

2018 - APPENDIX B - BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

NAME OF PROJECT: ANGIER COMMERCIAL - SHELL BUILDING
ADDRESS: 166 N. RALEIGH STREET ZIP CODE: _____
OWNER OR AUTHORIZED AGENT: STEVEN URENA PHONE # (919) 852-2329 E-MAIL urena.arch@gmail.com
OWNED BY: PRIVATE
CODE ENFORCEMENT JURISDICTION: TOWN OF ANGIER

CONTACT: STEVEN URENA

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
ARCHITECTURAL	URENA ARCHITECTURE, P.A.	STEVEN M. URENA	6688	(919) 852-2329	urena.arch@gmail.com
CIVIL	DUCK ENGINEERS, P.A.	PEPE E. MOOREHEAD	02444	(919) 304-7750	peper@duckengineers.com
ELECTRICAL	ELIZABETH D. VAN NOORDI, PE/EA	ELIZABETH D. VAN NOORDI	14467	(919) 414-6464	edvns@me.com
FIRE ALARM	ELIZABETH D. VAN NOORDI, PE/EA	ELIZABETH D. VAN NOORDI	14467	(919) 414-6464	edvns@me.com
PLUMBING	AMERICAN BUILDINGS	NATHAN PHILLIP MILLER	048795	(706) 362-8020	thomas-ha@nc.rr.com
MECHANICAL	AMERICAN BUILDINGS	NATHAN PHILLIP MILLER	048795	(706) 362-8020	thomas-ha@nc.rr.com
SPRINKLER-STANDPIPE	AMERICAN BUILDINGS	NATHAN PHILLIP MILLER	048795	(706) 362-8020	thomas-ha@nc.rr.com
STRUCTURAL	AMERICAN BUILDINGS	NATHAN PHILLIP MILLER	048795	(706) 362-8020	thomas-ha@nc.rr.com
RETAINING WALLS-5' HIGH	HARRIS STRUCTURAL DESIGN	THOMAS B. HARRIS	029465	(919) 356-6032	thomas-ha@nc.rr.com
OTHER - FOUNDATION	HARRIS STRUCTURAL DESIGN	THOMAS B. HARRIS	029465	(919) 356-6032	thomas-ha@nc.rr.com

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

2018 NC BUILDING CODE: NEW BUILDING
2018 NC EXISTING BUILDING CODE: NA
CONSTRUCTED: (DATE) _____ CURRENT OCCUPANCY(S) (Ch. 3): _____
RENOVATED: (DATE) _____ PROPOSED OCCUPANCY(S) (Ch. 3): _____
RISK CATEGORY: (Table 1604.5): CURRENT: 1 PROPOSED: 1

BASIC BUILDING DATA
CONSTRUCTION TYPE: II-B
SPRINKLERS: NO
STANDPIPES: NO
PRIMARY FIRE DISTRICT: NO FLOOD HAZARD AREA: NO
SPECIAL INSPECTIONS REQUIRED: NA

GROSS BUILDING AREA TABLE

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUBTOTAL
3RD FLOOR			
2ND FLOOR			
MEZZANINE			
1ST FLOOR		3,525	
BASEMENT			
TOTAL		3,525	

ALLOWABLE AREA
PRIMARY OCCUPANCY CLASSIFICATION(S): BUSINESS - B, STORAGE S-1
ACCESSORY OCCUPANCY CLASSIFICATION(S): NA
INCIDENTAL USES (TABLE 509): NA
SPECIAL USES (CHAPTER 4 - LIST CODE SECTION): NA
SPECIAL PROVISIONS (CHAPTER 5 - LIST CODE SECTION): NA
MIXED OCCUPANCY: NO SEPARATION: 0 HR. EXCEPTION: 508.3

NON-SEPARATED USE (508.3)
THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.
SEPARATED USE (508.4) - SEE BELOW AREA FOR CALCULATIONS
FOR EACH STORY, THE AREA OF OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.
ACTUAL AREA OF OCCUPANCY A + ACTUAL AREA OF OCCUPANCY B / ALLOWABLE AREA OF OCCUPANCY A + ALLOWABLE AREA OF OCCUPANCY B ≤ 1
+ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG. AREA PER STORY (ACTUAL)	(B) TABLE 506.2 AREA	(C) AREA FOR FRONTAGE INCREASE 1, 5	(D) ALLOWABLE AREA PER STORY OR UNLIMITED 7, 3
1	B, S-1	3,525	17,500	NOT USED	17,500

(S - OCCUPANCY IS MOST RESTRICTIVE)

- FRONTAGE AREA INCREASES FROM SECTION 506.2 ARE COMPUTED THUS:
A. PERMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MINIMUM WIDTH = _____ (F)
B. TOTAL BUILDING PERIMETER = _____ (P)
C. RATIO (F/P) = _____ (F/P)
D. W = MINIMUM WIDTH OF PUBLIC WAY = _____ (W)
E. PERCENT OF FRONTAGE INCREASE $I_f = 100 [F/P - 0.25] \times W/30 =$ _____ (%)
- UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
- MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING X D (MAXIMUM 3 STORIES) (506.2).
- THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH TABLE 406.3.5. THE MAXIMUM AREA OF AIR TRAFFIC CONTROL TOWERS MUST COMPLY WITH 412.1.2.
- FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREAL VALUE IN TABLE 506.2.

ALLOWABLE HEIGHT

BUILDING HEIGHT IN FEET (TABLE 504.3)	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
55	55	19	
BUILDING HEIGHT IN STORIES (TABLE 504.4)	7	1	

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

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D	RATING PROVIDED (W/REDUCTION)*	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES							
BEARING WALLS							
EXTERIOR							
NORTH							
EAST							
WEST							
SOUTH							
INTERIOR							
NON BEARING WALLS AND PARTITIONS							
EXTERIOR WALLS							
NORTH	> 10	0	0				
EAST	> 20	0	0				
WEST	> 30	0	0				
SOUTH	> 10	0	0				
INTERIOR WALLS & PARTITIONS							
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS							
FLOOR CEILING ASSEMBLY							
COLUMNS SUPPORTING FLOORS							
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS							
ROOF CEILING ASSEMBLY							
COLUMNS SUPPORTING ROOF							
SHAFT ENCLOSURES - EXIT							
SHAFT ENCLOSURES - OTHER (ELEVATOR)							
CORRIDOR SEPARATION							
OCCUPANCY/FIRE BARRIER SEPARATION							
PARTY/FIREWALL SEPARATION							
SMOKE BARRIER SEPARATION							
SMOKE PARTITION							
TENANT/ DWELLING UNIT/ SLEEPING UNIT SEPARATION							
INCIDENTAL USE SEPARATION							

* INDICATE SECTION NUMBER PERMITTING REDUCTION

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>10, >20, >30		NO LIMIT	

LIFE SAFETY SYSTEM REQUIREMENTS:
EMERGENCY LIGHTING: YES
EXIT SIGNS: NO (WILL BE ADDED AT TIME OF FIT-UP)
FIRE ALARM: NO
SMOKE DETECTION SYSTEMS: NO
PANIC HARDWARE: NO

LIFE SAFETY PLAN REQUIREMENTS:
LIFE SAFETY PLAN SHEET(S) # T1
 FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7) (N.A.)
 ASSUMED AND REAL PROPERTY LINE LOCATIONS (N.A.)
 EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8) (N.A.)
 OCCUPANCY USE FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2) (SEE LIFE SAFETY PLAN 1/11)
 OCCUPANT LOADS FOR EACH AREA (SEE LIFE SAFETY PLAN 1/11)
 EXIT ACCESS TRAVEL DISTANCES (1017) (SEE LIFE SAFETY PLAN 1/11)
 COMMON PATH OF TRAVEL DISTANCES (1006.2.1 & 1006.3.2(1)) (SEE LIFE SAFETY PLAN 1/11)
 DEAD END LENGTHS (1020.4) (0 FEET)
 CLEAR EXIT WIDTHS FOR EACH EXIT DOOR (32" CLEAR)
 MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3) (32" CLR. WIDTH @ 0.2" PER OCCUP. = 160 OCCUP.)
 ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR (18 OCCUP.)
 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) (N.A.)
 LOCATION OF DOORS WITH DELAYED EGRESS LOOKS AND THE AMOUNT OF DELAY (1010.1.9.7) (N.A.)
 LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOOKS (1010.1.9.8) (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 1-2 (407.5) (N.A.)
 NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE (N.A.)

ACCESSIBLE DWELLING UNITS (SECTION 1107)

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

ACCESSIBLE PARKING (SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	# OF ACCESSIBLE SPACES PROVIDED	REGULAR WITH 5' ACCESSIBLE	15' ACCESSIBLE	VAN SPACES WITH 5' ACCESSIBLE	TOTAL # ACCESSIBLE PROVIDED
SEE APPROVED SITE PLAN	SEE SITE PLAN	SEE SITE PLAN				
TOTAL	3,525					

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

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

* PLUMBING FIXTURE REQUIREMENTS TO BE DETERMINED AT TIME OF FIT-UP.

SPECIAL APPROVALS
SPECIAL APPROVAL: (LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ICC, ETC., DESCRIBE BELOW)

STRUCTURAL DESIGN
DESIGN LOADS:
IMPORTANCE FACTORS: WIND (W) _____ SNOW (S) _____ SEISMIC (E) _____
LIVE LOADS: ROOF _____ PSF MEZZANINE _____ PSF FLOOR _____ PSF
GROUND SNOW LOAD: _____ PSF
WIND LOAD: BASIC WIND SPEED _____ MPH (ASCE-7) EXPOSURE CATEGORY _____ WIND BASE SHEARS (FOR MWFRS) $v_x =$ _____ $v_y =$ _____
SEISMIC DESIGN CATEGORY: N/A A B C D
PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
OCCUPANCY CATEGORY (TABLE 1601.4) I II III IV
SPECTRAL RESPONSE ACCELERATION $S_g =$ _____ $S_1 =$ _____ $S_2 =$ _____
SITE CLASSIFICATION (ASCE-7) N/A A B C D E F
DATA SOURCE: N/A FIELD TEST PRESUMPTIVE HISTORICAL DATA
BASIC STRUCTURAL SYSTEM _____
SEISMIC BASE SHEAR $V_x =$ _____ $V_y =$ _____
ANALYSIS PROCEDURE _____
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED?
LATERAL DESIGN CONTROL: _____
SOIL BEARING CAPACITIES:
PRESUMPTIVE BEARING CAPACITY 2,000 PSF.
PILE SIZE, TYPE, AND CAPACITY _____

ENERGY SUMMARY
THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE ENERGY CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF ENERGY COST BUDGET METHOD, STATE THE ANNUAL ENERGY COST BUDGET VS. ALLOWABLE ANNUAL ENERGY COST BUDGET.
THERMAL ENVELOPE
DESIGNER STATEMENT: 1
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE THERMAL ENVELOPE REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE, VOLUME X-ENERGY.
SIGNED: _____
NAME: STEVEN M. URENA
TITLE: ARCHITECT
ELECTRICAL SYSTEM AND EQUIPMENT:
METHOD OF COMPLIANCE: SEE ELEC. DWGS.
MECHANICAL SYSTEMS, SERVICE AND EQUIPMENT:
METHOD OF COMPLIANCE: N.A.

COMcheck Software Version 4.1.1.0
Envelope Compliance Certificate

Project Information
Energy Code: 90.1 (2013) Standard
Project Title: Angier, North Carolina
Location: Angier, North Carolina
Climate Zone: 4a
Project Type: New Construction
Vertical Glazing / Wall Area: 9%
Performance Sim. Specs: EnergyPlus 8.1.0.009 (EPVW_USA_NC_Raleigh-Durham: Intl.AP.723060_TMY3.epw)

Construction Site: 166 N. Raleigh St. Angier, NC
Owner/Agent: _____ Design/Contractor: _____

Building Area: 1-Office: Nonresidential Floor Area: 3525

Envelope Assemblies

Assembly	Gross Area or Perimeter	R-Value	Cost. R-Value	Proposed U-Factor	Budget U-Factor
Roof 1: Other Metal Building Roof (Bldg. Use 1 - Office) (b)	3525	---	---	0.029	0.037
Floor 1: Slab-On-Grade Unheated (Bldg. Use 1 - Office) (d)	247	---	---	0.730	0.920
NORTH					
Exterior Wall 3: Other Metal Building Wall (Bldg. Use 1 - Office) (b)	656	---	---	0.049	0.060
EAST					
Exterior Wall 2: Other Metal Building Wall (Bldg. Use 1 - Office) (b)	1097	---	---	0.049	0.060
Door 2: Insulated Metal, Swinging (Bldg. Use 1 - Office)	42	---	---	0.114	0.500
SOUTH					
Exterior Wall 4: Other Metal Building Wall (Bldg. Use 1 - Office) (b)	656	---	---	0.049	0.060
WEST					
Exterior Wall 1: Steel Framed, 10' c.c. (Bldg. Use 1 - Office)	1240	20.0	0.4	0.103	0.064
Window 1: Metal Frame Fixed, Pref. Spec. Product ID Central 335, SHGC 0.28, PF 0.32, VT 0.43 (Bldg. Use 1 - Office) (c)	288	---	---	0.269	0.420
Door 1: Glass (1-50% glazing) Metal Frame, Entrance Door, Pref. Spec. Product ID AA 250, SHGC 0.60, PF 0.32, VT 0.60 (Bldg. Use 1 - Office) (e)	42	---	---	0.400	0.710

(a) Budget U-factors are used for software baseline calculations ONLY and are not code requirements.
(b) Other components require supporting documentation for proposed U-factors.
(c) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(d) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.
Envelope PASSES: Design 0.1% better than code

Envelope Compliance Statement
Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.
STEVEN URENA - Architect Signature: _____ Date: 5/28/21
Name - Title: _____

2 ENVELOPE COMPLIANCE CERTIFICATE
T1 FOR SHELL BUILDING

ANGIER COMMERCIAL SHELL BUILDING
166 N. RALEIGH STREET
ANGIER, NC

INDEX OF DRAWINGS

T1 - TITLE & BUILDING CODE SUMMARY

ARCHITECTURAL DRAWINGS
A1 FLOOR PLAN & ELEVATIONS
A2 WALL SECTIONS

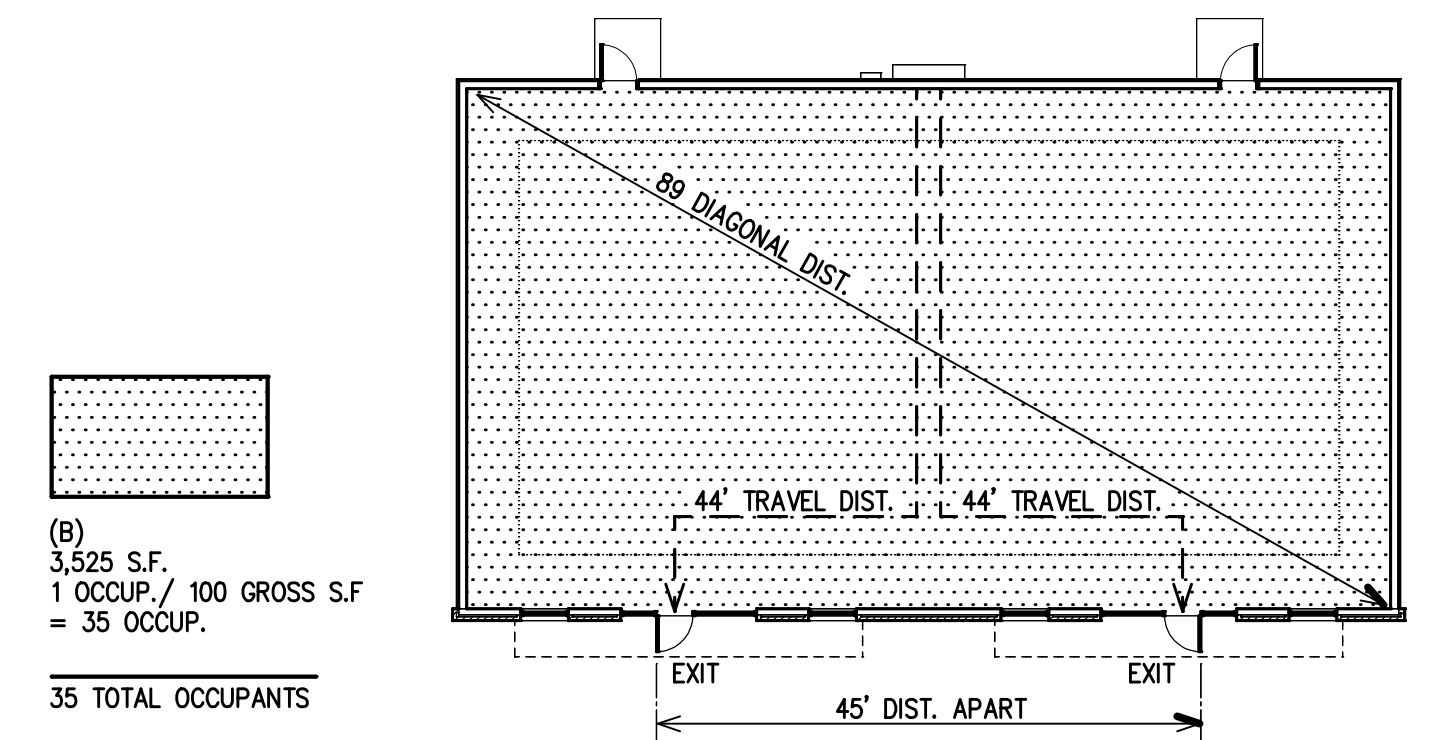
PLUMBING DRAWINGS
P1 PLUMBING PLAN & RISER

ELECTRICAL DRAWINGS
E1 ELECTRICAL PLAN & RISER

STRUCTURAL FOUNDATION DRAWINGS
S0 GENERAL NOTES
S1 FOUNDATION PLAN & DETAILS
S2 DETAILS

STRUCTURAL STEEL DRAWINGS
SEE ATTACHED AMERICAN BUILDINGS DRAWINGS

SITE DRAWINGS
SEE ATTACHED APPROVED SITE DRAWINGS



1 LIFE SAFETY PLAN
T1 SCALE: 1/16" = 1'-0"

URENA ARCHITECTURE, P.A.
REGISTERED ARCHITECT
15748
NORTH CAROLINA
RALEIGH, NC

STEVEN M. URENA
REGISTERED ARCHITECT
6688
NORTH CAROLINA
RALEIGH, NC

URENA ARCHITECTURE, P.A.
REGISTERED ARCHITECT
212 POWELL DR., SUITE 100 RALEIGH, NC 27606
TEL: (919) 852-2329 FAX: (919) 852-2322

