE CARE. PAY SPECIAL ATTENTION TO ANY STRESSED, DISEASED, OR INSECT-INFESTED TREES. REDUCE TREE STRESS CAUSED BY UNINTENDED CONSTRUCTION DAMAGE BY OPTIMIZING PLANT CARE WITH WATER, MULCH, AND FERTILIZER WHERE APPROPRIATE. CONSULT YOUR TREE EXPERT IS NEEDED.
- INFORM THE PROPERTY OWNER ABOUT THE MEASURES EMPLOYED DURING CONSTRUCTION, WHY THOSE MEASURES WERE TAKEN, AND HOW THE EFFORT CAN BE CONTINUED.

CONSTRUCTION DRAWINGS
INNOVATIVE GLASS SOLUTIONS
15 CASCADE CT, YOUNGSVILLE NC 27596
FRANKLIN COUNTY

EROSION CONTROL DETAILS

C3 PROJECT #: 22-158
REVIEW PROJECT #: Z-25-343
SHEET #: **C-2.3B**

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NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

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
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other 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 evenly distributed 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

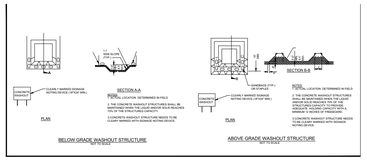
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, 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.



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 barrier 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.

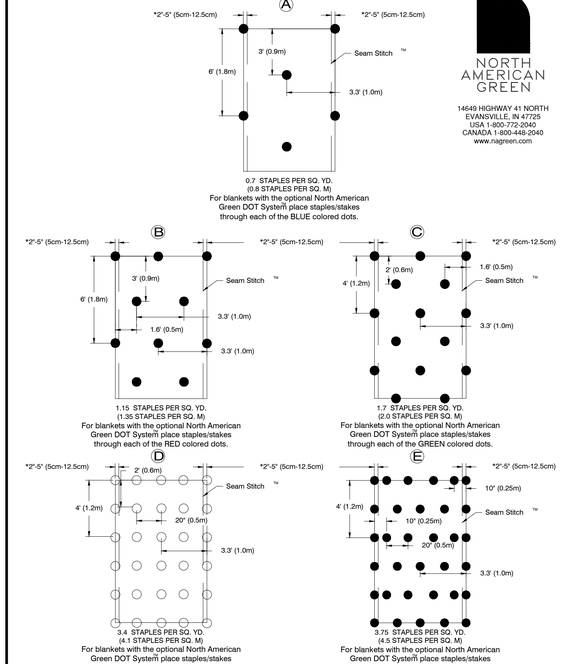
HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
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.

STAPLE PATTERN GUIDE FOR BLANKETS AND LINERS



*Location of Seam Stitch will vary depending on North American Green product type:

NORTH AMERICAN GREEN

14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
USA 1-800-772-2040
CANADA 1-800-448-2040
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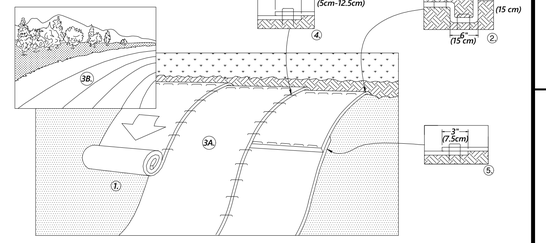
TYPICAL SLOPE BLANKET INSTALLATION



1. *PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.*
2. *BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.*
3. *ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM ™ STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.*
4. *THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" -5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.*
5. *CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.*

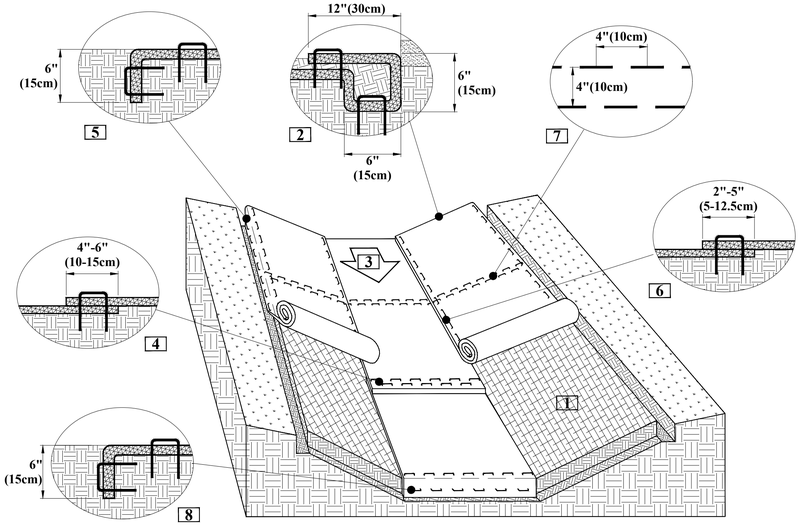
NOTE:
**IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.*

14649 HIGHWAY 41 NORTH, EVANSVILLE, INDIANA 47725
USA 1-800-772-2040 CANADA 1-800-448-2040

MAINTENANCE FOR ALL MATTING APPLICATIONS:

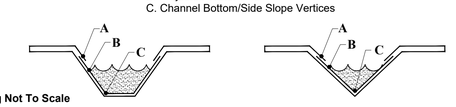
- *INSPECT FOR LOOSE ENDS/AREAS AND RESTAPLE AS NEEDED*
- *INSPECT AFTER RAIN EVENTS TO ENSURE THAT WATER IS NOT UNDERMINING THE BLANKETS/MATTING. IF SO, FILL IN THE SCOURED AREAS, REPLACE MATTING AND RESEED. CONTACT ENGINEER TO CONFIRM THAT ADDITIONAL MEASURES ARE NOT NECESSARY TO PREVENT FUTURE WASHOUTS.*
- *SHOULD CONSTRUCTION OR THE PROJECT LAST LONGER THAN EXPECTED, REPLENISH MATTING AS APPROPRIATE BASED UPON DESIGN LIFE OF MATTING. RE-INSTALL AND RESEED AS REQUIRED BY THE CORRESPONDING INSTALLATION INSTRUCTIONS AND DETAILS FOR THIS PROJECT.*

CHANNEL INSTALLATION DETAIL



1. *Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.*
2. *Begin at the top of the channel by anchoring the RECPs in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12"(30cm) of RECPs extended beyond the up-slope portion of the trench. Use ShoreMax mat at the channel/culvert outlet as supplemental scour protection as needed. Anchor the RECPs with a row of staples/stakes approximately 12"(30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12" apart across the width of the RECPs.*
3. *Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.*
4. *Place consecutive RECPs end-over-end (Shingle style) with a 4"-6" overlap. Use a double row of staples staggered 4" apart and 4" on center to secure RECPs.*
5. *Full length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes approximately 12"(30cm) apart in a 6"(15cm) deep X 6"(15cm) wide trench. Backfill and compact the trench after stapling.*
6. *Adjacent RECPs must be overlapped approximately 2"-5" (5-12.5cm) (Depending on RECPs type) and stapled.*
7. *In high flow channel applications a staple check slot is recommended at 30 to 40 foot (9 -12m) intervals. Use a double row of staples staggered 4"(10cm) apart and 4"(10cm) on center over entire width of the channel.*
8. *The terminal end of the RECPs must be anchored with a row of staples/stakes approximately 12" (30cm) apart in a 6"(15cm) deep X 6"(15cm) wide trench. Backfill and compact the trench after stapling.*

CRITICAL POINTS
A. Overlaps and Seams
B. Projected Water Line
C. Channel Bottom/Side Slope Vertices



Drawing Not To Scale

NOTES:
*Horizontal staple spacing should be altered if necessary to allow staples to secure the critical points along the channel surface.

**In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECP's.

NORTH AMERICAN GREEN
5401 St. Wendel - Cynthiana Rd.
Poseyville, IN 47633
PH: 800-722-2040
www.nagreen.com

Disclaimer:
The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.

Drawn on: 5-4-17

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 (and 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 (SDOs)	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 inspections, 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.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

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NORTH CAROLINA PROFESSIONAL SEAL 036242 ENGINEER CHAD E. ABBOTT
5/22/25

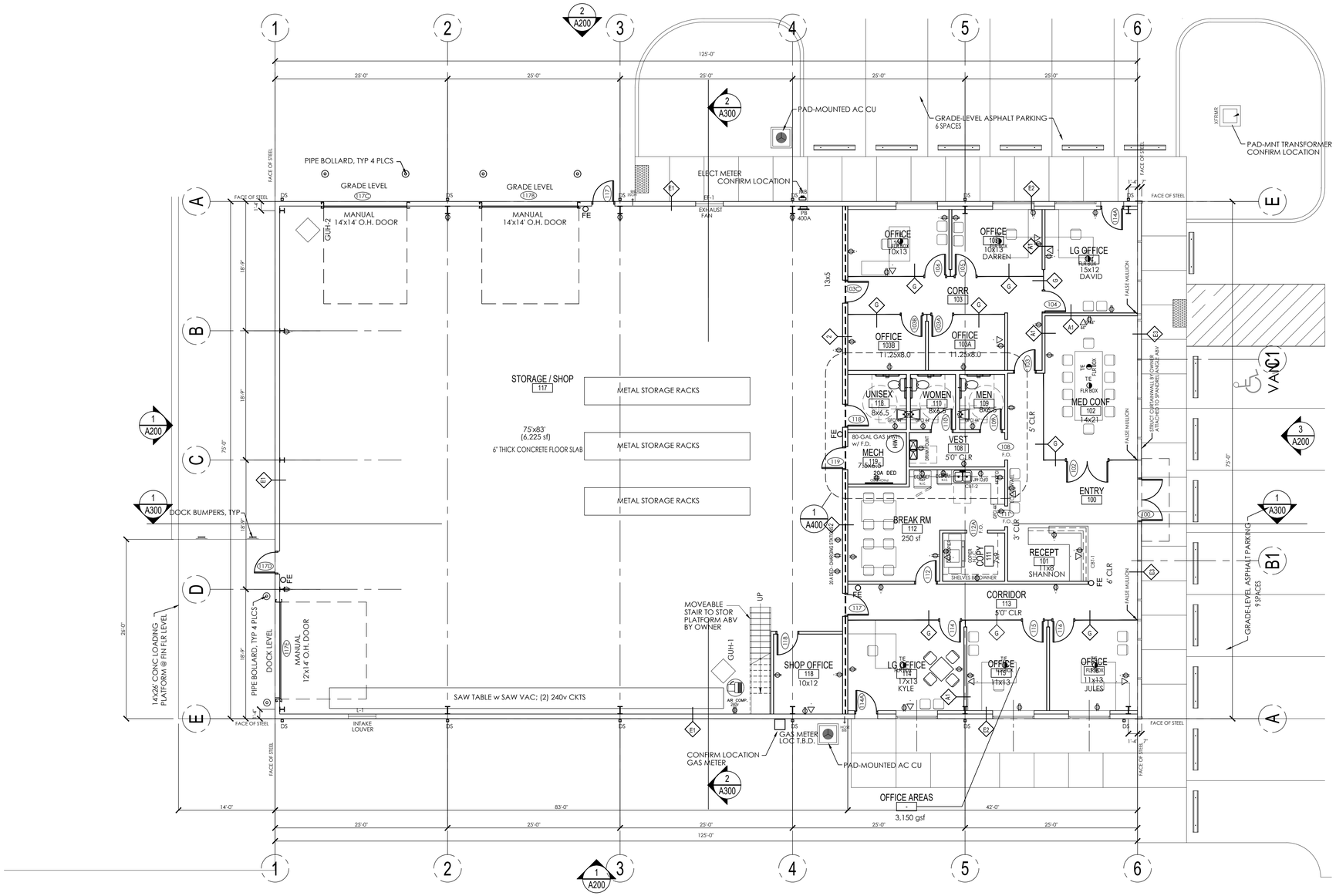
NO.	DATE	REVISIONS
1	5/22/25	DSF
2	3/18/25	DSF
3	8TH, 2025	BY
4		
5		
6		

FIRST ISSUED
FRANKLIN COUNTY COMMENTS - MARCH 28TH, 2025

CONSTRUCTION DRAWINGS
INNOVATIVE GLASS SOLUTIONS
15 CASCADE CT, YOUNGSVILLE NC 27596
FRANKLIN COUNTY

EROSION CONTROL DETAILS

C3 PROJECT #: 22-158
REVIEW PROJECT #: Z-25-343
SHEET #: C-2.3C



1 CONSTRUCTION FLOOR PLAN

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

CONSTRUCTION LEGEND

- NEW EXTERIOR WAREHOUSE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) CONTINUE PEMB INSULATION FULL TO EAVE- (NON-CONDITIONED).
- NEW EXTERIOR OFFICE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) PLUS AIR SPACE, 3-5/8" 25 GA MTL STUDS, 5/8" GYP BD, R-15 F.G BATTS w/OUT V.B.
- NEW EXTERIOR FACDE OFFICE WALL CONSTR w/ STRUCT CURTAINWALL FRAME, HORIZONTAL SPANDREL ANGLE w/ STOREFRONT GLAZING FULL HGT (16'-0" AFF EAVE) PLUS
- NEW 2-HR RATED OFFICE/WAREHOUSE FIRE PARTITION CONSTR FULL HGT TO ROOF DECK w/ 6" 20 GA MTL STUDS @ 16" O.C., (2) LA 5/8" GYP BD EA SIDE, R-15 F.G. BATTS w/ V.B. TO ROOF DECK. PROVIDE SLIP-TRACK CONDITION AS REQD @ ROOF DECK) PER UL#U-419.
- NEW NON-RATED PARTITION WALL TO 9'-0" AFF CONSTR w/ 3-5/8" 25 GA. MTL STUDS @ 16" O.C., w/ 1 LA 5/8" GWB EA SIDE w/ R-11 F.G. SOUND ATTENUATION BATTS(FILL STUD CAVITIES). BRACE WALLS AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. (ALL PARTITIONS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE (U.N.O.)
- NEW NON-RATED PARTITION WALL TO 10'-0" AFF CONSTR w/ 3-5/8" 25 GA. MTL STUDS @ 16" O.C., w/ 1 LA 5/8" GWB EA SIDE w/ R-11 F.G. SOUND ATTENUATION BATTS(FILL STUD CAVITIES). BRACE WALLS AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. (FIN CLG=8'-10" AFF w/ R-30 F.G. BATTS ON TILES @ COND SPACES)
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- NEW 1/2" BUTT-GLAZED PARTIITION FULL-HGT (8'-0"AFF) PROVIDE 10" DP GWB SOFFIT AT CEILING TO RECEIVE TRACK. BRACE SOFFIT AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. FIN CLG HEIGHT 10'-4" @ FRONT CURTAINWALL
- XXX — NEW DOOR, FRAME, HDWE TO BE INSTALLED PER SCHEDULES
- FEC FE — FIRE EXTINGUISHER, CABINET CONFIRM LOCATIONS W FIRE MARSHAL 10LB ABC TYPE; (ALLOW FOR 6 TOTAL)

ELECTRICAL / DATA LEGEND

- DENOTES DATA POWER, THROUGH FLOOR IN PEDESTAL-TYPE FLOOR BOX ADDED
- DENOTES CABLE TV CABLING IN CEILING ABOVE LOCATION
- DENOTES LOCATION OF CARD READER, ELECTRIC STRIKE
- DENOTES EMPTY DATA BOX @ 18"AFF w PULL STRING TO TOP OF WALL; WIRING AND DEVICES BY TENANT VENDOR
- DENOTES STANDARD DUPLEX OUTLET @ 18"AFF ON SHARED 120/20 CIRCUIT
- DENOTES DEDICATED DUPLEX OUTLET @ 18"AFF, 120/20 UNLESS NOTED OTHERWISE
- DENOTES GROUND-FAULT INTERUPTED CIRCUIT PER N.E.C. 120/20A UNLESS NOTED OTHERWISE
- DENOTES QUADRAPLEX 120v RECEPTACLE
- DENOTES 220v 30f RECEPTACLE

ITEMS STILL NEEDED/ TO BE CONFIRMED:

IT SERVER REQUIREMENTS
SECURITY REQUIREMENTS
MODULAR OFFICE FURNITURE WIRING, CIRCUITING POWER POLES, WHIPS (TOO LATE FOR FLOOR CORES).
CONFIRM COPIER, PRINTER, FAX LOCATIONS & REQUIREMENTS.
ANY SPECIAL REQUIREMENTS ?
AMPERAGE REQUIREMENTS FOR 220V RECEPTACLES.

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
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10/17/2025 11:38:21 AM

GENERAL NOTES

1. FINISHED FLOOR TO EAVE HEIGHT = 16'-0"
2. FINISHED CEILING HEIGHT = 8'-10" AFF (OFFICE AREAS), 16'-0"± - EXPOSED STRUCTURE (WAREHOUSE AREA)
3. 4-7/8" PARTITIONS ARE SHOWN NOMINAL 5". DIMENSION TOLERANCE IS 1/4" UNLESS NOTED "±".
4. ALIGNMENT NOTES SHALL TAKE PRECEDENCE OVER DIMENSIONS.
5. ANY FURNITURE & EQUIPMENT SHOWN IS BY TENANT AND IS NOT INCLUDED THIS PROJECT AND SHALL BE TENANTS RESPONSIBILITY UNLESS OTHERWISE NOTED (U.O.N.).
6. ALL NEW EQUIPMENT, FINISHES AND APPLIANCES SHALL BE SELECTED BY THE OWNER & INSTALLED BY THE VENDOR.
7. PROVIDE MOISTURE RESISTANT GWB w/ SEMI-GLOSS LATEX PAINT AT ALL WET WALLS.
8. PROVIDE F.R. WOOD BLOCKING AT ALL FIXTURES, CABINETS, SHELVES AND WALL STOPS AS REQ'D. TRADES SHALL COORDINATE LOCATIONS.
9. FILL AND LEVEL ALL CRACKS OVER 1/8" IN CONCRETE FLOOR AT NEW VCT LOCATIONS.
10. SEE STRUCTURAL PLANS BY OTHERS FOR FOUNDATION, FOOTINGS, RETAINING WALL PLANS, DETAILS.
11. SEE PRE-ENGINEERED BLDG MFRS PLANS FOR FRAMING, SHEATHING LOADING PLANS, DETAILS.
12. SEE ENGINEERD PLANS BY OTHERS FOR PLUMBING, ELECTRICAL, MECHANICAL, SPRINKLER PLANS, DETAILS.
13. ALL EXPOSED STEEL FRAMING MEMBERS IN OFFICE AREA SHALL BE FRAMED, FURRED, SHEATHED OVER AS TIGHTLY AS POSSIBLE.

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btaa Burdett and Associates Architecture, Inc.

NORTH CAROLINA REGISTERED ARCHITECT 23110 — 03/10/25 — SEAL 52379

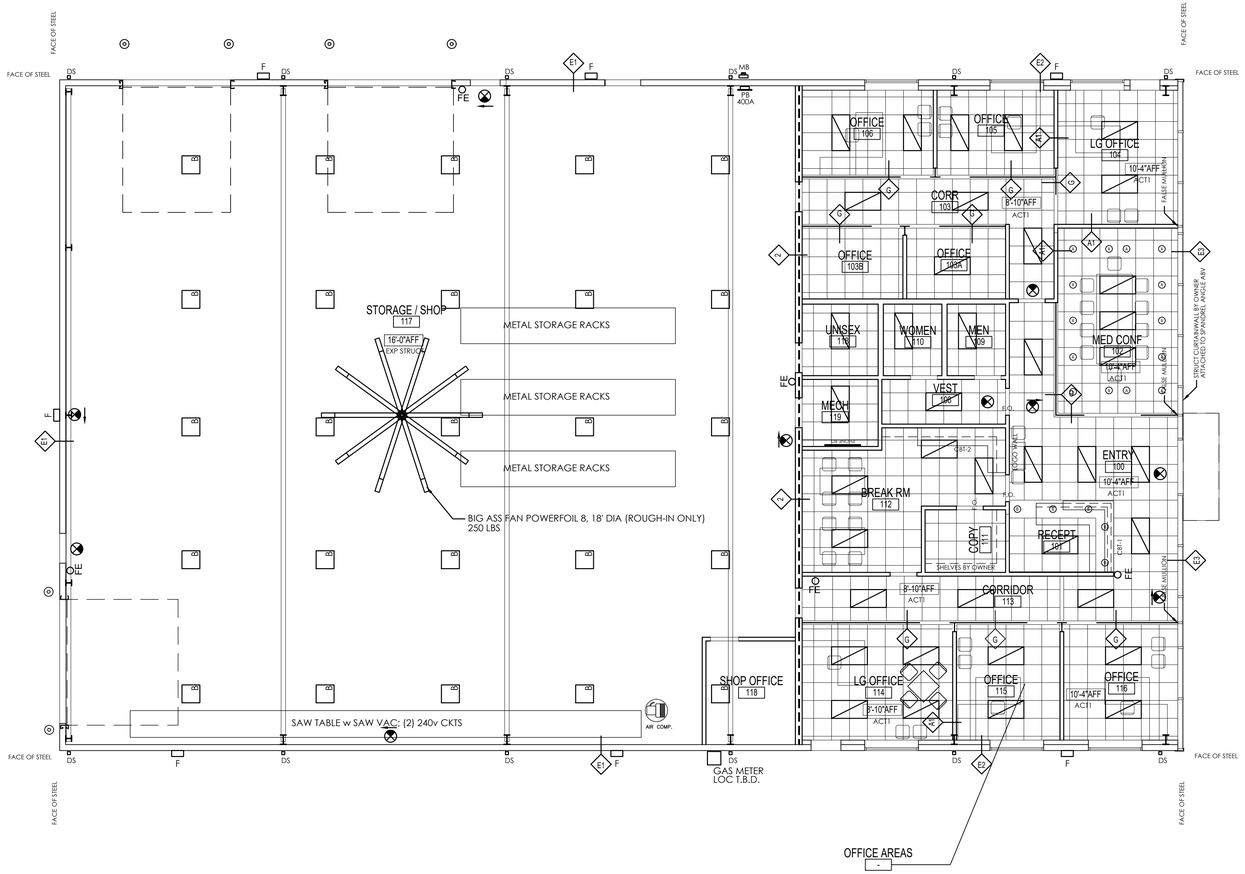
New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MANION
CHK. BY: DAVID BURDETT
DATE: Permit; Franklin Co, NC 02-10-25
REVISIONS:

TITLE: CONSTRUCTION FLOOR PLAN

SHEET NO. A101

PERMIT



1 REFLECTED CEILING PLAN

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

CONSTRUCTION LEGEND

- NEW EXTERIOR WAREHOUSE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) CONTINUE PEMB INSULATION FULL TO EAVE- (NON-CONDITIONED).
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- NEW 1/2" BUIT-GLAZED PARTITION FULL-HGT (8'-0"AFF) PROVIDE 10" DP GWB SOFFIT AT CEILING TO RECEUVE TRACK. BRACE SOFFIT AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. FIN CLG HEIGHT 10'-4" @ FRONT CURTAINWALL

CEILING LEGEND

- NEW 2'x4' RECESSED LED LIGHT FIXTURE
- 8'10"AFF — CEILING HEIGHT
- NON-RATED 2'x2' ACOUSTIC CEILING TILE IN WHITE METALLIC CEILING GRID (PROVIDE R-30 BATT INSULATION ON TILES AT CONDITIONED WAREHOUSE ROOMS)
- 24"x24" SUPPLY AIR DIFFUSER
- 48" SLOT SUPPLY AIR DIFFUSER
- 12"x24" RETURN AIR DIFFUSER
- EXHAUST FAN
- B — HI-BAY LED LIGHT FIXTURE
- EMERGENCY LIGHT w BATTERY BACK-UP; RE-USE EXISTING AS POSSIBLE
- ILLUMINATED EXIT SIGN; ARROWS INDICATE DIRECTIONS
- A — DENOTES INTERIOR RECESSED LED CAN LIGHT
- B — DENOTES INTERIOR SUSPENDED LED PENDANT LIGHT
- EXD — DENOTES EXTERIOR LED EXIT DISCHARGE LIGHT ON BATTERY BACK-UP
- F — DENOTES EXTERIOR LED WALL PACK FIXTURE
- DENOTES HVLS CEILING FAN (ROUGH-IN ONLY) AS MFR BY BIG ASS FAN CO. POWERFOIL 8 , 18' DIA; 230 LBS

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
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10/17/2025 11:38:22 AM

CEILING NOTES

THIS PLAN IS INTENDED TO COORDINATE CEILING DEVICE LOCATIONS FOR WORK OF THE RESPECTIVE TRADES.
SEE ARCHITECTURAL PLANS FOR ACTUAL WALL LOCATIONS AND DIMENSIONS.
SEE ASSOCIATED SYSTEMS SHEETS FOR ASSOCIATED SPECIFICATIONS, DETAILS, DUCTING PIPING AND CIRCUITING.
ALL CONTRACTORS ARE TO VERIFY & COORDINATE THEIR ACTIVITIES.
HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR INSULATION OF SUPPLY DUCTS AND GRILLES ABOVE CEILING & IN NON-CONDITIONED PLENUMS & SPACES AS REQUIRED.
SUSPENDED CEILING TO BE CENTERED & ORIENTED RELATIVE TO WALLED SPACES AS SHOWN.
CEILING CONTRACTOR TO BE RESPONSIBLE FOR TRIMMING OUT HVAC GRILLES @ ALL RATED & NON RATED CEILINGS.
ACOUSTICAL CEILING CONTRACTOR TO SUPPORT LIGHT FIXTURES PER MFR AND TO PROVIDE MIN. 2 TIE WIRES DIAGONALLY PER FIXTURE.
CAN LIGHTS, EXIT & EMERGENCY LIGHTS SHALL BE CENTERED IN CEILING TILES.

GENERAL NOTES

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bta Burdett and Associates Architecture, Inc.

NORTH CAROLINA REGISTERED ARCHITECT 40109 PAUL E. BURDETT SEAL
03/10/25
NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 52379 SEAL

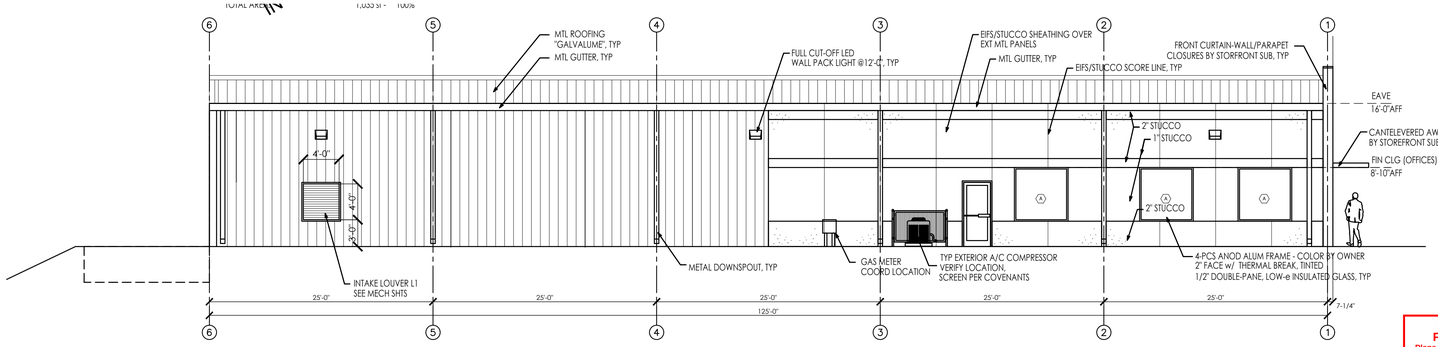
New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MONSON
CHK BY: DAVID BURDETT
DATE: Permit, Franklin Co, NC 02-10-25
REVISIONS:

TITLE: REFLECTED CEILING PLAN

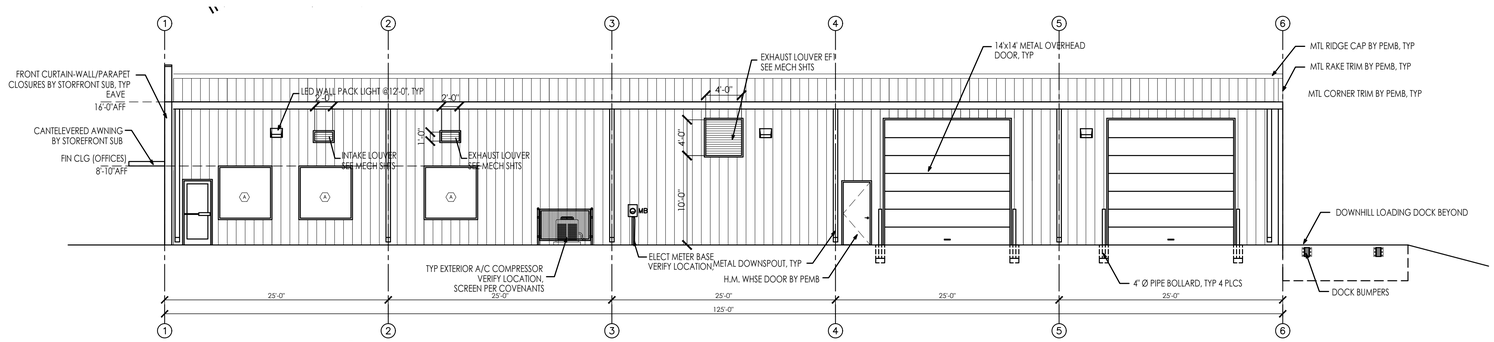
SHEET NO. A102

PERMIT



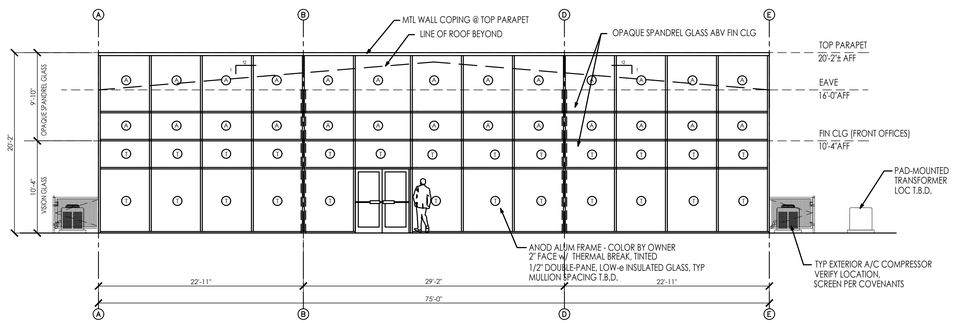
1 LEFT (SOUTH) BUILDING ELEVATION

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



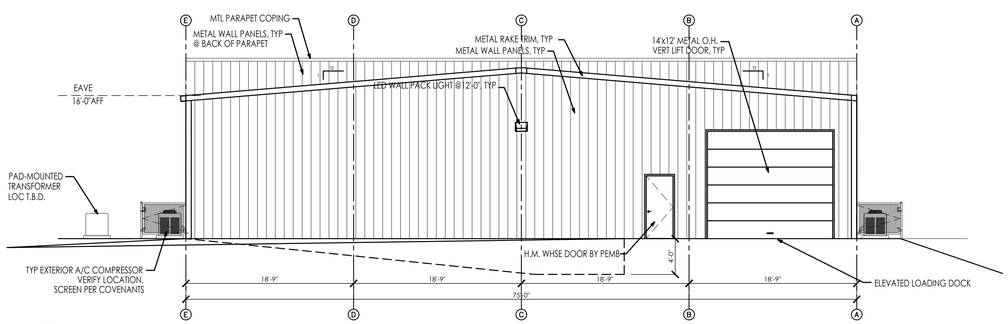
2 RIGHT (NORTH) BUILDING ELEVATION

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



3 FRONT (EAST) BUILDING ELEVATION

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



4 REAR (WEST) BUILDING ELEVATION

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

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REVIEWED FOR CODE COMPLIANCE
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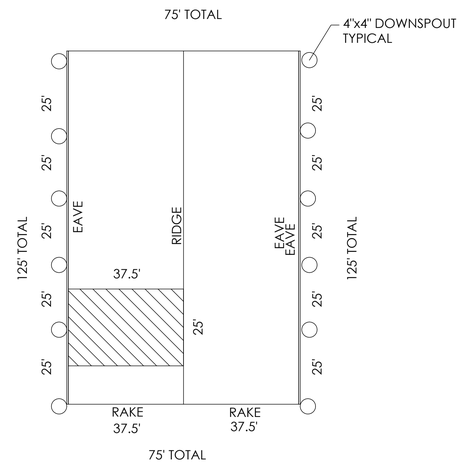
10/17/2025 11:38:22 AM



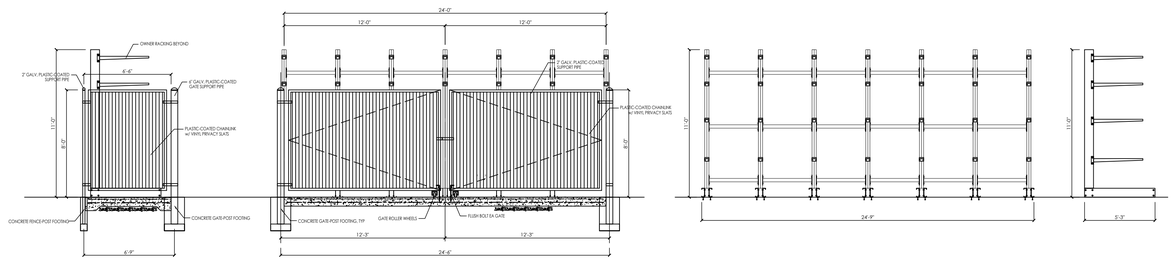
DOWNSPOUT SIZING;
100-YR RAINFALL FROM FIG. 1106.1 = 4"

MAXIMUM HORIZ. PROJECTED AREA= 938 SF = 3" Ø DOWNSPOUT MIN (TABLE 1106.2) - 9.6 SI
*4"x4" DOWNSPOUT PROVIDES 16 SI. * - MORE THAN SUFFICIENT

MAXIMUM HORIZ. PROJECTED AREA= 938 SF = 5" Ø GUTTER MIN. @ 1/2"/FT(TABLE 1106.2) - 9.8 SI
*6"x6" GUTTER PROVIDES 36 SI. * - MORE THAN SUFFICIENT

5 ROOF PLAN/ DOWNSPOPUT SIZING & SPACING

SCALE = NO SCALE



ENCLOSURE SIDE ELEVATION, TYP

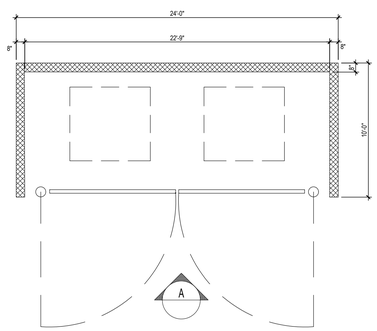
ENCLOSURE FRONT ELEVATION, TYP

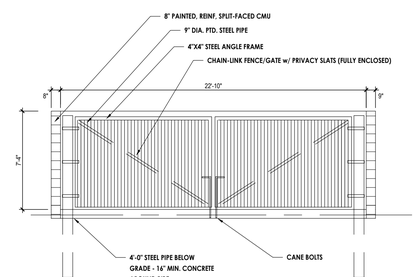
STOCK RACK FRONT ELEVATION, TYP

STOCK RACK SIDE ELEVATION, TYP

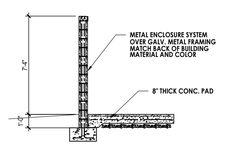
6 EXTERIOR RACKING ENCLOSURE

SCALE = 3/16" = 1'-0"





ELEVATION A



SECTION B-B

7 EXTERIOR DUMPSTER ENCLOSURE

SCALE = 3/16" = 1'-0"

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NORTH CAROLINA REGISTERED ARCHITECT 10859 DAVID BURDETT 05/30/25

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 52379 EIGHT

New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MANION
CHK. BY: DAVID BURDETT
DATE: Permit; Franklin Co., NC 05-30-25
REVISIONS:

TITLE: CONSTRUCTION ELEVATIONS

SHEET NO. A200 PERMIT

PANEL 1								
CKT	LOAD	BKR	LOAD kVA	PH	LOAD kVA	BKR	LOAD	CKT
1	OFFICE 106 RECEPT.	20/1	0.72	A	0.72	20/1	OFFICE 105 RECEPT.	2
3	OFFICE 104 RECEPT.	20/1	0.72	B	0.72	20/1	CONFERENCE RM. RECEPT.	4
5	CONFERENCE RM RECEPT.	20/1	0.90	C	0.72	20/1	OFFICE 103 RECEPT.	6
7	GFCI BATH RECEPT.	20/1	0.54	A	0.54	20/1	CORRIDOR RECEPT.	8
9	GFCI. WATER COOLER RECEPT.	20/1*	0.18	B	0.36	20/1	PHONE BD. RECEPT.	10
11	PHONE BD. RECEPT.	20/1	0.36	C	0.18	20/1*	REFRIG. RECPT.	12
13	DW RECEPT.	20/1*	0.36	A	0.36	20/1	GFCI C-TOP RECEPT.	14
15	GFCI C-TOP RECEPT.	20/1	0.36	B	0.54	20/1	BREAK RM RECEPT.	16
17	COPIER RECEPT.	20/1	0.72	C	0.90	20/1	RECEPTION 101 RECEPT.	18
19	OFFICE 114 RECEPT.	20/1	0.72	A	0.72	20/1	OFFICE 115 RECEPT.	20
21	OFFICE 116 RECEPT.	20/1	0.72	B	1.20	20/1	SIGN CKT.	22
23	OFFICE 118 RECEPT.	20/1	0.90	C	1.00	20/1	CHARGER RECPT.	24
25	CHARGER RECPT.	20/1	1.00	A	1.00	20/1	CHARGER RECPT.	26
27	WAREHOUSE RECPT.	20/1	0.36	B	0.54	20/1	WAREHOUSE RECPT.	28
29	WAREHOUSE RECPT.	20/1	0.54	C	2.50	30/2**	AIR COMP. RECPT.	30
31	GUH-1	20/1	0.18	A	2.50			32
33	GUH-2	20/1	0.18	B	0.00	20/1	PARKING LOT LIGHTS	34
35	SPARE	20/1	0.00	C	0.00	20/1	PARKING LOT LIGHTS	36
37	SPARE	20/1	0.00	A	20.20	200/3	PANEL 2	38
39	SPACE		0.00	B	19.00			40
41	SPACE		0.00	C	18.40			42
			kVA	PH	AMPS			
			29.6	A	246			
			24.9	B	207			
			27.1	C	226			

VOLTAGE/PHASE	208Y/120V, 3P, 4W
BUS RATING	400A
MAIN CIRCUIT BREAKER RATING	400A MB
AIC RATING	22K AIC
SERVICE ENTRANCE RATED	YES
ENCLOSURE	NEMA 1
MOUNTING	SURFACE

* USE GFCI BREAKER.

** VERIFY ELECTRICAL REQUIREMENTS WITH ACTUAL AIR COMP. BEING INSTALLED BEFORE ROUGH IN.

NEC ELECTRIC DEMAND SUMMARY 208Y/120V, 3P, 4W							
EQUIPMENT	DEMAND FACTOR	kVA A	kVA B	kVA C	LOAD kVA	NEC REFERENCE	NOTES/CALCULATIONS
LIGHTING	125%	3.60	3.60	3.60	10.80	220.12	9000SF X 1.2 VA/SF
RECEPTACLES < 10 kVA	100%	3.33	3.33	3.33	9.99	220.44	
RECEPTACLES > 10 kVA	50%	1.20	1.20	1.20	3.60	220.44	
HVAC	100%	11.90	11.90	11.90	35.70	--	BASED ON MCA
WATER HEATER	125%	2.84	2.84	0.00	5.68	422.13	STORAGE TANK (120 GAL @ 125%
SIGN	100%	0.00	1.20	0.00	1.20	220.14(F)	
EQUIPMENT	SEE CODE	2.77	2.77	2.77	8.31		
DEMAND kVA PER PHASE		25.64	26.84	22.80			
DEMAND AMPS PER PHASE		214	224	190			

THE CALCULATED LIGHTING LOAD EXCEEDS THE CONNECTED LIGHTING LOAD.

PANEL 2								
CKT	LOAD	BKR	LOAD kVA	PH	LOAD kVA	BKR	LOAD	CKT
1	OFFICE LIGHTING	20/1	0.96	A	1.14	20/1	OFFICE LIGHTING	2
3	WAREHOUSE LIGHTING	20/1	0.97	B	0.90	20/1	WAREHOUSE LIGTING	4
5	EXTERIOR LIGHTING	20/1	0.60	C	2.08	30/2**	BIG ASS FAN	6
7	WATER HEATER	30/2	2.25	A	2.08			8
9			2.25	B	1.08	20/1	EF-1	10
11	AH-1	35/3	3.80	C	2.21			12
13			3.80	A	2.21	30/3	HP-1	14
15			3.80	B	2.21			16
17	AH-2	30/3	3.56	C	2.36			18
19			3.56	A	2.36	30/3	HP-2	20
21			3.56	B	2.36			22
23	SAW	30**	1.87	C	0.00		SPACE	24
25			1.87	A	0.00		SPACE	26
27	SAW	30**	1.87	B	0.00		SPACE	28
29			1.87	C	0.00		SPACE	30
31	SPACE		0.00	A	0.00		SPACE	32
33	SPACE		0.00	B	0.00		SPACE	34
35	SPACE		0.00	C	0.00		SPACE	36
37	SPACE		0.00	A	0.00		SPACE	38
39	SPACE		0.00	B	0.00		SPACE	40
41	SPACE		0.00	C	0.00		SPACE	42
			kVA	PH	AMPS			
			20.2	A	169			
			19.0	B	158			
			18.4	C	153			

VOLTAGE/PHASE	208Y/120V, 3P, 4W
BUS RATING	200A
MAIN CIRCUIT BREAKER RATING	MLO
AIC RATING	22K AIC
SERVICE ENTRANCE RATED	NO
ENCLOSURE	NEMA 1
MOUNTING	SURFACE

** VERIFY ELECTRICAL REQUIREMENTS WITH ACTUAL EQUIPMENT BEING INSTALLED BEFORE ROUGH IN.

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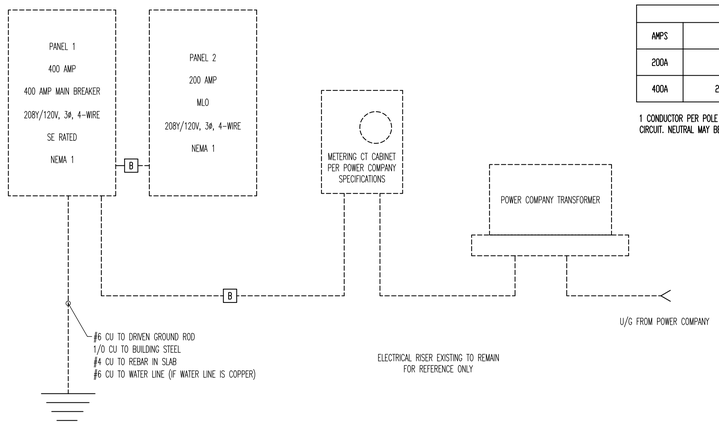
10/17/2025 11:38:22 AM



BREAKER FEEDER SCHEDULE			B
AMPS	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
200A	3/0	#6	2 1/2"
400A	2 SETS - 3/0	#3	2 1/2"

1 CONDUCTOR PER POLE PLUS NEUTRAL PER SET. E.C. TO VERIFY NECESSITY OF NEUTRAL FOR EACH CIRCUIT. NEUTRAL MAY BE DELETED IF NOT REQUIRED FOR INDIVIDUAL PIECES.

PANELS ELECTRICAL POWER RISER | 1

GENERAL ELECTRICAL NOTES:

ADMINISTRATIVE:

1. THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS: PC – PLUMBING CONTRACTOR, EC – ELECTRICAL CONTRACTOR, MC – MECHANICAL CONTRACTOR, GC – GENERAL CONTRACTOR, FASC – FIRE ALARM SYSTEM CONTRACTOR, AHJ – AUTHORITY HAVING JURISDICTION.
2. "PROVIDE" MEANS TO FURNISH AND INSTALL. THE ELECTRICAL CONTRACTOR SHALL ALSO INSTALL MATERIALS AND EQUIPMENT FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR AS REQUIRED.
3. EC SHALL PROVIDE LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY AND REASONABLY INCIDENTAL TO INSURE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. MINOR ITEMS, ACCESSORIES, AND DEVICES REASONABLY INFERRABLE AS NECESSARY FOR THE COMPLETION AND PROPER OPERATION OF ANY ELECTRICAL SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
4. WORKMANSHIP SHALL BE IN ACCORDANCE WITH NECA 1 "STANDARD PRACTICE FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING."
5. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE ELECTRICAL CONTRACTOR AT AN APPROVED LOCATION. THE ELECTRICAL CONTRACTOR SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE ELECTRICAL CONTRACTOR UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
6. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
7. DO NOT SCALE THESE DRAWINGS–REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
8. TRADE NAMES AND MANUFACTURERS ARE SPECIFIED TO ESTABLISH A QUALITY STANDARD. SUBSTITUTIONS SHALL BE PERMITTED IF APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ALL LISTED MODEL NUMBERS SHALL BE VERIFIED WITH THE MANUFACTURER FOR PROPER APPLICATION OF EQUIPMENT.
9. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
10. GROUNDING AND BONDING SHALL BE PER NEC ARTICLE 250. THE RACEWAY SYSTEM SHALL NOT BE RELIED UPON FOR GROUNDING CONTINUITY. A GREEN EQUIPMENT GROUNDING CONDUCTOR, SIZED PER NEC TABLE 250-122, SHALL BE RUN IN ALL POWER RACEWAYS. FOR NON-ISOLATED GROUND CIRCUITS PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. FOR ISOLATED GROUND CIRCUITS, PROVIDE ONE NEUTRAL AND ONE ISOLATED GROUND WIRE FOR EACH CIRCUIT; IN ADDITION, PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. MAIN BONDING JUMPERS AND SYSTEM BONDING JUMPERS SHALL BE INSTALLED IN ACCORDANCE WITH 250.28 OF THE NEC. FOR BUILDINGS OR STRUCTURES SUPPLIED BY FEEDERS OR BRANCH CIRCUITS, GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH 250.32. SEPARATELY DERIVED AC SYSTEMS SHALL BE GROUNDED IN ACCORDANCE WITH 250.30. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS; ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED PER 250.54 AS NECESSARY.
11. ALL MATERIALS AND EQUIPMENT SHALL COMPLY WITH THE UNDERWRITERS' LABORATORIES, INC. STANDARDS OR HAVE UL APPROVAL, OR BEAR UL RE-EXAMINATION LISTING WHERE SUCH APPROVAL HAS BEEN ESTABLISHED FOR THE TYPE OF DEVICE IN QUESTION.
12. CONDUCTORS, FUSES, CIRCUIT BREAKERS, AND DISCONNECT SWITCHES SHOWN ON THESE PLANS HAVE BEEN SIZED FOR THE SPECIFIED EQUIPMENT. BEFORE ORDERING ELECTRICAL EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON THE SITE AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES SHOULD CONDUCTOR, CIRCUIT BREAKER, OR FUSE SIZES REQUIRE CHANGE.
13. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE THE FOLLOWING MATERIALS ARE RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT: LIGHT FIXTURES, INCLUDING PROPER DISPOSAL OF BALLASTS, FLUORESCENT LIGHT BULBS, AND TRANSFORMERS, WIRING AND ELECTRICAL EQUIPMENT, AND INSULATION. WASTE MATERIALS CONTAINING LEAD, ASBESTOS, PCBs (FLUORESCENT LAMP BALLASTS), OR OTHER HARMFUL SUBSTANCES SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL AND STATE LAWS AND REQUIREMENTS CONCERNING HAZARDOUS WASTE.
14. ALL WORK SHALL CONFORM TO 2020 NATIONAL ELECTRIC CODE, 2018 STATE BUILDING CODE, AND ALL APPLICABLE LOCAL CODES.

MATERIALS:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY DISCONNECTS, SWITCHES, RECEPTACLES, TERMINALS, ETC, UNDER THE ELECTRICAL BID AND SHALL INCLUDE ALL NECESSARY CIRCUITS AND CONNECTIONS TO THE EQUIPMENT PROVIDED BY ALL SUPPLIERS, UNLESS NOTED OTHERWISE BY OTHER DISCIPLINES.
2. ENCLOSED SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE BY SQUARE D, EATON, OR GE. ENCLOSED SWITCHES SHALL HAVE A HANDLE LOCKABLE IN THE OFF POSITION AND SHALL HAVE A HANDLE INTERLOCKED TO PREVENT OPENING THE FRONT COVER WHILE IN THE ON POSITION. ENCLOSED SWITCHES OF THE FUSIBLE TYPE SHALL BE FUSED IN ACCORDANCE WITH NAMEPLATE DATA WITH DUAL ELEMENT TYPE FUSES BY BUSSMAN, LITTELFUSE, OR MERSEN.
3. CIRCUIT BREAKERS SHALL BE MOLDED-CASE, THERMAL MAGNETIC TYPE WITH QUICK-MAKE, QUICK-BREAK MECHANISM, COMMON TRIP ON MULTI-POLE BREAKERS, AND UL LISTED FOR BOTH COPPER AND ALUMINUM CONDUCTORS. CIRCUIT BREAKERS IN PANELS SHALL BE SERIES RATED WITH THE MAIN BREAKER, FULLY RATED FOR THE SYSTEM, OR SERIES RATED WITH THE BREAKER FEEDING THE PANEL FROM THE FACTORY.
4. ALL WIRE, CONNECTORS, TERMINALS, AND LUGS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WHERE CONDUCTORS ARE RUN IN PARALLEL, LUGS SHALL BE LISTED FOR PARALLEL CONDUCTORS. PUSH WIRE CONNECTORS ARE NOT ALLOWED FOR BUILDING WIRE. PUSH CONNECTORS ARE ONLY ALLOWED, WHEN APPROVED, AS PART OF MANUFACTURED LISTED PRODUCTS. ALL WIRE SHALL BE INSTALLED IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE.
5. THE INSULATION TYPE FOR INTERIOR WIRING SHALL BE DUAL RATED THHN/THWN OR XHHW; ALL WIRING INSTALLED BELOW GRADE OR IN MOIST OR WET LOCATIONS SHALL HAVE TYPE THWN OR XHHW INSULATION. INSULATION VOLTAGE RATING SHALL BE 600 VOLTS AND A MINIMUM TEMPERATURE RATING OF 75°C. CONDUCTORS SHALL BE SOLID OR STRANDED COPPER FOR #10 AWG AND #12 AWG, AND STRANDED COPPER FOR #8 AWG AND LARGER SIZES. ALL WIRING AND CABLE SHALL BE UL LISTED. ALL TERMINATIONS AND DEVICES SHALL BE RATED FOR USE WITH 75°C CONDUCTORS. FINAL CONNECTIONS TO ALL MOTORS AND EQUIPMENT SUBJECT TO VIBRATION OR MOVEMENT SHALL BE MADE WITH STRANDED COPPER CONDUCTORS. CONDUCTORS SHALL BE BY CERRO WIRE, INC, INDUSTRIAL WIRE & CABLE, INC, ENCORE WIRE CORPORATION, OR SOUTHWIRE COMPANY.
6. JOINTS IN SOLID CONDUCTORS SHALL BE SPLICED USING IDEAL "WIRE NUTS", 3M "SCOTCH LOCK", OR T&B "PIGGY" CONNECTORS IN JUNCTION BOXES, OUTLET BOXES, AND LIGHTING FIXTURES. JOINTS IN STRANDED CONDUCTORS SHALL BE SPLICED BY APPROVED MECHANICAL CONNECTORS AND GUM RUBBER TAPE OR FRICTION TAPE. SOLDERLESS MECHANICAL CONNECTORS FOR SPLICES AND TAPS, PROVIDED WITH UL APPROVED INSULATING COVERS, MAY BE USED INSTEAD OF MECHANICAL CONNECTORS PLUS TAPE. IN ALL CASES, CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICING SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES, TROUGHS, OR GUTTERS. WHERE CONCENTRIC, ECCENTRIC, OR OVERSIZED KNOCKOUTS ARE ENCOUNTERED, A GROUNDING TYPE INSULATED BUSHING SHALL BE PROVIDED.
7. ALL LUMINARES SHALL BE LISTED. LUMINARES IN WET OR DAMP LOCATIONS SHALL BE MARKED AS SUITABLE FOR THE RESPECTIVE USE. EMERGENCY LIGHTING SHALL BE INSTALLED AS SHOWN. FINAL LOCATIONS OF ALL EXIT AND EMERGENCY LIGHTS SHALL BE VERIFIED WITH THE BUILDING INSPECTOR PRIOR TO INSTALLATION. ALL FLUORESCENT FIXTURES SHALL HAVE ELECTRONIC BALLASTS MEETING ANSI C82.11 FOR ELECTRONIC BALLAST PERFORMANCE. ALL BALLASTS SHALL BE UL LISTED AND MEET FEDERAL AND STATE EFFICIENCY REQUIREMENTS.
8. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. CONDUIT FITTINGS AND COUPLINGS SHALL BE BY APPLETON, RACO, OR O-Z/GEDNEY. COUPLINGS SHALL BE THREADED, SET-SCREW, OR COMPRESSION TYPE. INDENTER OR CRIMP TYPE ARE NOT PERMITTED. CONDUIT FITTINGS AT ALL ELECTRICAL BOXES INCLUDING PULL, JUNCTION, AND OUTLET BOXES, SHALL HAVE INSULATED THROATS TO PREVENT INSULATION SCORING. DIE CAST FITTINGS ARE NOT PERMITTED
9. EMT SHALL BE MANUFACTURED IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE–AMERICAN NATIONAL STANDARD FOR STEEL ELECTRICAL METALLIC TUBING (EMT), ANSI C80.3 AND UL 797. RIGID METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI–AMERICAN NATIONAL STANDARD FOR ELECTRICAL RIGID STEEL CONDUIT (ERSC), ANSI C80.1 AND UL 6. INTERMEDIATE METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI–AMERICAN NATIONAL STANDARD FOR INTERMEDIATE METAL CONDUIT ANSI C80.6 AND UL 1242.
10. METAL CONDUIT SHALL BE BY ALLIED TUBING & CONDUIT, BECK MANUFACTURING, INC, OR WHEATLAND TUBE COMPANY. FLEXIBLE METAL CONDUIT, LIQUID-TIGHT FLEXIBLE METAL CONDUIT, AND NONMETALLIC CONDUIT SHALL BE BY AFC CABLE SYSTEMS, INC, ELECTRI-FLEX COMPANY, OR INTERNATIONAL METAL HOSE.

