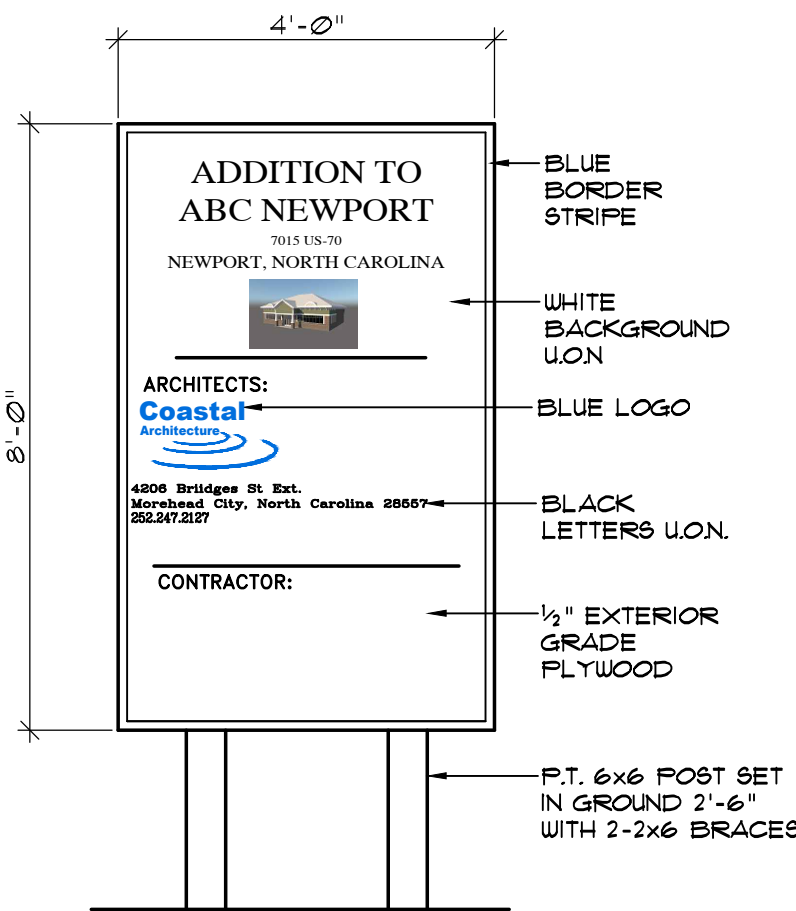


ADDITION TO ABC NEWPORT

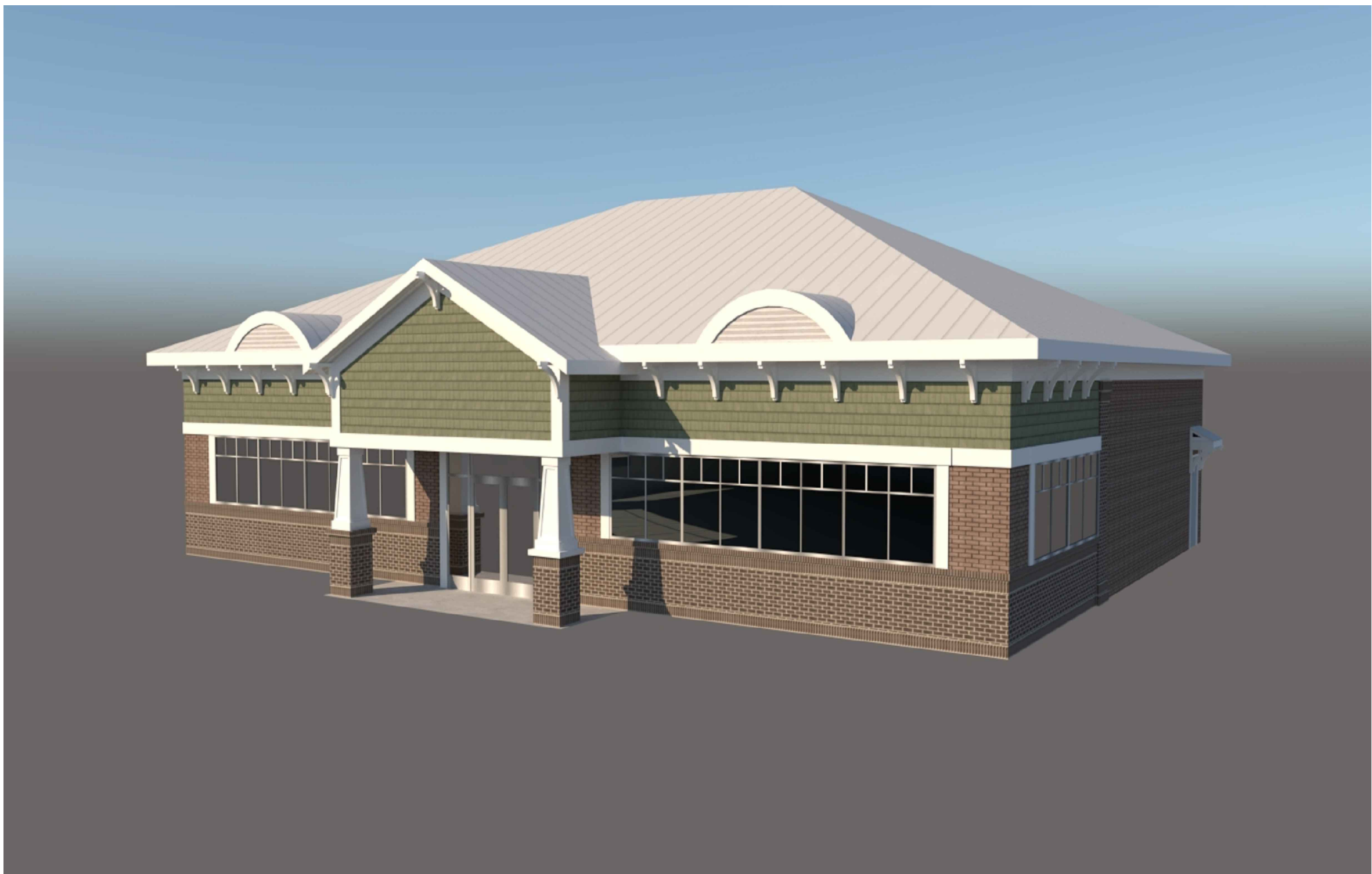
7015 US-70

NEWPORT, NORTH CAROLINA



PROJECT SIGN NOT TO SCALE

NOTE: SUBMIT SHOP DRAWING FOR COORDINATION OF LETTER HEIGHTS SPECIFIC SIGN COLORS.



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EX-2	EXISTING WALL SECTIONS	P-2	PLUMING PLAN
EX-3	EXISTING BUILDING SECTION		
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A-4	NEW EXTERIOR ELEVATIONS	E-1	ELECTRICAL SPECIFICATIONS
A-4.1	NEW EXTERIOR ELEVATIONS	E-2	EXISTING ELECTRICAL PLAN
A-5	NEW WALL SECTIONS	E-3	REVISED LIGHTING PLAN
A-5.1	NEW WALL SECTIONS	E-4	REVISED POWER PLAN
A-5.2	NEW WALL SECTIONS	E-5	PANELS & RISER
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A-5.4	NEW WALL SECTIONS		
A-5.5	NEW BUILDING SECTION, DETAILS		

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USE OF Coastal Architecture, DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

The Drawings, Specifications and other documents prepared by Coastal Architecture, the Designer, for this project are instruments of service for use solely with respect to this project and, unless otherwise provided, the Designer shall be deemed the author of these documents and shall retain all common law, statutory and other reserved rights, including copyright protection. The Owner shall be permitted to retain copies of the Designer's drawings, Specifications, and other documents for information and reference in connection with the Owner's use and occupancy of this project. No portions in part or in whole of the Drawings, Specifications and other documents shall be duplicated or used by the Owner or others for additions to this Project, completion of this Project by others, or on other Projects without written consent by the Designer.

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

Name of Project: ADDITION TO ABC NEWPORT
Address: 1015 HIGHWAY 10, NEWPORT, NORTH CAROLINA Zip Code: 28510
Owner/Authorized Agent: JACK ASKEW Phone # (252) 128 , 4269 E-Mail: _____
Owned By: ☐ City/County ☒ Private ☐ State _____
Code Enforcement Jurisdiction: ☒ City: NEWPORT ☐ County: _____ ☐ State: _____

CONTACT:
DESIGNER FIRM NAME LICENSE # TELEPHONE # E-MAIL
Architectural Coastal Architecture Lee Dixon 6419 (252) 241-2121 lee@coastalarchitecture.net
Civil _____
Electrical Burke Design Group Ben Burke 22038 (919) 111-1916 benburke@ncrr.com
Fire Alarm Burke Design Group Ben Burke 22038 (919) 111-1916 benburke@ncrr.com
Plumbing Burke Design Group Ben Burke 22038 (919) 111-1916 benburke@ncrr.com
Mechanical Burke Design Group Ben Burke 22038 (919) 111-1916 benburke@ncrr.com
Sprinkler-Standpipe _____
Structural Infocus Tim Corley 031029 (252) 412-8898 infocusengineering@gmail.com
Retaining Walls > 5 feet High _____
Other _____
(*Other* should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ☐ New Building ☐ Shell/Core ☐ 1st Time Interior Completions
☒ Addition ☐ Phased Construction—Shell Core
2018 NC EXISTING BUILDING CODE: ☐ Prescriptive ☐ Alteration Level I ☐ Historic Property
(check all that apply) ☐ Repair ☐ Alteration Level II ☐ Change of Use
☐ Chapter 14 ☐ Alteration Level III
CONSTRUCTED: (date) _____ CURRENT USE(S) (Ch. 3): _____
RENOVATED: (date) _____ PROPOSED USE(S) (Ch. 3): _____
OCCUPANCY CATEGORY (Table 1604.5): Current: _____ Proposed: _____

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

GROSS BUILDING AREA TABLE		
Floor	Existing (sq ft)	New (sq ft)
3rd Floor	-	-
2nd Floor	-	-
Mezzanine	1,136	1,849
1st Floor	1,136	1,849
Basement	-	-
TOTAL	1,136	1,849

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design versus the annual energy cost for the proposed design.

Existing building envelope complies with code: ☐ (if checked, the remainder of this section is not applicable.)
Exempt Building: ☐ Provide code or statutory reference: _____
Climate Zone: ☒ 3A ☐ 4A ☐ 5A

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

THERMAL ENVELOPE: (Prescriptive method only)
Roof/ceiling Assembly (each assembly)
Description of assembly: ROOF TRUSS w/ R-34 FOAM
U-Value of total assembly: _____
R-Value of insulation: R-34
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
Description of assembly: Brick Veneer w/ Densgold Sheathing, Metal Studs and R-15 Insulation
U-Value of total assembly: _____
R-Value of insulation: R-15
Openings (windows or doors with glazing)
U-Value of assembly: _____
Solar heat gain coefficient: _____
projection factor: _____
Door R-Values: _____

Walls below grade (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors slab on grade
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement: _____
slab heated: _____

STRUCTURAL DESIGN

DESIGN LOADS:
Importance Factors: Wind (IW) 1.0
Snow (IS) 1.0
Seismic (IE) _____
Live Loads: Roof 20 psf
Mezzanine _____ psf
Floor 100 psf
Ground Snow Load: 10 psf
Wind Load: Basic Wind Speed 143 mph (ASCE-7)
Exposure Category _____

SEISMIC DESIGN CATEGORY: ☐ A ☒ B ☐ C ☐ D
Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV
Spectral Response Acceleration SS _____ %g S1 _____ %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 ☐ Dual w/Special Moment Frame
☒ Building Frame ☐ Dual w/intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Analysis Procedure: ☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: ☐ Earthquake ☒ Wind
SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity 1500 psf
Pile size, type, and capacity _____

MECHANICAL DESIGN

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: _____
summer dry bulb: _____
interior design conditions
winter dry bulb: _____
summer dry bulb: _____
relative humidity: _____
Building heating load: _____
Building cooling load: _____

Mechanical Spacing Conditioning System

Unitary
description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____
Boiler
Size category. If oversized, state reason: _____
Chiller
Size category. If oversized, state reason: _____
List equipment efficiencies: _____

ELECTRICAL DESIGN

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

Lighting schedule (each fixture type)
lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified versus allowed (whole building or space by space)
total exterior wattage specified versus allowed

Additional Prescriptive Compliance
☐ 506.2.1 More Efficient Mechanical Equipment
☐ 506.2.2 Reduced Lighting Power Density
☐ 506.2.3 Energy Recovery Ventilation Systems
☐ 506.2.4 Higher Efficiency Service Water Heating
☐ 506.2.5 On-Site Supply of Renewable Energy
☐ 506.2.6 Automatic Daylighting Control Systems

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 (%)
> 30	UPNS	NL	NL

LIFE SAFETY SYSTEM REQUIREMENTS

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

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: G-2
☒ Fire and/or smoke rated wall locations (Chapter 7)
☒ Assumed and real property line locations (if not on the site plan)
☒ Exterior wall opening area with respect to distance to assumed property lines (705.8)
☒ Occupancy Use 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 1006.2.1 & 1006.3.2(1)]
☒ Dead end lengths (1020.4)
☒ Clear exit widths for each exit door
☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
☒ Actual occupant load for each exit door
☒ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☒ Location of doors with panic hardware (1010.1.10)
N/A ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
N/A ☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
N/A ☐ Location of doors equipped with hold-open devices
N/A ☐ Location of emergency escape windows (1030)
☒ The square footage of each fire area (202)
N/A ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
☒ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (SECTION 1105)

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

ACCESSIBLE PARKING (SECTION 1106)

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

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

USE	WATERCLOSETS			URINALS	LAVATORIES			SHOWERS/TUBS	DRINKING FOUNTAINS	
	Male	Female	Unisex		Male	Female	Unisex		Regular	Accessible
REQ'D			1				1	N/A	N/A	
PROVIDED			1				1	N/A	N/A	

SPECIAL APPROVALS

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

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Architecture
LLC

• Architectural
Design
• Planning
• Interiors



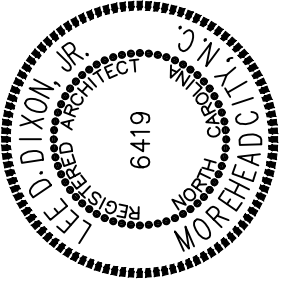
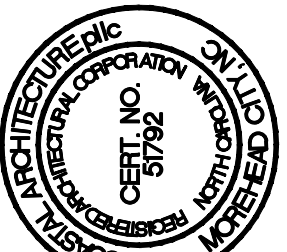
Member of the American
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Lee D. Dixon, Jr., AIA
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lee@coastalarchitecture.net

4206 Bridges St. Ext.,
Suite C
Morehead City, NC
28557

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ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA



GENERAL DATA

21036

ISSUED: 01/25/23
DWG BY: TRA
CKD BY: LDD

REVISIONS

SHEET NO.

G-1
OF

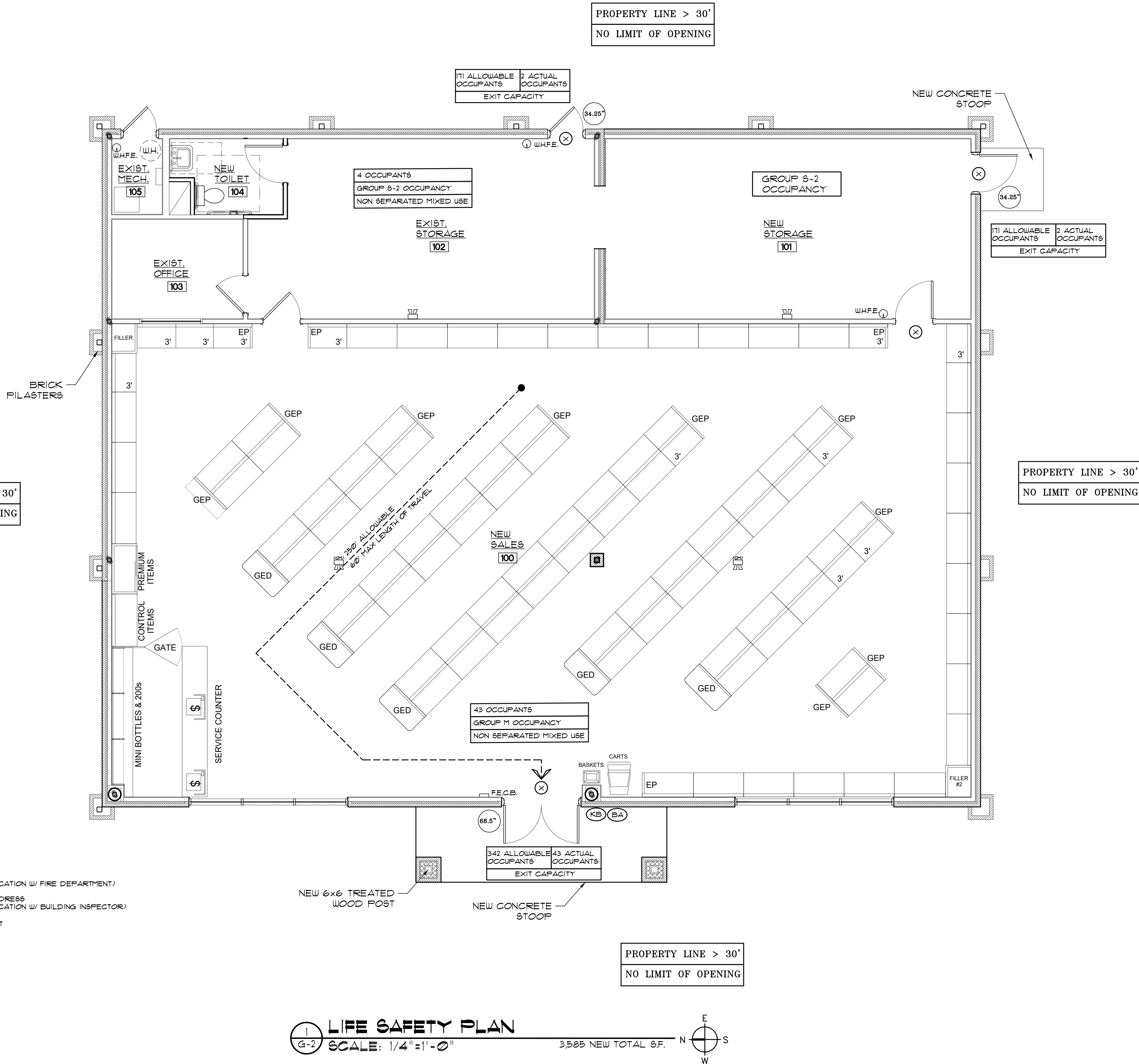
OCCUPANCY/LOAD TYPE KEYING:

M = MERCANTILE
S-2 = STORAGE

LEGEND:

- F.E.C.B. = FIRE EXTINGUISHER AND CABINET
LARSEN SEMI-RECESSED FG 2403-R3
BRUSHED CHROME W/ MP5 FIRE EXTINGUISHER
- Ⓢ WHFE. = WALL HUNG FIRE EXTINGUISHER
- 34.25" = CLEAR EXIT WIDTH
- ⓧ = EXIT
- Ⓟ = PANIC HARDWARE
- Ⓢ = EMERGENCY EXIT LIGHT
- Ⓢ = EMERGENCY EXIT LIGHT (CEILING MOUNTED)

- ⓀB KNOX BOX
(CONFIRM LOCATION W/ FIRE DEPARTMENT)
- ⓅA BUILDING ADDRESS
(CONFIRM LOCATION W/ BUILDING INSPECTOR)
- Ⓢ EGRESS LIGHT



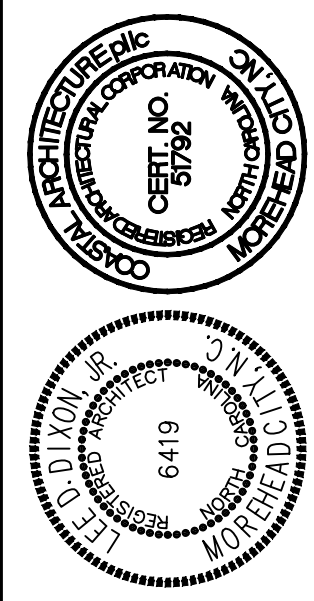
LIFE SAFETY PLAN
SCALE: 1/4" = 1' - 0"
3,585 NEW TOTAL S.F.