ANGIER COMMERCIAL SHELL BUILDING
166 N. RALEIGH STREET
ANGIER, NC

REVISIONS

NO.	DESCRIPTION

BUILDING CODE SUMMARY
JUNE 8 - 2021

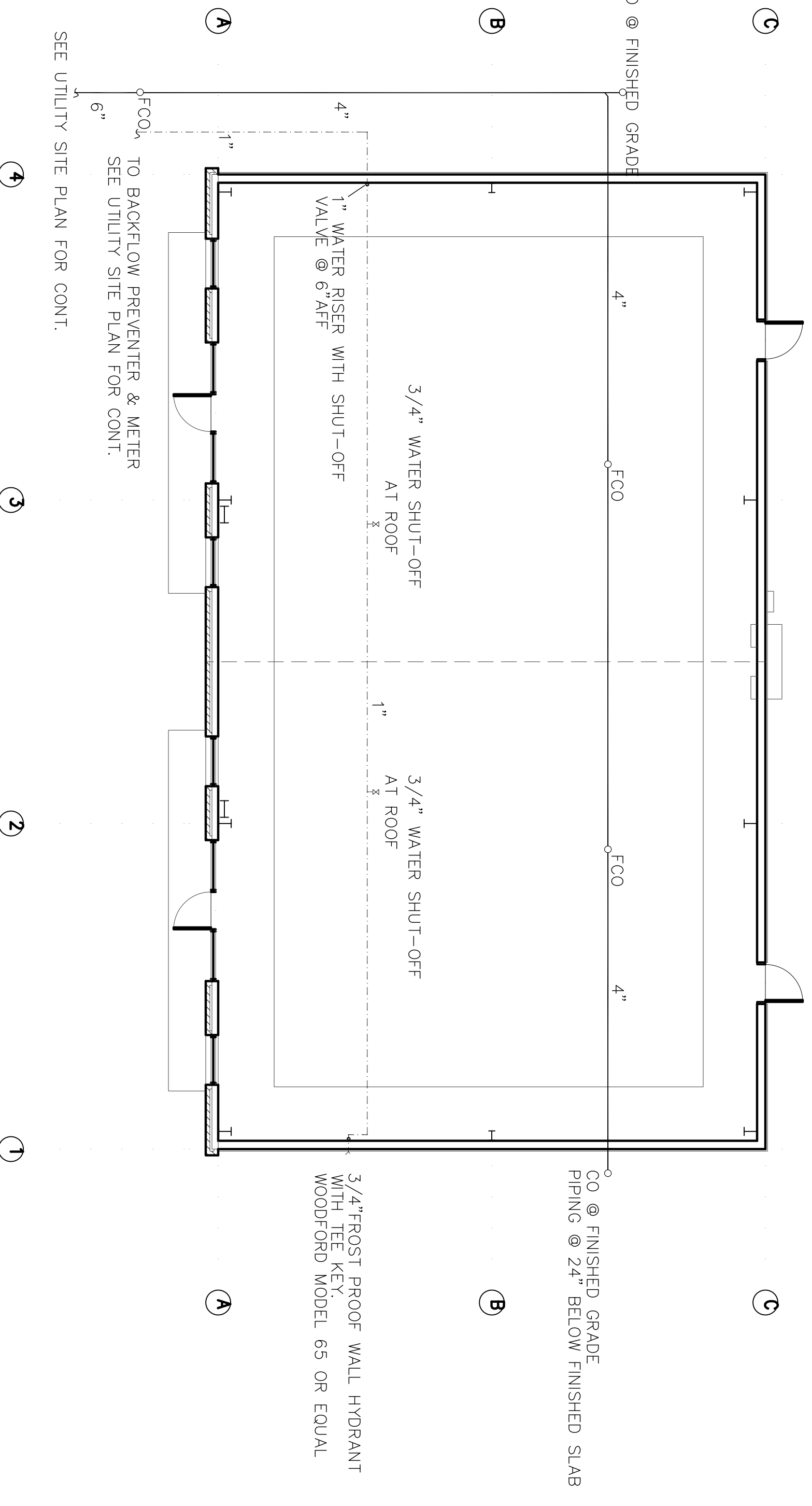
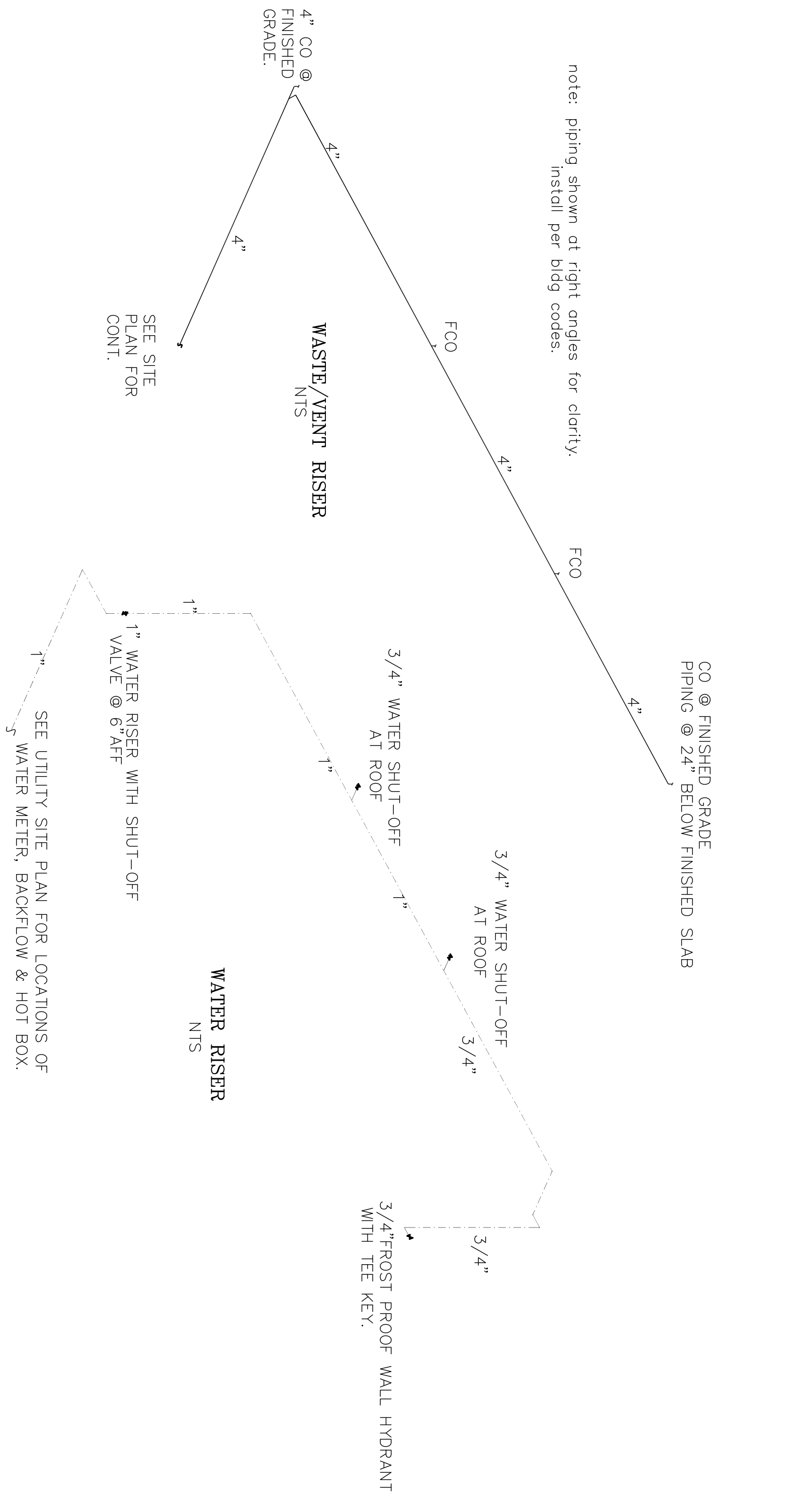
T1

2103-T

- PLUMBING NOTES:
1. THE ENTIRE PLUMBING SYSTEM SHALL BE IN ACCORDANCE W/ N.C. PLUMBING CODE AND LOCAL INSPECTOR.
 2. ALL WORK SHALL BE COORDINATED W/ ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING W/ EXISTING CONDITIONS & SHALL PROVIDE ANY NECESSARY OFFSETS, REROUTING, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.
 3. THESE PLANS ARE DIAGRAMATIC. CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSETS, TEES, ELBOWS, ETC. FOR FOR A COMPLETE WORKING PLUMBING SYSTEM.
 4. THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, INSPECTIONS, TAPS, ETC.
 5. ALL DOMESTIC WATER PIPING (ABOVE SLAB) SHALL BE TYPE "L" COPPER W/ 95/5 LEAD FREE SOLDER. ALL WATER PIPING (BELOW SLAB) SHALL BE TYPE "K" SOFT COPPER. COMPLY W/ ASTM B-88-88a.
 6. ALL WATER PIPING SHALL BE INSULATED W/ CLOSED CELL (ARMAFLEX) TYPE INSULATION W/ THE FLAME DENSITY RATING NOT EXCEEDING 25 & THE SMOKE DENSITY RATING NOT EXCEEDING 50. THICKNESS FOR COLD WATER PIPING SHALL BE 1" THICK. PROVIDE WITH HEAT TAPE FOR ALL EXPOSED WATER PIPING INSIDE BUILDING, INCLUDING VALVES.
 7. ALL BRANCH LINES SHALL HAVE SHUT-OFF VALVES. ALL DOMESTIC WATER BALL VALVES SHALL BE BRASS BODY, FULL PORT, CHROME PLATED BALL, TEFLO N SEATS, 150# WSP, FOR SIZES 1/2" THRU 2". SIZES ABOVE 2" SHALL BE BRONZE GATE VALVE, NRS SOLID DISC, SCREW OVER BONNET, 125# WSP. PROVIDE VALVE HANDLE EXTENSIONS AS REQUIRED FOR INSULATION.
 8. ALL SANITARY SEWER PIPING SHOWN IS BELOW SLAB/WITHIN WALLS UNLESS NOTED OTHERWISE. ALL SANITARY VENT PIPING SHOWN IS ABOVE CEILING/WITHIN WALLS UNLESS NOTED OTHERWISE.
 9. ALL WASTE & VENT PIPING NOT PASSING THROUGH RATED FLOOR SHALL BE SCHEDULE 40 PVC-DWV CONFORMING TO ASTM D 2665-87. ALL JOINTS SHALL BE SOLVENT WELDED TYPE CONFORMING TO ASTM D 2564-84. PIPING PASSING THROUGH FLOOR SHALL BE CAST IRON, ASTM A74 WITH EITHER CAULKED JOINT OR MECHANICAL COMPRESSION JOINT PER NC CODE.
 10. ALL PIPING SYSTEMS SHALL BE SUPPORTED AS REQUIRED BY N.C. PLUMBING CODE AND MANUFACTURERS RECOMMENDATIONS.
 11. ALL PLUMBING SYSTEMS SHALL BE TESTED AS REQUIRED PER N.C. PLUMBING CODE.
 12. BACKFLOW PREVENTOR FOR BUILDING TO BE INSTALLED BY SITE CONTRACTOR. SHALL BE RP2 TYPE IN HEATED BOX.
 13. THE ENTIRE DOMESTIC WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE W/ THE N.C. PLUMBING CODE.

ESTIMATED FIXTURE LOADS:

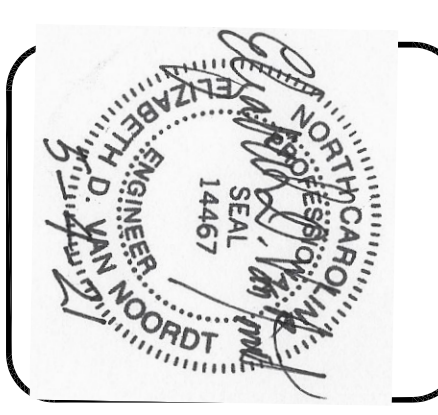
PER TENANT:		
2WC -	12 FU WASTE	10 FU WATER
2LAV -	2 FU WASTE	4 FU WATER
KIT SINK -	2 FU WASTE	14 FU WATER
EMC -	5 FU WASTE	25 FU WATER
TENANT TOTALS	165 FU WASTE	157 FU WATER
		180 GPM
MINIMUM		3/4" SERVICE
TOTAL LOADS:		
2 TENANTS -	33 FU WASTE = 4" MINIMUM SS SERVICE	
2 TENANTS -		
3141 FU WATER =	24 GPM = 1" WATER MIN.	



DRAWN	EDV
CHECKED	EDV
DATE	04/13/2021
SCALE	AS NOTED
JOB NO.	
SHEET	P-1

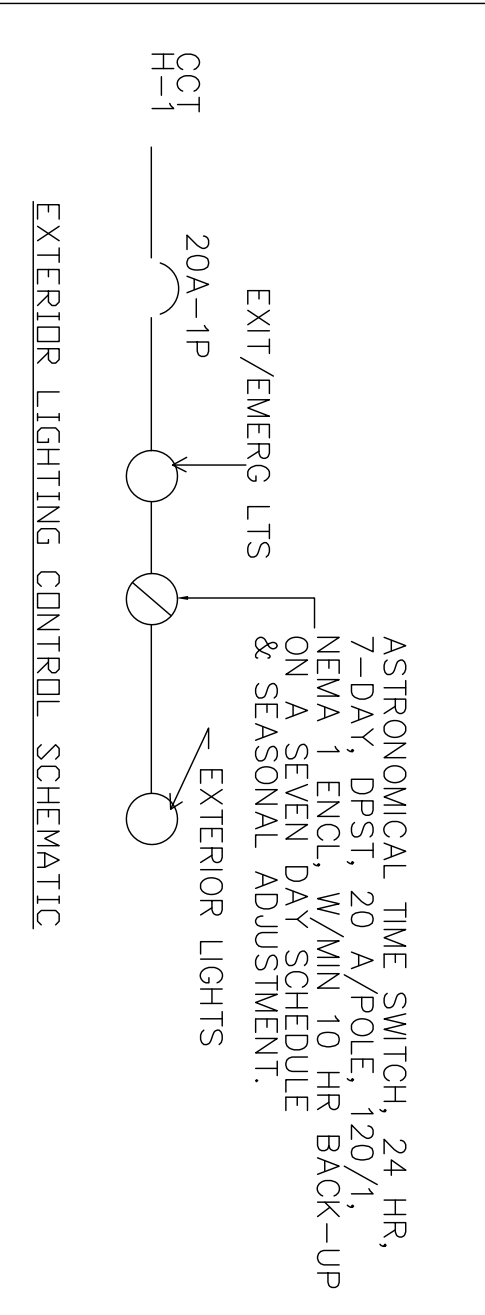
Elizabeth D. Van Noordt. P.E., P.A.
 2003 Bonner Bussells Drive
 Southport, NC 28461
 919-414-6464

ANGIER COMMERCIAL
 SHELL BUILDING
 166 N. RALEIGH STREET
 ANGIER, NC



GENERAL ELECTRICAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE WHICH INCLUDES THE 2013 EDITION OF THE NATIONAL ELECTRICAL CODE.
- WIRING SHALL BE TYPE THHN/THWN RUN IN EMT EXCEPT PVC MAY BE USED UNDERGROUND AND UNDERSLAB GREEN EQUIPMENT GROUND IN ALL CONDUITS.
- PROVIDE 2" CONDUIT UNDERGROUND FOR TELEPHONE FROM COORDINATE WITH TELEPHONE COMPANY.
- CONFIRM EXACT LOCATION AND SIZE OF ELECTRICAL SERVICE PANEL AND HEIGHTS PER NEC AND POWER COMPANY REQUIREMENTS.
- NON-EMERGENCY EXTERIOR LIGHTS SHALL BE PHOTO CONTROL "ON" AND "OFF".
- PANEL "H" SHALL BE NEMA 3R, SEE RATED.
- GROUNDING ELECTRODES SHALL BE BONDED TO 1) MADE ELECTRODE, 2) METAL COLD WATER PIPE, 3) BUILDING STEEL. PER NEC ART. 250-504 AND 104.
- PANEL H SHALL BE GROUPED WITH OTHER DISCONNECTS AT GUTTER A.
- ALL EXTERIOR LIGHTING SHALL HAVE A SOURCE EFFICACY OF AT LEAST 45 LUMENS PER WATT.
- ALL PENETRATIONS IN FIRE RATED ASSEMBLIES TO BE SEALED AS SHOWN ON RATED DETAILS.
- PROVIDE EXIT LIGHTS AS REQUIRED OR AS SHOWN ON DRAWINGS. CONNECT TO LOCAL LIGHTING CIRCUIT BEFORE THE SWITCHING.
- PROVIDE EMERGENCY LIGHTS AS REQUIRED OR AS SHOWN ON DRAWINGS. CONNECT TO LOCAL LIGHTING CIRCUIT BEFORE THE SWITCHING.
- EXTERIOR LIGHTING PROVIDED IN SHELL BUILDING, EMERGENCY LIGHTING INCLUDED 90 MIN POWER CAL BATTERY A ALL ENTRANCES WITH DUAL LAMPS.
- THESE PLANS ARE DIAGRAMMATIC AND SHOW THE GENERAL LOCATION OF DEVICES. EQUIPMENT, ROUTING, ETC. ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
- THE ELECTRICAL CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE PLANS PRIOR TO INSTALLATION OF ANY ELECTRICAL SYSTEMS AND SHALL RESOLVE ANY CONFLICTS WITH THE ENGINEER.
- PROVIDE A LAMINATED PLASTIC NAMEPLATE FOR EACH MAJOR ITEM OF ELECTRICAL EQUIPMENT. ATTACH WITH SCREWS, BOLTS OR RIVETS.
- PROVIDE ALL PANELS WITH TYPED DIRECTORIES SHOWN AS BUILT CONDITIONS AND LABEL ALL CIRCUITS. SHALL BE MARKED FOR AIC PER NEC 110.24
- PROVIDE A PLAQUE TO BE PLACED AT THE SERVICE FOR CURRENT AND ACCURATE AIC RATINGS.

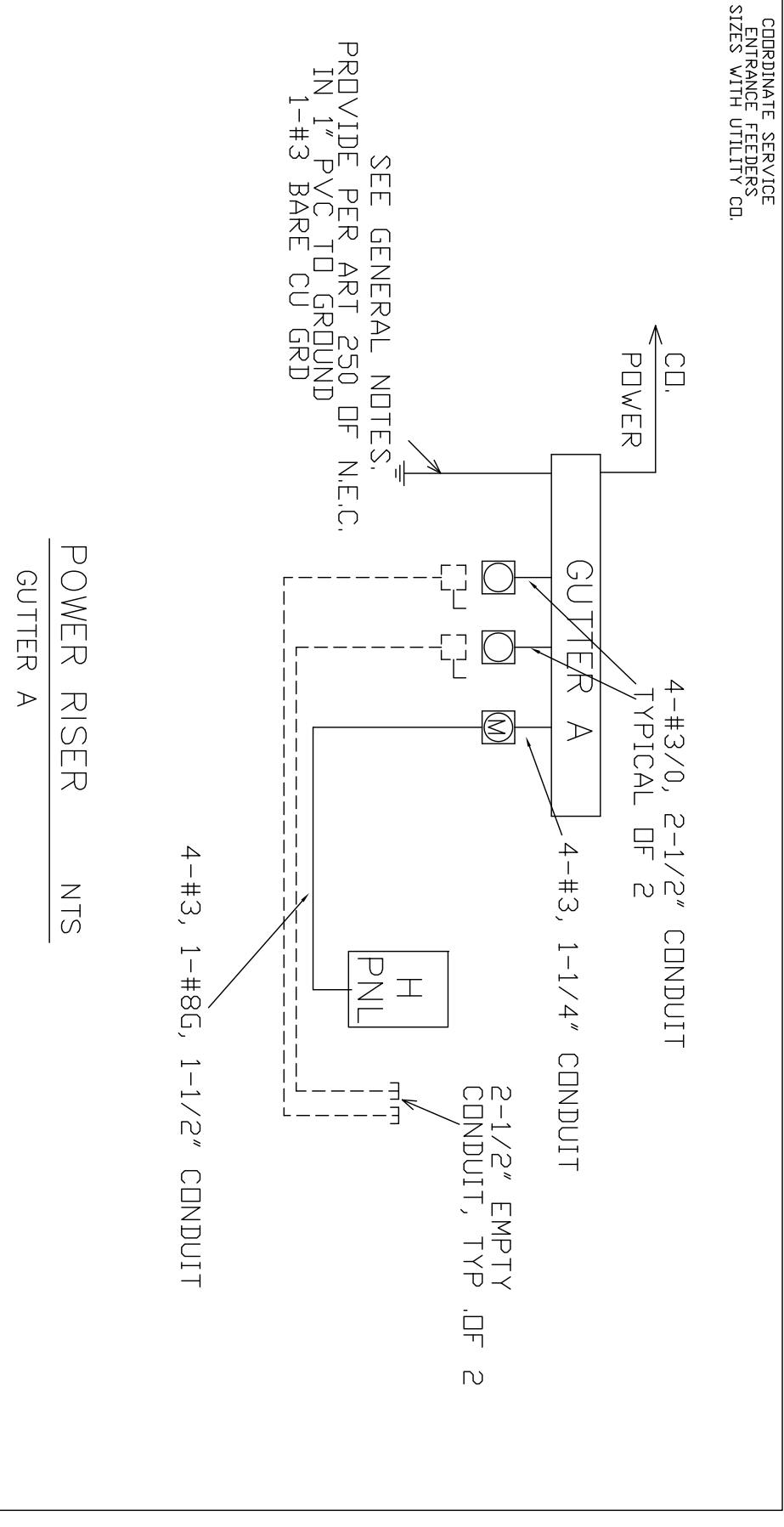


PANEL H

SURFACE MOUNTING	VOLTAGE	120/208 PHASE	3 WIRES	4			
100 AMP MCB	NEMA 3R	22 K AIC	GROUND BAR				
EQUIPMENT	WIRE	AMPS CIR	CIR	AMPS WIRE	EQUIPMENT		
ENTRY LIGHTS	12	20	1	2	20	12	RECEPTS
SIGN	12	20	3	4	20	12	HOT BOX FOR RPZ
SPACE			5	6			SPACE
			7	8			
			9	10			
			11	12			

ESTIMATED TYPICAL SERVICE LOADS:
 TYPICAL SERVICE 200 A
 LIGHTS: OFFICE 1875SF x 3.0 = 5625W x 125 = 7031 W
 RECEPTACLES: 1875 sq.ft. x 4 W = 7500 W
 HEATING: 1875 sq.ft. x 12 W = 22500 W
 WATER HEATING: 4500 W
 SIGN: 1500 W
 43031 W
 43031 VA / (208V x 173%) AT 208V 3P = 119 AMPS