METHODS:

1. COLOR CODE CONDUCTORS PER NEC. FEEDERS SHALL BE IDENTIFIED IN ACCORDANCE WITH NEC 215.12. USE BLACK, RED, AND BLUE FOR PHASES A, B, AND C RESPECTIVELY ON 208Y/120 VOLT THREE–PHASE Y SYSTEMS AND WHITE FOR THE NEUTRAL. ISOLATED GROUND WIRES SHALL BE GREEN WITH YELLOW BANDS OR STRIPES. ; THIS IDENTIFICATION SHALL BE MADE AT EACH POINT WHERE A CONNECTION IS MADE. COLORS SHALL BE FACTORY APPLIED FOR CONDUCTORS #6 AWG AND SMALLER. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN IN COLOR AND MINIMUM #12 AWG. THE EC SHALL PROVIDE PLENUM RATED CABLE FOR ANY ELECTRICAL, TELEPHONE, COMMUNICATION, OR OTHER CABLE THAT ENTERS CEILING RETURN PLENUMS.
2. CONCEAL ALL CONDUIT EXCEPT IN MECHANICAL ROOMS OR UNFINISHED AREAS AS NOTED. USE EMT CONDUIT FOR ALL BRANCH CIRCUITS AND FEEDERS INSIDE THE BUILDING. TYPE MC CABLE AND TYPE AC CABLE MAY BE INSTALLED WITHIN WALLS IF ALL NEUTRAL WIRES, ISOLATED GROUND WIRES, AND EQUIPMENT GROUND WIRES AS LISTED ABOVE ARE CONTAINED IN THE CABLE. *** TYPE NM CABLE MAY BE USED FOR INTERIOR BRANCH CIRCUITS IN NORMALLY DRY LOCATIONS SUBJECT TO THE RESTRICTIONS OF NEC 334.10 AND 334.12. TYPE NM CABLE CONDUCTORS SHALL BE DERATED PER NEC 334.80. *** FLEXIBLE CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SHALL BE MADE USING WEATHERPROOF FLEXIBLE CONDUIT. FOR LAY–IN LIGHT FIXTURES, USE MAXIMUM OF SIX (6) FEET OF FLEXIBLE MC CABLE (OR THE FLEXIBLE CONDUIT PROVIDED BY THE FIXTURE MANUFACTURER). SCHEDULE 40 PVC CONDUIT MAY BE USED FOR THE SECONDARY UNDERGROUND SERVICE, UNDERGROUND TELEPHONE SERVICE, AND BRANCH AND FEEDER CIRCUITS UNDER SLAB OR EXTERIOR TO THE BUILDING. EXPOSED EXTERIOR CONDUIT SHALL BE SCHEDULE 80 PVC. ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED WITH UNDERGROUND LINE MARKING TAPE 6–8 in BELOW GRADE DIRECTLY ABOVE THE RACEWAY. PROVIDE PULL WIRE IN EMPTY CONDUITS. UPSIZE CONDUIT FROM MINIMUM SIZE AS NECESSARY FOR LONGER PULLS. UNDERGROUND RACEWAYS THAT STUB INTO THE BOTTOM OF SWITCHBOARDS, OUTDOOR TRANSFORMERS, GENERATORS, ETC., SHALL RISE AT LEAST 2 in ABOVE THE FINISHED SLAB TO PREVENT WATER FROM DRAINING INTO THE RACEWAYS. RACEWAYS THAT PENETRATE EXTERIOR WALLS OR INTERIOR PARTITIONS SEPARATING SPACES THAT WILL BE AT SIGNIFICANTLY DIFFERENT TEMPERATURES SHALL BE SEALED IN ACCORDANCE WITH 300.5(G), 300.7(A), AND 300.50(E) OF THE NEC. ROUTE CONDUIT IN AND UNDER SLAB FROM POINT–TO–POINT. ROUTE EXPOSED CONDUIT AND CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS. COMPLETELY AND THOROUGHLY SWAB ALL RACEWAYS BEFORE INSTALLING WIRE. PULL ALL CONDUCTORS INTO EACH RACEWAY AT ONE TIME. USE A SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE #4 AWG AND LARGER.
3. CABLES, RACEWAYS, OR BOXES, INSTALLED IN EXPOSED OR CONCEALED LOCATIONS UNDER METAL–CORRUGATED SHEET ROOF DECKING, SHALL BE INSTALLED AND SUPPORTED SO THERE IS NOT LESS THAN 1–1/2 in MEASURED FROM THE LOWEST SURFACE OF THE ROOF DECKING TO THE TOP OF THE CABLE, RACEWAY, OR BOX. A CABLE, RACEWAY, OR BOX SHALL NOT BE INSTALLED IN CONCEALED LOCATIONS IN METAL–CORRUGATED, SHEET DECKING–TYPE ROOF. SEE NEC 300.4(E).
4. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL OUTLET, JUNCTION, PULL BOXES, FITTINGS, AND SUPPORTS. ALL OUTLET AND JUNCTION BOXES SHALL BE GALVANIZED STEEL TYPE BY APPLETON, STEEL CITY, OR RACO. EXTERIOR BOXES SHALL BE TYPE FS. VAPORTITE BOXES SHALL BE TYPE GS. WHERE SURFACE MOUNTED BOXES ARE USED, THOSE BOXES AND THEIR FACEPLATES SHALL HAVE ROUNDED CORNERS. BOXES INSTALLED IN FLOORS SHALL BE RATED FOR THE APPLICATION. MOUNT JUNCTION AND OUTLET BOXES FLUSH WITH FINISH SURFACES UNLESS OTHERWISE NOTED. WHERE MOUNTING HEIGHTS ARE GIVEN, THEY SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE CENTER OF THE BOX. ALL BOXES SHALL BE SIZED PER NEC ARTICLE 314. ALL OUTLET AND JUNCTION BOXES SHALL HAVE A COVER PLATE, PROVIDED BY THE ELECTRICAL CONTRACTOR. OUTLET BOXES IN RATED WALLS SHALL BE INSTALLED IN ACCORDANCE WITH NORTH CAROLINA BUILDING CODE 714.3.2 (MAXIMUM BOX SIZE IS 16 SQUARE in AND MAXIMUM OF SIX (6) BOXES PER 100 SQUARE FEET). INSTALL OUTLET BOXES IN RATED WALLS SUCH THAT OPENINGS OCCUR IN ONE SIDE ONLY WITHIN ANY GIVEN STUD SPACE. ALL CLEARANCES BETWEEN THE OUTLET BOX AND THE GYPSUM BOARD SHALL BE FILLED WITH JOINT COMPOUND OR OTHER APPROVED FIRE STOP MATERIAL. FLUSH MOUNTED JUNCTION BOXES IN ADJACENT ROOMS SHALL NOT BE MOUNTED BACK–TO–BACK. SURFACE MOUNTED FIXTURES SHALL BE FED THROUGH FLUSH MOUNTED 4X4 OCTAGONAL OR SQUARE BOXES.
5. ALL CONDUIT, BOXES, AND ELECTRICAL EQUIPMENT SHALL BE FIRMLY AND SECURELY FASTENED TO OR SUPPORTED FROM THE BUILDING STRUCTURAL MEMBERS OR EMBEDDED IN CONCRETE OR MASONRY. ELECTRICAL SUPPORTS SHALL NOT BE ATTACHED TO DUCTWORK, PIPING, OR THEIR SUPPORTS. HANGERS SHALL BE CATALOG ITEMS COMPATIBLE WITH AND SUITABLE FOR THE INTENDED USE. FOR METAL ROOF DECK INSTALLATIONS, 1 in EMT CONDUIT MAXIMUM AND 4 in JUNCTION BOXES MAXIMUM MAY BE SUPPORTED BY DECKING. THE SUSPENDED CEILING SYSTEM SHALL NOT BE USED FOR THE SUPPORT OF ELECTRICAL RACEWAY SYSTEMS OR SUPPORT OF COMMUNICATIONS OR DATA SYSTEMS WIRING. CONTRACTOR SHALL COMPLY WITH 1613 OF THE NORTH CAROLINA GENERAL CONSTRUCTION BUILDING CODE.
6. WHERE CONDUCTORS ARE RUN IN PARALLEL, THE EC SHALL COMPLY WITH NEC 310.4.
7. ELECTRICAL CONTRACTOR SHALL INSTALL DISCONNECT SWITCHES IN SIGHT OF ALL HARDWIRED EQUIPMENT AND APPLIANCES OR PROVIDE BREAKERS CAPABLE OF BEING LOCKED IN THE OPEN POSITION PER NEC 422.31. FOR MOTOR DRIVEN APPLIANCES, PROVIDE A DISCONNECTING MEANS PER NEC 422.31 AND 430 PART IX. WHERE AN INDIVIDUAL DISCONNECT SWITCH, CIRCUIT BREAKER, STARTER, ETC, IS SHOWN ON THE PLANS ADJACENT TO ITS LOAD AND NOT LOCATED ON A WALL, PROVIDE NECESSARY MATERIALS AND LABOR TO SUPPORT THE DEVICE.
8. ELECTRICAL CONTRACTOR SHALL FIELD IDENTIFY ALL SWITCH BOARD, PANEL BOARDS, CONTROL PANELS, METER SOCKETS, ETC., TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS PER 110.16 OF NEC.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT, SWITCHES, PANELS, ETC. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT, AND BACK WITH WHITE CORE, WHITE ENGRAVED LETTERS (1/4 in MINIMUM) ETCHED INTO THE WHITE CORE. ELECTRICAL CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD THAT ACCURATELY IDENTIFIES CIRCUITS INSIDE EACH PANEL. HANDWRITTEN LABELS ARE NOT ACCEPTABLE.

GENERAL ELECTRICAL NOTES | 2

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KILIAN ENGINEERING, INC. No. C-2277
NORTH CAROLINA CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA PROFESSIONAL SEAL 048744 ENGINEER KEITH D. COCHRAN

Digitally signed by Keith D Cochran
Contact Info: kcochran@kilianengineering.com
Date: 2025.08.07 12:03:17-04'00'

New Building for
INNOVATIVE GLASS SOLUTIONS
SITE LIGHTING
BURT WINSTON ROAD
FRANKLIN COUNTY, NC

DWG BY: DC
CHK BY: KDC
DATE: 8/7/2025
REVISIONS:

NOTES, SCHEDULES & RISER

SHEET NO.
E1
240813a

LIGHTING FIXTURE SCHEDULE

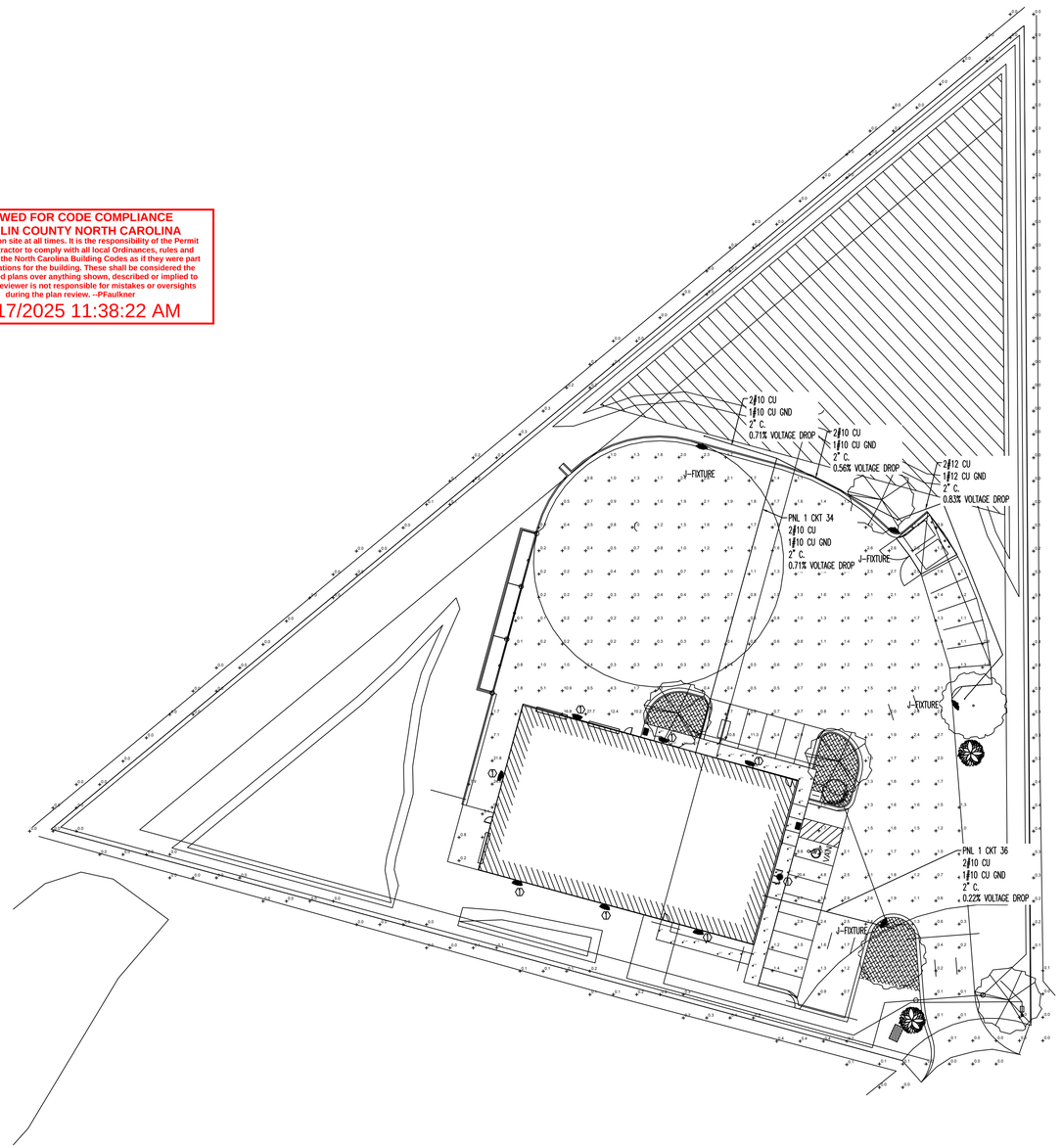
Label	Manufactuer	Catalog Number	Description	Lamp Lumens	Watts	Mounting Height	Utility Company
E	Lithonia	CSXW LED 700 40K T2M MVOLT PE DDBXD	Full Cut-off LED Wall Pack	10221.03	71.70	12'	N/A
F	RAB	VAN17-90/E	Cut-off LED Canopy Fixture	13276.3	83.20	12'	N/A
J	AEL	ATBM P10 MVOLT R3 4K/5K	Full Cut-off LED Cobra Head Roadway Fixture	11302.45	81.00	30'	Wake Electric

J FIXTURES CONTROLLED BY PHOTO CELL.

PHOTOMETRIC STATISTICS

Loading Dock	
Average	1.8 fc
Maximum	5.1 fc
Minimum	0.2 fc
Max/Min	25.5:1
Average/Min	9.0:1
Parking	
Average	2.0 fc
Maximum	27.7 fc
Minimum	0.1 fc
Max/Min	277.0:1
Average/Min	20.0:1
Property Line	
Average	0.1 fc
Maximum	0.5 fc
Minimum	0.0 fc
Max/Min	N/A
Average/Min	N/A
Sidewalk	
Average	12.4 fc
Maximum	32.2 fc
Minimum	0.6 fc
Max/Min	53.7:1
Average/Min	20.7:1
Street	
Average	0.0 fc
Maximum	0.1 fc
Minimum	0.0 fc
Max/Min	N/A
Average/Min	N/A

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. --PFaulkner
10/17/2025 11:38:22 AM



SITE PHOTOMETRIC PLAN SCALE: 1"=30'

LIGHTING PLAN HEX NOTES

1. SEE SHEET E4 OF ORIGINALLY SEALED SET ON 5/21/25 FOR CIRCUITING.

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NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
KILIAN ENGINEERING, INC.
No. C-2277

NORTH CAROLINA PROFESSIONAL SEAL 048744 ENGINEER KEITH D. COCHRAN

Digitally signed by Keith D Cochran
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INNOVATIVE GLASS SOLUTIONS
New Building for
SITE LIGHTING
BURT WINSTON ROAD
FRANKLIN COUNTY, NC

DWG BY: KDC
CHK BY: KDC
DATE: 8/7/2025
REVISIONS:

SITE PHOTOMETRIC PLAN

SHEET NO.
E2

240813a

NUCOR BUILDINGS GROUP

200 Whetstone Road Phone: (803) 568-2100
Swansea, SC 29160

Version: 1.6.13.0 (PROD)

Tuesday, March 18, 2025

JMJ Companies
10713 Staghound
Zebulon, NC 27597
Attn.: Bob Schug
Project Location: Youngsville, NC 27596
Project Number: S25B0226A

Project Name: Innovative Glass Solutions
Buildings: A->75'-0"x125'-0"x16'-0"(RCG, 1:12)

This Letter of Design Certification ensures that the materials furnished by the metal building supplier are designed in accordance with the information specified to the metal building supplier on the order documents and summarized by the loading information listed below. The Project Engineer of Record (not the metal building supplier) is responsible for verifying that the building code and design loads meet any and all applicable local requirements.

The Professional Engineer whose seal appears on this Letter of Certification is employed by the metal building manufacturer, a Member of MBMA, and does not serve as or represent the Engineer of Record for this project and shall not be construed as such.

DESIGN LOAD CRITERIA:

Structural Loads Applied in General Accordance with: North Carolina (NCBC 2018)
Risk Category: II - Standard Buildings

PROJECT-WIDE LOADING INFORMATION:

Ground Snow Load: 15.00 psf Snow Exposure Factor,Ce: 1.00 Snow Imp. Factor,Is: 1.00
Roof Live Load: 20.00 psf Reducible as per code

Design Wind Speed: 115 mph Nominal Design Wind Speed: 89 mph ***C&C Wind:27psf / -36psf
UL90 Rated: No Wind Exposure: C

Seismic Criteria: Ss:0.142 S1:0.072 *No ground snow included in seismic calculations.
Design Sds / Sd1: 0.151 / 0.115 Analysis Procedure: Equivalent Lateral Force Procedure
Seis. Imp. Factor,Ie: 1.00 Long. SFRS: Not Detailed For Seismic
Seis. Design Category: B Site Class: D Lat. SFRS: Not Detailed For Seismic

BUILDING-SPECIFIC LOADING INFORMATION:

	Roof Dead	Collateral Dead		Snow Coefficient			Snow Load (psf)		Wind		Seismic		
Bldg	(psf)*	Pri (psf)	Sec (psf)	Ct	Cs		Ps (psf)	**Pm (psf)	Enclosure	GCpi	R	Cs	V (kips)
A	3.00	4.00	4.00	1.10	1.00		11.55	15.00	Enclosed	±0.18	3.00	0.050	6.00

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY, NORTH CAROLINA
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. --PFaulkner
10/17/2025 11:38:22 AM

**Primary Structural Not Included*
***Pm is based on the minimum roof snow load calculated per building code or the contract-specified roof snow load, whichever is greater. This value, Pm, is only applied in combination with Dead and Collateral Loads. Roof Snow in other loading conditions is determined per the specified Building Code.*
****Design wind pressures to be used for wall exterior component and cladding materials not provided by Metal Building Supplier*

Mezzanine Information:

Floor Dead Load: N/A Floor Collateral Load: N/A Floor Live Load: N/A

Crane Information:

No cranes on building.

Roof-Top Unit Information:

2 - 250# FANS.

The design of structural members supporting roof gravity loads is controlled by the more critical effect of roof live load or roof snow applied in accordance with the governing building code.

DESIGN STANDARDS REFERENCED:

- AISC Specification for Structural Steel Buildings - Steel Construction Manual, 14th Edition, ©2010.
- AISI North-American Spec. for the Design of Cold-Formed Steel Structures, ©2012 Edition.
- IBC codes are designed in accordance with ASCE7-10 Edition.
- MBMA Metal Building Systems Manual, Latest Edition.
- AWS Latest Edition of Structural Welding Code.
- No buyout structural components provided on this project.

NORTH CAROLINA PROFESSIONAL SEAL 24064 ENGINEER RAJESH H. BHAGNARI

Digitally signed by Rajesh H. Bhagnari
Date: 2025.03.19 13:51:48-04'00'

Professional Seal

MBMA METAL BUILDING MANUFACTURES ASSOCIATION©

IAS ACCREDITED Metal Building Systems

GENERAL NOTES:

1. MATERIALS

	ASTM DESCRIPTION
STRUCTURAL STEEL PLATE	A529 / A572 / A1011
HOT ROLLED MILL SHAPES	A36 / A529 / A500
HSS ROUND	A500
HSS RECTANGULAR	A500
COLD FORM SHAPES	A653 / A1011
ROOF AND WALL SHEETING	A653 / A792
BOLTS	A307 / A325 / A490
CABLE	A475
RODS	A529 / A572

2. STRUCTURAL PRIMER NOTE:

SHOP COAT PRIMER IS INTENDED TO PROTECT THE STEEL FRAMING FOR A SHORT PERIOD OF TIME. STORAGE IN EXTREME COLD TEMPERATURES OR WINTER SNOW CONDITIONS, INCLUDING TRANSPORTATION ON SALTED OR CHEMICALLY TREATED ROADS WILL ADVERSELY AFFECT THE DURABILITY AND LONGEVITY OF THE PRIMER. THE COAT OF SHOP PRIMER DOES NOT PROVIDE THE UNIFORMITY OF APPEARANCE, OR THE DURABILITY AND CORROSION RESISTANCE OF A FIELD APPLIED FINISH COAT OF PAINT OVER A SHOP PRIMER. MINOR ABRASIONS TO THE SHOP COAT PRIMER CAUSED BY HANDLING, LOADING, SHIPPING, UNLOADING AND ERECTION ARE UNAVOIDABLE AND ARE NOT THE RESPONSIBILITY OF THE METAL BUILDING MANUFACTURER. METAL BUILDING MANUFACTURER IS NOT RESPONSIBLE FOR THE DETERIORATION OF THE PRIMER OR CORROSION THAT MAY RESULT FROM ATMOSPHERIC AND ENVIRONMENTAL CONDITIONS NOR THE COMPATIBILITY OF THE PRIMER TO ANY FIELD APPLIED COATING.

3. BUILDING ERECTION NOTES:

THE GENERAL CONTRACTOR AND/OR ERECTOR IS RESPONSIBLE TO SAFELY AND PROPERLY ERECT THE METAL BUILDING SYSTEM IN CONFORMANCE WITH THESE DRAWINGS, OSHA REQUIREMENTS, AND EITHER MBMA OR CSA S16 STANDARDS PERTAINING TO PROPER ERECTION. TEMPORARY SUPPORTS SUCH AS GUYS, BRACES, FALSEWORK, CRIBBING OR OTHER ELEMENTS FOR ERECTION ARE TO BE DETERMINED, FURNISHED AND INSTALLED BY THE ERECTOR. THESE SUPPORTS MUST SECURE THE STEEL FRAMING, OR PARTLY ASSEMBLED STEEL FRAMING, AGAINST LOADS COMPARABLE IN INTENSITY TO THOSE FOR WHICH THE STRUCTURE WAS DESIGNED IN ADDITION TO LOADS RESULTING FROM THE ERECTION OPERATION. SECONDARY WALL AND ROOF FRAMING (PURLINS, GIRTS AND/OR JOIST) ARE NOT DESIGNED TO FUNCTION AS A WORKING PLATFORM OR TO PROVIDE AS AN ANCHORAGE POINT FOR A FALL ARREST /SAFETY TIE OFF.

4. SPECIAL INSPECTION:

SPECIAL INSPECTIONS AND TESTING THAT MAY BE REQUIRED BY GOVERNMENTAL OR OTHER AUTHORITY DURING CONSTRUCTION AND/OR STEEL FABRICATION (COLLECTIVELY, "INSPECTIONS") ARE NOT THE RESPONSIBILITY OF THE PEMB MANUFACTURER, AND TO THE EXTENT REQUIRED IT SHALL BE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTITIVE. IN THE EVENT INSPECTIONS ARE REQUIRED, THE OWNER AND/OR THE OWNER'S REPRESENTITIVE SHALL EMPLOY A THIRD PARTY QUALITY ASSURANCE TESTING AGENCY APPROVED BY THE RELEVANT AUTHORITY. IF SUCH REQUIREMENTS ARE NOT SPECIFICALLY INCLUDED IN THE PEMB MANUFACTURER'S SALES DOCUMENTS, NO INSPECTIONS BY THE PEMB MANUFACTURER OR AT THE PEMB MANUFACTURER'S FACILITY SHALL BE MADE. THE PEMB MANUFACTURER'S FACILITIES ARE ACCREDITED BY IAS AC472.

5. A325 & A490 BOLT TIGHTENING REQUIREMENTS:

IT IS THE RESPONSIBILITY OF THE ERECTOR TO ENSURE PROPER BOLT TIGHTNESS IN ACCORDANCE WITH APPLICABLE REGULATIONS. FOR PROJECTS IN THE UNITED STATES, SEE THE RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS OR FOR PROJECTS IN CANADA, SEE THE CAN/CSA S16 LIMIT STATES DESIGN OF STEEL STRUCTURES FOR MORE INFORMATION.

THE FOLLOWING CRITERIA MAY BE USED TO DETERMINE THE BOLT TIGHTNESS (I.E., "SNUG-TIGHT" OR "FULLY-PRETENSIONED"), UNLESS REQUIRED OTHERWISE BY LOCAL JURISDICTION OR CONTRACT REQUIREMENTS:

A) ALL A490 BOLTS SHALL BE "FULLY-PRETENSIONED".
B) ALL A325 BOLTS IN PRIMARY FRAMING (RIGID FRAMES AND BRACING) MAY BE "SNUG-TIGHT", EXCEPT AS FOLLOWS: "FULLY-PRETENSION" A325 BOLTS IF:
   a) BUILDING SUPPORTS A CRANE SYSTEM WITH A CAPACITY GREATER THAN 5 TONS.
   b) BUILDING SUPPORTS MACHINERY THAT CREATES VIBRATION, IMPACT, OR STRESS-REVERSALS ON THE CONNECTIONS. THE ENGINEER-OF-RECORD FOR THE PROJECT SHOULD BE CONSULTED TO EVALUATE FOR THIS CONDITION.
   c) THE PROJECT SITE IS LOCATED IN A HIGH SEISMIC AREA. FOR IBC-BASED CODES, "HIGH SEISMIC AREA" IS DEFINED AS "SEISMIC DESIGN CATEGORY" OF 'D', 'E', OR 'F'. SEE THE "BUILDING LOADS" SECTION ON THIS PAGE FOR THE DEFINED SEISMIC DESIGN CATEGORY FOR THIS PROJECT.
   d) ANY CONNECTION DESIGNATED IN THESE DRAWINGS AS "A325-SC". "SLIP-CRITICAL (SC)" CONNECTIONS MUST BE FREE OF PAINT, OIL, OR OTHER MATERIALS THAT REDUCE FRICTION AT CONTACT SURFACES. GALVANIZED OR LIGHTLY-RUSTED SURFACES ARE ACCEPTABLE.
C) IN CANADA, ALL A325 AND A490 BOLTS SHALL BE "FULLY-PRETENSIONED", EXCEPT FOR SECONDARY MEMBERS (PURLINS, GIRTS, OPENING FRAMING, ETC.) AND FLANGE BRACES.

SECONDARY MEMBERS (PURLINS, GIRTS, OPENING FRAMING, ETC.) AND FLANGE BRACE CONNECTIONS MAY ALWAYS BE "SNUG-TIGHT", UNLESS INDICATED OTHERWISE IN THESE DRAWINGS.

6. GENERAL DESIGN NOTES:

1) ALL STRUCTURAL STEEL SECTIONS AND WELDED PLATE MEMBERS ARE DESIGNED IN ACCORDANCE WITH ANSI/AISC 360 "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS" OR THE CAN/CSA S16 "LIMIT STATES DESIGN OF STEEL STRUCTURES", AS REQUIRED BY THE SPECIFIED BUILDING CODE.
2) ALL WELDING OF STRUCTURAL STEEL IS BASED ON EITHER AWS D1.1 "STRUCTURAL WELDING CODE - STEEL" OR CAN/CSA W59 "WELDED STEEL CONSTRUCTION (METAL ARC WELDING)", AS REQUIRED BY THE SPECIFIED BUILDING CODE.
3) ALL COLD FORMED MEMBERS ARE DESIGNED IN ACCORDANCE WITH ANSI/AISI S100 OR CAN/CSA S136 "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", AS REQUIRED BY THE SPECIFIED BUILDING CODE.
4) ALL WELDING OF COLD FORMED STEEL IS BASED ON AWS D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL" OR CAN/CSA W59 "WELDED STEEL CONSTRUCTION (METAL ARC WELDING)", AS REQUIRED BY THE SPECIFIED BUILDING CODE.
5) ALL NUCOR BUILDING GROUP FACILITIES ARE IAS AC-472 ACCREDITED FOR DESIGN AND FABRICATION OF METAL BUILDING SYSTEMS. FOR PROJECTS IN CANADA, DESIGN AND FABRICATION ARE DONE ONLY IN FACILITIES THAT ARE ALSO CAN/CSA A660 AND W47.1 CERTIFIED.
6) IF JOISTS ARE INCLUDED WITH THIS PROJECT, THEY ARE SUPPLIED AS A PART OF THE SYSTEMS ENGINEERED METAL BUILDING AND ARE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1926.758 OF THE OSHA SAFETY STANDARDS FOR STEEL ERECTION, DATED JANUARY 18, 2001.
7) COLUMN BASE PLATES ARE DESIGNED NOT TO EXCEED THE ALLOWABLE BEARING STRESS OF CONCRETE THAT HAS A MINIMUM COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS.

BUILDING INFORMATION

PRIMER COLORS
PRIMARY PRIMER COLOR: RED SECONDARY PRIMER COLOR: RED

ROOF SHEETING
TYPE: CFR GAUGE: 24 FINISH: Galvalume Plus CLIP TYPE: Tall
THERMAL BLOCKS: Yes EPS FOAM SPACER: No ROOF LINE TRIM, PAINTED: TBD/GM
YES☒ NO☐ DOWNSPOUTS PAINTED: TBD GUTTERS PAINTED: TBD
YES☒ NO☐ INSULATION 4.00" (NOT BY MBS)
YES☐ NO☒ PIPE JACKS, SIZE: QUANTITY:
YES☐ NO☒ RIDGE VENTS, 10'-0" LONG X 9" THROAT. QUANTITY:
YES☐ NO☒ ROOF FRAMED OPENINGS, SEE ROOF FRAMING PLAN FOR SIZES
YES☐ NO☒ COMPOSITE CFR DECK, TYPE: GAUGE: FINISH:

WALL SHEETING
TYPE: R-Panel GAUGE: 26 FINISH: TBD
CORNER TRIM, PAINTED: TBD BASE TRIM, PAINTED: TBD
YES☒ NO☐ WALKDOORS, QUANTITY: (2) 3070 PAINTED: WHITE
YES☐ NO☒ WINDOWS, QUANTITY: PAINTED:
YES☒ NO☐ INSULATION 6.00" (NOT BY MBS)

WALL FRAMED OPENINGS
YES☒ NO☐ FRAMED OPENING TRIM, PAINTED: TBD

BUILDING OPTIONS

YES☐ NO☒ LINER PANELS
FRAMED OPENING TRIM, PAINTED:
WALL: TYPE: GAUGE: FINISH: WALL TRIM, PAINTED:
CEILING: TYPE: GAUGE: FINISH:

YES☐ NO☒ TRANSLUCENT PANELS
WALL:
ROOF:
INSULATED PANELS? YES☐ NO☐

YES☐ NO☒ EAVE EXTENSION
PROJ: TYPE: GAUGE: FINISH: SOFFIT TRIM AT BUILDING LINE PAINTED:

YES☐ NO☒ RAKE EXTENSION
PROJ: TYPE: GAUGE: FINISH: SOFFIT TRIM AT BUILDING LINE PAINTED:

YES☐ NO☒ CANOPY
AT EAVE LINE ☐ BELOW EAVE ☐ PROJECTION: CLEAR UNDER CANOPY BEAM:
ROOF PANEL: TYPE: GAUGE, FINISH:
SOFFIT PANEL: TYPE: GAUGE, FINISH: SOFFIT TRIM AT BUILDING LINE PAINTED:

YES☐ NO☒ PARTITION WALLS
WALL PANEL: TYPE: GAUGE, FINISH: TRIM PAINTED:

YES☐ NO☒ WAINSCOT
WALL PANEL: TYPE: GAUGE, FINISH:
BASE TRIM PAINTED: JAMB TRIM PAINTED: TRANSITION TRIM PAINTED:

YES☐ NO☒ FASCIA
PROJ: TOP OF FASCIA HEIGHT:
FACE PANEL, TYPE: GAUGE, FINISH: CAP TRIM PAINTED:
BACK PANEL, TYPE: GAUGE, FINISH: BASE TRIM PAINTED:
☐ CLOSED SYSTEM, CLEAR UNDER SOFFIT TRIM:
SOFFIT PANEL, TYPE: GAUGE, FINISH: SOFFIT TRIM AT BUILDING LINE PAINTED:
☐ OPEN SYSTEM, (NO SOFFIT PANEL PROVIDED) CLEAR UNDER SOFFIT TRIM:

YES☒ NO☐ PARAPET
☒ STRUCTURAL PARAPET ☐ NON-STRUCTURAL PARAPET TOP OF PARAPET HEIGHT: 20'-8"
BACK PANEL, TYPE: N/A N/A GAUGE, FINISH: GLASS (NOT BY MBS)

YES☐ NO☒ CRANES (SEE CRANE PLAN FOR ADDITIONAL INFORMATION)
YES☐ NO☒ MEZZANINE (SEE MEZZANINE PLAN FOR ADDITIONAL INFORMATION)

THE DRAWINGS AND THE METAL BUILDING THEY REPRESENT ARE THE PRODUCT OF THE METAL BUILDING MANUFACTURER. THE REGISTERED PROFESSIONAL ENGINEER'S SEAL PERTAINS ONLY TO THE REQUIREMENTS LISTED HEREIN FOR THE MATERIALS DESIGNED AND SUPPLIED BY THE METAL BUILDING MANUFACTURER. THE REGISTERED PROFESSIONAL ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS IS EMPLOYED OR ENGAGED BY THE METAL BUILDING MANUFACTURER AND DOES NOT SERVE AS OR REPRESENT THE PROJECT ENGINEER OF RECORD AND SHALL NOT BE CONSTRUED AS SUCH.

7. GLOSSARY OF ABBREVIATIONS:

APL = A-PANEL FOR THE LINER
APS = A-PANEL FOR THE SOFFIT
APW = A-PANEL FOR THE WALL
A.R. = ANCHOR RODS
BS = BOTH SIDES
B.U. = BUILT-UP
CFR = CONCEALED FASTENED ROOF PANEL
DIA = DIAMETER
FLG = FLANGE
F.S = FAR SIDE
GA. = GAUGE
?? = PART MARK TO BE DETERMINED AND WILL BE UPDATED ON CONSTRUCTION DRAWINGS
H.S.B. = HIGH STRENGTH BOLTS
HT. = HEIGHT
LLV = LONG LEG VERTICAL
LSN = LOC SEAM NON-SWAGED ROOF PANELS
LSS = LOC SEAM SWAGED ROOF PANELS
MAX = MAXIMUM
M.B. = MACHINE BOLTS
MBS = METAL BUILDING SUPPLIER
MIN = MINIMUM
N/A = NOT APPLICABLE
NIC = NOT IN CONTRACT
N.S. = NEAR SIDE
O.A.L. = OVERALL LENGTH
O.C. = ON CENTER
PL = PLATE
REQ'D = REQUIRED
REV. = REVISION
RPL = R-PANEL FOR THE LINER
RPR = R-PANEL FOR THE ROOF
RPS = R-PANEL FOR THE SOFFIT
RPW = R-PANEL FOR THE WALL
RRL = REVERSE R-PANEL FOR THE LINER
RRS = REVERSE R-PANEL FOR THE SOFFIT
RRW = REVERSE R-PANEL FOR THE WALL
SL = STEEL LINE
SLV = SHORT LEG VERTICAL
SIM = SIMILAR
SS2 = STANDING SEAM II ROOF PANEL
SS3 = STANDING SEAM 360 ROOF PANEL
TBD = TO BE DETERMINED
TYP = TYPICAL
U.N./U.N.O. = UNLESS NOTED OTHERWISE

NUCOR BUILDING SYSTEMS
A DIVISION OF NUCOR CORPORATION

MBMA MEMBER

IAS ACCREDITED Metal Building Systems AC 472

BUILDING LOADS

DESIGN CODE: North Carolina (NCBC 2018)
ROOF LIVE LOAD: 20.00 PSF RISK CATEGORY: II
LIVE LOAD REDUCIBLE Yes
GROUND SNOW LOAD: 15.0 PSF SNOW EXP. FACTOR, Ce: 1.0000
SNOW IMPORTANCE FACTOR, Is: 1.00

WIND: 115 / 89 MPH (V) / (Vasd)
C & C PRESSURES (PSF): 27 / -36
EXPOSURE: C
UL 90 NO
R-Panel Roof-Const. No. 161 ; R-Panel Roof w/ Translucent Panel-Const. No. 167
CFR Roof-Const. No. 552 ; CFR Roof w/ Translucent Panel-Const. No. 590
Composite CFR Roof-Const. No. 552A; LS9 Roof-Const. No. 332.
SEISMIC INFORMATION Ss: 0.142 S1: 0.072
Design Sds/Sd1: 0.151 / 0.115 Site Class: D
Seismic Imp. Factor: 1.00 Seismic Design Category: B
Analysis Procedure: Equivalent Lateral Force Method
Basic SFRS: Not Detailed for Seismic

NOTES:
1) COLLATERAL DEAD LOADS, UNLESS OTHERWISE NOTED, ARE ASSUMED TO BE UNIFORMLY DISTRIBUTED. WHEN SUSPENDED SPRINKLER SYSTEMS, LIGHTING, HVAC EQUIPMENT, CEILINGS, ETC., ARE SUSPENDED FROM ROOF MEMBERS, CONSULT THE M.B.S. IF THESE CONCENTRATED LOADS EXCEED 500 POUNDS (USING THE WEB MOUNT DETAIL) OR 200 POUNDS (USING THE FLANGE MOUNT DETAIL), OR IF INDIVIDUAL MEMBERS ARE LOADED SIGNIFICANTLY MORE THAN OTHERS.

2) THE DESIGN OF STRUCTURAL MEMBERS SUPPORTING GRAVITY LOADS IS CONTROLLED BY THE MORE CRITICAL EFFECT OF ROOF LIVE LOAD OR ROOF SNOW LOAD, AS DETERMINED BY THE APPLICABLE CODE.

3) Pm IS BASED ON THE MINIMUM ROOF SNOW LOAD CALCULATED PER BUILDING CODE OR THE CONTRACT SPECIFIED SNOW LOAD, WHICHEVER IS GREATER. THIS VALUE, Pm, IS ONLY APPLIED IN COMBINATION WITH THE DEAD AND COLLATERAL LOADS. ROOF SNOW IN OTHER LOADING CONDITIONS IS DETERMINED PER THE SPECIFIED BUILDING CODE.

	BUILDING		
ROOF DEAD (PSF):	3.00	ROOF SNOW Pm (PSF):	15.00
PRI. COL. (PSF):	4.00	WIND ENCLOSURE:	Enclosed
SEC. COL. (PSF):	4.00	GCpi:	+/-0.18
SNOW Ct:	1.10	SEISMIC R:	3
SNOW Cs:	1.00	SEISMIC Cs:	0.050
ROOF SNOW Ps (PSF):	11.55	BASE SHEAR (KIPS):	6.00

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
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10/17/2025 11:38:22 AM

Digitally signed by Rajesh H. Bhagnari
Date: 2025.03.21 17:49:47 -04'00'

DRAWING INDEX

COVERSHEET C1 ~ C2
ANCHOR BOLT DRAWINGS F1 ~ F2
COLUMN BASE REACTIONS R1
STRUCTURAL/SHEETING DRAWINGS E1 ~ E6
DETAILS

ISSUE	DWN	CHK	ENG	PE	DATE
ANCHOR BOLTS	MBS	HH	RHB		3/20/25
PERMITS	MBS	HH	RHB		3/20/25

NUCOR BUILDING SYSTEMS
305 INDUSTRIAL PARKWAY, WATERLOO, IN 46793
PHONE: (260) 837-7891 FAX: (260) 837-7384
PO BOX 1006, 200 WHETSTONE RD, SWANSEA, SC 29160
PHONE: (803) 568-2100 FAX: (803) 568-2121
600 APACHE TRAIL, TERRELL, TX 75160
PHONE: (972) 524-4700 FAX: (972) 524-4717
1050 WATERY LANE, BRIGHAM CITY, UT 84302
PHONE: (435) 919-3100 FAX: (435) 919-3101

PROJECT NAME: INNOVATIVE GLASS SOLUTIONS
CASCADE CT, YOUNGSVILLE, NC 27596
CUSTOMER NAME: JMJ COMPANIES
ZEBULON, NC 27597
JOB NUMBER: S25B0226A
SHEET TITLE: COVERSHEET

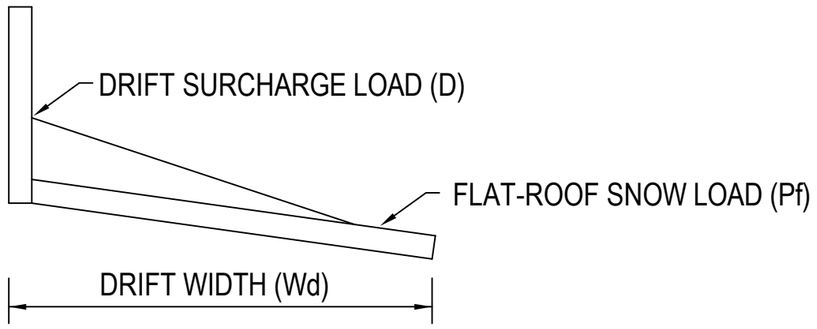
NORTH CAROLINA PROFESSIONAL SEAL 24064 ENGINEER RAJESH H. BHAGNARI

This seal pertains only to the materials designed and supplied by Nucor Building Systems, a division of Nucor Corporation. The drawings and the materials they represent are the product of Nucor Building Systems. The register professional engineer whose seal appears on these drawings is employed by Nucor Building Systems and does not serve as or represent the project engineer of record and shall not be construed as such.

SHEET C1 of 2

FOR OCCUPANCY (RISK) CATEGORY I OR II, IBC PROVISIONS INDICATE THAT SINGLE-STORY BUILDINGS SHALL HAVE "NO DRIFT LIMIT" PROVIDED THAT INTERIOR WALLS, PARTITIONS, CEILINGS, AND EXTERIOR WALL SYSTEMS HAVE BEEN DESIGNED TO ACCOMMODATE THE SEISMIC STORY DRIFTS. INTERIOR WALLS, PARTITIONS, CEILINGS, OR EXTERIOR WALL SYSTEMS NOT PROVIDED BY THE METAL BUILDING MANUFACTURER SHALL BE DESIGNED AND DETAILED BY OTHERS TO ACCOMMODATE THE SEISMIC STORY DRIFTS. SEISMIC DRIFT VALUES MAY BE OBTAINED FROM THE METAL BUILDING MANUFACTURER.

THE BUILDING CODE REQUIRES CONSIDERATION OF SNOW SURCHARGES FOR ANY LOWER ROOF OF A STRUCTURE LOCATED WITHIN 20 ft. OF A HIGHER STRUCTURE. INFORMATION PROVIDED TO THE METAL BUILDING MANUFACTURER INDICATES SNOW SURCHARGES MUST BE CONSIDERED IN THE METAL BUILDING DESIGN AS SHOWN BELOW.



THE CONDITIONS AT THE FOLLOWING LOCATIONS PRODUCE DRIFT SURCHARGE LOADS:

1. LOCATION: LN6 D(psf): 40.00 Pf(psf): 11.55 Wd(ft): 10

2. LOCATION:* D(psf)*: Pf(psf)*: Wd(ft)*:

3. LOCATION:* D(psf)*: Pf(psf)*: Wd(ft)*:

4. LOCATION:* D(psf)*: Pf(psf)*: Wd(ft)*:

BCL2

THIS BUILDING SYSTEM DESIGN IS BASED ON UNIFORMLY APPLYING THE CONTRACT-SPECIFIED LIVE, SNOW, WIND, SEISMIC, COLLATERAL AND AUXILIARY LOADS. IN ADDITION, THE DESIGN IS BASED ON APPLYING A CODE-DEFINED LIVE LOAD (INCLUDING APPLICABLE REDUCTIONS) AND A CODE-DEFINED SNOW LOAD (BASED ON CONTRACT-SPECIFIED GROUND SNOW) FOR ALL PARTIAL LOADING AND UNBALANCED SNOW LOAD CONDITIONS.

BCL4

BCL3

ACCESSORIES (DOORS, WINDOWS, ETC.) NOT PROVIDED BY THE METAL BUILDING MANUFACTURER MUST BE DESIGNED AS "COMPONENTS AND CLADDING" IN ACCORDANCE WITH THE SPECIFIC WIND PROVISIONS OF THE REFERENCED BUILDING CODE DISPLAYED ON THE COVER PAGE OF THIS DRAWING PACKET.

MO1

FRAMED OPENINGS HAVE BEEN DESIGNED TO SUPPORT WIND LOAD NORMAL TO THE WALL BASED ON THE STANDARD BUILDING CODE CRITERIA. FRAMED OPENINGS HAVE NOT BEEN DESIGNED FOR ANY ADDITIONAL MOMENT OR CATENARY FORCES FROM THE DOOR. ANY CHANGE TO THE INFORMATION SHOWN HERE WILL REQUIRE AN ENGINEERING INVESTIGATION AND POSSIBLE BUILDING REINFORCEMENT.

MO2

IF SNOW GUARDS OR OTHER DEVICES INTENDED TO HOLD SNOW AND/OR ICE ACCUMULATION ON THE ROOF SYSTEM ARE TO BE USED ON THIS PROJECT, THEY MUST BE INSTALLED UNDER THE GUIDANCE OF THE PROJECT "ENGINEER OF RECORD" (EOR), NOT THE METAL BUILDING MANUFACTURER, SO AS NOT TO EXCEED THE DESIGN ROOF SNOW LOAD ON THIS PROJECT.

RA3

REVIEWED FOR CODE COMPLIANCE
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ISSUE	DWN	CHK	ENG	PE	DATE
ANCHOR BOLTS	MBS	HH	RHB		3/20/25
PERMITS	MBS	HH	RHB		3/20/25

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PROJECT NAME: INNOVATIVE GLASS SOLUTIONS
CASCADE CT, YOUNGSVILLE, NC 27596

CUSTOMER NAME: JMJ COMPANIES
ZEBULON, NC 27597

JOB NUMBER: S25B0226A

SHEET TITLE: ADDITIONAL NOTES

NORTH CAROLINA PROFESSIONAL SEAL 24064 ENGINEER RAJESH H. BHAGVARI

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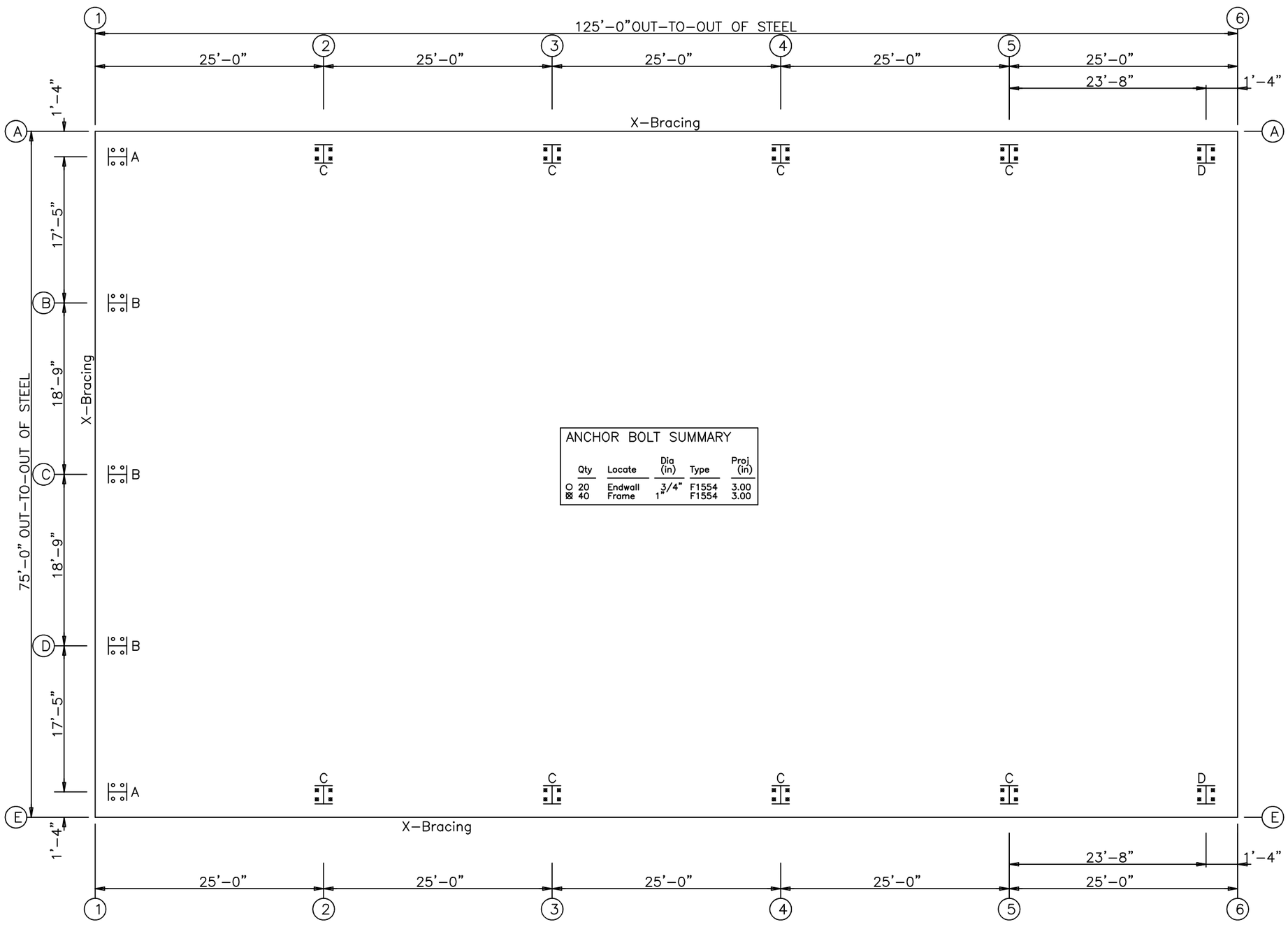
SHEET C2 of 2

ANCHOR BOLT PLAN

GENERAL NOTES

1. THE SPECIFIED ANCHOR ROD DIAMETER ASSUMES F1554 GRADE 36 UNLESS NOTED OTHERWISE. ANCHOR ROD MATERIAL OF EQUAL DIAMETER MEETING OR EXCEEDING THE STRENGTH REQUIREMENTS SET FORTH ON THESE DRAWINGS MAY BE UTILIZED AT THE DISCRETION OF THE FOUNDATION DESIGN ENGINEER. ANCHOR ROD EMBEDMENT LENGTH SHALL BE DETERMINED BY THE FOUNDATION DESIGN ENGINEER.
2. METAL BUILDING MANUFACTURER IS NOT RESPONSIBLE FOR PROJECT FOUNDATION DESIGN. THE FOUNDATION DESIGN IS THE RESPONSIBILITY OF A REGISTERED PROFESSIONAL ENGINEER, FAMILIAR WITH LOCAL SITE CONDITIONS.
3. ANCHOR RODS, NUTS, FLAT WASHERS FOR ANCHOR RODS, EXPANSION BOLTS, AND CONCRETE/MASONRY EMBEDMENT PLATES ARE NOT BY METAL BUILDING MANUFACTURER.
4. THE ANCHOR ROD LOCATIONS PROVIDED BY METAL BUILDING MANUFACTURER SATISFY PERTINENT REQUIREMENTS FOR THE DESIGN OF THE MATERIALS SUPPLIED BY THE METAL BUILDING MANUFACTURER. IT IS THE RESPONSIBILITY OF THE FOUNDATION ENGINEER TO MAKE CERTAIN THAT SUFFICIENT EDGE DISTANCE IS PROVIDED FOR ALL ANCHOR RODS IN THE DETAILS OF THE FOUNDATION DESIGN.
5. DRAWINGS ARE NOT TO SCALE. SEE DETAILS FOR COLUMN ORIENTATION.
6. THE ANCHOR ROD PLAN INDICATES WHERE THE ANCHOR RODS ARE TO BE PLACED AS WELL AS THE FOOTPRINT OF THE METAL BUILDING. IT IS ESSENTIAL THAT THESE ANCHOR ROD PATTERNS BE FOLLOWED. IF THESE SETTINGS DIFFER FROM THE ARCHITECTURAL FOUNDATION PLANS, THE METAL BUILDING MANUFACTURER MUST BE CONTACTED IMMEDIATELY – BEFORE CONCRETE IS PLACED.
7. "SINGLE" CEE COLUMNS SHALL BE ORIENTED WITH THE "TOES" TOWARD THE LOW EAVE UNLESS NOTED OTHERWISE.
8. ALL DIMENSIONS ARE OUT TO OUT OF STEEL. IF CONCRETE NOTCH IS REQUIRED THEN THE REQUIRED DIMENSION SHOULD BE ADDED TO OBTAIN THE OUT TO OUT OF CONTRETE DIMENSIONS.
9. FINISHED FLOOR ELEVATION = 100'–0" BOTTOM OF BASE PLATE = 100'–0" UNLESS NOTED OTHERWISE.



ANCHOR BOLT SUMMARY

	Qty	Locate	Dia (in)	Type	Proj (in)
○	20	Endwall	3/4"	F1554	3.00
⊠	40	Frame	1"	F1554	3.00

ANCHOR BOLT PLAN

NOTE: All Base Plates @ 100'–0" (U.N.)