PROPERTY LINE > 30'
NO LIMIT OF OPENING

PROPERTY LINE > 30'
NO LIMIT OF OPENING

PROPERTY LINE > 30'
NO LIMIT OF OPENING

PROPERTY LINE > 30'
NO LIMIT OF OPENING



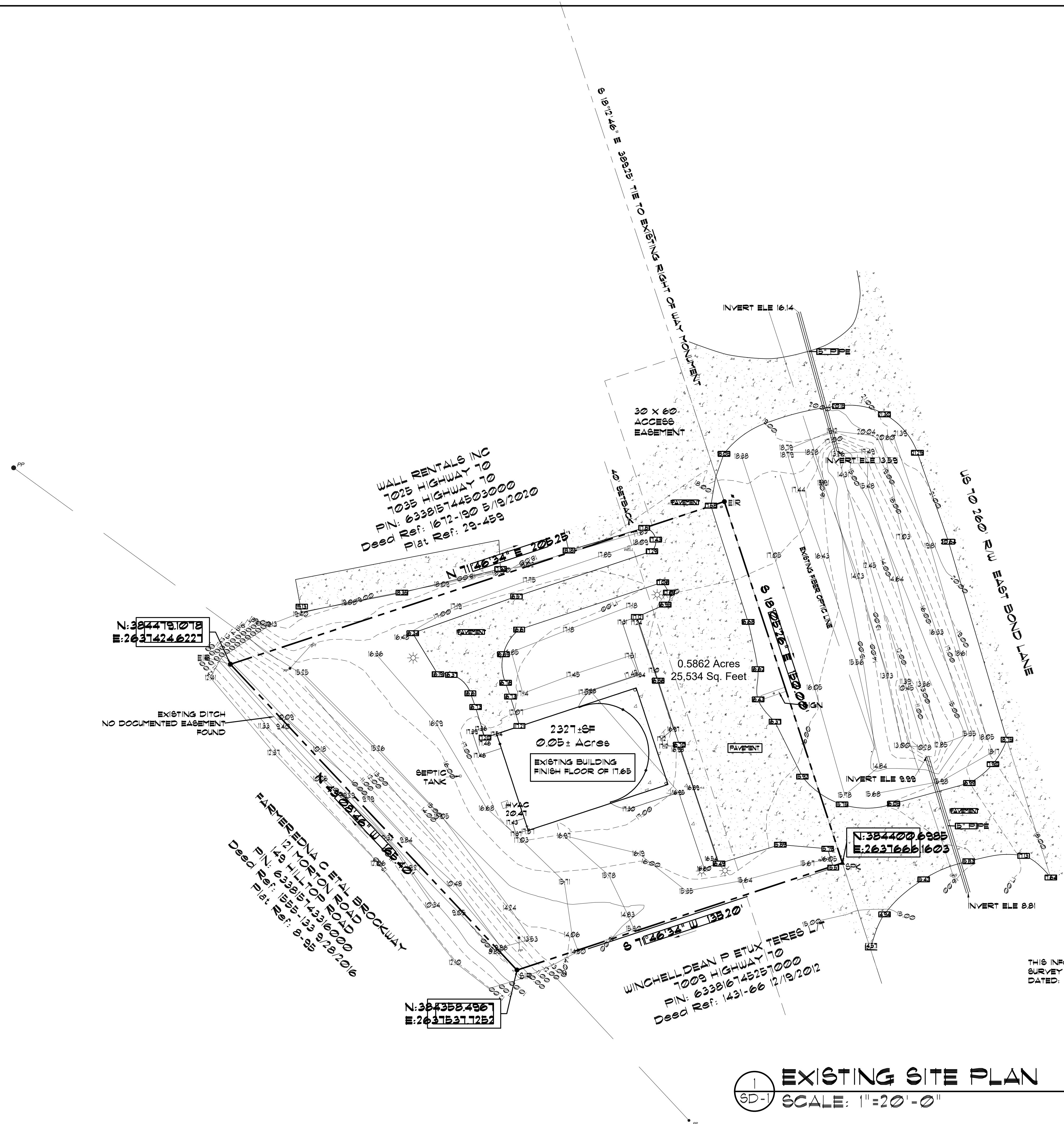
LIFE SAFETY PLAN

21036

ISSUED:
DWG BY: TRA
CKD BY: LDD
REVISIONS

SHEET NO.
G-2
OF

- EIP-EXISTING IRON PIPE
- EIR-EXISTING IRON ROD
- EOM-EXISTING CONCRETE MONUMENT
- EA-EXISTING AXLE
- EN-EXISTING NAIL
- EPK-EXISTING PK NAIL
- POINT-NOTHING EXISTING OR SET
- NGS-NORTH CAROLINA GEODETIC SURVEY
- NGS-NATIONAL GEODETIC SURVEY
- R1/2 MON-NCDOT MONUMENT
- SIP-SET IRON PIPE
- SIR-SET IRON PIPE
- SOM-SET CONCRETE MONUMENT
- EA-SET AXLE
- SN-SET NAIL
- SPK-SET PK NAIL
- OP-OVERHEAD POWER
- NOT HELD-NOT CONSIDERED PART OF SURVEY
- NHUL-NORMAL HIGH WATER LINE
- AEC-AREA OF ENVIRONMENTAL CONCERN
- NAVD-NORTH AMERICAN VERTICAL DATUM
- NAD-NORTH AMERICAN HORIZONTAL DATUM
- PP-POWER POLE
- UT-UNDERGROUND TELEPHONE
- UP-UNDERGROUND POWER
- UUL-UNDERGROUND WATER
- DL-DRILL HOLE



THIS INFORMATION TAKEN FROM
SURVEY BY JAMEY PHILLIPS RLS
DATED: 08/02/21

EXISTING SITE PLAN
SCALE: 1"=20'-0"

- **Architectural Design**
- **Planning**
- **Interiors**



**Member of the American
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ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA

EXISTING SITE
PLAN

21036

ISSUED: 01/25/23

WG BY: TRA/MES

REVISIONS

SHEET NO.

SD-1

1. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO BID TABULATION.
2. SEED ALL AREAS DAMAGED BY CONSTRUCTION TO MATCH SURROUNDING AREAS.
3. PROVIDE TEMPORARY SEEDING FOR EROSION CONTROL AND ALL EROSION DEVICES NECESSARY TO CONTROL RUN OFF AND EROSION DURING CONSTRUCTION.

- ZONED GH
- NO MINIMUM LOT SIZE
- NO REAR OR SIDE SET BACKS
- 40' FRONT SET BACK
- MAX BUILDING HEIGHT 10'
- PARKING (ART XII)
- RETAIL (200 2' TRUCKS 200 = 14
- WAREHOUSE (1500 12' COMPANY VEHICLE
- 100 SF = 1 SPACE (NO COMPANY VEHICLE STORED ON SITE)
- BIKE SPACES 2% OF 16 = 1 BIKE SPACE
- LANDSCAPING (ART XII)
- VEGETATIVE BUFFER EXISTS AT REAR PROPERTY LINE
- 5' PARKING TRUSS FENCE
- FOUNDATION PLANTINGS 1 SHRUB / 15 SF = 48 SHRUBS
- STREET PLANTINGS

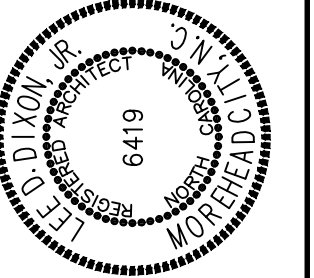
- **Architectural Design**
- **Planning**
- **Interiors**



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Suite C
Morehead City, NC
28557**

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ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA



NEW SITE PLAN

21036

ISSUED: 01/25/23

WG BY: TRA/MES

EVIDENCES

--	--

SHEET NO.

05 0

SD-2

OF

Page 10 of 10

4

EXISTING ASPHALT

EXISTING ASPHALT

EXISTING CONTOUR

NEW FINISH CONTOUR

EXISTING SPOT ELEVATION

NEW SPOT ELEVATION

NEW TREE

NEW SHRUB

NEW SHRUB 1 EVERY 4'-0" O.C.

EXISTING TREE TO REMAIN

APPROX TREE LINE FIELD VERIFY

S

NEW SEWER LINE FROM BUILDING TO PROPERTY LINE FOR TOWN CONNECTION

E

NEW WATER LINE FROM BUILDING TO PROPERTY LINE FOR TOWN CONNECTION

ONE (1) ABS FIBERGLASS DUPLEX BASIN PACKAGE CONSISTING OF:

- (1) 48" x 96" FIBERGLASS BASIN WITH 48" ALUMINUM ACCESS COVER
- (2) GUIDE RAIL ASSEMBLIES WITH 2" SS. RAILS
- (2) ABS 820/20 HP SUBMERSIBLE GRINDER PUMPS, 240 VOLT/1 PHASE/2 HP
- (2) INTERNAL PIPING INCLUDED
- (2) FLOAT SWITCHES WITH SS. FLOAT SWITCH BRACKET
- (2) SS. LIFTING CHAINS
- (1) AMERICAN CONTROLS DUPLEX CONTROL PANEL IN 304SS ENCLOSURE

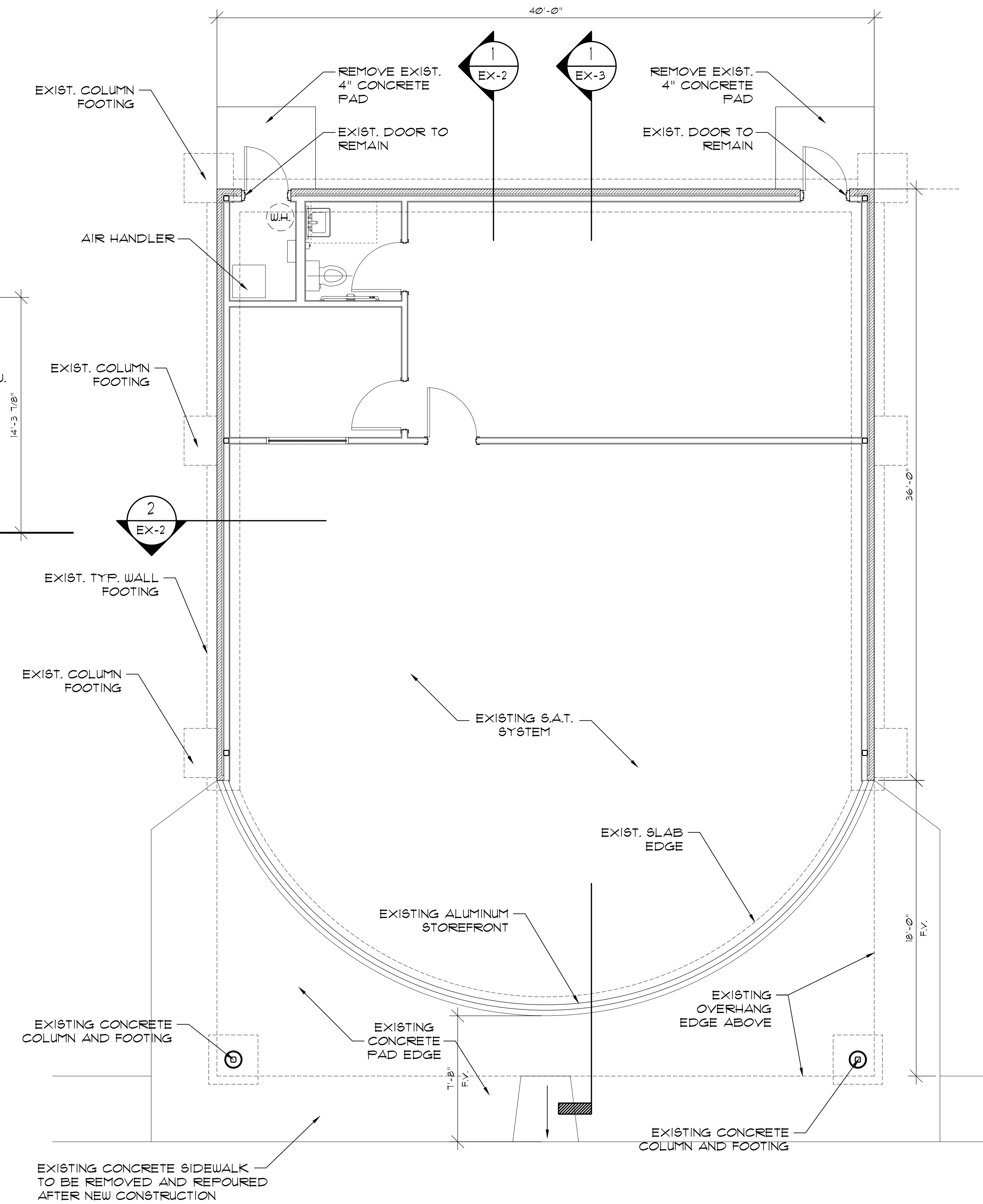
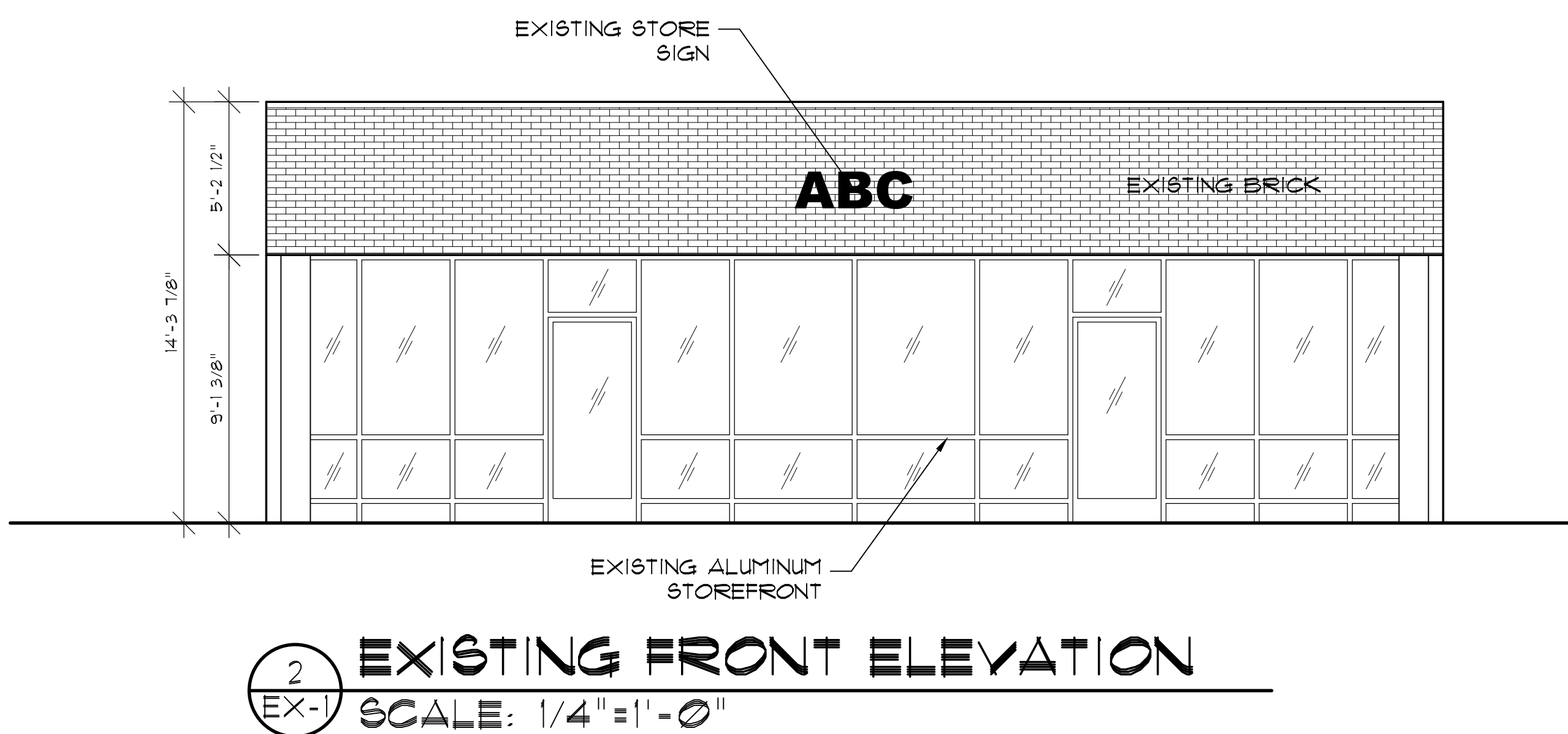
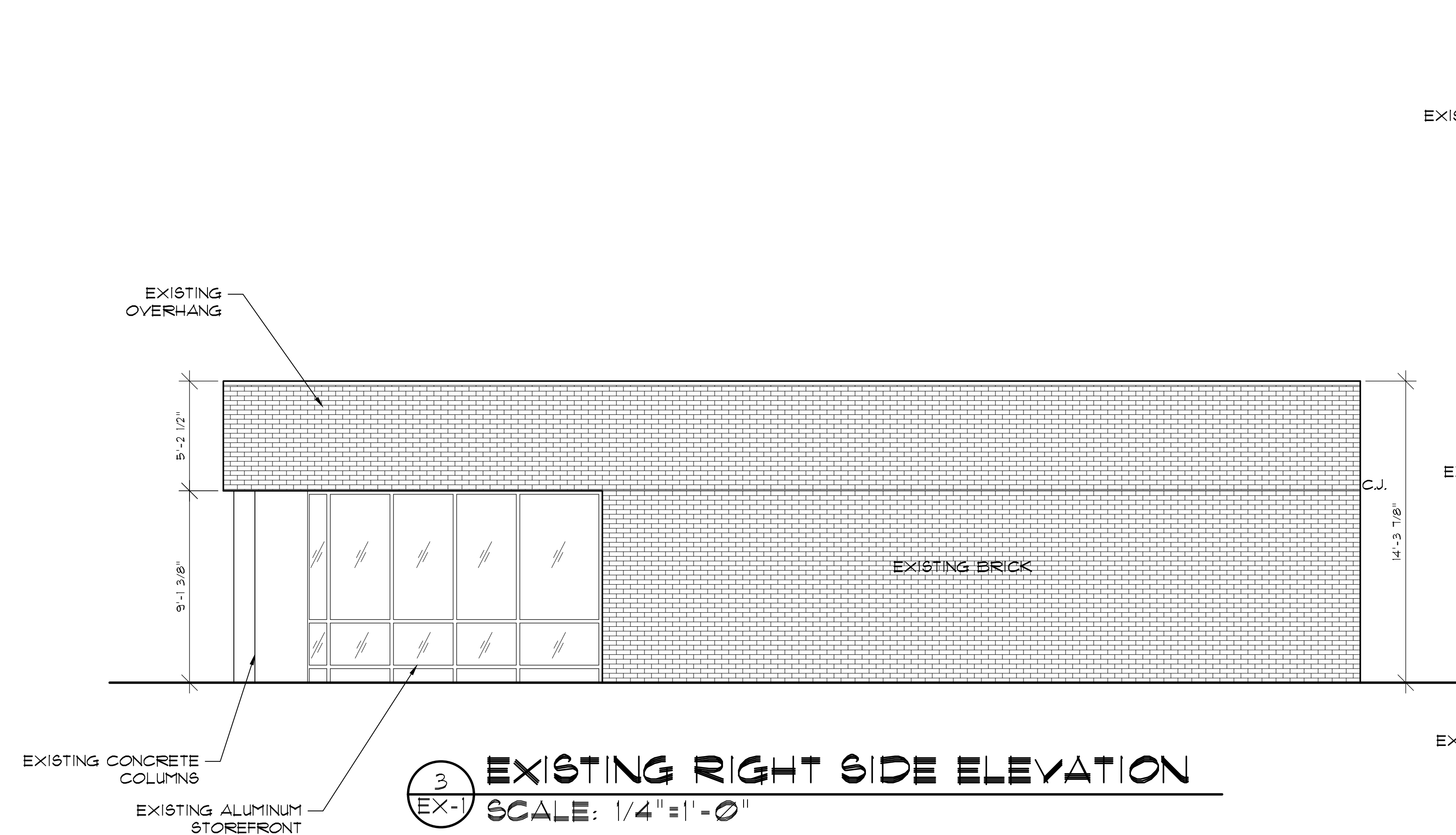
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E:2637537.7252

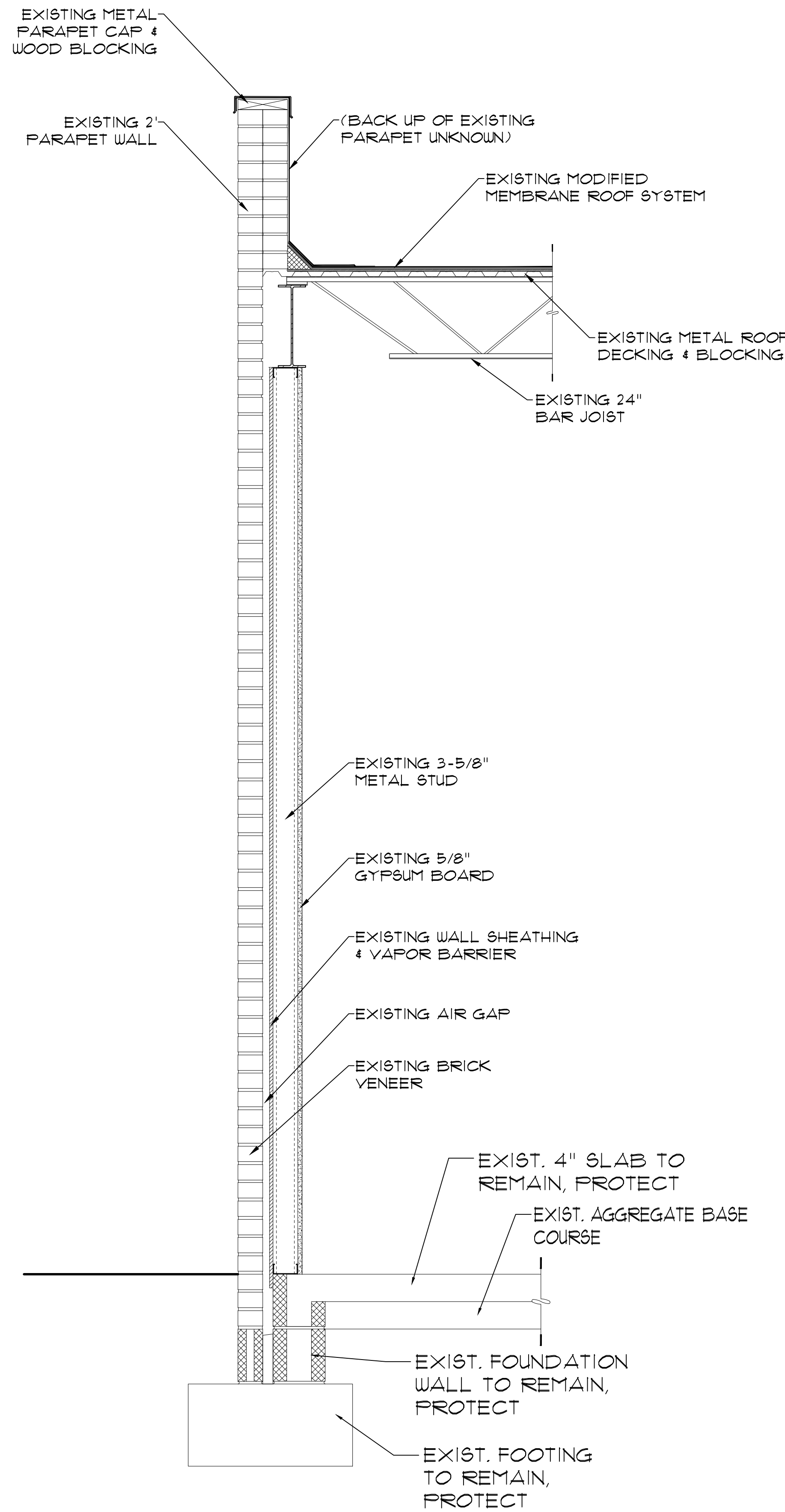
8 7146
WINCHELL DEAN P ETUX TERED
7009 HIGHWAY 170
PIN: 633816745251000
Deed Ref: 1431-66 12/18/2012