HOUSE PANEL SERVICE LOADS:
 LIGHTS: 80W x 125 = 100 W
 RECEPTACLES: 3 X 180 W/REP = 540 W
 HOT BOX: 1500 W
 SIGN: 1500 W
 3640 W
 3640 KVA / (208V x 173%) AT 208V 3P = 101 AMPS

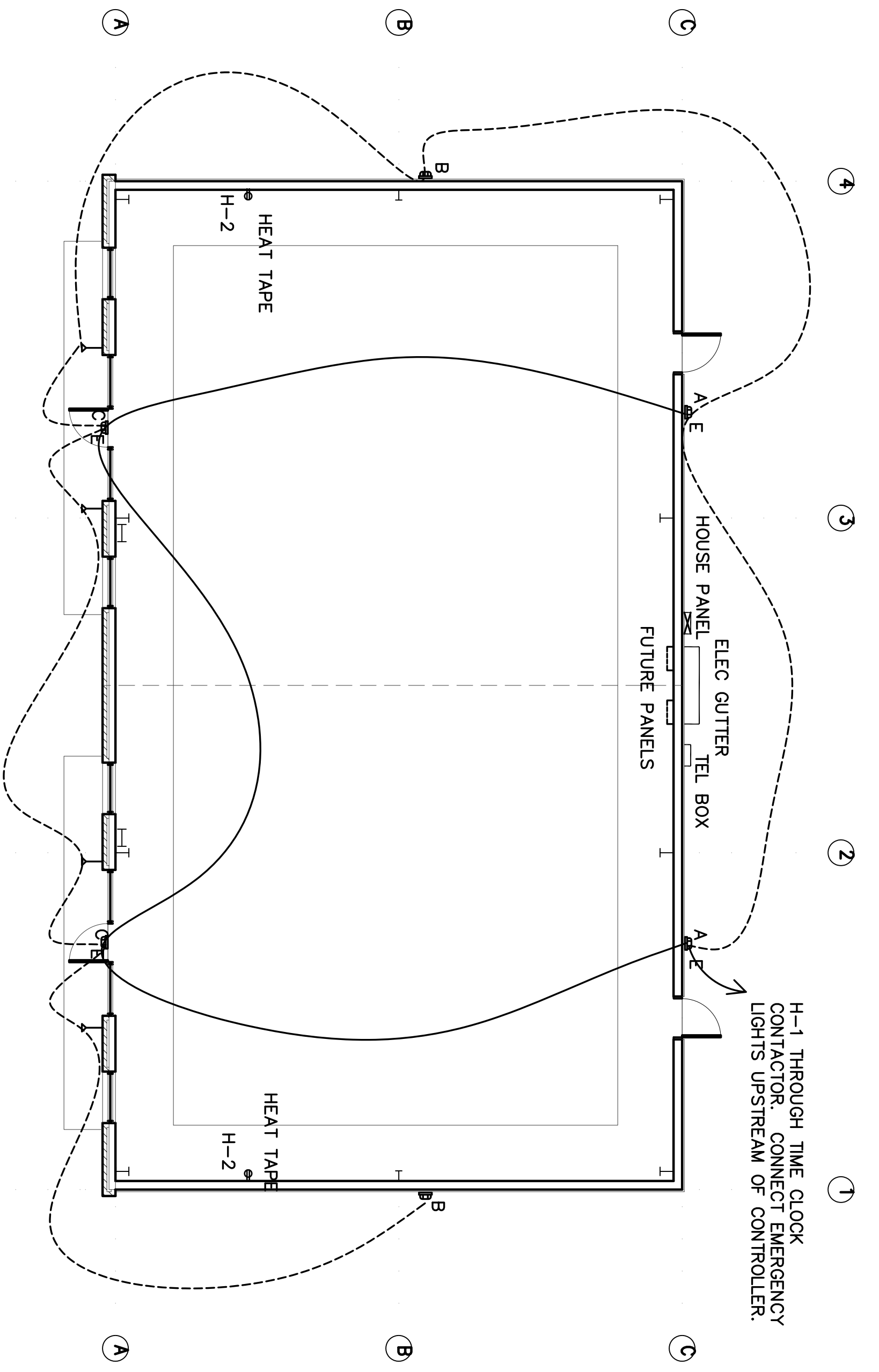
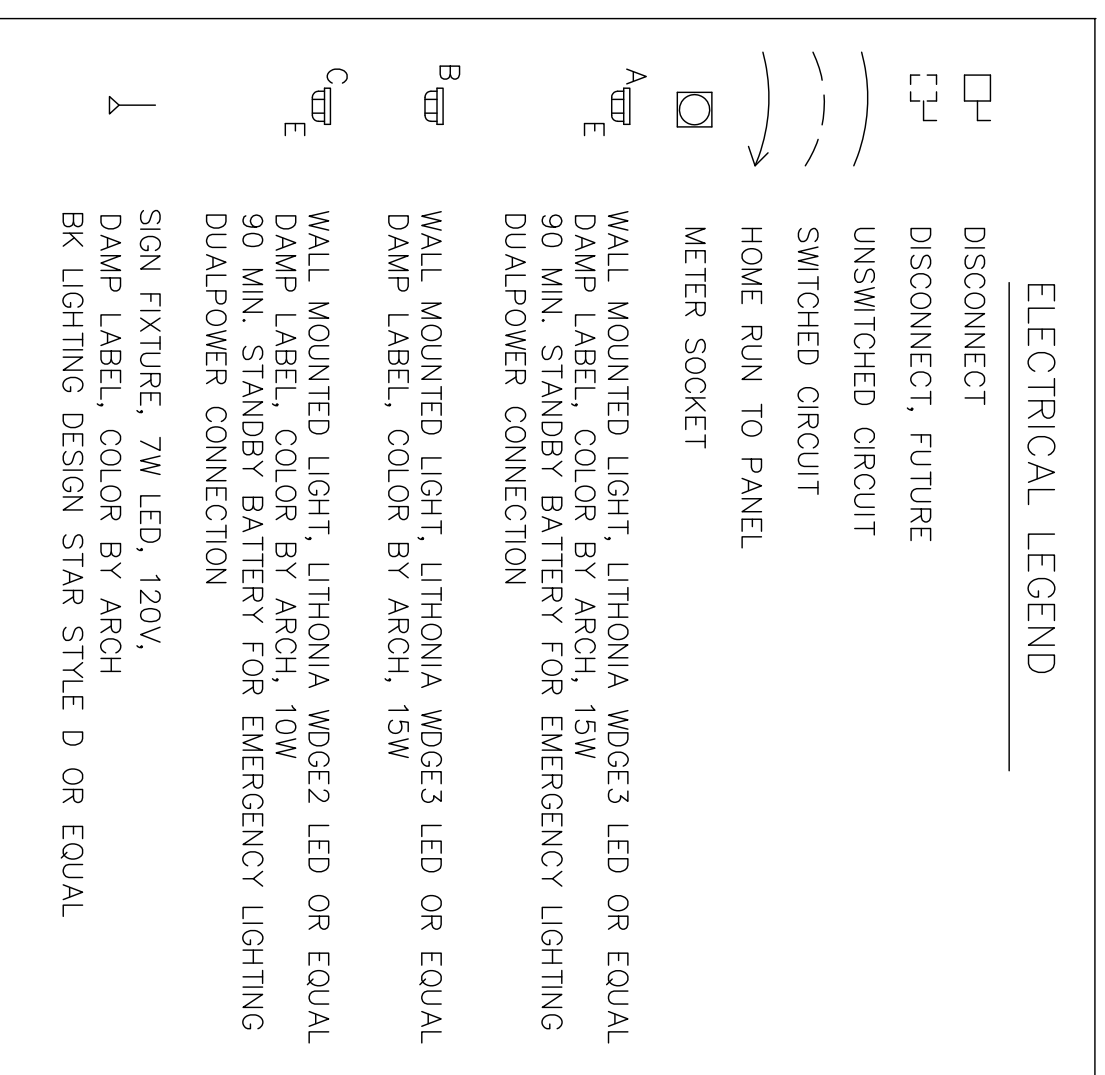


ESTIMATED SERVICE ENTRANCE DEMAND LOAD:
 TENANTS: 43 KVA X 2 = 86 KVA
 HOUSE PANEL: 36 KVA
 TOTAL DEMAND = 896 KVA
 896 KVA / (208V x 173%) AT 208V 3P = 249 AMPS

ELECTRICAL SYSTEMS AND EQUIPMENT

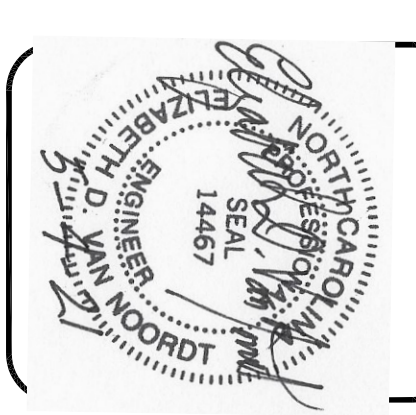
- METHOD OF COMPLIANCE:
- Prescriptive Performance Energy Cost Budget
- Provide a standard riser diagram which indicates designated point for check metering. None Required.
- Provide a standard panel schedule description which identifies different end-use loads. See Plans
- Lighting Schedule
- lamp type required in fixture - See Legend
 - number of lamps in fixture - See Legend
 - ballast type used in the fixture - See Legend
 - number of ballasts in fixture - See Legend
 - total wattage per fixture - See Legend
- total interior wattage specified vs. allowed - None Required.
- total exterior lighting- Zone 3
- façades - allowed - 2476 SF X .113 W/SF = 280 W specified - 60W
 - entrances - allowed - 6 LF X 30 W/LF = 180 W specified - 20W

DESIGNER STATEMENT:
 To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of the North Carolina State Building Code.
 Energy:
 SIGNED: *Elizabeth D. Van Noordt*
 NAME: Elizabeth D. Van Noordt, P.E.
 TITLE: Professional Engineer



H-4
 D.S. RP-20 A, 120/1 PHASE, NEMA 3R, FUSE AT NAMEPLATE. VERIFY LOCATION OF HOT BOX WITH SITE UTILITIES.

5/4/21 REVISED TO 3 PHASE



ANGIER COMMERCIAL SHELL BUILDING
 166 N. RALEIGH STREET
 ANGIER, NC

Elizabeth D. Van Noordt, P.E., P.A.
 2003 Bonner Bussells Drive
 Southport, NC 28461
 919-414-6464

DRAWN	EDV
CHECKED	EDV
DATE	04/13/2021
SCALE	AS NOTED
JOB NO.	
SHEET	E-1

GENERAL NOTES

1. THE GENERAL CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND THE ENGINEER OF ANY DISCREPANCIES WITHIN THE CONSTRUCTION DOCUMENTS.
2. DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2018 NORTH CAROLINA BUILDING CODE.
3. DESIGN LOADS:

Importance Factor: Wind (Iw) 1.0
 Snow (Is) 1.0
 Seismic (Ie) 1.0

Live Loads: Roof 20 psf
 Second Floor N/A
 First Floor 125 psf

Ground Snow Load: 15 psf

Wind Load: Basic Wind Speed 115 mph (ASCE-7-10)
 Exposure Category B
 Wind Base Shears (for MWFRS) $V_x = 22.5K$ $V_y = 12.8K$

SEISMIC DESIGN CATEGORY **B**
 Provide the following Seismic Design Parameters:
 Occupancy Category (Table 1604.5) **II**
 Spectral Response Acceleration S_s 17.2% g S_1 8.3% g
 Site Classification **D** (Field Test)
 Basic structural system (check one)
 Bearing Wall Dual w/ Special Moment Frame
 Building Frame Dual w/ Intermediate R/C or Special Steel
 Moment Frame Inverted Pendulum
 Seismic base shear $V_x = 4.5K$ $V_y = 4.5K$
 Analysis Procedure: Simplified Equivalent Lateral Force Modal
 Architectural, Mechanical, Components anchored? No

LATERAL DESIGN CONTROL: Earthquake Wind

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

4. ALL SAFETY REGULATIONS, METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIAL SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING, BRACING AND FORMWORK, ETC. AS REQUIRED.
5. THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, THE SIZE AND LOCATION OF ALL SLEEVES, PADS, DEPRESSIONS, OPENINGS, ETC.
6. DIMENSIONS ARE NOT TO BE DERIVED BY SCALING THESE DRAWINGS. IF THERE IS ANY QUESTION ABOUT DETAILS OR DIMENSIONS, CONTACT THE ARCHITECT AND ENGINEER FOR CLARIFICATION.
7. IF ANY BIDDER IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE DOCUMENTS, THEY SHALL REQUEST AN INTERPRETATION FROM THE ARCHITECT IN WRITING.

SUBMITTALS

1. THE CONTRACT DOCUMENTS ARE THE STRUCTURAL ENGINEER'S INSTRUMENTS OF SERVICE TO CONVEY DESIGN INTENT. THEY ARE NOT TO BE CONSIDERED FABRICATION OR LAYOUT DRAWINGS.
2. THE FOLLOWING ARE REQUIRED SUBMITTALS:
 A. CONCRETE MIX DESIGNS
 B. REINFORCING BAR DRAWINGS
 C. STRUCTURAL STEEL
 D. METAL DECK
 E. STEEL JOISTS
 F. ROOF TRUSSES
3. FOR REVIEW OF EACH SUBMITTAL, THE SCHEDULE SHALL ALLOW FOR TEN BUSINESS DAYS FOLLOWING ENGINEER'S RECEIPT.
4. SUBMITTALS TO BE REVIEWED BY THE ENGINEER SHALL BE SUBMITTED TO THE ARCHITECT. THE STRUCTURAL ENGINEER WILL NOT ACCEPT SUBMITTALS DIRECTLY FROM CONTRACTORS WITHOUT THE ENGINEER'S PRIOR APPROVAL.
5. UPON COMPLETION OF THE ENGINEER'S REVIEW, SUBMITTALS WILL BE RETURNED TO THE ARCHITECT FOR THEIR REVIEW.
6. ANY DEVIATION IN DESIGN, DETAILS, DIMENSIONS, ETC. FROM THE CONSTRUCTION DOCUMENTS SHALL BE CLOUDED ON THE SUBMITTAL AND VERIFICATION OF THE CHANGE SHALL BE REQUESTED. "VERIFY" MARKS NOT ADDRESSED SHALL NOT BE ASSUMED CORRECT AND SHALL BE RESUBMITTED TO THE ENGINEER OR CLARIFIED BY A REQUEST FOR INFORMATION. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ANY DEVIATIONS UNLESS ENGINEER REVIEWS AND ACKNOWLEDGES THE CHANGES IN WRITING.
7. THE ENGINEER WILL NOT REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.

FOUNDATIONS

1. ALLOWABLE SOIL BEARING IS STATED ON THE FOUNDATION PLANS.
2. BACKFILLING SHALL BE PERFORMED IN EQUAL LIFTS AROUND THE BUILDING PERIMETER TO BALANCE LATERAL EARTH PRESSURE ON THE BUILDING. WALK BEHIND COMPACTION EQUIPMENT IS REQUIRED WITHIN A DISTANCE OF TWO TIMES THE WALL HEIGHT.
3. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL IN WRITING. THE CONTRACTOR SHALL LOCATE ANY EXISTING UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION.

CONCRETE

1. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE CODE REFERENCED EDITION OF ACI-318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
2. CONCRETE MIX DESIGN REQUIREMENTS AND COMPRESSIVE STRENGTH AT 28 DAYS:

DESCRIPTION	28 DAY STRENGTH (PSI)	WEIGHT PER CUBIC FOOT (PCF)	SUMP AT POINT OF PLACEMENT	AGGREGATE	% AIR
FOOTINGS	3000	145	4" ± 1"	ASTM C33	3
SLAB ON GRADE	3000	145	4" ± 1"	ASTM C33	3
COMPOSITE FLOOR TOPPING (LIGHT WEIGHT)	3500	110	5" ± 1"	ASTM C330	3
BASEMENT WALLS	5000	145	5" ± 1"	ASTM C33	3

FLY ASH SHALL BE LIMITED TO 20% OF THE TOTAL CEMENTITIOUS MATERIAL WEIGHT, WATER REDUCING ADMIXTURES MAY BE USED TO ACHIEVE SLUMP REQUIREMENTS.

3. SEE ARCHITECTURAL DOCUMENTS FOR JOINT SIZES AND FILLER MATERIALS.
4. LOCATION OF ALL CONSTRUCTION JOINTS, EXCLUDING SLABS ON GRADE, SHALL BE COORDINATED WITH STRUCTURAL ENGINEER.
5. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A $\frac{3}{4}$ " CHAMFER, UNLESS NOTED OTHERWISE BY THE ARCHITECT.
6. SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER SHOWING PROPOSED LOCATIONS OF ANY MATERIAL SUCH AS BUT NOT LIMITED TO CONDUITS, EMBEDMENTS, OR FIXTURES TO BE PLACED INSIDE ANY STRUCTURAL CONCRETE MEMBER SUCH AS BEAMS, WALLS, SLABS, COLUMNS OR FOOTINGS.
7. UNLESS SPECIFIED OTHERWISE IN THE SPECIFICATION, TESTING OF CONCRETE SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF ACI 318 SECTION 5.6 "EVALUATION AND ACCEPTANCE OF CONCRETE."
8. THE FOLLOWING PROCEDURES SHALL MEET THE REQUIREMENTS OF THE REFERENCED CODE SECTIONS

PROCEDURE	REFERENCE SECTION
PREPARATION	ACI 304 - "GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"
CONVEYING	ACI 318 SECTION 5.9 - "CONVEYING"
DEPOSITING	ACI 318 SECTION 5.10 - "DEPOSITING"
CONSOLIDATION	ACI 309 - "GUIDE FOR CONSOLIDATION OF CONCRETE"
CURING	ACI 308 - "STANDARD PRACTICE FOR CURING CONCRETE"
HOT WEATHER CONCRETING	ACI 305 - "HOT WEATHER CONCRETING"
COLD WEATHER CONCRETING	ACI 306 - "COLD WEATHER CONCRETING"

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE NEW BILLET STEEL, DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
2. WELDED WIRE FABRIC SHALL BE SHEETS OF NEW BILLET STEEL COLD DRAWN, CONFORMING TO ASTM SPECIFICATION A62, GRADE 60.
3. BAR SUPPORTS, DESIGN, DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 318 AND "THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.
4. SPLICES FOR CONTINUOUS BARS SHALL BE CLASS B, UNLESS NOTED OTHERWISE, WELDED WIRE FABRIC SHALL BE LAPPED 12" MINIMUM.
5. MINIMUM CONCRETE COVERAGE SHALL BE AS FOLLOWS. IF STIRRUPS, TIES OR SPIRALS ARE USED, COVERAGE SHALL BE THE OUTERMOST FACE OF THE ELEMENTS.

A. FOOTINGS, CAISSONS, AND OTHER MEMBERS WHERE CONCRETE IS DEPOSITED AGAINST SOIL (EXCEPT SLABS ON GRADE.)	3"
B. CONCRETE EXPOSED TO WEATHER OR SOIL	
#6 BAR AND LARGER:	2"
#5 BAR AND SMALLER:	1 1/2"
C. CONCRETE NOT EXPOSED TO WEATHER OR SOIL (SLABS, WALLS, JOISTS)	
#14 BAR AND LARGER	1 1/2"
#11 BAR AND SMALLER	1"
BEAMS AND COLUMNS	1 1/2"
6. WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMN FOOTING.
7. PROVIDE DOWELS IN WALL FOOTING TO MATCH WALL VERTICALS UNLESS NOTED OTHERWISE ON DRAWINGS. PROVIDE CLASS B SPLICE. USE STANDARD ACI 90° HOOK WITH 3" CLEAR TO BOTTOM OF FOOTING UNLESS NOTED OTHERWISE.