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ISSUE	DWN	CHK	ENG	PE	DATE
ANCHOR BOLTS	MBS	HH	RHB		3/20/25
PERMITS	MBS	HH	RHB		3/20/25

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PROJECT NAME: INNOVATIVE GLASS SOLUTIONS
CASCADE CT, YOUNGSVILLE, NC 27596
CUSTOMER NAME: JMJ COMPANIES
ZEBULON, NC 27597
JOB NUMBER: S25B0226A
SHEET TITLE: ANCHOR BOLT PLAN

PROFESSIONAL ENGINEER
NORTH CAROLINA
SEAL 24064
RAJESH H. BHAGNARI

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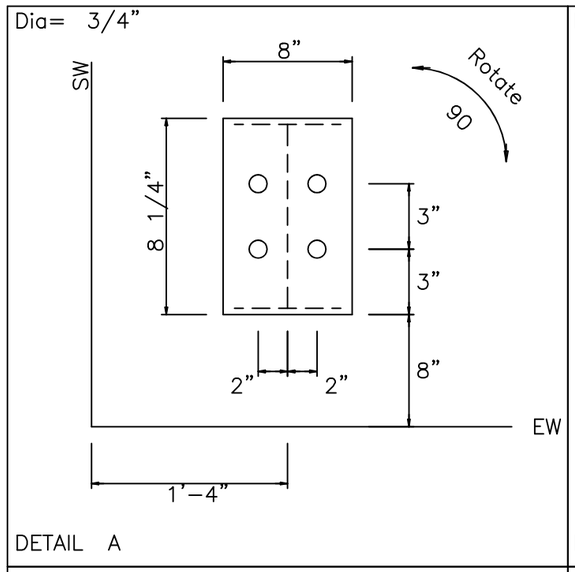
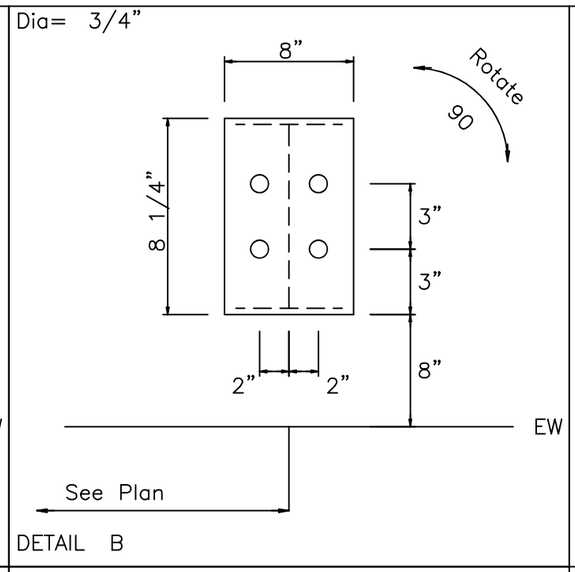
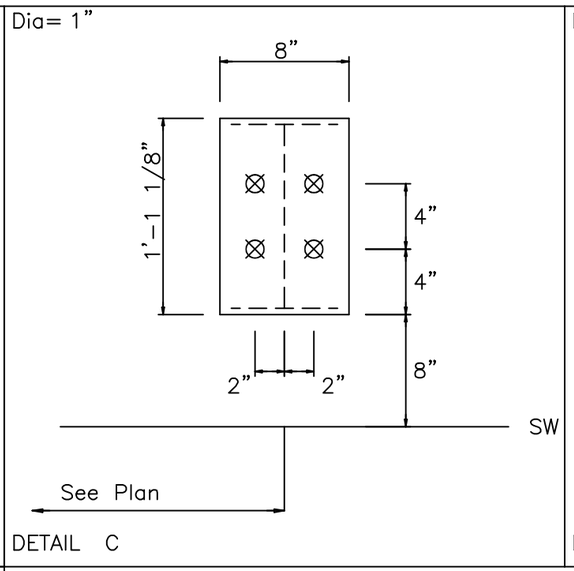
SHEET: F1 of 2



DETAIL A



DETAIL B



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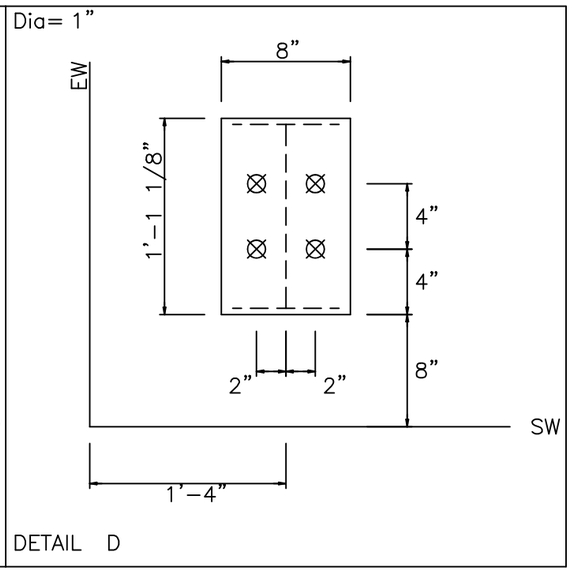
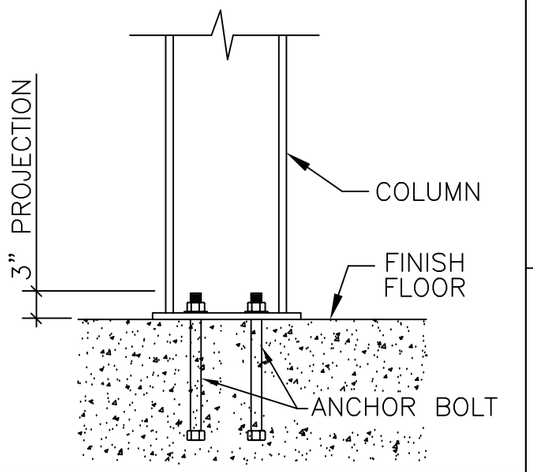
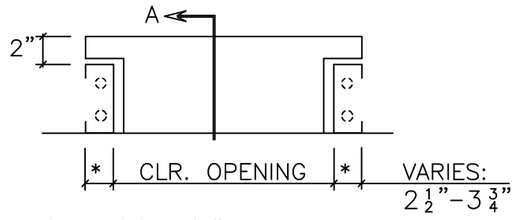


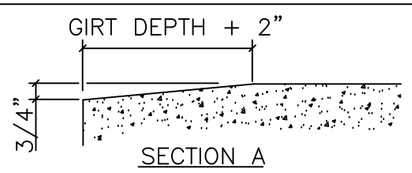
DETAIL D



TYPICAL COLUMN BASE PLATE DETAIL



(USE (2) 1/2" DIA EXPANSION BOLTS PER JAMB)



SECTION A

(RECOMMENDED)

TYPICAL OVERHEAD DOOR FRAMED OPENING

FOUNDATION DESIGN NOTES:

1. THE ORIENTATION OF THE ANCHOR BOLT DETAILS SHOWN ON THIS PAGE MAY NOT COINCIDE WITH THE ACTUAL COLUMN ORIENTATION SHOWN ON THE ANCHOR BOLT DRAWING. PLEASE REFERENCE THE SIDEWALL (SW) AND ENDWALL (EW) STEEL LINES SHOWN ON THE ANCHOR BOLT DETAILS WITH THE ANCHOR BOLT PLAN DURING LAYOUT OF COLUMN AND ANCHOR BOLT LOCATIONS.

2. COLUMN BASE PLATES MAY HAVE MORE HOLES THAN ARE REQUIRED DUE TO PRODUCTION LIMITATIONS. PLEASE FOLLOW ANCHOR BOLT DETAILS FOR QUANTITY OF ANCHOR BOLTS REQUIRED. EXTRA BASE PLATE HOLES DO NOT NEED INFILLED PER THE MBS DESIGN SPECIFICATIONS.

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SHEET TITLE: BASE PLATE DETAILS

SEAL 24064
NORTH CAROLINA PROFESSIONAL ENGINEER
RAJESH H. BHAGNARI

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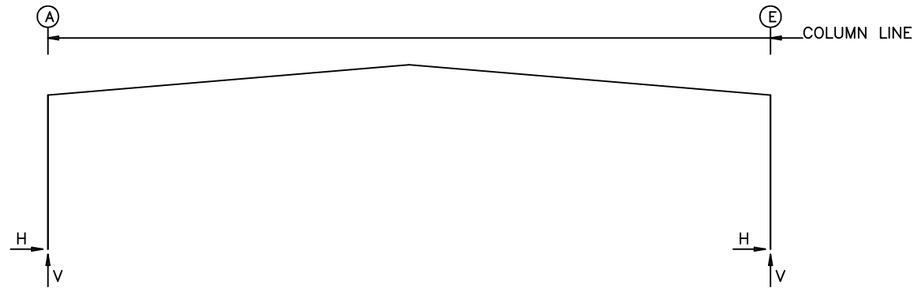
SHEET F2 of 2

FRAME LINES: 2 3 4 5 6



RIGID FRAME: ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Anc. Bolt Qty	Bolt Dia	Base Plate (in) Width	Length	Thick	Elev. (in)
2*	A	4	1.000	8.000	13.13	0.500	0.0
2*	E	4	1.000	8.000	13.13	0.500	0.0

2* Frame lines: 2 3 4 5 6

ENDWALL COLUMN: ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Anc. Bolt Qty	Bolt Dia	Base Plate (in) Width	Length	Thick	Elev. (in)
1	A	4	0.750	8.000	8.250	0.375	0.0
1	B	4	0.750	8.000	8.250	0.375	0.0
1	C	4	0.750	8.000	8.250	0.375	0.0
1	D	4	0.750	8.000	8.250	0.375	0.0
1	E	4	0.750	8.000	8.250	0.375	0.0

GENERAL NOTES

1. ALL LOADING CONDITIONS ARE EXAMINED. THE MAXIMUM AND MINIMUM HORIZONTAL (H) AND VERTICAL (V) REACTIONS AND THE CORRESPONDING VERTICAL (V) OR HORIZONTAL (H) REACTIONS ARE REPORTED.
2. REACTIONS ARE PROVIDED BY LOAD CASE IN ORDER TO AID THE FOUNDATION ENGINEER IN DETERMINING THE APPROPRIATE LOAD FACTORS AND COMBINATIONS TO BE USED WTIH EITHER WORKING STRESS OR ULTIMATE STRENGTH DESIGN METHODS. WIND LOAD CASES ARE GIVEN FOR EACH PRIMARY WIND DIRECTION.
3. FOR ASCE7-10 AND LATER BASED BUILDING CODES, THE UNFACTORED LOAD CASE REACTIONS DUE TO WIND ARE GENERATED USING THE ULTIMATE DESIGN WIND SPEED (Vult).
4. POSITIVE (+) REACTIONS ARE AS SHOWN ABOVE. FOUNDATION LOADS ARE IN OPPOSITE DIRECTIONS.
5. BRACING REACTIONS ARE IN THE PLANE OF THE BRACE WITH THE HORIZONTAL REACTION (H) ACTING AWAY FROM THE BRACED BAY AND THE VERTICAL REACTION (V) ACTING DOWNWARD.

****** RIGID FRAME LOAD CASE ABBREVIATIONS: ******
Wind_L1/Wind_R1: LATERAL WIND FROM THE LEFT/RIGHT, CASE 1
Wind_L2/Wind_R2: LATERAL WIND FROM THE LEFT/RIGHT, CASE 2
Wind_Ln1/Wind_Ln2: LONGITUDINAL WIND, CASE 1/2
Seismic_L/Seismic_R: LATERAL SEISMIC LOAD FROM LEFT/RIGHT
LWIND#_L#E/LWIND#_R#E: LONGITUDINAL WIND EDGE ZONES
F#UNB_SL_L/F#UNB_SL_R: UNBALANCED ROOF SNOW WITH WIND FROM LEFT/RIGHT
F#PAT_LL #/F#PAT_SL #: PARTIAL LIVE/SNOW LOADING FOR CONTINUOUS BEAM SYSTEMS

****** ENDWALL COLUMN LOAD CASE ABBREVIATIONS: ******
Collat: COLLATERAL LOAD
Rafter Wind_L/Rafter Wind_R: LATERAL WIND FROM THE LEFT/RIGHT
Brace Wind_L/Brace Wind_R: LATERAL WIND FROM THE LEFT/RIGHT
Wind_P/Wind_S: LONGITUDINAL WIND PRESSURE/SUCTION ON COLUMNS
Wind_Ln: LONGITUDINAL WIND SUCTION ON ROOF
Seis_L/Seis_R: LATERAL SEISMIC LOAD FROM LEFT/RIGHT
E#UNB_SL_L/E#UNB_SL_R: UNBALANCED ROOF SNOW WITH WIND FROM LEFT/RIGHT
E#PAT_LL #/E#PAT_SL #: PARTIAL LIVE/SNOW LOADING FOR CONTINUOUS BEAM SYSTEMS

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead Horz	Dead Vert	Collateral Horz	Collateral Vert	Live Horz	Live Vert	Snow Horz	Snow Vert	Snow_Drift Horz	Snow_Drift Vert	Wind_Left1 Horz	Wind_Left1 Vert
2*	A	3.7	5.2	3.3	4.1	9.4	11.8	9.1	11.4	10.9	13.7	-16.7	-20.0
2*	E	-3.7	5.2	-3.3	4.1	-9.4	11.8	-9.1	11.4	-10.9	13.7	9.3	-14.5

Frame Line	Column Line	Wind_Right1 Horz	Wind_Right1 Vert	Wind_Left2 Horz	Wind_Left2 Vert	Wind_Right2 Horz	Wind_Right2 Vert	Wind_Long1 Horz	Wind_Long1 Vert	Wind_Long2 Horz	Wind_Long2 Vert	Seismic_Left Horz	Seismic_Left Vert
2*	A	-9.3	-14.5	-11.8	-11.3	-4.5	-5.8	-10.2	-19.2	-10.8	-15.4	-0.9	-0.3
2*	E	16.7	-20.0	4.5	-5.8	11.8	-11.3	10.8	-15.4	10.2	-19.2	-0.9	0.3

Frame Line	Column Line	Seismic_Right Horz	Seismic_Right Vert	MIN_SNOW Horz	MIN_SNOW Vert	F1UNB_SL_L Horz	F1UNB_SL_L Vert	F1UNB_SL_R Horz	F1UNB_SL_R Vert
2*	A	0.9	0.3	11.8	14.7	7.9	11.4	7.9	6.6
2*	E	0.9	-0.3	-11.8	14.7	-7.9	6.6	-7.9	11.4

2* Frame lines: 2 3 4 5 6

ENDWALL COLUMN: BASIC COLUMN REACTIONS (k)

Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind Left1 Vert	Wind Right1 Vert	Wind Left2 Vert	Wind Right2 Vert	Wind Press Horz	Wind Suct Horz	Wind Long1 Vert	Wind Long2 Vert
1	A	0.6	0.4	1.9	1.2	-2.8	-1.8	-1.8	-0.8	-1.6	1.9	-3.0	-1.8
1	B	1.5	1.3	6.1	3.6	-9.1	-5.1	-6.3	-2.3	-3.4	3.7	-9.1	-5.3
1	C	1.0	0.8	3.8	2.3	-4.2	-4.4	-2.7	-2.9	-3.8	4.1	-4.1	-4.0
1	D	1.5	1.3	6.1	3.6	-5.3	-9.1	-2.4	-6.3	-3.4	3.7	-5.3	-9.1
1	E	0.6	0.4	1.9	1.2	-1.8	-2.8	-0.8	-1.8	-1.6	1.9	-1.8	-2.9

Frm Line	Col Line	Seis Left Vert	Seis Right Vert	Seis Long Vert	MIN_SNOW Horz	MIN_SNOW Vert	E1UNB_SL_L Horz	E1UNB_SL_L Vert	E1UNB_SL_R Horz	E1UNB_SL_R Vert	E1PAT_LL_1 Horz	E1PAT_LL_1 Vert	E1PAT_LL_2 Horz	E1PAT_LL_2 Vert
1	A	0.0	0.0	0.0	0.0	1.5	0.0	1.0	0.0	0.3	0.0	2.3	0.0	-0.3
1	B	0.0	0.0	0.0	0.0	4.7	0.0	4.6	0.0	1.1	0.0	3.0	0.0	3.1
1	C	0.0	-0.1	0.0	0.0	2.9	0.0	2.3	0.0	2.3	0.0	1.9	0.0	1.9
1	D	0.0	0.0	0.0	0.0	4.7	0.0	1.1	0.0	4.4	0.0	3.1	0.0	3.0
1	E	0.0	0.0	0.0	0.0	1.5	0.0	0.3	0.0	1.0	0.0	-0.3	0.0	2.3

Frm Line	Col Line	E1PAT_LL_3 Horz	E1PAT_LL_3 Vert	E1PAT_LL_4 Horz	E1PAT_LL_4 Vert	E1PAT_LL_5 Horz	E1PAT_LL_5 Vert
1	A	0.0	1.9	0.0	-0.3	0.0	2.3
1	B	0.0	6.1	0.0	3.1	0.0	3.0
1	C	0.0	1.6	0.0	4.4	0.0	1.6
1	D	0.0	3.0	0.0	3.1	0.0	6.1
1	E	0.0	2.3	0.0	-0.3	0.0	1.9

BUILDING BRACING REACTIONS

Wall Loc	Wall Line	Col Line	± Reactions(k) Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel_Shear (lb/ft) Wind	Seis	Note
L_EW	1	B,C	2.1	2.0	0.7	0.6			
F_SW	E	2,3	10.1	5.6	3.1	1.7			
R_EW	6								(h)
B_SW	A	4,3	10.1	5.6	3.1	1.7			

(h)Rigid frame at endwall

Reactions for seismic represent shear force, Eh
Reaction values shown are unfactored

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SHEET TITLE
REACTIONS

SEAL 24064
NORTH CAROLINA PROFESSIONAL ENGINEER RAJESH H. BHAGNARI

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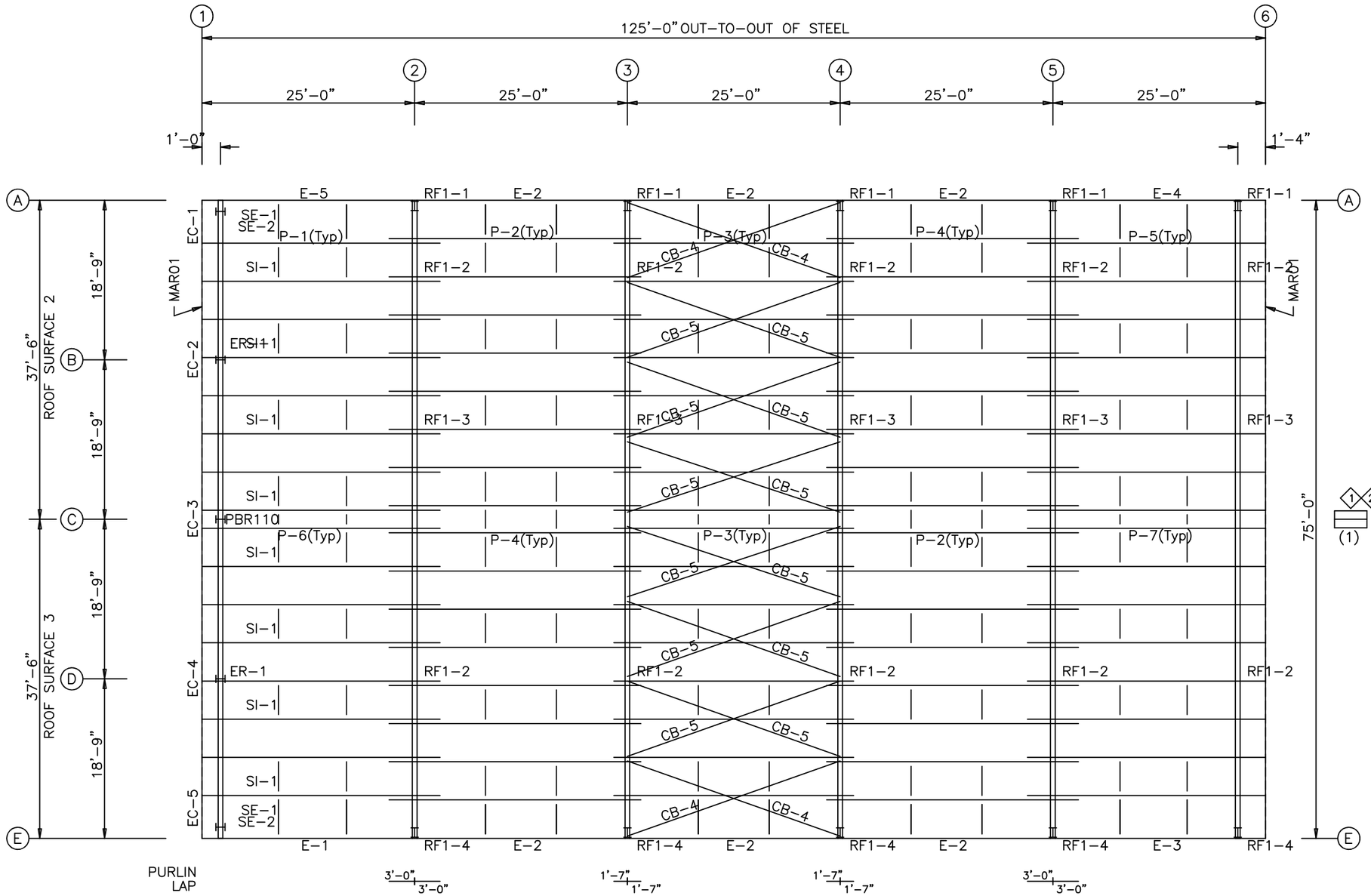
R1 of 1



ROOF FRAMING PLAN

TRIM TABLE ROOF PLAN			
◇ID	PART	LENGTH	DETAIL
1	RTP2121	121.000	TRIM_444
2	RTP2242	242.000	TRIM_444
3	FEB120	120.000	

MEMBER TABLE ROOF PLAN		
MARK	PART	LENGTH
P-1	95Z060	335.750
P-2	95Z060	355.000
P-3	95Z060	338.000
P-4	95Z060	355.000
P-5	95Z060	335.750
P-6	95Z060	335.750
P-7	95Z060	335.750
E-1	95E099	299.625
E-2	95E099	299.750
E-3	95E099	299.625
E-4	95E099	299.625
E-5	95E099	299.625
CB-4	RD05-	322.000
CB-5	RD05-	324.000
PBR110	PBR110	16.000
SI-1	PBX-	56.750
SE-1	PBX-	60.375
SE-2	PBX-	60.875

ROOF SHEETING

PANELS: 24 Ga. CFR Galvalume Plus

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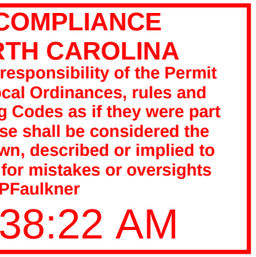
JOB NUMBER: S25B0226A
SHEET TITLE: ROOF FRAMING & SHEETING



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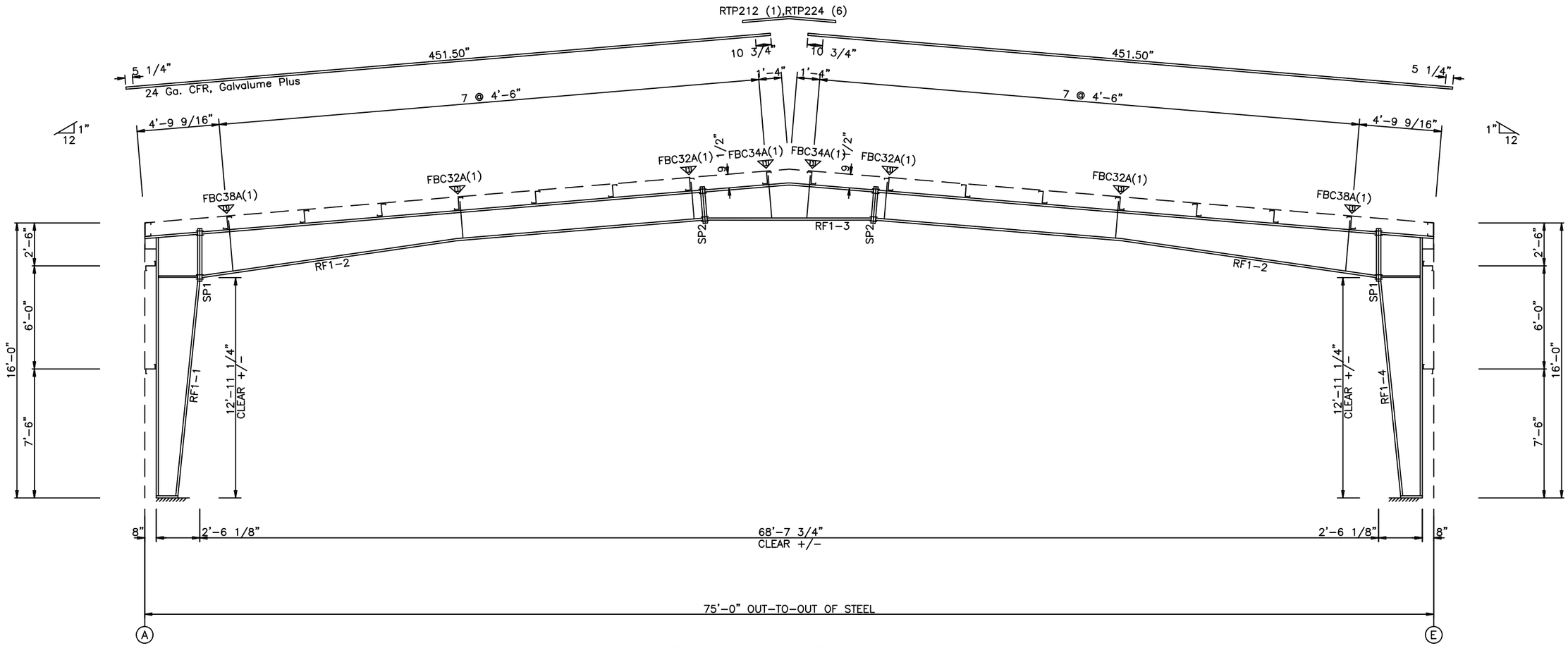
SHEET E2 of 6



RIGID FRAME ELEVATION: FRAME LINE 2 3 4 5 6

SPLICE PLATE & BOLT TABLE									
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP1	4	4	0	A325	1.000	3.25	6"	3/4"	3'-2"
SP2	4	4	0	A325	0.750	3.00	6"	5/8"	2'-1"

CONNECTION PLATES	
☐ ID	Mark/Part
1	FBL&N01

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
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ISSUE	DWN	CHK	ENG	PE	DATE
PERMITS	MBS	HH	RHB		3/20/25

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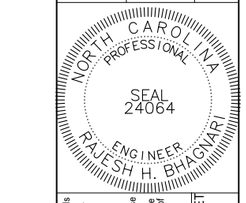
1050 WATERY LANE, BRIGHAM CITY, UT 84302
PHONE: (435) 919-3100 FAX: (435) 919-3101

PROJECT NAME: INNOVATIVE GLASS SOLUTIONS
CASCADE CT, YOUNGSVILLE, NC 27596

CUSTOMER NAME: JMJ COMPANIES
ZEBULON, NC 27597

JOB NUMBER: S25B0226A

SHEET TITLE: RIGID FRAME CROSS SECTION



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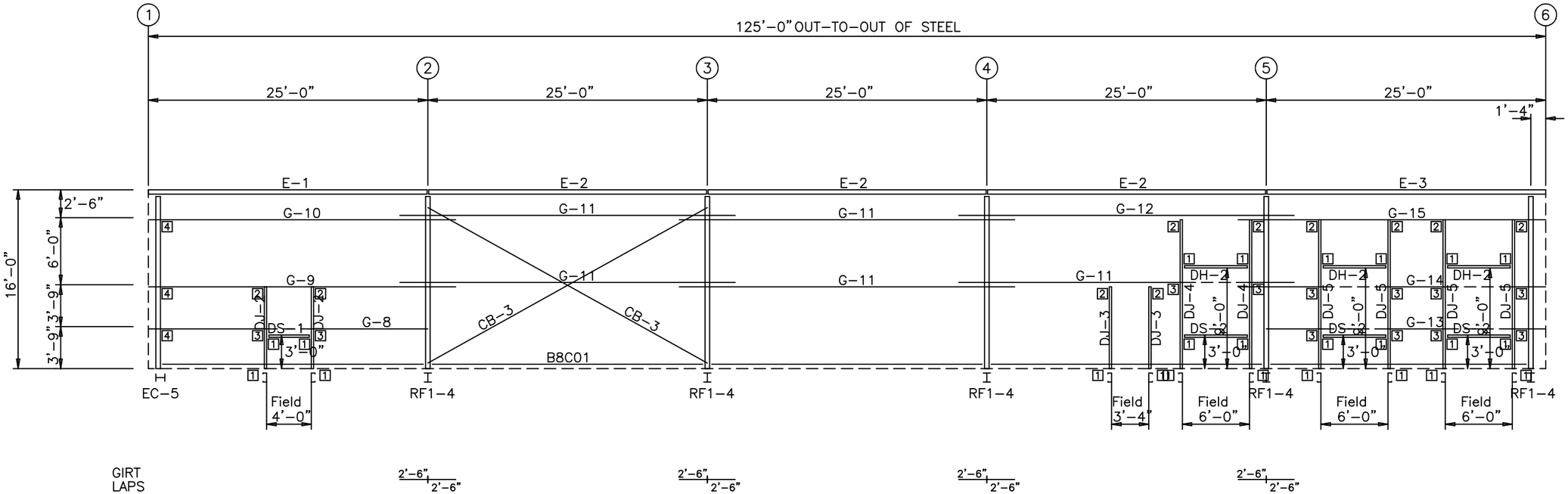
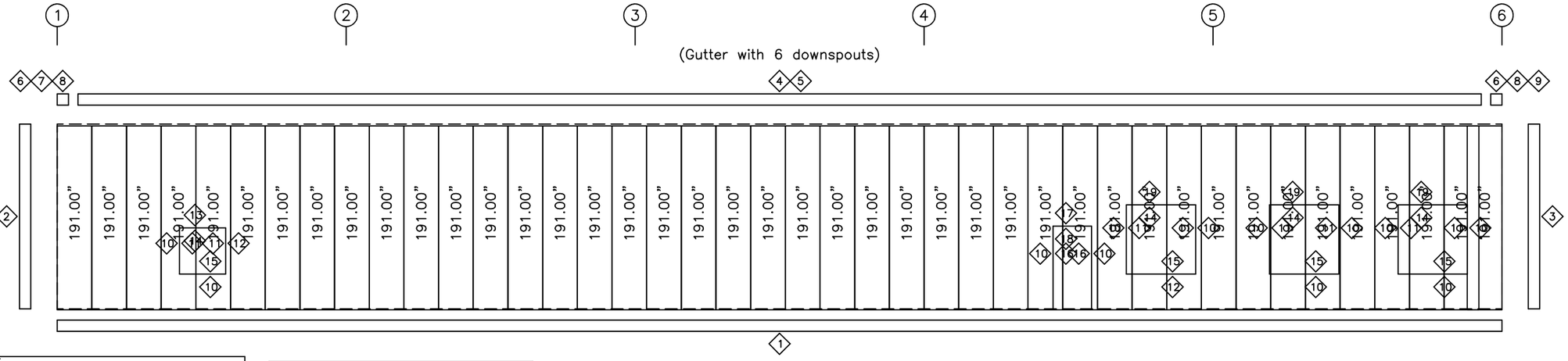
SHEET: E1 of 6



GIRT LAPS

2'-6" 2'-6" | 2'-6" 2'-6" | 2'-6" 2'-6" | 2'-6" 2'-6"

SIDEWALL FRAMING: FRAME LINE E



SIDEWALL SHEETING & TRIM: FRAME LINE E

PANELS: 26 Ga. RPW – Undefined color C

TRIM TABLE FRAME LINE E			
◇ID	PART	LENGTH	DETAIL
1	BSB121	121.000	TRIM_365
2	COB242	242.000	TRIM_353
3	JTA121	121.000	TRIM_362
4	GSN121	121.000	TRIM_452
5	GSN242	242.000	TRIM_452
6	H4000N	10.120	
7	RSCL	9.250	
8	RSCE	9.250	
9	RSCR	9.250	
10	CC8121	121.000	TRIM_375
11	JTA087	87.000	TRIM_374
12	CC8121	Use Drop	TRIM_375
13	CW8052	52.000	TRIM_375
14	HTA080	80.000	TRIM_374
15	STA076	76.000	TRIM_374
16	JTA087	87.000	TRIM_373
17	CW8040	40.000	TRIM_375
18	HTA044	44.000	TRIM_373
19	CW8076	76.000	TRIM_375

MEMBER TABLE FRAME LINE E		
MARK	PART	LENGTH
DJ-2	F08C060	85.750
DJ-3	F08C060	85.750
DJ-4	F08C060	157.750
DJ-5	F08C060	157.750
DH-2	F08C060	72.000
DS-1	F08C060	48.000
DS-2	F08C060	72.000
E-1	95E099	299.625
E-2	95E099	299.750
E-3	95E099	299.625
G-8	08Z060	302.000
G-9	08Z089	329.750
G-10	08Z060	329.750
G-11	08Z060	360.000
G-12	08Z075	360.000
G-13	08Z060	302.000
G-14	08Z060	329.750
G-15	08Z089	329.750
CB-3	RD05-	355.000

CONNECTION PLATES FRAME LINE E	
□ID	MARK/PART
1	HCJ01&bh
2	JCT01
3	FOC94&bh
4	GCC03&bt

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FRANKLIN COUNTY NORTH CAROLINA
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PROJECT NAME: INNOVATIVE GLASS SOLUTIONS
CASCADE CT, YOUNGSVILLE, NC 27596

CUSTOMER NAME: JMJ COMPANIES
ZEBULON, NC 27597

JOB NUMBER: S25B0226A

SHEET TITLE: FRONT SIDEWALL ELEVATION

NORTH CAROLINA PROFESSIONAL SEAL 24064 ENGINEER RAJESH H. BHAGNARI

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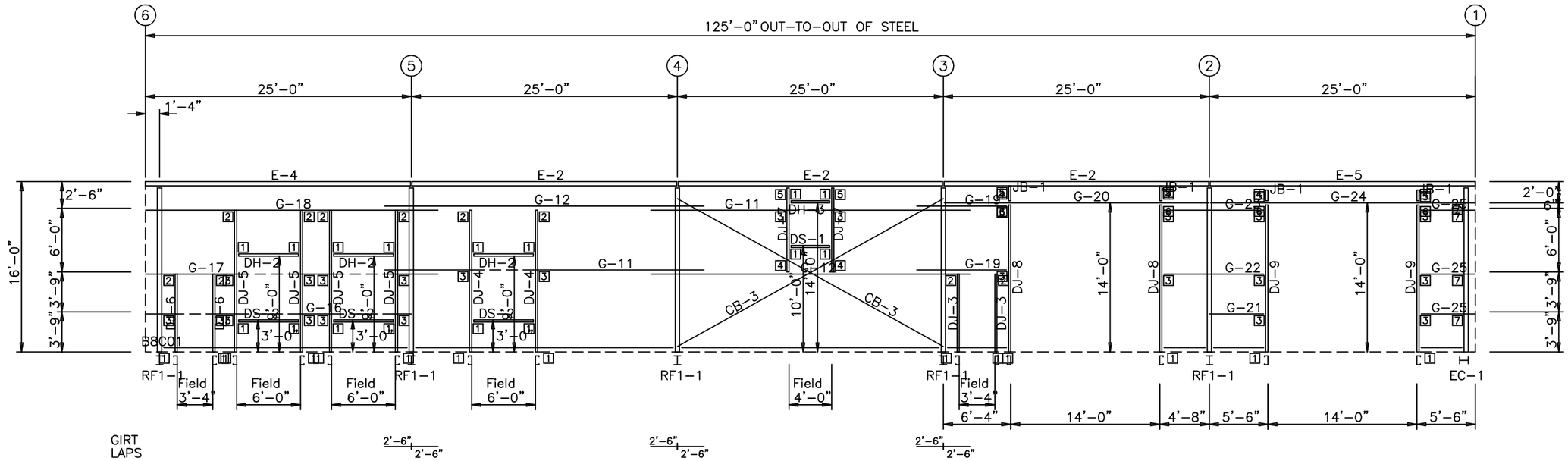
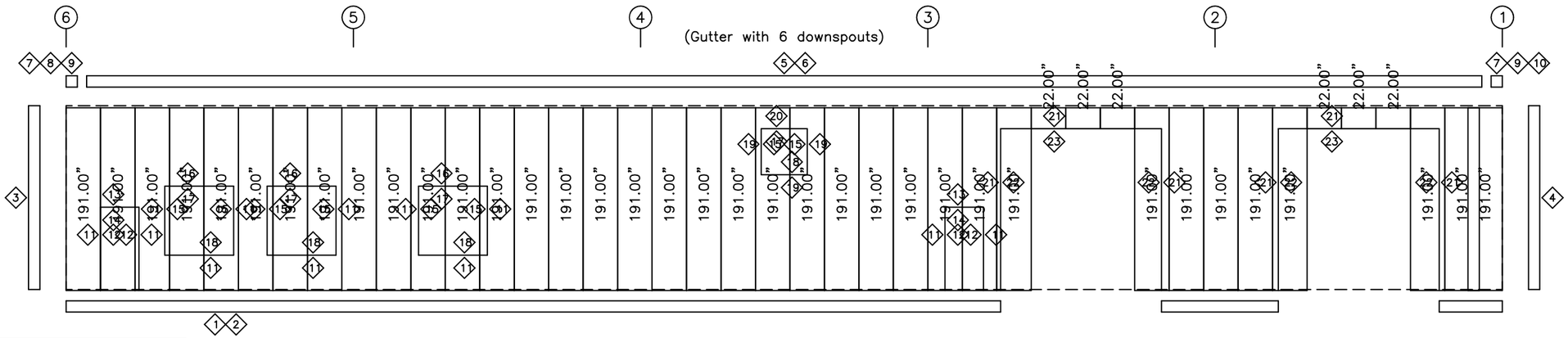
SHEET E5 of 6



SIDEWALL FRAMING: FRAME LINE A



SIDEWALL SHEETING & TRIM: FRAME LINE A

PANELS: 26 Ga. RPW – Undefined color C

MEMBER TABLE
FRAME LINE A

MARK	PART	LENGTH
DJ-3	F08C060	85.750
DJ-4	F08C060	157.750
DJ-5	F08C060	157.750
DJ-6	F08C060	85.750
DJ-7	F08C060	87.000
DJ-8	F08C060	168.000
DJ-9	F08C060	168.000
DH-2	F08C060	72.000
DH-3	F08C060	48.000
DS-1	F08C060	48.000
DS-2	F08C060	72.000
E-2	95E099	299.750
E-4	95E099	299.625
E-5	95E099	299.625
G-11	08Z060	360.000
G-12	08Z075	360.000
G-16	08Z060	302.000
G-17	08Z060	329.750
G-18	08Z089	329.750
G-19	08Z060	103.000
G-20	08C060	298.500
G-21	08Z060	65.250
G-22	08Z060	116.000
G-23	08Z075	116.000
G-24	08C089	299.000
G-25	08Z060	62.750
CB-3	RD05-	355.000
JB-1	F08C060	9.125

TRIM TABLE
FRAME LINE A

◇ID	PART	LENGTH	DETAIL
1	BSB121	121.000	TRIM_365
2	BSB121	Use Drop	TRIM_365
3	JTA121	121.000	TRIM_362
4	COB242	242.000	TRIM_353
5	GSN121	121.000	TRIM_452
6	GSN242	242.000	TRIM_452
7	H4000N	10.120	
8	RSCL	9.250	
9	RSCE	9.250	
10	RSCR	9.250	
11	CC8121	121.000	TRIM_375
12	JTA087	87.000	TRIM_373
13	CW8040	40.000	TRIM_375
14	HTA044	44.000	TRIM_373
15	JTA087	87.000	TRIM_374
16	CW8076	76.000	TRIM_375
17	HTA080	80.000	TRIM_374
18	STA076	76.000	TRIM_374
19	CC8121	Use Drop	TRIM_375
20	CW8052	52.000	TRIM_375
21	CC8169	169.000	TRIM_375
22	JTA169	169.000	TRIM_373
23	HTA172	172.000	TRIM_373

CONNECTION PLATES
FRAME LINE A

□ID	MARK/PART
1	HCJ01&bh
2	JCT01
3	FOC94&bh
4	JCT02
5	JCE01
6	JCT13
7	GCC03&bt

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PHONE: (435) 919-3100 FAX: (435) 919-3101

PROJECT NAME
INNOVATIVE GLASS SOLUTIONS
CASCADE CT, YOUNGSVILLE, NC 27596

CUSTOMER NAME
JMJ COMPANIES
ZEBULON, NC 27597

JOB NUMBER
S25B0226A

SHEET TITLE
BACK SIDEWALL ELEVATION

NORTH CAROLINA PROFESSIONAL SEAL 24064 ENGINEER RAJESH H. BHAGNARI

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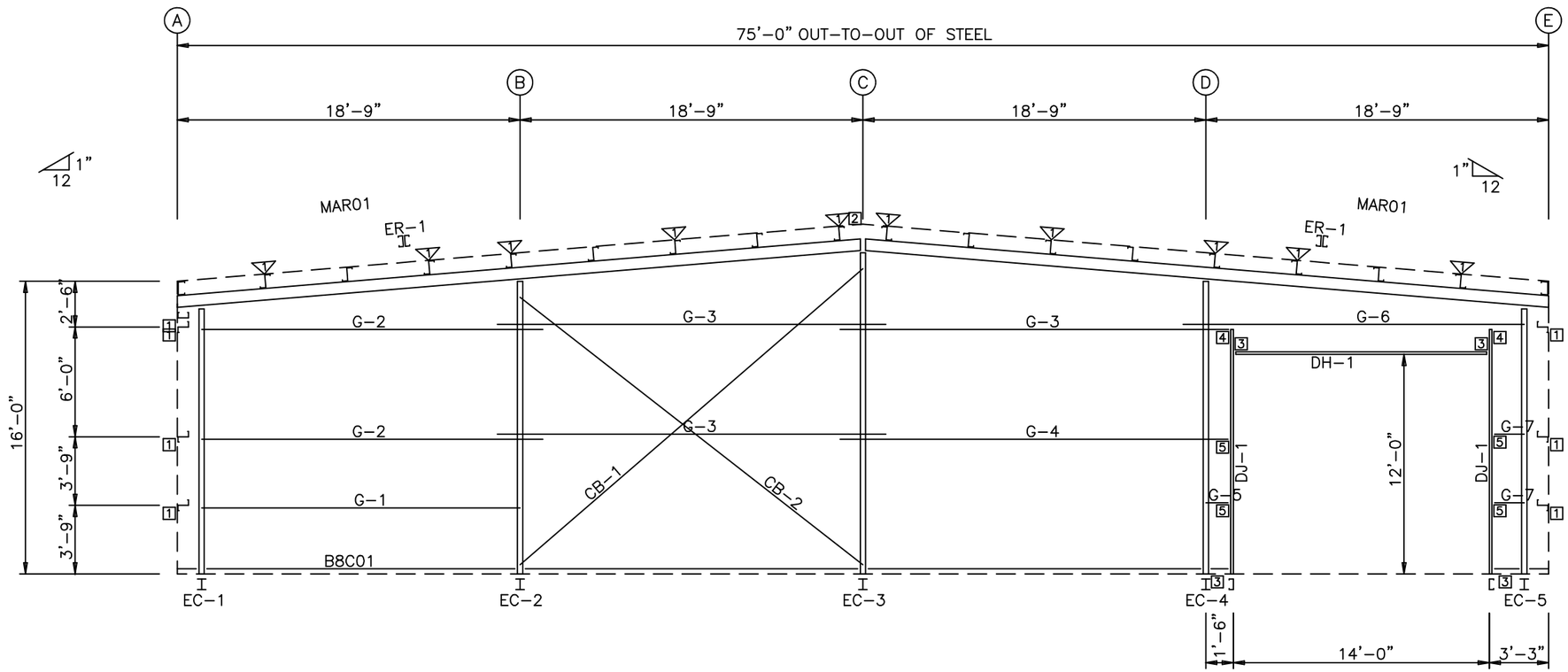
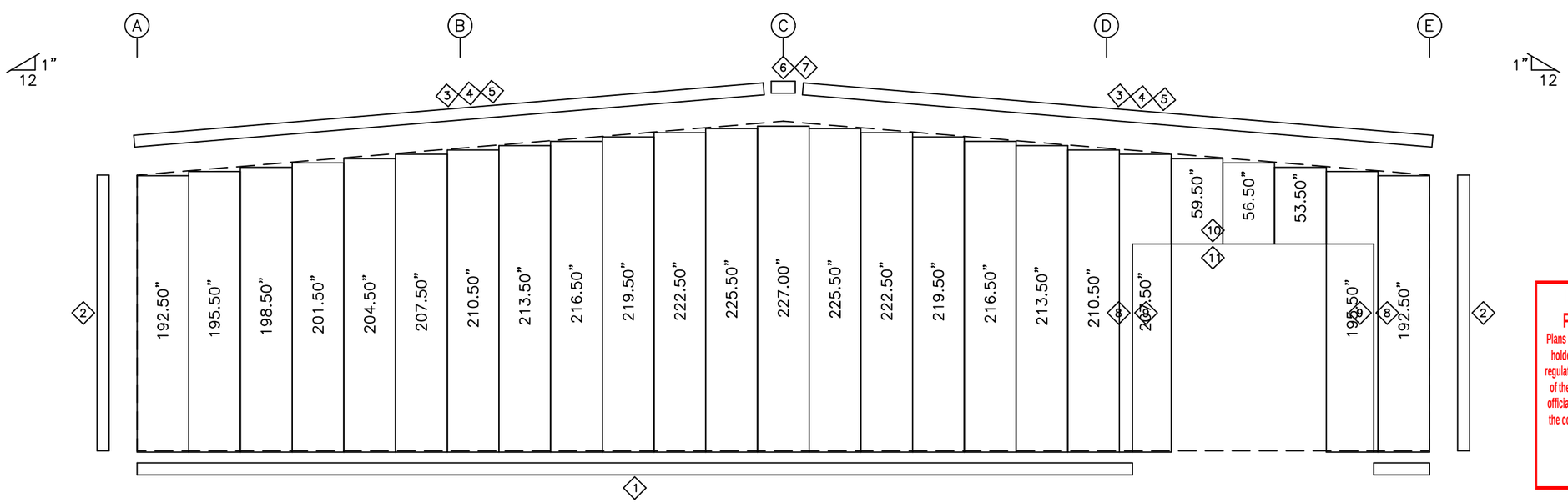
SHEET
E6 of 6



GIRT LAPS

1'-3" 1'-3" 1'-3" 1'-3" 1'-3" 1'-3"

ENDWALL FRAMING: FRAME LINE 1



ENDWALL SHEETING & TRIM: FRAME LINE 1

PANELS: 26 Ga. RPW – Undefined color C

BOLT TABLE FRAME LINE 1				
LOCATION	QUAN	TYPE	DIA	LENGTH
ER-1/ER-1	4	A325	1/2"	2"
Columns/Raf	4	A325	1/2"	2"

TRIM TABLE FRAME LINE 1			
◇ID	PART	LENGTH	DETAIL
1	BSB121	121.000	TRIM_365
2	COB242	242.000	TRIM_353
3	RSN242	242.000	TRIM_399
4	FEB120	Use Drop	
5	RTR121	121.000	TRIM_399
6	MPAN01	26.440	
7	MPP01	14.380	
8	CC8145	145.000	TRIM_375
9	JTA145	145.000	TRIM_373
10	CC8169	169.000	TRIM_375
11	HTA172	172.000	TRIM_373

MEMBER TABLE FRAME LINE 1		
MARK	PART	LENGTH
EC-1	W8x10	175.938
EC-2	W8x10	193.375
EC-3	W8x10	211.938
EC-4	W8x10	193.375
EC-5	W8x10	175.938
ER-1	W08SD089	450.375
DJ-1	F08C060	157.750
DH-1	F08C060	168.000
G-1	08Z060	218.750
G-2	08Z060	231.500
G-3	08Z060	255.000
G-4	08Z060	255.000
G-5	08Z060	17.250
G-6	08Z060	231.500
G-7	08Z060	27.500
CB-1	RD05-	308.000
CB-2	RD05-	296.000

FLANGE BRACE TABLE FRAME LINE 1			
▽ ID	# SIDES	MARK	CLIP
1	1	FBE06	FBL&N01

CONNECTION PLATES FRAME LINE 1	
□ID	MARK/PART
1	GCC03&bt
2	NCR03
3	HCJ01&bh
4	JCT01
5	FOC94&bh

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FRANKLIN COUNTY NORTH CAROLINA
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PROJECT NAME: INNOVATIVE GLASS SOLUTIONS
CASCADE CT, YOUNGSVILLE, NC 27596
CUSTOMER NAME: JMJ COMPANIES
ZEBULON, NC 27597
JOB NUMBER: S25B0226A
SHEET TITLE: LEFT ENDWALL ELEVATION

NORTH CAROLINA PROFESSIONAL SEAL 24064 ENGINEER RAJESH H. BHAGNARI

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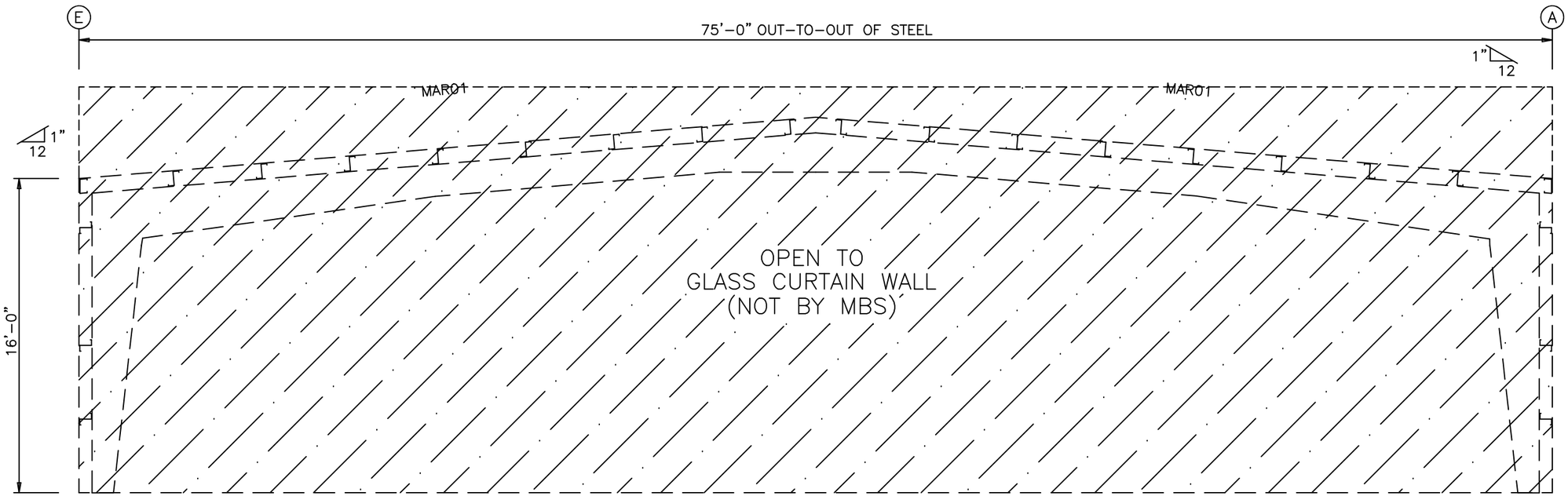
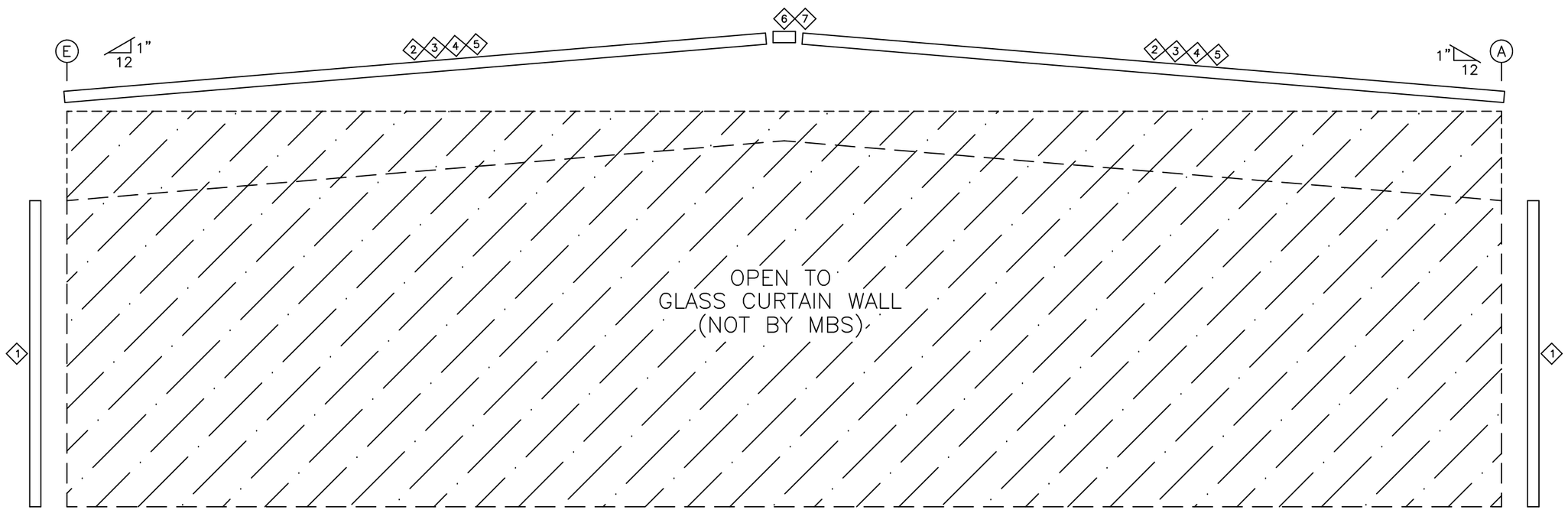
SHEET E3 of 6



ENDWALL FRAMING: FRAME LINE 6



ENDWALL SHEETING & TRIM: FRAME LINE 6

TRIM TABLE
FRAME LINE 6

◇ID	PART	LENGTH	DETAIL
1	JTA121	121.000	TRIM_362
2	FEB120	Use Drop	
3	RSN242	242.000	TRIM_403
4	ETU1121	121.000	
5	RTR121	121.000	
6	MPAN01	26.440	
7	MPP01	14.380	

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PROJECT NAME
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CASCADE CT, YOUNGSVILLE, NC 27596

CUSTOMER NAME
JMJ COMPANIES
ZEBULON, NC 27597

JOB NUMBER
S25B0226A

SHEET TITLE
RIGHT ENDWALL ELEVATION

NORTH CAROLINA PROFESSIONAL SEAL 24064 ENGINEER RAJESH H. BHAGWARI

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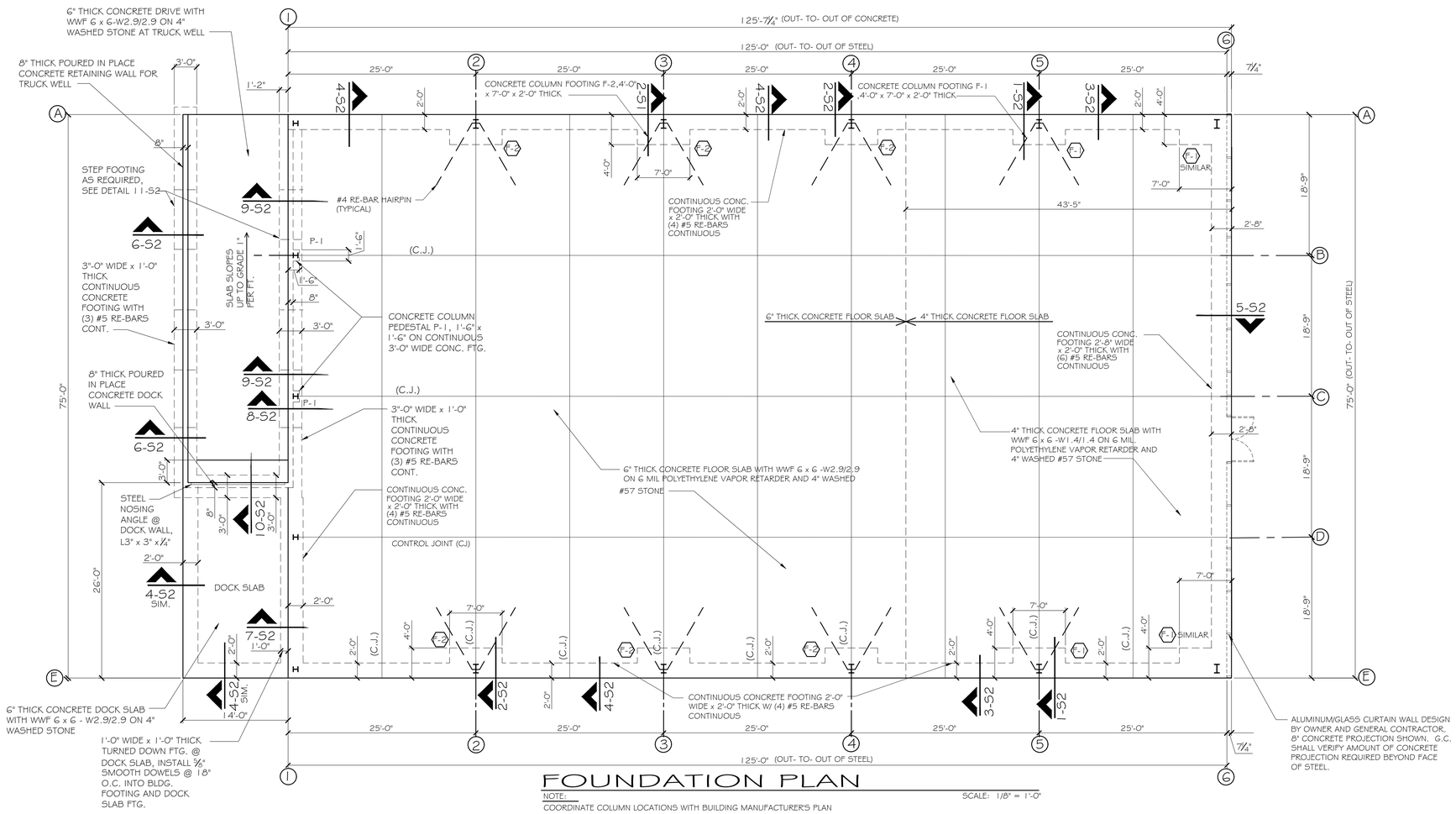
SHEET
E4 of 6



FOUNDATION PLAN

NOTE:
COORDINATE COLUMN LOCATIONS WITH BUILDING MANUFACTURER'S PLAN

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

FOUNDATION NOTES

1. FOUNDATION DESIGN BASED ON ASSUMED SOIL BEARING PRESSURE OF 2000 PSF.
2. MINIMUM COMPRESSIVE STRENGTH F 'c OF CONCRETE TO BE 3000 PSI.
3. STEEL REINFORCEMENT BARS TO BE A615, GRADE 60. REINFORCEMENT BARS TO BE SUPPORTED BY CHAIRS OR SPACERS. CONCRETE BLOCK OR BRICKS SHALL NOT BE USED AS SPACERS. WELDED WIRE FABRIC (MESH) SHALL CONFORM TO ASTM A185 AND BE PROVIDED IN FLAT SHEETS (ROLLS NOT PERMITTED). SUPPORT WIRE FABRIC WITH CHAIRS OR LIFTS DURING CONCRETE PLACEMENT TO INSURE PROPER POSITION IN SLAB. CONCRETE BLOCK OR BRICKS SHALL NOT BE USED AS SPACERS. MINIMUM SHALL BE AS FOLLOWS:
   A. SLABS.....3/4"
   B. ALL CONCRETE CAST AGAINST EARTH.....3"
4. ANCHOR RODS SHALL HAVE WITH HEAVY HEX NUTS AND WASHERS (SEE DETAIL). ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36, UNLESS OTHERWISE NOTED. SEE MANUFACTURER'S DRAWING FOR ANCHOR BOLT SIZE AND LOCATION.
5. PERIMETER INSULATION, WHEN REQUIRED SHALL BE INSTALLED IN ACCORDANCE WITH STATE AND LOCAL CODES.
6. A 6 MIL POLYETHYLENE VAPOR RETARDER SHALL BE INSTALLED BELOW SLAB.
7. BOTTOM OF FOOTING SHALL BE 12" BELOW FINISHED GRADE MINIMUM.
8. ALL WORK SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE NORTH CAROLINA BUILDING CODE, 2018 EDITION.
9. FOUNDATION IS DESIGNED FOR ANCHOR ROD REACTIONS AS SHOWN ON NUCOR BUILDING SYSTEMS DRAWINGS, JOB NO. 525B0226A.