THIS INFORMATION TAKEN FROM
SURVEY BY JAMEY PHILLIPS RLS
DATED: 08/02/21

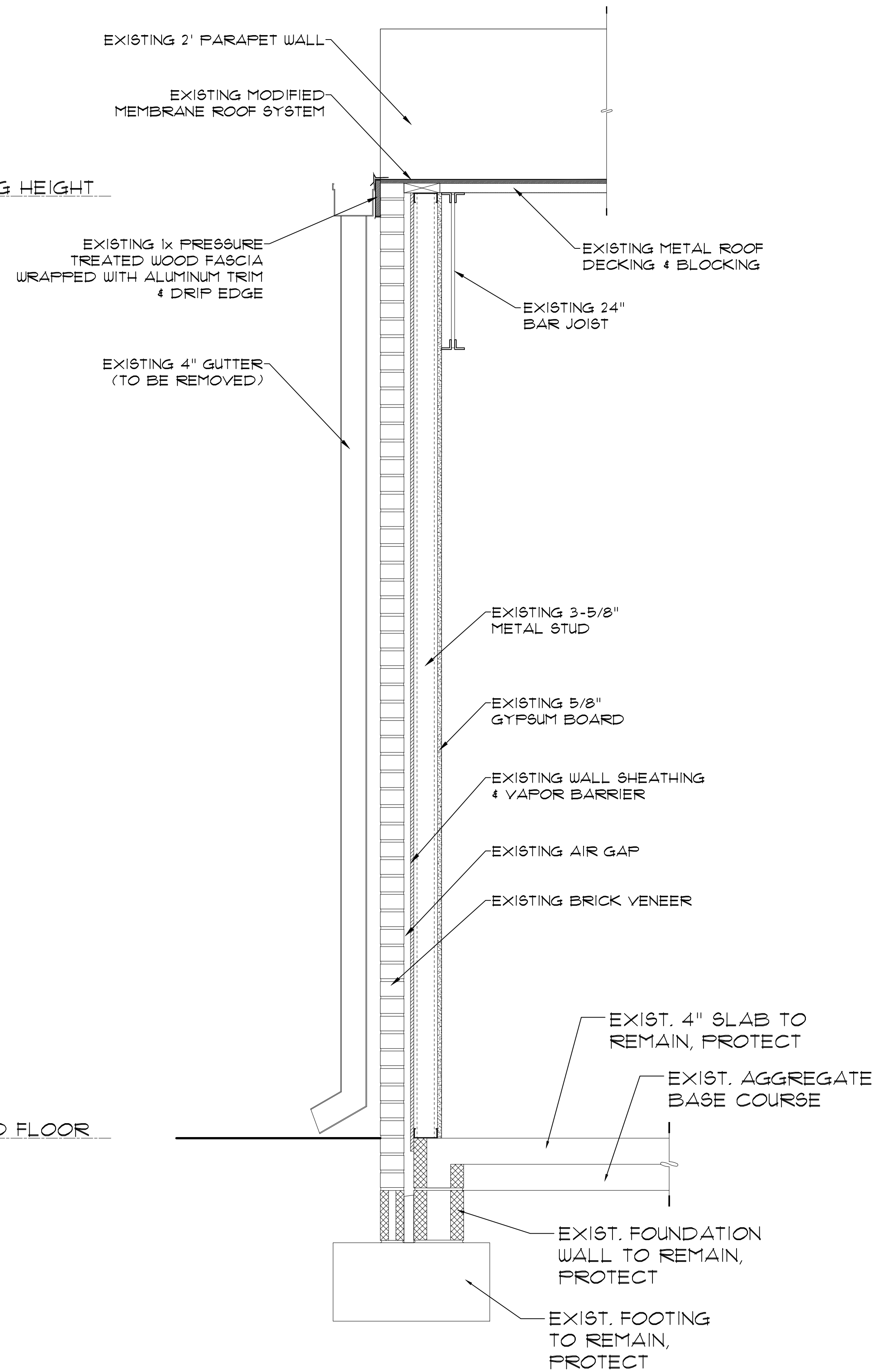
NEW SITE PLAN
SCALE: 1"=20'-0"

THESE DRAWING AND SPECIFICATIONS REPRESENT AN INSTRUMENT OF SERVICE AND AS SUCH SHALL REMAIN IN OWNERSHIP WITH THE ARCHITECT. USE OR REPRODUCTION BY ANY MEANS, IN WHOLE OR IN PART, WITHOUT THE ARCHITECT'S WRITTEN CONSENT, IS PROHIBITED.

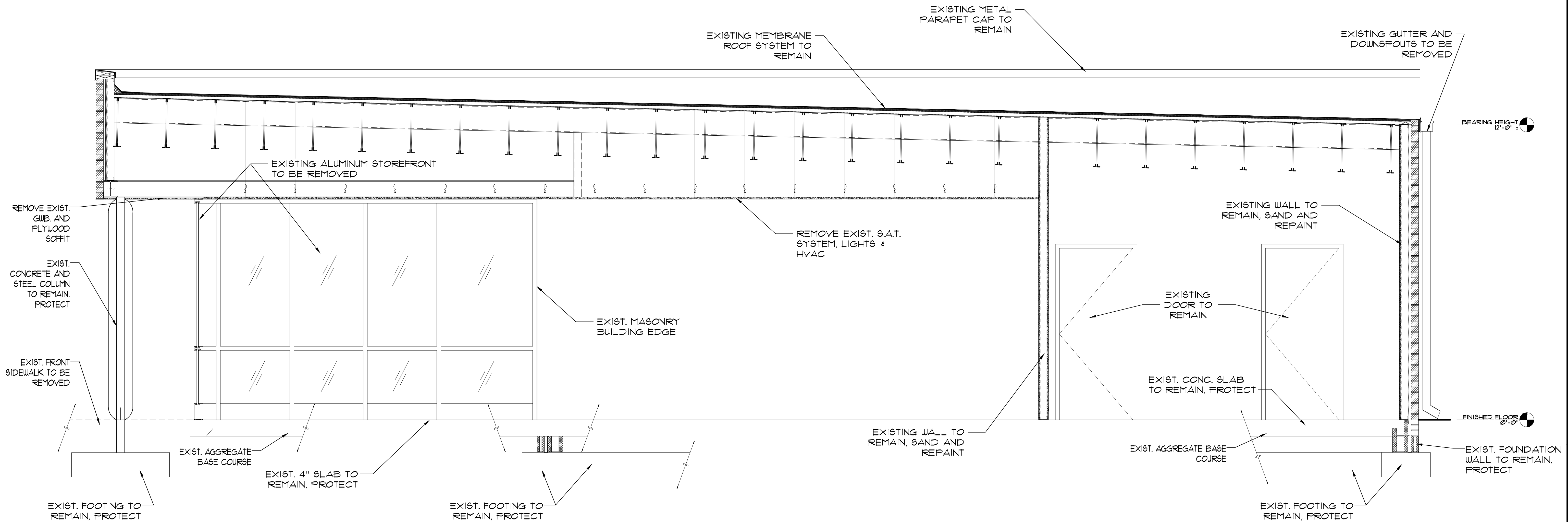




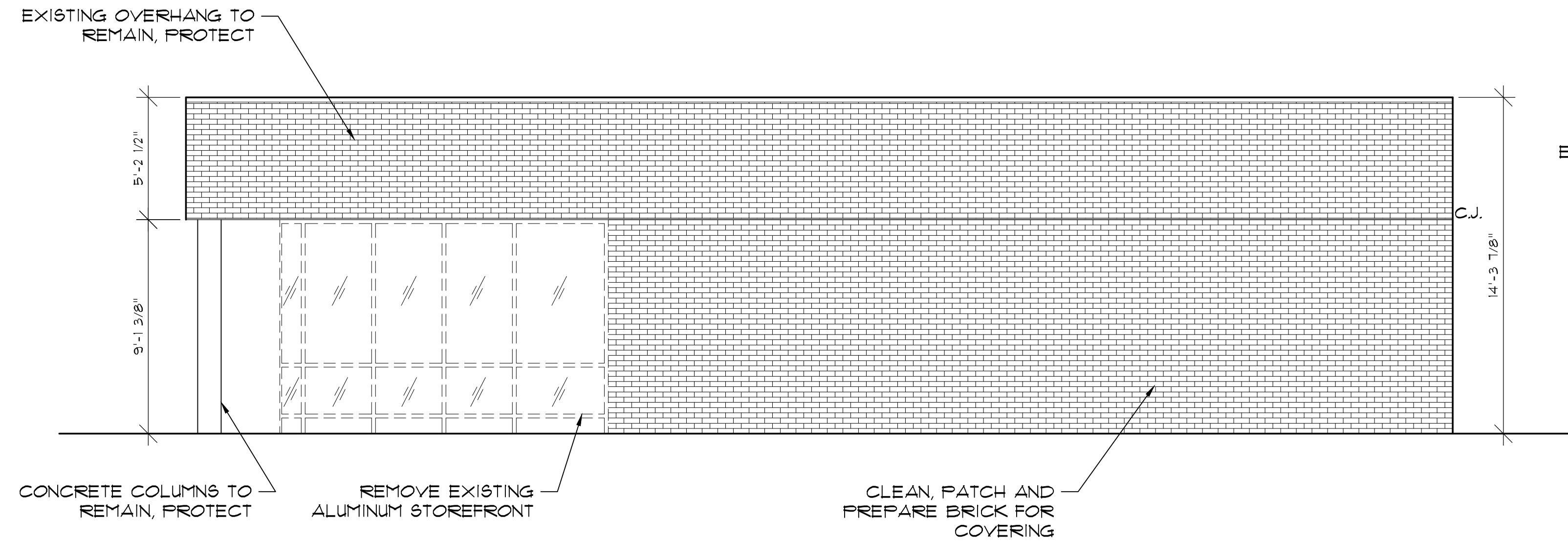
2 WALL SECTION
EX-2 SCALE: 1/2"=1'-0"



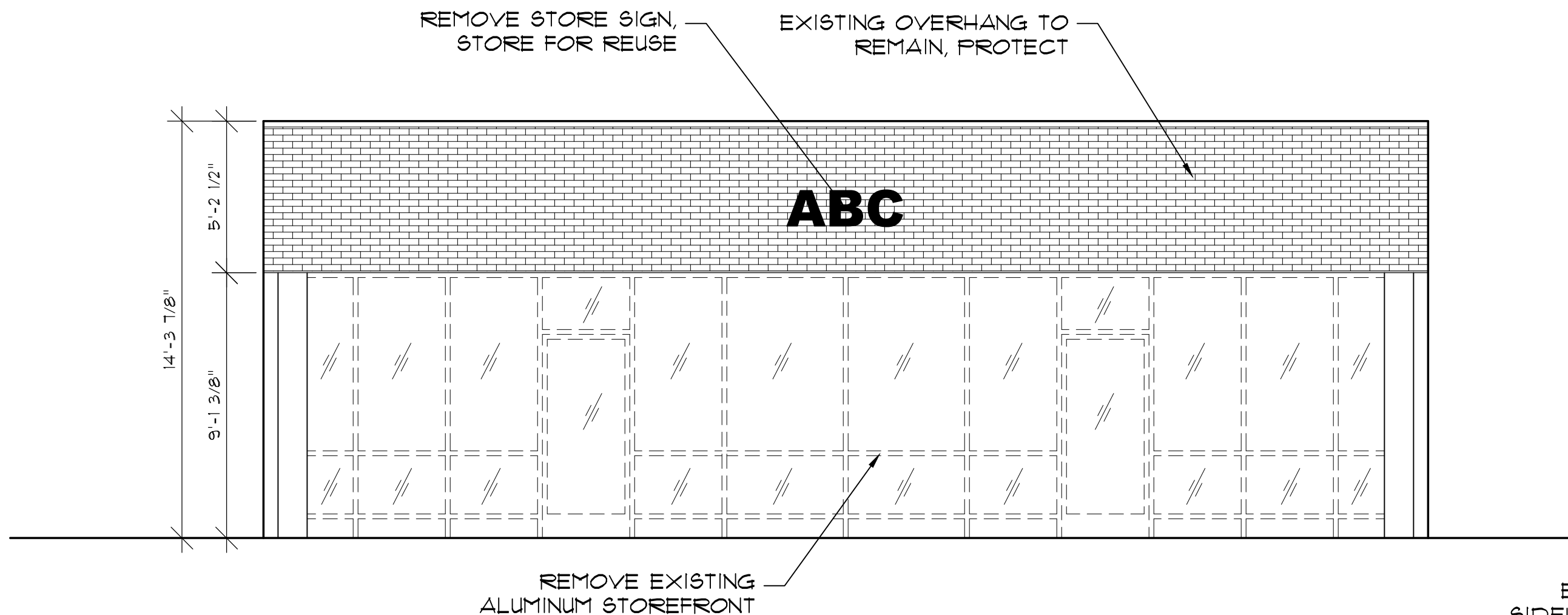
1 WALL SECTION
EX-2 SCALE: 1/2"=1'-0"



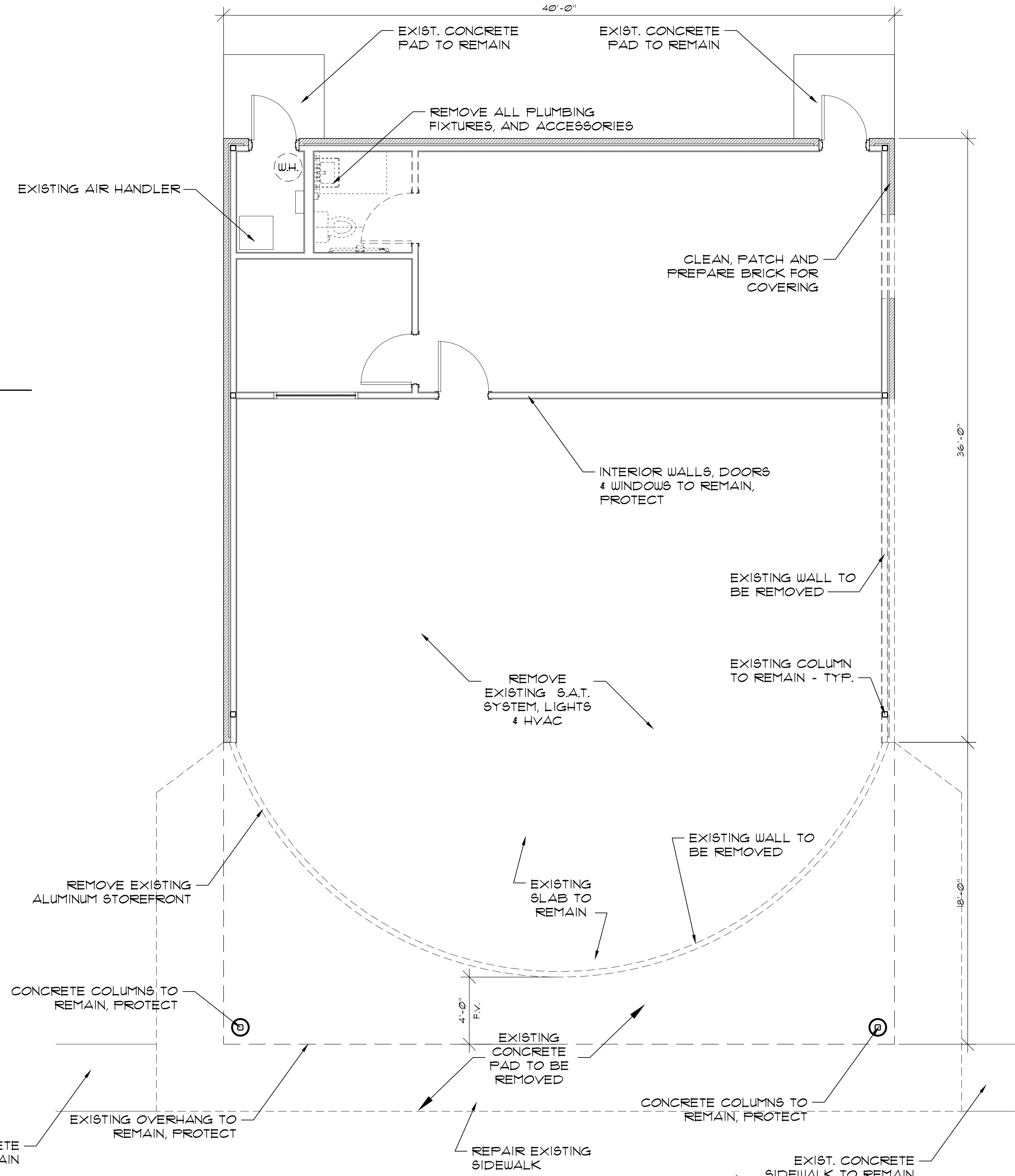
1 EXISTING BUILDING SECTION
EX-3 SCALE: 1/2" = 1'-0"



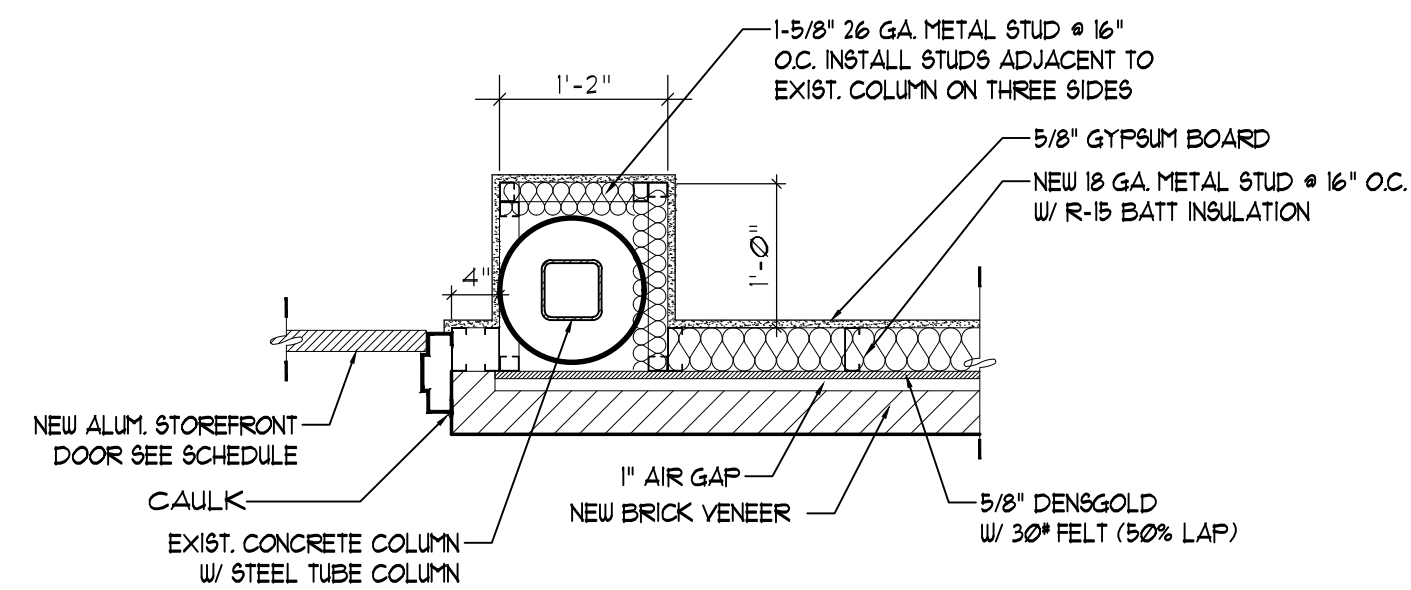
3
D-1
SELECTIVE DEMO
RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