STRUCTURAL MASONRY

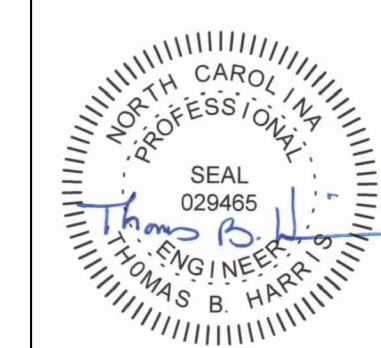
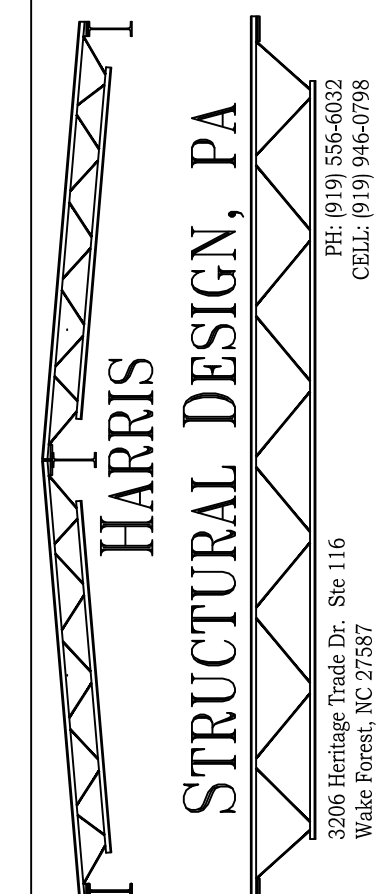
1. ALL MASONRY WORK TO BE DONE IN ACCORDANCE WITH THE CODE REFERENCED EDITION OF ACI-530 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND ACI-530.1 "SPECIFICATION FOR MASONRY STRUCTURES."
2. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND HAVE A MINIMUM NET COMPRESSIVE STRENGTH 1900 PSI. THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF MASONRY (F_m) SHALL BE 1500 PSI, AS DETERMINED BY THE UNIT STRENGTH METHOD (REFERENCE ACI 530.1 SECTION 1.4B). PRISM TESTING IS REQUIRED IF THE ABOVE REQUIREMENTS ARE NOT MET.
3. CLAY MASONRY UNITS SHALL HAVE A MINIMUM UNIT COMPRESSIVE STRENGTH OF 8000 PSI. REFER TO ARCHITECTURAL DOCUMENTS FOR ASTM DESIGNATIONS.
4. MORTAR SHALL BE PORTLAND CEMENT-LIME AND CONFORM TO ASTM C270. WHEN CMU IS IN CONTACT WITH SOIL USE TYPE M MORTAR.

AVERAGE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS		
MORTAR TYPE	CLAY MASONRY	CONCRETE UNIT MASONRY
M	NA	2500 PSI
S	NA	1,800 PSI
N	750 PSI	NA

5. BLOCK FILL FOR REINFORCED MASONRY SHALL BE FINE GROUT IN CONFORMANCE WITH ASTM C476 MINIMUM COMPRESSIVE STRENGTH METHOD. GROUT SHALL BE 3000 PSI AT 28 DAYS AS SAMPLED AND TESTED IN ACCORDANCE WITH ASTM C1019. GROUT SLUMP SHALL BE 8 TO 11 INCHES.
6. REINFORCING: ASTM A615 - GRADE 60. SEE CHART BELOW FOR MINIMUM LAP SPLICE LENGTH AND EMBEDMENT OF REINFORCING BARS.

MASONRY REINFORCING LAP SPLICES AND EMBED LENGTH		
BAR SIZE	LAP SPLICE LENGTH (IN)	EMBEDMENT
#4	24	18
#5	30	24
#6	36	28
#7	42	32
#8	48	36
#9	54	42

7. ALL MASONRY SHALL BE PLACED IN RUNNING BOND UNLESS SPECIFICALLY NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
8. MASONRY PREPARATION, CONSTRUCTION AND PROTECTION IN HOT OR COLD WEATHER (GREATER THAN 90°F OR LESS THAN 40°F) SHALL BE IN CONFORMANCE WITH ACI 530.1 SECTION 1.8.
9. EMBEDDED CONDUITS, PIPES AND SLEEVES SHALL BE COMPATIBLE WITH MASONRY AND SHALL NOT BE LOCATED IN GROUTED CELLS. PIPES CONTAINING WATER SUBJECT TO FREEZING, MATERIALS IN EXCESS OF 150°F OR PIPES UNDER PRESSURE IN EXCESS OF 55 PSI SHALL NOT BE EMBEDDED IN MASONRY. GENERAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL EMBEDDED ITEMS WITH THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.



SEAL DATE: 6-18-2021
 Corp. License Number C-2550

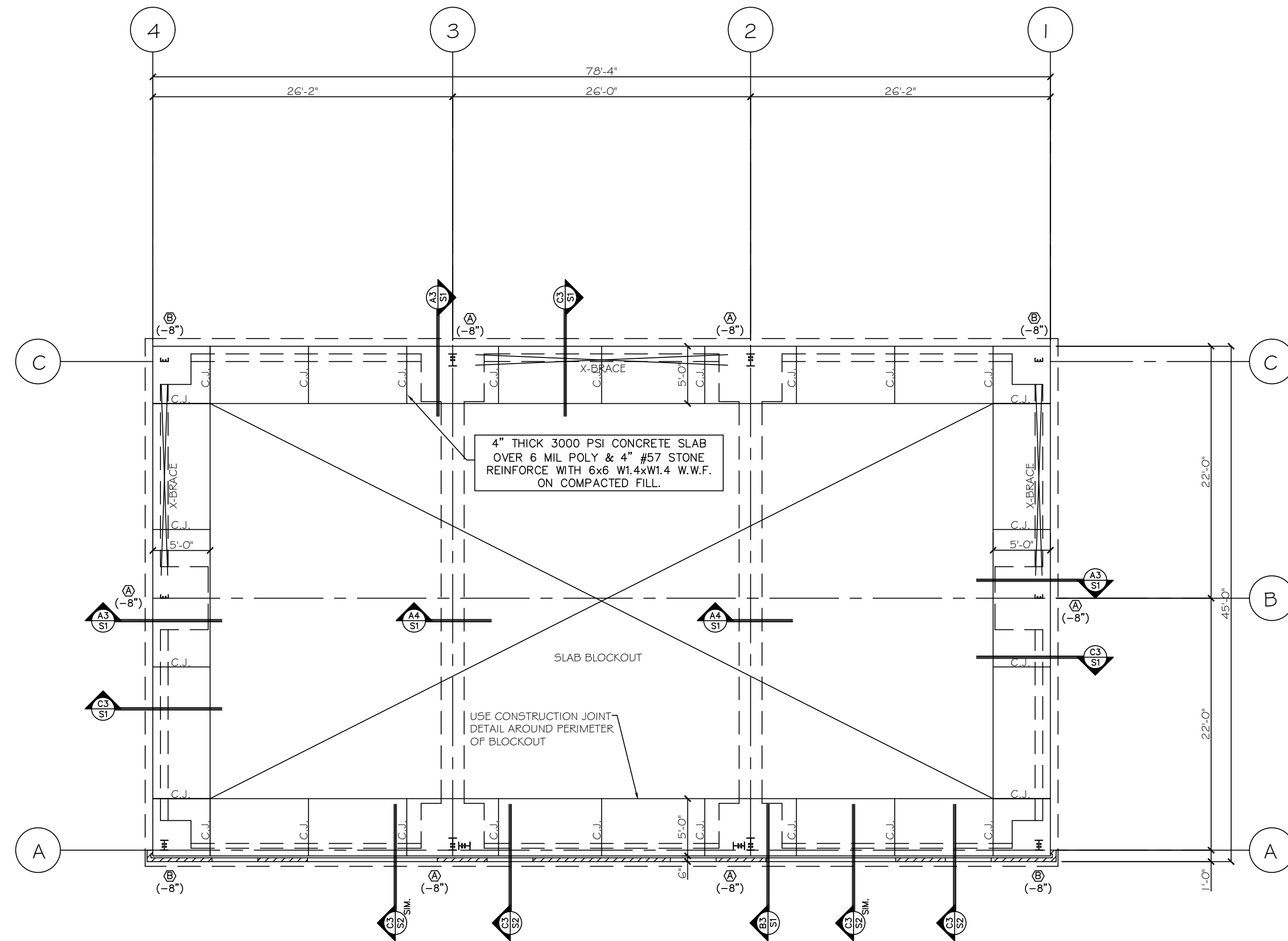
ANGIER COMMERCIAL
 SHELL BUILDING
 166 N. RALEIGH STREET
 ANGIER, NC

REVISIONS

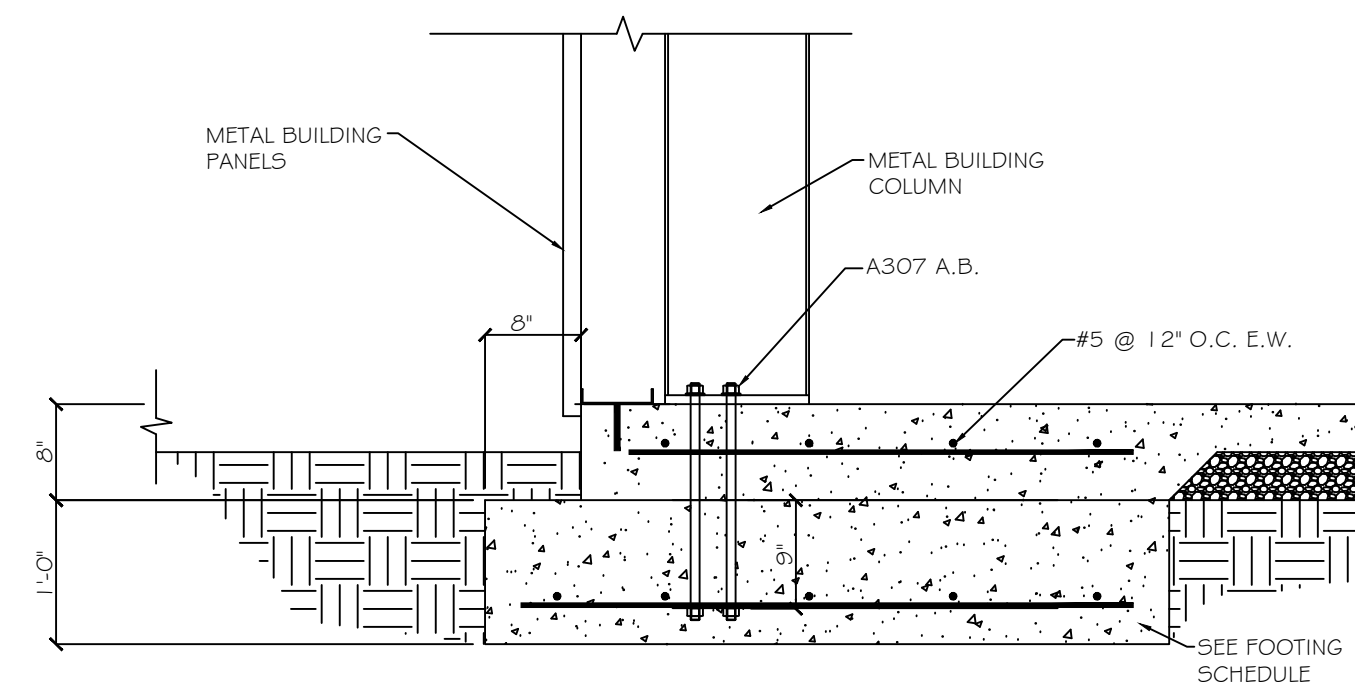
GENERAL NOTES

6-18-21

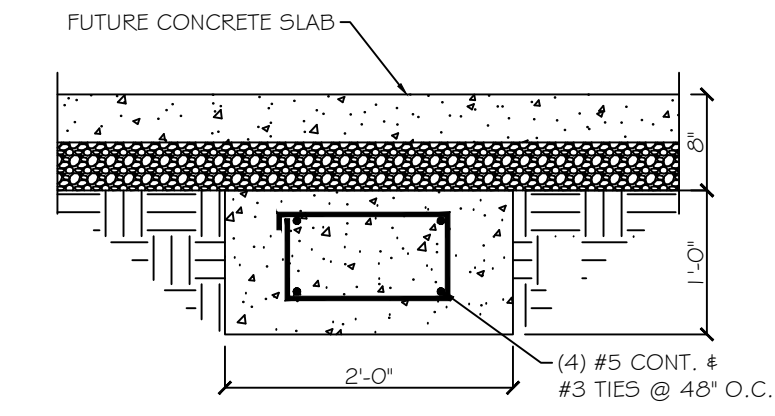
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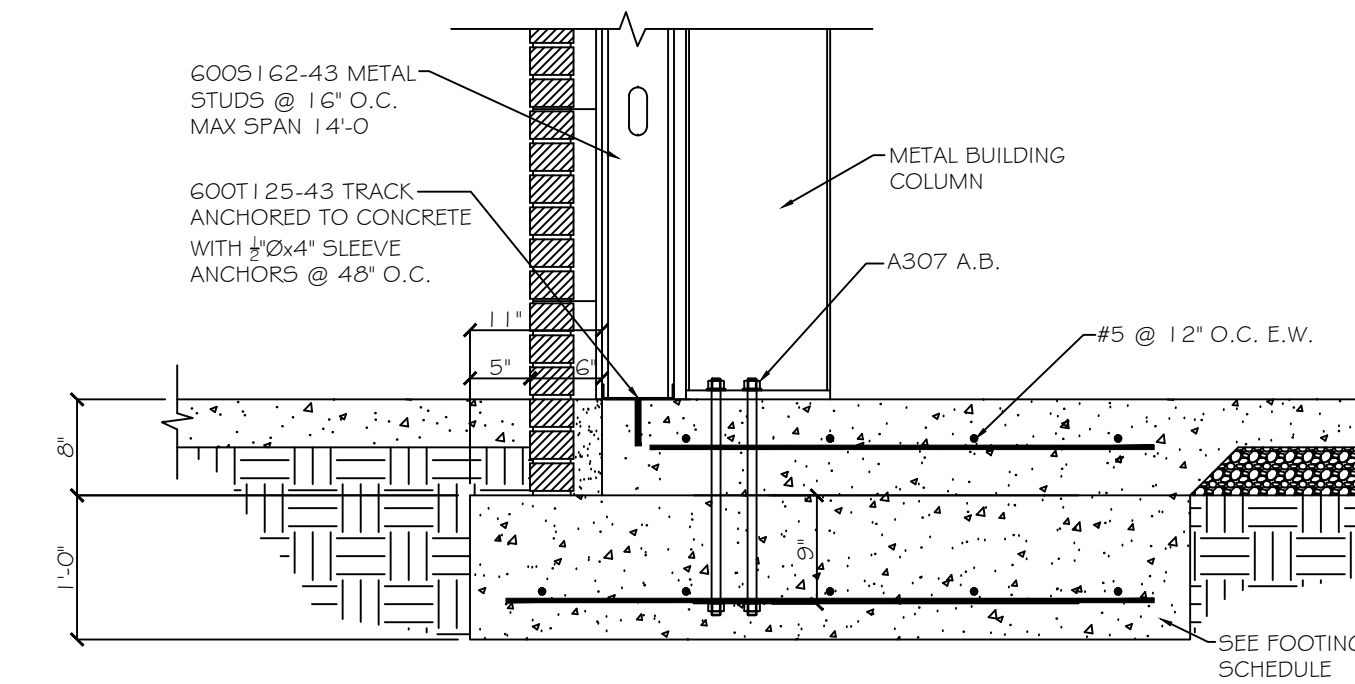
C1 FOUNDATION PLAN
SCALE: 1/8" = 1'-0"



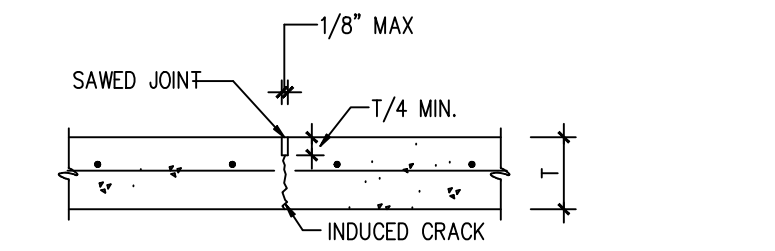
A3 EXTERIOR COLUMN FOOTING DETAIL
SCALE: 3/4" = 1'-0"



A4 TIE BEAM DETAIL
SCALE: 3/4" = 1'-0"

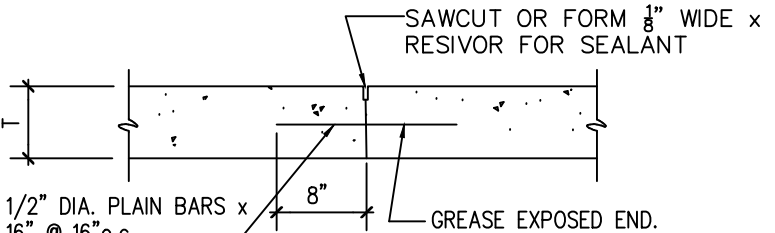


B3 EXTERIOR COLUMN FOOTING DETAIL
SCALE: 3/4" = 1'-0"



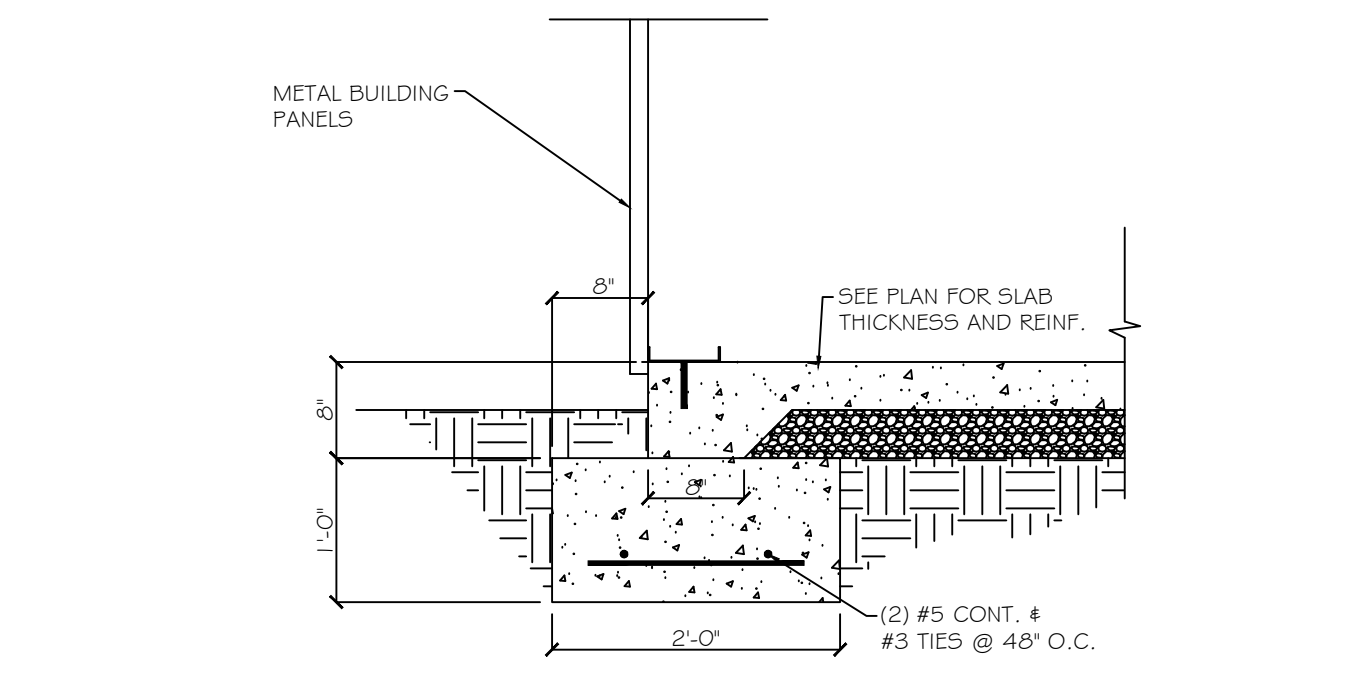
NOTES: 1) SAW JOINTS AS SOON AS CONCRETE WILL NOT RAVEL UNDER SAW BLADE. ALLOW SLAB TO CURE FOR 30 DAYS (MIN.) BEFORE FILING JOINTS W/ SEALANT.