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STRUCTURAL DESIGN

DESIGN LOADS

Importance Factors: Wind (I_W) 1; Snow (I_S) 1; Seismic (I_E) 1

Live Loads: Roof 20 psf; Mezzanine ___ psf; Floor 100 psf

Snow Loads: 15 psf

Wind Loads: Basic Wind Speed 115 (mph ASCE-7); Exposure Category C

SEISMIC DESIGN CATEGORY: ☐A ☑B ☐C ☐D

Provide the following Seismic Design Parameters:

Occupancy Category (Table 1604.5) ☐I ☑II ☐III ☐IV

Seismic Use Group 1

Spectral Response Acceleration S_s 14.2 %g S_1 7.2 %g

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

Data Source: ☐ Field Test ☑ Presumptive ☐ Historical Data

Basic structural system (check one)

- ☐ Bearing Wall
- ☑ Building Frame
- ☐ Moment Frame
- ☐ Dual w/Special Moment Steel
- ☐ 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) ___ psf

Presumptive Bearing capacity 2000 psf

Pile size, type, and capacity ___

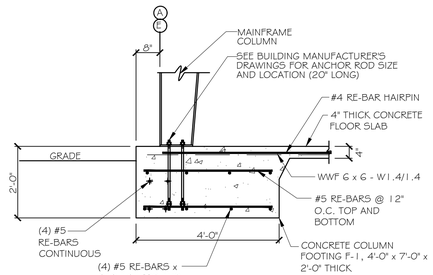
NORTH CAROLINA PROFESSIONAL SEAL 13253 ENGINEER WILLIAM A. PERSON
AUG. 12, 2025

WILLIAM A. PERSON, PE
86 STEPPING STONE LANE
WAYNESVILLE, NC 28786
TEL. (919) 497-6494

PROJECT:
NEW BUILDING FOR:
INNOVATIVE GLASS SOLUTIONS
LOT #6 LEGACY COMMERCIAL CENTER - CASCADE CT.
FRANKLIN COUNTY, NORTH CAROLINA

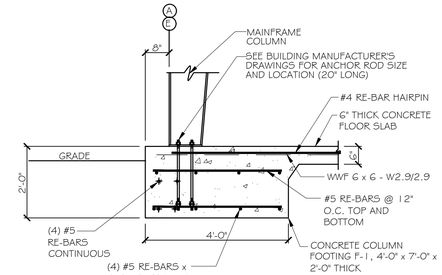
JOB NO: INNOVATIVE, 11.24
DRAWN BY: WTG
DATE: DEC. 3, 2024
REVISIONS:
1 MAY 19, 2025
2 JULY 30, 2025

S-1
OF ONE



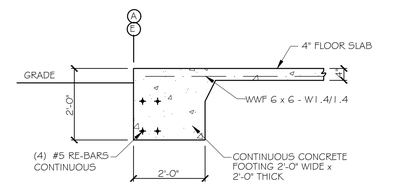
1 S-2 FOOTING SECTION @ MAINFRAME COLUMN F-1

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



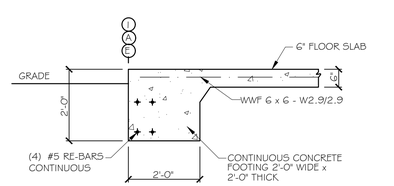
2 S-2 FOOTING SECTION @ MAINFRAME COLUMN F-2

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



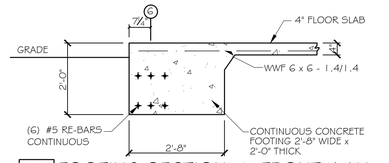
3 S-2 FOOTING SECTION @ 4" FLOOR SLAB

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



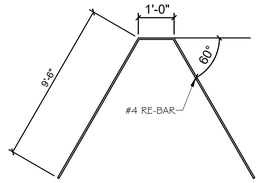
4 S-2 FOOTING SECTION @ 6" FLOOR SLAB

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



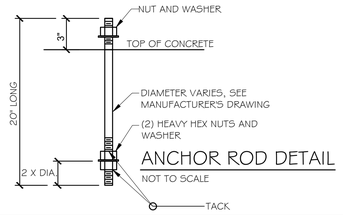
5 S-2 FOOTING SECTION @ FRONT WALL

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



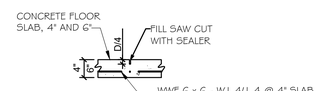
RE-BAR HAIRPIN DETAIL

NOT TO SCALE



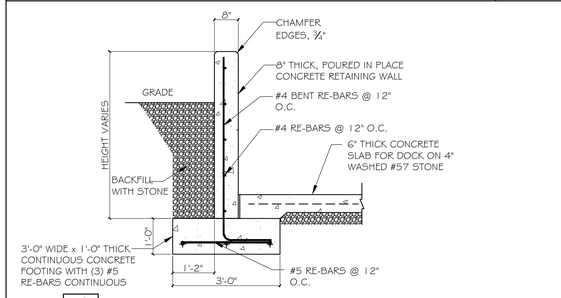
ANCHOR ROD DETAIL

NOT TO SCALE



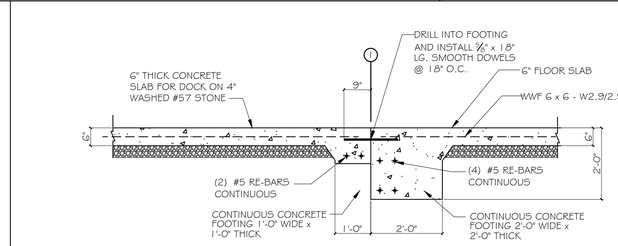
CONTROL JOINT DETAIL

NOT TO SCALE



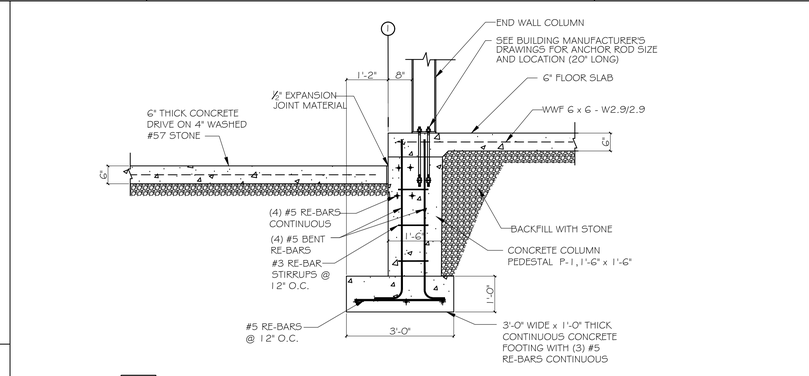
6 S-2 SECTION @ RETAINING WALL & DOCK DRIVE

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



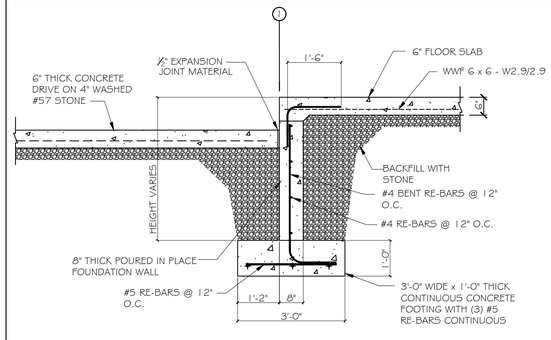
7 S-2 SECTION @ BLDG. END WALL AND DOCK

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



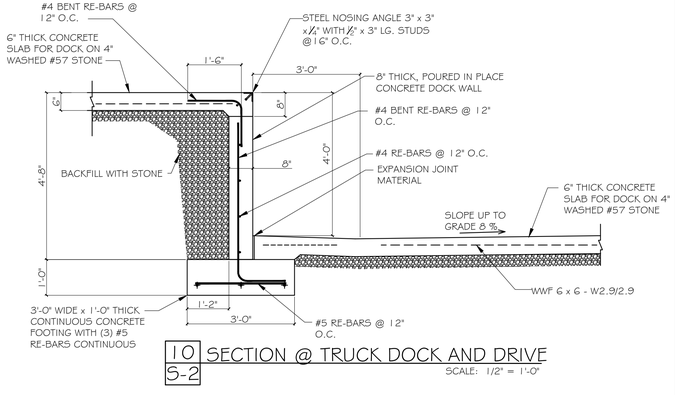
8 S-2 SECTION @ END WALL COLUMN PEDESTAL AND DOCK DRIVE

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



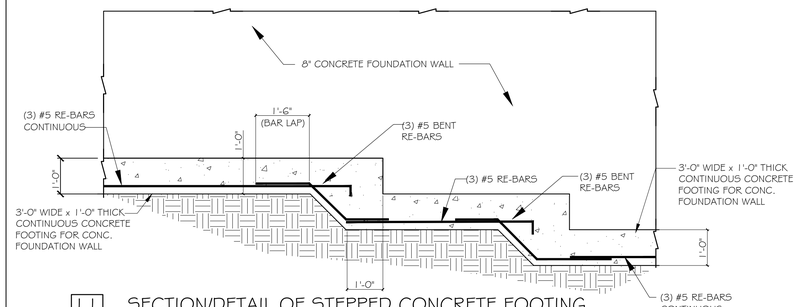
9 S-2 SECTION @ BLDG. END WALL AND DOCK DRIVE

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



10 S-2 SECTION @ TRUCK DOCK AND DRIVE

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



11 S2 SECTION/DETAIL OF STEPPED CONCRETE FOOTING

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

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
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10/17/2025 11:38:23 AM

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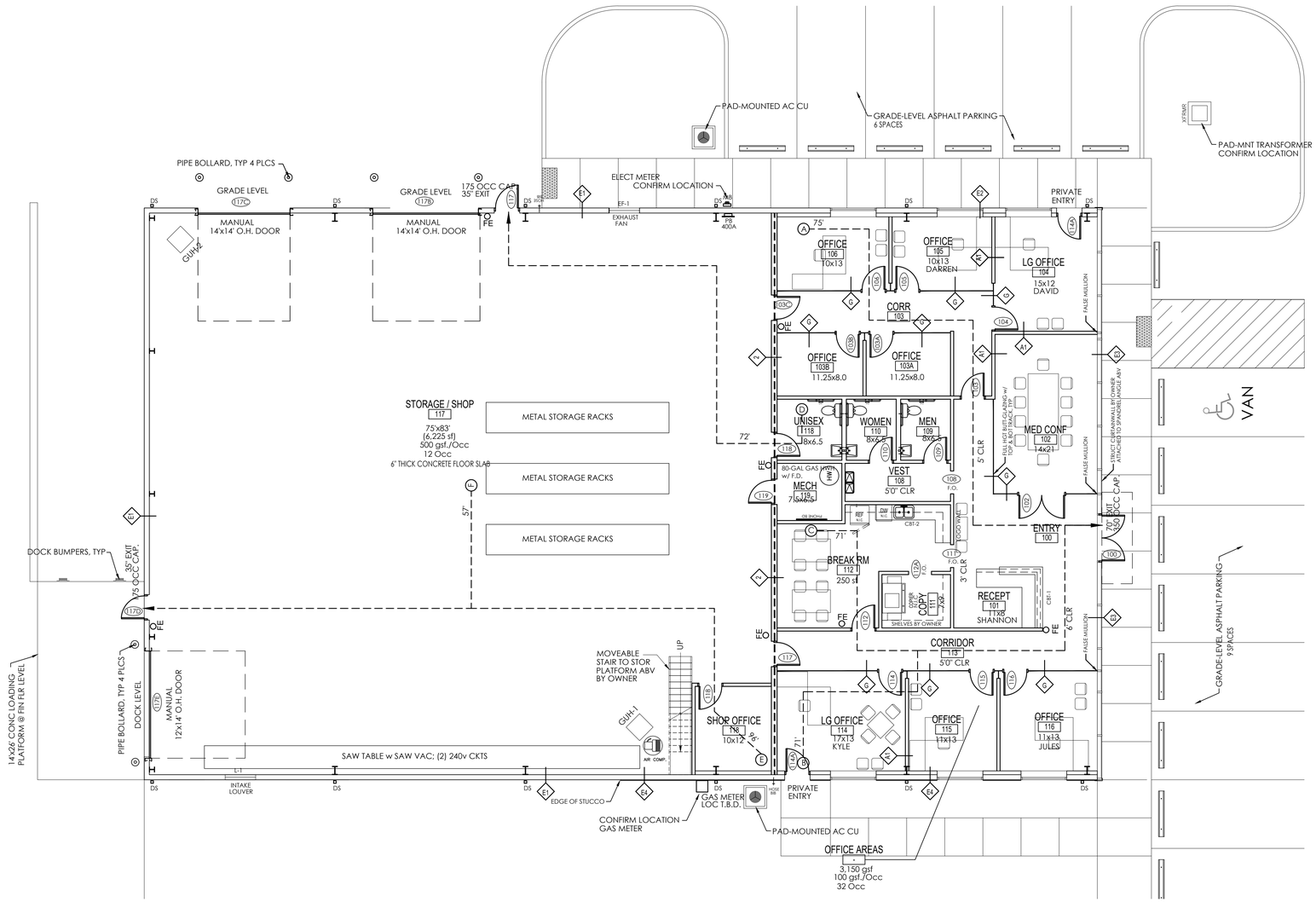
S-2
OF 2



1 LIFE SAFETY PLAN

SCALE = 1/8 =1'-0"

CONSTRUCTION LEGEND

- NEW EXTERIOR WAREHOUSE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) CONTINUE PEMB INSULATION FULL TO EAVE- (NON-CONDITIONED).
- NEW EXTERIOR OFFICE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) PLUS AIR SPACE, 3-5/8" 25 GA MTL STUDS, 5/8" GYP BD, R-15 F.G BATTS w/OUT V.B.
- NEW EXTERIOR FACDE OFFICE WALL CONSTR w/ STRUCT CURTAINWALL FRAME, HORIZONTAL SPANDREL ANGLE w/ STOREFRONT GLAZING FULL HGT (16'-0" AFF EAVE) PLUS
- NEW EXTERIOR WAREHOUSE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) CONTINUE PEMB INSULATION FULL TO EAVE- (NON-CONDITIONED). EXTERIOR CLAD w/ 1"-2" DRAINABLE EIFS STUCCO SYSTEM OVER EXT MTL PANELS. FASTEN/DRAIN/FLASH PER MFR.
- NEW 2-HR RATED OFFICE/WAREHOUSE FIRE PARTITION CONSTR FULL HGT TO ROOF DECK w/ 6" 20 GA MTL STUDS @ 16" O.C., (2) LA 5/8" GYP BD EA SIDE, R-15 F.G. BATTS w/ V.B. TO ROOF DECK. PROVIDE SLIP-TRACK CONDITION AS REQD @ ROOF DECK) PER UL#U-419.
- NEW NON-RATED PARTITION WALL TO 9'-0" AFF CONSTR w/ 3-5/8" 25 GA. MTL STUDS @ 16" O.C., w/ 1 LA 5/8" GWB EA SIDE w/ R-11 F.G. SOUND ATTENUATION BATTS(FILL STUD CAVITIES). BRACE WALLS AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. (ALL PARTITIONS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE (U.N.O.)
- NEW NON-RATED PARTITION WALL TO 10'-0" AFF CONSTR w/ 3-5/8" 25 GA. MTL STUDS @ 16" O.C., w/ 1 LA 5/8" GWB EA SIDE w/ R-11 F.G. SOUND ATTENUATION BATTS(FILL STUD CAVITIES). BRACE WALLS AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. (FIN CLG=8'-10" AFF w/ R-30 F.G. BATTS ON TILES @ COND SPACES)
- NEW 1/2" BUTT-GLAZED PARTITION FULL-HGT (8'-0"AFF) PROVIDE 10" DP GWB SOFFIT AT CEILING TO RECEIVE TRACK. BRACE SOFFIT AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. FIN CLG HEIGHT 10'-4" @ FRONT CURTAINWALL
- XXX — NEW DOOR, FRAME, HDWE TO BE INSTALLED PER SCHEDULES
- FEC FE — FIRE EXTINGUISHER, CABINET CONFIRM LOCATIONS W FIRE MARSHAL 10LB ABC TYPE: (ALLOW FOR 6 TOTAL)

EXIT TRAVEL DISTANCES

LOCATION	PERMISSABLE TRAVEL	ACTUAL
A - OFFICE	200'	75'
B- OFFICE	200'	71'
C- BREAK RM	200'	71'
D- UNISEX	200'	72'
E- SHOP OFFICE	200'	96'
F- WAREHOUSE	200'	57'

PERMISSABLE TRAVEL BASED ON BUSINESS "S-2" USE FOR NON-SPRINKLERED BUILDING.
OFFICE AREA DOES NOT REQUIRES TWO REMOTE MEANS OF EGRESS.

OCCUPANCY SUMMARY

CLASSIFICATION	SF/OCC	SF	OCCUPANT LOAD
OFFICE AREA - BUSINESS (B)	100 GSF	3,150 gsf	32 OCCUPANTS
UNCOND. WAREHOUSE (S2)	500 GSF	6,225 gsf	13 OCCUPANTS
NET AREAS	0 GSF	0	0 OCCUPANTS
TOTALS		9,375 gsf	0 OCCUPANTS
OCCUPANTS PER CODE (FOR EGRESS ONLY):			45 OCCUPANTS

DEFINITIONS:
NSF= NET SQUARE FEET
GSF = GROSS SQUARE FEET

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
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10/17/2025 11:38:23 AM

LIFE SAFETY PLAN REQUIREMENTS

- N/A ☐ Fire and/or smoke rated wall locations (Chapter 7).
- N/A ☐ Assumed and real property line locations (if not on the site plan). SEE SITE PLAN(S)
- N/A ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8). N/A: >60' to all property lines
- ☒ Occupancy Use for for each area as it relates to occupant load calculation (Table 1004.1.2).
- ☒ Occupant loads for each area.
- ☒ Exit access travel distances (1017).
- ☒ Common path of travel distances (Tables 1006.2 & 1006.3.2(1)]. 100' PERMITTED IN B & S2 USE - 75' & 0' PROVIDED RESPECTIVELY
- ☒ Dead end lengths (1020.4). N/A @ OFFICE AREAS - SINGLE EXIT SPACE.NO DEAD END AT STORAGE AREAS.
- ☒ Clear exit widths for each door **(ALSO SEE DOOR SCHEDULE)**
- ☒ Maximum calculated occupant load capacity each exist door can accomodate based on egress width (1005.3).
- ☒ Actual occupant load for each exit door. (SEE TABLE ON LIFE SAFETY PLAN SHEET)
- N/A ☐ A separate schematic plan indicating where fire rated floor/ceiling and /or roof structure is provided for purposes of occupancy separation
- N/A ☐ Location of doors with panic hardware (1010.1.10) (ALSO SEE DOOR SCHEDULE)
- N/A ☐ Location of doors with delayed egress locks and the amount of the delay (1010.1.9.7).
- N/A ☐ Location of doors with electromagnetic locks (1010.1.9.9).
- N/A ☐ Location of doors equipped with hold-open devices.
- N/A ☐ Location of emergency escape windows (1030).
- N/A ☐ The square footage of each fire area. (202).
- N/A ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5).
- N/A ☐ Note any code exceptions or table notes tha may have been utilized regarding the items above.

* CALCULATED OCCUPANT LOAD AND & EXIT WIDTH

USE GROUP AND/ OR SPACE DESIGNATION	(a) AREA SQ. FT.	(b) AREA PER OCCUPANT	(a/b) NUMBER OF OCCUPANTS	(c) EGRESS WIDTH PER OCCUPANT (TABLE 1005.1) STAIR	(c) LEVEL	EXIT WIDTH [in][1][2][3] REQUIRED WIDTH (SECTION 1005.1) Σa/b) X c STAIR	REQUIRED WIDTH LEVEL	ACTUAL WIDTH SHOWN ON PLANS STAIR	ACTUAL WIDTH SHOWN ON PLANS LEVEL	
OFFICE AREAS	3,150 gsf	100 gsf	32	N/A	0.2"	N/A	6.4"	N/A	70"	70" DR# 100
WAREHOUSE AREAS	6,225 gsf	500 gsf	13	N/A	0.2"	N/A	2.6"	N/A	70"	35" DR# 117 35" DR# 117C
Total #'s	9,375 gsf		* 45				9.0"		140"	

[1] See Table 1004.1.1 to determine whether net or gross area is applicable.
[2] Minimum stairway width (Section 1009.1); min. corridor width (Section 1017.2); min. door width (Section 1008.1.1)
[3] Minimum width of exit passageway (Section 1021.2)
The loss of 1means of egress shall not reduce the available capacity to less than 50 percent of the total required (Section 1005.1)
Assembly occupancies (Section 1025)

* AGGREGATE OCUPANT LOAD SHOWN FOR EGRESS PURPOSES ONLY.

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P.O. Box 97216
Raleigh, NC 27624
TEL: (919) 802-2511
www.burdettassociates.com
bta Burdett and Associates Architecture, Inc.

NORTH CAROLINA REGISTERED ARCHITECT 40110 DAVID M. BURDETT 10/09/25

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 52379 GREGORY S. MONDIN EIGHT

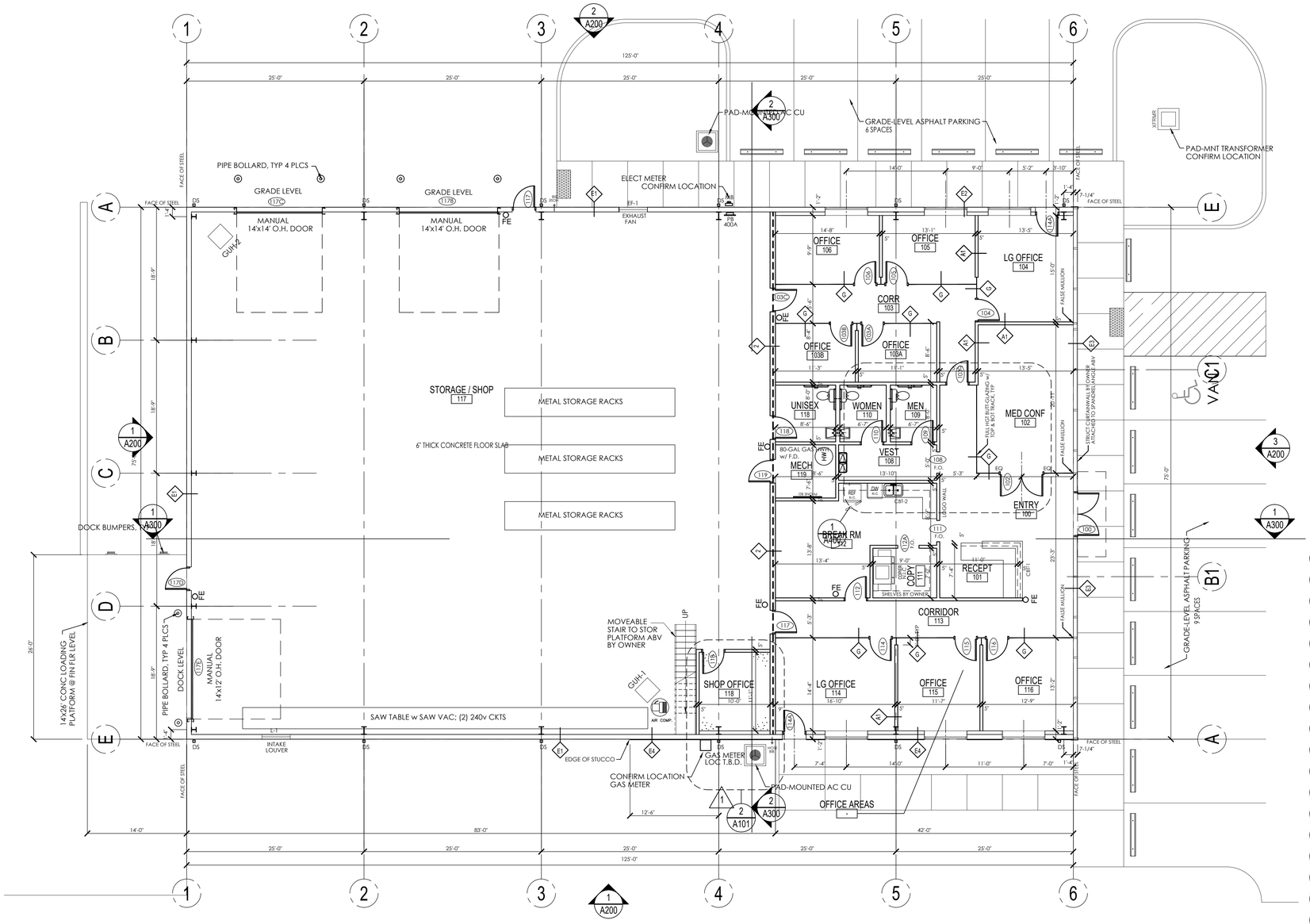
New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MONDIN
CHK BY: DAVID BURDETT
DATE: Permit: Franklin Co, NC 07-09-25
REVISIONS:

TITLE: LIFE SAFETY SHEET

SHEET NO. A100

PERMIT



1 CONSTRUCTION FLOOR PLAN

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

CONSTRUCTION LEGEND

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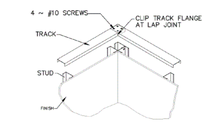
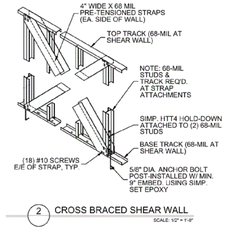
- XXX — NEW DOOR, FRAME, HDWE TO BE INSTALLED PER SCHEDULES
- FEC / FE — FIRE EXTINGUISHER, CABINET CONFIRM LOCATIONS W FIRE MARSHAL 10LB ABC TYPE; (ALLOW FOR 6 TOTAL)

HEADER SCHEDULE

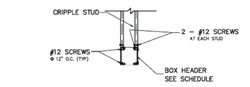
	OPENING WIDTH	HEADER SIZE AND # OF METAL STUDS
(A)	GREATER THAN 3'-0" AND LESS THAN 6'-6"	(2) 800S200-54 w/ (2) JACK STUDS EACH END
(B)	6'-6" AND LARGER	(2) 1000S250-97 W/ (3) JACK STUDS EACH END -OR- (2) 1200S250-68 W/ (3) JACK STUDS EACH END
(C)	3'0" AND LESS (INTERIOR)	(2) 400S137-43 W/ (1) JACK STUD EACH END



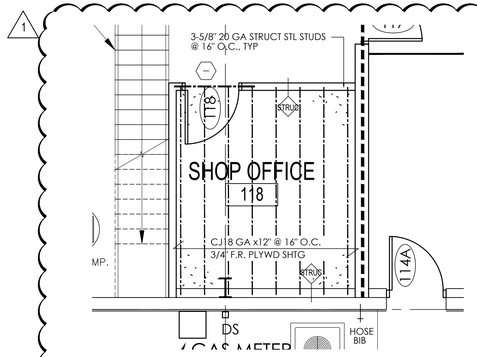
2 WALL FRAMING @ CORNER TRACK LAP CONNECTION
NO SCALE



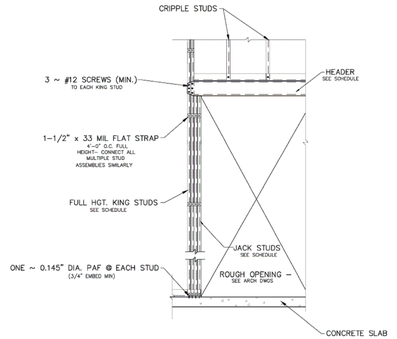
2 CROSS BRACED SHEAR WALL
SCALE: 1/2" = 1'-0"



5 TYPICAL BOX HEADER CONSTRUCTION
NO SCALE



2 STORAGE LOFT FRAMING PLAN
SCALE = 1/4" =1'-0"
* LOFT IS FOR PAPER STORAGE, NOT OCCUPANTS (GUARDRAILS NOT REQD)



3 DOOR OPENING ELEVATION
NO SCALE

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10/17/2025 11:38:23 AM

GENERAL NOTES

1. FINISHED FLOOR TO EAVE HEIGHT = 16'-0"
2. FINISHED CEILING HEIGHT = 8'-10" AFF (OFFICE AREAS), 16'-0'± - EXPOSED STRUCTURE (WAREHOUSE AREA)
3. 4-7/8" PARTITIONS ARE SHOWN NOMINAL 5". DIMENSION TOLERANCE IS 1/4" UNLESS NOTED "±".
4. ALIGNMENT NOTES SHALL TAKE PRECEDENCE OVER DIMENSIONS.
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6. ALL NEW EQUIPMENT, FINISHES AND APPLIANCES SHALL BE SELECTED BY THE OWNER & INSTALLED BY THE VENDOR.
7. PROVIDE MOISTURE RESISTANT GWB w/ SEMI-GLOSS LATEX PAINT AT ALL WET WALLS.
8. PROVIDE F.R. WOOD BLOCKING AT ALL FIXTURES, CABINETS, SHELVES AND WALL STOPS AS REQ'D. TRADES SHALL COORDINATE LOCATIONS.
9. FILL AND LEVEL ALL CRACKS OVER 1/8" IN CONCRETE FLOOR AT NEW VCT LOCATIONS.
10. SEE STRUCTURAL PLANS BY OTHERS FOR FOUNDATION, FOOTINGS, RETAINING WALL PLANS, DETAILS.
11. SEE PRE-ENGINEERED BLDG MFRS PLANS FOR FRAMING, SHEATHING LOADING PLANS, DETAILS.
12. SEE ENGINEERD PLANS BY OTHERS FOR PLUMBING, ELECTRICAL, MECHANICAL, SPRINKLER PLANS, DETAILS.
13. ALL EXPOSED STEEL FRAMING MEMBERS IN OFFICE AREA SHALL BE FRAMED, FURRED, SHEATHED OVER AS TIGHTLY AS POSSIBLE.

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NORTH CAROLINA REGISTERED ARCHITECT 40110 SEAL
10/09/25

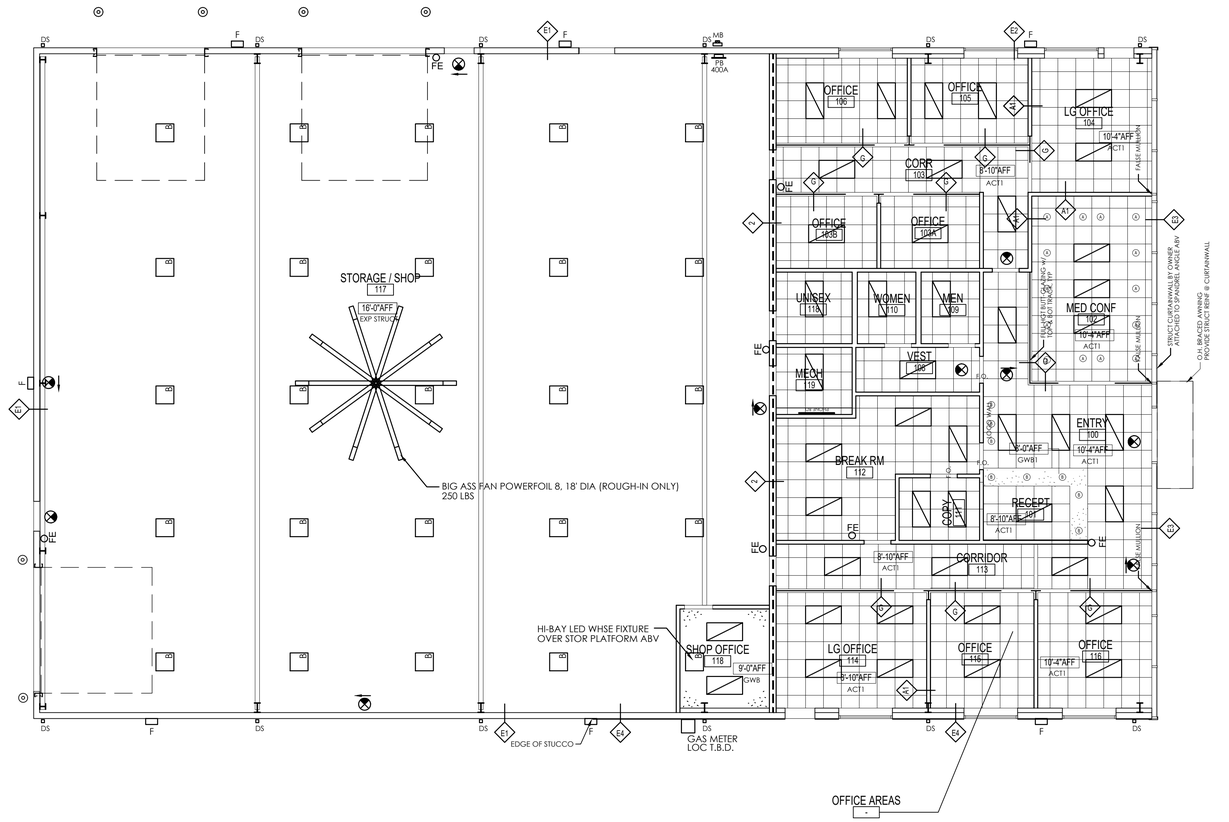
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 52379 SEAL

New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY:	GREG MONSON		
CHK BY:	DAVID BURDETT		
DATE:	Permit, Franklin Co, NC	07-09-25	
REVISIONS:	1 Review Comments #1	10-08-25	

TITLE:
CONSTRUCTION FLOOR PLAN

SHEET NO.
A101
PERMIT



1 REFLECTED CEILING PLAN

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

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
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10/17/2025 11:38:23 AM

CONSTRUCTION LEGEND

- NEW EXTERIOR WAREHOUSE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) CONTINUE PEMB INSULATION FULL TO EAVE- (NON-CONDITIONED).
- NEW EXTERIOR OFFICE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) PLUS AIR SPACE, 3-5/8" 25 GA MTL STUDS, 5/8" GYP BD, R-15 F.G BATTS w/OUT V.B.
- NEW EXTERIOR FACDE OFFICE WALL CONSTR w/ STRUCT CURTAINWALL FRAME, HORIZONTAL SPANDREL ANGLE w/ STOREFRONT GLAZING FULL HGT (16'-0" AFF EAVE) PLUS
- NEW EXTERIOR WAREHOUSE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) CONTINUE PEMB INSULATION FULL TO EAVE- (NON-CONDITIONED). EXTERIOR CLAD w/ 1"-2" DRAINABLE EIFS STUCCO SYSTEM OVER EXT MTL PANELS. FASTEN/DRAIN/FLASH PER MFR.
- NEW 2-HR RATED OFFICE/WAREHOUSE FIRE PARTITION CONSTR FULL HGT TO ROOF DECK w/ 6" 20 GA MTL STUDS @ 16" O.C., (2) LA 5/8" GYP BD EA SIDE, R-15 F.G. BATTS w/ V.B. TO ROOF DECK. PROVIDE SLIP-TRACK CONDITION AS REQD @ ROOF DECK) PER UL#U-419.
- NEW NON-RATED PARTITION WALL TO 9'-0" AFF CONSTR w/ 3-5/8" 25 GA. MTL STUDS @ 16" O.C., w/ 1 LA 5/8" GWB EA SIDE w/ R-11 F.G. SOUND ATTENUATION BATTS(FILL STUD CAVITIES). BRACE WALLS AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. (ALL PARTITIONS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE (U.N.O.)
- NEW NON-RATED PARTITION WALL TO 10'-0" AFF CONSTR w/ 3-5/8" 25 GA. MTL STUDS @ 16" O.C., w/ 1 LA 5/8" GWB EA SIDE w/ R-11 F.G. SOUND ATTENUATION BATTS(FILL STUD CAVITIES), BRACE WALLS AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. (FIN CLG=8'-10" AFF w/ R-30 F.G. BATTS ON TILES @ COND SPACES)
- NEW 1/2" BUTT-GLAZED PARTITION FULL-HGT (8'-0"AFF) PROVIDE 10" DP GWB SOFFIT AT CEILING TO RECEIVE TRACK. BRACE SOFFIT AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. FIN CLG HEIGHT 10'-4" @ FRONT CURTAINWALL
- XXX — NEW DOOR, FRAME, HDWE TO BE INSTALLED PER SCHEDULES
- FEC / FE — FIRE EXTINGUISHER, CABINET CONFIRM LOCATIONS W FIRE MARSHAL 10LB ABC TYPE; (ALLOW FOR 6 TOTAL)

CEILING LEGEND

- NEW 2'x4' RECESSED LED LIGHT FIXTURE
- 8'10"AFF — CEILING HEIGHT
- NON-RATED 2'x2' ACOUSTIC CEILING TILE IN WHITE METALLIC CEILING GRID (PROVIDE R-30 BATT INSULATION ON TILES AT CONDITIONED WAREHOUSE ROOMS)
- 24"x24" SUPPLY AIR DIFFUSER
- 48" SLOT SUPPLY AIR DIFFUSER
- 12"x24" RETURN AIR DIFFUSER
- EXHAUST FAN
- B — HI-BAY LED LIGHT FIXTURE
- EMERGENCY LIGHT w BATTERY BACK-UP; RE-USE EXISTING AS POSSIBLE
- ILLUMINATED EXIT SIGN; ARROWS INDICATE DIRECTIONS
- A — DENOTES INTERIOR RECESSED LED CAN LIGHT
- B — DENOTES INTERIOR SUSPENDED LED PENDANT LIGHT
- ED — DENOTES EXTERIOR LED EXIT DISCHARGE LIGHT ON BATTERY BACK-UP
- F — DENOTES EXTERIOR LED WALL PACK FIXTURE; FULL CUT-OFF
- DENOTES HVLS CEILING FAN (ROUGH-IN ONLY) AS MFR BY BIG ASS FAN CO. POWERFOIL 8 , 18' DIA; 230 LBS

CEILING NOTES

THIS PLAN IS INTENDED TO COORDINATE CEILING DEVICE LOCATIONS FOR WORK OF THE RESPECTIVE TRADES.
SEE ARCHITECTURAL PLANS FOR ACTUAL WALL LOCATIONS AND DIMENSIONS.
SEE ASSOCIATED SYSTEMS SHEETS FOR ASSOCIATED SPECIFICATIONS, DETAILS, DUCTING PIPING AND CIRCUITING.
ALL CONTRACTORS ARE TO VERIFY & COORDINATE THEIR ACTIVITIES.
HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR INSULATION OF SUPPLY DUCTS AND GRILLES ABOVE CEILING & IN NON-CONDITIONED PLENUMS & SPACES AS REQUIRED.
SUSPENDED CEILING TO BE CENTERED & ORIENTED RELATIVE TO WALLED SPACES AS SHOWN.
CEILING CONTRACTOR TO BE RESPONSIBLE FOR TRIMMING OUT HVAC GRILLES @ ALL RATED & NON RATED CEILINGS.
ACOUSTICAL CEILING CONTRACTOR TO SUPPORT LIGHT FIXTURES PER MFR AND TO PROVIDE MIN. 2 TIE WIRES DIAGONALLY PER FIXTURE.
CAN LIGHTS, EXIT & EMERGENCY LIGHTS SHALL BE CENTERED IN CEILING TILES.

GENERAL NOTES

1. FINISHED FLOOR TO EAVE HEIGHT = 16'-0"
2. FINISHED CEILING HEIGHT = 8'-10" AFF (OFFICE AREAS), 16'-0"± - EXPOSED STRUCTURE (WAREHOUSE AREA)
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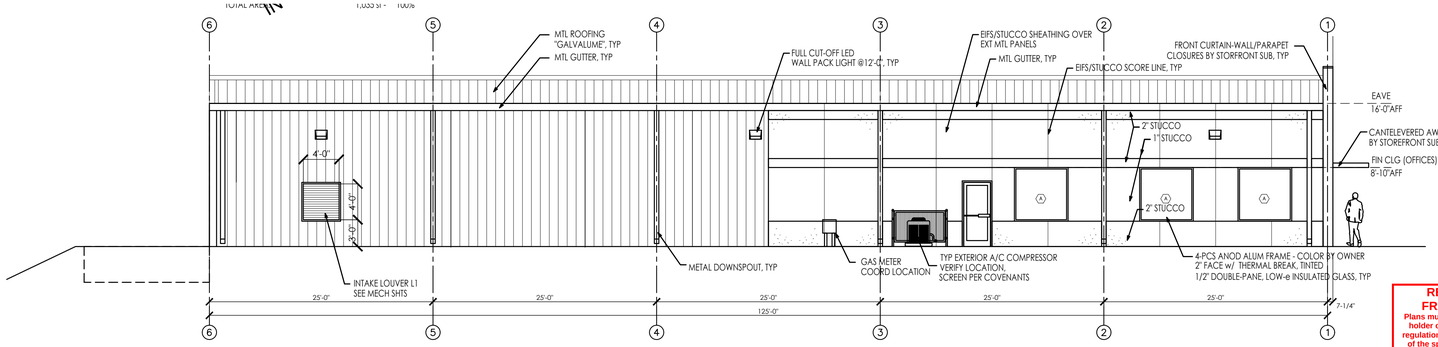
NORTH CAROLINA REGISTERED ARCHITECT 21105 DAVID W. BURDETT 10/09/25 PROFESSIONAL ENGINEER 52379 SEAL

New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DRG: MINION
CHK: BY: DAVID BURDETT
DATE: Permit; Franklin Co, NC 07-08-25
REVISIONS:

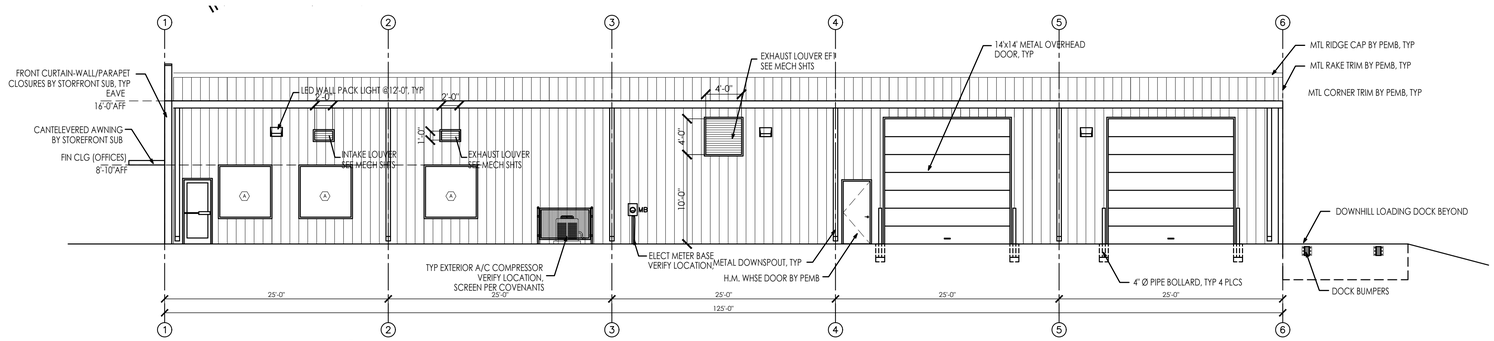
TITLE:
REFLECTED CEILING PLAN

SHEET NO.
A102
PERMIT



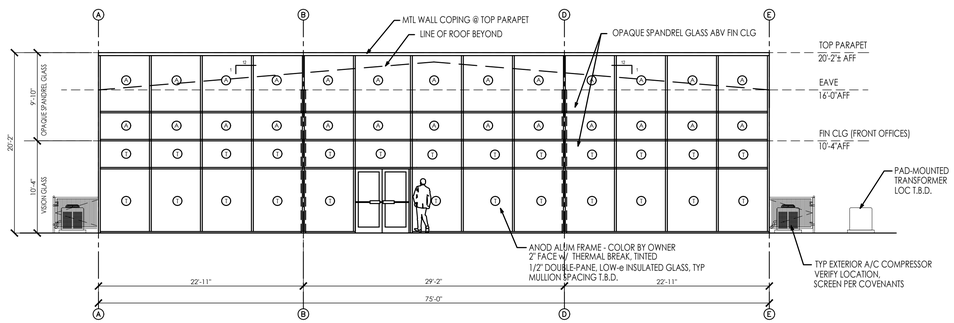
1 LEFT (SOUTH) BUILDING ELEVATION

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



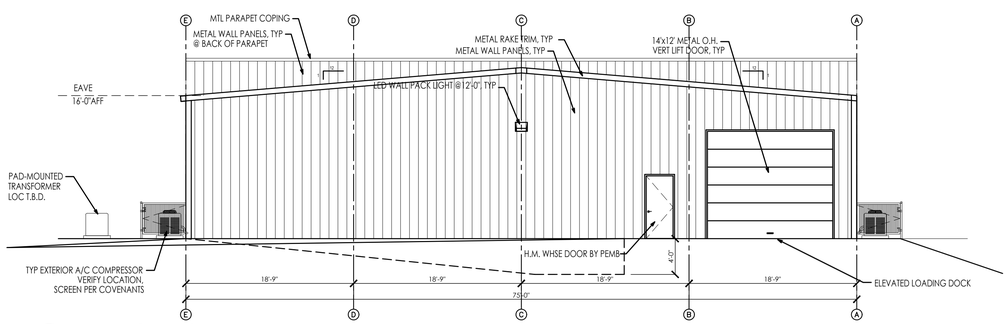
2 RIGHT (NORTH) BUILDING ELEVATION

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



3 FRONT (EAST) BUILDING ELEVATION

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



4 REAR (WEST) BUILDING ELEVATION

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

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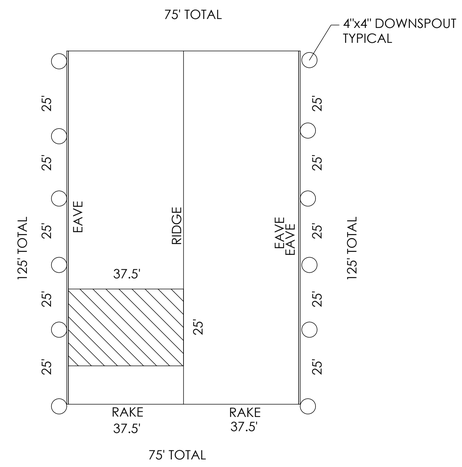
10/17/2025 11:38:23 AM



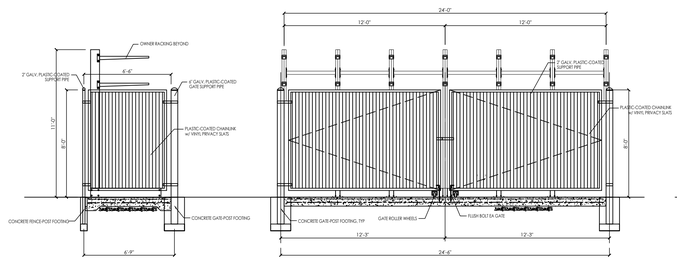
DOWNSPOUT SIZING;
100-YR RAINFALL FROM FIG. 1106.1 = 4"

MAXIMUM HORIZ. PROJECTED AREA= 938 SF = 3" Ø DOWNSPOUT MIN (TABLE 1106.2) - 9.6 SI
*4"x4" DOWNSPOUT PROVIDES 16 SI. * - MORE THAN SUFFICIENT

MAXIMUM HORIZ. PROJECTED AREA= 938 SF = 5" Ø GUTTER MIN. @ 1/2"/FT(TABLE 1106.2) - 9.8 SI
*6"x6" GUTTER PROVIDES 36 SI. * - MORE THAN SUFFICIENT

5 ROOF PLAN/ DOWNSPOPUT SIZING & SPACING

SCALE = NO SCALE



ENCLOSURE SIDE ELEVATION, TYP

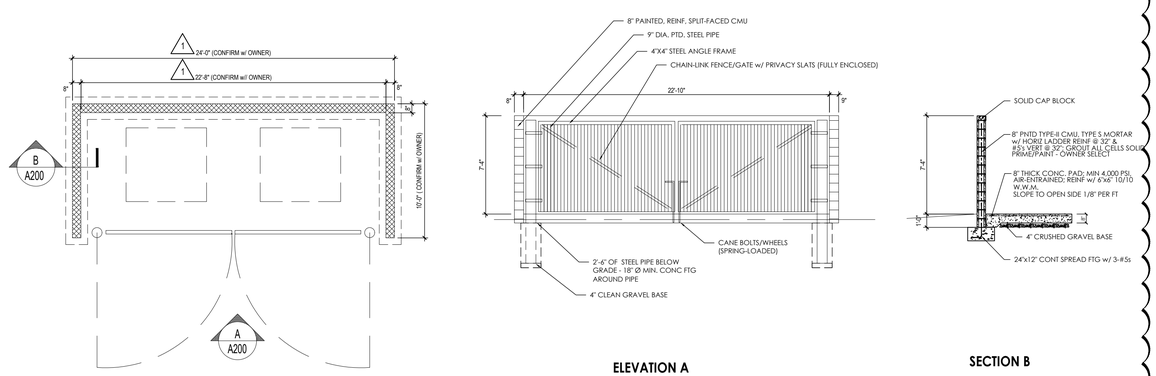
ENCLOSURE FRONT ELEVATION, TYP

STOCK RACK FRONT ELEVATION, TYP

STOCK RACK SIDE ELEVATION, TYP

6 EXTERIOR RACKING ENCLOSURE

SCALE = 3/16" = 1'-0"



ELEVATION A

SECTION B

7 EXTERIOR DUMPSTER ENCLOSURE

SCALE = 3/16" = 1'-0"

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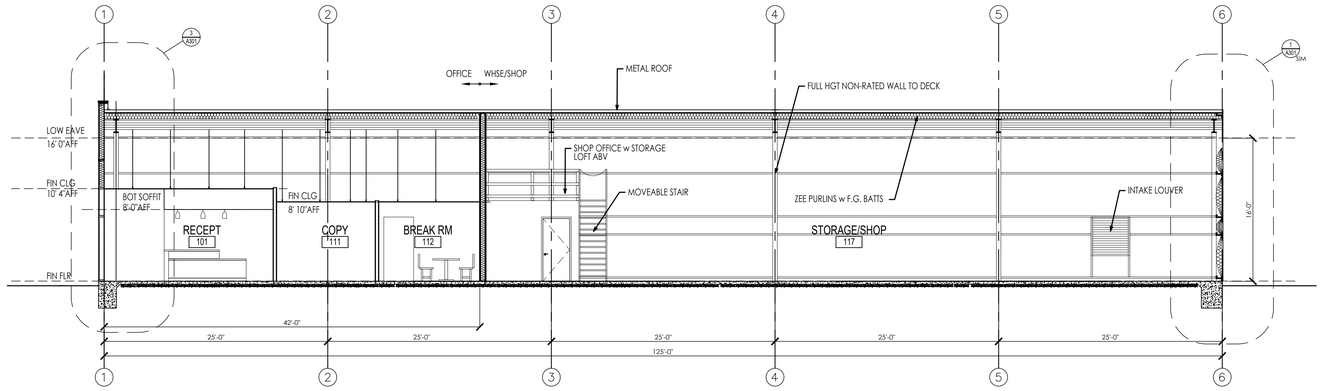
New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MONDIN
CHK BY: DAVID BURDETT
DATE: Permit: Franklin Co, NC 07-08-25
REVISIONS: Review Comments #1 10/09/25

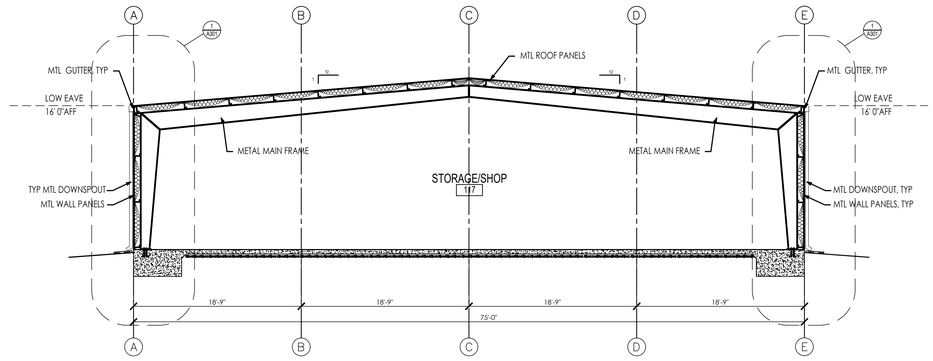
TITLE:
CONSTRUCTION ELEVATIONS

SHEET NO.
A200
PERMIT



1 LONGITUDINAL BUILDING SECTION

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



2 TRANSVERSE BUILDING SECTION

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

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
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10/17/2025 11:38:23 AM

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1109 PAUL A. BURDETT 01/09/25