2
D-1
SELECTIVE DEMO
FRONT ELEVATION
SCALE: 1/4" = 1'-0"

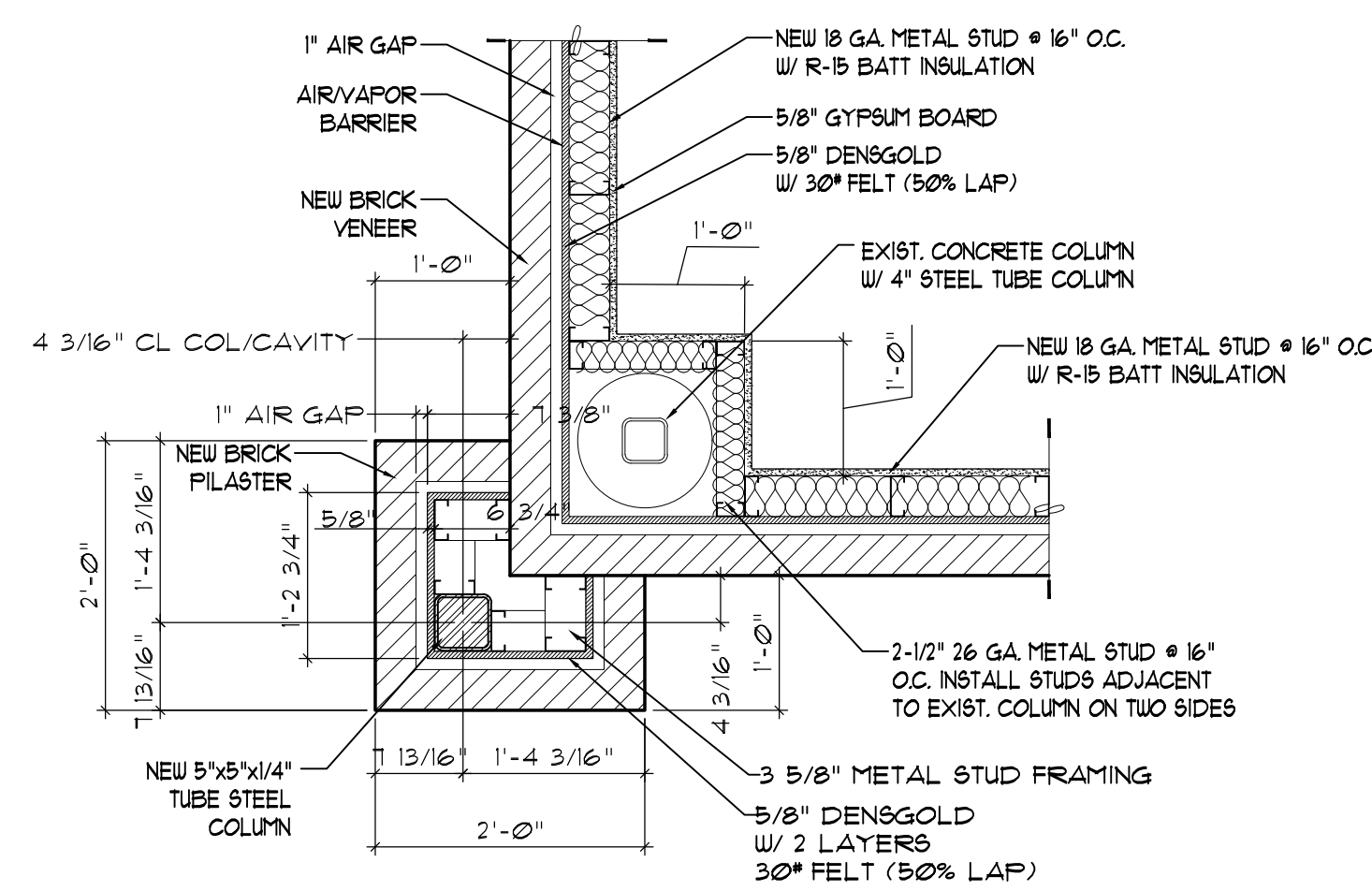


1
D-1
SELECTIVE
DEMO FLOOR PLAN
SCALE: 1/4" = 1'-0"



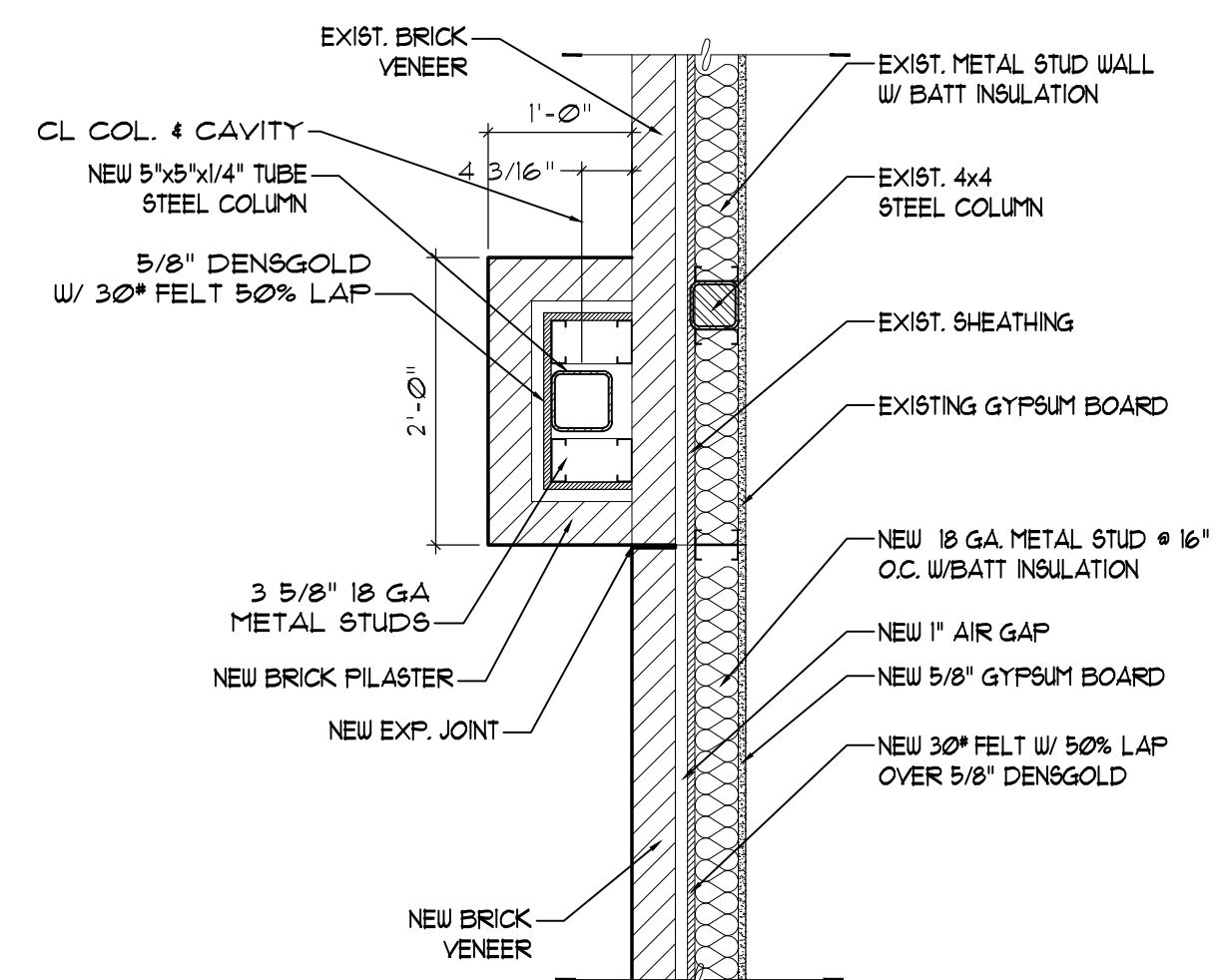
**COLUMN WRAP
DETAIL @ EXIST. COL.**
SCALE: 3/4" = 1'-0"

NOTE:
DIMENSIONS ARE FROM FACE OF STUD TO FACE OF STUD.



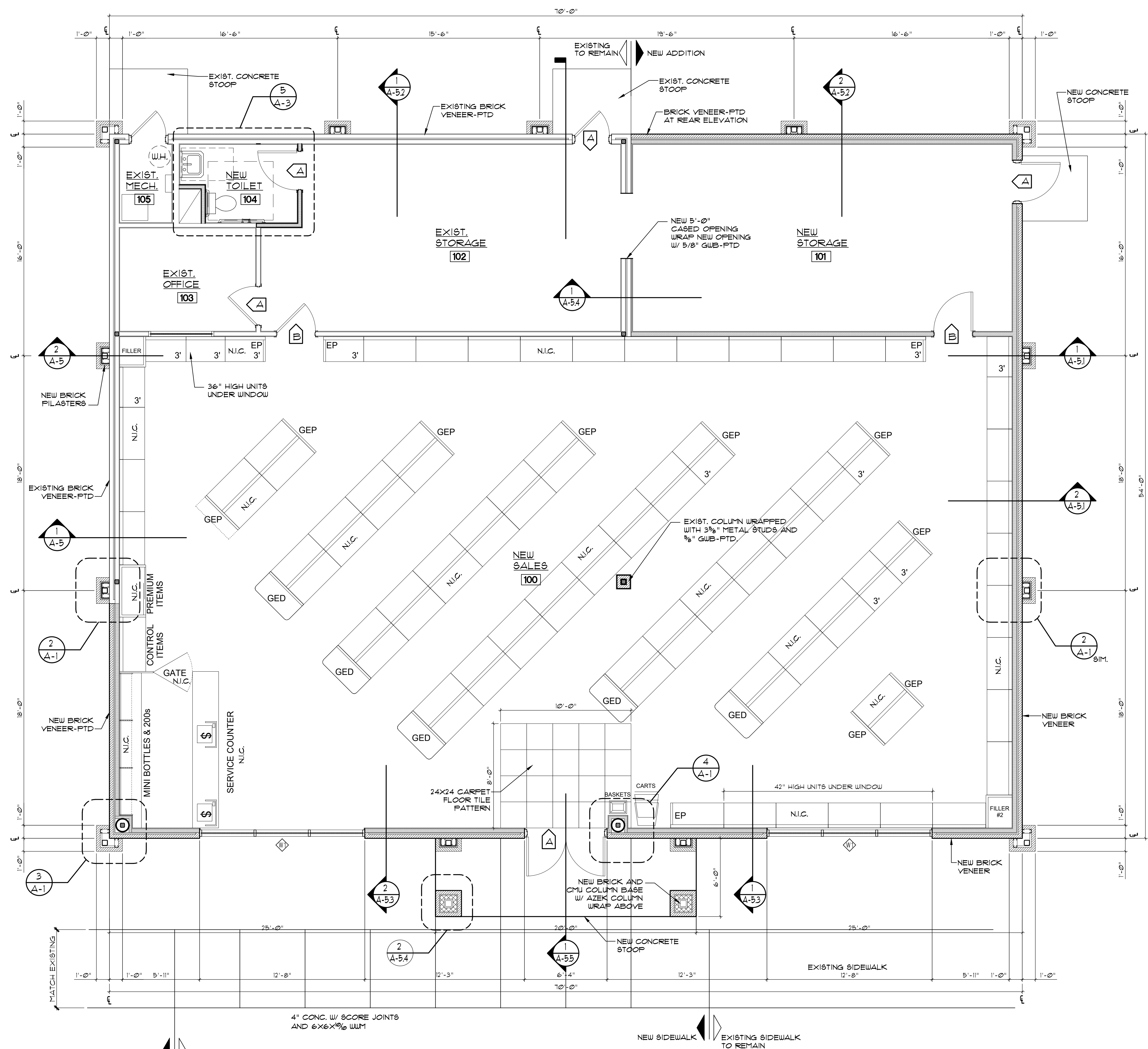
**COLUMN WRAP
DETAIL @ CORNER**
SCALE: 3/4" = 1'-0"

NOTE:
DIMENSIONS ARE FROM FACE OF BRICK TO FACE OF BRICK.
DIMENSIONS ARE FROM FACE OF STUD TO FACE OF STUD.



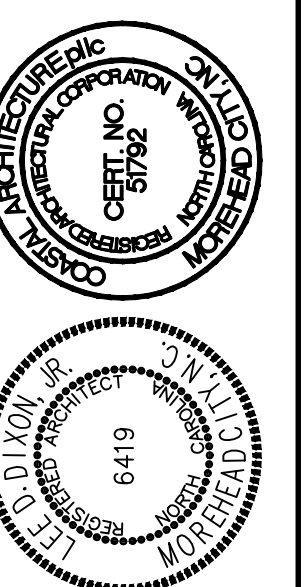
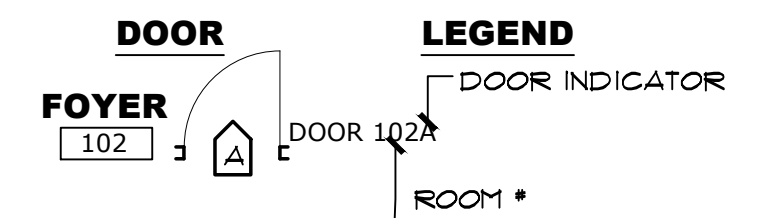
**DETAIL
AT NEW PILASTERS**
SCALE: 3/4" = 1'-0"

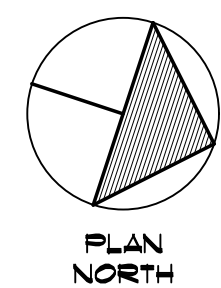
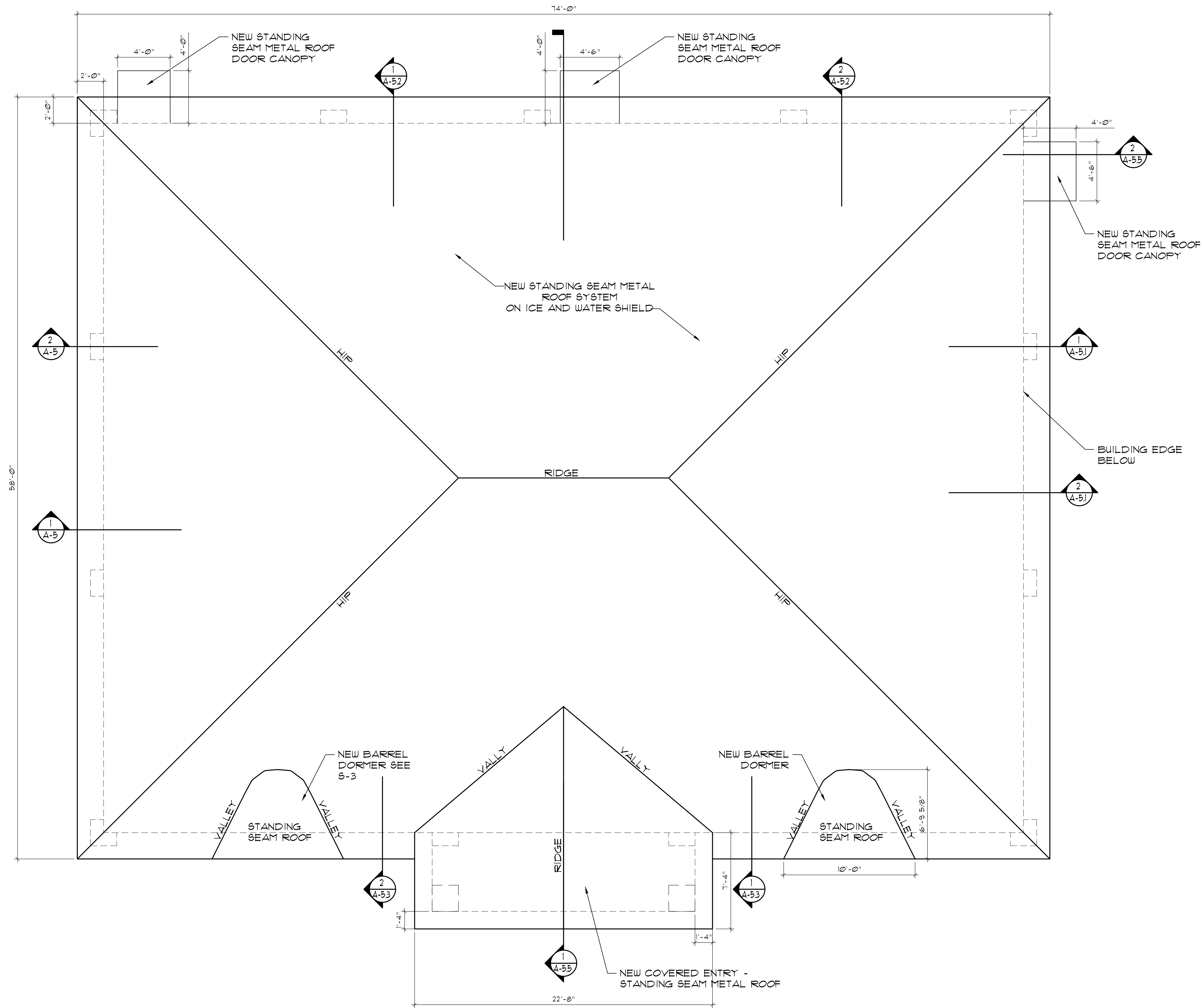
NOTE:
DIMENSIONS ARE FROM FACE FACE OF BRICK TO FACE OF BRICK



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

1,736 EXIST. S.F. (APPROX.)
1,849 NEW S.F.
3,585 NEW TOTAL S.F.



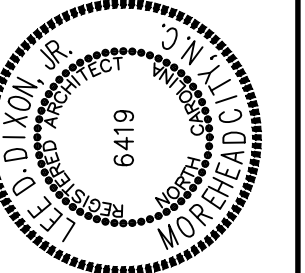
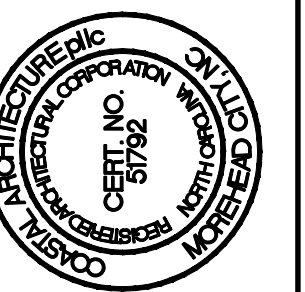


1
A-1.1

NEW ROOF PLAN

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

ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA



NEW ROOF PLAN

21036

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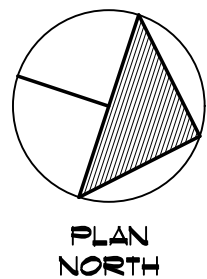
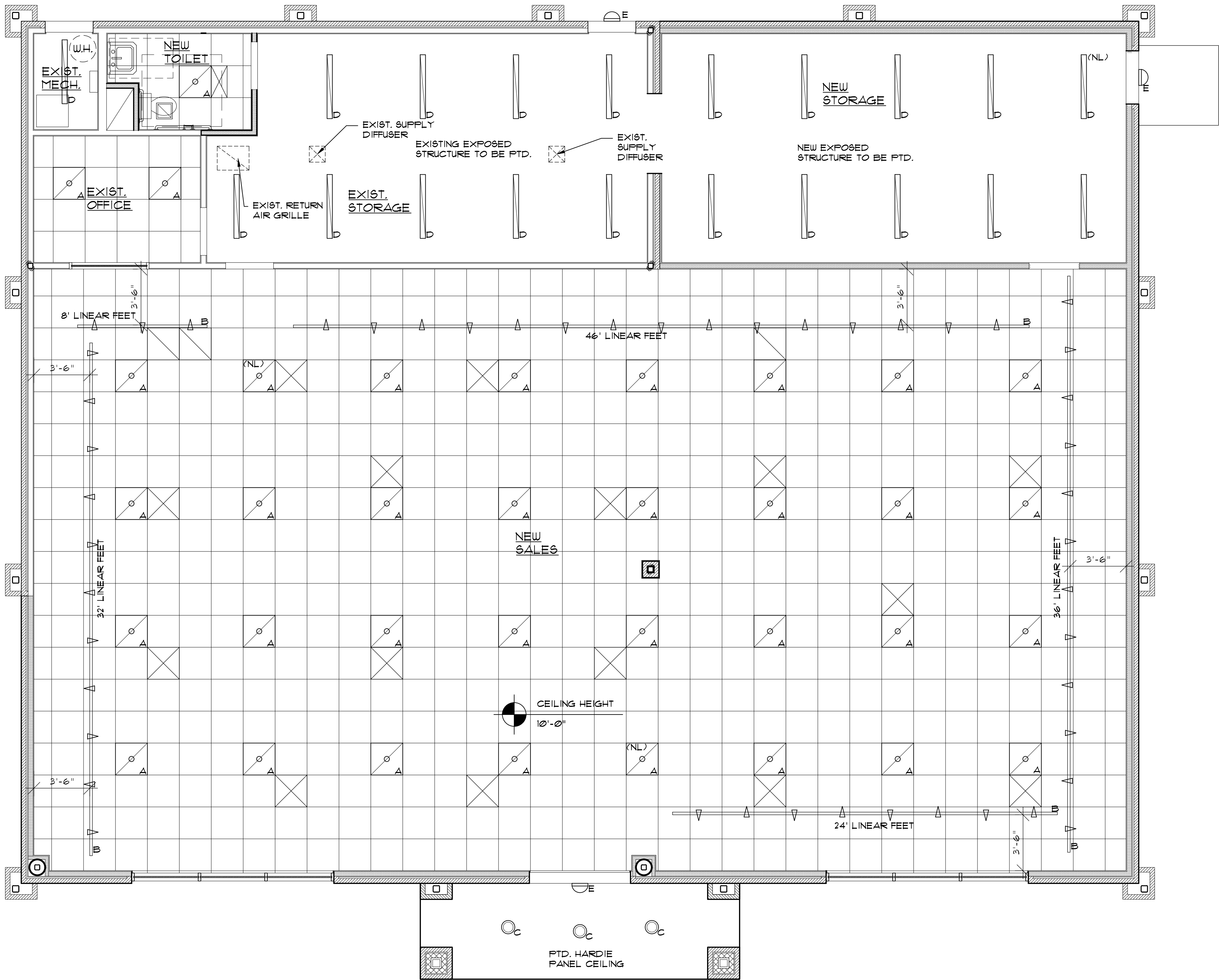
REVISIONS

SHEET NO.