DETAIL - BLDG. SLAB CONTROL JOINT

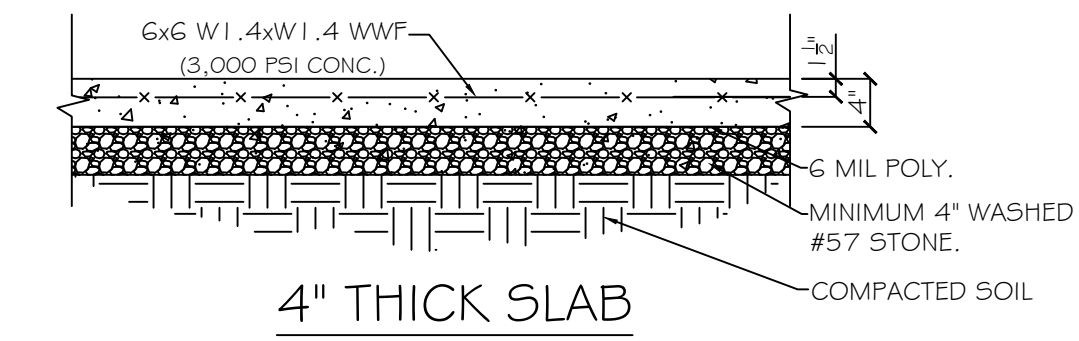


DETAIL - BLDG. SLAB CONST. JOINT

B4 SLAB JOINT DETAILS
SCALE: 3/4" = 1'-0"



C3 PERIMETER FOOTING DETAIL
SCALE: 3/4" = 1'-0"



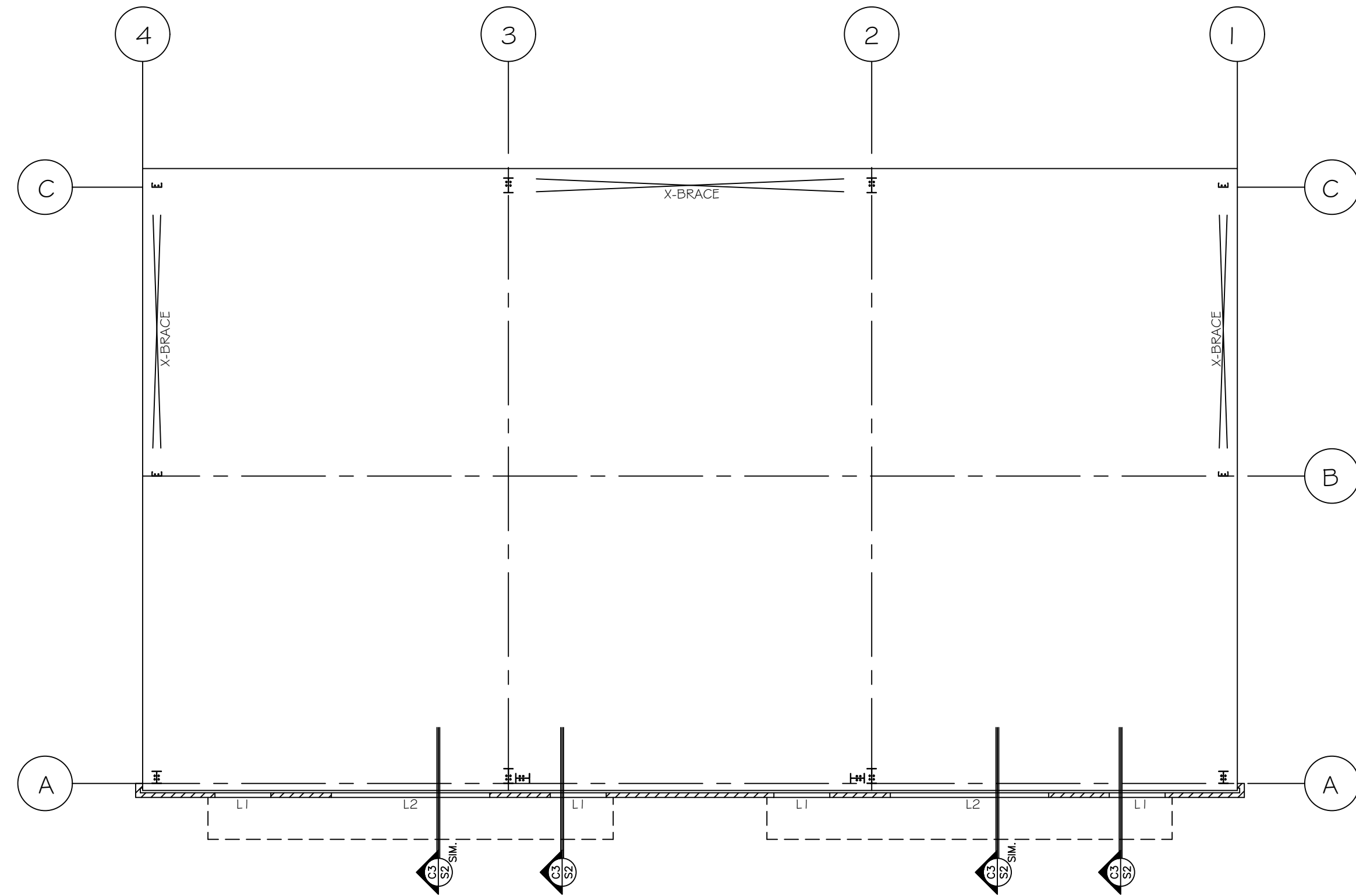
C4 SLAB REINFORCEMENT DETAIL
SCALE: 3/4" = 1'-0"

FOOTING SCHEDULE			2000 PSF
MARK	SIZE	REINFORCING	
(A)	5'-6" x 5'-6" x 12"	#5 @ 12" BOT.	
(B)	4'-0" x 4'-0" x 12"	#5 @ 12" BOT.	

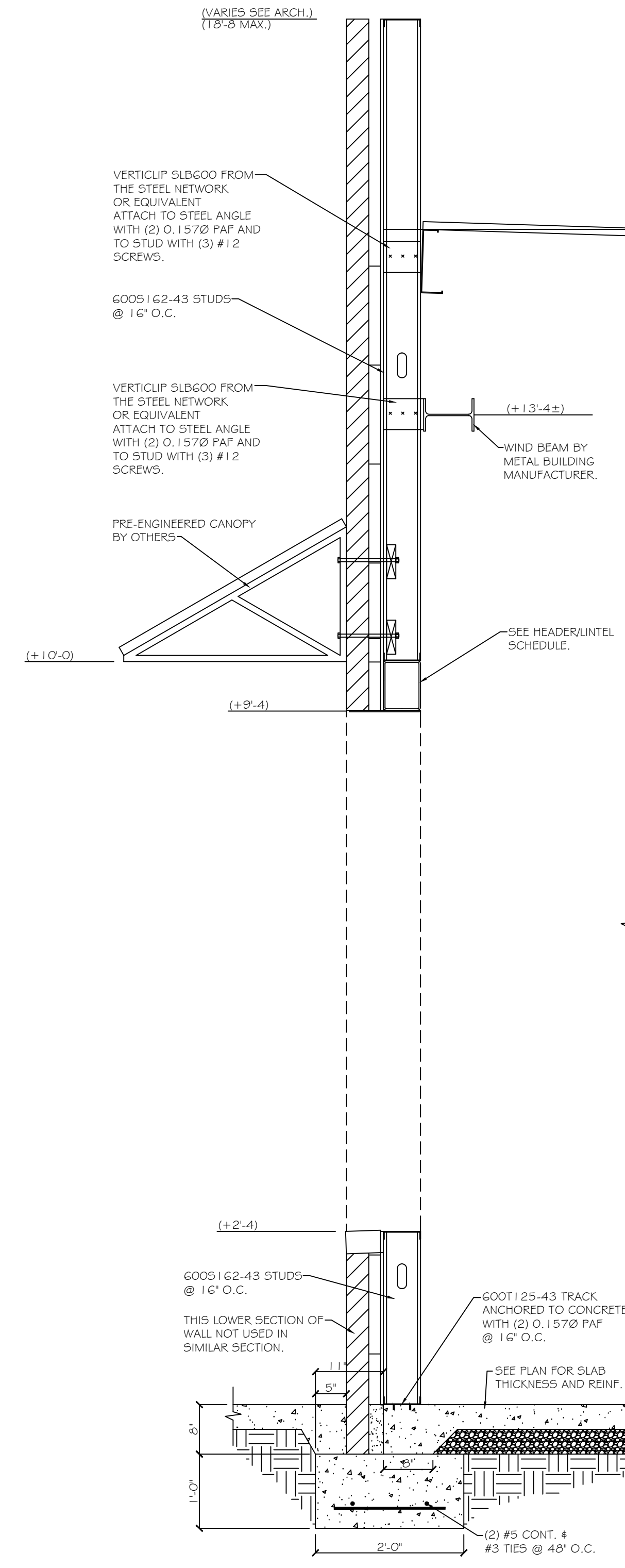
FOUNDATION PLAN

- FOOTING DESIGN BASED ON ASSUMED SOIL BRG. CAPACITY OF 2000 PSF. NOTIFY ENGINEER IF TESTS SHOW OTHERWISE.
- ELEV. NOTED (-) ARE BELOW F.F. (0.00) TO TOP OF FOOTING.
- USE 3000 PSI. CONCRETE AND GRADE 60 REBAR.
- FOUNDATION DESIGNED PER METAL BUILDING MANUF. REACTIONS.

D4 FOUNDATION NOTES



C1 WALL FRAMING PLAN
SCALE: 1/8" = 1'-0"



C3 FRONT WALL SECTION
SCALE: 3/4" = 1'-0"

HEADER/LINTEL SCHEDULE

DESIGNATION	HEADER/LINTEL	SUPPORT
L1	2~600S162-43 METAL STUDS WITH 600T125-43 TRACK TOP & BOTT. & L3½x3½ BRICK LINTEL BEAR 8" MIN.	(1) 600S162-43 JACKS (2) 600S162-43 KINGS
L2	2~1000S162-43 METAL STUDS WITH 600T125-43 TRACK TOP & BOTT. & L6x3½ BRICK LINTEL BEAR 8" MIN.	(2) 600S162-43 JACKS (3) 600S162-43 KINGS

FASTEN LIGHT GAGE ASSEMBLY TOGETHER w/ #10 TEK SCREWS @ 12" O.C. TOP & BOTT. EACH SIDE.

BOX HEADER WITH (2) METAL STUDS PER SCHEDULE & 600T125-43 TRACKS TOP & BOTT. (NO SPLICES ALLOWED)

KING STUDS

TRACK SECTION WITH (2) #10 SCREWS THROUGH FLANGES (BOTH SIDES) AND (4) #10 SCREWS INTO FULL HEIGHT STUDS.

BAND STUDS TOGETHER WITH 1/8" STRAPPING AT 4'-0" O.C. VERTICALLY, (FULL HEIGHT OF WALL)

JACK STUDS

B4 LINTEL/HEADER SCHEDULE
SCALE: 3/4" = 1'-0"

HARRIS
STRUCTURAL DESIGN, PA
 166 N. Raleigh Street, Ste. 116
 Angier, NC 27521
 PHONE: (919) 946-0798
 CELL: (919) 946-0798
 EMAIL: thomas-harris@tdnc.com



ANGIER COMMERCIAL SHELL BUILDING
 166 N. RALEIGH STREET
 ANGIER, NC

REVISIONS
DETAILS
6-18-21

S2

Nathan P. Miller, PE
License No. 048795

May 10, 2021

HMD Development Inc
8204 Creedmor Rd. Ste 100
Raleigh, NC 27613

Project Name: Angier Commercial Shell
Buildings: A->44'-0"x78'-4"x14'-0"(RCG,0.5:12)

Attn.: Bryant Dickinson
Project Location: Angier, NC 27501
NBG Project #: A21B0621A

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. 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:	15.0 psf	Snow Exposure Factor, Ce:	1.00	Snow Imp. Factor, Is:	1.00
Roof Live Load:	20.0 psf	Reducible As Per Code:			
Ultimate Design Wind Velocity:	115 mph	Nominal Design Wind Velocity:	89 mph		
***Components & Cladding Pressures:	22 psf/ -29 psf				
Is Roof to meet UL 90 Requirements?:	No			Wind Exposure:	B
Seismic Criteria:	Ss: 0.172 S1: 0.083	• No ground snow included in seismic calculations.			
Design Sds / Sd1:	0.183/0.133	Analysis Procedure: Equiv. Lat. Force Procedure			
Seis. Imp. Factor, Ie:	1.00	Basic SFRS: Not Detailed for Seismic			
Seis. Design Category:	B	Site Class:	D		

BUILDING-SPECIFIC LOADING INFORMATION:

Bldg	Roof Dead	Collateral Dead		Snow Coefficient		Snow Load (psf)		Wind		Seismic		
	(psf)*	Pri (psf)	Sec (psf)	Ct	Cs	Ps (psf)	**Pm (psf)	Enclosure	GCpi	R	Cs	V (kips)
A	3.0	5.0	5.0	1.0	1.00	10.50	15.50	Enclosed	± 0.18	3.00	0.061	4.5

*Primary Structural Not Included

**P_m is based on the minimum roof snow load calculated per building code or the contract-specified roof snow load, whichever is greater. This value, P_m, is only applied in combination with Dead and Collateral Loads. Roof Snow in other loading conditions is determined per the specified Building Code.

***Ultimate 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.

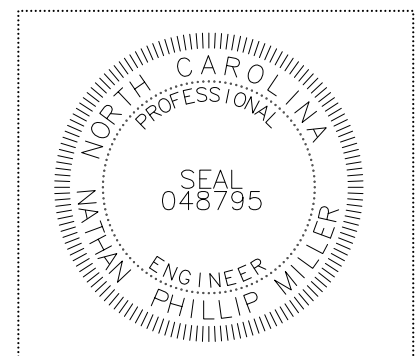
Roof-Top Unit Information

No roof-top units on building.

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 Specification for the Design of Cold-Formed Steel Structures, © 2012 Edition.
- IBC codes are designed in accordance with ASCE7-10 Edition.
- MBMA Low Rise Building Systems Manual, Latest Edition.
- AWS Latest Edition of Structural Welding Code.
- No buyout structural components provided on this project.



Professional Seal



GENERAL NOTES:

1. MATERIALS	ASTM DESCRIPTION
STRUCTURAL STEEL PLATE	A529 / A572 / A1011
HOT ROLLED MILL SHAPES	A36 / A529 / A500
HHS ROUND	A500
HHS 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 REPRESENTATIVE. IN THE EVENT INSPECTIONS ARE REQUIRED, THE OWNER AND/OR THE OWNER'S REPRESENTATIVE 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 RSCC 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-PRE-TENSIONED"), UNLESS REQUIRED OTHERWISE BY LOCAL JURISDICTION OR CONTRACT REQUIREMENTS:

- A) ALL A490 BOLTS SHALL BE "FULLY-PRE-TENSIONED".
- B) ALL A325 BOLTS IN PRIMARY FRAMING (RIGID FRAMES AND BRACING) MAY BE "SNUG-TIGHT", EXCEPT AS FOLLOWS: "FULLY-PRE-TENSION" 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-PRE-TENSIONED", 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.

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:

A.B. = ANCHOR BOLTS	MAX = MAXIMUM	REQ'D = REQUIRED
BS = BOTH SIDES	M.B. = MACHINE BOLTS	REV. = REVISION
B.U. = BUILT-UP	MBS = METAL BUILDING SUPPLIER	SIM = SIMILAR
DIA = DIAMETER	TBD = TO BE DETERMINED	SL = STEEL LINE
FLG = FLANGE	N/A = NOT APPLICABLE	N.S. = NEAR SIDE
F.S = FAR SIDE	NIC = NOT IN CONTRACT	MIN = MINIMUM
GA. = GAUGE	SLV = SHORT LEG VERTICAL	TYP = TYPICAL
H.S.B. = HIGH STRENGTH BOLTS	O.A.L. = OVERALL LENGTH	U.N.O. = UNLESS NOTED OTHERWISE
HT. = HEIGHT	O.C. = ON CENTER	PL = PLATE
LLV = LONG LEG VERTICAL	U.N.O. = UNLESS NOTED OTHERWISE	
PEMB = PRE-ENGINEERED METAL BUILDING MANUFACTURER		
?? = PART MARK TO BE DETERMINED AND WILL BE UPDATED ON CONSTRUCTION DRAWINGS		

SEE SHEET AB-2 FOR ADDITIONAL DESIGN NOTES

ABC Design Approved
Ryan McDonough
 05/13/2021 1:08:12 PM

DRAWING INDEX

COVERSHEET	C-1
ANCHOR BOLT DRAWINGS	AB-1 & AB-2
COLUMN BASE REACTIONS	AB-3
STRUCTURAL/SHEETING DRAWINGS	E-01~E-07
DETAILS	

BUILDING INFORMATION

PRIMER COLORS

PRIMARY PRIMER COLOR: RED SECONDARY PRIMER COLOR: RED

ROOF SHEETING

TYPE: S3P GAUGE: 24 FINISH: GALVALUME PLUS CLIP TYPE: TALL
 THERMAL BLOCKS: YES EPS FOAM SPACER: NO ROOF LINE TRIM, PAINTED: FOX GRAY
 YES NO DOWNSPOUTS PAINTED: FOX GRAY GUTTERS PAINTED: FOX GRAY
 YES NO INSULATION 4.38 INCH (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 S3P DECK, TYPE: N/A GAUGE: _____ FINISH: _____

WALL SHEETING

TYPE: A3P GAUGE: 26 FINISH: FOX GRAY
 CORNER TRIM, PAINTED: FOX GRAY BASE TRIM, PAINTED: BURNISHED SLATE
 YES NO WALKDOORS, QUANTITY: 2 PAINTED: WHITE
 YES NO WINDOWS, QUANTITY: _____ PAINTED: _____
 YES NO INSULATION 2 INCH (NOT BY MBS)

WALL FRAMED OPENINGS

YES NO FRAMED OPENING TRIM, PAINTED: ---
 SIZES: FSW: NONE _____
 BSW: NONE _____
 LEW: NONE _____
 REW: NONE _____

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 (NOT BY ABC)
 STRUCTURAL PARAPET NON-STRUCTURAL PARAPET TOP OF PARAPET HEIGHT: 18'-10"
 BACK PANEL, TYPE: L3P 26 GAUGE, FINISH: GALVALUME PLUS
 YES NO CRANES (SEE CRANE PLAN FOR ADDITIONAL INFORMATION)
 YES NO MEZZANINE (SEE MEZZANINE PLAN FOR ADDITIONAL INFORMATION)

BUILDING LOADS

DESIGN CODE: NCBC 2018
 ROOF LIVE LOAD: 20.00 PSF MBMA OCC. CLASS: II
 LIVE LOAD REDUCIBLE Yes
 GROUND SNOW LOAD: 15.0 PSF SNOW EXP. FACTOR, Ce: 1.00
 SNOW IMPORTANCE FACTOR, Is: 1.00

WIND: 115 / 89 MPH
 (Vult) / (Vasd)

C & C PRESSURES (PSF): 22 / -29
 EXPOSURE: B
 UL 90 NO

L3P Roof-Const. No.161 ; L3P Roof w/ Translucent Panel-Const. No.167
 S3P Roof-Const. No.552 ; S3P Roof w/ Translucent Panel-Const. No.590 ;
 Composite CFR Roof-Const. No.552A ; N/A Roof-Const. No. _____

SEISMIC INFORMATION Ss: 0.172 S1: 0.083

Design Sds/Sd1: 0.184 / 0.133 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.

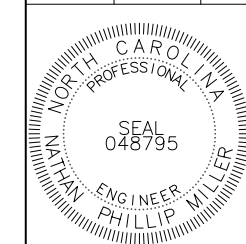
3) Pm IS BASED ON THE MINIMUM ROOF SNOW LOAD CALCULATED PER BUILDING CODE OR THE CONTRACT SPECIFIED SNOW LOAD, WHICHEVER IS GREATER. THIS VALUE, Pm, IS ONLY APPLIED IN COMBINATION WITH THE DEAD AND COLLATERAL LOADS. ROOF SNOW IN OTHER LOADING CONDITIONS IS DETERMINED PER THE SPECIFIED BUILDING CODE.