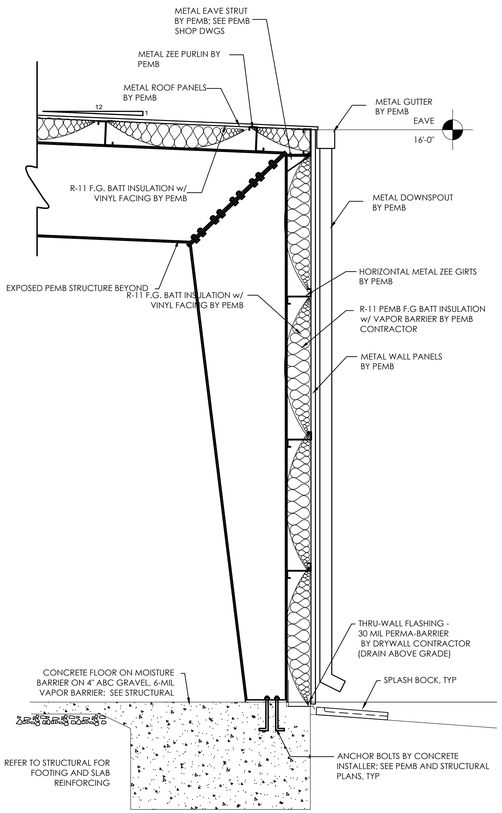
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 52379 PAUL A. BURDETT EIGHT

New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MANDIN
CHK BY: DAVID BURDETT
DATE: Permit; Franklin Co, NC 07-08-25
REVISIONS:

TITLE:
BUILDING SECTIONS

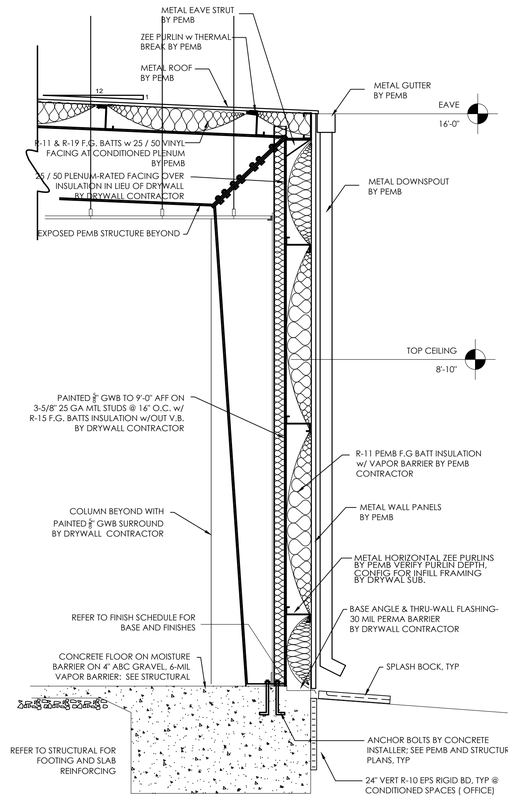
SHEET NO.
A300
PERMIT



1 SECTION "E1"@ UNCOND WAREHOUSE

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

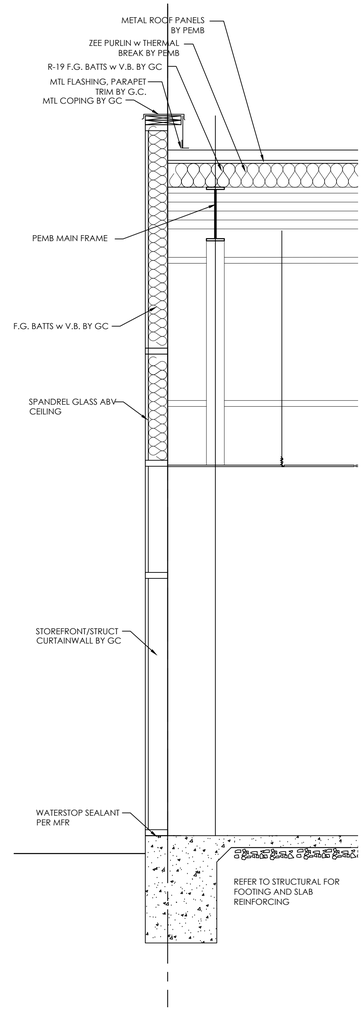
(SEE STRUCTURAL FOR MEMBER SIZING, ENDWALL SIMILAR)



2 SECTION "E2"@ COND OFFICE

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

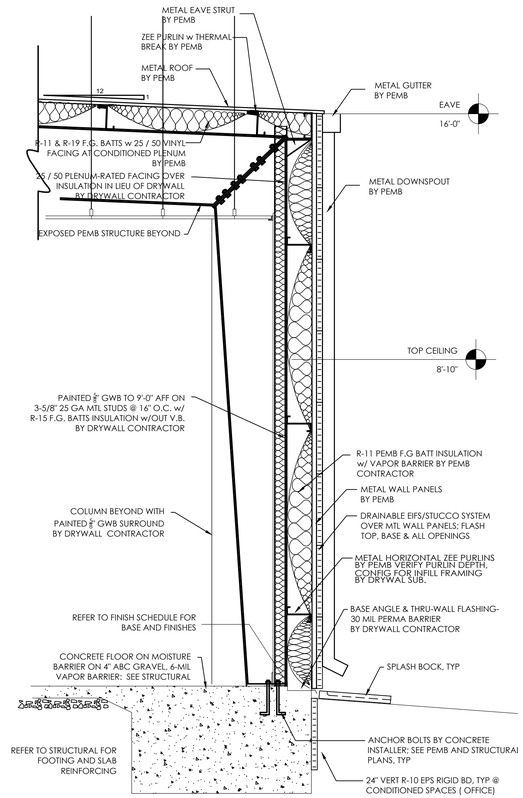
(SEE STRUCTURAL FOR MEMBER SIZING)



3 SECTION "E3"@ COND OFFICE

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

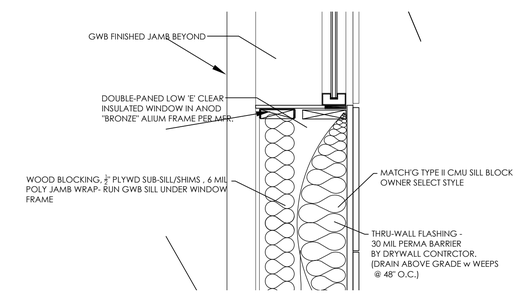
(SEE STRUCTURAL FOR MEMBER SIZING)



4 SECTION "E2"@ COND OFFICE

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

(SEE STRUCTURAL FOR MEMBER SIZING)



5 SILL DETAIL

SCALE = 1"=1'-0"

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
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10/17/2025 11:38:24 AM

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- NEW EXTERIOR WAREHOUSE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) CONTINUE PEMB INSULATION FULL TO EAVE- (NON-CONDITIONED). EXTERIOR CLAD w/ 1"-2" DRAINABLE EIFS STUCCO SYSTEM OVER EXT MTL PANELS. FASTEN/DRAIN/FLASH PER MFR.
- NEW 2-HR RATED OFFICE/WAREHOUSE FIRE PARTITION CONSTR FULL HGT TO ROOF DECK w/ 6" 20 GA MTL STUDS @ 16" O.C., (2) LA 5/8" GYP BD EA SIDE, R-15 F.G. BATTS w/ V.B. TO ROOF DECK. PROVIDE SLIP-TRACK CONDITION AS REQD @ ROOF DECK) PER UL#U-419.
- NEW NON-RATED PARTITION WALL TO 9'-0" AFF CONSTR w/ 3-5/8" 25 GA. MTL STUDS @ 16" O.C., w/ 1 LA 5/8" GWB EA SIDE w/ R-11 F.G. SOUND ATTENUATION BATTS(FILL STUD CAVITIES). BRACE WALLS AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. (ALL PARTITIONS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE (U.N.O.)
- NEW NON-RATED PARTITION WALL TO 10'-0" AFF CONSTR w/ 3-5/8" 25 GA. MTL STUDS @ 16" O.C., w/ 1 LA 5/8" GWB EA SIDE w/ R-11 F.G. SOUND ATTENUATION BATTS(FILL STUD CAVITIES). BRACE WALLS AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. (FIN CLG=8'-10" AFF w/ R-30 F.G. BATTS ON TILES @ COND SPACES)
- NEW 1/2" BUTT-GLAZED PARTITION FULL-HGT (8'-0"AFF) PROVIDE 10" DP GWB SOFFIT AT CEILING TO RECEIVE TRACK. BRACE SOFFIT AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. FIN CLG HEIGHT 10'-4" @ FRONT CURTAINWALL
- NEW DOOR, FRAME, HDWE TO BE INSTALLED PER SCHEDULES
- FEC FE — FIRE EXTINGUISHER, CABINET CONFIRM LOCATIONS W FIRE MARSHAL 10LB ABC TYPE; (ALLOW FOR 6 TOTAL)

PRE-ENGINEERED METAL BUILDING (PEMB) GENERAL NOTES

1. PEMB ERECTOR SHALL INCLUDE IN HIS SCOPE THE INSTALLATION OFALL COMPONENTS PROVIDED BYNASH BUILDING CO. (PEMB MFR)INCLUDING,BUT NOT LIMITED TO BUILDING FRAME/GIRTS, ROOF AND WALL PANELS, THERMAL BREAKS, INSULATION/VAPOR BARRIERS,METAL FLASHINGS, GUTTERS/DOWNSPOUTS.
2. CONCRETE SUBCONTRACTOR SHALL INCLUDE IN HIS SCOPE THE SUPPLY AND INSTALLATION OF ALL CONCRETE COMPONENTS INCLUDING,BUT NOT LIMITED TO: REINFORCING BAR, VAPOR BARRIERS, ANCHOR BOLTS, EXPANSION JOINTS, SAWCUTING, CURING AGENTS/RETARDANTS, SEALERS.

GENERAL NOTES

1. FINISHED FLOOR TO EAVE HEIGHT = 16'-0"
2. FINISHED CEILING HEIGHT = 8'-10" AFF (OFFICE AREAS), 16'-0"± - EXPOSED STRUCTURE (WAREHOUSE AREA)
3. 4-7/8" PARTITIONS ARE SHOWN NOMINAL 5". DIMENSION TOLERANCE IS 1/4" UNLESS NOTED "±".
4. ALIGNMENT NOTES SHALL TAKE PRECEDENCE OVER DIMENSIONS.
5. ANY FURNITURE & EQUIPMENT SHOWN IS BY TENANT AND IS NOT INCLUDED THIS PROJECT AND SHALL BE TENANTS RESPONSIBILITY UNLESS OTHERWISE NOTED (U.O.N.).
6. ALL NEW EQUIPMENT, FINISHES AND APPLIANCES SHALL BE SELECTED BY THE OWNER & INSTALLED BY THE VENDOR.
7. PROVIDE MOISTURE RESISTANT GWB w/ SEMI-GLOSS LATEX PAINT AT ALL WET WALLS.
8. PROVIDE F.R. WOOD BLOCKING AT ALL FIXTURES, CABINETS, SHELVES AND WALL STOPS AS REQ'D. TRADES SHALL COORDINATE LOCATIONS.
9. FILL AND LEVEL ALL CRACKS OVER 1/8" IN CONCRETE FLOOR AT NEW VCT LOCATIONS.
10. SEE STRUCTURAL PLANS BY OTHERS FOR FOUNDATION, FOOTINGS, RETAINING WALL PLANS, DETAILS.
11. SEE PRE-ENGINEERED BLDG MFRS PLANS FOR FRAMING, SHEATHING LOADING PLANS, DETAILS.
12. SEE ENGINEERD PLANS BY OTHERS FOR PLUMBING, ELECTRICAL, MECHANICAL, SPRINKLER PLANS, DETAILS.
13. ALL EXPOSED STEEL FRAMING MEMBERS IN OFFICE AREA SHALL BE FRAMED, FURRED, SHEATHED OVER AS TIGHTLY AS POSSIBLE.

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bta Burdett and Associates Architecture, Inc.

NORTH CAROLINA REGISTERED ARCHITECT 21052 DAVID BURDETT 10/09/25

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 52379 SEAL JOSEPH EIGHMY

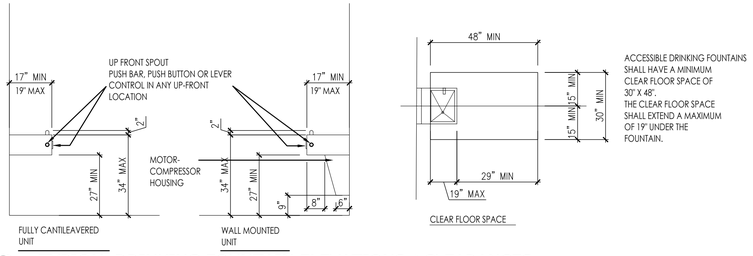
New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MOKEN
CHK BY: DAVID BURDETT
DATE: Permit: Franklin Co, NC 07-08-25
REVISIONS:

TITLE: SECTIONS / DETAILS

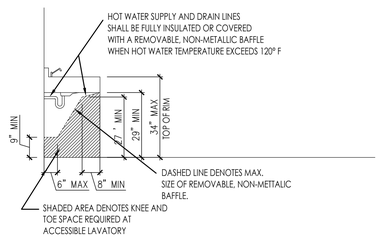
SHEET NO. A301

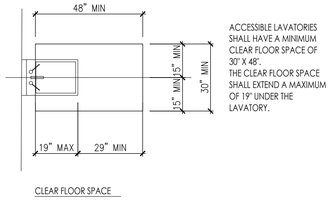
PERMIT



3 TYPICAL DRINKING FOUNTAIN ELEVATIONS / CLEARANCES

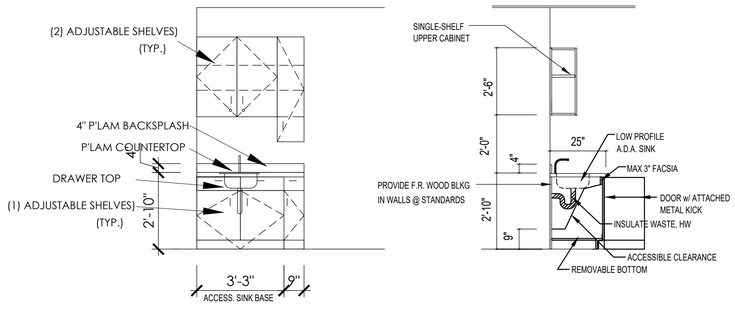
SCALE = 3/8"=1'-0"





4 TYPICAL ACCESSIBLE LAVATORY ELEVATIONS / CLEARANCES

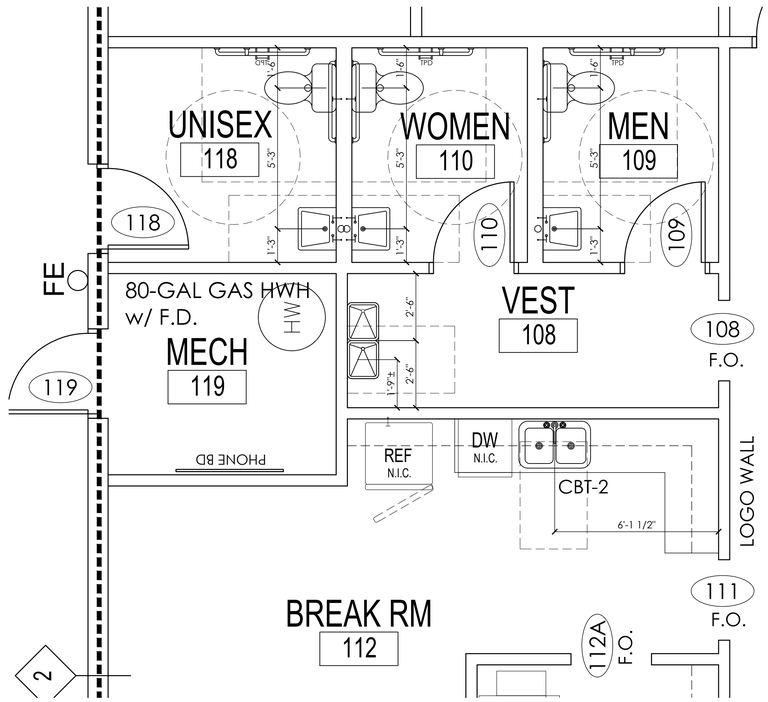
SCALE = 3/8"=1'-0"



5 TYPICAL ACCESSIBLE BREAK ROOM COUNTERTOPS/CABINET CLEARANCES

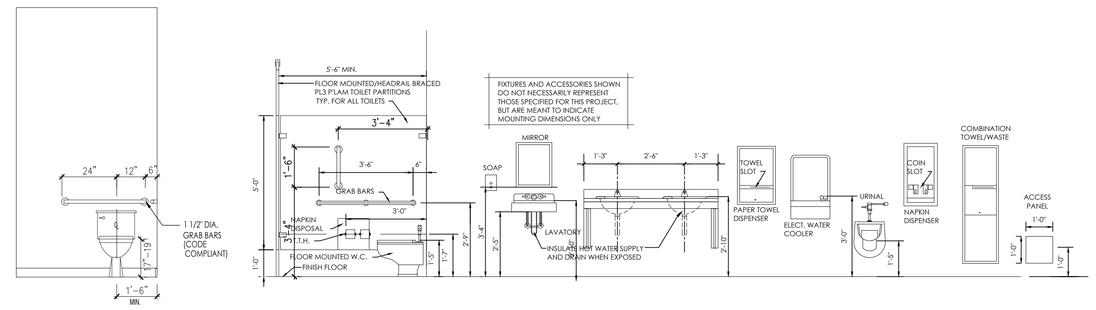
SCALE = 3/8"=1'-0"

(MILLWORK FABRICATOR TO PROVIDE SHOP DRWGS FOR OWNER APPROVAL)



1 ENLARGED RESTROOM PLAN

SCALE = 3/8"=1'-0"



2 TYPICAL RESTROOM FIXTURE/ ACCESSORY ELEVATIONS

SCALE = 3/8"=1'-0"

CONSTRUCTION LEGEND

- NEW EXTERIOR WAREHOUSE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) CONTINUE PEMB INSULATION FULL TO EAVE- (NON-CONDITIONED).
- NEW EXTERIOR OFFICE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) PLUS AIR SPACE, 3-5/8" 25 GA MTL STUDS, 5/8" GYP BD, R-15 F.G BATTS w/OUT V.B.
- NEW EXTERIOR FACDE OFFICE WALL CONSTR w/ STRUCT CURTAINWALL FRAME, HORIZONTAL SPANDREL ANGLE w/ STOREFRONT GLAZING FULL HGT (16'-0" AFF EAVE) PLUS
- NEW EXTERIOR WAREHOUSE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) CONTINUE PEMB INSULATION FULL TO EAVE- (NON-CONDITIONED). EXTERIOR CLAD w/ 1"-2" DRAINABLE EIFS STUCCO SYSTEM OVER EXT MTL PANELS. FASTEN/DRAIN/FLASH PER MFR.
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- FEC FE — FIRE EXTINGUISHER. CABINET CONFIRM LOCATIONS W FIRE MARSHAL 10LB ABC TYPE; (ALLOW FOR 6 TOTAL)

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. --PFaulkner
10/17/2025 11:38:24 AM

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NORTH CAROLINA REGISTERED ARCHITECT 10093 DAVID BURDETT
10/09/25
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 52379 GREG MCKEON EIGHT

New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MCKEON
CHK BY: DAVID BURDETT
DATE: Permit, Franklin Co, NC 07-09-25
REVISIONS:

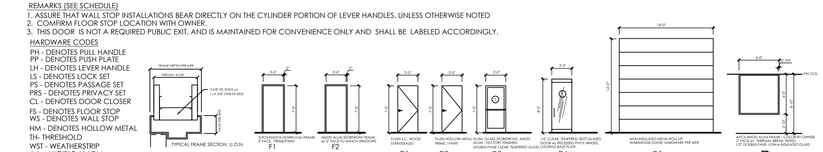
TITLE:
ENLARGED
FLOOR PLAN

SHEET NO.
A400
PERMIT

*DOOR / FRAME SCHEDULE

DOORS					FRAMES				HARDWARE & QTYS							REMARKS
NO.	MARK	TYPE	QTY & SIZE	FINISH	MARK	TYPE	SIZE (OUTSIDE)	FINISH							LG	
100	D3	ALUM STOREFRONT DOOR	(2) 3'-0" x 7'-0"	ANOD ALUM	F2	ALUM	6'4"X 7'2"	ANOD ALUM	P/P	LS	CL	TH	WST			INSUL GLASS
102	D4	1/2" CLR BUTT GLAZED	3'-0" x 8'-0"	-	-	-	-	-	P/P		CL					RECESSED PIVOT CLOSER
103	D1	FLUSH; STAIN GRADE S.C. WOOD	3'-0" x 7'-0"	STAIN/SEAL	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	PS	CL			WS		
103A	D1	FLUSH; STAIN GRADE S.C. WOOD	3'-0" x 7'-0"	STAIN/SEAL	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	LS				WS		
103B	D1	FLUSH; STAIN GRADE S.C. WOOD	3'-0" x 7'-0"	STAIN/SEAL	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	LS				WS		
103C	D1	FLUSH; STAIN GRADE S.C. WOOD	3'-0" x 7'-0"	STAIN/SEAL	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	LS	CL			WS		90-MIN, "B"
104	D4	1/2" CLR BUTT GLAZED	3'-0" x 8'-0"	-	-	-	-	-	P/P		CL					RECESSED PIVOT CLOSER
105	D4	1/2" CLR BUTT GLAZED	3'-0" x 8'-0"	-	-	-	-	-	P/P		CL					RECESSED PIVOT CLOSER
106	D4	1/2" CLR BUTT GLAZED	3'-0" x 8'-0"	-	-	-	-	-	P/P		CL					RECESSED PIVOT CLOSER
108	-	GWB FURRED OPNG	4'-0" x 8'-0"	PRIME/PAINT	-	-	-	-								
109	D1	FLUSH; STAIN GRADE S.C. WOOD	3'-0" x 7'-0"	STAIN/SEAL	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	PRS				WS		
110	D1	FLUSH; STAIN GRADE S.C. WOOD	3'-0" x 7'-0"	STAIN/SEAL	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	PRS				WS		
111	-	GWB FURRED OPNG	4'-0" x 8'-0"	PRIME/PAINT	-	-	-	-								
112	D1	FLUSH; STAIN GRADE S.C. WOOD	3'-0" x 7'-0"	STAIN/SEAL	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	PP	PH	CL			WS		
112A	-	GWB FURRED OPNG	4'-0" x 8'-0"	PRIME/PAINT	-	-	-	-								
114	D4	1/2" CLR BUTT GLAZED	3'-0" x 8'-0"	-	-	-	-	-	P/P		CL					RECESSED PIVOT CLOSER
115	D4	1/2" CLR BUTT GLAZED	3'-0" x 8'-0"	-	-	-	-	-	P/P		CL					RECESSED PIVOT CLOSER
116	D4	1/2" CLR BUTT GLAZED	3'-0" x 8'-0"	-	-	-	-	-	P/P		CL					RECESSED PIVOT CLOSER
117	D1	FLUSH; STAIN GRADE S.C. WOOD	3'-0" x 7'-0"	PRIME/PAINT	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	LS	CL			WS		90-MIN, "B"
117A	D2	FLUSH; INSUL. HOLLOW METAL	3'-0" x 7'-0"	PRIME/PAINT	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	LS	CL	TH	WST	WS		
117B	DS	NON-INSUL O.H. VERT LIFT DOOR	14'-0" x 14'-0"	FACTORY FIN			BY MFR									MOTORIZED DOOR
117C	DS	NON-INSUL O.H. VERT LIFT DOOR	14'-0" x 14'-0"	FACTORY FIN			BY MFR									MOTORIZED DOOR
117D	D2	FLUSH; INSUL. HOLLOW METAL	3'-0" x 7'-0"	PRIME/PAINT	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	LS	CL	TH	WST	WS		
117E	DS	NON-INSUL O.H. VERT LIFT DOOR	14'-0" x 14'-0"	FACTORY FIN			BY MFR									MOTORIZED DOOR
118	D1	FLUSH; STAIN GRADE S.C. WOOD	3'-0" x 7'-0"	PRIME/PAINT	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	LS	CL			WS		90-MIN, "B"
119	D1	FLUSH; STAIN GRADE S.C. WOOD	3'-0" x 7'-0"	PRIME/PAINT	FI	H.M.	3'4" x 7'2"	PRIME/PAINT	LH	LS	CL			WS		90-MIN, "B"

*NOTES
ALL NEW DOORS HARDWARE SHALL BE MEDIUM DUTY COMMERCIAL GRADE AND ADA COMPLIANT - BRUSHED CHROME FINISH.
ALL DOORS SHALL BE SOLID CORE, BIRTCH VENEER, PRE-FINISHED; STAINED/SEALED.
ALL FRAMES SHALL BE PAINTED WITH ALKYD ENAMEL PRIMER PER FINISH SCHEDULE.
ALL HARDWARE AND CYLINDERS SHALL BE PROVIDE D BY HARDWARE SUPPLIER, INCLUDING STOREFRONT DOORS.
REMARKS (SEE SCHEDULE)
1. ASSURE THAT WALL STOP INSTALLATIONS BEAR DIRECTLY ON THE CYLINDER PORTION OF LEVER HANDLES. UNLESS OTHERWISE NOTED
2. COMFIRM FLOOR STOP LOCATION WITH OWNER.
3. THIS DOOR IS NOT A REQUIRED PUBLIC EXIT, AND IS MAINTAINED FOR CONVENIENCE ONLY AND SHALL BE LABELED ACCORDINGLY.
HARDWARE CODES
PH - DENOTES PULL HANDLE
PP - DENOTES PUSH PLATE
LH - DENOTES LEVER HANDLE
LS - DENOTES LOCK SET
PS - DENOTES PASSAGE SET
PRS - DENOTES PRIVACY SET
CL - DENOTES DOOR CLOSER
FS - DENOTES FLOOR STOP
WS - DENOTES WALL STOP
HM - DENOTES HOLLOW METAL
TH- THRESHOLD
WST - WEATHERSTRIP
AA - AUDIBLE ALARM
KP - KICK PLATE
ED - EXIT DEVICE (PANIC BAR)
FB - MANUAL FLUSH BOLT (TOP AND BOTTOM)



TYPICAL FRAME SECTION — FRAME TYPES — DOOR TYPES — WINDOW TYPES

FINISH SCHEDULE

NO.	ROOM	FLOOR	BASE	WALLS	CASEWORK/ COUNTERTOPS	CEILING	HEIGHT	REMARKS
100	ENTRY	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
101	RECEPT	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
102	MED CONF	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
103	CORRIDOR	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
103A	OFFICE	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
103B	OFFICE	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
104	LG OFFICE	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
105	OFFICE	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
106	OFFICE	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
108	VEST	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
109	MEN	VCT-1	RB1	PNT1	-	ACT-1	8'-10'	
110	WOMEN	VCT-1	RB1	PNT1	-	ACT-1	8'-10'	
111	COPY	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
112	BREAK RM	VCT-1	RB1	PNT1		ACT-1	8'-10'	
113	CORRIDOR	CPT-1	RB1	PNT1	-	ACT-1	8'-10'	
114	LG OFFICE	VCT-1	RB1	PNT1	-	ACT-1	8'-10'	
115	OFFICE	VCT-1	RB1	PNT1	-	ACT-1	8'-10'	
116	OFFICE	SC-1	RB1	PNT1	-	ACT-1	8'-10'	
117	STORAGE / SHOP	SC-1	-	-	-	EXP STRUCT	16'-0" ±	
118	SHOP OFFICE	SC-1	RB1	PNT1	-	ACT-1	8'-10'	
119	MECH	SC-1	RB1	PNT1	-	ACT-1	8'-10'	

* ALL INTERIOR DOOR FRAMES, TRIM TO BE PRIMED, PAINTED W ALKYD ENAMEL.
* LEVEL ALL FLOORS IN OFFICE AREA, FILL CRACKS READY TO RECEIVE TENANT FINISEHS.

*FINISH SPECIFICATIONS:

RB: 4" RUBBER COVED WALL BASE
MANUFACTURER: -
COLOR: TENANT SELECT

PNT1: WALL PAINT, TWO COATS LATEX SATIN OVER ONE COAT OF PRIMER
MANUFACTURER: -
COLOR: TENANT SELECT

PNT2: H.M. DOOR FRAMES ALKYD ENAMEL OVER SHOP PRIMER
MANUFACTURER: -
COLOR: TENANT SELECT

PNT3: WALL PAINT, TWO SEMI-GLOSS OVER ONE COAT OF PRIMER AT WET WALLS
MANUFACTURER: -
COLOR: TENANT SELECT

PL1: PLATIC LAMINATE COUNTERTOPS w/
PL2: PLATIC LAMINATE CABINETS (WHITE MELAMINE INTERIORS)
MANUFACTURER: -
COLOR: TENANT SELECT COLORS, LOCATIONS.

VCT: VINYL COMPOSITION TILE FLOORING
MANUFACTURER: -
COLOR: TENANT SELECT

CPT-1: CARPET FLOORING- DIRECT GLUE
MANUFACTURER: -GC PROVIDE ALLOWANCE
COLOR: TENANT SELECT

ACT-1 ACOUSTICAL SUSPENDED CEILING
MANUFACTURER: ARMSTRONG
STYLE: CORTEGA 24"x24" REGULAR EDGE
COMMENTS: 15/16" ; 24"x24"WHITE METAL GRID
CONTACT:

* ALL FINISHES SHALL BE CLASS "C" OR BETTER PER NCSBC 2009 VOL 1, CHAPT. 8. TABLE 803..5.
* OWNER SHALL SELECT /APPROVE ALL COLOR SELCTIONS.

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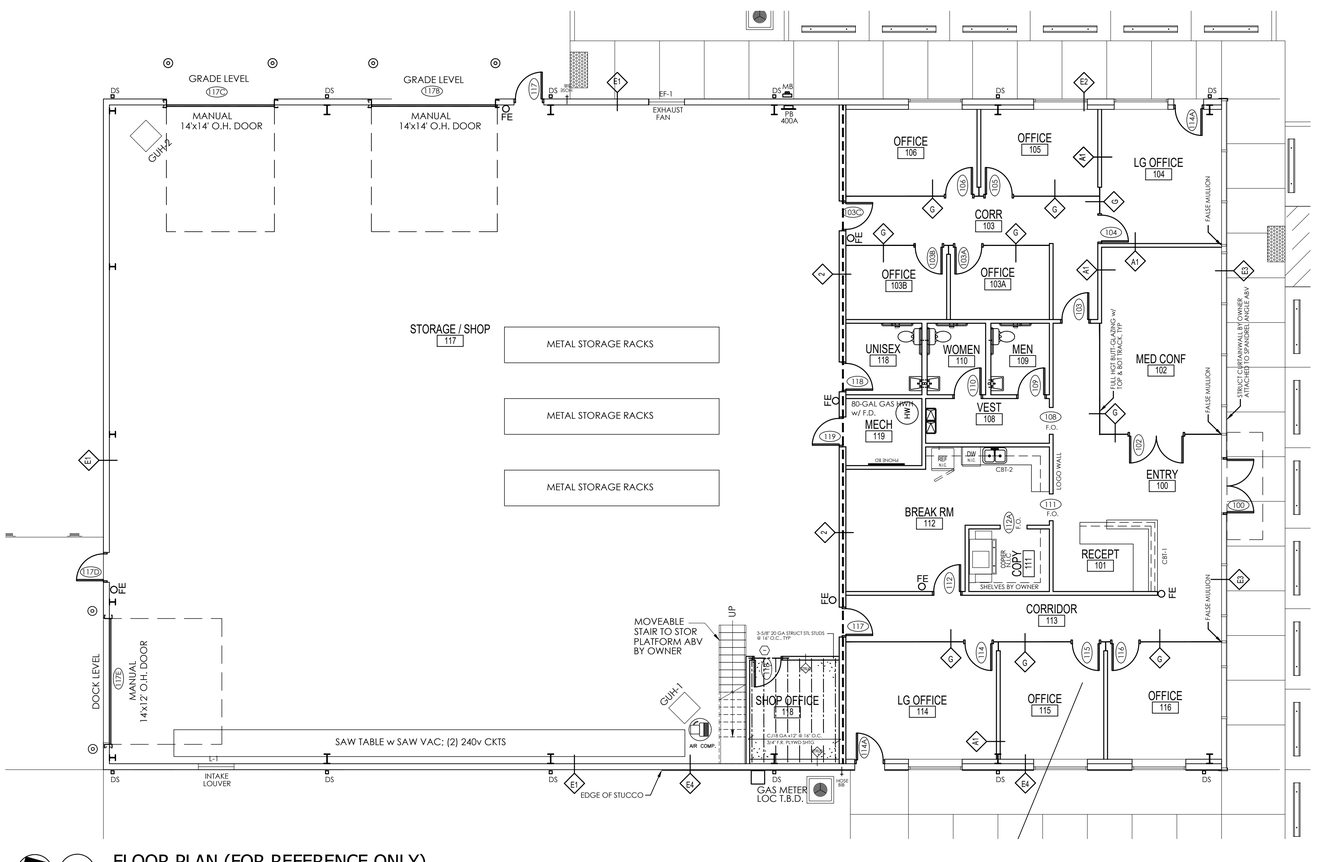
- NEW EXTERIOR OFFICE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) PLUS AIR SPACE; 3-5/8" 25 GA MTL STUDS, 5/8" GYP BD, R-15 F.G BATTS w/OUT V.B.
- NEW EXTERIOR FACDE OFFICE WALL CONSTR w/ STRUCT CURTAINWALL FRAME, HORIZONTAL SPANDREL ANGLE w/ STOREFRONT GLAZING FULL HGT (16'-0" AFF EAVE) PLUS
- NEW EXTERIOR WAREHOUSE P.E.M.B.WALLCONSTR w/ STEEL COLUMN FRAME, HORIZONTAL GIRTS AND VERTCAL METAL BUILDING PANELS w/ R-11 F.G. BATTS AND VAPOR BARRIER FULL HGT (16'-0" AFF EAVE) CONTINUE PEMB INSULATION FULL TO EAVE- (NON-CONDITIONED). EXTERIOR CLAD w/ 1"-2" DRAINABLE EIFS STUCCO SYSTEM OVER EXT MTL PANELS. FASTEN/DRAIN/FLASH PER MFR.
- NEW 2-HR RATED OFFICE/WAREHOUSE FIRE PARTIITION CONSTR FULL HGT TO ROOF DECK w/ 6" 20 GA MTL STUDS @ 16" O.C., (2) LA 5/8" GYP BD EA SIDE, R-15 F.G. BATTS w/ V.B. TO ROOF DECK. PROVIDE SLIP-TRACK CONDITION AS REQD @ ROOF DECK) PER UL#U-419.
- NEW NON-RATED PARTIITION WALL TO 9'-0" AFF CONSTR w/ 3-5/8" 25 GA. MTL STUDS @ 16" O.C., w/ 1 LA 5/8" GWB EA SIDE w/ R-11 F.G. SOUND ATTENUATION BATTS(FILL STUD CAVITIES). BRACE WALLS AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. (ALL PARTIITIONS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE (U.N.O.)
- NEW NON-RATED PARTIITION WALL TO 10'-0" AFF CONSTR w/ 3-5/8" 25 GA. MTL STUDS @ 16" O.C., w/ 1 LA 5/8" GWB EA SIDE w/ R-11 F.G. SOUND ATTENUATION BATTS(FILL STUD CAVITIES). BRACE WALLS AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. (FIN CLG=8'-10" AFF w/ R-30 F.G. BATTS ON TILES @ COND SPACES)
- NEW 1/2" BUTT-GLAZED PARTIITION FULL-HGT (8'-0"AFF) PROVIDE 10" DP GWB SOFFIT AT CEILING TO RECEIVE TRACK. BRACE SOFFIT AT 48" INTERVALS TO ROOF DECK OR STRUCTURE. FIN CLG HEIGHT 10'-4" @ FRONT CURTAINWALL
- NEW DOOR, FRAME, HDWE TO BE INSTALLED PER SCHEDULES
- FEC FE — FIRE EXTINGUISHER, CABINET CONFIRM LOCATIONS W FIRE MARSHAL 10LB ABC TYPE; (ALLOW FOR 6 TOTAL)

MILLWORK NOTES

MILLWORK ELEVATIONS AND DETAILS ARE ILLUSTRATIONAL ONLY.
FABRICATOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW.
MILLWORK INSTALLER SHALL FIELD VERIFY CONDITIONS THAT AFFECT HIS WORK.
POWER AND DATA RECPTACLES SHALL BE UNDER-COUNTER @ 18"AFF.
FIELD LOCATE IN-COUNTER GROMMETS WITH TENANT.
ALL COUNTERTOPS TO BE P'LAM UNLESS NOTED OTHERWISE.



1 FLOOR PLAN (FOR REFERENCE ONLY)
SCALE = 1/8"=1'-0"

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. --PFaulkner
10/17/2025 11:38:24 AM

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Burdett and Associates
Architecture, Inc.

NORTH CAROLINA REGISTERED ARCHITECT 40110 GREGORY S. MONDON
10/09/25
NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 52379 DAVID E. BURDETT EIGHTH

New Building for
INNOVATIVE GLASS SOLUTIONS
Lot #6 Legacy Commercial Center - Cascade Ct.
FRANKLIN COUNTY, NC

DWG BY: GREG MONDON
CHK BY: DAVID BURDETT
DATE: Permit; Franklin Co., NC 07-08-25
REVISIONS: 1 Review Comments #1 10/09/25

TITLE: SCHEDULES/ DETAILS

SHEET NO. A600
PERMIT

PLUMBING LINES SIZING TABLE									
FIXTURE TYPE	OCCUPANCY	QTY	DRAINAGE FIXTURE UNITS		WATER SUPPLY FIXTURE UNITS				
			EACH	TOTAL	CW	HW	CW & HW	HW TOTAL	TOTAL
WATER CLOSET (FLUSH TANK)	PUBLIC	3	4.00	12.00	5.00	0.00	5.00	0.00	15.00
LAVATORY	PUBLIC	4	1.00	4.00	1.50	1.50	2.00	6.00	8.00
DRINKING FOUNTAIN	PUBLIC	1	0.50	0.50	0.25	0.00	0.25	0.00	0.25
EMERGENCY FLOOR DRAIN	PUBLIC	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEMAND FIXTURE	GPM	QTY	TOTAL GPM	TOTAL DFU				16.5	
KITCHEN DISHWASHER	3	1	3.00	TOTAL WFSUs				6.0	23.3
HOSE BIBBS	5	1	5.00	GPM				10.70	21.50
				OTHER FIXTURES' GPM				3.00	3.00
				TOTAL GPM				13.70	24.50
MINIMUM BUILDING DRAIN SIZE	4"								
MINIMUM WATER LINE SIZE	1"								

ALL REQUIRED VALVES NOT SHOWN.
INSTALL FULL OPEN VALVES PER 2018 PC CODE 606.1.5 AND 606.1.8
INSTALL SHUT OFF VALVES PER 2018 NC PLUMBING CODE 606.2 AND 606.2.1

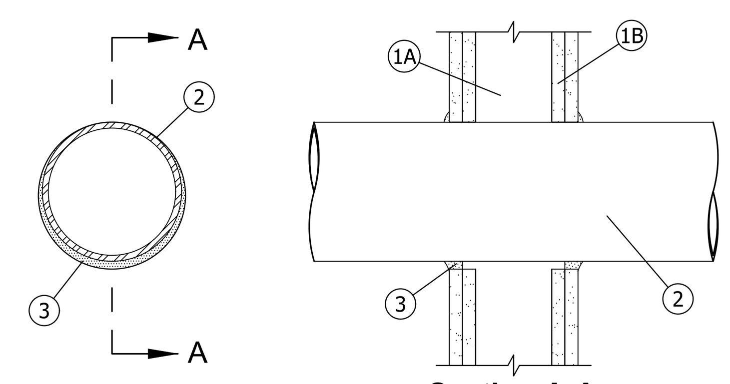
ELECTRIC WATER HEATER SCHEDULE											
MARK	MFG	MODEL	TANK VOL	INPUT	RECOVERY	SET POINT	POWER		CONNECTIONS		OPTIONS
			GALS	kW	GPH @ 60° ΔT	°F	VOLTAGE	PHASE	HOT	COLD	
WH-1	RHEEM	ELD40	40	4.5	30	110	208	1	3/4	3/4	1-5

1. PROVIDE GALVANIZED STEEL SAFETY PAN
2. UL 174 LISTED
3. PROVIDE ASME LISTED TEMPERATURE AND PRESSURE RELIEF VALVE
4. MEET OR EXCEED ENERGY FACTOR REQUIREMENTS OF ASHRAE 90.1-2007
5. OR EQUAL BY A.O. SMITH, BRADFORD WHITE, OR STATE

PLUMBING SCHEDULES | 1

System No. W-L-1088

F Ratings - 1 & 2 Hr. (See Item 1)
T Rating - 0 Hr.



Section A-A

1. **Wall Assembly -** The 1 or 2 hr. fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs -** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) O.C. with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min. 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) O.C.
   B. **Gypsum Board* -** 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 6-3/4 in. (171 mm).

   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. **Through Penetrant -** One metallic pipe, tubing or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between pipes, tubing or conduits and periphery of opening shall be min 0 in. (point contact) to max 5/8 in. (16 mm). Pipe, tubing or conduit to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, tubing or conduits may be used:
   A. **Steel Pipe -** Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Iron Pipe -** Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.
   C. **Copper Tubing -** Nom 6 in. (152 mm) diam (or smaller) Type M (or heavier) copper tubing.
   D. **Copper Pipe -** Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
   E. **Conduit -** Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing, nom 4 in. (102 mm) diam (or smaller) galv steel conduit or nom 1 in. (25 mm) diam (or smaller) flexible steel conduit.
3. **Fill, Void or Cavity Material* - Sealant -** Min 5/8 in. (16 mm) thickness of fill material within annulus, flush with both surfaces of wall. Additional fill material installed such that a min 1/4 in. (6 mm) thick crown is formed around the penetrating item lapping 1/2 in. (13 mm) beyond the periphery of the opening.

   SPECIFIED TECHNOLOGIES INC - SpecSeal LC 150 Sealant, SpecSeal LE600 Sealant

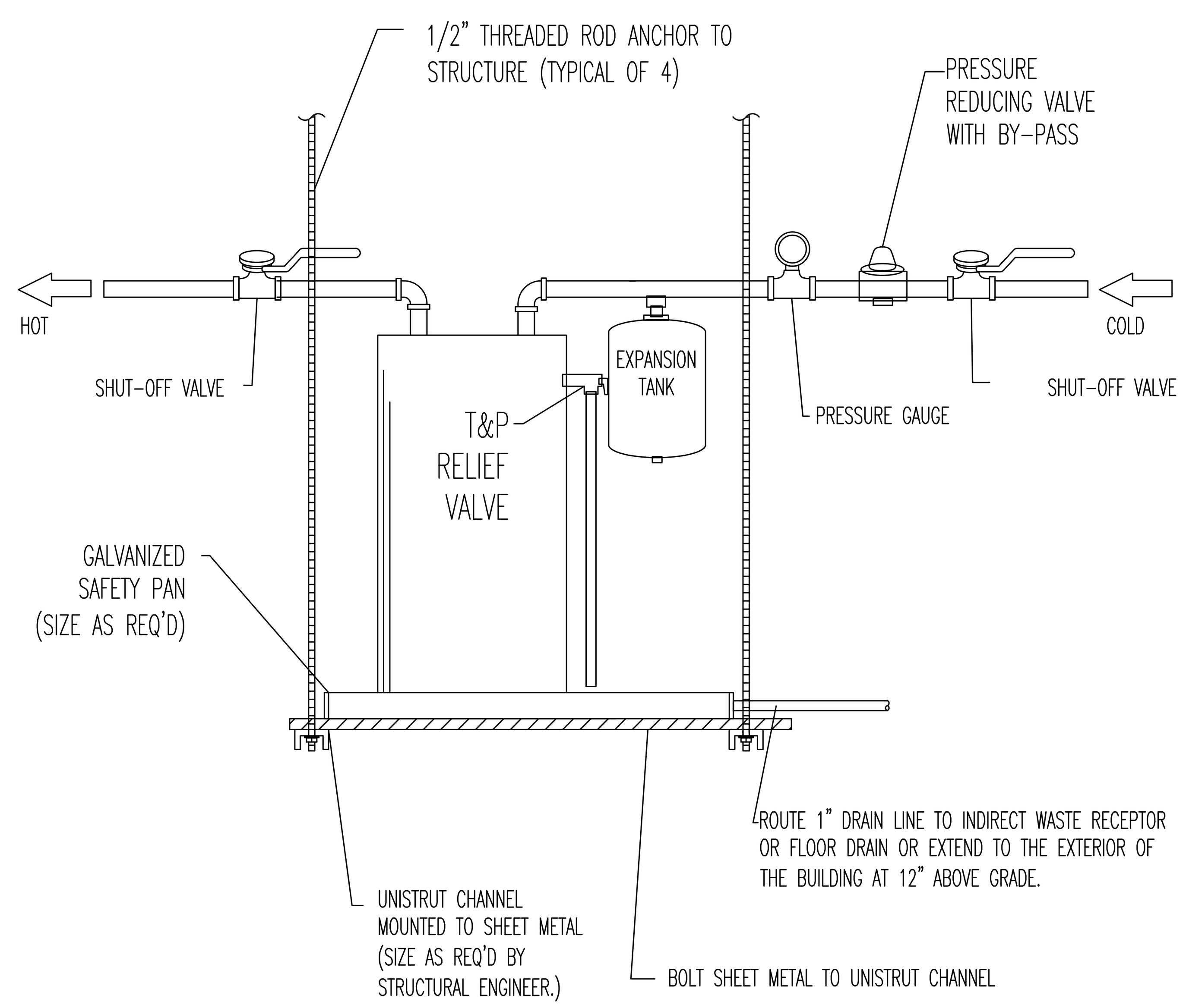
*Bearing the UL Classification Mark

STI

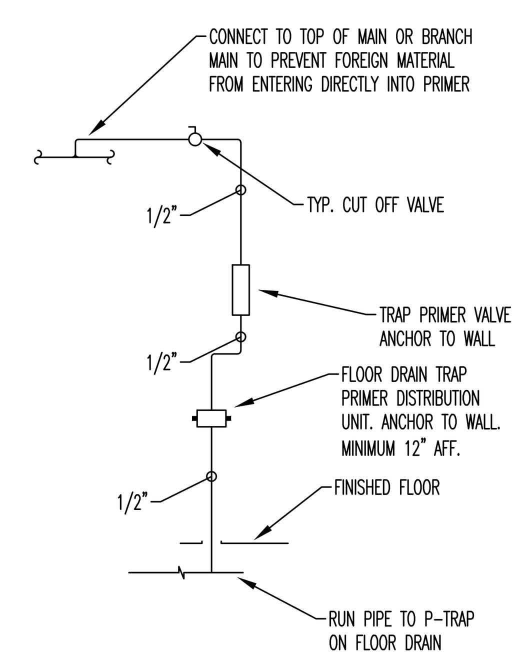
Specified Technologies Inc. 200 Evans Way Somerville, NJ 08876
Reproduced courtesy of Underwriters Laboratories, Inc.
Created or Revised: June 08, 2007
(800)992-1180 • (908)526-8000 • FAX (908)231-8415 • E-Mail:techserv@stifirestop.com • Website:www.stifirestop.com

W-L-1088
PAGE 1 OF 1

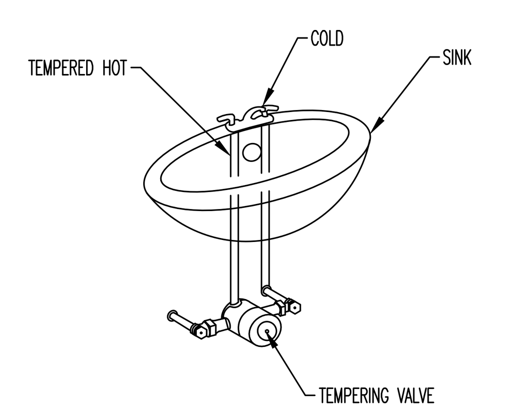
PLUMBING DETAIL | 2



ELECTRIC WATER HEATER ABOVE CEILING DETAIL - NO SCALE | 3



TRAP PRIMER DETAIL | 4



THERMOSTATIC MIXING VALVE DETAIL - NO SCALE | 5

GENERAL PLUMBING NOTES:

ADMINISTRATIVE:

1. THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS: PC – PLUMBING CONTRACTOR, EC – ELECTRICAL CONTRACTOR, MC – MECHANICAL CONTRACTOR, GC – GENERAL CONTRACTOR, FASC – FIRE ALARM SYSTEM CONTRACTOR.
2. "PROVIDE" MEANS TO FURNISH AND INSTALL. THE PLUMBING CONTRACTOR SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR.
3. THE PC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
4. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED AT AN APPROVED LOCATION. PC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE PC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
5. ALL MATERIALS USED SHALL BE NEW AND FREE OF DEFECTS. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED AT NO EXPENSE TO THE OWNER. ALL MATERIALS AND EQUIPMENT SHALL BEAR APPROVAL FROM UL OR AN APPROVED THIRD PARTY AGENCY. WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN, IT IS TO ESTABLISH A STANDARD OF QUALITY AND NOT TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. PRODUCTS DETERMINED TO BE EQUAL BY THE ENGINEER WILL BE ACCEPTED.
6. THE PLUMBING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE 2018 NORTH CAROLINA PLUMBING CODE AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
7. THE PC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
8. DO NOT SCALE THESE DRAWINGS–REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
9. THESE PLANS ARE DIAGRAMMATIC. THE PC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, FIXTURES, PIPING, ETC, TO ACCOMMODATE PLANNED AND ENCOUNTERED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BENDS, OFFSETS, AND FITTINGS THAT MAY BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE PC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO THE OWNER. THE PC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. TO AVOID POTENTIAL CONFLICTS, COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION. ALL UNDERGROUND UTILITIES SHALL BE LOCATED PRIOR TO ANY DIGGING.
10. TRENCHING, COMPACTION, AND BACKFILL SHALL BE BY PC AND SHALL BE IN ACCORDANCE WITH SECTION 306 OF THE NC PLUMBING CODE. UNDERGROUND LINES SHALL BE LOCATED SUCH THAT THEY DO NOT ENDANGER FOOTINGS OR FOUNDATION WALLS.
11. THE PC SHALL PROVIDE FIRESTOPPING AT ALL PENETRATIONS OF RATED FLOOR/CEILING ASSEMBLIES AND RATED WALL ASSEMBLIES TO PRESERVE OR RESTORE THE FIRE RESISTANCE RATING. SEAL ALL PENETRATIONS USING A UL LISTED SYSTEM FOUND IN THE UL DIRECTORY SPECIFIC TO THE UL LISTING OF THE ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR UL RATED ASSEMBLIES SPECIFIC TO THE PROJECT.
12. SYSTEM TESTING SHALL BE PERFORMED BY PLUMBING CONTRACTOR IN ACCORDANCE WITH NORTH CAROLINA PLUMBING CODE, SECTIONS 312.2, 312.3, AND 312.5.
13. PC SHALL DISINFECT THE ENTIRE DOMESTIC WATER PIPING SYSTEM IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.
14. AT THE COMPLETION OF WORK AND PRIOR TO ACCEPTANCE BY OWNER, THE PC SHALL CLEAN ALL EXPOSED FIXTURES, MATERIALS, AND EQUIPMENT UNDER THIS CONTRACT.
15. PC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

MATERIALS:

1. ALL OVERHEAD DOMESTIC WATER PIPING SHALL BE TYPE L COPPER WITH 95/5 LEAD FREE SOLDER, AND ALL BELOW GRADE WATER PIPING SHALL BE TYPE K COPPER WITH NO JOINTS. ALL PIPING SHALL HAVE MANUFACTURER'S NAME AND THE APPLICABLE STANDARD TO WHICH IT WAS MANUFACTURED CLEARLY MARKED ON EACH LENGTH. PIPING SHALL COMPLY WITH ASTM B-88. USE BRAZED JOINTS ON ALL COPPER PIPING 1-1/2 INCH AND LARGER. *** PC MAY USE PEX (ASTM F 877) WITH APPROVED FITTINGS (ASTM F 1807) WITH OWNER'S APPROVAL. *** CPVC PIPING (ASTM D 2846 OR ASTM F 441) WITH APPROVED FITTINGS (ASTM D 2846, ASTM F 438, OR ASTM F 439) MAY ALSO BE USED WHERE NOT LOCATED IN PLENUMS. ALL PLASTIC PIPE, FITTINGS, AND COMPONENTS SHALL BE THIRD PARTY CERTIFIED AS CONFORMING TO NSF 14. ALL PIPE AND PIPE FITTINGS, INCLUDING VALVES AND FAUCETS, USED IN THE WATER DISTRIBUTION SYSTEM SHALL HAVE A MAXIMUM LEAD CONTENT OF .25-PERCENT AND SHALL CONFORM TO NSF 61. HOT WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 100 PSI AT 180°F. COLD WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 160 PSI AT 73.4°F. DO NOT INSTALL PEX OR CPVC PIPING IN RETURN AIR PLENUMS.
2. BALL VALVES SHALL HAVE BRASS BODY, FULL PORT, CHROME PLATED BALL, WITH TEFLON SEATS, 150 PSI WSP, AND COMPLY WITH MSS SP-110. GATE VALVES SHALL HAVE BRONZE BODY, CLASS 150, AND COMPLY WITH MSS SP-80, TYPE 2 STANDARD. VALVE BODY SHALL BE ASTM B 62, BRONZE WITH INTEGRAL SEAT AND UNION RING BONNET. ENDS SHALL BE THREADED OR SOLDER WITH COPPER-SILICON BRONZE STEM AND SOLID-WEDGE BRONZE DISC. INSTALL VALVES IN LOCATIONS THAT PERMIT EASY ACCESS WITHOUT DAMAGE TO BUILDING OR FINISHED MATERIALS; PROVIDE ACCESS DOORS IF REQUIRED. VALVES SHALL BE BY NIBCO, WATTS, OR STOCKHAM.
3. COLD WATER LINES SHALL BE INSULATED WITH 1/2 INCH THICK FIBROUS GLASS INSULATION WITH A FLAME DENSITY RATING LESS THAN 25 AND A SMOKE DENSITY RATING LESS THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. HOT WATER LINES UP TO 2 INCHES DIAMETER SHALL HAVE 1 INCH THICK INSULATION CONFORMING TO THE SAME STANDARD. PIPING LARGER THAN 2 INCHES SHALL RECEIVE 1-1/2 INCH THICK INSULATION. CLOSED CELL RUBBER INSULATION MEETING THE SMOKE AND FLAME RATINGS ABOVE MAY BE SUBSTITUTED FOR FIBROUS GLASS TYPE IF SO DESIRED. INSULATION INSTALLED ON PIPING OPERATING BELOW AMBIENT TEMPERATURES MUST HAVE A CONTINUOUS VAPOR RETARDER. ALL JOINTS, SEAMS AND FITTINGS MUST BE SEALED. ON SYSTEMS OPERATING ABOVE AMBIENT, THE BUTT JOINTS SHOULD NOT BE SEALED. ON COLD SURFACES WHERE A VAPOR SEAL MUST BE MAINTAINED, INSULATION SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN MOISTURE AND VAPOR RETARDER. ALL HANGERS, SUPPORTS, ANCHORS, OR OTHER PROJECTIONS SECURED TO COLD SURFACES SHALL BE INSULATED AND VAPOR SEALED TO PREVENT CONDENSATION. ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES EXCEPT WHERE FIRESTOP OR FIRESAFING MATERIALS ARE REQUIRED. INSULATION SHALL HAVE A FACTORY APPLIED ALL-SERVICE JACKET WITH SELF-SEALING LAP. WHITE-KRAFT PAPER BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBERS; CONFORMING TO ASTM C 1136 TYPE 1; VAPOR RETARDER; WITH A SELF-SEALING ADHESIVE. VERIFY THAT PIPING HAS BEEN TESTED, SURFACES ARE CLEAN AND DRY, AND ALL FOREIGN MATERIALS ARE REMOVED BEFORE APPLYING INSULATION MATERIALS. INSULATION SHALL BE BY KNAUF, ARMACELL, JOHNS-MANVILLE, OR OWENS-CORNING.
4. ALL INSULATION CONTAINING FIBROUS MATERIALS EXPOSED TO AIRFLOW SHALL BE RATED FOR THAT EXPOSURE OR SHALL BE ENCAPSULATED. INSULATING PROPERTIES FOR ALL MATERIALS SHALL MEET OR EXCEED INDUSTRY STANDARDS. POLYSTYRENE PRODUCTS SHALL MEET ASTM C578 91. ALL INSULATION SHALL BE LOW-EMITTING WITH NOT GREATER THAN 0.05 PPM FORMALDEHYDE EMISSIONS. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE REQUIREMENTS OF THE LOCAL CODES AND ORDINANCES ADOPTED BY THE JURISDICTION IN WHICH THE BUILDING IS LOCATED.
5. FAUCETS AND FIXTURE FITTINGS SHALL CONFORM TO ASME A112.18.1. FAUCETS AND FIXTURE FITTINGS THAT SUPPLY DRINKING WATER FOR HUMAN CONSUMPTION SHALL CONFORM TO THE REQUIREMENTS OF NSF 61, SECTION 9. FIXTURE FITTINGS, FAUCETS, AND DIVERTERS SHALL BE INSTALLED AND ADJUSTED SO THAT THE FLOW OF HOT WATER FROM THE FITTINGS CORRESPONDS TO THE LEFT HAND SIDE OF THE FIXTURE FITTING.
6. BACKFLOW PREVENTION SHALL BE IN ACCORDANCE WITH SECTION 608.13 OF THE NC PLUMBING CODE AND THE LOCAL AUTHORITY HAVING JURISDICTION. DOUBLE CHECK VALVE ASSEMBLIES SHALL CONFORM TO ASSE 1015 OR AWWA C510. ACCESS TO BACKFLOW PREVENTERS SHALL BE PROVIDED AS SPECIFIED BY THE INSTALLATION INSTRUCTIONS OF THE APPROVED MANUFACTURER.
7. FOR BELOW GRADE SANITARY WASTE PIPING, PC SHALL USE SERVICE WEIGHT CAST IRON PIPE WITH COMPRESSION JOINTS (ASTM A 74). USE MINIMUM 2 INCH SIZE UNDERGROUND. SOLID WALL SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET TYPE PIPE FITTINGS (ASTM D 3311) MAY ALSO BE USED. DO NOT USE PVC PIPE FOR APPLICATIONS WHERE THE WASTE WATER TEMPERATURE EQUALS OR EXCEEDS 140°F OR IF THE BUILDING HEIGHT EXCEEDS 75 FEET.
8. FOR ABOVE GRADE SANITARY WASTE AND VENT PIPING, USE SERVICE WEIGHT CAST IRON NO-HUB TYPE WITH COUPLINGS (CISPI 301). SOLID WALL SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET TYPE FITTINGS (ASTM D 3311) MAY BE USED IF PERMITTED BY LOCAL CODE, EXCEPT IN BUILDINGS EXCEEDING 75 FEET IN HEIGHT. DO NOT INSTALL PVC IN RETURN AIR PLENUMS. ALL VENT AND BRANCH VENT PIPES SHALL BE SO GRADED AND CONNECTED AS TO DRAIN BACK TO THE DRAINAGE PIPE BY GRAVITY. BRANCH VENTS EXCEEDING 40 FEET IN DEVELOPED LENGTH SHALL BE INCREASED BY ONE NOMINAL SIZE FOR THE ENTIRE DEVELOPED LENGTH OF THE PIPE.
9. PC SHALL PROVIDE ALL WATER HEATERS (WATTAGE/INPUT AND CAPACITY AS NOTED IN SCHEDULE). ALL WATER HEATERS SHALL BE THIRD PARTY CERTIFIED; PROVIDE PANS FOR WATER HEATERS IN ACCORDANCE WITH 504.7 OF THE NC PLUMBING CODE. ELECTRICAL CONNECTIONS SHALL BE BY ELECTRICAL CONTRACTOR, PC SHALL COORDINATE WITH EC ON ELECTRICAL CHARACTERISTICS OF THE EQUIPMENT PROVIDED.