A-1.1
OF

LEGEND	
	NEW 2'x2' ACOUSTICAL CEILING TILE, AND HANGERS. (CEILING HEIGHT 10'-0")
	NEW LED LIGHT FIXTURES, SEE ELECTRICAL.
	(NL) NIGHT LIGHT (NOT SWITCHED/ ALWAYS ON)
	SUPPLY DIFFUSER (SEE MECHANICAL)
	RETURN AIR GRILLE (SEE MECHANICAL)
	CEILING HEIGHT INDICATOR

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1
A-2
NEW RCP PLAN
SCALE: 1/4"=1'-0"

Coastal

Architecture

- Architectural Design
- Planning
- Interiors

AIA

Member of the American Institute of Architects

Lee D. Dixon, Jr., AIA

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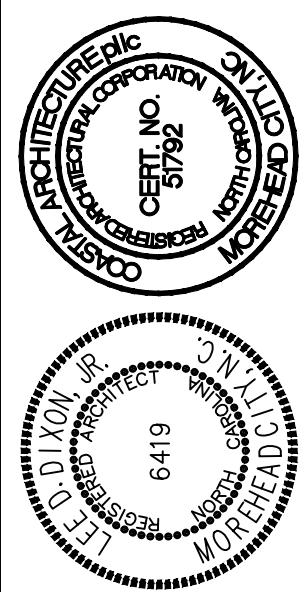
lee@coastalarchitecture.net

4206 Bridges St. Ext., Suite C

Morehead City, NC 28557

www.CoastalArchitecture.net

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NEW RCP PLAN

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A-2

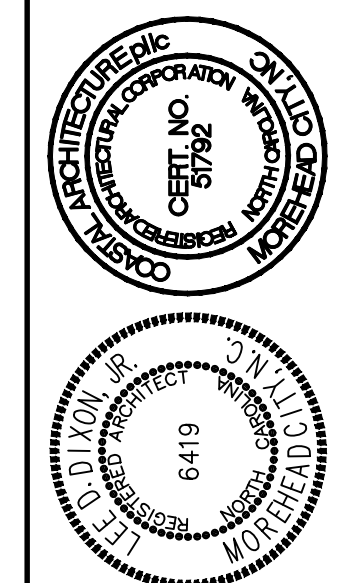
OF



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28557**

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ADDITION TO
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SCHEDULES, INTERIOR
ELEVATIONS

21036

ISSUED: 01/25/23

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CKD BY: LDD

REVISIONS

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SHEET NO.

AC

A-3

OF

[illegible]

NOTE:

1. ALL MOUNTING HEIGHTS ARE AS SHOWN UNLESS OTHERWISE NOTED.
2. PROVIDE BLOCKING FOR ALL TOILET ACCESSORIES.
3. PROVIDE HANDICAP DOOR SIGNAGE AT TOILET RM. DOOR.
4. SUBMIT ALL ACCESSORIES FOR APPROVAL & FINAL SELECTION BY OWNER.
5. PROVIDE ADA COMPLIANT DRAIN WRAP AT ALL EXPOSED PIPES/DRAINS.

ROOM FINISH SCHEDULE REMARKS

1) MOISTURE & MILDEW RESISTANCE 5/8" GWB REQUIRED

2) PROVIDE 2'X2' CEILING GRID. SEE REFLECTED CLG PLAN. COORDINATE W/ MECH & ELEC.

3) PATCH TO MATCH EXISTING GWB PRIOR TO PAINTING.

4) USE EXISTING 2'X2' CEILING GRID. ADJUSTS GRID TO NEW CEILING HEIGHT. PROVIDE NEW CEILING TILES.

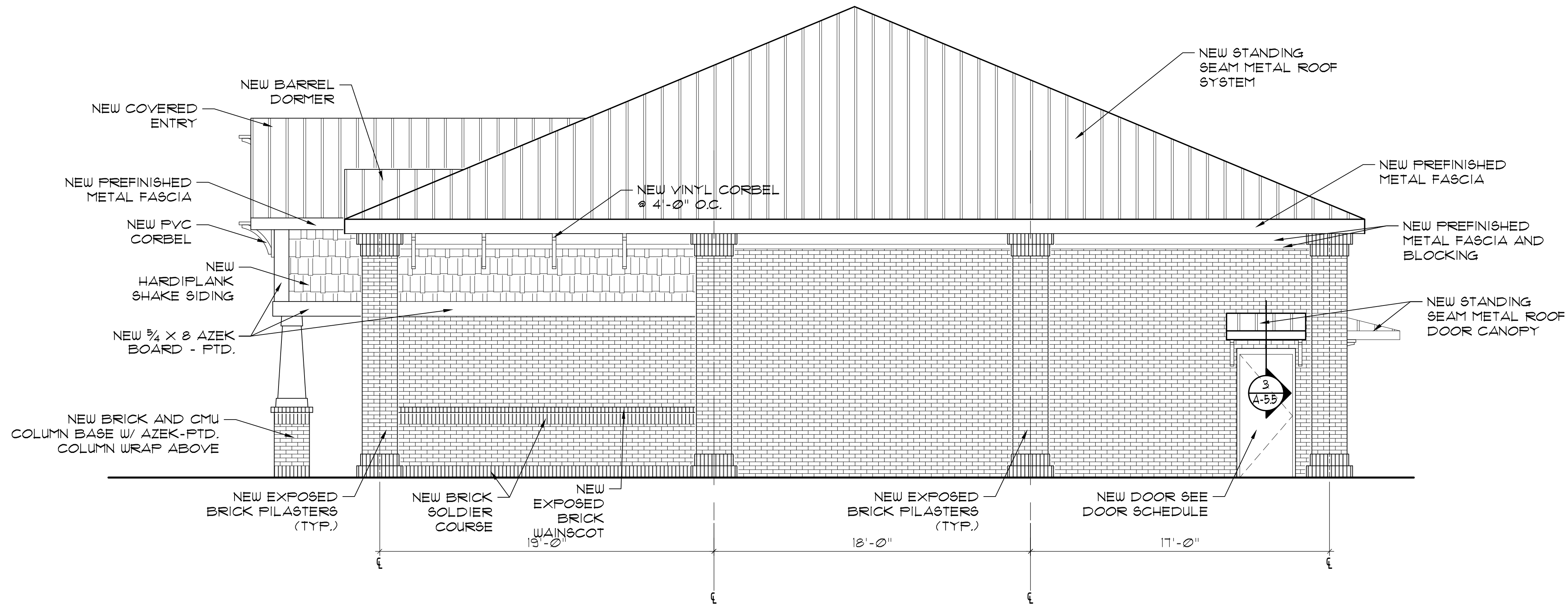
5) EXPOSED STRUCTURE TO BE PAINTED

6) CARPET TILE AT ENTRY

DOOR SCHEDULE REMARKS
FIELD VERIFY EXISTING FRAME DIMENSIONS AND CONDITION PRIOR TO ORDERING NEW DOOR.
PROVIDE PANIC DEVICES AND CLOSER
ALL WOOD DOORS TO BE STAINED
PROVIDE PANIC ALARM
FRAME COLOR TO BE WHITE

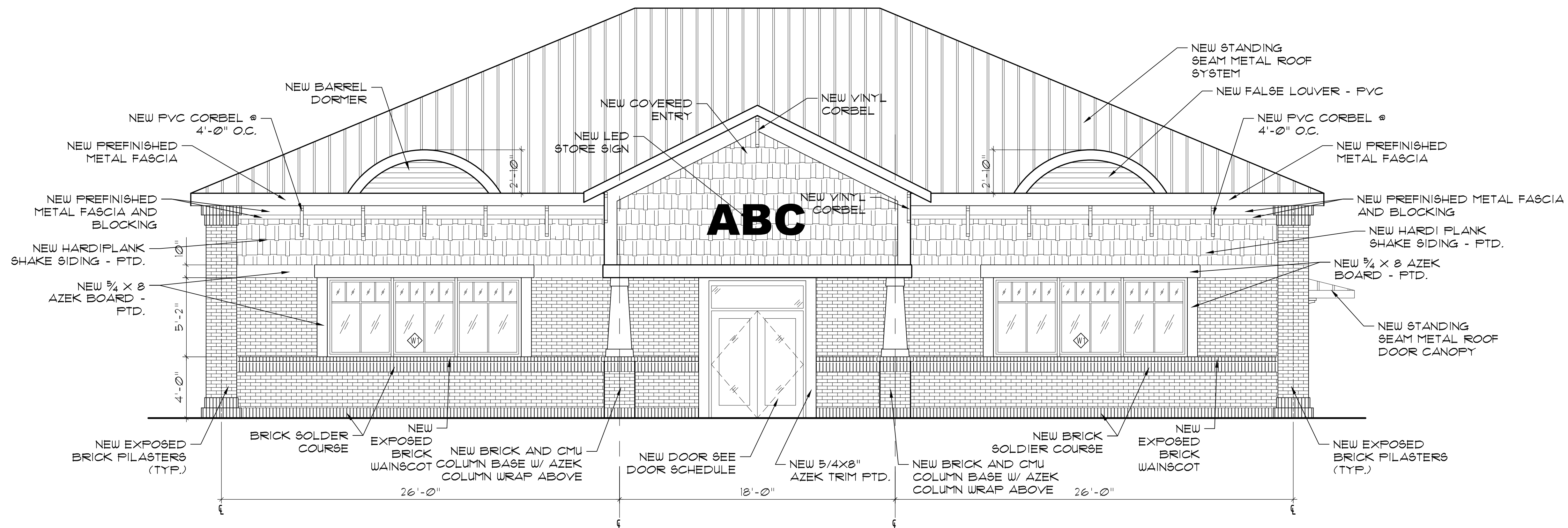
WINDOW SCHEDULE REMARKS
FRAMES COLOR TO BE WHITE





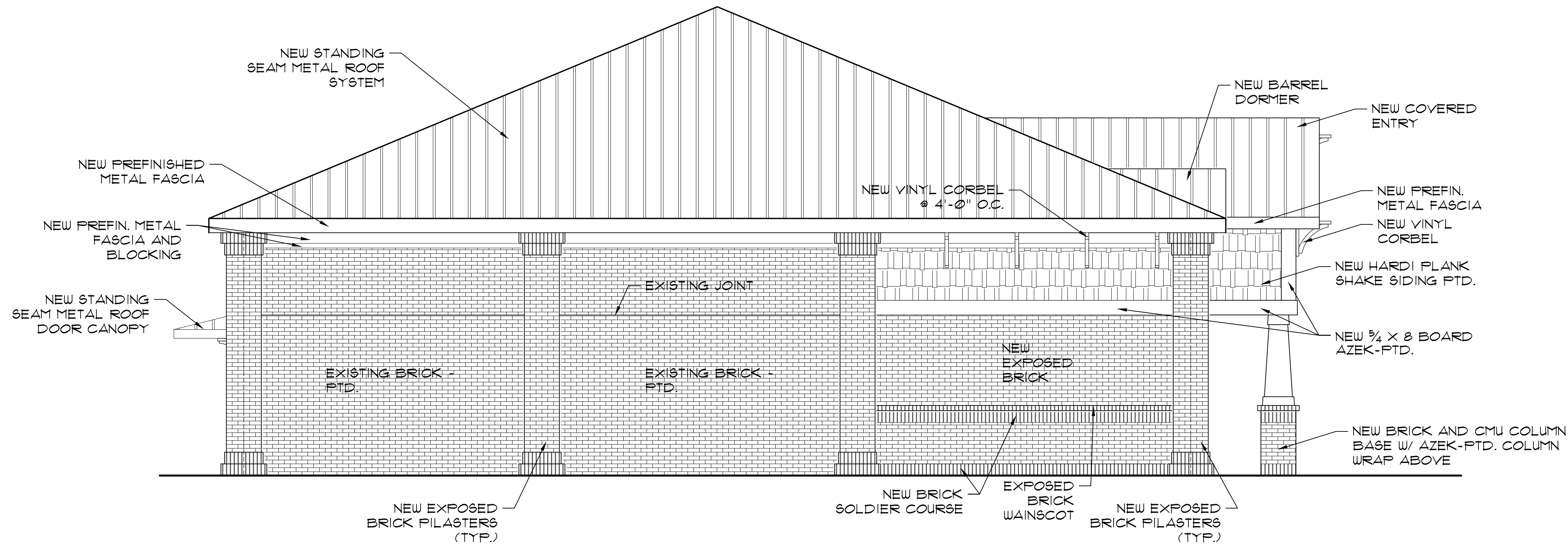
PVC CORBELS TO BE 3" X 2'-0" X 2'-0"H STANDARD THORTON ARCHITECTURAL GRADE PVC BRACKET W/ BLOCK ENDS BY EKENA MILLWORK OR APPROVED EQUAL. CUT AND TRIM CAP TO FIT CONDITIONS. PROVIDE 1 CORBEL AS A SAMPLE FOR APPROVAL.

2 NEW RIGHT SIDE ELEVATION
A-4 SCALE: 1/4"=1'-0"



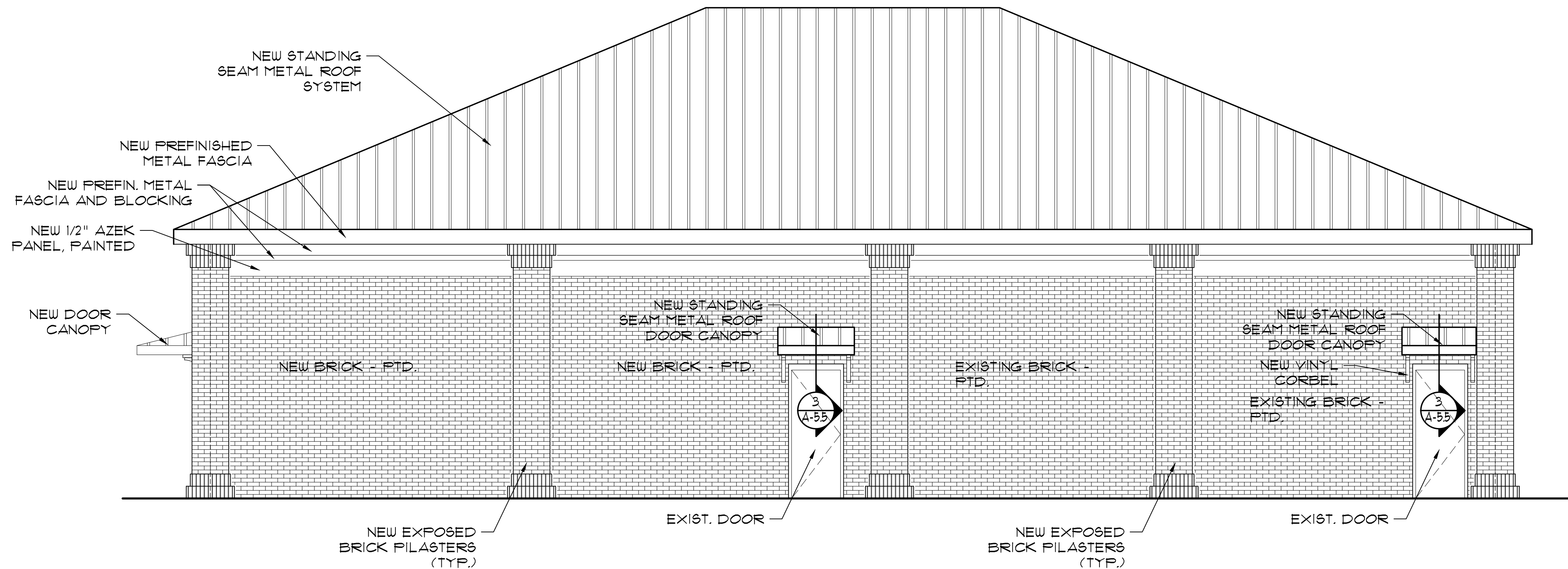
1 NEW FRONT ELEVATION
A-4 SCALE: 1/4"=1'-0"

NEW EXPOSED BRICK TO BE:
MERIDAN BRICK, SAVANNAH GRAY, MODULAR
SALISBURY COLLECTION



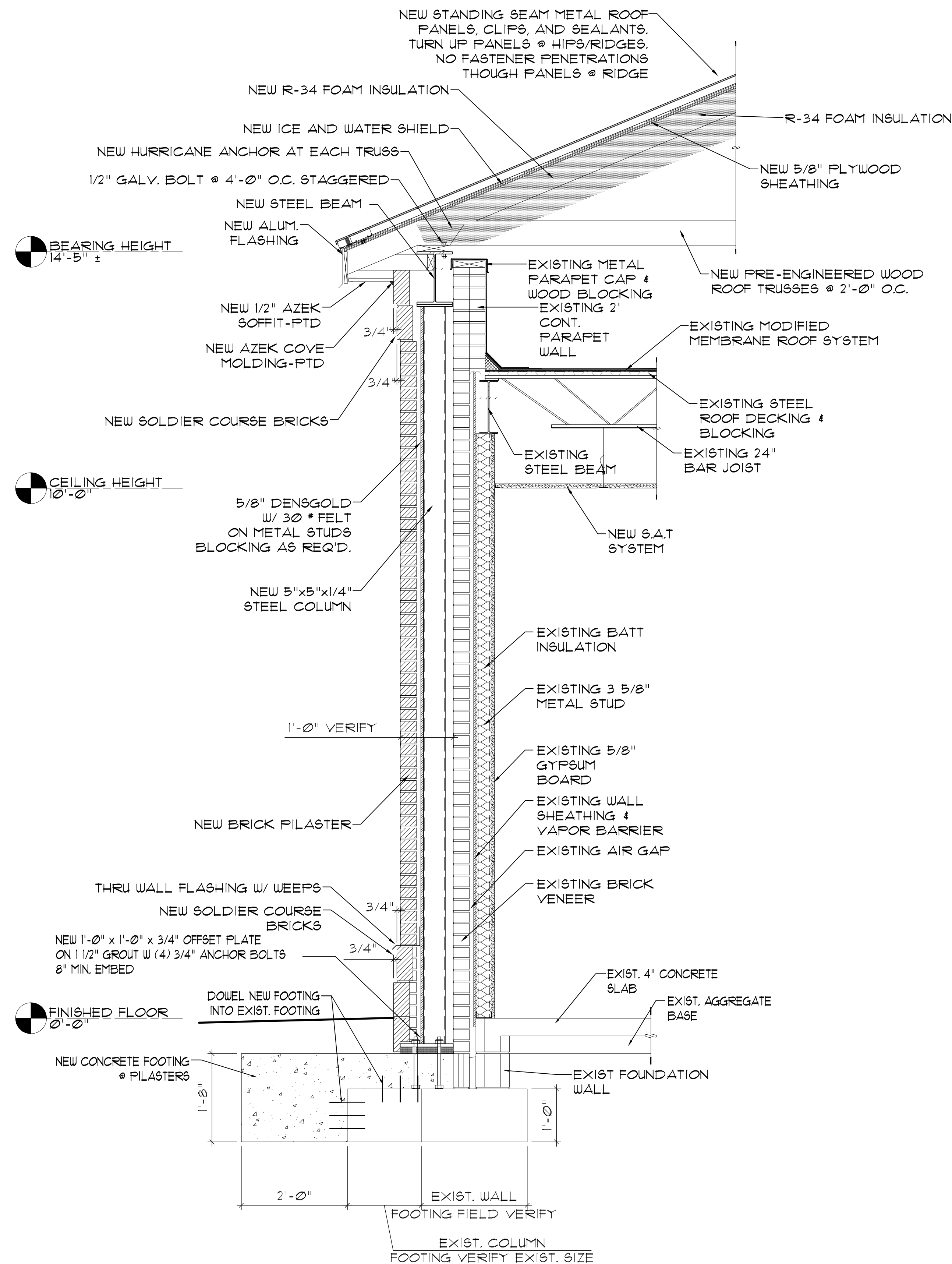
2
A-4.1
NEW LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"