BUILDING	
ROOF DEAD (PSF):	3.0
ROOF SNOW Pm (PSF):	15.50
PRI. COL. (PSF):	5.0
SEC. COL. (PSF):	5.0
SNOW Ct:	1.0
SNOW Cs:	1.00
ROOF SNOW Ps (PSF):	10.50
WIND ENCLOSURE:	Closed
GCpi:	±0.18
SEISMIC R:	3.00
SEISMIC Cs:	0.061
BASE SHEAR (KIPS):	4.5

DATE	TYPE	ENG	CHK	DRN	ANCHOR BOLTS	PERMITS
5/13/21	RPM	JDH	ERW	ERW		
5/13/21	RPM	JDH	ERW	ERW		

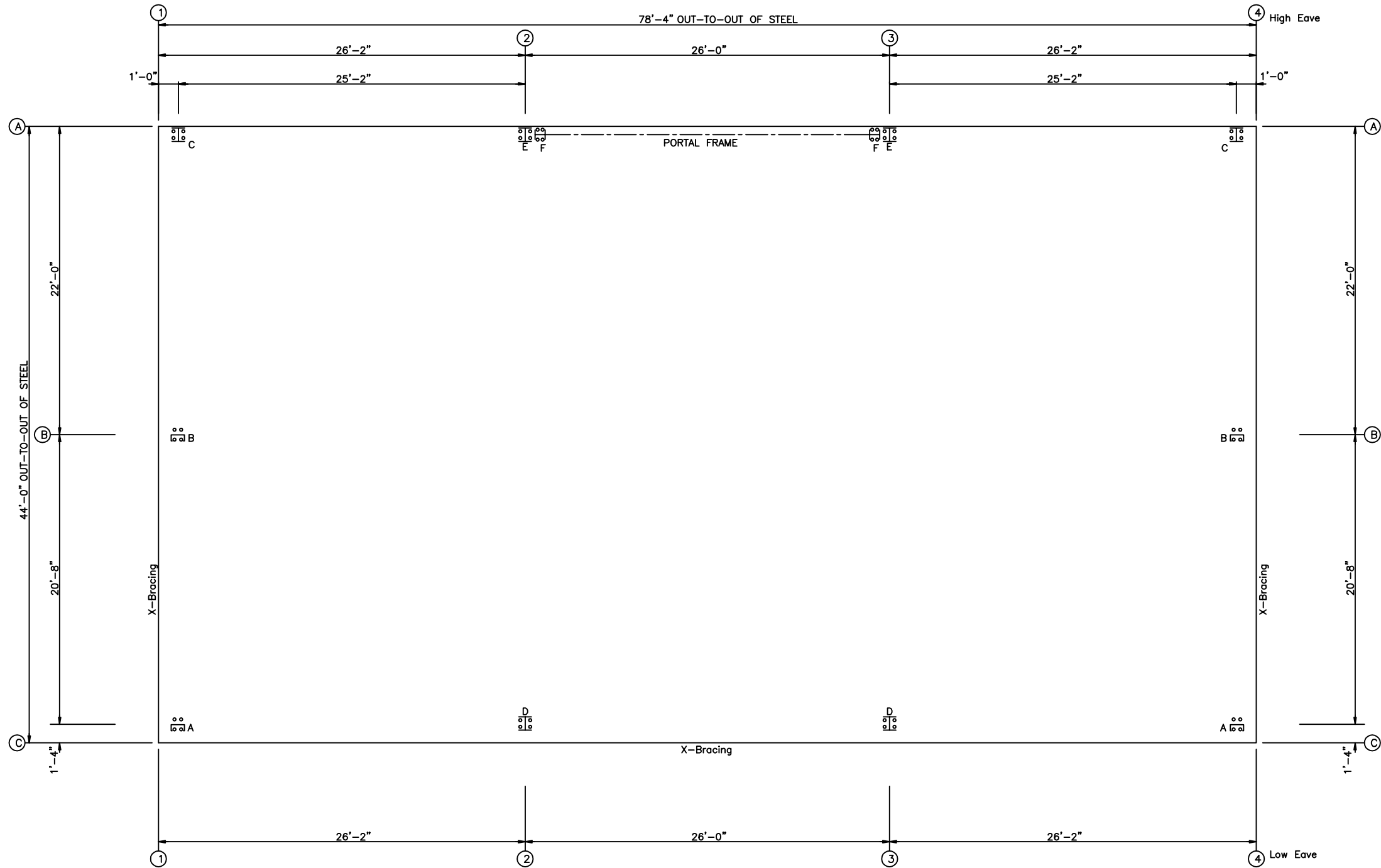
Nathan P. Miller, PE
 License No. 048795

ANGIER COMMERCIAL SHELL
 166 RALEIGH STREET, ANGIER, NC 27501
 HMD DEVELOPMENT INC
 RALEIGH, NC 27613



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SHEET TITLE: COVERSHEET
 JOB NUMBER: A21B0621A
 SHEET: C-1



ANCHOR BOLT PLAN
NOTE: All Base Plates @ 100'-0" (U.N.)

ANCHOR BOLT SUMMARY

Qty	Locate	Dia (in)	Type
24	Endwall	3/4"	F1554
16	Frame	3/4"	F1554
8	WindCol	3/4"	F1554

o Dia = 3/4"

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 CONCRETE DIMENSIONS.
9. FINISHED FLOOR ELEVATION = 100'-0"
BOTTOM OF BASE PLATE = 100'-0"
UNLESS NOTED OTHERWISE.

DATE	ISSUE	CHK	ENG	PE
5/13/21 <td>ANCHOR BOLTS <td>ERW</td> <td>JDH</td> <td>RPM</td> </td>	ANCHOR BOLTS <td>ERW</td> <td>JDH</td> <td>RPM</td>	ERW	JDH	RPM
				NPM

PROJECT NAME
ANGIER COMMERCIAL SHELL
166 RALEIGH STREET, ANGIER, NC 27501

CUSTOMER NAME
HMD DEVELOPMENT INC
RALEIGH, NC 27613

PROFESSIONAL ENGINEER
NATHAN P. MILLER
SEAL 048795

PROJECT NAME
ANGIER COMMERCIAL SHELL
166 RALEIGH STREET, ANGIER, NC 27501

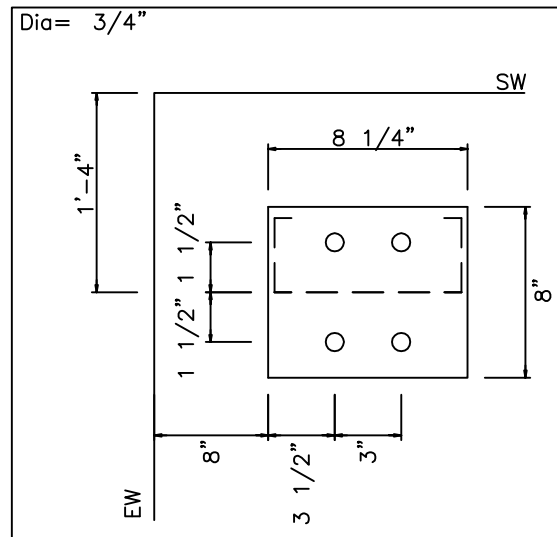
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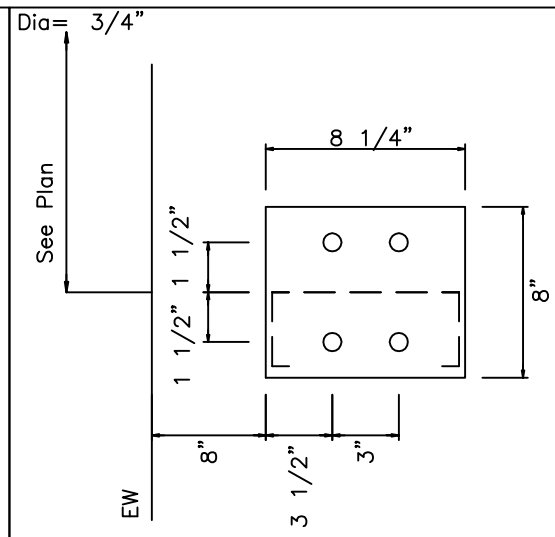
SHEET TITLE
ANCHOR BOLT PLAN

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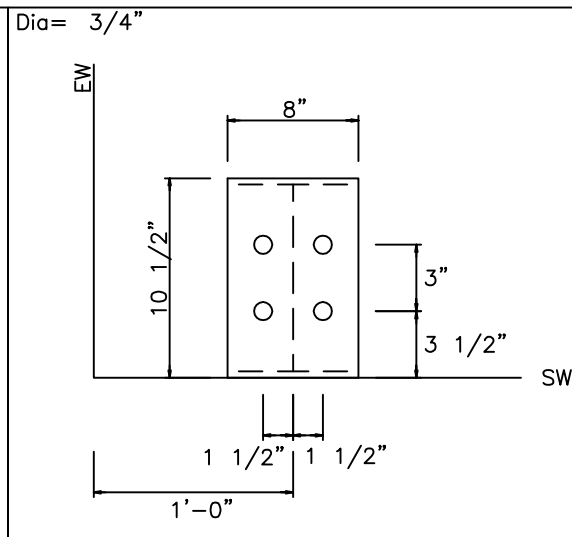
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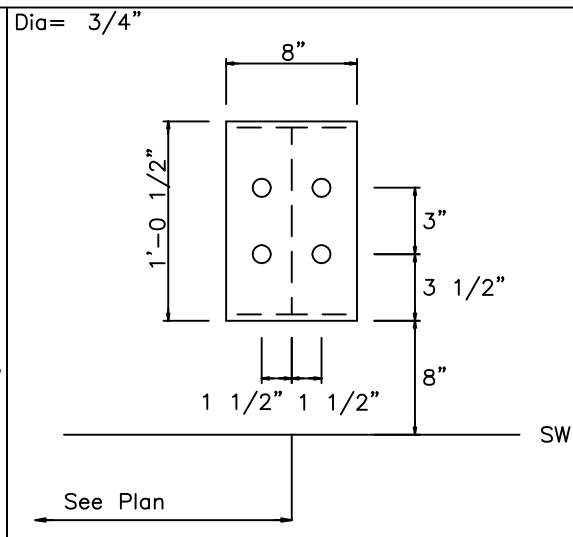
DETAIL A



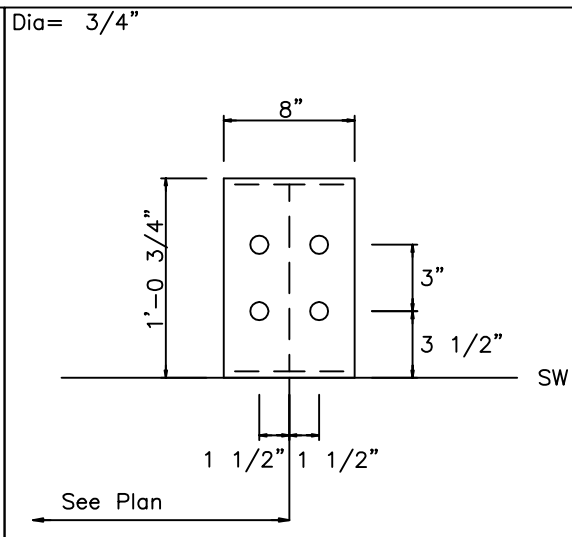
DETAIL B



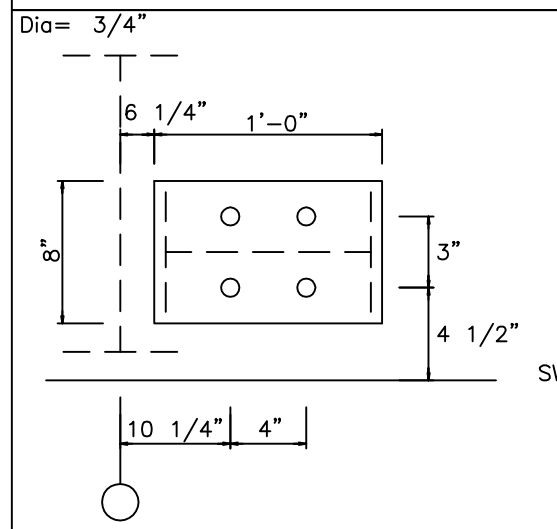
DETAIL C



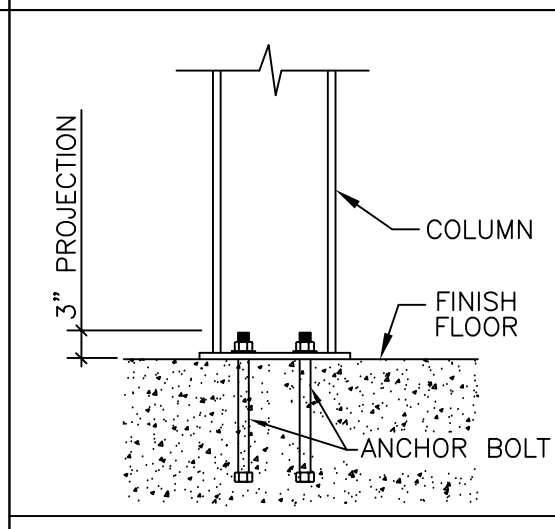
DETAIL D



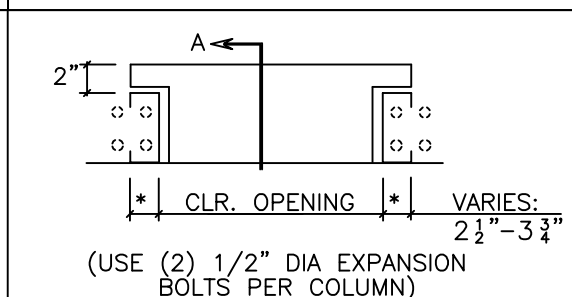
DETAIL E



DETAIL F



TYPICAL COLUMN BASE PLATE DETAIL



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.

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.

THIS BUILDING SYSTEM IS BASED ON UNIFORMLY APPLYING THE CONTRACT-SPECIFIED LIVE LOAD AND ROOF SNOW LOAD. 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.

THE WALL SYSTEM BY OTHERS MUST WEIGH NO MORE THAN 55 PSF.

THE SPANDREL BEAMS AND/OR SPANDREL CHANNELS SUPPORTING THE TOP OF THE MASONRY WALLS MUST BE ATTACHED TO THE WALLS WITH A SPACING NOT TO EXCEED 4'-0" O.C. (MAX.). THE SPANDRELS MUST ALSO BE RIGIDLY ATTACHED TO THE WALL NO MORE THAN 6" AWAY FROM EACH PAIR OF INTERMEDIATE STIFFENERS. THIS ATTACHMENT IS DESIGNED AND PROVIDED BY OTHERS (NOT BY THE METAL BUILDING MANUFACTURER). FIELD DRILLING OF THE SPANDRELS FOR A BOLTED CONNECTION WILL BE REQUIRED.

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.

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.

THE DESIGN OF THE PARAPET/FACADE IS NOT BY THE METAL BUILDING MANUFACTURER. THE FACADE MUST BE DESIGNED TO ADEQUATELY CARRY AND TRANSFER THE PROPER CODE-REQUIRED LOADS TO THE FRAMES, AND MUST NOT ALLOW RAINFALL ACCUMULATION.

ISSUE	ANCHOR BOLTS	DATE
ERW	JDH	5/13/21
CHK	ENG	
DRN	RPM	
PE	NPM	

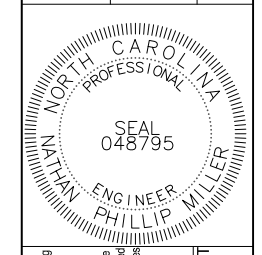
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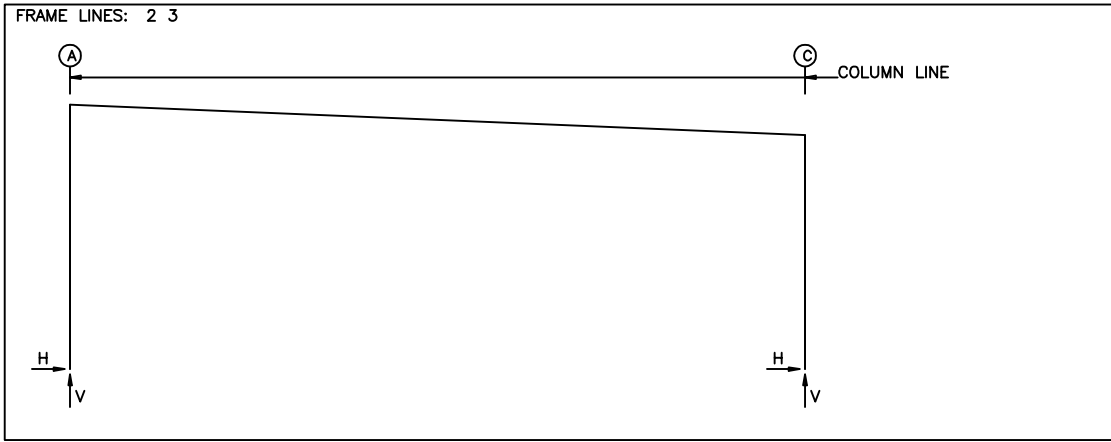
JOB NUMBER
A21B0621A

SHEET TITLE
BASE PLATE DETAILS



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SHEET
AB-2



RIGID FRAME: ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Anc. Qty	Bolt Dia	Base_Plate (in)			Grout (in)
				Width	Length	Thick	
2*	A	4	0.750	8.000	12.75	0.375	0.0
2*	C	4	0.750	8.000	12.50	0.375	0.0
2* Frame lines:				2 3			

ENDWALL COLUMN: ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Anc. Qty	Bolt Dia	Base_Plate (in)			Grout (in)
				Width	Length	Thick	
1	A	4	0.750	8.000	10.50	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
4	C	4	0.750	8.000	8.250	0.375	0.0
4	B	4	0.750	8.000	8.250	0.375	0.0
4	A	4	0.750	8.000	10.50	0.375	0.0

GENERAL NOTES

- 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.
- REACTIONS ARE PROVIDED BY LOAD CASE IN ORDER TO AID THE FOUNDATION ENGINEER IN DETERMINING THE APPROPRIATE LOAD FACTORS AND COMBINATIONS TO BE USED WITH EITHER WORKING STRESS OR ULTIMATE STRENGTH DESIGN METHODS. WIND LOAD CASES ARE GIVEN FOR EACH PRIMARY WIND DIRECTION.
- FOR ASCE7-10 AND LATER BASED BUILDING CODES, THE UNFACTORED LOAD CASE REACTIONS DUE TO WIND ARE GENERATED USING THE ULTIMATE DESIGN WIND SPEED (V_{ult}).
- POSITIVE (+) REACTIONS ARE AS SHOWN ABOVE. FOUNDATION LOADS ARE IN OPPOSITE DIRECTIONS.
- 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		Collateral		Live		Snow		Snow_Drift		Wind_Left1	
		Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert
2*	A	1.0	2.5	1.3	3.0	3.1	7.1	2.7	6.3	0.1	1.7	-6.5	-8.8
2*	C	-1.0	2.5	-1.3	3.1	-3.1	7.3	-2.7	6.4	-0.1	0.1	-2.5	-4.5
Frame Line	Column Line	-Wind_Right1-		--Wind_Left2-		-Wind_Right2-		--Wind_Long1-		--Wind_Long2-		-Seismic_Left	
		Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert
2*	A	-0.2	-8.7	-6.0	-4.5	0.0	-4.4	-0.6	-6.5	-2.4	-10.5	-0.7	-0.5
2*	C	8.4	-12.4	-3.0	-0.1	8.1	-8.0	0.7	-6.8	2.2	-10.6	-0.9	0.5
Frame Line	Column Line	Seismic_Right		-MIN_SNOW--									
		Horiz	Vert	Horiz	Vert								
2*	A	0.7	0.5	3.9	8.9								
2*	C	0.9	-0.5	-3.9	9.2								
2* Frame lines:		2 3											

ENDWALL COLUMN: BASIC COLUMN REACTIONS (k)

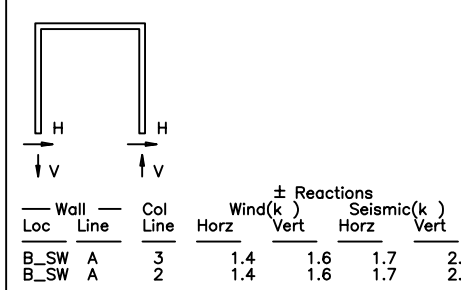
Frm Line	Col Line	Dead		Collat		Live		Snow		Snow Drift		Wind Left1		Wind Right1		Wind Left2		Wind Right2		Wind Press		Wind Suct		Wind Long2	
		Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert
1	A	0.9	0.6	2.3	1.3	0.9	1.9	0.0	0.8	0.0	-0.1	0.0	2.7	0.0	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	B	1.7	1.9	6.9	4.0	0.1	-4.7	-8.5	-4.7	-5.8	-1.9	-3.3	3.6	-8.2											
1	C	0.6	0.6	2.3	1.3	0.0	-1.5	-2.6	-1.5	-1.7	-1.0	-1.7	2.0	-2.7											
Frm Line	Col Line	Seis Left		Seis Right		-MIN_SNOW--		E1PAT_SL_1-		E1PAT_SL_2-		E1PAT_LL_1-		E1PAT_LL_2-											
		Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert
1	A	0.0	0.0	0.0	1.9	0.0	0.8	0.0	-0.1	0.0	2.7	0.0	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	B	0.0	0.0	0.0	5.7	0.0	1.0	0.0	1.0	0.0	3.4	0.0	3.3	0.0	3.3	0.0	3.4	0.0	3.4	0.0	3.4	0.0	3.4	0.0	3.4
1	C	0.0	0.0	0.0	1.9	0.0	-0.1	0.0	0.7	0.0	0.0	-0.3	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Frm Line	Col Line	Dead		Collat		Live		Snow		Snow Drift		Wind Left1		Wind Right1		Wind Left2		Wind Right2		Wind Press		Wind Suct		Wind Long2	
		Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert
4	C	0.6	0.6	2.3	1.3	0.0	-2.6	-1.5	-1.7	-1.0	-1.7	2.0	-2.7												
4	B	1.7	1.9	6.9	4.0	0.1	-8.5	-4.7	-5.8	-1.9	-3.3	3.6	-8.2												
4	A	0.9	0.6	2.3	1.3	0.9	-2.5	-1.9	-1.6	-1.0	-1.7	2.0	-2.7												
Frm Line	Col Line	Seis Left		Seis Right		-MIN_SNOW--		E2PAT_SL_1-		E2PAT_SL_2-		E2PAT_LL_1-		E2PAT_LL_2-											
		Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert
4	C	0.0	0.0	0.0	1.9	0.0	0.7	0.0	-0.1	0.0	2.6	0.0	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	B	0.0	0.0	0.0	5.7	0.0	1.0	0.0	1.0	0.0	3.3	0.0	3.4	0.0	3.4	0.0	3.4	0.0	3.4	0.0	3.4	0.0	3.4	0.0	3.4
4	A	0.0	0.0	0.0	1.9	0.0	-0.1	0.0	0.8	0.0	-0.4	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