METHODS:

1. EXTEND DOMESTIC WATER PIPE FROM FIVE (5) FEET OUTSIDE THE BUILDING INTO THE BUILDING AS INDICATED ON THE PLANS AND INSTALL DOMESTIC WATER DISTRIBUTION PIPING TO ALL FIXTURES AND EQUIPMENT REQUIRING THE SAME. WATER SERVICE PIPE AND THE BUILDING SEWER SHALL BE SEPARATED BY 5 FEET OF UNDISTURBED OR COMPACTED EARTH IN ACCORDANCE WITH 603.2. PROVIDE ALL FITTINGS, VALVES, AND OTHER ACCESSORIES AS NECESSARY FOR A COMPLETE INSTALLATION. ALL DOMESTIC WATER PIPING SHALL BE CONCEALED IN FINISHED AREAS. ANY OPEN ENDS SHALL BE PROTECTED UNTIL FINAL CONNECTIONS ARE MADE.
2. ABOVE GRADE DOMESTIC WATER PIPING SHALL BE SLOPED AT A MINIMUM OF 1/32 INCH PER FOOT AND ARRANGED TO DRAIN AT LOW POINTS. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. ROUTE PIPING IN AN ORDERLY MANNER-PARALLEL OR PERPENDICULAR TO WALLS WHEN POSSIBLE-AND MAINTAIN GRADIENT. EACH SUPPLY BRANCH LINE SERVING MORE THAN ONE FIXTURE SHALL HAVE A SHUTOFF VALVE INSTALLED TO ISOLATE ALL FIXTURES AND PIECES OF EQUIPMENT SUPPLIED BY THE BRANCH LINE. THE SHUTOFF VALVE SHALL BE LABELED AND LOCATED AS CLOSE TO THE CONNECTION TO THE SUPPLY MAIN AND RISER AS POSSIBLE. PROVIDE A FULL-OPEN VALVE ON THE BASE OF EVERY WATER RISER PIPE AND ON THE TOP OF EVERY WATER DOWN-FEED PIPE. PROVIDE VALVE HANDLE EXTENSIONS AS NECESSARY FOR INSULATION.
3. IT SHALL BE THE RESPONSIBILITY OF THE PC TO SUSPEND AND SUPPORT ALL PIPING SYSTEMS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALLY ACCEPTED PIPE HANGERS AND SUSPENSION EQUIPMENT. ALL FIXTURES, DEVICES, AND EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE FIXTURE OR EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF THE ROOF JOISTS, GIRDERS, AND BEAMS. THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT AND PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL DECKING. USE STEEL HANGERS FOR STEEL AND PLASTIC PIPE AND COPPER OR COPPER-PLATED HANGERS FOR COPPER PIPE. PROVIDE PROTECTION FOR COPPER PIPING IN CONTACT WITH DISSIMILAR METALS. WHERE COPPER PIPING IS SUPPORTED ON HANGERS WITH OTHER PIPING, PROVIDE A PERMANENT ELECTROLYTIC ISOLATION MATERIAL TO PREVENT CONTACT WITH OTHER METALS. IN GENERAL, HANGERS SHALL BE CLEVIS TYPE, STANDARD WEIGHT. FOR PIPING, HANGER SPACING SHALL BE IN ACCORDANCE WITH TABLE 308.5 OF THE NC PLUMBING CODE. HANGERS AND ACCESSORIES SHALL BE GRINNEL, MASON, OR B-LINE.
4. SLEEVE ALL PIPES PASSING THROUGH PARTITIONS, WALLS, AND FLOORS. SLEEVES IN FLOORS AND INTERIOR WALLS OF POURED IN PLACE CONCRETE, BRICK, TILE, OR MASONRY SHALL BE SCHEDULE 40 STEEL PIPE, MACHINE CUT. SLEEVES IN GYPSUM BOARD WALLS SHALL BE 22 GAUGE, ROLLED GALVANIZED SHEET METAL. TACK WELD ON THE LONGITUDINAL SEAM. PROVIDE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE AND BELOW CEILINGS. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER. SLEEVES IN WALLS SHALL BE INSTALLED FLUSH WITH THE WALL. SLEEVES IN FLOORS SHALL EXTEND 3/4 INCH ABOVE THE FLOOR-EXCEPT THEY SHALL BE FLUSH FOR 2 HOUR RATED FLOORS-AND SHALL BE FLUSH WITH THE STRUCTURE BELOW. EACH SLEEVE SHALL HAVE AN INSIDE DIAMETER 1 INCH LARGER THAN THE OUTSIDE DIAMETER OF THE COVERING OF EACH COVERED PIPE TO ALLOW CONTINUOUS INSULATION-BUT NOT LESS THAN TWO PIPE SIZES LARGER THAN EACH UNCOVERED. ANNULAR SPACES BETWEEN SLEEVES AND PIPES SHALL BE FILLED OR CAULKED IN AN APPROVED MANNER.
5. THE TOP OF WATER PIPES INSTALLED BELOW GRADE OUTSIDE THE BUILDING SHALL BE BELOW THE FROST LINE OR A MINIMUM OF 12 INCHES BELOW FINISHED GRADE WHICHEVER IS GREATER. WATER PIPING INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION. WATER PIPING INSTALLED IN AN UNCONDITIONED UTILITY ROOM OR UNCONDITIONED ATTIC SHALL BE INSULATED TO A MINIMUM OF R6.5 DETERMINED IN ACCORDANCE WITH ASTM C 177.
6. HOT WATER PROVIDED TO PUBLIC HAND-WASHING FACILITIES/LAVATORIES SHALL BE TEMPERED WATER DELIVERED THROUGH AN APPROVED WATER-TEMPERATURE LIMITING DEVICE THAT CONFORMS TO ASSE 1070 OR CSA B125.3.
7. INSULATE ALL EXPOSED WASTE AND SUPPLY PIPING UNDER LAVATORIES, SINKS, AND ELECTRIC WATER COOLERS WITH THE HANDI-LAV GUARD INSULATION KIT BY TRUEBRO OR EQUAL.
8. THE PC SHALL INSTALL WATER HAMMER ARRESTORS ON BRANCH LINES WITH QUICK CLOSING VALVES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. WATER HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010.
9. THE PC SHALL PROVIDE CHECK VALVES AT ALL FIXTURES WITH THREADED OUTLETS AS REQUIRED BY CODE. TRAP PRIMERS SHALL BE PROVIDED AS SHOWN ON THE PLANS OR AS REQUIRED.
10. ADJUST STOPS AND VALVES FOR INTENDED FLOW RATE TO FIXTURES WITHOUT SPLASHING, NOISE, OR OVERFLOW.
11. BEFORE COMMENCING WORK, CHECK INVERT ELEVATIONS REQUIRED FOR SEWER CONNECTIONS, CONFIRM INVERTS, AND VERIFY THESE CAN BE PROPERLY CONNECTED TO WITH SLOPE FOR DRAINAGE AND COVER TO AVOID FREEZING. ONCE INVERTS AND FALL HAVE BEEN ESTABLISHED, EXTEND SANITARY SEWER PIPING TO 5 FEET OUTSIDE THE BUILDING AND INSTALL ALL DRAINS, STACKS, VENTS, FLOOR DRAINS, AND CLEANOUTS NECESSARY FOR A COMPLETE INSTALLATION.
12. ALL SANITARY SEWER PIPING IS BELOW GRADE OR WITHIN WALLS UNLESS OTHERWISE NOTED. ALL SANITARY VENT PIPING IS ABOVE THE CEILING OR WITHIN WALLS UNLESS OTHERWISE NOTED. SOIL AND WASTE PIPING SHALL BE INSTALLED TO PROVIDE PROTECTION AGAINST FREEZING PER 305.4.1. WASTE AND SOIL LINES LEAVING THE BUILDING MUST HAVE A MINIMUM COVER OF 3 INCHES.
13. SOIL AND WASTE LINES 2-1/2 INCHES AND SMALLER SHALL BE SLOPED AT 1/4 INCH PER FOOT MINIMUM. SOIL AND WASTE LINES 3 INCHES TO 6 INCHES IN DIAMETER SHALL BE SLOPED AT 1/8 INCH PER FOOT MINIMUM.
14. FOR WATER CLOSET WASTE CONNECTIONS, A 4 INCH BY 3 INCH CLOSET BEND SHALL BE ACCEPTABLE. WHERE A 3 INCH BEND IS UTILIZED ON WATER CLOSETS, A 4 INCH BY 3 INCH FLANGE SHALL BE INSTALLED TO RECEIVE THE FIXTURE HORN.
15. HORIZONTAL DRAIN PIPES SHALL HAVE CLEANOUTS IN ACCORDANCE WITH 708.10. EXTEND CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE THREADED CLEANOUT PLUGS WITH A MIXTURE OF GRAPHITE AND LINSEED OIL. ENSURE CLEARANCE AT ALL CLEANOUTS FOR RODDING OF DRAINAGE SYSTEM. INSTALL FLOOR CLEANOUTS AT AN ELEVATION TO ACCOMMODATE FINISHED FLOOR. EVERY CLEANOUT SHALL BE INSTALLED TO ALLOW CLEANING IN THE DIRECTION OF FLOW OF THE DRAINAGE PIPE OR AT RIGHT ANGLES THERETO. CLEANOUTS ON 6 INCH AND SMALLER PIPES SHALL BE PROVIDED WITH A CLEARANCE OF NOT LESS THAN 18 INCHES FOR RODDING.
16. AIR ADMITTANCE VALVES SHALL BE INSTALLED AFTER THE DWV TESTING REQUIRED BY SECTIONS 312.2 AND 312.3. PROVIDE ACCESS TO ALL AIR ADMITTANCE VALVES PER CODE. INSTALLATION OF ALL AIR ADMITTANCE VALVES SHALL CONFORM TO SECTION 918 OF THE NC PLUMBING CODE. AIR ADMITTANCE VALVES SHALL CONFORM TO ASSE 1050 OR 1051.
17. THE PC SHALL PROVIDE UNIONS FOR DISASSEMBLY AND SERVICE OF ALL FIXTURES AND OTHER RELEVANT PLUMBING EQUIPMENT. UNIONS SHALL BE GROUND-JOINT WITH BRASS SEAT. PROVIDE INSULATING UNIONS AT EACH JUNCTION OF DISSIMILAR MATERIALS.
18. THE PC SHALL ACCURATELY ROUGH-IN ALL FIXTURES ACCORDING TO MANUFACTURER'S INSTALLATION DIMENSIONS AND INSTRUCTIONS. OFFSET ADAPTERS AND FLEXIBLE CONNECTORS ARE NOT ACCEPTABLE. FLUSH HANDLES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS FOR ADA COMPLIANCE. INSTALL EACH FIXTURE WITH TRAP EASILY REMOVABLE FOR SERVICING AND CLEANING. SEAL FIXTURES TO WALL AND FLOOR SURFACES WITH SEALANT. SOLIDLY ATTACH WATER CLOSETS TO FLOOR WITH LAG SCREWS. SEAL ALL SELF-RIMMING LAVATORIES AND SINKS (VITREOUS CHINA AND STAINLESS STEEL) WITH A COMMERCIAL GRADE PLUMBER'S PUTTY OR ACRYLIC LATEX CAULK APPLIED TO THE UNDERSIDE OF THE FIXTURE RIM IN A GENEROUS AMOUNT SO THAT WHEN FIXTURE IS SET, SEALANT SHALL OOZE OUT.
19. ALL VENT THRU THE ROOF (VTR) PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PC SHALL PROVIDE FLASHING MATERIAL REQUIRED FOR VTRS. JOINTS AT THE ROOF AND AROUND VENT PIPES SHALL BE MADE WATER TIGHT BY THE USE OF LEAD, COPPER, GALVANIZED STEEL, ALUMINUM, OR OTHER APPROVED FLASHINGS OR FLASHING MATERIAL. MAINTAIN MINIMUM 10 FEET FROM ALL OUTSIDE AIR INTAKES.
20. INSTALL FULL OPEN VALVES PER NC PLUMBING CODE 606.1 ON THE MAIN WATER LINE INTO THE BUILDING. INSTALL CUT OFF VALVES PER NC PC 606.2.

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GENERAL PLUMBING NOTES | 6

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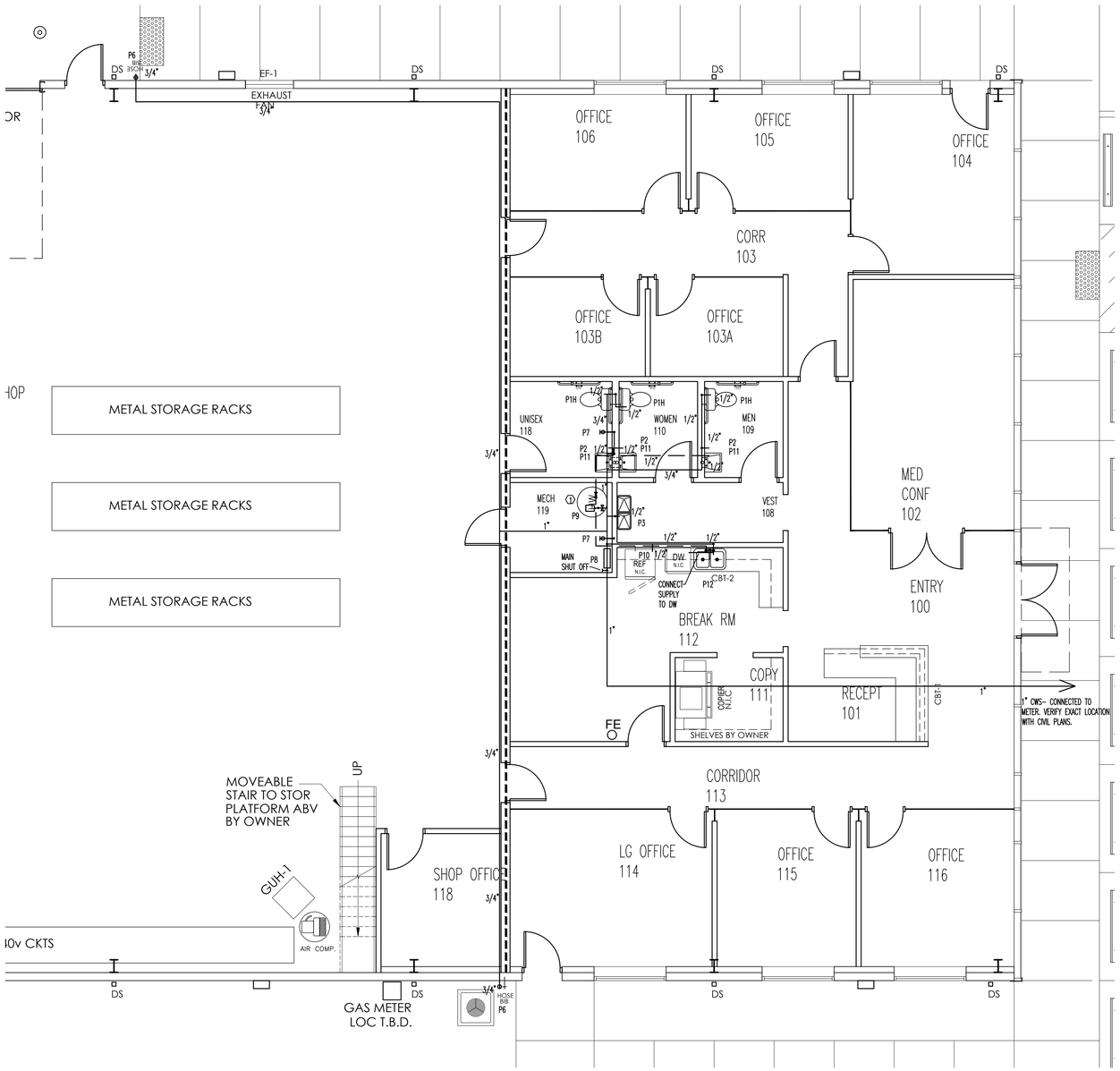
NORTH CAROLINA PROFESSIONAL SEAL 17304 ENGINEER MICHAEL W. KILIAN
05/21/2025
KILIAN ENGINEERING, INC. CORPORATE SEAL NORTH CAROLINA

New Building for
INNOVATIVE GLASS SOLUTIONS
BURT WINSTON ROAD
FRANKLIN COUNTY, NC

DWG BY: DC
CHK BY: KDC
DATE: 5/21/25
REVISIONS:

NOTES, SCHEDULES

SHEET NO.
P1
240813



DO NOT TAP WATER LINE AHEAD OF BACK FLOW PREVENTION.

ALL REQUIRED VALVES NOT SHOWN.
INSTALL FULL OPEN VALVES PER 2018 PC CODE 606.1.5 AND 606.1.8
INSTALL SHUT OFF VALVES PER 2018 NC PLUMBING CODE 606.2 AND 606.2.1

SUPPLY PLAN HEX NOTES

1. ROUTE 1" DRAIN LINE TO INDIRECT WASTE RECEPTOR, FLOOR DRAIN OR TO THE EXTERIOR OF THE BUILDING AT 12" ABOVE GRADE.

LINETYPE LEGEND

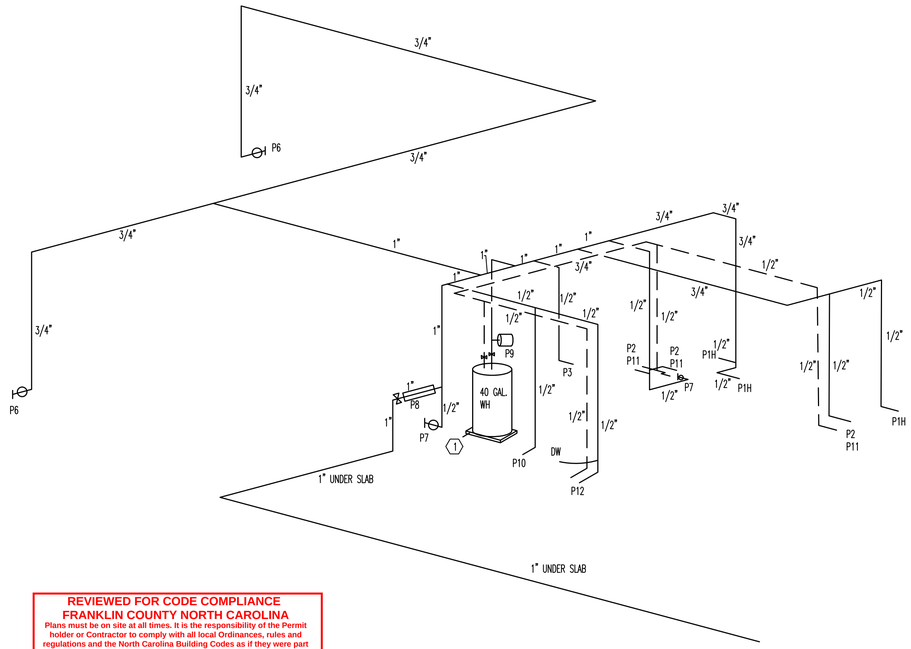
COLD WATER SUPPLY ———————

HOT WATER SUPPLY – – – – – – – – – – – – – –

PLUMBING SUPPLY PLAN SCALE: 1/4"=1'-0" | 1

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	MANUFACTURER	FITTING	HW	CW	WASTE
P1H	TWO PIECE TANK TYPE ADA WATER CLOSET	TOTO CST744EL OR EQUAL BY AMERICAN STANDARD OR KOHLER	TWO-PIECE VITREOUS CHINA TOILET WITH HIGH-PROFILE TANK, ELONGATED FRONT BOWL AND CHROME TRIP LEVER. 1.28 GPF. PROVIDE SCS34 OPEN FRONT SEAT LESS COVER. ASME 112.19.2 COMPLIANCE. TOP OF SEAT SHALL BE 17-19 INCHES AFF FOR ADA. LEVER MOUNTED ON WIDE SIDE FOR ADA	-	1/2"	3"
P2	WALL MOUNT LAVATORY	TOTO LT307.4 OR EQUAL BY AMERICAN STANDARD OR KOHLER	VITREOUS CHINA LAVATORY WITH BACKSPLASH COMPLYING WITH ASME 112.19.2. TOP OF RIM SHALL BE 34 INCHES AFF FOR ADA. PROVIDE WITH LAV-GUARD PROTECTORS FOR SUPPLY AND DRAIN LINES. PROVIDE JR SMITH 0700 (CONCEALED ARMS) WITH 19" ARMS 0800 (WALL SUPPORT PLATE). USE MOEN 8430 FAUCET.	1/2"	1/2"	2"
P3	DRINKING FOUNTAIN	OASIS PGRACSL OR EQUAL BY ELKAY OR STERN WILLIAMS	ADA COMPLIANT FOR ADULT AND CHILD. 8.0 GPH OF 50°F WATER AT 90°F AMBIENT. PROVIDE ACCESSORY APRON FOR ADA COMPLIANCE AS NECESSARY	-	3/8"	2"
P4	FLOOR DRAIN	WATTS FD-200-A OR EQUAL BY ZURN OR JR SMITH	ON GRADE EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, WEEP HOLES, ADJUSTABLE ROUND NICKEL BRONZE STRAINER, AND NO HUB OUTLET. PROVIDE TRAP PRIMER CONNECTION OPTION IF NOTED.	-	-	3"
P5	WATER HAMMER ARRESTOR	ZURN Z1700 SERIES OR EQUAL BY WATTS OR SIOUX CHIEF	INSTALL ON BRANCH LINES PER MFG'S INSTRUCTIONS. PROVIDE ACCESS PANEL WHERE NECESSARY WHERE LOCATED ABOVE HARD CEILINGS OR WITHIN WALLS.	-	VARIES	-
P6	FREEZEPROOF HOSE BIBB	WOODFORD MODEL 68 OR EQUAL BY ZURN OR MIFAB	THE MODEL 68 IS A ASSE 1053 LISTED HYDRANT, WITH A ASSE 1052 DOUBLE CHECK BACKFLOW PREVENTER, COMES WITH A CHROME PLATED BRASS HEAD WITH STAINLESS STEEL COVER. IT DRAINS AUTOMATICALLY EVEN WITH A ATTACHED HOSE, HAS A ONE PIECE PLUNGER WHICH CONTROLS DRAIN AND FLOW FUNCTION, WORKS WITH PRESSURES UP TO 125 PSI, AND A MAX TEMPERATURE OF 120 DEGREES, TEE KEY FOR HYDRANT DOOR AND LOCK, EASIER TO INSTALL THAN STANDARD RECESSED BOX HYDRANT, WALL CLAMP IS INCLUDED, HEAD COVER FLIPS DOWN AND OUT OF THE WAY FOR UNOBSTRUCTED HYDRANT USE	-	3/4"	-
P7	INTERIOR HOSE BIBB	WOODFORD MODEL 26 OR EQUAL BY ZURN OR MIFAB	PROVIDE CHECK VALVE AND ANTI-SIPHON PROTECTION IF NOT INTEGRAL TO UNIT		1/2"	
P8	1" DOUBLE CHECK VALVE	WATTS 007M1QT OR EQUAL BY CONBRACO OR WILKINS	ASSEMBLY SHALL CONSIST OF TWO POSITIVE SEATING CHECK MODULES WITH CAPTURED SPRINGS AND RUBBER SEAT DISCS. THE CHECK MODULE SEATS AND SEAT DISCS SHALL BE REPLACEABLE. SERVICE OF ALL INTERNAL COMPONENTS SHALL BE THROUGH A SINGLE ACCESS COVER SECURED WITH STAINLESS STEEL BOLTS. THE ASSEMBLY SHALL ALSO INCLUDE TWO RESILIENT SEATED ISOLATION VALVES; FOUR TOP MOUNTED, RESILIENT SEATED TEST COCKS. ASSEMBLY SHALL MEET THE REQUIREMENTS OF ASSE 1015 AND AWWA C510	-	1"	-
P9	EXPANSION TANK	AMTROL ST-5 OR EQUAL BY WATTS OR BELL & GOSSETT	INSTALL ON COLD WATER LINE BETWEEN WATER HEATER AND RP2	-	3/4"	-
P10	REFRIGERATOR VALVE BOX	DATEY OR APPROVED EQUAL	HIGH IMPACT POLYSTYRENE BOX WITH 1/4 TURN BRASS BALL VALVE. COMPLIANT WITH NSF 61, SECTION 9.	-	1/2"	-
P11	THERMOSTATIC MIXING VALVE	WATTS LFMMV OR EQUAL BY LAWLER OR LEONARD VALVE	ASSE STANDARD 1069 OR 1070 APPROVED WITH 1/2 INCH FEMALE NPT INLET AND OUTLET CONNECTIONS, BRASS BODY, AND INTERAL MOUNTING HOLES. TAMPER RESISTANT THERMOPLASTIC ENCLOSURE. SINGLE REPLACEABLE CARTRIDGE DESIGN.	1/2"	1/2"	-
P12	SINK DOUBLE BOWL	ELKAY LRAD2231 9 OR EQUAL BY FRANKE OR MOEN	TOP MOUNTED 18 GA STAINLESS STEEL. MAX BOWL DEPTH 6 INCHES FOR WHEEL CHAIR ACCESSIBLITY-USE DELTA FAUCET SET 340-WF OR EQUAL BY MOEN OR KOHLER.	1/2"	1/2"	2"
FCO	FLOOR CLEANOUT	ZURN, WATTS, JR SMITH	EPOXY COATED CAST IRON FLOOR CLEANOUT WITH ROUND ADJUSTABLE GASKETED NICKEL BRONZE TOP, REMOVABLE GAS TIGHT GASKETED BRASS CLEANOUT PLUG, AND NO HUB INLET.	-	-	4"
WCO	WALL CLEANOUT	ZURN, WATTS, OR JR SMITH	CAST IRON CLEANOUT FERRULE WITH THREADED BRASS COUNTERSUNK CLEANOUT PLUG, STAINLESS STEEL ACCESS COVER, AND VANDAL PROOF STAINLESS STEEL SCREW	-	-	4"
AAV	AIR ADMITTANCE VALVE	STUDOR REDIVENT OR APPROVED EQUAL	ANSI/ASSE 1051 LISTED. NSF STANDARD 14. PROVIDE PVC OR ABS CONNECTOR AS NECESSARY. CONNECT VALVE TO PIPING PER MANUFACTURER. INSTALL IN THE VERTICAL, UPRIGHT POSITION AFTER ROUGH-IN AND PRESSURE TESTING OF THE SYSTEM. PROVIDE WALL BOX IF NOT ABOVE CEILING OR OTHERWISE CONCEALED.	-	-	2"



PLUMBING SUPPLY RISER SCALE: NTS | 2

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NORTH CAROLINA PROFESSIONAL SEAL 17304 ENGINEER MICHAEL W. KILIAN
05/21/2025

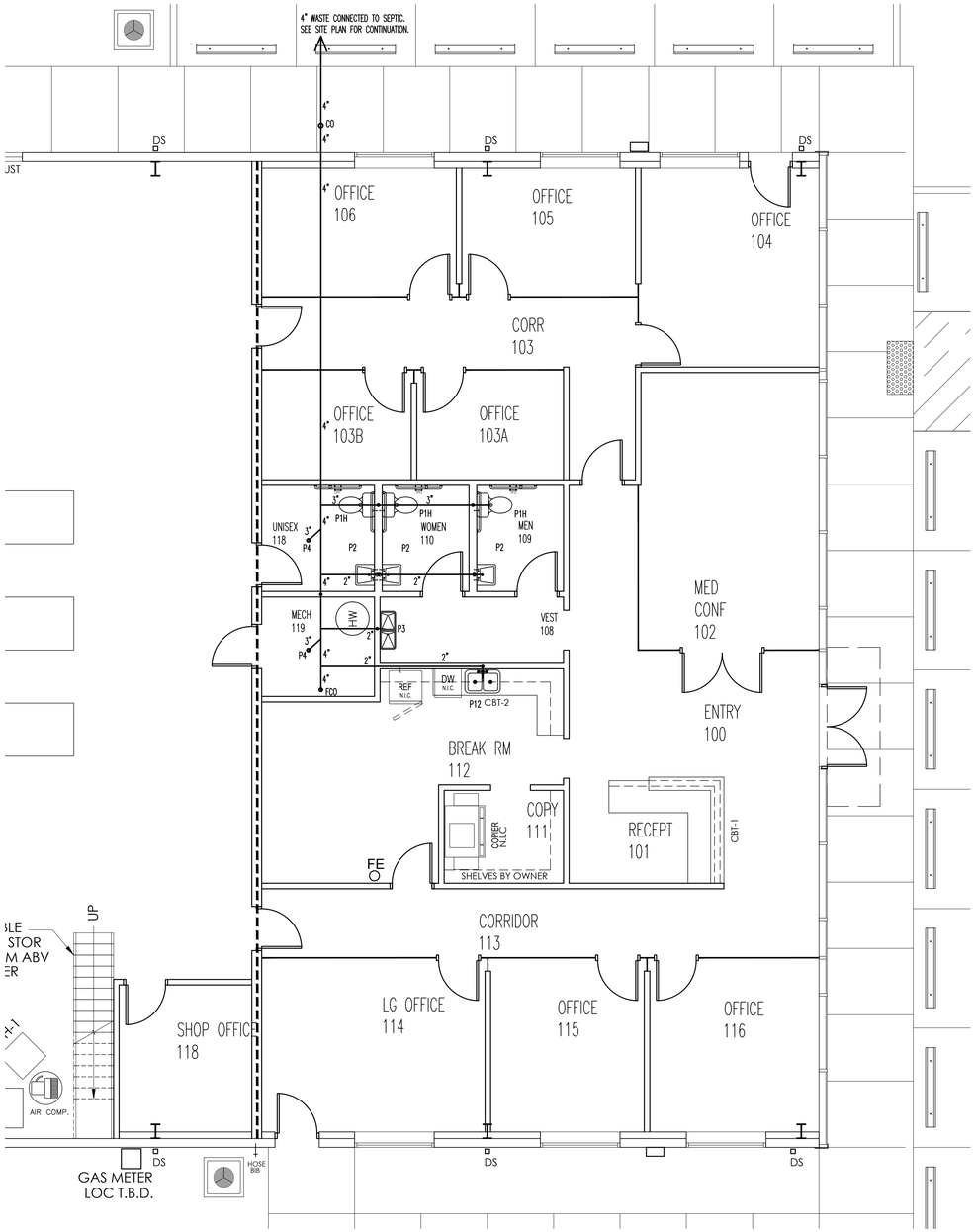
KILIAN ENGINEERING, INC. CORPORATE SEAL NORTH CAROLINA

INNOVATIVE GLASS SOLUTIONS
New Building for
BURT WINSTON ROAD
FRANKLIN COUNTY, NC

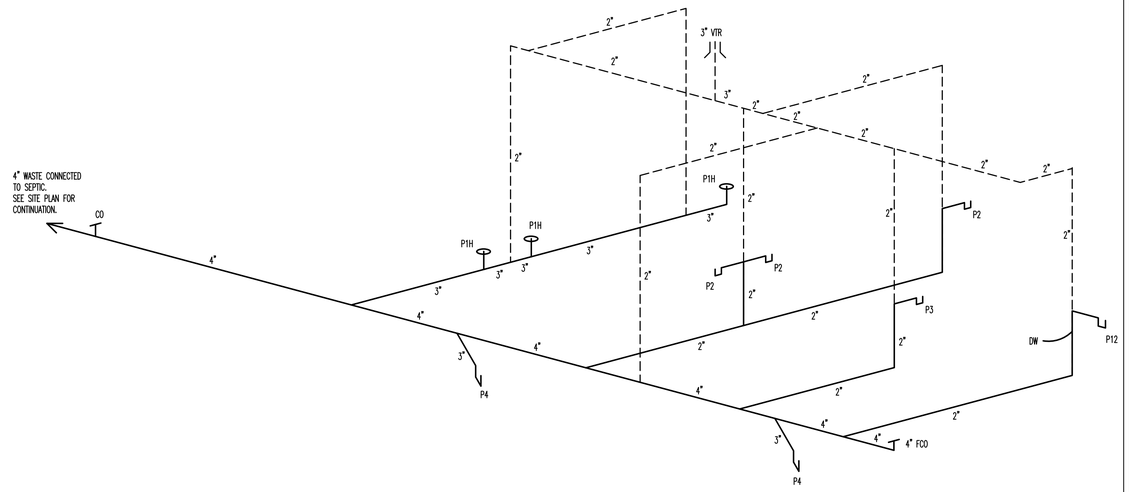
DWG BY: DC
CHK BY: KDC
DATE: 5/21/25
REVISIONS:

PLUMBING SUPPLY PLAN

SHEET NO.
P2
240813



PLUMBING WASTE PLAN SCALE: 3/16"=1'-0" | 1



PLUMBING WASTE RISER SCALE: NTS | 2

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LINETYPE LEGEND

COLD WATER SUPPLY	———
HOT WATER SUPPLY	– – – –
SANITARY SEWER LINE	———
VENT LINE	– – – –

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PLUMBING WASTE PLAN

SHEET NO.
P3
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GAS UNIT HEATER SCHEDULE									
MARK	MFG / MODEL #	INPUT	HEAT OUTPUT	AIR FLOW	VOLT/PH	FLA	MOCP	WEIGHT	NOTES
		MBH	MBH	CFM		AMPS	AMPS	POUNDS	
GUH-1-2	REZNOR / UDZ-75	75.0	62	961	120/1	3.7	20.0	100.0	1-4

1. NATURAL GAS.
2. INSTALL VENT PER MANUFACTURES INSTRUCTIONS
3. PROVIDE ALL MOUNTING HARDWARE AND ANY OPTIONS NEEDED FOR A COMPLETE INSTALLATION.
4. COORDINATE MOUNTING HEIGHT WITH GENERAL CONTRACTOR.

WAREHOUSE

VENTILATION CALCULATIONS			
OCCUPANCY	AREA (FT²)	CFM/FT²	EXH (CFM)
WAREHOUSE	6000	.06	360

1,500 CFM EXCEEDS MIN. CODE REQUIREMENTS.

EXHAUST FAN SCHEDULE								
MARK	MFG / MODEL #	TYPE	ESP (in WG)	CFM	VOLT/PH	FLA	SONES	NOTES
EF-1	GREENHECK AER-20-02-0610	WALL	0.41	1500	120/1	7.2	12.8	3

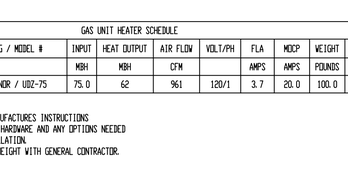
1. PROVIDE WITH PITCHED ROOF CURB & CAP FOR FLAT OR SLOPED ROOF, OR HOODED WALL WITH BACKDRAFT DAMPER CAP AS APPLICABLE.
2. PROVIDE WITH SQUARE TO ROUND DUCT ADAPTER AS NECESSARY
3. OR EQUAL BY LOREN COOK OR PENNBARRY OR TWIN CITY

LOUVER SCHEDULE					
MARK	MFG / MODEL #	TYPE	SIZE	CFM	NOTES
L-1	GREENHECK EHH-701-30X18	WALL	30X18	1500	1,2

1. OR EQUAL BY RUSKIN
2. PROVIDE WITH PEST SCREEN AND BAROMETRIC DAMPER, SPRING LOADED OPEN UPON NEGATIVE PRESSURE.

System No. W-L-1088

F Ratings - 1 & 2 Hr. (See Item 1)
T Rating - 0 Hr.



Section A-A

1. **Wall Assembly -** The 1 or 2 hr. fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs -** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) O.C. with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min. 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) O.C.
   B. **Gypsum Board* -** 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 6-3/4 in. (171 mm).
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. **Through Penetrant -** One metallic pipe, tubing or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between pipes, tubing or conduits and periphery of opening shall be min 0 in. (point contact) to max 5/8 in. (16 mm). Pipe, tubing or conduit to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, tubing or conduits may be used:
   A. **Steel Pipe -** Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Iron Pipe -** Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.
   C. **Copper Tubing -** Nom 6 in. (152 mm) diam (or smaller) Type M (or heavier) copper tubing.
   D. **Copper Pipe -** Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
   E. **Conduit -** Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing, nom 4 in. (102 mm) diam (or smaller) galv steel conduit or nom 1 in. (25 mm) diam (or smaller) flexible steel conduit.
3. **Fill, Void or Cavity Material* - Sealant -** Min 5/8 in. (16 mm) thickness of fill material within annulus, flush with both surfaces of wall. Additional fill material installed such that a min 1/4 in. (6 mm) thick crown is formed around the penetrating item lapping 1/2 in. (13 mm) beyond the periphery of the opening.
   SPECIFIED TECHNOLOGIES INC - SpecSeal LC 150 Sealant, SpecSeal LE600 Sealant

*Bearing the UL Classification Mark

STI

Specified Technologies Inc. 200 Evans Way Somerville, NJ 08876

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W-L-1088
PAGE 1 OF 1

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. --PFaulkner
10/17/2025 11:38:24 AM

GENERAL MECHANICAL NOTES:

ADMINISTRATIVE:

1. THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS:
   PC – PLUMBING CONTRACTOR, EC – ELECTRICAL CONTRACTOR,
   MC – MECHANICAL CONTRACTOR, GC – GENERAL CONTRACTOR,
   FASC – FIRE ALARM SYSTEM CONTRACTOR, AHJ – AUTHORITY HAVING JURISDICTION.
2. "PROVIDE" MEANS TO FURNISH AND INSTALL. MC SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND GENERAL CONTRACTOR AS SHOWN ON THE PLANS OR NECESSARY FOR A COMPLETE INSTALLATION.
3. THE MC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
4. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE CONTRACTOR AT AN APPROVED LOCATION. THE MC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE MC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
5. THE MC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA MECHANICAL AND BUILDING CODES AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE MC SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
6. THE MC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
7. DO NOT SCALE THESE DRAWINGS–REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
8. THE MC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE MC SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE MC SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
9. ALL MECHANICAL MATERIALS SHALL BE NEW AND FREE OF DEFECT AND LISTED AND LABELED BY UL OR AN APPROVED THIRD PARTY AGENCY. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED BY THE MC WITHOUT ADDITIONAL COST TO THE OWNER. WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN, THE CITED EXAMPLE IS INTENDED TO ESTABLISH A STANDARD OF QUALITY AND NOT TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. SUCH EXAMPLES ARE USED TO CONVEY A GENERAL STYLE, TYPE, CHARACTER, AND QUALITY OF THE PRODUCT DESIRED; PRODUCTS DETERMINED TO BE EQUAL BY THE ENGINEER WILL BE ACCEPTED.
10. THESE PLANS ARE DIAGRAMMATIC. THE MC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, DUCTS, REGISTERS, GRILLES, ETC, TO ACCOMMODATE PLANNED AND ENCOUNTERED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BENDS, OFFSETS, AND FITTINGS THAT MAY BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE MC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO THE OWNER.
11. THE MC SHALL VERIFY THE FUNCTIONALITY AND OPERATION OF ALL EXISTING MECHANICAL EQUIPMENT IN THE AREA OF WORK. REPLACE FILTERS, LEAK TEST AND RECHARGE REFRIGERANT LINES, REPLACE OR LUBRICATE BEARINGS, CHECK LINKAGES AND ACTUATORS, AND PERFORM OTHER MAINTENANCE SERVICE AS NECESSARY TO GET THE EQUIPMENT IN PROPER ORDER
12. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER CONNECTIONS TO THE MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROL WIRING.
13. IT IS THE MC'S RESPONSIBILITY TO VERIFY THAT ITEMS FURNISHED FOR THIS CONTRACT WILL FIT IN THE SPACE AVAILABLE. THE MC SHALL MAKE FIELD MEASUREMENTS AS NECESSARY TO DETERMINE SPACE REQUIREMENTS. IF THE MC MUST ALTER EQUIPMENT DUE TO SPACE CONSIDERATIONS, THE MC SHALL PROVIDE SIZES AND SHAPES THAT FIT THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS.
14. MC SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR REGARDING THE ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT BEING PROVIDED.
15. MAINTAIN CLEARANCES FOR ALL EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR SERVICEABILITY. ALL ROOFTOP EQUIPMENT MUST BE A MINIMUM OF 10 FEET FROM ROOF EDGE.
16. MC SHALL FURNISH A BOUND SET OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT TO THE OWNER UPON COMPLETION OF THE PROJECT. MC SHALL PROVIDE ALL DOCUMENTATION TO THE OWNER AS NECESSARY TO SUBMIT FOR FACTORY WARRANTIES.
17. CONTRACTOR SHALL PROTECT ALL HVAC EQUIPMENT FROM CONSTRUCTION AND SHEET ROCK DUST DURING CONSTRUCTION. ALL FILTERS SHALL BE REPLACED WITH NEW AT THE COMPLETION OF THE PROJECT.
18. ALL EQUIPMENT INSTALLED ON ROOF MUST BE WITHIN THE ROOF SCREEN.
19. IF A ROOF PENETRATION IS REQUIRED AND THE ROOF IS UNDER WARRANTY, USE THE AUTHORIZED ROOFER. PROVIDE DOCUMENTATION.
20. ALL PIPING, WIRING, CONDUIT, INSULATION, EQUIPMENT, SUPPORTS, ETC. SHALL BE SUITABLE FOR INSTALLATION IN A RETURN PLENUM AS NECESSARY. COORDINATE WITH OTHER TRADES ON LOCATIONS OF ALL PLENUMS.
21. MC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

MATERIALS:

1. THE MC SHALL PROVIDE ALL DX UNITARY HEATING AND COOLING EQUIPMENT AS SCHEDULED ON THE DRAWINGS. AIR-COOLED SPLIT SYSTEM HEAT PUMPS AND AIR-CONDITIONERS SHALL BE BY TRANE, CARRIER, OR YORK. AIR-COOLED ROOFTOP PACKAGE HEAT PUMPS, GAS-ELECTRIC UNITS, AND AIR-CONDITIONERS SHALL BE BY TRANE, CARRIER, OR YORK. GAS FURNACES SHALL BE BY TRANE, CARRIER, OR YORK. THE MC SHALL PROVIDE FACTORY AND FIELD INSTALLED ACCESSORIES AS SCHEDULED OR AS NECESSARY FOR A COMPLETE AND OPERATIONAL HVAC SYSTEM.
2. THE MC SHALL PROVIDE ALL EXHAUST AND SUPPLY FANS AS SCHEDULED. FANS SHALL BE BY GREENHECK, LOREN COOK, TWIN CITY, OR PENNBARRY.
3. DUCTWORK IS SHOWN WITH FREE AREA DIMENSIONS. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT STANDARD, 2 INCH S.P.
4. EXTERNAL DUCT INSULATION AND FACTORY-INSULATED FLEXIBLE DUCT SHALL BE LEGIBLY PRINTED OR IDENTIFIED AT INTERVALS NOT GREATER THAN 36 INCHES WITH THE NAME OF THE MANUFACTURER, THE THERMAL RESISTANCE R-VALUE AT THE SPECIFIED INSTALLED THICKNESS AND THE FLAME SPREAD AND SMOKE-DEVELOPED INDEXES OF THE COMPOSITE MATERIALS. ALL DUCT INSULATION PRODUCT R-VALUES SHALL BE BASED ON INSULATION ONLY, EXCLUDING AIR FILMS, VAPOR RETARDERS OR OTHER DUCT COMPONENTS, AND SHALL BE BASED ON TESTED C-VALUES AT 75°F MEAN TEMPERATURE AT THE INSTALLED THICKNESS, IN ACCORDANCE WITH RECOGNIZED INDUSTRY PROCEDURES. THE INSTALLED THICKNESS OF DUCT INSULATION USED TO DETERMINE ITS R-VALUES SHALL BE DETERMINED AS FOLLOWS:
   4.1. FOR DUCT BOARD, DUCT LINER AND FACTORY-MADE RIGID DUCTS NOT NORMALLY SUBJECTED TO COMPRESSION, THE NOMINAL INSULATION THICKNESS SHALL BE USED.
   4.2. FOR DUCT WRAP, THE INSTALLED THICKNESS SHALL BE ASSUMED TO BE 75 PERCENT (25-PERCENT COMPRESSION) OF NOMINAL THICKNESS.
   4.3. FOR FACTORY-MADE FLEXIBLE AIR DUCTS, THE INSTALLED THICKNESS SHALL BE DETERMINED BY DIVIDING THE DIFFERENCE BETWEEN THE ACTUAL OUTSIDE DIAMETER AND NOMINAL INSIDE DIAMETER BY TWO.
5. DUCT LINER MAY BE SUBSTITUTED FOR EXTERIOR DUCT WRAP. DUCT LINER INSULATION MATERIALS SHALL MEET THE REQUIREMENTS OF ASTM C 1071, AND ASTM C 21. EXTERIOR DUCT R-VALUE SHALL BE R-8 AND INTERIOR R-VALUE SHALL BE R-6 IN ACCORDANCE WITH THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE. NOMINAL DUCT SIZES SHALL BE ADJUSTED AS NECESSARY SO THAT FREE AREA DIMENSIONS ARE PRESERVED AS SHOWN ON THE PLANS. FABRICATION AND INSTALLATION SHALL CONFORM TO THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND TO THE REQUIREMENTS OF THE LATEST EDITION OF THE NORTH AMERICAN INSULATION MANUFACTURERS ASSOCIATION FIBROUS GLASS DUCT LINER STANDARDS AND/OR SMACNA HVAC DUCT CONSTRUCTION STANDARDS. DUCT LINER SHALL HAVE A BLACK PIGMENTED MAT ON THE AIRSTREAM SIDE TO RESIST DAMAGE DURING INSTALLATION AND SERVICE. EDGES SHALL BE FACTORY COATED WITH BLACK PIGMENTED COATING TO COMPLY WITH SMACNA DCS REQUIREMENTS. ALL PORTIONS OF DUCT DESIGNATED TO RECEIVE DUCT LINER SHALL BE COMPLETELY COVERED WITH DUCT LINER. TRANSVERSE JOINTS SHALL BE NEATLY BUTTED AND THERE SHALL BE NO INTERRUPTIONS OR GAPS. THE BLACK PIGMENTED OR MAT FACED SURFACES SHALL FACE THE AIRSTREAM. DUCT LINER SHALL BE ADHERED TO THE SHEET METAL WITH 90 PERCENT COVERAGE OF ADHESIVE COMPLYING WITH REQUIREMENTS OF ASTM C 916. ALL EXPOSED LEADING EDGES AND TRANSVERSE JOINTS SHALL BE FACTORY COATED OR COATED WITH ADHESIVE DURING FABRICATION. DUCT LINER SHALL BE ADDITIONALLY SECURED WITH MECHANICAL FASTENERS, EITHER WELD-SECURED OR IMPACT DRIVEN, WHICH SHALL COMPRESS THE DUCT LINER SUFFICIENTLY TO HOLD IT FIRMLY IN PLACE. ADHESIVE BONDED PINS ARE NOT PERMITTED DUE TO LONG-TERM ADHESIVE AGING CHARACTERISTICS. LININGS SHALL BE INTERRUPTED AT THE AREA OF OPERATION OF A FIRE DAMPER AND AT A MINIMUM OF 6 INCHES UPSTREAM AND 6 INCHES DOWNSTREAM OF ELECTRIC RESISTANCE AND FUEL-BURNING HEATERS IN A DUCT SYSTEM. METAL NOSINGS OR SLEEVES SHALL BE INSTALLED OVER EXPOSED DUCT LINER THAT FACE OPPOSITE THE DIRECTION OF AIRFLOW. UPON COMPLETION OF INSTALLATION OF DUCT LINER AND BEFORE OPERATION IS TO COMMENCE, VISUALLY INSPECT SYSTEM AND VERIFY THAT THE DUCT LINER IS PROPERLY INSTALLED. OPEN ALL SYSTEM DAMPERS AND TURN ON FANS TO BLOW ALL SCRAPS AND OTHER LOOSE PIECES OF MATERIAL OUT OF THE DUCT SYSTEM. ALLOW FOR A MEANS OF REMOVAL OF SUCH MATERIAL.
6. ALL INSULATION CONTAINING FIBROUS MATERIALS EXPOSED TO AIRFLOW SHALL BE RATED FOR THAT EXPOSURE OR SHALL BE ENCAPSULATED. INSULATING PROPERTIES FOR ALL MATERIALS SHALL MEET OR EXCEED INDUSTRY STANDARDS. POLYSTYRENE PRODUCTS SHALL MEET ASTM C578. ALL INSULATION SHALL HAVE FORMALDEHYDE EMISSIONS NOT GREATER THAN 0.05 PPM. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE REQUIREMENTS OF THE LOCAL CODES AND ORDINANCES ADOPTED BY THE JURISDICTION IN WHICH THE BUILDING IS LOCATED.
7. MASTIC USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A-95 OR UL 181B-98. MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURER OF ADHESIVES, MASTICS, AND INSULATION CEMENTS. DO NOT INSTALL DUCT SEALANT WHEN TEMPERATURES ARE LESS THAT THOSE RECOMMENDED BY THE SEALANT MANUFACTURER.
8. ALL ADHESIVES AND SEALANTS SHALL HAVE VOC CONTENT BELOW 20 GRAMS PER LITER AND WHICH MEET THE REQUIREMENTS OF THE MANUFACTURER OF THE PRODUCTS BEING ADHERED OR INVOLVED. ADHESIVES AND SEALANTS SHALL CONTAIN NO HEAVY METALS OR FORMALDEHYDE.
9. FACTORY-MADE AIR DUCTS AND CONNECTORS SHALL COMPLY WITH UL 181-96.
10. FLEXIBLE DUCT SHALL BE UL LISTED CLASS 0 OR CLASS 1, INSULATED, AND COMPLY WITH UL 181. FLEXIBLE DUCT SHALL BE FACTORY FORMED, COMPOSED OF SPIRAL WOUND CORROSION RESISTANT WIRE BONDED TO AN INNER FABRIC LINER. DUCT SHALL BE FACTORY INSULATED WITH A FOIL VAPOR BARRIER JACKET. CONNECT TO RIGID DUCT WITH SPIN-IN FITTING AND DAMPER. FLEXIBLE DUCTS AND AIR CONNECTORS SHALL NOT PASS THROUGH ANY FIRE RESISTANCE RATED ASSEMBLY.
11. THE MC SHALL PROVIDE ALL DIFFUSERS, GRILLES, LOUVERS, AND OTHER AIR DISTRIBUTION OUTLETS AND INLETS. LOUVERS, GRILLES, AND DIFFUSERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. FOR LAY-IN CEILINGS, INSTALL SUPPORT FROM THE STRUCTURE FOR EACH DIFFUSER OR DAMPER. AIR DISTRIBUTION OUTLETS AND INLETS SHALL BE BY HART & COOLEY, PRICE, METAL-AIRE, NAILOR, OR CARNES.
12. AIR FILTERS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 605 OF THE 2018 NC MECHANICAL CODE.
13. THE MC SHALL PROVIDE ALL REFRIGERATION PIPING. ALL PIPE AND FITTINGS SHALL BE TYPE ACR HARD COPPER TUBING WITH SWEAT FITTINGS. REFRIGERATION LINES SHALL BE RUN NEATLY. WHERE A GROUP OF LINES ARE RUN, TRAPEZE HANGERS MAY BE USED. DO NOT USE CHAIN OR WIRE HANGERS. WRAP TUBING WITH RUBBER TAPE AT EACH CLAMP OR HANGER. FOR COVERED PIPES, HANGERS SHALL FIT AROUND THE OUTSIDE OF THE COVERING WITH 12 GAUGE GALVANIZED STEEL SHIELDS OF A LENGTH EQUAL TO THE OUTSIDE DIAMETER OF THE INSULATION AND COVERING 3/4 OF THE CIRCUMFERENCE OF THE INSULATION. SAGS SHALL NOT BE PERMISSIBLE. HORIZONTAL LINES SHALL PITCH DOWN NOT LESS THAN 1 INCH IN 40 FEET. INSULATE WITH 1 INCH CLOSED CELL ARMAFLEX TYPE INSULATION WITH A FLAME DENSITY RATING LESS THAN 25 AND A SMOKE DENSITY RATING LESS THAN 50. ALL JOINTS AND SPLICES IN INSULATION SHALL BE TAPED AND AIR TIGHT. SOLDER REFRIGERATION LINES USING 15 PERCENT SILVER SOLDER AND EVACUATE LINES TO 300 MICRONS. PROVIDE MOISTURE INDICATING SIGHT GLASS AND FILTER DRYER IN LIQUID LINE. PROVIDE OIL TRAPS AND DOUBLE RISERS IN REFRIGERANT SUCTION AND HOT GAS LINES WHERE REQUIRED TO PREVENT OIL SLUGGING AT THE COMPRESSOR AND INSURE PROPER LUBRICATION. MC SHALL BE RESPONSIBLE FOR SEALING LINE SET PENETRATIONS OF ANY RATED ASSEMBLIES IN ACCORDANCE WITH A SYSTEM LISTED IN THE UL DIRECTORY FOR THE SPECIFIC ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR A LIST OF ALL UL FIRE RATED ASSEMBLIES.