NEW EXPOSED BRICK TO BE:
MERIDIAN BRICK, SAVANNAH GRAY, MODULAR
SALISBURY COLLECTION

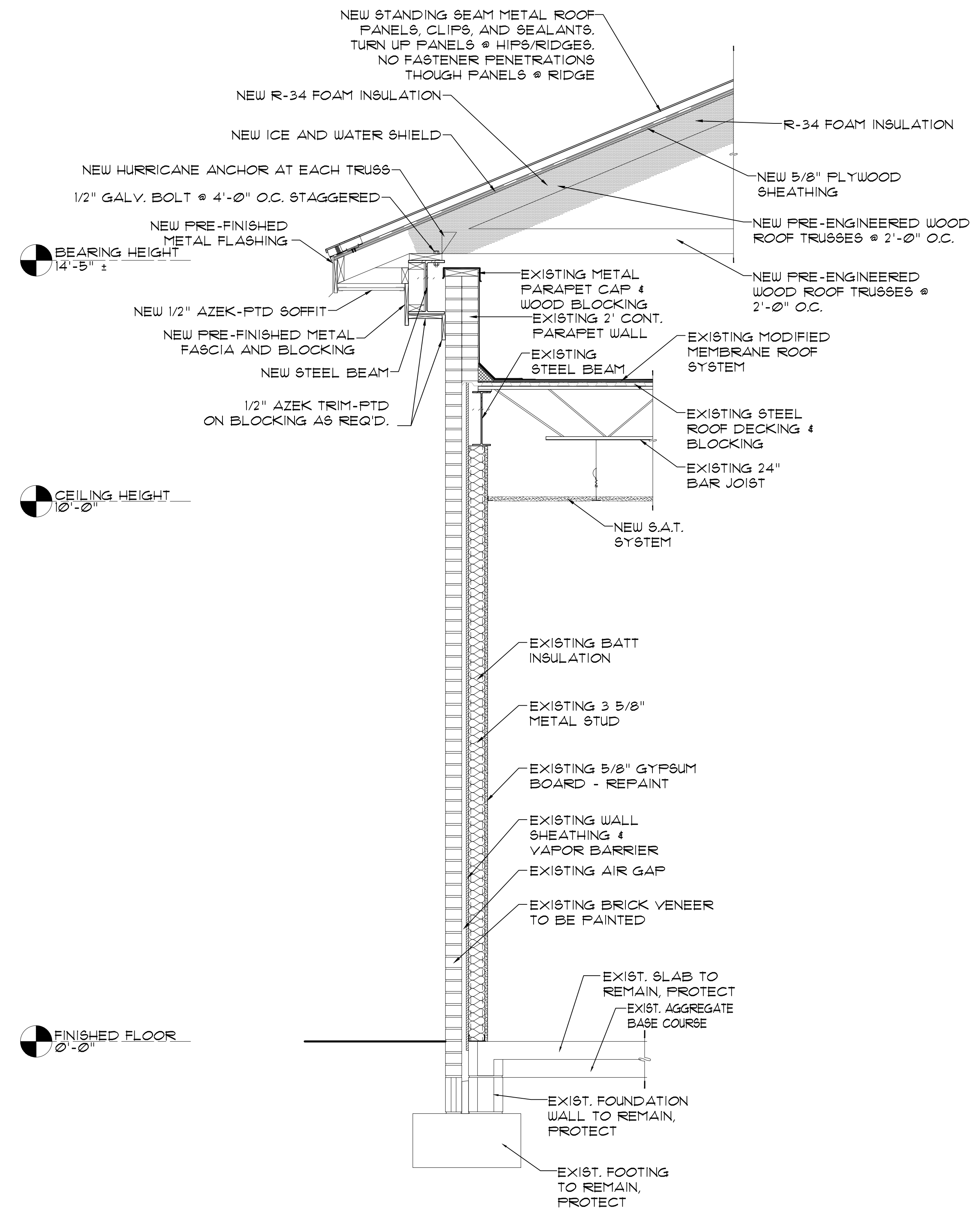


NEW BRICK TO BE PAINTED SHALL HAVE SAME
TEXTURE AS EXISTING BRICK TO BE PAINTED

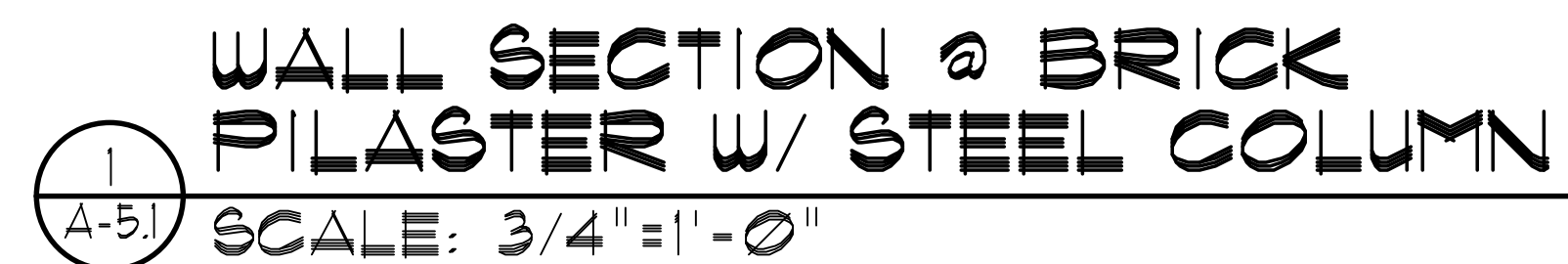
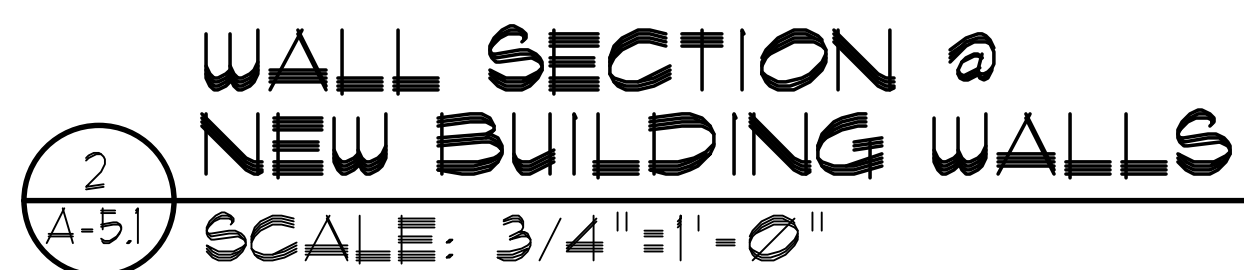
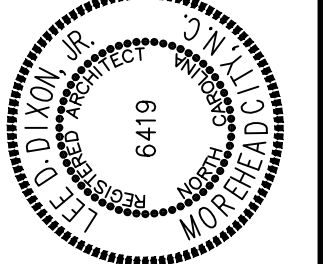
1
A-4.1
NEW REAR ELEVATION
SCALE: 1/4" = 1'-0"

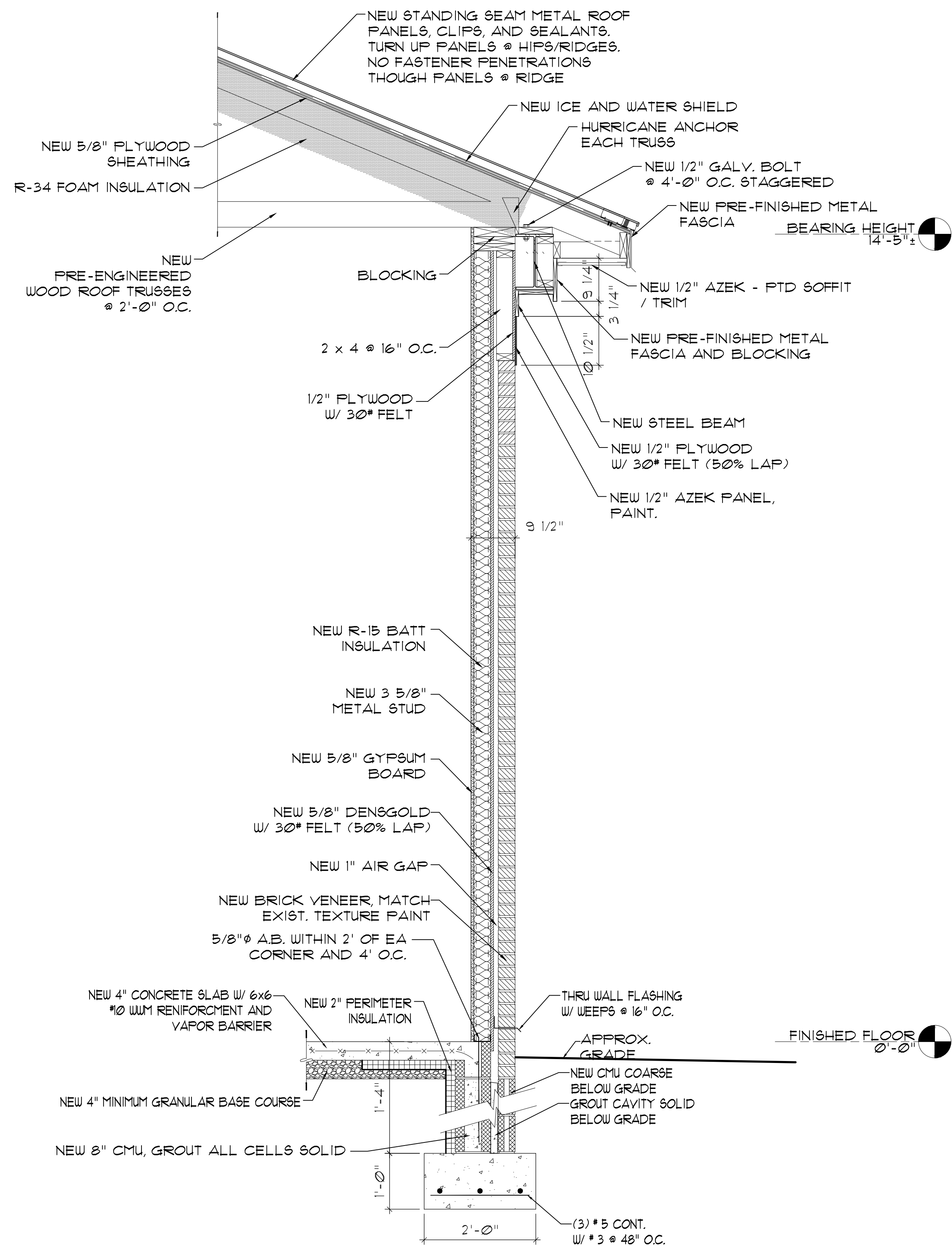


2
A-5
WALL SECTION @ BRICK
PILASTER W/ STEEL COLUMN
SCALE: 3/4"=1'-0"



1
A-5
WALL SECTION @
EXISTING BUILDING SIDE
SCALE: 3/4"=1'-0"

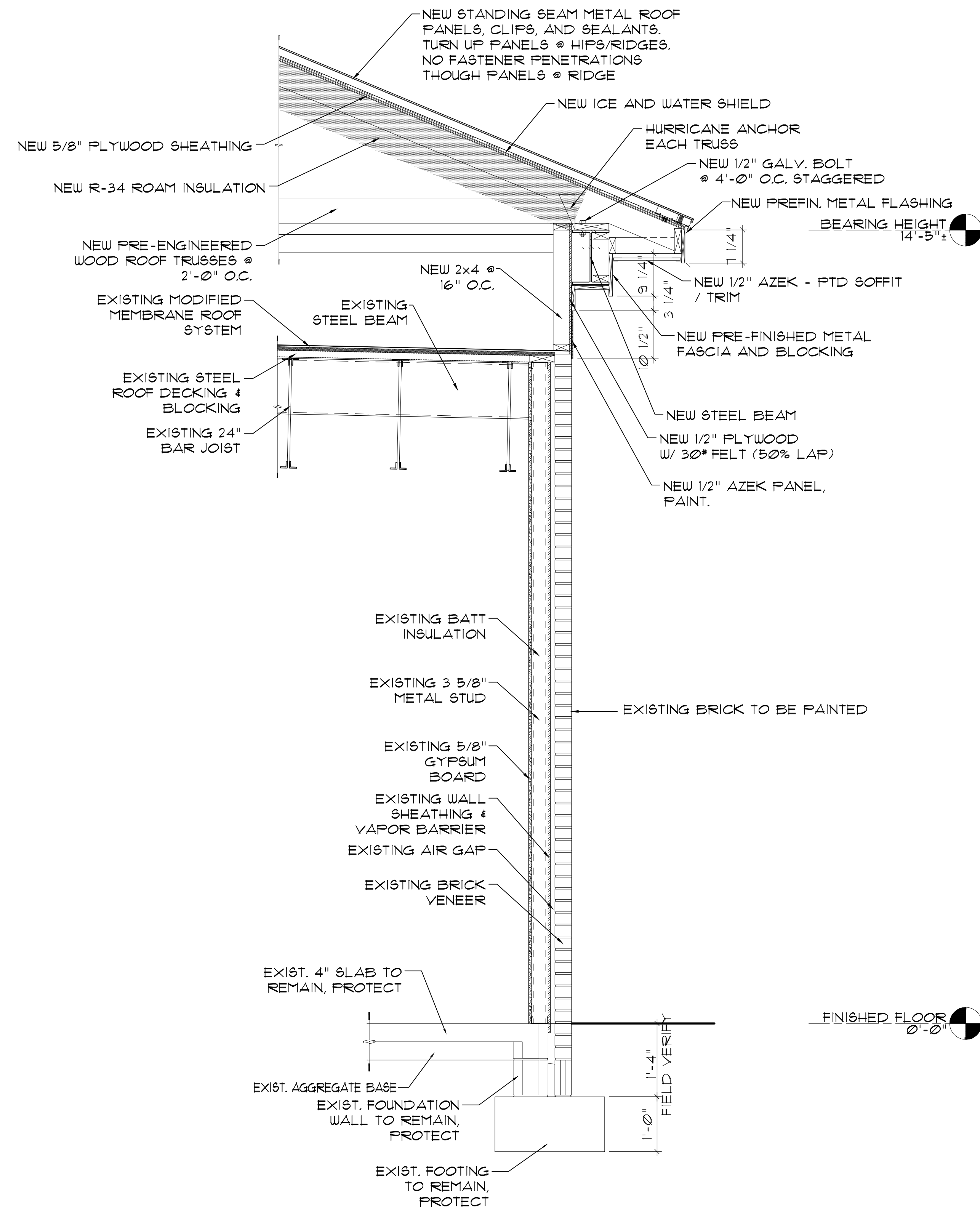




2
A-5.2

WALL SECTION @
NEW BUILDING REAR

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



1
A-5.2

WALL SECTION @
EXIST. BUILDING REAR

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

WALL SECTION

21036

ED: 1-25-23

BY: TRA

DISCUSSION

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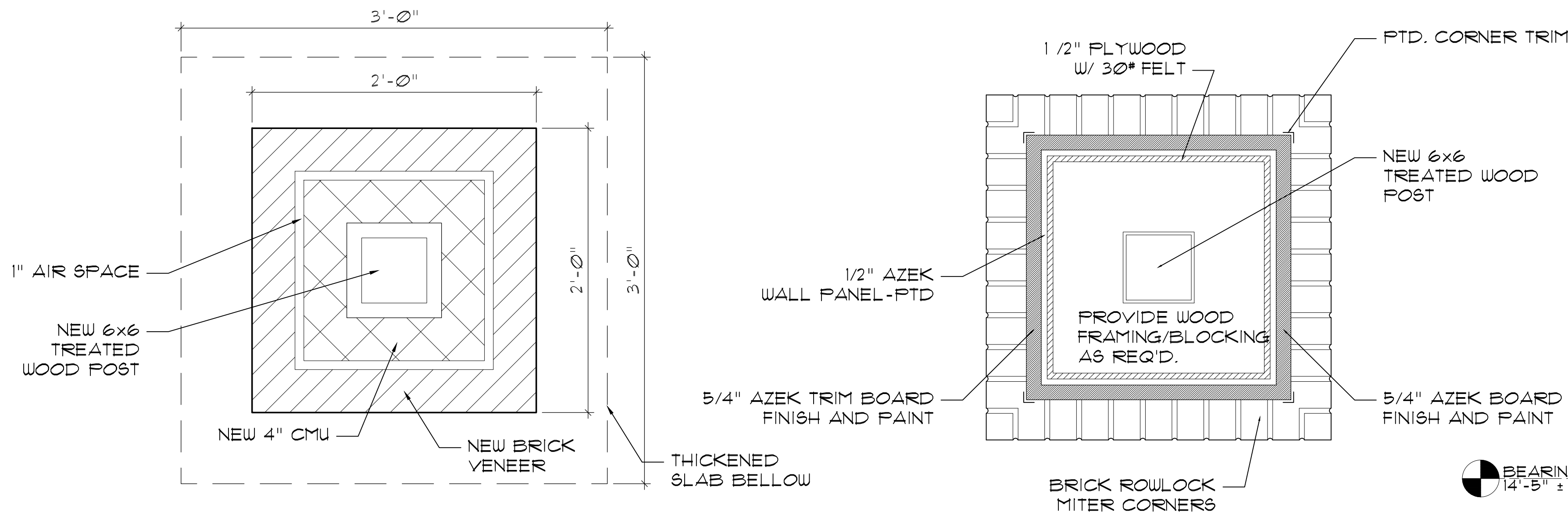
SHEET NO.

50

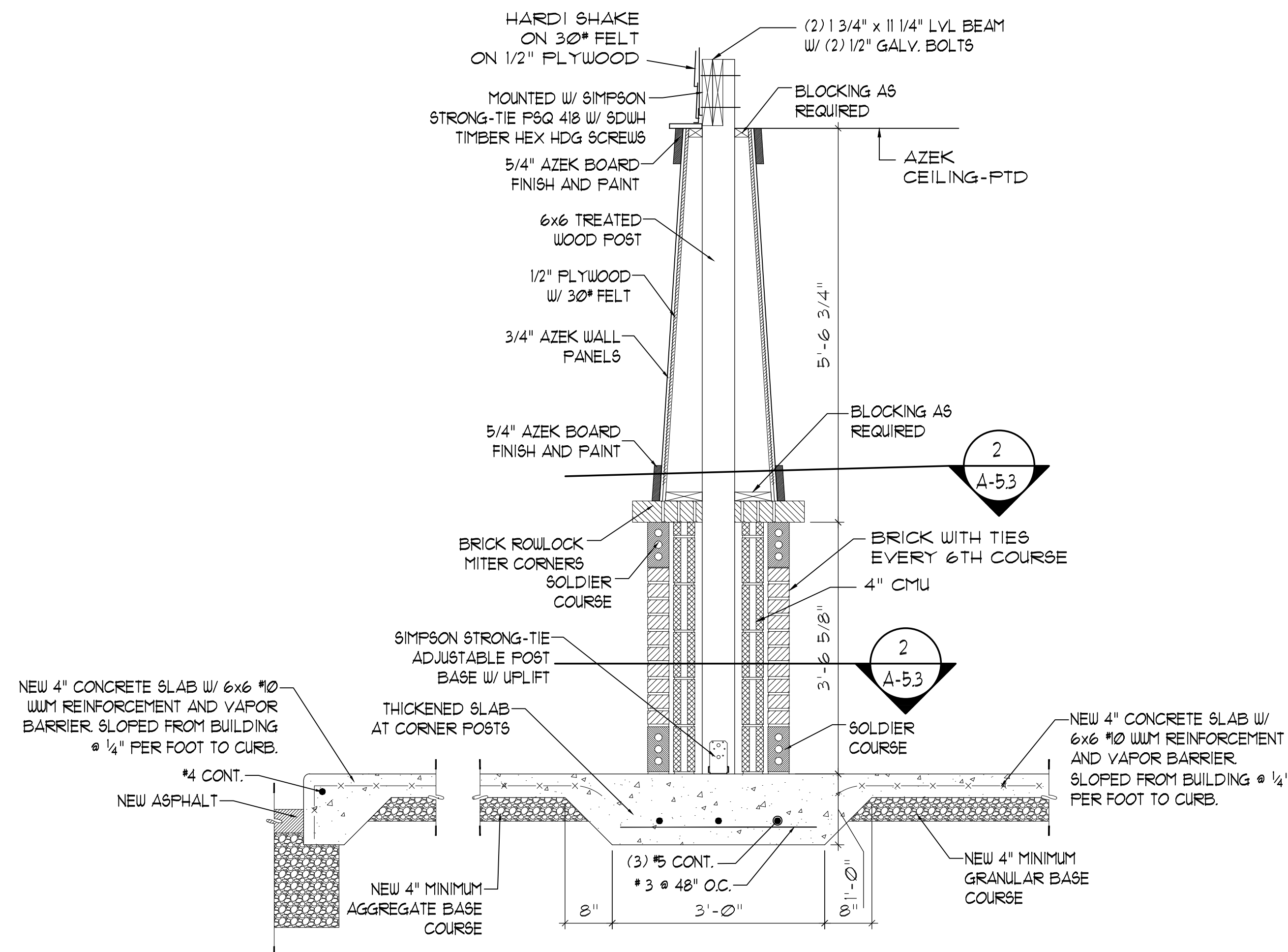
A-53

OF





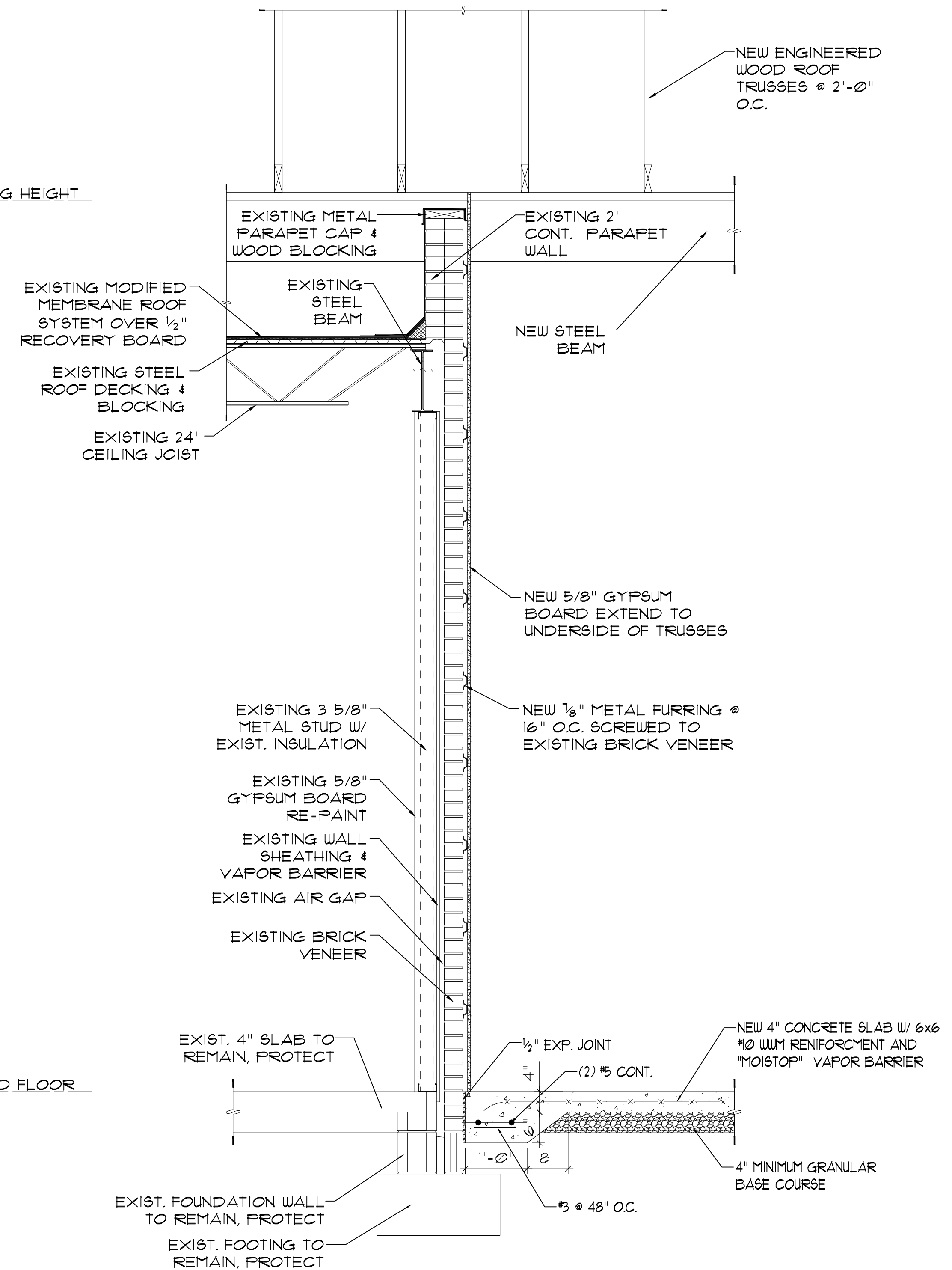
3 ENTRY COLUMN SECTION
SCALE: 1 1/2" = 1'-0"