BUILDING BRACING REACTIONS

Wall Loc	Line	Col Line	± Reactions(k)				Panel_Shear (lb/ft)		Note
			Wind		Seismic		Wind	Seis	
L_EW	1	B,C	4.2	2.7	1.0	0.6			
F_SW	2,3	C	2.6	1.2	1.3	0.6			
R_EW	4	C,B	4.2	2.7	1.0	0.6			
B_SW	A	2,3							(a)

(a) Wind bent in bay

WIND BENT REACTIONS



DATE	BY	CHK	APP
5/13/21	ERW	JDH	

ANCHOR BOLTS

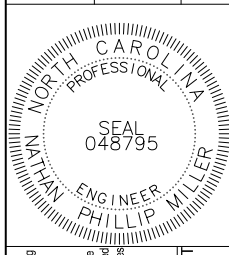
Nathan P. Miller, PE
 License No. 048795

PROJECT NAME
 ANGIER COMMERCIAL SHELL
 166 RALEIGH STREET, ANGIER, NC 27501

CUSTOMER NAME
 HMD DEVELOPMENT INC
 RALEIGH, NC 27613

JOB NUMBER
 A21B0621A

SHEET TITLE
 REACTIONS



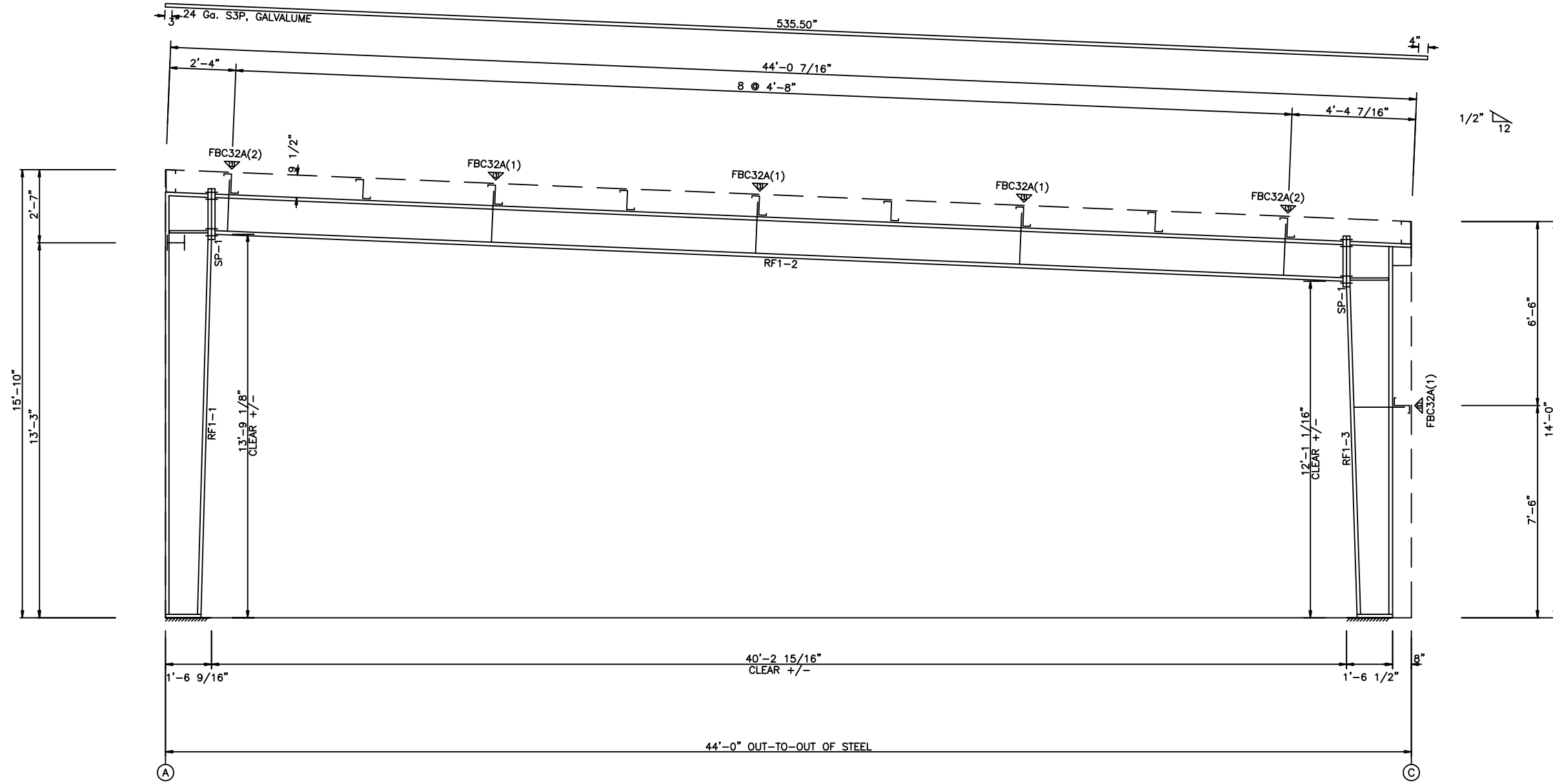
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SHEET
 AB-3

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

CONNECTION PLATES		
ID	Qty	Mark/Part
1	6	FBL&N01

▽ FLANGE BRACES: (1) One Side; (2) Two Sides
A - L2525105

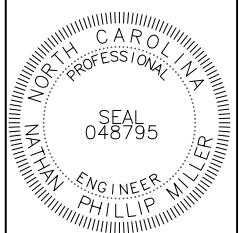


RIGID FRAME ELEVATION: FRAME LINE 2 3

ISSUE	DATE	PERMITS
ERW/JDH	5/13/21	

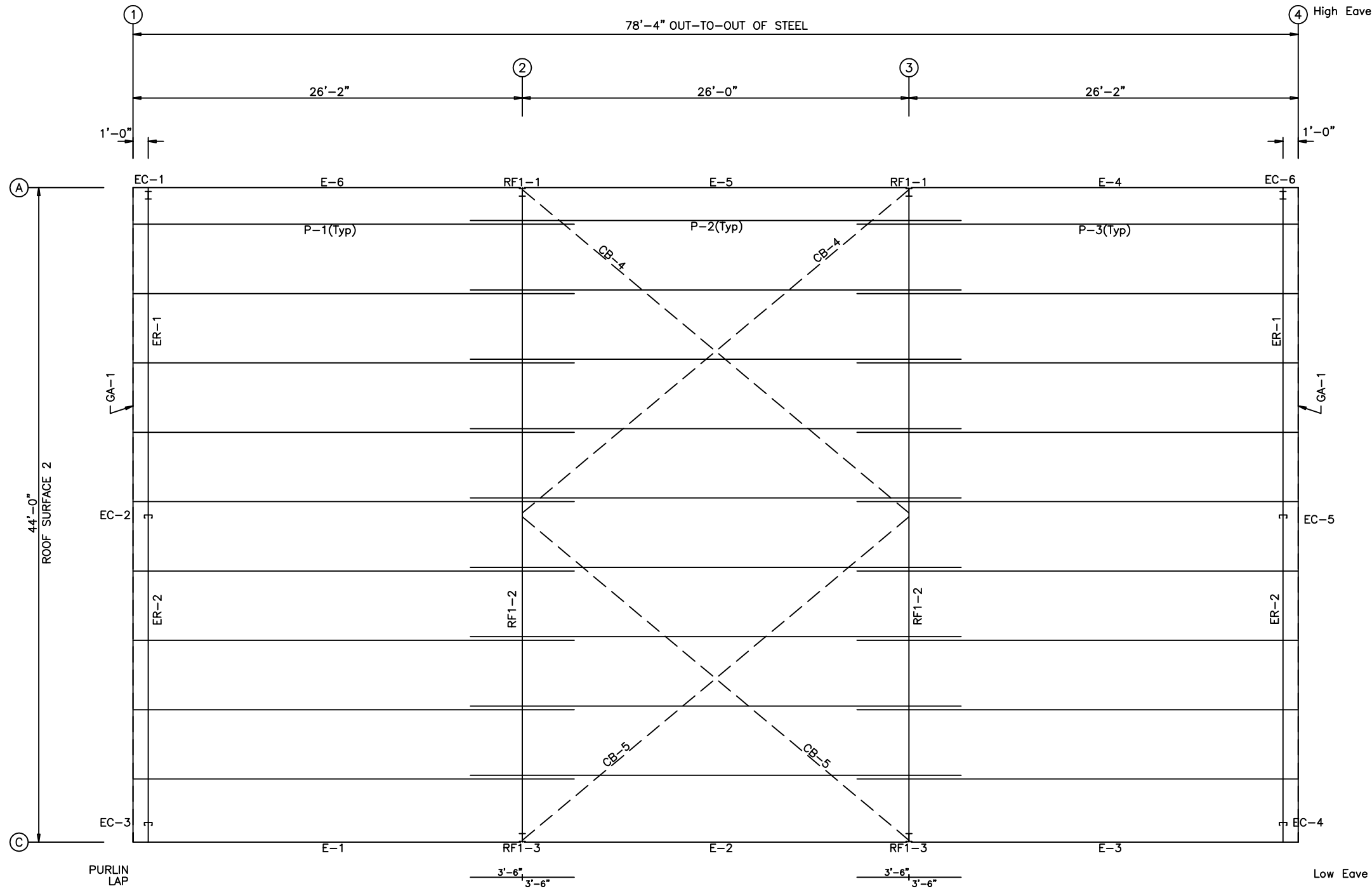
Nathan P. Miller, PE
License No. 048795

PROJECT NAME
ANGIER COMMERCIAL SHELL
166 RALEIGH STREET, ANGIER, NC 27501
CUSTOMER NAME
HMD DEVELOPMENT INC
RALEIGH, NC 27613
JOB NUMBER
A21B0621A
SHEET TITLE
RIGID FRAME ELEVATION



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SHEET
E-01



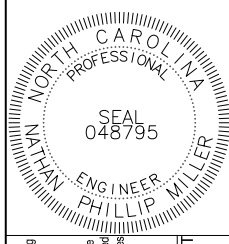
ROOF FRAMING PLAN

MEMBER TABLE		
ROOF PLAN		
MARK	PART	LENGTH
P-1	95Z075	355.750
P-2	95Z060	396.000
P-3	95Z075	355.750
E-1	95E060	313.625
E-2	95E060	311.750
E-3	95E060	313.625
E-4	95HE060	313.625
E-5	95HE060	311.750
E-6	95HE060	313.625
CB-4	RD05-	406.000
CB-5	RD05-	401.000

DATE	ISSUE	CHK	ENG	PE
5/13/21	PERMITS	ERW	JDH	RPM

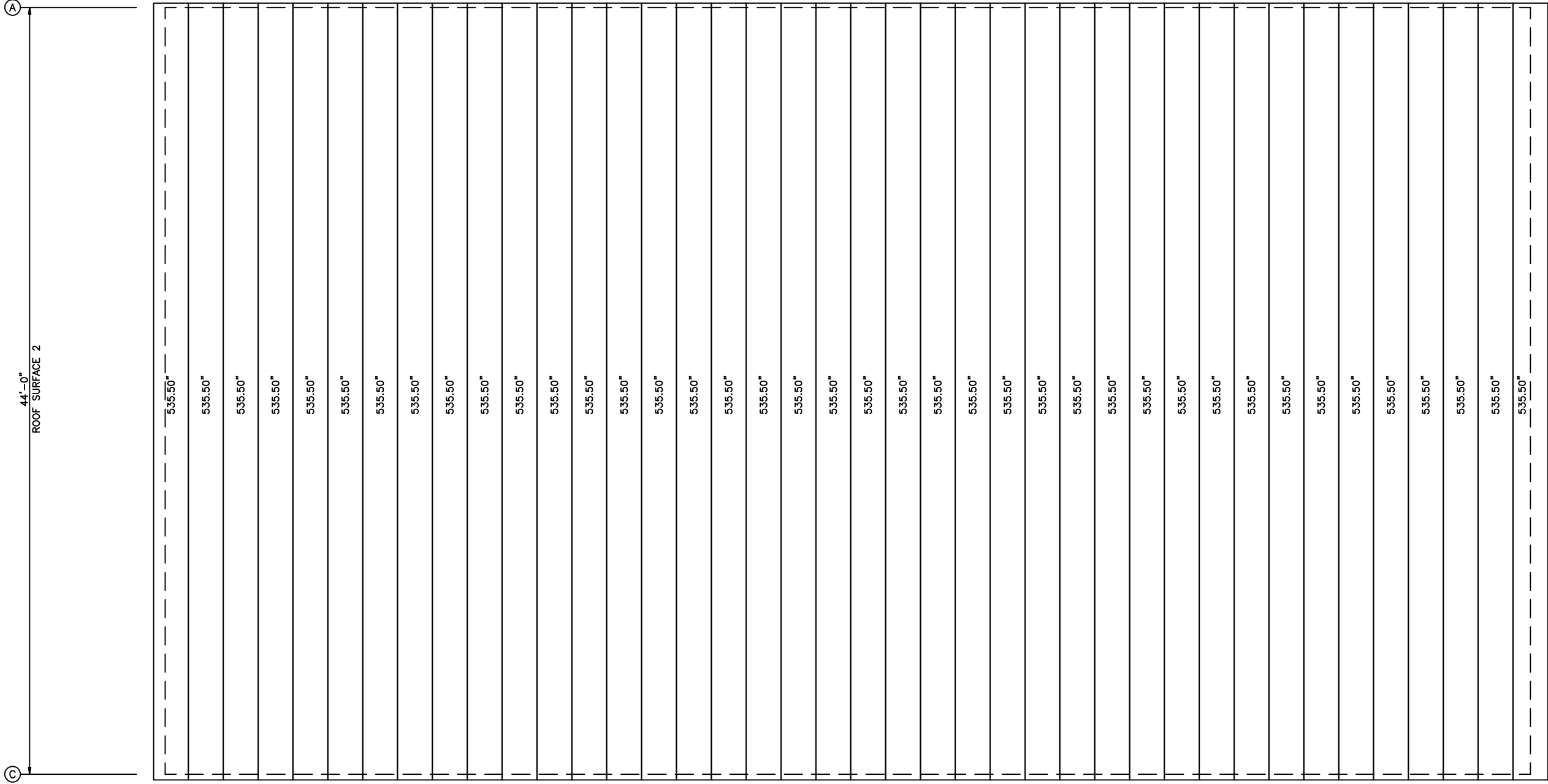
PROJECT NAME
ANGIER COMMERCIAL SHELL
 166 RALEIGH STREET, ANGIER, NC 27501
 CUSTOMER NAME
HMD DEVELOPMENT INC
 RALEIGH, NC 27613
 JOB NUMBER
A21B0621A

PROFESSIONAL ENGINEER
NATHAN P. MILLER
 License No. 048795



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SHEET
E-02



ROOF SHEETING PLAN
 PANELS: 24 Ga. S3P - GALVALUME

ISSUE	DATE	CHK	ENG	PER
PERMITS	5/13/21	ERW	RPM	NPM

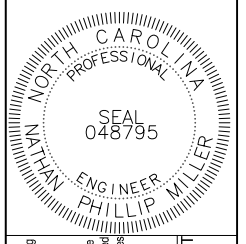
PROJECT NAME
 ANGIER COMMERCIAL SHELL
 166 RALEIGH STREET, ANGIER, NC 27501

CUSTOMER NAME
 HMD DEVELOPMENT INC
 RALEIGH, NC 27613

PROFESSIONAL ENGINEER
 Nathan P. Miller, PE
 License No. 048795

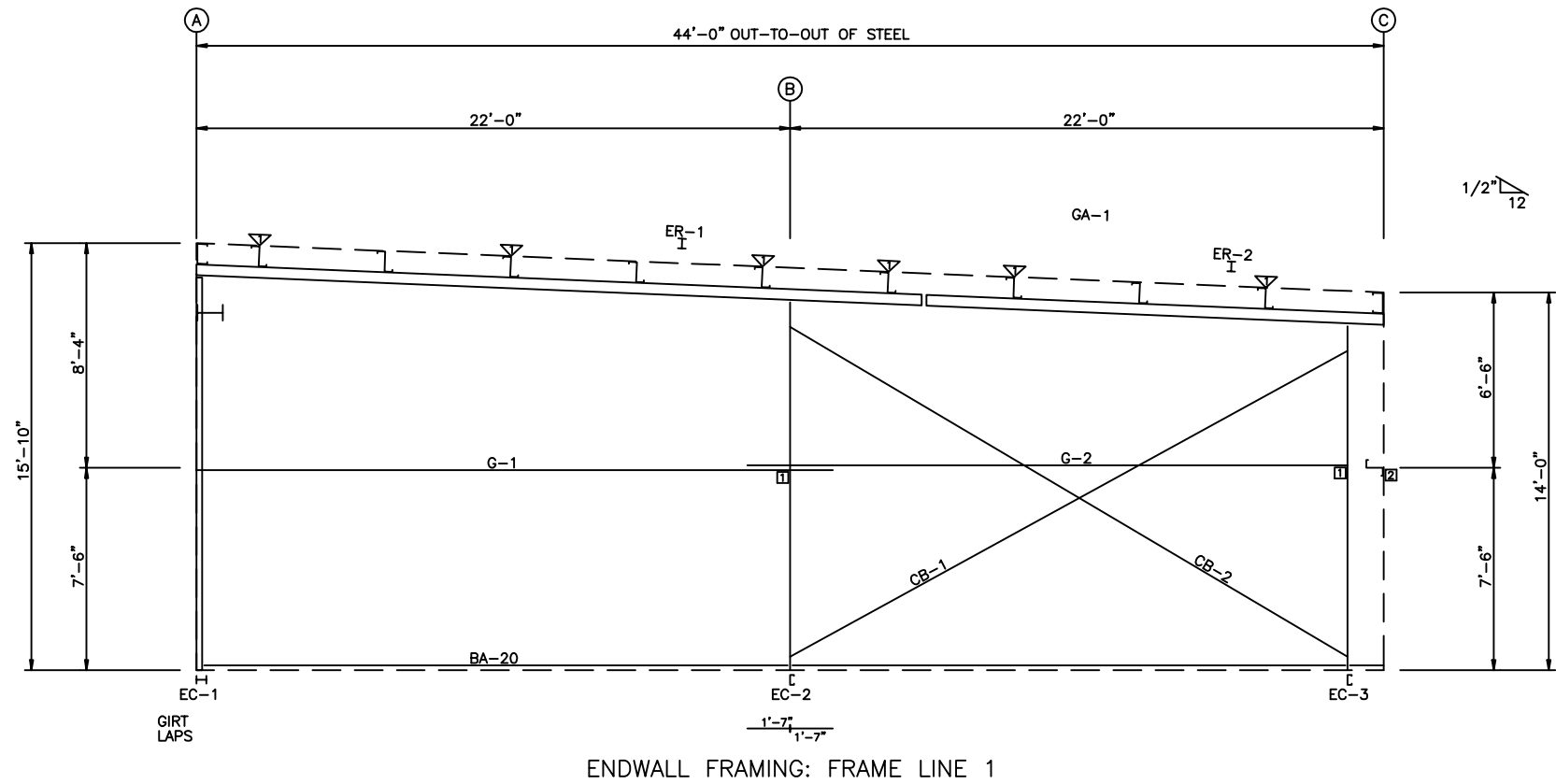
JOB NUMBER
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SHEET TITLE
 ROOF SHEETING PLAN