METHODS:

1. INSULATE DUCTWORK WITH FIBERGLASS DUCT WRAP; INSTALLED R-VALUE SHALL BE A MINIMUM R-6. COVERINGS AND LININGS, INCLUDING ADHESIVES WHEN USED, SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL NEW DUCTWORK SHALL RECEIVE INSULATION ON THE OUTSIDE. INSTALL DUCT WRAP INSULATION WITH FACING OUTSIDE SO THAT TAPE FLAP OVERLAPS INSULATION AND FACING OF ADJACENT PIECE OF DUCT WRAP. INSULATION SHALL BE TIGHTLY BUTTED. FOR RECTANGULAR DUCTS, INSTALL SO INSULATION IS NOT EXCESSIVELY COMPRESSED AT DUCT CORNERS. STAPLE SEAMS APPROXIMATELY 6 INCHES ON CENTER WITH OUTWARD CLINCHING STAPLES. SEAL SEAMS WITH PRESSURE SENSITIVE TAPE MATCHING THE FACING. FOR RECTANGULAR DUCTS 24 INCHES IN WIDTH OR GREATER, SECURE DUCT WRAP TO THE BOTTOM OF THE DUCT WITH MECHANICAL FASTENERS SPACED 18 INCHES ON CENTER TO PREVENT SAGGING OF INSULATION. ADJACENT SECTIONS OF DUCT WRAP SHALL BE TIGHTLY BUTTED WITH THE 2 INCH TAPE FLAP OVERLAPPING. ALL TEARS, PUNCTURES, ETC. OF THE DUCT WRAP INSULATION SHALL BE SEALED WITH TAPE OR MASTIC TO PROVIDE A VAPOR TIGHT SYSTEM. INSULATION SHALL BE BY KNAUF INSULATION, OWENS CORNING CORP, OR CERTAINTEED CORPORATION.
2. VERIFY THAT DUCTS HAVE BEEN TESTED BEFORE APPLYING INSULATION MATERIALS. VERIFY THAT DUCT SURFACES ARE CLEAN, DRY AND FREE OF FOREIGN MATERIAL PRIOR TO INSULATING. DUCT COVERINGS SHALL NOT PENETRATE A WALL OR FLOOR REQUIRED TO HAVE A FIRE-RESISTANCE RATING OR REQUIRED TO BE FIRE BLOCKED.
3. WHERE DUCTS ARE CONNECTED TO EXTERIOR WALL LOUVERS AND DUCT OUTLET IS SMALLER THAN LOUVER FRAME, PROVIDE BLANK-OUT PANELS SEALING LOUVER AREA AROUND DUCT. USE SAME MATERIAL AS DUCT, PAINTED BLACK ON EXTERIOR SIDE; SEAL TO LOUVER FRAME AND DUCT.
4. DUCTS CONNECTING TO A FURNACE SHALL HAVE A CLEARANCE TO COMBUSTIBLES IN ACCORDANCE WITH THE FURNACE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. FOR STRUCTURES IN FLOOD HAZARD AREAS, DUCTS SHALL BE LOCATED ABOVE THE DESIGN FLOOD ELEVATION. DUCT SHALL NOT BE INSTALLED IN OR WITHIN 4 INCHES OF THE EARTH.
6. PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AT FIRE DAMPERS, COMBINATION FIRE AND SMOKE DAMPERS.
7. CONSTRUCT T's, BENDS, AND ELBOWS WITH RADII OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT ON CENTERLINE. WHERE NOT POSSIBLE AND WHERE RECTANGULAR ELBOWS MUST BE USED, PROVIDE TURNING VANES.
8. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE; MAXIMUM OF 30 DEGREES DIVERGENCE UPSTREAM OF EQUIPMENT AND 45 DEGREES CONVERGENCE DOWNSTREAM.
9. IT SHALL BE THE RESPONSIBILITY OF THE MC TO SUSPEND AND SUPPORT ALL EQUIPMENT, DUCTWORK, DIFFUSERS, AND OTHER MATERIALS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALLY ACCEPTED HANGERS AND SUSPENSION EQUIPMENT. ALL HVAC EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF THE ROOF JOISTS, GIRDERS, AND BEAMS. THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT OR PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL DECKING.
10. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA AT INTERVALS NOT EXCEEDING 10 FEET. DUCTS 36 INCHES OR LARGER SHALL HAVE TRAPEZE TYPE HANGERS SUSPENDED WITH THREADED ROD. SUPPORT DUCTS FROM BAR JOISTS, GIRDERS, OR BEAMS.
11. CHECK LOCATIONS OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENT. COORDINATE WITH SPRINKLER CONTRACTOR IF APPLICABLE.
12. PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL MINIMUM 2 DUCT WIDTHS FROM DUCT TAKE-OFF. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFFS TO DIFFUSERS, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER OR REGISTER ASSEMBLY. ADJUST AIR HANDLING AND DISTRIBUTION SYSTEMS TO PROVIDE DESIGN SUPPLY, RETURN, AND EXHAUST AIR QUANTITIES AT SITE ALTITUDE.
13. MC SHALL INSTALL FIRE DAMPERS AT EACH PENETRATION OF A RATED WALL AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. FIRE DAMPERS SHALL BE UL LABELED (UL 555), CURTAIN TYPE, WITH INTEGRAL FACTORY SLEEVE AND BLADES LOCATED OUTSIDE THE AIR STREAM. INSTALLATION OF ALL FIRE DAMPERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SECTION 607 OF THE 2018 NC MECHANICAL CODE. PROVIDE ACCESS PANELS FOR TESTING AND SERVICE AS NECESSARY. MC SHALL PROVIDE RADIATION DAMPERS AND THERMAL BLANKETS FOR ALL PENETRATIONS OF RATED CEILING ASSEMBLIES. RADIATION DAMPERS SHALL BE UL LABELED (UL 555C) AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC INSTALLATION INSTRUCTIONS. FIRE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, AND CEILING RADIATION DAMPERS SHALL BE BY RUSKIN, NAILOR, OR LLOYD INDUSTRIES.
14. MC SHALL INSTALL PROGRAMMABLE THERMOSTATS AS SHOWN ON THE PLANS. THERMOSTAT SHALL BE MOUNTED AT 48 INCHES AFF. THERMOSTATS SHALL MEET THE REQUIREMENTS OF SECTION C403.2.4 OF THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.
15. FRESH AIR INTAKES SHALL BE INSTALLED ON ALL UNITS AS SHOWN ON DRAWINGS. MAINTAIN 10 FEET OF DISTANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST TERMINATIONS AND PLUMBING VENT THRU ROOFS.
16. MC SHALL INSTALL ALL EXHAUST FANS AND VENT TO THE BUILDING'S EXTERIOR. EC SHALL SWITCH FANS WITH LIGHTS OR ON SEPARATE SWITCH AS SHOWN.
17. P-TRAPS MUST BE INSTALLED ON ALL UNITS. MC SHALL INSTALL AUXILIARY DRAIN PANS UNDER OVERHEAD AIR HANDLERS AND AN AUTOMATIC CUT-OFF FLOAT SWITCH FOR EACH. P-TRAPS AND CONDENSATE LINES SHALL BE 1 INCH. P-TRAPS AND CONDENSATE LINES MAY BE PVC WHERE NOT LOCATED IN PLENUMS; OTHERWISE, THEY SHALL BE TYPE M COPPER. CONDENSATE SHALL BE ROUTED TO DAYLIGHT OR STORM DRAIN.
18. INSTALL BACKDRAFT DAMPERS ON FRESH AIR AND EXHAUST DUCTS WHERE THEY PENETRATE THE THERMAL ENVELOPE PER NORTH CAROLINA ENERGY CONSERVATION CODE C402.5.5

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NORTH CAROLINA PROFESSIONAL SEAL 17304 ENGINEER MICHAEL W. KILLIAN
05/21/2025

KILLIAN ENGINEERING, INC. CORPORATE SEAL NORTH CAROLINA

New Building for
INNOVATIVE GLASS SOLUTIONS
BURT WINSTON ROAD
FRANKLIN COUNTY, NC

DWG BY: DC
CHK BY: KDC
DATE: 5/21/25
REVISIONS:

NOTES, SCHEDULES

SHEET NO.
M1
240813

UNIT 1

MECHANICAL SYSTEM, SERVICE SYSTEMS, AND EQUIPMENT

METHOD OF COMPLIANCE	PRESCRIPTIVE
THERMAL ZONE	ZONE 4A
EXTERIOR DESIGN CONDITIONS	
HEATING DESIGN DRY BULB	23.1°F
COOLING DESIGN DRY BULB	91.7°F
COOLING DESIGN WET BULB	75.6°F
INTERIOR DESIGN CONDITIONS	
HEATING DESIGN DRY BULB	70°F
COOLING DESIGN DRY BULB	75°F
COOLING RELATIVE HUMIDITY	50%
HEATING LOAD	32,000 BTU/H
SENSIBLE COOLING LOAD	40,000 BTU/H
LATENT COOLING LOAD	6,000 BTU/H
MECHANICAL SPACING CONDITIONING SYSTEM:	
UNITARY	AIR COOLED DX
DESCRIPTION OF UNIT(S)	4 TON SPLIT SYSTEM HEAT PUMP
BOILER	N/A
TOTAL BOILER OUTPUT	N/A
CHILLER	N/A
TOTAL CHILLER CAPACITY	N/A
EQUIPMENT EFFICIENCIES:	SEE SCHEDULES
EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS):	SEE SCHEDULES

DESIGNER STATEMENT:

TO THE BEST OF MY KNOWLEDGE, THE MECHANICAL DESIGN FOR THIS BUILDING COMPLIES WITH MECHANICAL AND EQUIPMENT REQUIREMENTS OF THE 2018 NORTH CAROLINA STATE BUILDING CODE AND 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.

Ventilation Calculation (For Unit unit 1)

Room Name(s)	Zone Type	Area (sq.ft.)	Rp	Ra	Default Occupancy	Pz	Ez	Airflow to Zone (cfm)
OFFICE	Office Space	778	5	0.06	5	3.89	0.8	860
BREAKROOM	Meeting/Conference Room	275	5	0.06	50	13.75	0.8	340
COORIDOR	Corridors	505	0	0.06	0	0.00	0.8	400
	N/A	0	0	0	0	0.00	0.8	0
	N/A	0	0	0	0	0.00	0.8	0

		Maximum Zp:	0.313419
K-12 School?	No	**Ev:**	0.8
		Actual System Population:	8
Uncorrected Intake	133 cfm		
Outdoor Air Intake	*167 cfm*		
Percent of Unit Air	10%		

UNIT 2

MECHANICAL SYSTEM, SERVICE SYSTEMS, AND EQUIPMENT

METHOD OF COMPLIANCE	PRESCRIPTIVE
THERMAL ZONE	ZONE 4A
EXTERIOR DESIGN CONDITIONS	
HEATING DESIGN DRY BULB	23.1°F
COOLING DESIGN DRY BULB	91.7°F
COOLING DESIGN WET BULB	75.6°F
INTERIOR DESIGN CONDITIONS	
HEATING DESIGN DRY BULB	70°F
COOLING DESIGN DRY BULB	75°F
COOLING RELATIVE HUMIDITY	50%
HEATING LOAD	28,500 BTU/H
SENSIBLE COOLING LOAD	34,500 BTU/H
LATENT COOLING LOAD	6,000 BTU/H
MECHANICAL SPACING CONDITIONING SYSTEM:	
UNITARY	AIR COOLED DX
DESCRIPTION OF UNIT(S)	3.5 TON SPLIT SYSTEM HEAT PUMP
BOILER	N/A
TOTAL BOILER OUTPUT	N/A
CHILLER	N/A
TOTAL CHILLER CAPACITY	N/A
EQUIPMENT EFFICIENCIES:	SEE SCHEDULES
EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS):	SEE SCHEDULES

DESIGNER STATEMENT:

TO THE BEST OF MY KNOWLEDGE, THE MECHANICAL DESIGN FOR THIS BUILDING COMPLIES WITH MECHANICAL AND EQUIPMENT REQUIREMENTS OF THE 2018 NORTH CAROLINA STATE BUILDING CODE AND 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.

Ventilation Calculation (For Unit unit 2)

Room Name(s)	Zone Type	Area (sq.ft.)	Rp	Ra	Default Occupancy	Pz	Ez	Airflow to Zone (cfm)
OFFICE	Office Space	460	5	0.06	5	2.30	0.8	610
CONFERENCE RM	Meeting/Conference Room	256	5	0.06	50	12.80	0.8	460
COORIDOR	Corridors	254	0	0.06	0	0.00	0.8	130
BATHROOM	N/A	236	0	0	0	0.00	0.8	200
	N/A	0	0	0	0	0.00	0.8	0

		Maximum Zp:	0.215652
K-12 School?	No	**Ev:**	0.9
		Actual System Population:	9
Uncorrected Intake	103 cfm		
Outdoor Air Intake	*115 cfm*		
Percent of Unit Air	8%		

DS Residential Split Schedule

Residental Products are rated in Net MBH

(2) Weight (each) with factory installed options

ject Na: Innovative Glass

Tag #	Sequence	Model Number	Brand	Qty	Supply Air Blower Airflow (cfm) SA	Supply Air Blower Airflow (cfm) OA	Supply Air Blower ESP (IWG)	Cooling: Temperature (°F) Ent. Air DB	Ent. Air WB	Lvg. Air DB	Lvg. Air WB	Lvg. Air DP	OD Amb	Capacity MBH[1] Total	Capacity MBH[1] Sens.	EER	SEER	Refrig-erant	Heating: Temp (°F) Ent. DB	Lvg. DB	Applied Electric kW	Heat Pump Ratings: Airflow (cfm)	OD	MBH	Cop	HSPF	Electrical: Voltage	MCA	Max Fuse	Weight[2]
HP-1	1	THE48B31S	York	1	1600	170		80.0	67.0	60.3	58.0	56.6	95	46.3	34.0	12	14.5	R410A	60.0	89.7		1600.00	47.00	51.40	4.20	9	208/230-3-60	18.42	30	251.0
AHU-1	1	JHETC48GBCS2N1	York	1	1600	170	0.5	80.0	67.0	60.3	58.0	56.6	95	46.3	34.0	12	14.5	R410A	60.0	74.2	7.20						208-3-60	31.7	35	129.0
HP-2	2	THE42B33S	York	1	1375	170		80.0	67.0	60.2	57.7	56.1	95	40.7	29.4	12	15	R410A	60.0	87.3		1400.00	47.00	40.60	3.70	8.55	208/230-3-60	19.7	30	235.0
AHU-2	2	JHETC42FBCS2N1	York	1	1375	170	0.5	80.0	67.0	60.2	57.7	56.1	95	40.7	29.4	12	15	R410A	60.0	76.6	7.20						208-3-60	29.7	30	125.0

1. PROVIDE CONCRETE PAD FOR UNIT TO SIT ON
2. PROVIDE HAIL GUARDS FOR COIL
3. CONSULT MANUFACTURER ON LINE SET LENGTHS EXCEEDING 60FT
4. OR EQUAL BY CARRIER, LENNOX, OR TRANE
5. ANY EQUIPMENT SUBSTITUTIONS MUST EQUAL OR EXCEED EFFICIENCIES LISTED (RATINGS PER ARI)
6. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES

1. PROVIDE HEAT STRIP OUTDOOR TEMPERATURE LOCKOUT TO PREVENT SUPPLEMENTAL HEAT OPERATION IN RESPONSE TO THE THERMOSTAT BEING CHANGED TO A WARMER SETTING. SET NO LOWER THAN 35°F AND NO HIGHER THAN 40°F
2. REPLACE ALL FILTERS AT PROJECT'S COMPLETION
3. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH NIGHT-TIME SET BACK
4. CONSULT MANUFACTURER ON LINE SET LENGTHS EXCEEDING 60FT
5. HEATER RATED AT 208V
6. OR EQUAL BY CARRIER, LENNOX, OR TRANE
7. ANY EQUIPMENT SUBSTITUTIONS MUST EQUAL OR EXCEED EFFICIENCIES LISTED (RATINGS PER ARI)
8. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES

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10/17/2025 11:38:24 AM

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NORTH CAROLINA PROFESSIONAL SEAL 17304 ENGINEER MICHAEL W. KILIAN
05/21/2025

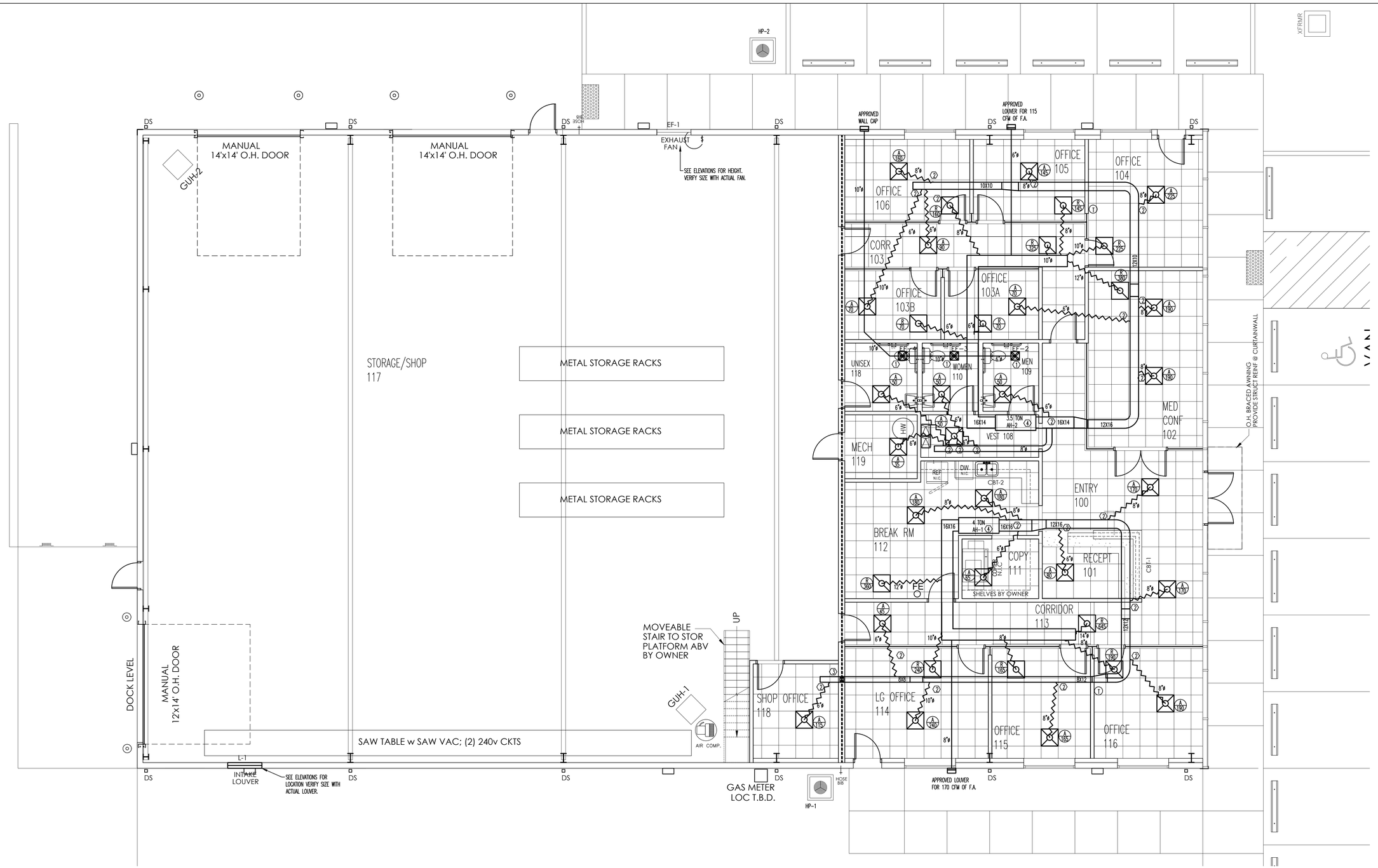
KILIAN ENGINEERING, INC. CORPORATE SEAL NORTH CAROLINA

INNOVATIVE GLASS SOLUTIONS
New Building for
BURT WINSTON ROAD
FRANKLIN COUNTY, NC

DWG BY: DJC
CHK BY: KDC
DATE: 5/21/25
REVISIONS:

SCHEDULES

SHEET NO.
M2
240813



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MECHANICAL PLAN HEX NOTES

1. MC TO ROUTE EXHAUST DUCT FROM EF-2-4 TO EXTERIOR THROUGH WALL. TERMINATE WITH ROOF CAP OR HOODED WALL CAP A MIN. OF 10'-0" FROM FRESH AIR LOUVER.
2. PROVIDE BALANCING DAMPER AT ALL TAKEOFFS.
3. PROVIDE FIRE RATED DAMPER THRU RATED WALL. SEE DETAIL ON SHEET M3.
4. SET A.H. AT MIN. 10'-8" ABOVE FINISHED FLOOR. DRAIN CONDENSATION TO EXTERIOR. TIE INTO CLOSEST DOWNSPOUT OR TERMINATE 12' FROM GRADE.

(T) THERMOSTAT LOCATION MOUNT AT 48" A.F.F.

EXHAUST FAN SCHEDULE									
MARK	MFG / MODEL #	TYPE	ESP (in WG)	CFM	VOLT/PH	FLA	SONES	NOTES
EF-2-4	GREENHECK SP-B110	CEILING	0.40	96	120/1	1.14	2.0	1-3

1. PROVIDE WITH PITCHED ROOF CURB & CAP FOR FLAT OR SLOPED ROOF, OR HOODED WALL WITH BACKDRAFT DAMPER CAP AS APPLICABLE.
2. PROVIDE WITH SQUARE TO ROUND DUCT ADAPTER AS NECESSARY
3. OR EQUAL BY LORCIN COOK OR PENNBARRY OR TWIN CITY
4. VERIFY VOLTAGE BEFORE ORDERING.

REGISTER & GRILLE SCHEDULE						
MARK	MFG	MODEL #	SIZE	MOUNTING	DESCRIPTION	NOTES
A	HART & COOLEY	HVS	24X24	LAY-IN	4-WAY DIFFUSER, BRIGHT WHITE	1, 2
R	HART & COOLEY	94AT	24X24	LAY-IN	STEEL, LAY IN, RETURN GRILLE	1

1. OR EQUAL BY PRICE, METAL-AIRE, CARNES, TITUS OR NAILOR.
2. PROVIDE WITH FOIL LINED, MOLDED INSULATION BLANKET.

MECHANICAL PLAN SCALE: 3/16"=1'-0"

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BURT WINSTON ROAD
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DWG BY: DJC
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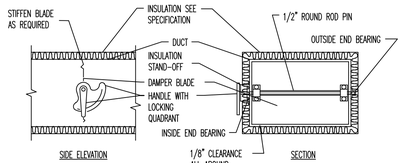
MECHANICAL PLAN

SHEET NO.
M3

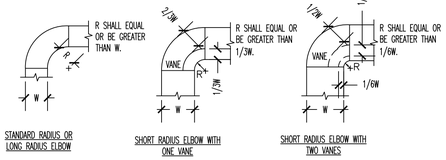
240813



NOTE:

1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.
3. FOR 1 in wg PRESSURE CLASS, DELETE SOLID 1/2" ROUND PIN

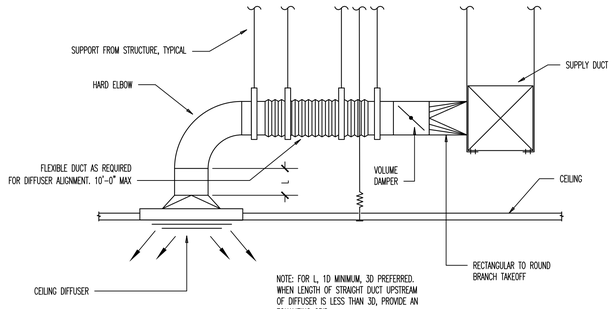
BALANCING DAMPER DETAIL-NO SCALE | 1



NOTES:

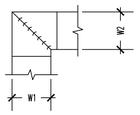
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
2. ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

ACCEPTABLE ELBOWS-NO SCALE | 2



NOTE: FOR L, 1D MINIMUM, 3D PREFERRED. WHEN LENGTH OF STRAIGHT DUCT UPSTREAM OF DIFFUSER IS LESS THAN 3D, PROVIDE AN EQUALIZING GRID

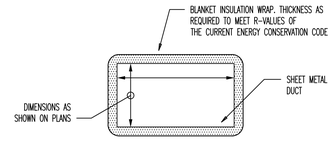
DIFFUSER RUN-OUT DETAIL-NO SCALE | 3



NOTES:

1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" RADIUS, 1 1/2" MAXIMUM SPACE BETWEEN VANES AND A 3/4" TRAILING EDGE.
4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20" VANES SHALL BE DOUBLE VANE TYPE.

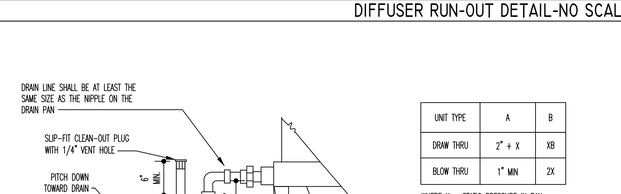
SQUARE ELBOW DETAIL-NO SCALE | 4



NOTES:

1. ALL DUCT DIMENSIONS SHOWN ON THE PLANS ARE INSIDE CLEAR.
2. PROVIDE A MINIMUM OF R-5 INSULATION WHEN DUCT IS LOCATED IN AN UNCONDITIONED SPACE
3. PROVIDE A MINIMUM OF R-8 INSULATION WHEN DUCT IS LOCATED OUTSIDE THE BUILDING ENVELOPE
4. DUCT THICKNESS GAUGE AND REINFORCEMENT SHALL BE PER SMACNA FOR 2 in w. g. STATIC PRESSURE CLASS.
5. USE DUCT LINER FOR FIRST 10 FEET OF SUPPLY AND RETURN DUCTS CONNECTING TO ROOFTOP UNITS.

DUCT INSULATION DETAIL-NO SCALE | 5



UNIT TYPE	A	B
DRAW THRU	2" + X	XB
BLOW THRU	1" MIN	2X

WHERE X = STATIC PRESSURE IN PAN

NOTES:

1. DRAIN LINE SHALL BE INSULATED WHERE MOISTURE FROM SWEATING WILL BE OBJECTIONABLE OR CAUSE DAMAGE TO AREA.
2. FOR UNITS LOCATED ABOVE CEILINGS, PROVIDE 3/4" MINIMUM SECONDARY DRAIN PIPING. ROUTE TO A POINT WHERE LEAKAGE WILL BE NOTICEABLE.
3. MINIMUM AIR GAP SHALL BE EQUAL TO TWO (2) TIMES THE INTERNAL DIAMETER OF THE CONDENSATE DRAIN PIPING.
4. DRAIN PAN SHALL HAVE A MINIMUM DEPTH OF 1.5" AND SHALL NOT BE LESS THAN 3" LARGER THAN THE UNIT DIMENSIONS.

P-TRAP DETAIL-NO SCALE | 6

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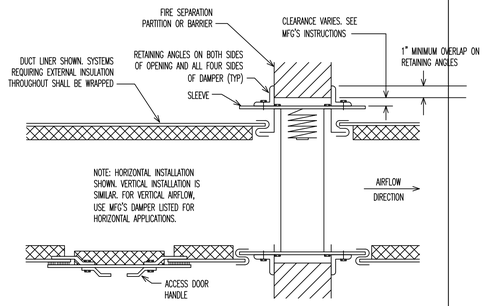
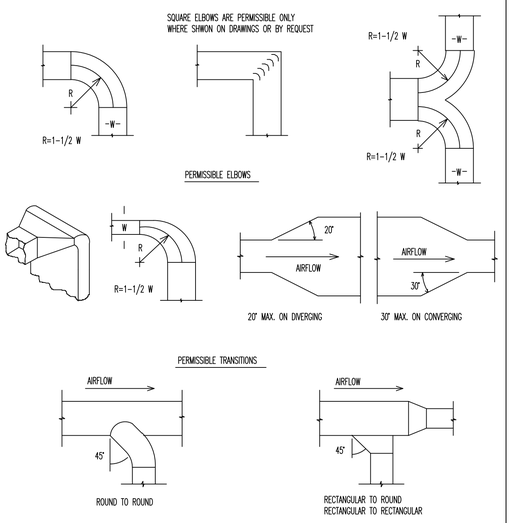


NOTES:

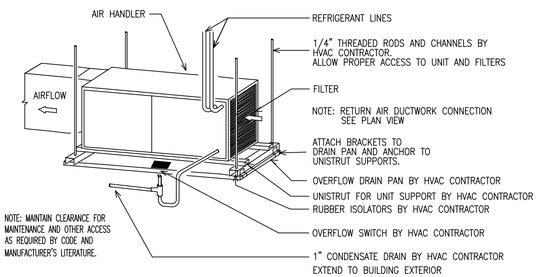
1. INSTALL PER MANUFACTURER'S INSTALLATION AND INSTRUCTIONS AND UL 555.
2. FASTEN RETAINING ANGLES AND SLEEVE PER MANUFACTURER'S INSTRUCTIONS
3. PROVIDE REMOVABLE ACCESS DOOR (16" X DUCT WIDTH – 2") WITH CAM TYPE LATCHES. ACCESS DOOR/DAMPER ORIENTATIONS TO BE FIELD VERIFIED.
4. INSTALL DAMPERS SO THAT LATCHING DEVICE, IF PRESENT, IS ACCESSIBLE FROM ACCESS DOOR.
5. ALL DUCTWORK, LATCHING DEVICES, ANGLES, GASKETS, SLEEVES, FIRE OR SMOKE DAMPERS, AND FUSIBLE LINKS ARE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR
6. MANUFACTURER'S INSTRUCTIONS SHALL TAKE PRECEDENCE OVER THIS DETAIL IN EVENT OF CONFLICT.

FIRE DAMPER DETAIL-NO SCALE | 7



NOTE: AIRFLOW ARROWS ARE SHOWN FOR SUPPLY DUCT BY DEFAULT. AIRFLOW DIRECTION IS REVERSED FOR RETURN AND EXHAUST DUCTWORK.

ACCEPTABLE DUCT TRANSITIONS-NO SCALE | 8



TYPICAL OVERHEAD AIR HANDLER-NO SCALE | 9

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05/21/2025

KILIAN ENGINEERING, INC. CORPORATE SEAL NORTH CAROLINA

INNOVATIVE GLASS SOLUTIONS
New Building for
BURT WINSTON ROAD
FRANKLIN COUNTY, NC

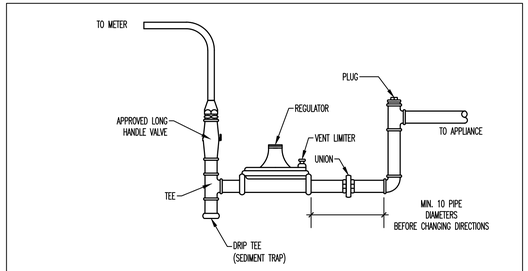
DWG BY: DC
CHK BY: RDZ
DATE: 5/21/25
REVISIONS:

MECH. DETAILS

SHEET NO.
M4
240813

GENERAL GAS LINE PIPING NOTES

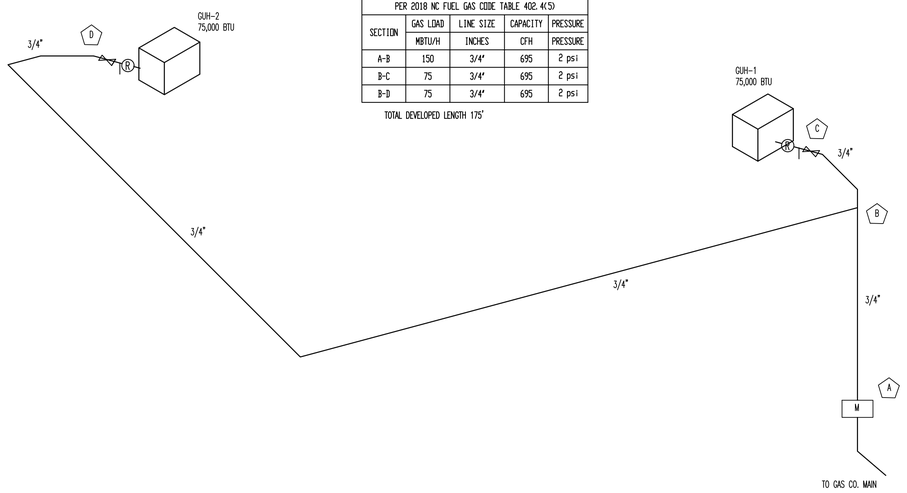
1. THE GAS PIPING CONTRACTOR (GPC) SHALL PROVIDE ALL MATERIALS AND LABOR AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
2. THE GPC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA FUEL GAS CODE AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE MORE STRINGENT SHALL BE USED. THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ENGINEER IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
3. THE GPC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
4. DO NOT SCALE THESE DRAWINGS–REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
5. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS.
6. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
7. THE CONTRACTOR SHALL INSTALL HIGH PRESSURE REGULATORS AT EACH PIECE OF EQUIPMENT AS NECESSARY.
8. INSTALL A DRIP LEG IN GAS LINE AT EACH POINT WHERE CONDENSATE COULD COLLECT. ALL DRIP LEGS SHALL BE READILY ACCESSIBLE FOR CLEANING OR EMPTYING.
9. PIPING SHALL BE SCHEDULE 40 STEEL OR WROUGHT IRON AND COMPLY WITH ANSI/ASME B36.10, ASTM A 53, OR ASTM A 106.
10. ALL PIPES AND FITTINGS SHALL BE NEW, FREE OF DEFECTS, AND RATED FOR THE APPLICATION.
11. ALL PIPING SHALL BE INSTALLED SO AS NOT TO BE SUBJECT TO PHYSICAL DAMAGE.
12. PVC VENT PIPING SHALL NOT BE INSTALLED INDOORS.
13. THE TYPE OF PIPING JOINT USED SHALL BE SUITABLE FOR THE PRESSURE–TEMPERATURE CONDITIONS AND SHALL BE SELECTED CONSIDERING JOINT TIGHTNESS AND MECHANICAL STRENGTH UNDER THE SERVICE CONDITIONS.
14. PIPE JOINTS SHALL BE THREADED, FLANGED, BRAZED, OR WELDED.
15. FLEXIBILITY SHALL BE PROVIDED BY THE USE OF BENDS, LOOPS, OFFSETS, OR COUPLINGS OF THE SLIP TYPE. PROVISIONS SHALL BE MADE TO ABSORB THERMAL CHANGES BY THE USE OF EXPANSION JOINTS OF THE BELLOWS TYPE OR BY THE USE OF "BALL" OR "SWIVEL" JOINTS. DO NOT USE EXPANSION JOINTS OF THE SLIP TYPE INSIDE THE BUILDING. PIPE ALIGNMENT GUIDES SHALL BE USED WITH EXPANSION JOINTS PER THE MFG.
16. ALL GAS PIPING SHALL BE LABELED TO INDICATE THE PRESSURE.
17. PIPE HANGERS AND SUPPORTS SHALL CONFORM TO ANSI/MSS SP–58.
18. BENDS SHALL BE MADE ONLY WITH BENDING TOOLS AND PROCEDURES INTENDED FOR THAT PURPOSE. DO NOT BEND PIPE THROUGH AN ARC OF MORE THAN 90°. ALL BENDS SHALL BE SMOOTH AND FREE OF CRACKS, BUCKLING, OR OTHER EVIDENCE OF DAMAGE.
19. INSTALL GAS SHUTOFF VALVES UPSTREAM OF EACH GAS REGULATOR. VALVES SHALL BE READILY ACCESSIBLE AND NOT SUBJECT TO PHYSICAL DAMAGE.
20. WHERE A SEDIMENT TRAP IS NOT INCORPORATED AS PART OF THE APPLIANCE, A SEDIMENT TRAP SHALL BE INSTALLED DOWNSTREAM OF THE APPLIANCE SHUTOFF VALVE AS CLOSE TO THE INLET OF THE APPLIANCE AS PRACTICAL.
21. PRIOR TO ACCEPTANCE BY THE OWNER, ALL GAS PIPING INSTALLATIONS SHALL BE INSPECTED AND PRESSURE TESTED IN ACCORDANCE WITH SECTION 406 OF THE NC FUEL GAS CODE.

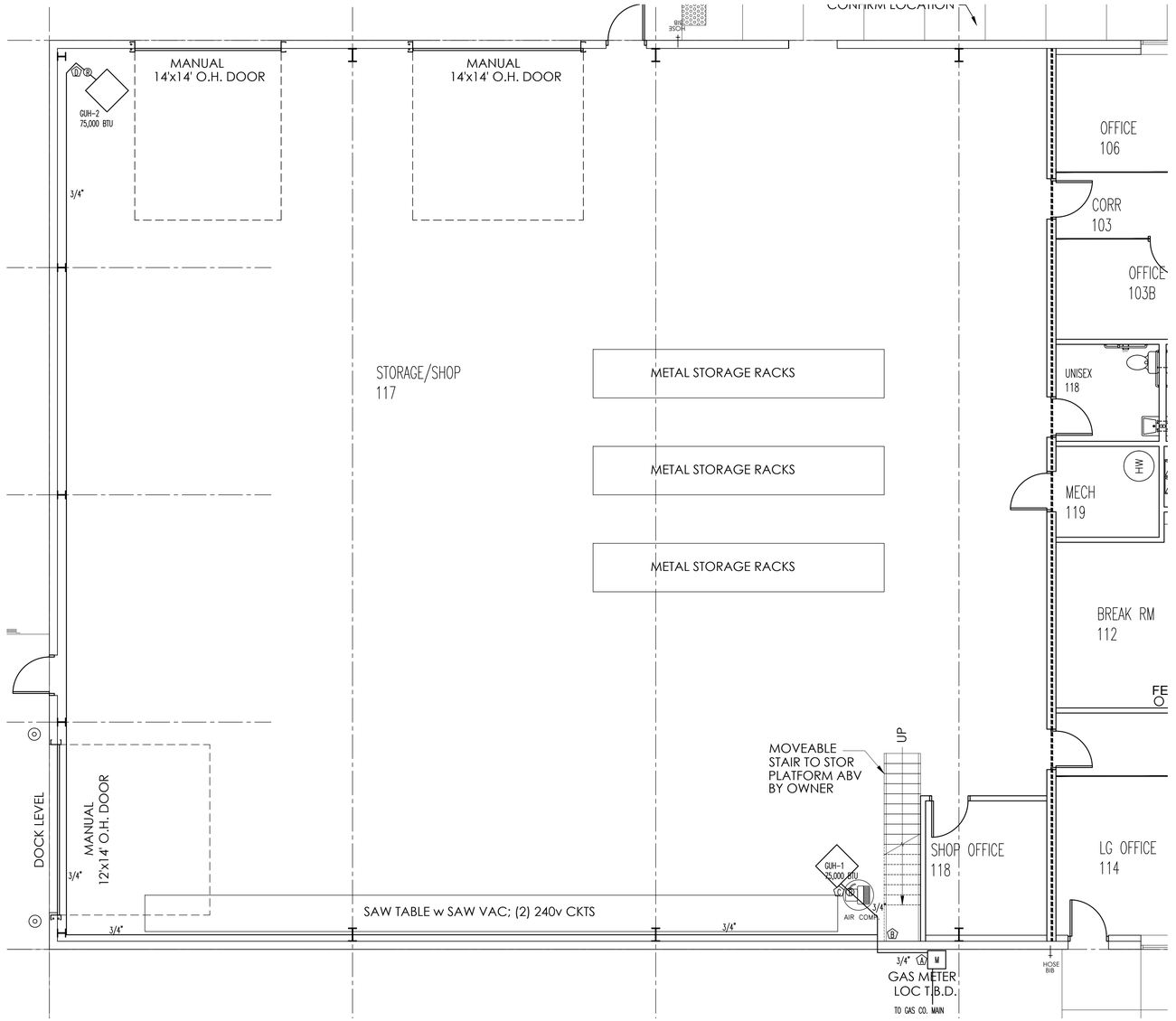


GAS PIPING REGULATOR DETAIL ONE PER APPLIANCE- NO SCALE

GAS LINE SIZING VERIFICATION TABLE				
PER 2018 NC FUEL GAS CODE TABLE 402.4(5)				
SECTION	GAS LOAD	LINE SIZE	CAPACITY	PRESSURE
	MBTU/H	INCHES	CFH	PRESSURE
A–B	150	3/4"	695	2 psi
B–C	75	3/4"	695	2 psi
B–D	75	3/4"	695	2 psi

TOTAL DEVELOPED LENGTH 175'





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10/17/2025 11:38:25 AM

GAS RISER & NOTES - SCALE: NTS | 1

GAS PLAN - SCALE: 3/16"=1'-0" | 2

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FRANKLIN COUNTY, NC

DWG BY: DC
CHK BY: KDC
DATE: 5/21/25
REVISIONS:

GAS PLANS

SHEET NO.
G1
240813

ELECTRICAL DESIGNER'S STATEMENT			
ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE PRESCRIPTIVE _X_ PERFORMANCE ___ ENERGY COST BUDGET ___			
LIGHTING SCHEDULE:			
LAMP TYPE REQUIRED IN FIXTURE:		SEE LIGHTING LEGEND	
NUMBER OF LAMPS PER FIXTURE:		SEE LIGHTING LEGEND	
BALLAST TYPE USED IN FIXTURE:		SEE LIGHTING LEGEND	
NUMBER OF BALLASTS IN FIXTURE:		SEE LIGHTING LEGEND	
TOTAL WATTAGE PER FIXTURE:		SEE LIGHTING LEGEND	
TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED:		WATTS SPECIFIED	WATTS ALLOWED x 90%
		3172.0	5696
OCCUPANCY	AREA (sf)	ALLOWANCE (W/sf)	WATTAGE ALLOWED
OFFICE	3000	0.82	2364
WAREHOUSE	6009	0.66	3965.00
TOTAL	9009		6329
EQUIPMENT SCHEDULES WITH MOTORS (NOT USED FOR MECHANICAL SYSTEMS) MOTOR HORSEPOWER: N/A NUMBER OF PHASES: N/A MINIMUM EFFICIENCY: N/A MOTOR TYPE: N/A NUMBER OF POLES: N/A			
DESIGNER STATEMENT: TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.			

FOR THE ADDITIONAL PRESCRIPTIVE REQUIREMENT REQUIRED BY C406 OF 2018 NORTH CAROLINA ENERGY CONSERVATION CODE, WE ARE CHOOSING C406.3 – REDUCED LIGHTING POWER DENSITY.

3172 W SPECIFIED <= 5696 W

NOTES FOR EMERGENCY FIXTURES

1. FOR INTERIOR FIXTURES WITH EMERGENCY BATTERIES, WIRE THE BATTERY CHARGER ON THE SAME CIRCUIT AS THE FIXTURE BALLAST AHEAD OF ALL SWITCHES, SENSORS, ETC.
2. FOR EXTERIOR FIXTURES WITH EMERGENCY BATTERIES, WIRE THE BATTERY CHARGER ON THE SAME CIRCUIT AS THE NORMAL EXTERIOR LIGHTS AHEAD OF ALL CONTACTORS, PHOTOCELLS, ETC.
3. IN BOTH CASES, EMERGENCY POWER SHOULD INITIATE ONLY IN THE EVENT OF THE LOSS OF NORMAL POWER. ALL BATTERIES SHALL BE RATED TO POWER TWO (2) LAMPS FOR 90 MINUTES MINIMUM.

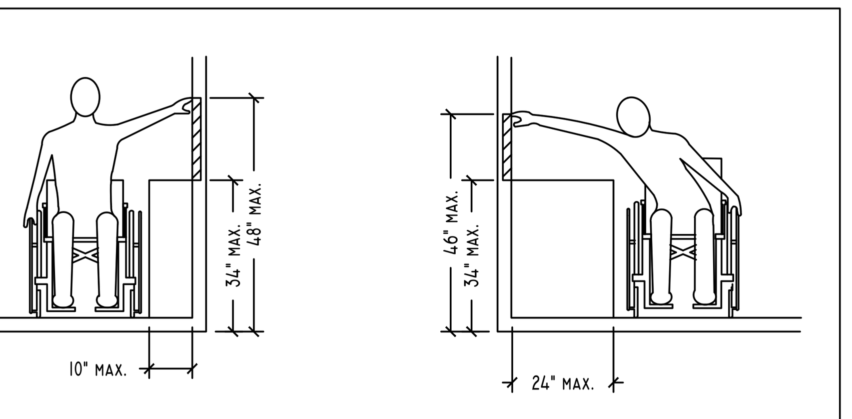
VOLTAGE DROP SCHEDULE

120V CIRCUITS < 8 AMPS (1.0 kVA)

DISTANCE TO 1ST LOAD	AWG SIZE
0' – 120'	#12
121' – 190'	#10
191' – 300'	#8
301' – 470'	#6

120V CIRCUITS 9 TO 14 AMPS (1.0–1.7 kVA)

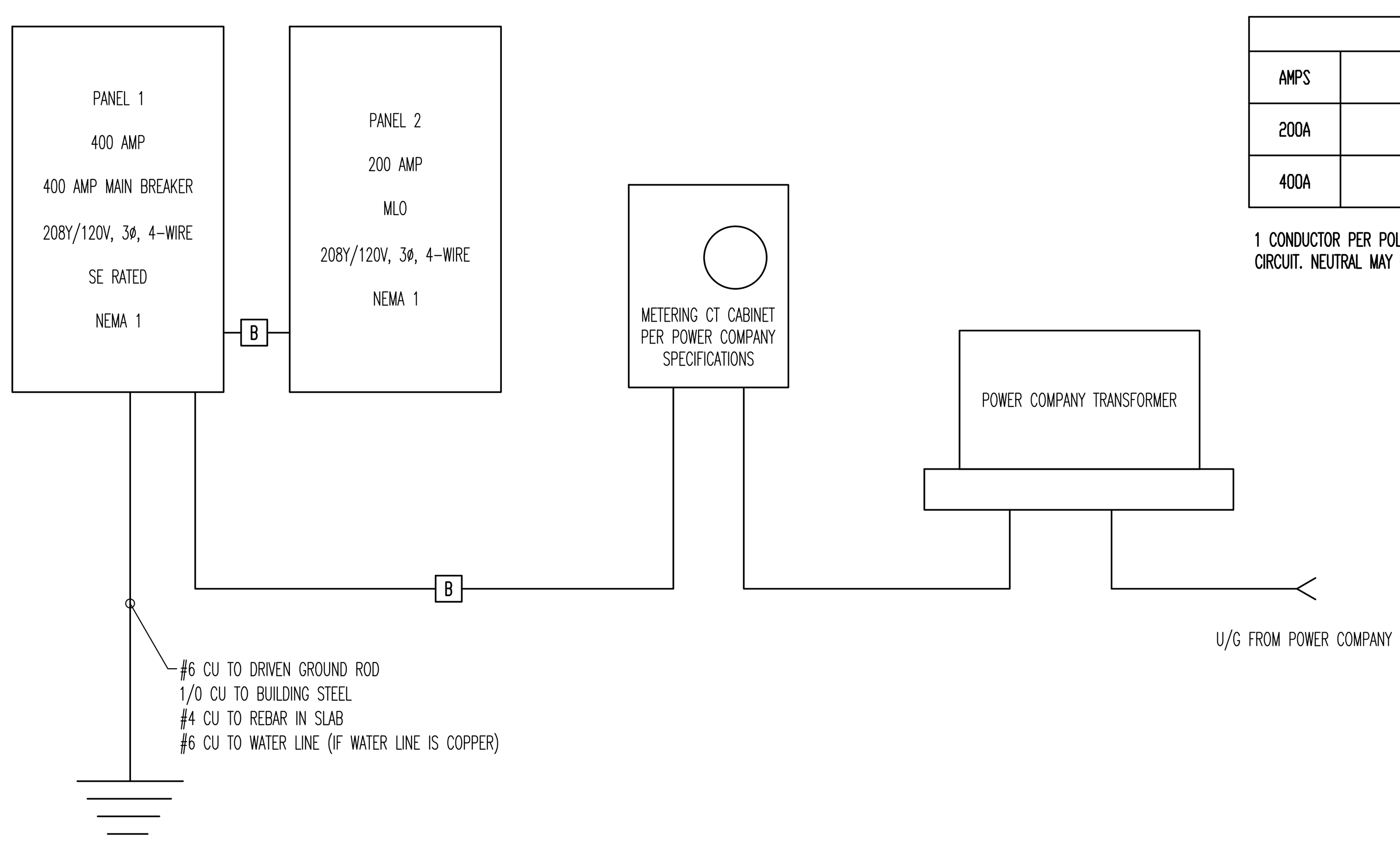
DISTANCE TO 1ST LOAD	AWG SIZE
0' – 65'	#12
66' – 110'	#10
111' – 170'	#8
171' – 270'	#6



ANSI A117.1 FIG. 308.3.2. OBSTRUCTED HIGH REACH SIDE.
ALL SWITCHES AND CONTROLS MUST COMPLY FOR ALL COUNTERTOPS

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. --PFaulkner
10/17/2025 11:38:25 AM

ELECTRICAL SCHEDULES | 1



BREAKER FEEDER SCHEDULE [B]			
AMPS	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
200A	3/0	#6	2 1/2"
400A	2 SETS – 3/0	#3	2 1/2"

1 CONDUCTOR PER POLE PLUS NEUTRAL PER SET. E.C. TO VERIFY NECESSITY OF NEUTRAL FOR EACH CIRCUIT. NEUTRAL MAY BE DELETED IF NOT REQUIRED FOR INDIVIDUAL PIECES.

ELECTRICAL POWER RISER | 2

GENERAL ELECTRICAL NOTES:

ADMINISTRATIVE:

1. THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS: PC – PLUMBING CONTRACTOR, EC – ELECTRICAL CONTRACTOR, MC – MECHANICAL CONTRACTOR, GC – GENERAL CONTRACTOR, FASC – FIRE ALARM SYSTEM CONTRACTOR, AHJ – AUTHORITY HAVING JURISDICTION.
2. "PROVIDE" MEANS TO FURNISH AND INSTALL. THE ELECTRICAL CONTRACTOR SHALL ALSO INSTALL MATERIALS AND EQUIPMENT FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR AS REQUIRED.
3. EC SHALL PROVIDE LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY AND REASONABLY INCIDENTAL TO INSURE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. MINOR ITEMS, ACCESSORIES, AND DEVICES REASONABLY INFERABLE AS NECESSARY FOR THE COMPLETION AND PROPER OPERATION OF ANY ELECTRICAL SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
4. WORKMANSHIP SHALL BE IN ACCORDANCE WITH NECA 1 "STANDARD PRACTICE FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING."
5. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE ELECTRICAL CONTRACTOR AT AN APPROVED LOCATION. THE ELECTRICAL CONTRACTOR SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE ELECTRICAL CONTRACTOR UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
6. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
7. DO NOT SCALE THESE DRAWINGS–REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
8. TRADE NAMES AND MANUFACTURERS ARE SPECIFIED TO ESTABLISH A QUALITY STANDARD. SUBSTITUTIONS SHALL BE PERMITTED IF APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ALL LISTED MODEL NUMBERS SHALL BE VERIFIED WITH THE MANUFACTURER FOR PROPER APPLICATION OF EQUIPMENT.
9. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
10. GROUNDING AND BONDING SHALL BE PER NEC ARTICLE 250. THE RACEWAY SYSTEM SHALL NOT BE RELIED UPON FOR GROUNDING CONTINUITY. A GREEN EQUIPMENT GROUNDING CONDUCTOR, SIZED PER NEC TABLE 250–122, SHALL BE RUN IN ALL POWER RACEWAYS. FOR NON–ISOLATED GROUND CIRCUITS PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. FOR ISOLATED GROUND CIRCUITS, PROVIDE ONE NEUTRAL AND ONE ISOLATED GROUND WIRE FOR EACH CIRCUIT; IN ADDITION, PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. MAIN BONDING JUMPERS AND SYSTEM BONDING JUMPERS SHALL BE INSTALLED IN ACCORDANCE WITH 250.28 OF THE NEC. FOR BUILDINGS OR STRUCTURES SUPPLIED BY FEEDERS OR BRANCH CIRCUITS, GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH 250.32. SEPARATELY DERIVED AC SYSTEMS SHALL BE GROUNDED IN ACCORDANCE WITH 250.30. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS; ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED PER 250.54 AS NECESSARY.
11. THE ELECTRICAL CONTRACTOR SHALL ALSO COORDINATE WITH THE GENERAL CONTRACTOR REGARDING THE BONDING OF THE FOOTING REBAR, SO THAT IT WILL BE IN PLACE AND READY AT TIME OF FOOTING INSPECTION.
12. ALL MATERIALS AND EQUIPMENT SHALL COMPLY WITH THE UNDERWRITERS' LABORATORIES, INC. STANDARDS OR HAVE UL APPROVAL, OR BEAR UL RE–EXAMINATION LISTING WHERE SUCH APPROVAL HAS BEEN ESTABLISHED FOR THE TYPE OF DEVICE IN QUESTION.
13. CONDUCTORS, FUSES, CIRCUIT BREAKERS, AND DISCONNECT SWITCHES SHOWN ON THESE PLANS HAVE BEEN SIZED FOR THE SPECIFIED EQUIPMENT. BEFORE ORDERING ELECTRICAL EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON THE SITE AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES SHOULD CONDUCTOR, CIRCUIT BREAKER, OR FUSE SIZES REQUIRE CHANGE.
14. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE THE FOLLOWING MATERIALS ARE RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT: LIGHT FIXTURES, INCLUDING PROPER DISPOSAL OF BALLASTS, FLUORESCENT LIGHT BULBS, AND TRANSFORMERS, WIRING AND ELECTRICAL EQUIPMENT, AND INSULATION. WASTE MATERIALS CONTAINING LEAD, ASBESTOS, PCBs (FLUORESCENT LAMP BALLASTS), OR OTHER HARMFUL SUBSTANCES SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL AND STATE LAWS AND REQUIREMENTS CONCERNING HAZARDOUS WASTE.
15. ALL WORK SHALL CONFORM TO 2020 NATIONAL ELECTRIC CODE, 2018 STATE BUILDING CODE, AND ALL APPLICABLE LOCAL CODES.