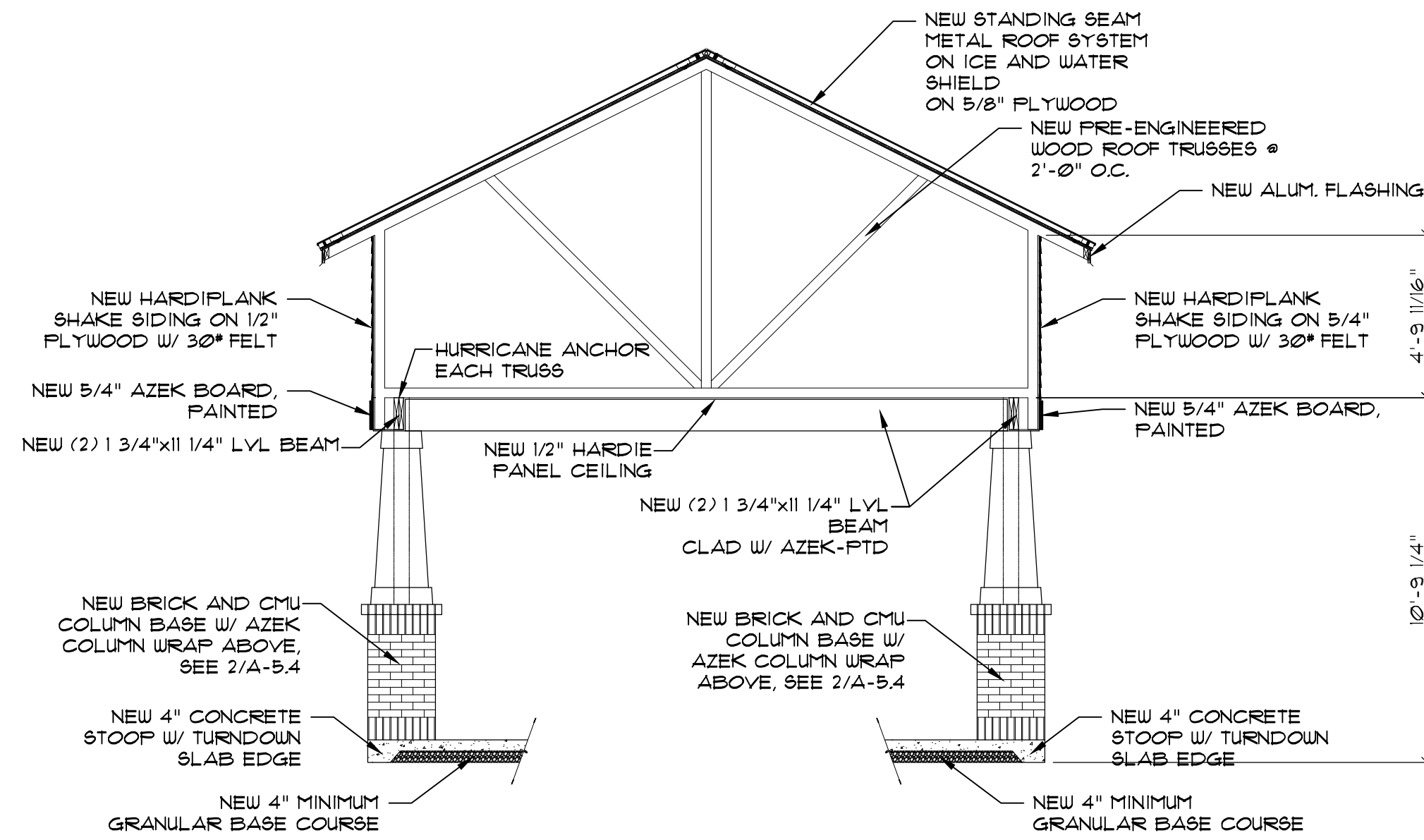
2 ENTRY COLUMN SECTION
SCALE: 3/4" = 1'-0"

BEARING HEIGHT
14'-5" ±

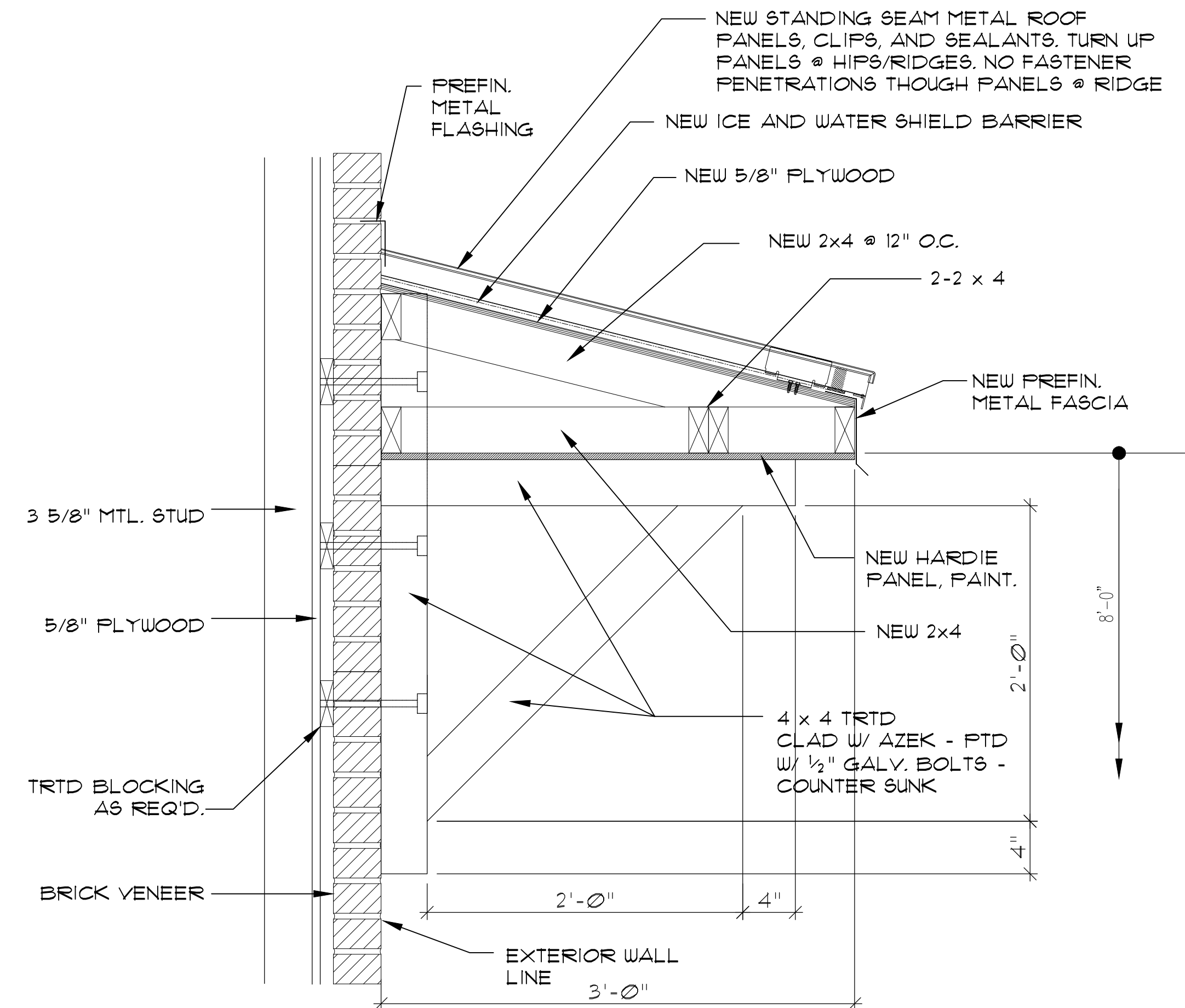
FINISHED FLOOR
0'-0"



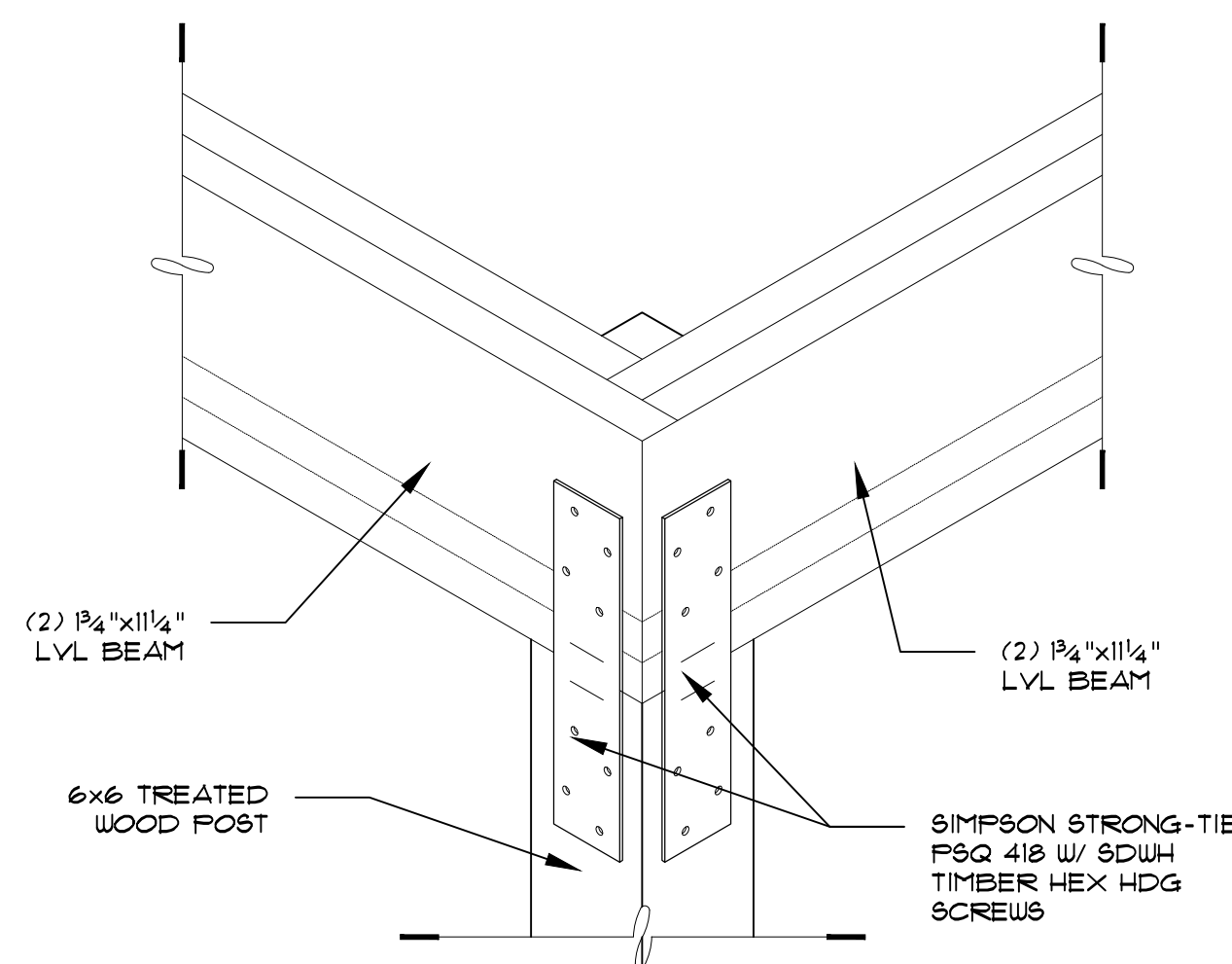
1 WALL SECTION @ EXIST. TO NEW STORAGE
SCALE: 3/4" = 1'-0"



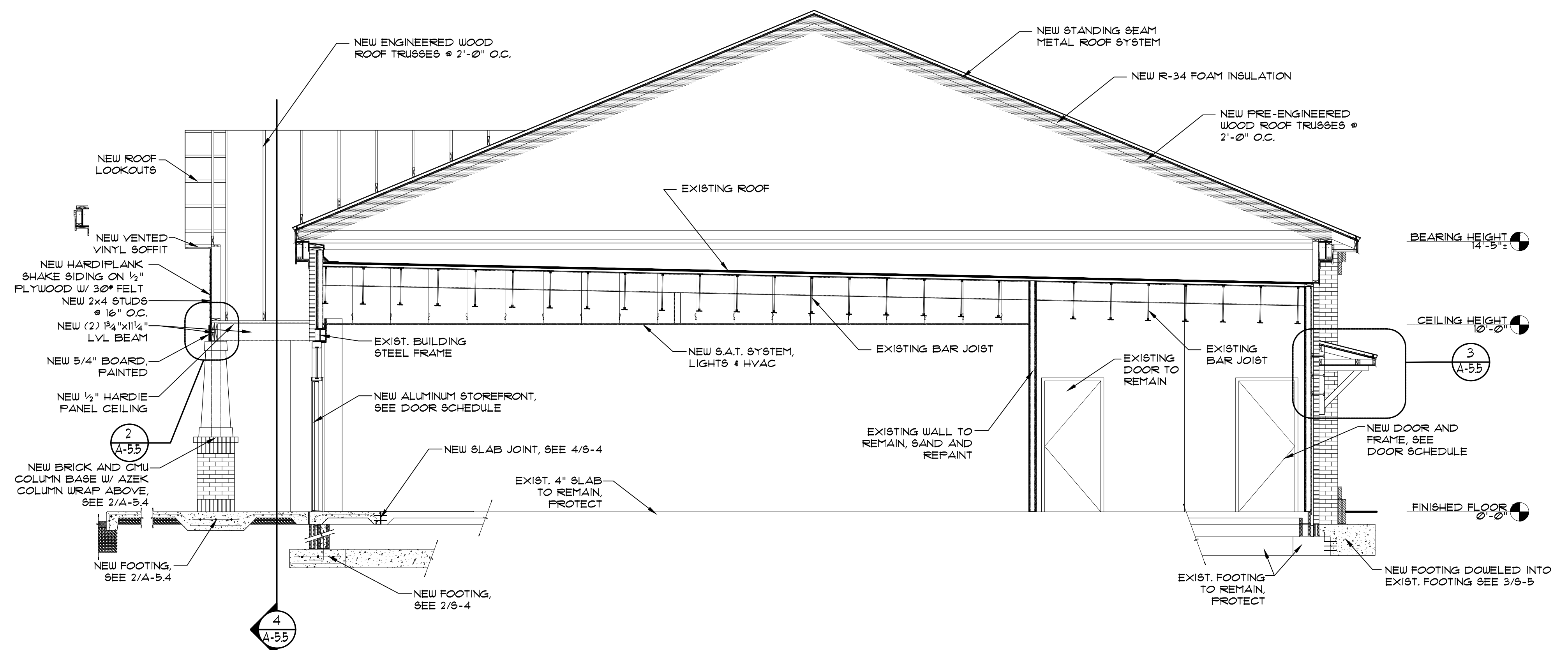
4 ENTRY CANOPY SECTION
SCALE: 1/4" = 1'-0"



3 DOOR CANOPY SECTION
SCALE: 1-1/2" = 1'-0"



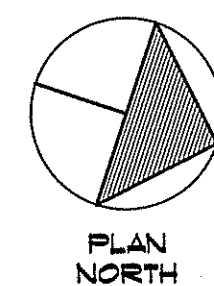
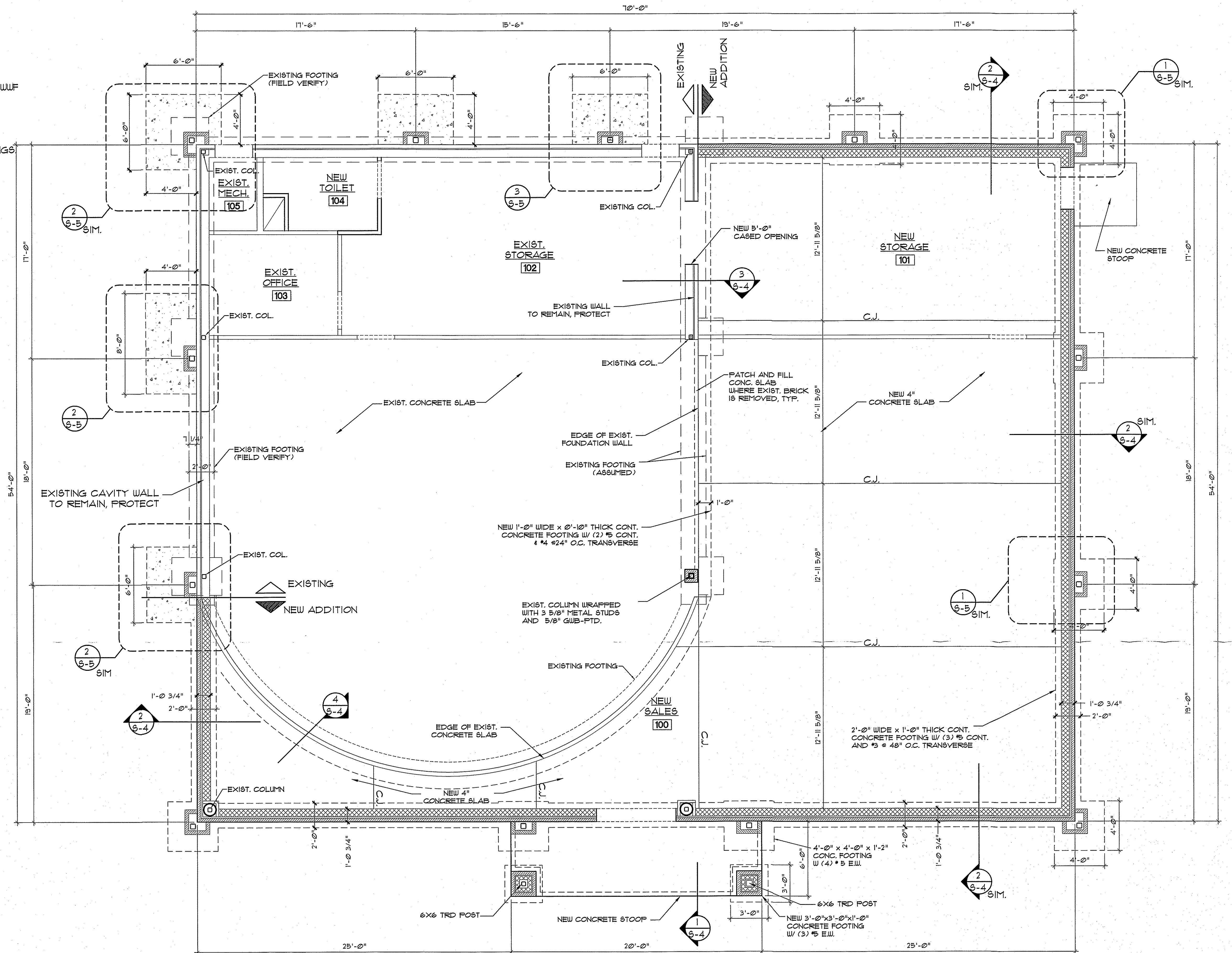
2 LVL BEAM AND COLUMN DETAIL
SCALE: 1-1/2" = 1'-0"