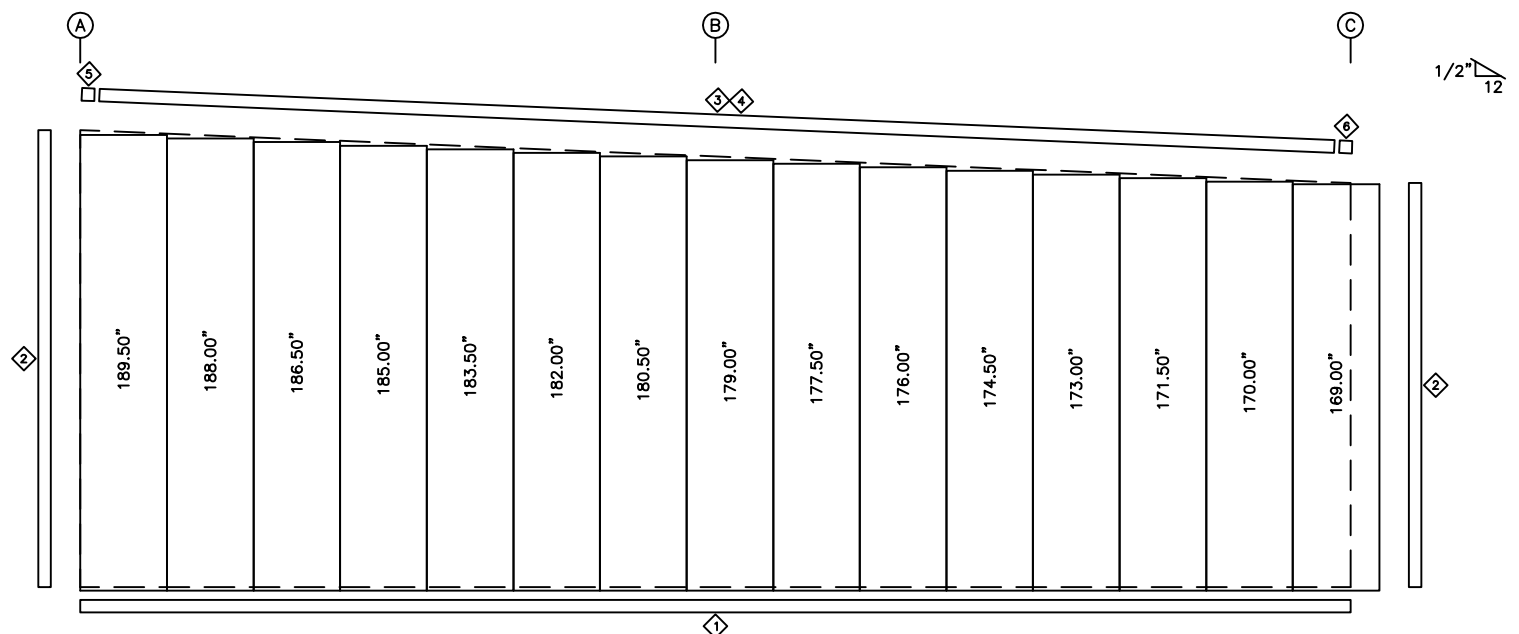


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SHEET
 E-03



ENDWALL FRAMING: FRAME LINE 1



ENDWALL SHEETING & TRIM: FRAME LINE 1
PANELS: 26 Ga. A3P - FOX GRAY-SP

BOLT TABLE FRAME LINE 1				
LOCATION	QUAN	TYPE	DIA	LENGTH
ER-1/ER-2	4	A325	1/2"	2"
EC-1/ER-1	4	A325	1/2"	2"
EC-2/ER-1	6	A325	1/2"	2"
EC-3/ER-2	6	A325	1/2"	2"

TRIM TABLE FRAME LINE 1		
◇ ID	PART	LENGTH
1	NoTrim	Use Drop
2	FCRA2	182.000
3	TRU1	182.000
4	RSF1	182.000
5	TRUECL	8.130
6	TRUECR	8.130

MEMBER TABLE FRAME LINE 1		
MARK	PART	LENGTH
EC-1	W10x22	172.375
EC-2	W08S099	161.375
EC-3	W08S075	151.000
ER-1	W8x18	323.250
ER-2	W8x18	204.375
G-1	08Z060	282.750
G-2	08Z060	274.500
CB-1	RD05-	292.000
CB-2	RD05-	297.000

FLANGE BRACE TABLE FRAME LINE 1			
▽ ID	#	MARK	CLIP
1	1	FBC30	FBL&N01

CONNECTION PLATES FRAME LINE 1		
□ ID	MARK	PART
1	GCW08gcb	
2	GCC03	

DATE	ISSUE	PERMITS
5/13/21 <td></td> <td></td>		

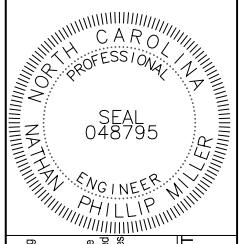
Nathan P. Miller, PE
License No. 048795

PROJECT NAME
ANGIER COMMERCIAL SHELL
166 RALEIGH STREET, ANGIER, NC 27501

CUSTOMER NAME
HMD DEVELOPMENT INC
RALEIGH, NC 27613

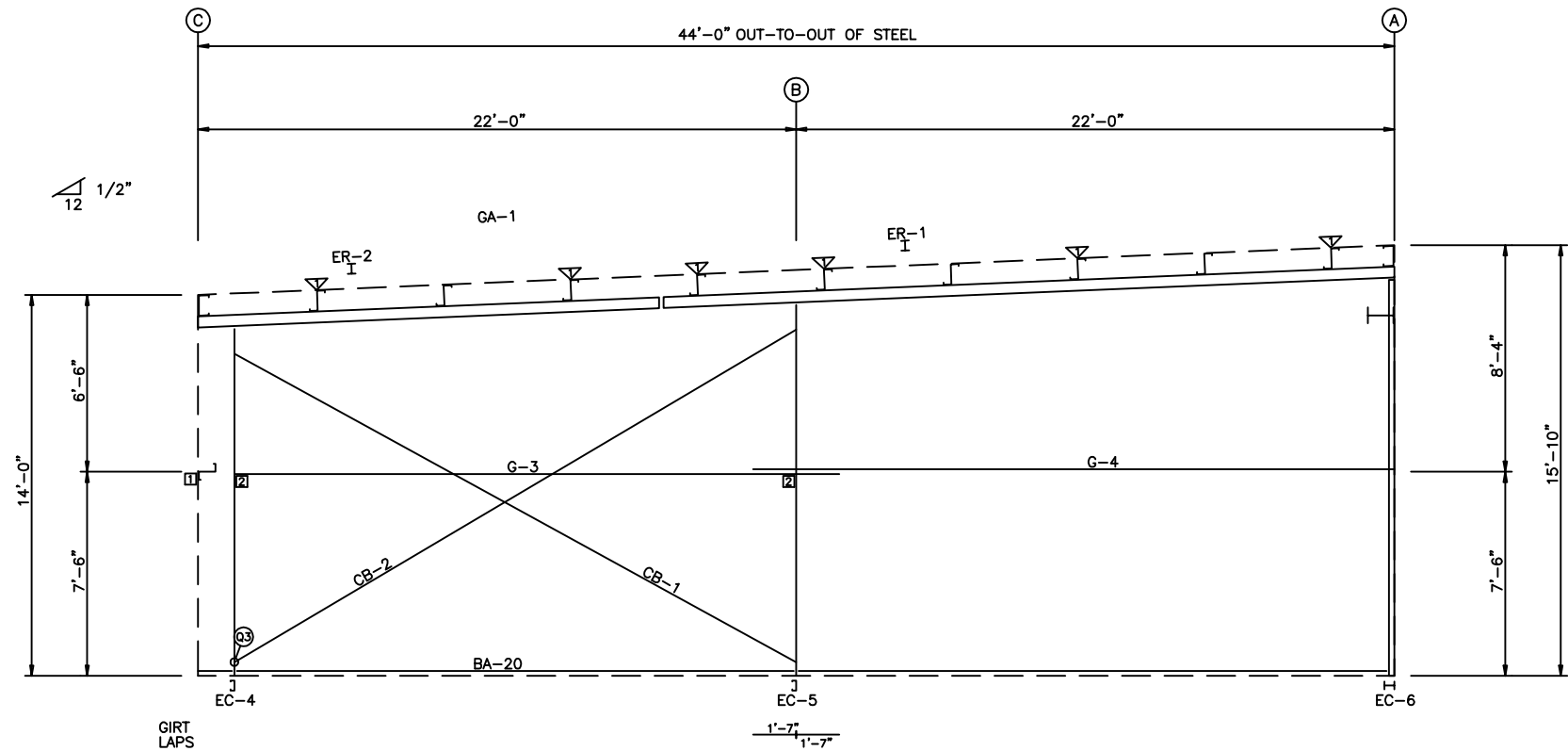
JOB NUMBER
A21B0621A

SHEET TITLE
ENDWALL FRAMING & SHEETING AT LINE 1

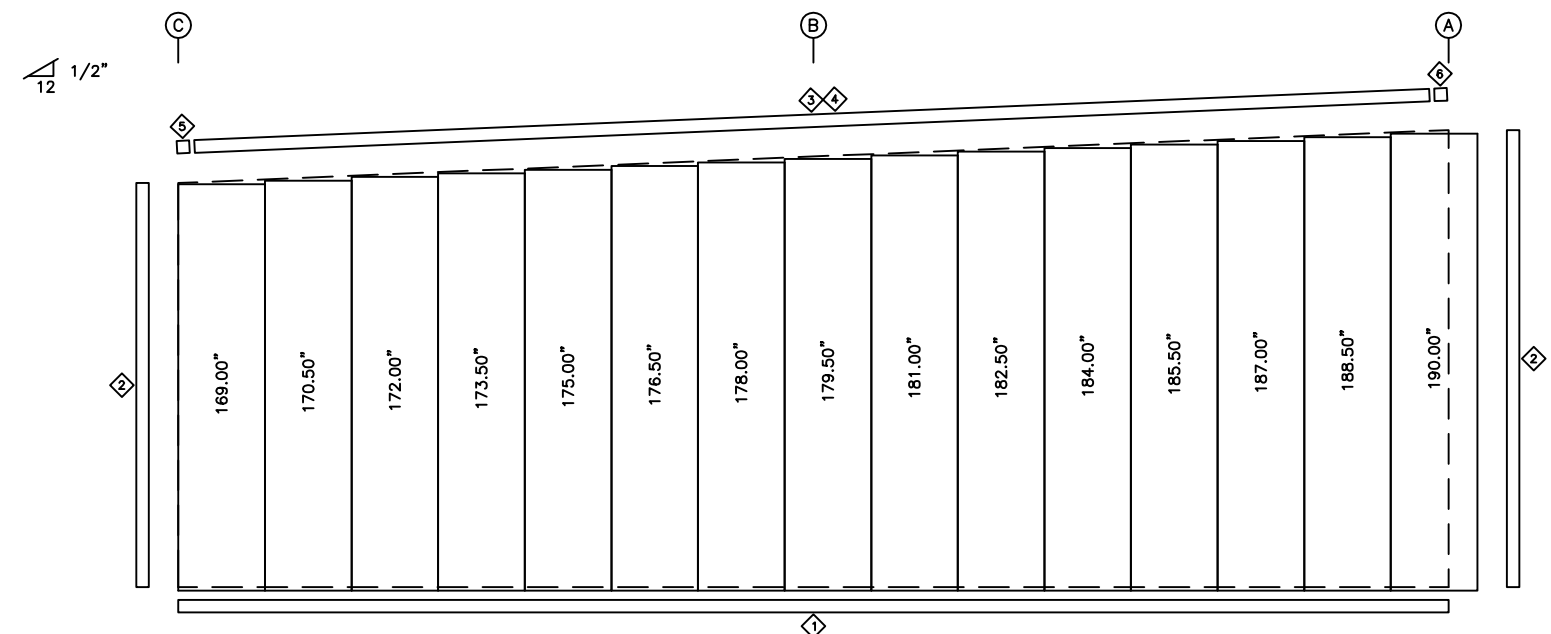


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SHEET
E-04



ENDWALL FRAMING: FRAME LINE 4



ENDWALL SHEETING & TRIM: FRAME LINE 4
PANELS: 26 Ga. A3P - FOX GRAY-SP

BOLT TABLE FRAME LINE 4				
LOCATION	QUAN	TYPE	DIA	LENGTH
ER-1/ER-2	4	A325	1/2"	2"
EC-4/ER-2	6	A325	1/2"	2"
EC-5/ER-1	6	A325	1/2"	2"
EC-6/ER-1	4	A325	1/2"	2"

TRIM TABLE FRAME LINE 4		
◇ ID	PART	LENGTH
1	NoTrim	Use Drop
2	FCRA2	182.000
3	TRU1	182.000
4	RSF1	182.000
5	TRUECL	8.130
6	TRUECR	8.130

MEMBER TABLE FRAME LINE 4		
MARK	PART	LENGTH
EC-4	W08S075	151.000
EC-5	W08S099	161.375
EC-6	W10x22	172.375
ER-1	W8x18	323.250
ER-2	W8x18	204.375
G-3	08Z060	274.500
G-4	08Z060	282.750
CB-1	RD05-	292.000
CB-2	RD05-	297.000

FLANGE BRACE TABLE FRAME LINE 4			
▽ ID	#	MARK	CLIP
1	1	FBC30	FBL&N01

CONNECTION PLATES FRAME LINE 4	
□ ID	MARK/PART
1	GCC03
2	GCW08qcb

DATE	ISSUE	PERMITS
5/13/21 <td></td> <td></td>		

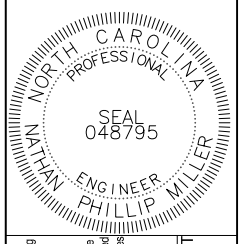
Nathan P. Miller, PE
License No. 048795

PROJECT NAME
ANGIER COMMERCIAL SHELL
166 RALEIGH STREET, ANGIER, NC 27501

CUSTOMER NAME
HMD DEVELOPMENT INC
RALEIGH, NC 27613

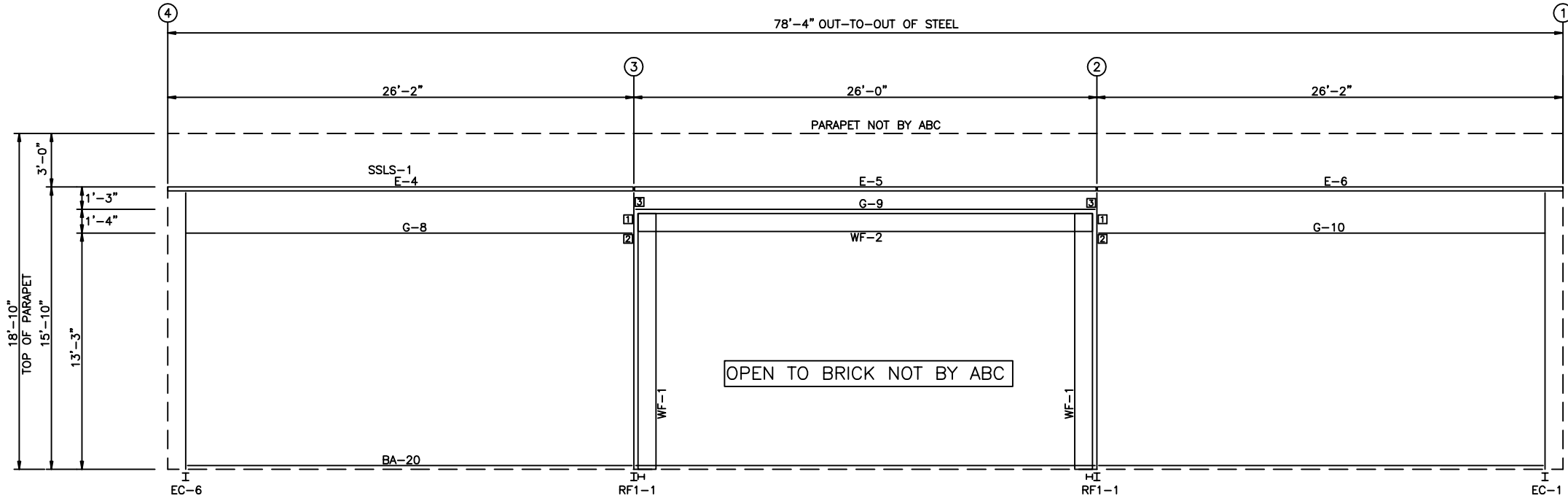
JOB NUMBER
A21B0621A

SHEET TITLE
ENDWALL FRAMING & SHEETING AT LINE 4

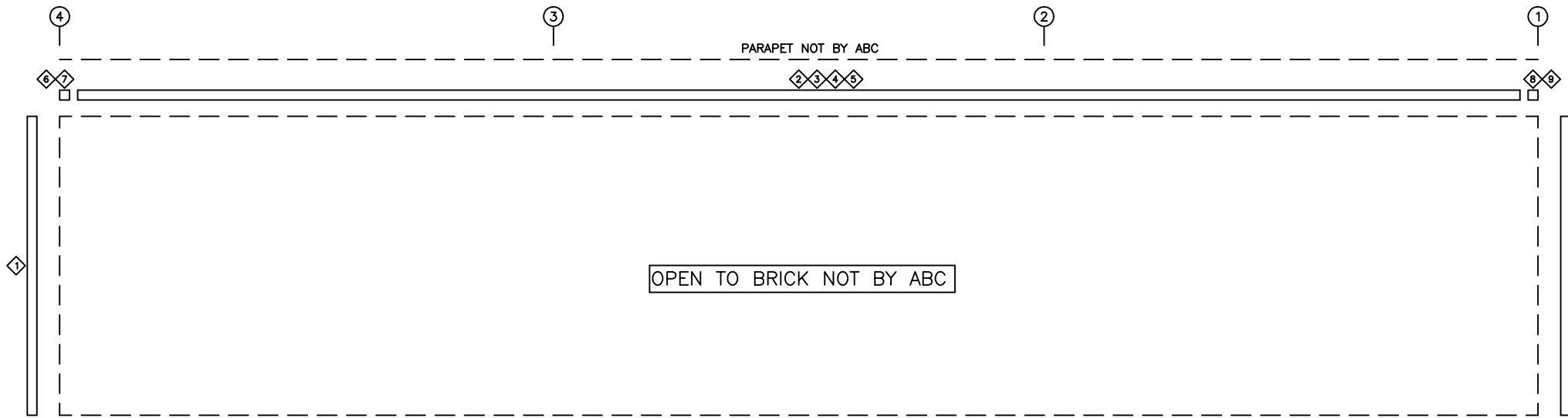


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SHEET
E-05



SIDEWALL FRAMING: FRAME LINE A



SIDEWALL SHEETING & TRIM: FRAME LINE A

BOLT TABLE FRAME LINE A				
LOCATION	QUAN	TYPE	DIA	LENGTH
WF-1 - WF-2	4	A325	5/8"	2 1/4"
WF-1 - RF1-1	4	A325	3/4"	3"

TRIM TABLE FRAME LINE A		
ID	PART	LENGTH
1	FCRA2	182.000
2	THS1	182.000
3	FJ2	182.000
4	TFEC1	182.000
5	TFOS81	182.000
6	THCS1LU	15.000
7	THES1L	10.250
8	THCS1RU	15.000
9	THES1R	10.250

MEMBER TABLE FRAME LINE A		
MARK	PART	LENGTH
WF-1	W1215525	175.000
WF-2	W1215625	275.250
E-4	95HE060	313.625
E-5	95HE060	311.750
E-6	95HE060	313.625
G-8	W8x18	289.000
G-9	C12x20.7	299.000
G-10	W8x18	289.000

CONNECTION PLATES FRAME LINE A	
ID	MARK/PART
1	PFC04
2	GFI01
3	GFI03

DATE	PE	ENG	CHK	DWN	ISSUE	
					PERMITS	DATE
5/13/21					ERW/JDH	

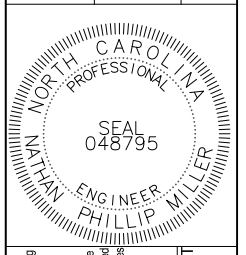
Nathan P. Miller, PE
License No. 048795

PROJECT NAME
ANGIER COMMERCIAL SHELL
166 RALEIGH STREET, ANGIER, NC 27501

CUSTOMER NAME
HMD DEVELOPMENT INC
RALEIGH, NC 27613

JOB NUMBER
A21B0621A

SHEET TITLE
SIDEWALL FRAMING & SHEETING AT LINE A



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SHEET
E-07