MATERIALS:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY DISCONNECTS, SWITCHES, RECEPTACLES, TERMINALS, ETC, UNDER THE ELECTRICAL BID AND SHALL INCLUDE ALL NECESSARY CIRCUITS AND CONNECTIONS TO THE EQUIPMENT PROVIDED BY ALL SUPPLIERS, UNLESS NOTED OTHERWISE BY OTHER DISCIPLINES.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SERVICE ENTRANCE EQUIPMENT, SUB PANELS, AND OTHER ELECTRICAL DISTRIBUTION EQUIPMENT AS NECESSARY FOR A COMPLETE INSTALLATION. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH UTILITY REGARDING SERVICE AND METERING DETAILS. PRIOR TO ORDERING EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL OBTAIN THE AVAILABLE FAULT CURRENT OR TRANSFORMER SIZE AND IMPEDANCE FROM THE UTILITY AND CONTACT THE ENGINEER IF THE VALUE EXCEEDS THE EQUIPMENT SPECIFIED. PANEL BOARDS AND SWITCH BOARDS SHALL BE SQUARE D, CUTLER–HAMMER, SIEMENS, OR GE. BUSES SHALL BE COPPER UNLESS OTHERWISE APPROVED BY THE ENGINEER. RECESSED PANEL BOARDS SHALL BE INSTALLED FLUSH WITH THE WALL FINISH. METER BASES SHALL COMPLY WITH THE UTILITY'S SPECIFICATIONS AND SHALL BE MOUNTED AT A HEIGHT APPROVED BY THE UTILITY. ALL EQUIPMENT IDENTIFIED FOR SERVICE ENTRANCE USE SHALL BE SO LABELED AND UL LISTED FOR SUCH USE. ELECTRICAL CONTRACTOR SHALL INSTALL ALL ELECTRICAL EQUIPMENT WITH CLEARANCES PER NEC 110.26. ELECTRICIAN SHALL PERMANENTLY LABEL EQUIPMENT PER NEC 110.24.
3. ENCLOSED SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE BY SQUARE D, EATON, OR GE. ENCLOSED SWITCHES SHALL HAVE A HANDLE LOCKABLE IN THE OFF POSITION AND SHALL HAVE A HANDLE INTERLOCKED TO PREVENT OPENING THE FRONT COVER WHILE IN THE ON POSITION. ENCLOSED SWITCHES OF THE FUSIBLE TYPE SHALL BE FUSED IN ACCORDANCE WITH NAMEPLATE DATA WITH DUAL ELEMENT TYPE FUSES BY BUSSMAN, LITTELFUSE, OR MERSEN.
4. OCCUPANCY SENSORS SHALL BE BY WATTSTOPPER, LUTRON, LEVITON, SENSOR SWITCH, HUBBELL, OR APPROVED EQUAL.
5. CIRCUIT BREAKERS SHALL BE MOLDED–CASE, THERMAL MAGNETIC TYPE WITH QUICK–MAKE, QUICK–BREAK MECHANISM, COMMON TRIP ON MULTI–POLE BREAKERS, AND UL LISTED FOR BOTH COPPER AND ALUMINUM CONDUCTORS. CIRCUIT BREAKERS IN PANELS SHALL BE SERIES RATED WITH THE MAIN BREAKER, FULLY RATED FOR THE SYSTEM, OR SERIES RATED WITH THE BREAKER FEEDING THE PANEL FROM THE FACTORY.
6. ALL WIRE, CONNECTORS, TERMINALS, AND LUGS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WHERE CONDUCTORS ARE RUN IN PARALLEL, LUGS SHALL BE LISTED FOR PARALLEL CONDUCTORS. PUSH WIRE CONNECTORS ARE NOT ALLOWED FOR BUILDING WIRE. PUSH CONNECTORS ARE ONLY ALLOWED, WHEN APPROVED, AS PART OF MANUFACTURED LISTED PRODUCTS. ALL WIRE SHALL BE INSTALLED IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE.
7. THE INSULATION TYPE FOR INTERIOR WIRING SHALL BE DUAL RATED THHN/THWN OR XHHW; ALL WIRING INSTALLED BELOW GRADE OR IN MOIST OR WET LOCATIONS SHALL HAVE TYPE THWN OR XHHW INSULATION. INSULATION VOLTAGE RATING SHALL BE 600 VOLTS AND A MINIMUM TEMPERATURE RATING OF 75°C. CONDUCTORS SHALL BE SOLID OR STRANDED COPPER FOR #10 AWG AND #12 AWG, AND STRANDED COPPER FOR #8 AWG AND LARGER SIZES. ALL WIRING AND CABLE SHALL BE UL LISTED. ALL TERMINATIONS AND DEVICES SHALL BE RATED FOR USE WITH 75°C CONDUCTORS. FINAL CONNECTIONS TO ALL MOTORS AND EQUIPMENT SUBJECT TO VIBRATION OR MOVEMENT SHALL BE MADE WITH STRANDED COPPER CONDUCTORS. CONDUCTORS SHALL BE BY CERRO WIRE, INC, INDUSTRIAL WIRE & CABLE, INC, ENCORE WIRE CORPORATION, OR SOUTHWIRE COMPANY.
8. JOINTS IN SOLID CONDUCTORS SHALL BE SPLICED USING IDEAL "WIRE NUTS", 3M "SCOTCH LOCK", OR T&B "PIGGY" CONNECTORS IN JUNCTION BOXES, OUTLET BOXES, AND LIGHTING FIXTURES. JOINTS IN STRANDED CONDUCTORS SHALL BE SPLICED BY APPROVED MECHANICAL CONNECTORS AND GUM RUBBER TAPE OR FRICTION TAPE. SOLDERLESS MECHANICAL CONNECTORS FOR SPLICES AND TAPS, PROVIDED WITH UL APPROVED INSULATING COVERS, MAY BE USED INSTEAD OF MECHANICAL CONNECTORS PLUS TAPE. IN ALL CASES, CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICING SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES, TROUGHS, OR GUTTERS. WHERE CONCENTRIC, ECCENTRIC, OR OVERSIZED KNOCKOUTS ARE ENCOUNTERED, A GROUNDING TYPE INSULATED BUSHING SHALL BE PROVIDED.
9. ALL LUMINAIRES SHALL BE LISTED. LUMINAIRES IN WET OR DAMP LOCATIONS SHALL BE MARKED AS SUITABLE FOR THE RESPECTIVE USE. EMERGENCY LIGHTING SHALL BE INSTALLED AS SHOWN. FINAL LOCATIONS OF ALL EXIT AND EMERGENCY LIGHTS SHALL BE VERIFIED WITH THE BUILDING INSPECTOR PRIOR TO INSTALLATION. ALL FLUORESCENT FIXTURES SHALL HAVE ELECTRONIC BALLASTS MEETING ANSI C82.11 FOR ELECTRONIC BALLAST PERFORMANCE. ALL BALLASTS SHALL BE UL LISTED AND MEET FEDERAL AND STATE EFFICIENCY REQUIREMENTS.
10. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. CONDUIT FITTINGS AND COUPLINGS SHALL BE BY APPLETON, RACO, OR O–Z/GEDNEY. COUPLINGS SHALL BE THREADED, SET–SCREW, OR COMPRESSION TYPE. INDENTER OR CRIMP TYPE ARE NOT PERMITTED. CONDUIT FITTINGS AT ALL ELECTRICAL BOXES INCLUDING PULL, JUNCTION, AND OUTLET BOXES, SHALL HAVE INSULATED THROATS TO PREVENT INSULATION SCORING. DIE CAST FITTINGS ARE NOT PERMITTED
11. EMT SHALL BE MANUFACTURED IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE–AMERICAN NATIONAL STANDARD FOR STEEL ELECTRICAL METALLIC TUBING (EMT), ANSI C80.3 AND UL 797. RIGID METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI–AMERICAN NATIONAL STANDARD FOR ELECTRICAL RIGID STEEL CONDUIT (ERSC), ANSI C80.1 AND UL 6. INTERMEDIATE METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI–AMERICAN NATIONAL STANDARD FOR INTERMEDIATE METAL CONDUIT ANSI C80.6 AND UL 1242.
12. METAL CONDUIT SHALL BE BY ALLIED TUBING & CONDUIT, BECK MANUFACTURING, INC, OR WHEATLAND TUBE COMPANY. FLEXIBLE METAL CONDUIT, LIQUID–TIGHT FLEXIBLE METAL CONDUIT, AND NONMETALLIC CONDUIT SHALL BE BY AFC CABLE SYSTEMS, INC, ELECTRI–FLEX COMPANY, OR INTERNATIONAL METAL HOSE.

METHODS:

1. EC SHALL REVIEW THE MECHANICAL PLANS TO ESTABLISH POINTS OF CONNECTION AND THE EXTENT OF THE ELECTRICAL WORK TO BE PROVIDED IN THE CONTRACT.
2. ALL CIRCUIT BREAKERS FEEDING HVAC EQUIPMENT SHALL BE HACR BREAKERS. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG IN 3/4 in CONDUIT. EACH MULTI–WIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE SOURCE PER NEC 210.4(B). GROUP ALL CONDUCTORS OF EACH MULTI–WIRE BRANCH CIRCUIT PER 210.4(D) WITH WIRE TIES OR SIMILAR MEANS. DO NOT EXCEED THREE HOMERUNS PER CONDUIT. DO NOT INSTALL ISOLATED GROUND AND NON–ISOLATED GROUND CIRCUITS IN THE SAME CONDUIT. INSTALL CONDUCTORS OF DIFFERENT VOLTAGES IN SEPARATE CONDUITS.
3. COLOR CODE CONDUCTORS PER NEC. FEEDERS SHALL BE IDENTIFIED IN ACCORDANCE WITH NEC 215.12. USE BLACK, RED, AND BLUE FOR PHASES A, B, AND C RESPECTIVELY ON 208Y/120 VOLT THREE–PHASE Y SYSTEMS AND WHITE FOR THE NEUTRAL. ISOLATED GROUND WIRES SHALL BE GREEN WITH YELLOW BANDS OR STRIPES. ; THIS IDENTIFICATION SHALL BE MADE AT EACH POINT WHERE A CONNECTION IS MADE. COLORS SHALL BE FACTORY APPLIED FOR CONDUCTORS #6 AWG AND SMALLER. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN IN COLOR AND MINIMUM #12 AWG. THE EC SHALL PROVIDE PLENUM RATED CABLE FOR ANY ELECTRICAL, TELEPHONE, COMMUNICATION, OR OTHER CABLE THAT ENTERS CEILING RETURN PLENUMS.
4. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING. COORDINATE LIGHTING LAYOUT WITH CEILING GRID, MECHANICAL EQUIPMENT, DUCTWORK AND SPRINKLER HEADS AS NECESSARY. SEE REFLECTED CEILING PLAN FOR DETAILS. FLUORESCENT FIXTURES UTILIZING DOUBLE–ENDED LAMPS MUST HAVE A DISCONNECTING MEANS COMPLYING WITH NEC 410.130(G).
5. MOUNT LIGHT SWITCHES AT 48 in AFF. MULTIPLE SWITCHES AT SAME LOCATION SHALL BE UNDER ONE WALL PLATE. VERIFY WALL PLATE COLOR AND MATERIAL WITH THE ARCHITECT/OWNER. INSTALL SWITCHES WITH off POSITION DOWN. ALL SWITCHES SHALL BE HEAVY DUTY, IVORY PLASTIC WITH TOGGLE HANDLE, RATED 120–277V AC, AND COMPLYING WITH NEMA WD 6 AND WD 1. SWITCHES SHALL BE BY COOPER WIRING DEVICES, LEVITON MANUFACTURING, PASS & SEYMOUR, OR HUBBELL. PROVIDE BOX DEVICE PARTITION/DIVIDERS FOR MULTI–GANG BOXES FOR COMPLIANCE WITH NEC 404.8(B).
6. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE–STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE–RESISTANCE RATING. SEAL PENETRATIONS USING A UL LISTED SYSTEM FOUND IN THE UL DIRECTORY SPECIFIC TO THE UL LISTING OF THE ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR UL RATED ASSEMBLIES SPECIFIC TO THIS PROJECT.
7. ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLES IN KITCHENS, RESTROOMS, OUTDOORS, AND IN SHOP AREAS AS REQUIRED BY NEC. REFRIGERATORS AND WATER COOLERS MUST HAVE A DEDICATED GFCI BREAKER. EACH OUTDOOR HVAC UNIT MUST HAVE A GFCI RECEPTACLE WITHIN 25 FEET FOR SERVICING. GFCI RECEPTACLES SHALL CONFORM TO UL 943 CLASS A AND UL 498 STANDARDS. RECEPTACLES SHALL BE BY COOPER WIRING DEVICES, LEVITON MANUFACTURING, PASS & SEYMOUR, OR HUBBELL. ALL RECEPTACLES SHALL BE 125V RATED, HEAVY DUTY, AND COMPLY WITH NEMA WD 6 AND WD 1.
8. LOCATIONS AND HEIGHTS OF ALL WALL–MOUNTED DEVICES SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION.
9. CONCEAL ALL CONDUIT EXCEPT IN MECHANICAL ROOMS OR UNFINISHED AREAS AS NOTED. USE EMT CONDUIT FOR ALL BRANCH CIRCUITS AND FEEDERS INSIDE THE BUILDING. TYPE MC CABLE AND TYPE AC CABLE MAY BE INSTALLED WITHIN WALLS IF ALL NEUTRAL WIRES, ISOLATED GROUND WIRES, AND EQUIPMENT GROUND WIRES AS LISTED ABOVE ARE CONTAINED IN THE CABLE. *** TYPE NM CABLE MAY BE USED FOR INTERIOR BRANCH CIRCUITS IN NORMALLY DRY LOCATIONS SUBJECT TO THE RESTRICTIONS OF NEC 334.10 AND 334.12. TYPE NM CABLE CONDUCTORS SHALL BE DERATED PER NEC 334.80. *** FLEXIBLE CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SHALL BE MADE USING WEATHERPROOF FLEXIBLE CONDUIT. FOR LAY–IN LIGHT FIXTURES, USE MAXIMUM OF SIX (6) FEET OF FLEXIBLE MC CABLE (OR THE FLEXIBLE CONDUIT PROVIDED BY THE FIXTURE MANUFACTURER). SCHEDULE 40 PVC CONDUIT MAY BE USED FOR THE SECONDARY UNDERGROUND SERVICE, UNDERGROUND TELEPHONE SERVICE, AND BRANCH AND FEEDER CIRCUITS UNDER SLAB OR EXTERIOR TO THE BUILDING. EXPOSED EXTERIOR CONDUIT SHALL BE SCHEDULE 80 PVC. ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED WITH UNDERGROUND LINE MARKING TAPE 6–8 in BELOW GRADE DIRECTLY ABOVE THE RACEWAY. PROVIDE PULL WIRE IN EMPTY CONDUITS. UPSIZE CONDUIT FROM MINIMUM SIZE AS NECESSARY FOR LONGER PULLS. UNDERGROUND RACEWAYS THAT STUB INTO THE BOTTOM OF SWITCHBOARDS, OUTDOOR TRANSFORMERS, GENERATORS, ETC., SHALL RISE AT LEAST 2 in ABOVE THE FINISHED SLAB TO PREVENT WATER FROM DRAINING INTO THE RACEWAYS. RACEWAYS THAT PENETRATE EXTERIOR WALLS OR INTERIOR PARTITIONS SEPARATING SPACES THAT WILL BE AT SIGNIFICANTLY DIFFERENT TEMPERATURES SHALL BE SEALED IN ACCORDANCE WITH 300.5(G), 300.7(A), AND 300.50(E) OF THE NEC. ROUTE CONDUIT IN AND UNDER SLAB FROM POINT–TO–POINT. ROUTE EXPOSED CONDUIT AND CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS. COMPLETELY AND THOROUGHLY SWAB ALL RACEWAYS BEFORE INSTALLING WIRE. PULL ALL CONDUCTORS INTO EACH RACEWAY AT ONE TIME. USE A SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE #4 AWG AND LARGER.
10. CABLES, RACEWAYS, OR BOXES, INSTALLED IN EXPOSED OR CONCEALED LOCATIONS UNDER METAL–CORRUGATED SHEET ROOF DECKING, SHALL BE INSTALLED AND SUPPORTED SO THERE IS NOT LESS THAN 1–1/2 in MEASURED FROM THE LOWEST SURFACE OF THE ROOF DECKING TO THE TOP OF THE CABLE, RACEWAY, OR BOX. A CABLE, RACEWAY, OR BOX SHALL NOT BE INSTALLED IN CONCEALED LOCATIONS IN METAL–CORRUGATED, SHEET DECKING–TYPE ROOF. SEE NEC 300.4(E).
11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL OUTLET, JUNCTION, PULL BOXES, FITTINGS, AND SUPPORTS. ALL OUTLET AND JUNCTION BOXES SHALL BE GALVANIZED STEEL TYPE BY APPLETON, STEEL CITY, OR RACO. EXTERIOR BOXES SHALL BE TYPE FS. VAPORTITE BOXES SHALL BE TYPE GS. WHERE SURFACE MOUNTED BOXES ARE USED, THOSE BOXES AND THEIR FACEPLATES SHALL HAVE ROUNDED CORNERS. BOXES INSTALLED IN FLOORS SHALL BE RATED FOR THE APPLICATION. MOUNT JUNCTION AND OUTLET BOXES FLUSH WITH FINISH SURFACES UNLESS OTHERWISE NOTED. WHERE MOUNTING HEIGHTS ARE GIVEN, THEY SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE CENTER OF THE BOX. ALL BOXES SHALL BE SIZED PER NEC ARTICLE 314. ALL OUTLET AND JUNCTION BOXES SHALL HAVE A COVER PLATE, PROVIDED BY THE ELECTRICAL CONTRACTOR. OUTLET BOXES IN RATED WALLS SHALL BE INSTALLED IN ACCORDANCE WITH NORTH CAROLINA BUILDING CODE 714.3.2 (MAXIMUM BOX SIZE IS 16 SQUARE in AND MAXIMUM OF SIX (6) BOXES PER 100 SQUARE FEET). INSTALL OUTLET BOXES IN RATED WALLS SUCH THAT OPENINGS OCCUR IN ONE SIDE ONLY WITHIN ANY GIVEN STUD SPACE. ALL CLEARANCES BETWEEN THE OUTLET BOX AND THE GYPSUM BOARD SHALL BE FILLED WITH JOINT COMPOUND OR OTHER APPROVED FIRE STOP MATERIAL. FLUSH MOUNTED JUNCTION BOXES IN ADJACENT ROOMS SHALL NOT BE MOUNTED BACK–TO–BACK. SURFACE MOUNTED FIXTURES SHALL BE FED THROUGH FLUSH MOUNTED 4X4 OCTAGONAL OR SQUARE BOXES.
12. ALL CONDUIT, BOXES, AND ELECTRICAL EQUIPMENT SHALL BE FIRMLY AND SECURELY FASTENED TO OR SUPPORTED FROM THE BUILDING STRUCTURAL MEMBERS OR EMBEDDED IN CONCRETE OR MASONRY. ELECTRICAL SUPPORTS SHALL NOT BE ATTACHED TO DUCTWORK, PIPING, OR THEIR SUPPORTS. HANGERS SHALL BE CATALOG ITEMS COMPATIBLE WITH AND SUITABLE FOR THE INTENDED USE. FOR METAL ROOF DECK INSTALLATIONS, 1 in EMT CONDUIT MAXIMUM AND 4 in JUNCTION BOXES MAXIMUM MAY BE SUPPORTED BY DECKING. THE SUSPENDED CEILING SYSTEM SHALL NOT BE USED FOR THE SUPPORT OF ELECTRICAL RACEWAY SYSTEMS OR SUPPORT OF COMMUNICATIONS OR DATA SYSTEMS WIRING. CONTRACTOR SHALL COMPLY WITH 1613 OF THE NORTH CAROLINA GENERAL CONSTRUCTION BUILDING CODE.
13. WHERE CONDUCTORS ARE RUN IN PARALLEL, THE EC SHALL COMPLY WITH NEC 310.4.
14. PROVIDE AN UNDERGROUND PVC CONDUIT SYSTEM FOR TELEPHONE SERVICE WITH PULL WIRES. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH TELEPHONE UTILITY REGARDING ADDITIONAL FACILITIES REQUIRED FOR THE SERVICE INSTALLATION.
15. INSTALL ONE (1) 3/4 in FIRE RETARDANT TREATED PLYWOOD BACKBOARD WHERE INDICATED ON THE DRAWINGS FOR THE USE BY THE TELEPHONE SYSTEM. PROVIDE A 120 VOLT RECEPTACLE ADJACENT TO THE TELEPHONE BOARD. GROUND ALL TELEPHONE AND COMMUNICATIONS CIRCUITS PER NEC 800.
16. ALL TELEPHONE AND COMMUNICATIONS OUTLETS AND RACEWAYS ARE ROUGH–INS ONLY. EACH TELEPHONE AND COMMUNICATIONS OUTLET SHALL BE A 4 in SQUARE BY 2–1/8 in DEEP BOX WITH 3/4 in KNOCK–OUTS AND A 3/4 in CONDUIT STUBBED FROM THE OUTLET BOX TO ABOVE THE CEILING. PROVIDE A NON–METALLIC INSULATING BUSHING ON ALL CONDUITS STUBBED ABOVE THE CEILING. PROVIDE A BLANK COVER PLATE ON ALL OUTLET BOXES.
17. ELECTRICAL CONTRACTOR SHALL INSTALL DISCONNECT SWITCHES IN SIGHT OF ALL HARDWIRED EQUIPMENT AND APPLIANCES OR PROVIDE BREAKERS CAPABLE OF BEING LOCKED IN THE OPEN POSITION PER NEC 422.31. FOR MOTOR DRIVEN APPLIANCES, PROVIDE A DISCONNECTING MEANS PER NEC 422.31 AND 430 PART IX. WHERE AN INDIVIDUAL DISCONNECT SWITCH, CIRCUIT BREAKER, STARTER, ETC, IS SHOWN ON THE PLANS ADJACENT TO ITS LOAD AND NOT LOCATED ON A WALL, PROVIDE NECESSARY MATERIALS AND LABOR TO SUPPORT THE DEVICE.
18. ELECTRICAL CONTRACTOR SHALL FIELD IDENTIFY ALL SWITCH BOARD, PANEL BOARDS, CONTROL PANELS, METER SOCKETS, ETC., TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS PER 110.16 OF NEC.
19. ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT, SWITCHES, PANELS, ETC. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT, AND BACK WITH WHITE CORE, WHITE ENGRAVED LETTERS (1/4 in MINIMUM) ETCHED INTO THE WHITE CORE. ELECTRICAL CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD THAT ACCURATELY IDENTIFIES CIRCUITS INSIDE EACH PANEL. HANDWRITTEN LABELS ARE NOT ACCEPTABLE.
20. IN ACCORDANCE WITH SECTION F510 OF THE NC FIRE PREVENTION CODE, TESTING WILL BE REQUIRED TO DETERMINE SATISFACTORY FIRST RESPONDER RADIO SIGNAL STRENGTH INSIDE EACH BUILDINGS ON SITE. TESTING WILL NEED TO EITHER BE COMPLETED BY A COUNTY FIRE INSPECTOR (OBTAIN BY REQUESTING A COURTESY INSPECTION) OR A CERTIFIED 3RD PARTY. TESTING SHALL TAKE PLACE AT BOTH 80% PROJECT COMPLETION AND AGAIN AT 100% COMPLETION. IF UNACCEPTABLE SIGNAL DEGRADATION IS PRESENT AT EITHER 80% OR 100% INSPECTION, THEN AN ACCEPTABLE BOOSTER SYSTEM SHALL BE ADDED TO THE BUILDING DESIGN AT THAT TIME.

GENERAL ELECTRICAL NOTES | 3

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Kilian Engineering, Inc.
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(P) 252.438.8778 | CORPORATE LICENSE C-2277

NORTH CAROLINA PROFESSIONAL SEAL 17304 ENGINEER MICHAEL W. KILIAN
05/21/2025
KILIAN ENGINEERING, INC. CORPORATE SEAL NORTH CAROLINA

New Building for
INNOVATIVE GLASS SOLUTIONS
BURT WINSTON ROAD
FRANKLIN COUNTY, NC

DWG BY: DC
CHK BY: KDC
DATE: 5/21/25
REVISIONS:

NOTES, SCHEDULES & RISER

SHEET NO.
E1
240813

PANEL 1								
CKT	LOAD	BKR	LOAD kVA	PH	LOAD kVA	BKR	LOAD	CKT
1	OFFICE 106 RECPT.	20/1	0.72	A	0.72	20/1	OFFICE 105 RECPT.	2
3	OFFICE 104 RECPT.	20/1	0.72	B	0.72	20/1	CONFERENCE RM. RECPT.	4
5	CONFERENCE RM RECPT.	20/1	0.90	C	0.72	20/1	OFFICE 103 RECPT.	6
7	GFCI BATH RECPT.	20/1	0.54	A	0.54	20/1	CORRIDOR RECPT.	8
9	GFCI. WATER COOLER RECPT.	20/1*	0.18	B	0.36	20/1	PHONE BD. RECPT.	10
11	PHONE BD. RECPT.	20/1	0.36	C	0.18	20/1*	REFRIG. RECPT.	12
13	DW RECPT.	20/1*	0.36	A	0.36	20/1	GFCI C-TOP RECPT.	14
15	GFCI C-TOP RECPT.	20/1	0.36	B	0.54	20/1	BREAK RM RECPT.	16
17	COPIER RECPT.	20/1	0.72	C	0.90	20/1	RECEPTION 101 RECPT.	18
19	OFFICE 114 RECPT.	20/1	0.72	A	0.72	20/1	OFFICE 115 RECPT.	20
21	OFFICE 116 RECPT.	20/1	0.72	B	1.20	20/1	SIGN CKT.	22
23	OFFICE 118 RECPT.	20/1	0.90	C	1.00	20/1	CHARGER RECPT.	24
25	CHARGER RECPT.	20/1	1.00	A	1.00	20/1	CHARGER RECPT.	26
27	WAREHOUSE RECPT.	20/1	0.36	B	0.54	20/1	WAREHOUSE RECPT.	28
29	WAREHOUSE RECPT.	20/1	0.54	C	2.50	30/2**	AIR COMP. RECPT.	30
31	GUH-1	20/1	0.18	A	2.50			32
33	GUH-2	20/1	0.18	B	0.00	20/1	SPARE	34
35	SPARE	20/1	0.00	C	0.00	20/1	SPARE	36
37	SPARE	20/1	0.00	A	20.20	200/3	PANEL 2	38
39	SPACE		0.00	B	19.00			40
41	SPACE		0.00	C	18.40			42
			kVA	PH	AMPS			
			29.6	A	246			
			24.9	B	207			
			27.1	C	226			

VOLTAGE/PHASE	208Y/120V, 3P, 4W
BUS RATING	400A
MAIN CIRCUIT BREAKER RATING	400A MB
AIC RATING	22K AIC
SERVICE ENTRANCE RATED	YES
ENCLOSURE	NEMA 1
MOUNTING	SURFACE

* USE GFCI BREAKER.

** VERIFY ELECTRICAL REQUIREMENTS WITH ACTUAL AIR COMP. BEING INSTALLED BEFORE ROUGH IN.

PANEL 2								
CKT	LOAD	BKR	LOAD kVA	PH	LOAD kVA	BKR	LOAD	CKT
1	OFFICE LIGHTING	20/1	0.96	A	1.14	20/1	OFFICE LIGHTING	2
3	WAREHOUSE LIGHTING	20/1	0.97	B	0.90	20/1	WAREHOUSE LIGTING	4
5	EXTERIOR LIGHTING	20/1	0.60	C	2.08	30/2**	BIG ASS FAN	6
7	WATER HEATER	30/2	2.25	A	2.08			8
9			2.25	B	1.08	20/1	EF-1	10
11	AH-1	35/3	3.80	C	2.21	30/3	HP-1	12
13			3.80	A	2.21			14
15			3.80	B	2.21			16
17	AH-2	30/3	3.56	C	2.36	30/3	HP-2	18
19			3.56	A	2.36			20
21			3.56	B	2.36			22
23	SAW	30**	1.87	C	0.00		SPACE	24
25			1.87	A	0.00		SPACE	26
27	SAW	30**	1.87	B	0.00		SPACE	28
29			1.87	C	0.00		SPACE	30
31	SPACE		0.00	A	0.00		SPACE	32
33	SPACE		0.00	B	0.00		SPACE	34
35	SPACE		0.00	C	0.00		SPACE	36
37	SPACE		0.00	A	0.00		SPACE	38
39	SPACE		0.00	B	0.00		SPACE	40
41	SPACE		0.00	C	0.00		SPACE	42
			kVA	PH	AMPS			
			20.2	A	169			
			19.0	B	158			
			18.4	C	153			

VOLTAGE/PHASE	208Y/120V, 3P, 4W
BUS RATING	200A
MAIN CIRCUIT BREAKER RATING	MLO
AIC RATING	22K AIC
SERVICE ENTRANCE RATED	NO
ENCLOSURE	NEMA 1
MOUNTING	SURFACE

** VERIFY ELECTRICAL REQUIREMENTS WITH ACTUAL EQUIPMENT BEING INSTALLED BEFORE ROUGH IN.

NEC ELECTRIC DEMAND SUMMARY 208Y/120V, 3P, 4W							
EQUIPMENT	DEMAND FACTOR	kVA A	kVA B	kVA C	LOAD kVA	NEC REFERENCE	NOTES/CALCULATIONS
LIGHTING	125%	3.60	3.60	3.60	10.80	220.12	9000SF X 1.2 VA/SF
RECEPTACLES < 10 kVA	100%	3.33	3.33	3.33	9.99	220.44	
RECEPTACLES > 10 kVA	50%	1.20	1.20	1.20	3.60	220.44	
HVAC	100%	11.90	11.90	11.90	35.70	--	BASED ON MCA
WATER HEATER	125%	2.84	2.84	0.00	5.68	422.13	STORAGE TANK (120 GAL @ 125%
SIGN	100%	0.00	1.20	0.00	1.20	220.14(F)	
EQUIPMENT	SEE CODE	2.77	2.77	2.77	8.31		
DEMAND kVA PER PHASE		25.64	26.84	22.80			
DEMAND AMPS PER PHASE		214	224	190			

THE CALCULATED LIGHTING LOAD EXCEEDS THE CONNECTED LIGHTING LOAD.

EQUIPMENT CONNECTION SCHEDULE								
SYMBOL	DESCRIPTION	FURN. BY	VOLT/PH	MCA	MOCP	AWG	EGC	COND.
AH-1	4 TON AIR HANDLER	MC	208/3	31.7	35	#8	#10	1"
HP-1	4 TON HEAT PUMP	MC	208/3	18.4	30	#10	#10	3/4"
AH-2	3.5 TON AIR HANDLER	MC	208/3	29.7	30	#10	#10	3/4"
HP-2	3.5 TON HEAT PUMP	MC	208/3	19.7	30	#10	#10	3/4"
BIG ASS FAN	POWERFOIL 8	EC	208/1	20	30	#10	#10	3/4"
WATER HEATER	40 GAL. W.H.	PC	208/3	21.6	30	#10	#10	3/4"
AIR COMP.	AIR COMP.	OWNER	208/1	20	30	#10	#10	3/4"
SAW	SAW	OWNER	208/1	20	30	#10	#10	3/4"

VERIFY SAW AND AIR COMP. ELECTRICAL REQUIREMENTS BEFORE ROUGH IN. ADJUST FOR VOLTAGE DROP AS NEEDED.

REVIEWED FOR CODE COMPLIANCE
FRANKLIN COUNTY NORTH CAROLINA
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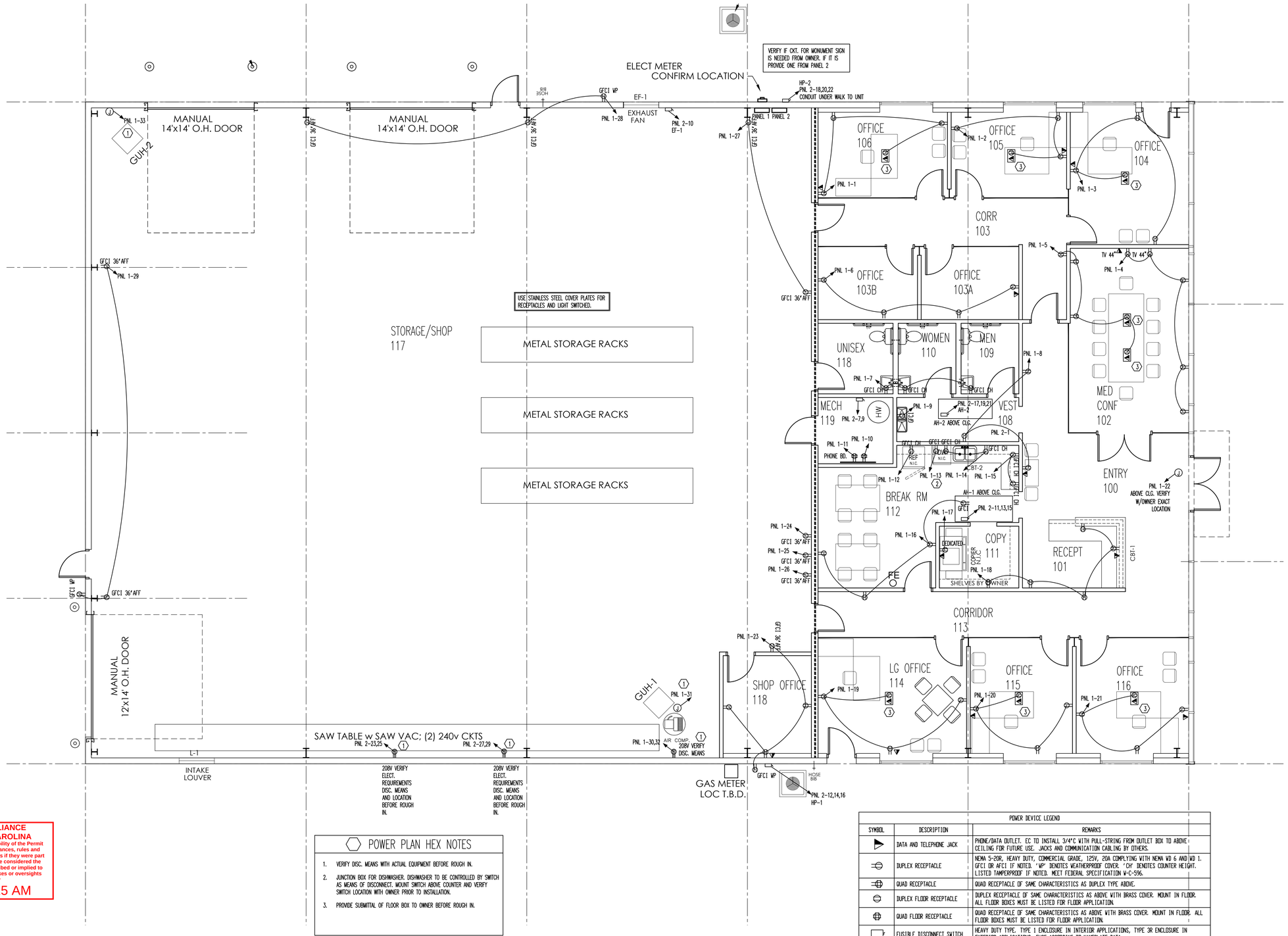
PANEL SCHEDULES

SHEET NO.
E2
240813



POWER DEVICE LEGEND		
SYMBOL	DESCRIPTION	REMARKS
	DATA AND TELEPHONE JACK	PHONE/DATA OUTLET. CC TO INSTALL 3/4"C WITH PULL-STRING FROM OUTLET BOX TO ABOVE CEILING FOR FUTURE USE. JACKS AND COMMUNICATION CABLING BY OTHERS.
	DUPLEX RECEPTACLE	NEMA 5-20R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD 6 AND WD 1. GFCI OR AFCI IF NOTED. 'WP' DENOTES WEATHERPROOF COVER. 'CH' DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL SPECIFICATION W-C-596.
	QUAD RECEPTACLE	QUAD RECEPTACLE OF SAME CHARACTERISTICS AS DUPLEX TYPE ABOVE.
	DUPLEX FLOOR RECEPTACLE	DUPLEX RECEPTACLE OF SAME CHARACTERISTICS AS ABOVE WITH BRASS COVER. MOUNT IN FLOOR. ALL FLOOR BOXES MUST BE LISTED FOR FLOOR APPLICATION.
	QUAD FLOOR RECEPTACLE	QUAD RECEPTACLE OF SAME CHARACTERISTICS AS ABOVE WITH BRASS COVER. MOUNT IN FLOOR. ALL FLOOR BOXES MUST BE LISTED FOR FLOOR APPLICATION.
	FUSIBLE DISCONNECT SWITCH	HEAVY DUTY TYPE. TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN EXTERIOR APPLICATIONS, FUSE ACCORDING TO NAMEPLATE DATA.
J	JUNCTION BOX	GALVANIZED METAL BOX CONSTRUCTED IN ACCORDANCE WITH 314.40 OF THE NEC.

POWER PLAN HEX NOTES

1. VERIFY DISC. MEANS WITH ACTUAL EQUIPMENT BEFORE ROUGH IN.
2. JUNCTION BOX FOR DISHWASHER. DISHWASHER TO BE CONTROLLED BY SWITCH AS MEANS OF DISCONNECT. MOUNT SWITCH ABOVE COUNTER AND VERIFY SWITCH LOCATION WITH OWNER PRIOR TO INSTALLATION.
3. PROVIDE SUBMITTAL OF FLOOR BOX TO OWNER BEFORE ROUGH IN.

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ELECTRICAL POWER PLAN SCALE: 3/16"=1'-0"

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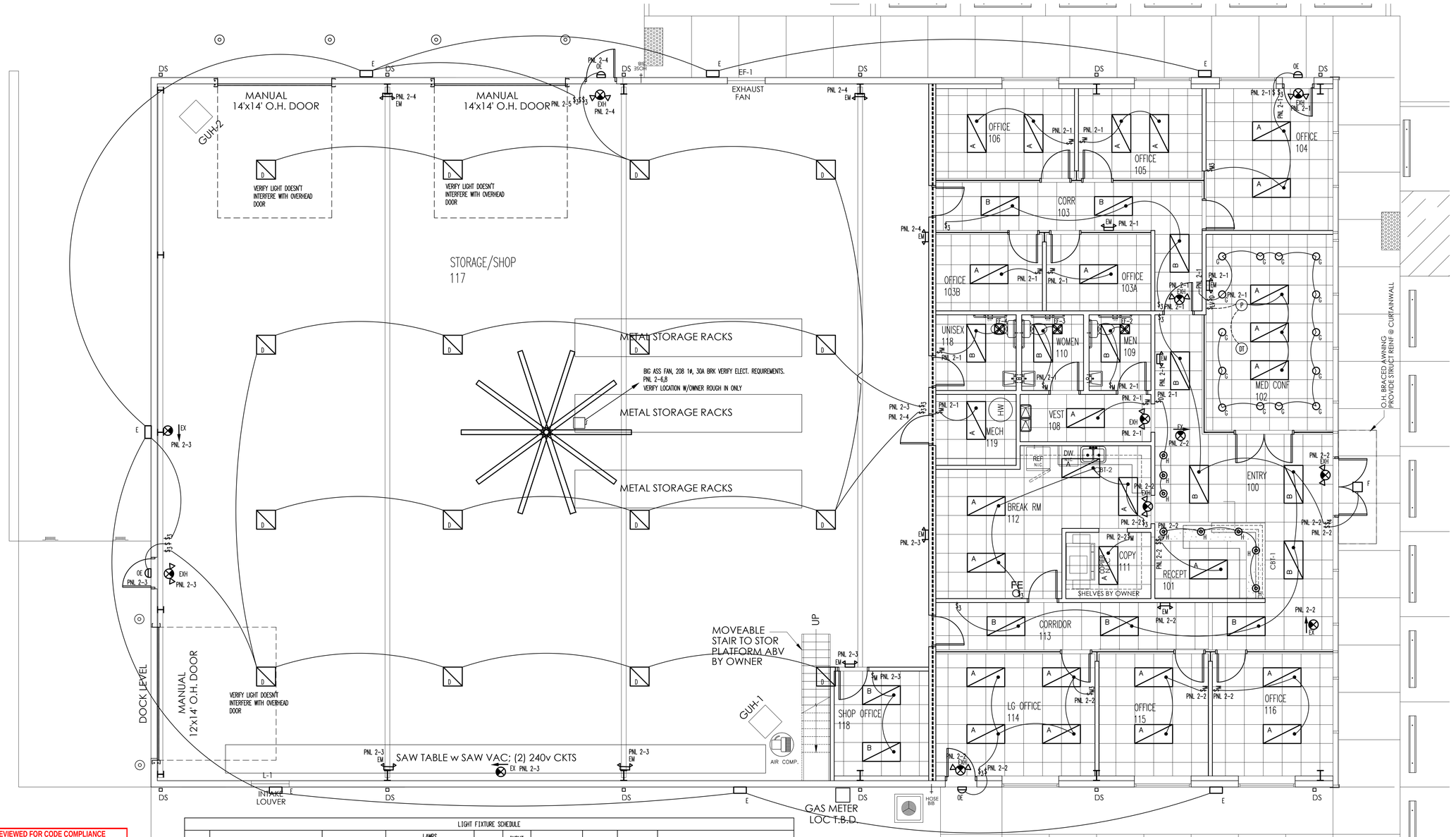
ELECT. POWER PLAN

SHEET NO.
E3
240813



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LIGHT FIXTURE SCHEDULE

MARK	DESCRIPTION	LOUVER/LENS	LAMPS			VOLTAGE	INPUT WATTAGE	MOUNTING	REMARKS	MFG	MODEL
			TYPE	WATTAGE	CCT						
A	2X4 LED TROFFER	-	LED	45	3500K	120	45	LAY-IN	2	LITHONIA	2 BLT4-48L-ADP-EZI-LP835
B	2X4 LED TROFFER	-	LED	30	3500K	120	30	LAY-IN	2	LITHONIA	2 BLT4-30L-ADP-EZI-LP835
C	WRAP ARROUND SURFACE LED	-	LED	52	3500K	120	52	SURFACE	2	LITHONIA	TRUM 48 ALO6 CMP 8SWW2 ZT MVOLT
D	HIGH BAY LED	-	LED	90	5000K	120	90	SUSPEND/SURFACE	2,4	LITHONIA	CPHB 12LM MVOLT 50K
E	LED WALL PACK	-	LED	69	4000K	120	69	SURFACE	2,3	LITHONIA	CSXW LED 700 40K T2M MVOLT PE DDBXD
F	LED CANOPY LIGHT WITH BATTERY BACKUP	-	LED	70,80,90	3,4,5K	120	70,80,90	SURFACE	1,2,3	RAB LIGHING	VANI7/E
G	6" LED DOWNLIGHT	-	LED	12.5	3500K	120	12.5	RECESSED	2	JUNO	LG-1335U-G3
H	PENDANT LIGHT	-	LED	20	3500K	120	20	PENDANT	4	TBD	OWNER SELECTION
OE	EXTERIOR OVAL LED EMERGENCY LIGHT	POLYCARBONATE	LED	6	-	120	12	SURFACE	1,2	EELP	DEM-LED-BR-ACEM
EXH	LED EXIT/COMBO W/ BATTERY BACKUP	ACRYLIC	LED	N/A	N/A	120	3	VARIES	1,2	LITHONIA	LHQM-S-W-1-R-120/277-N-SD
EX	LED EXIT SIGN W/ BATTERY BACKUP	ACRYLIC	LED	N/A	N/A	120	1	VARIES	1,2	LITHONIA	LQM-S-W-1-R-120/277-EL-N-SD
EM	DUAL HEAD EMERGENCY FIXTURE	ACRYLIC	LED	N/A	N/A	120	2	VARIES	1,2	LITHONIA	ELM2L-SDRT

1. FIXTURE SHALL HAVE BATTERY BACKUP FOR 90 MINUTE ILLUMINATION
2. OR EQUAL BY CURRENT, COOPER, COLUMBIA OR MOBERN
3. PROVIDE POTOCELL
4. EC TO VERIFY MOUNTING METHOD AND PROVIDE EVERYTHING FOR A COMPLETE INSTALLATION.

VERIFY ALL FIXTURE COLORS WITH OWNER OR ARCHITECT PRIOR TO PURCHASE.

LIGHTING DEVICE LEGEND

SYMBOL	DESCRIPTION	REMARKS
$	SINGLE POLE WALL SWITCH	HEAVY DUTY, AC ONLY, COMMERCIAL GRADE GENERAL USE SNAP SWITCH COMPLYING WITH NEMA WD 6 AND WD 1. IVORY PLASTIC BODY WITH TOGGLE HANDLE. 120-277V, 20A. MEET FEDERAL SPECIFICATION W-S-896.
$OM	WALL MOUNTED OCCUPANCY SENSOR	WATTSTOPPER DW-100 LINE VOLTAGE OCCUPANCY SENSOR. ULTRA SONIC AND INFRARED.
$LV	LOW VOLTAGE SWITCH	WATTSTOPPER LVS-1 LOW VOLTAGE MOMENTARY CONTROL SWITCH.
$3	3 WAY SWITCH	3-WAY TYPE SWITCH WITH SAME CHARACTERISTICS AS SINGLE POLE SWITCH ABOVE.
(DT)	CEILING OCCUPANCY SENSOR	WATTSTOPPER, DT-300 LOW VOLTAGE OCCUPANCY SENSOR. 360° ULTRA SONIC AND INFRARED.
(P)	POWER PACK	WATTSTOPPER, RZ-150 LOW VOLTAGE POWER PACK FOR CEILING PACK SENSORS.
(J)	JUNCTION BOX	GALVANIZED METAL BOX CONSTRUCTED IN ACCORDANCE WITH 314.40 OF THE NEC.
	EXHAUST FAN	VENT FAN, 120V, CFM AS NOTED MC TO PROVIDE AND VENT, EC TO WIRE.

ELECTRICAL LIGHTING PLAN SCALE: 3/16"=1'-0"

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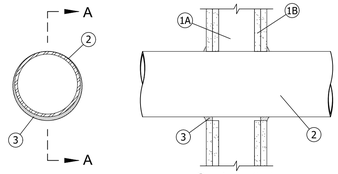
DATE: 5/21/25
REVISIONS:

ELECTRICAL LIGHTING PLAN

SHEET NO.
E4
240813

System No. W-L-1088

F Ratings - 1 & 2 Hr. (See Item 1)
T Rating - 0 Hr.



Section A-A

1. **Wall Assembly -** The 1 or 2 hr. fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs -** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) O.C. with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min. 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) O.C.

   B. **Gypsum Board* -** 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 6-3/4 in. (171 mm).

   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrant -** One metallic pipe, tubing or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between pipes, tubing or conduits and periphery of opening shall be min 0 in. (point contact) to max 5/8 in. (16 mm). Pipe, tubing or conduit to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, tubing or conduits may be used:

   A. **Steel Pipe -** Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

   B. **Iron Pipe -** Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.

   C. **Copper Tubing -** Nom 6 in. (152 mm) diam (or smaller) Type M (or heavier) copper tubing.

   D. **Copper Pipe -** Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

   E. **Conduit -** Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing, nom 4 in. (102 mm) diam (or smaller) galv steel conduit or nom 1 in. (25 mm) diam (or smaller) flexible steel conduit.

3. **Fill, Void or Cavity Material* - Sealant -** Min 5/8 in. (16 mm) thickness of fill material within annulus, flush with both surfaces of wall. Additional fill material installed such that a min 1/4 in. (6 mm) thick crown is formed around the penetrating item lapping 1/2 in. (13 mm) beyond the periphery of the opening.

   SPECIFIED TECHNOLOGIES INC - SpecSeal LC 150 Sealant, SpecSeal LE600 Sealant

*Bearing the UL Classification Mark

Specified Technologies Inc. 200 Evans Way Somerville, NJ 08876
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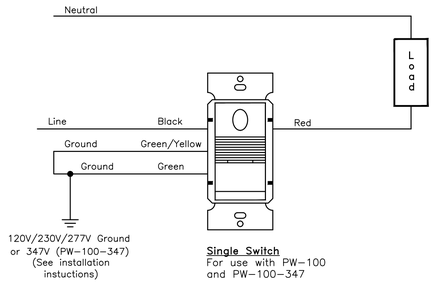
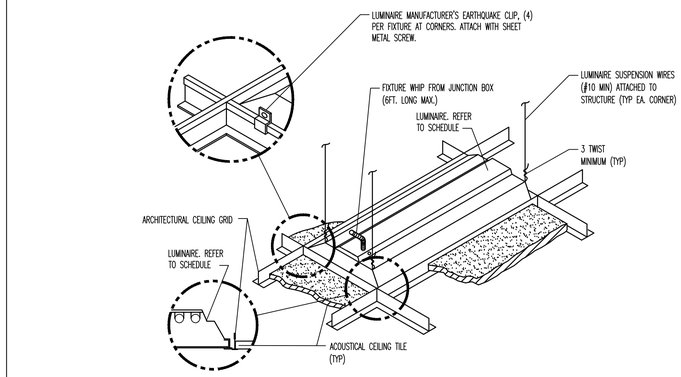
W-L-1088
PAGE 1 OF 1

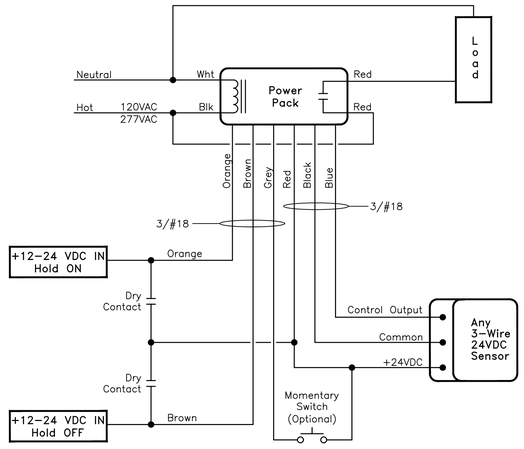
WALL DETAIL - NO SCALE | 3



WALL OCCUPANCY SENSOR WIRING-NO SCALE | 1

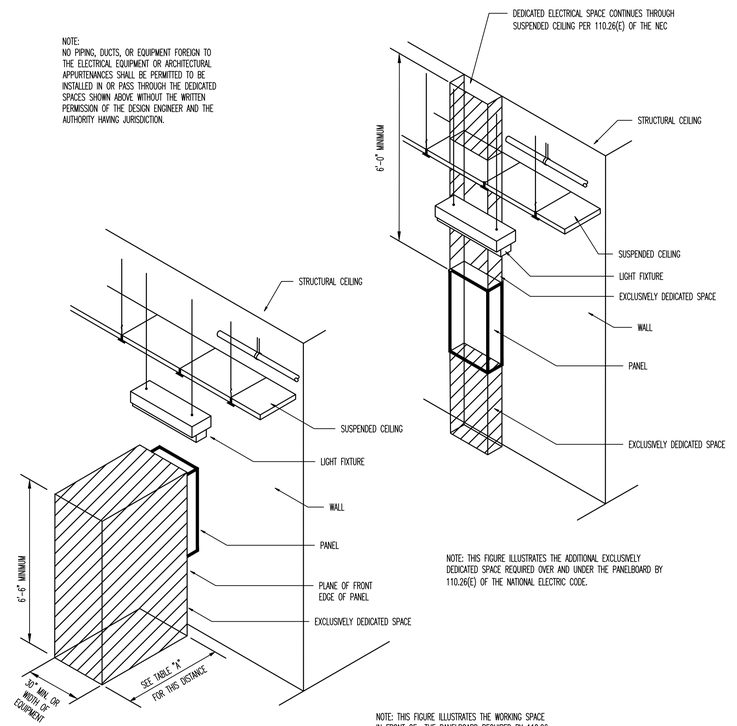


LAY-IN FIXTURE SUPPORT-NO SCALE | 2



CEILING OCCUPANCY SENSOR WIRING - NO SCALE | 4

NOTE:
NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE ELECTRICAL EQUIPMENT OR ARCHITECTURAL APPURTENANCES SHALL BE PERMITTED TO BE INSTALLED IN OR PASS THROUGH THE DEDICATED SPACES SHOWN ABOVE WITHOUT THE WRITTEN PERMISSION OF THE DESIGN ENGINEER AND THE AUTHORITY HAVING JURISDICTION.



NOTE: THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER THE PANELBOARD BY 110.26(E) OF THE NATIONAL ELECTRIC CODE.

NOTE: THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF THE PANELBOARD REQUIRED BY 110.26 OF THE NATIONAL ELECTRIC CODE.

NOTE: WHERE THE CONDITIONS ARE AS FOLLOWS:

CONDITION 1 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE THAT ARE EFFECTIVELY GUARDED BY INSULATING MATERIALS.

CONDITION 2 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE. CONCRETE, BRICK, OR TILE WALLS SHALL BE CONSIDERED AS GROUNDED.

CONDITION 3 - EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.

TABLE 110.26(A)(1) WORKING SPACE			
VOLTAGE TO GROUND, NOMINAL	MINIMUM CLEAR DISTANCE (FEET)		
	CONDITION 1	2	3
0-150	3	3	3
151-600	3	3-1/2	4

REQUIRED CLEARANCES-NO SCALE | 7

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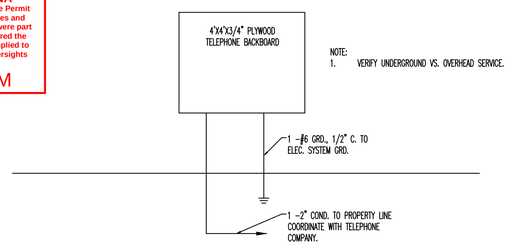
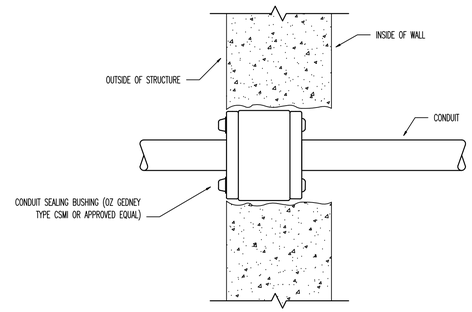
Plans must be on site at all times. It is the responsibility of the Permit holder or Contractor to comply with all local Ordinances, rules and regulations and the North Carolina Building Codes as if they were part of the specifications for the building. These shall be considered the official approved plans over anything shown, described or implied to the contrary. Reviewer is not responsible for mistakes or oversights during the plan review. --PFaulkner
10/17/2025 11:38:25 AM



PHONE BOARD DETAIL - NO SCALE | 5



EXTERIOR WALL PENETRATION-NO SCALE | 6

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05/21/2025
KILIAN ENGINEERING, INC. CORPORATE SEAL NORTH CAROLINA

INNOVATIVE GLASS SOLUTIONS

New Building for
BURT WINSTON ROAD
FRANKLIN COUNTY, NC

DWG BY: DC
CHK BY: RDC
DATE: 5/21/25
REVISIONS:

ELECT. DETAILS

SHEET NO.
E5

240813