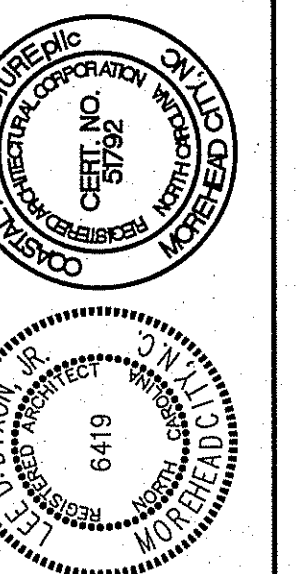
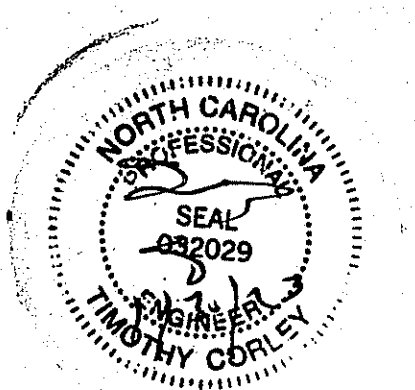
1 NEW BUILDING SECTION
SCALE: 1/4" = 1'-0"

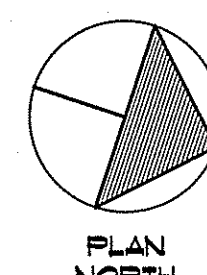
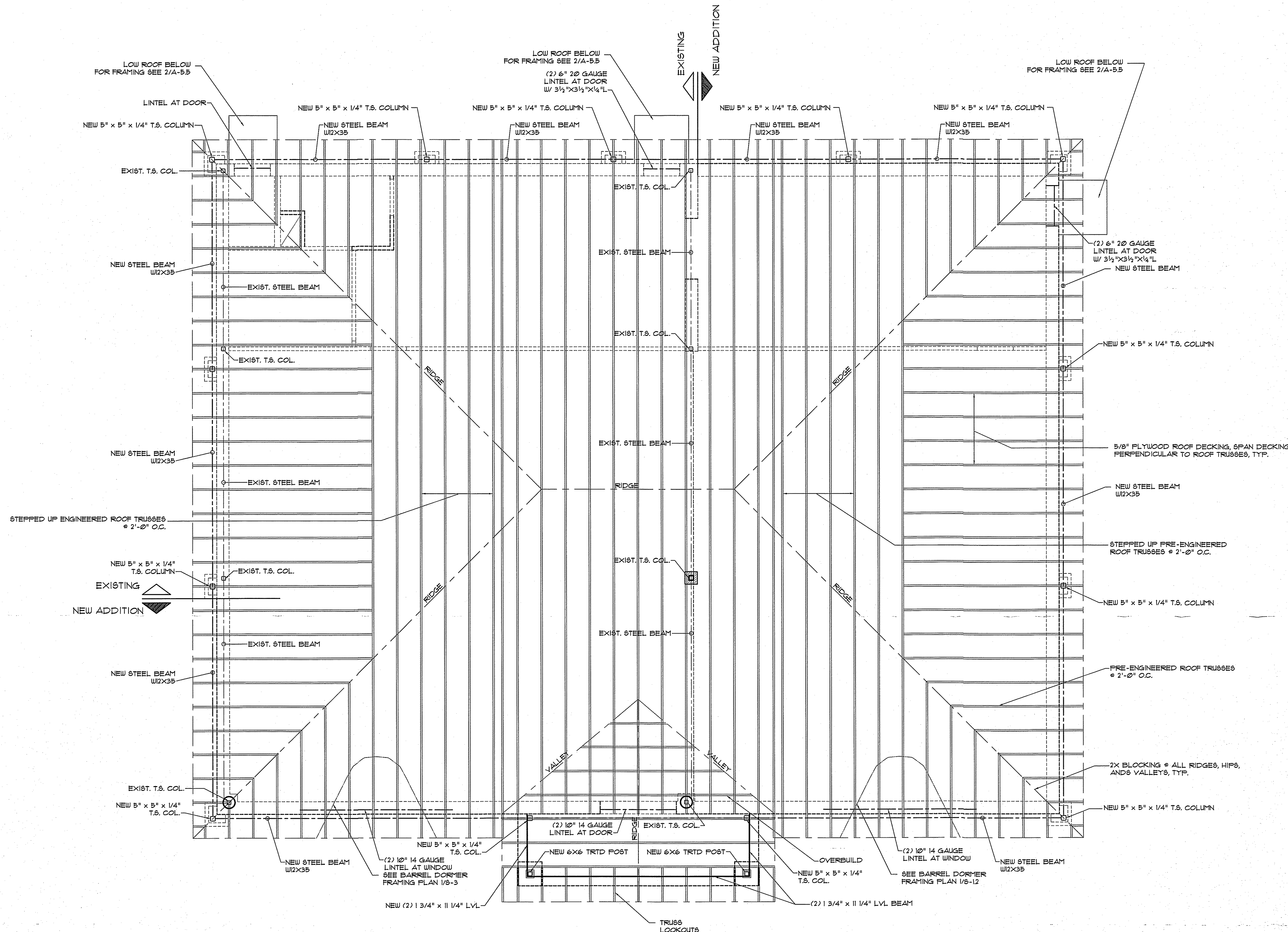
NOTES:

1. TOP OF FOOTING = (8" B.F.G.), TYPICAL U.O.N.
2. STEP FOOTING AS REQUIRED.
3. FLOOR SLAB SHALL BE 4" CONCRETE REINF. W/ 6X6 W/4XW/4 W/4F OVER APPROVED VAPOR BARRIER ON 4" MIN. COMPACTED GRANULAR BASE.
4. C.J. DENOTES CONTROL JOINT LOCATION.
5. SEE ARCH PLANS FOR LOCATION OF EXTERIOR DOOR OPENINGS.

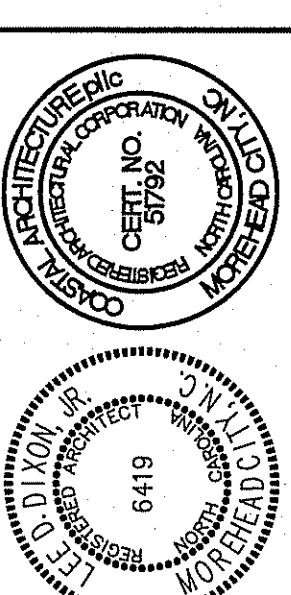
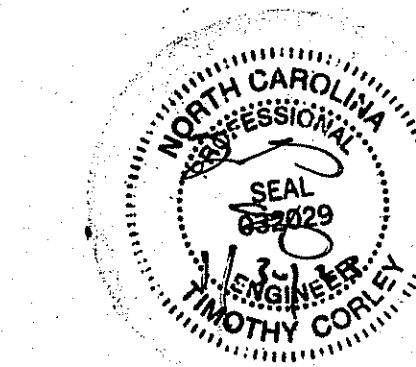


1 S-1 NEW FOUNDATION PLAN SCALE: 1/4" = 1'-0"





1
3-2 **ROOF FRAMING PLAN**
SCALE: 1/4" = 1'-0"



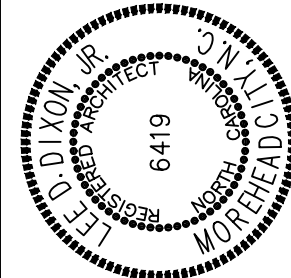
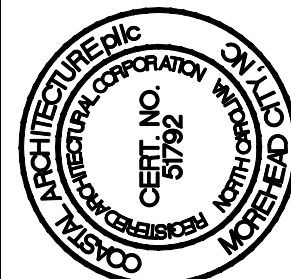
NEW ROOF FRAMING
PLAN

21036

ISSUED: 01/25/23
DWG BY: TRA
CKD BY: LDD

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S-2
OF



NEW DORMER DETAIL

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SHEET NO.

S-3
OF

Barrel Roof Dormer Calculations
Calculations are rounded to the nearest 1/16 inch

Radius of Barrel Roof = 2'-10''
Main Roof Pitch = 5.00
Main Roof Pitch Angle = 22.61986°
Barrel Roof Plan View Run = 6'-9 5/8''
Total Arc Length of Barrel Roof = 8'-10 7/8''
Total Arc Angle of Barrel Roof = 180.00000

Arc Length of 12" O.C. spacing = 1'-0''
Arc Angle of 12" O.C. Spacing = 20.22204
Cord Length of 12" O.C. Spacing = 11.93781

Plan View Ellipse Axis
Semi Minor Axis= 2'-10''
Semi Major Axis= 6'-9 5/8''

Main Roof Ellipse Axis
Semi Minor Axis= 2'-10''
Semi Major Axis= 7'-4 7/16''

Ellipse layout points on Main Roof Real Surface
Purlin Face cut perpendicular to Roof Surface

#0 [y = 7'-4 7/16'' x = 0] Purlin Slope Angle = 0.00000°
Miter Angle = 67.38014°
Saw Blade Bevel Angle = 0.00000°
Barrel Roof Rafter Length = 6'-9 5/8''

#1 [y = 6'-10 15/16'' x = 0'-11 13/16''] Purlin Slope Angle = 20.22204°
Miter Angle = 66.05701°
Saw Blade Bevel Angle = 18.60669°
Barrel Roof Rafter Length = 6'-4 5/8''

#2 [y = 5'-7 5/16'' x = 1'-10 1/16''] Purlin Slope Angle = 40.44408°
Miter Angle = 61.29944°
Saw Blade Bevel Angle = 36.78437°
Barrel Roof Rafter Length = 5'-2 1/8''

#3 [y = 3'-7 5/16'' x = 2'-5 11/16''] Purlin Slope Angle = 60.66612°
Miter Angle = 49.61827°
Saw Blade Bevel Angle = 53.58320°
Barrel Roof Rafter Length = 3'-3 15/16''

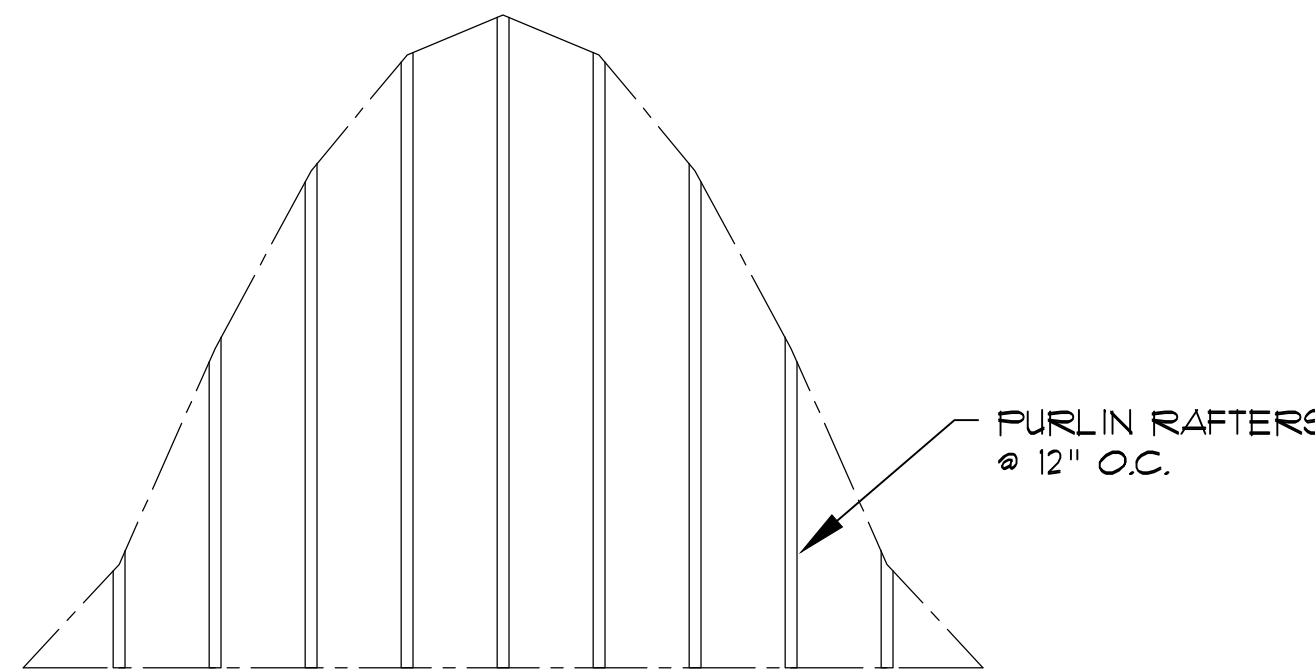
#4 [y = 1'-2'' x = 2'-9 5/8''] Purlin Slope Angle = 80.88816°
Miter Angle = 20.81025°
Saw Blade Bevel Angle = 65.70354°
Barrel Roof Rafter Length = 1'-0 15/16''

#5 [y = 0 x = 2'-10''] Purlin Slope Angle = 90°
Miter Angle = 0.00000°
Saw Blade Bevel Angle = 67.38014°
Barrel Roof Rafter Length = 0

Barrel Roof Dormer Real Roof Surface Layout Points
(Plywood Roof Sheathing)
x= 0, y= 6'-9 5/8''
x= 1'-0'', y= 6'-4 5/8''
x= 2'-0'', y= 5'-2 1/8''
x= 3'-0'', y= 3'-3 15/16''
x= 4'-0'', y= 1'-0 15/16''
x= 4'-5 7/16'', y= 0

Purlin Rafter Deduction for Ellipse Valley Sleeper Offset for 3/4" Plywood = 0'-1 15/16''
Purlin Rafter Deduction for Ellipse Valley Sleeper Offset for 1 1/8" Plywood = 0'-2 15/16''
Purlin Rafter Deduction for Ellipse Valley Sleeper Offset for 1 1/2" Material = 0'-3 15/16''
Purlin Rafter Deduction for Ellipse Valley Sleeper Offset for 1 3/4" LVL = 0'-4 9/16''

Ellipse Valley Sleeper Offset for 3/4" Plywood = 0'-1 13/16''
Ellipse Valley Sleeper Offset for 1 1/8" Plywood = 0'-2 3/4''
Ellipse Valley Sleeper Offset for 1 1/2" Material = 0'-3 5/8''
Ellipse Valley Sleeper Offset for 1 3/4" LVL = 0'-4 1/4''

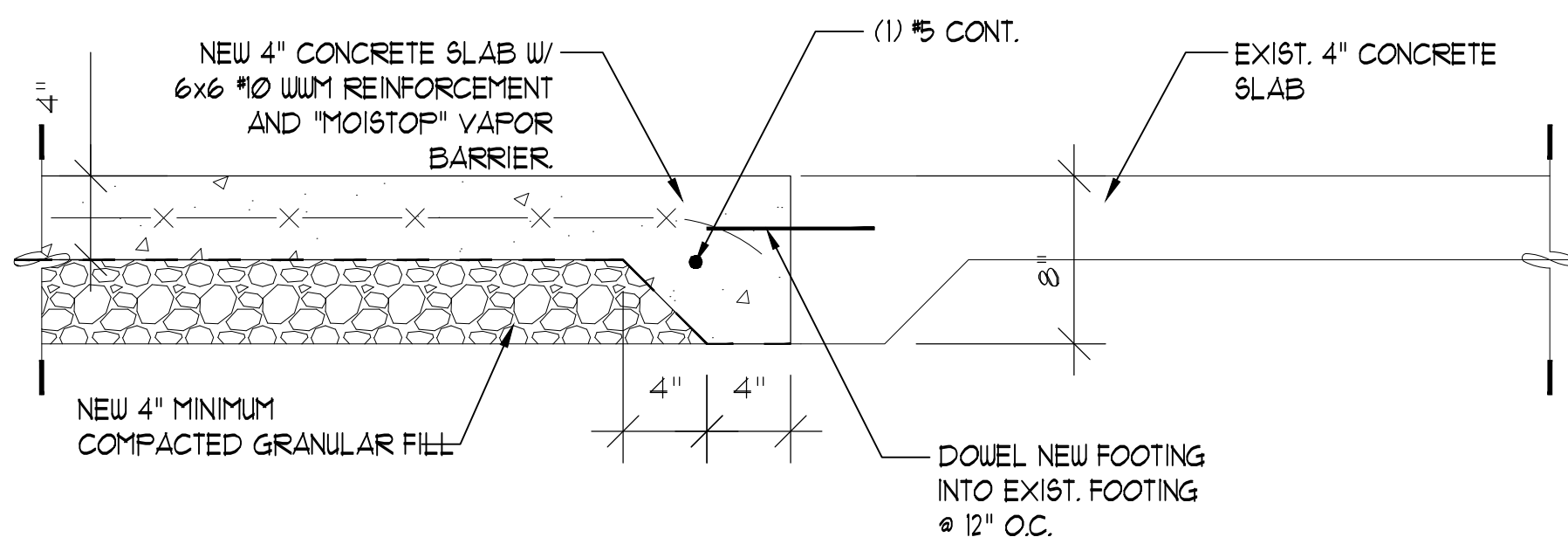


BARREL DORMER
FRAMING PLAN

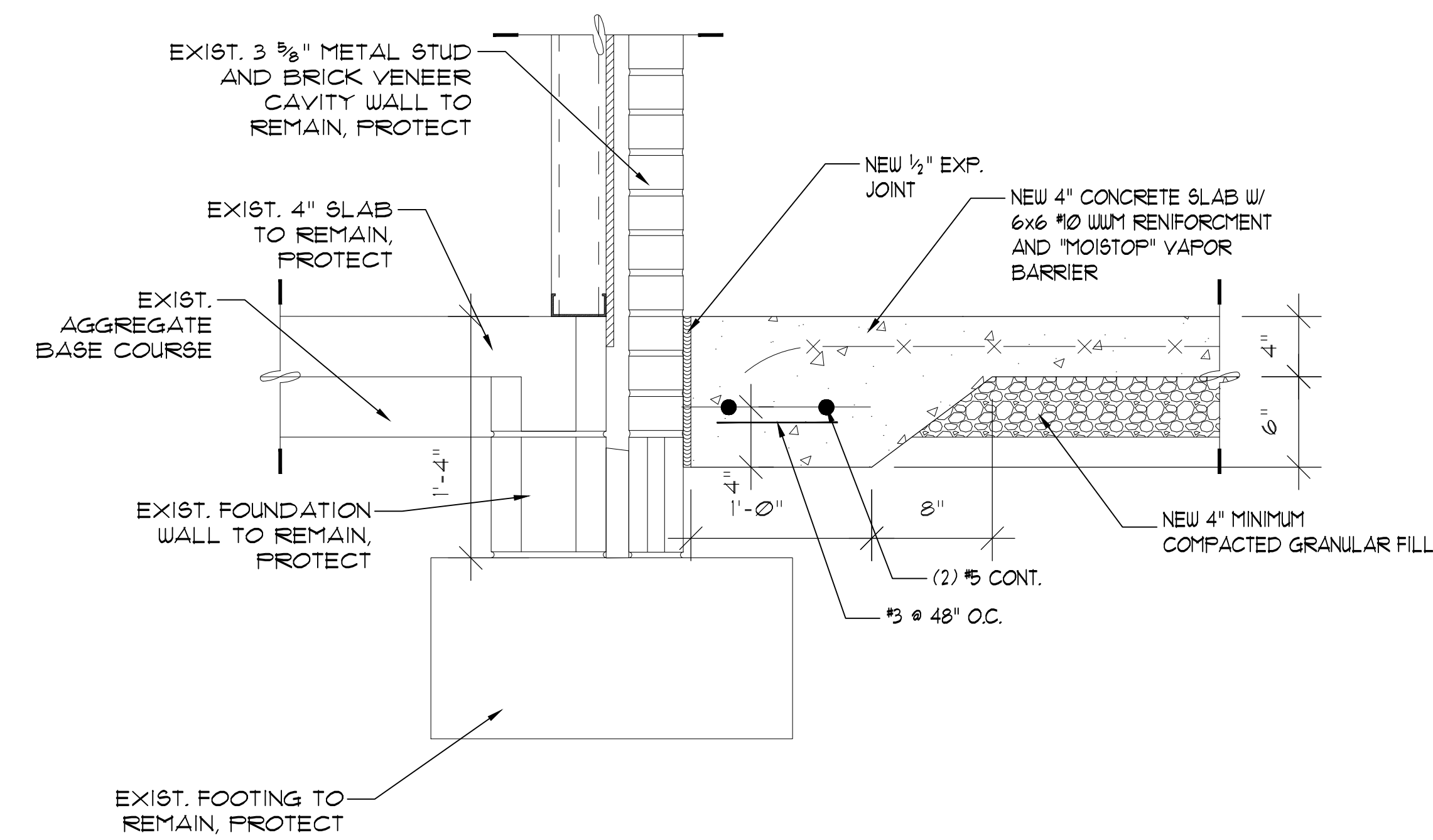
SCALE: 1/2"=1'-0"

BARREL DORMER
CALCULATIONS

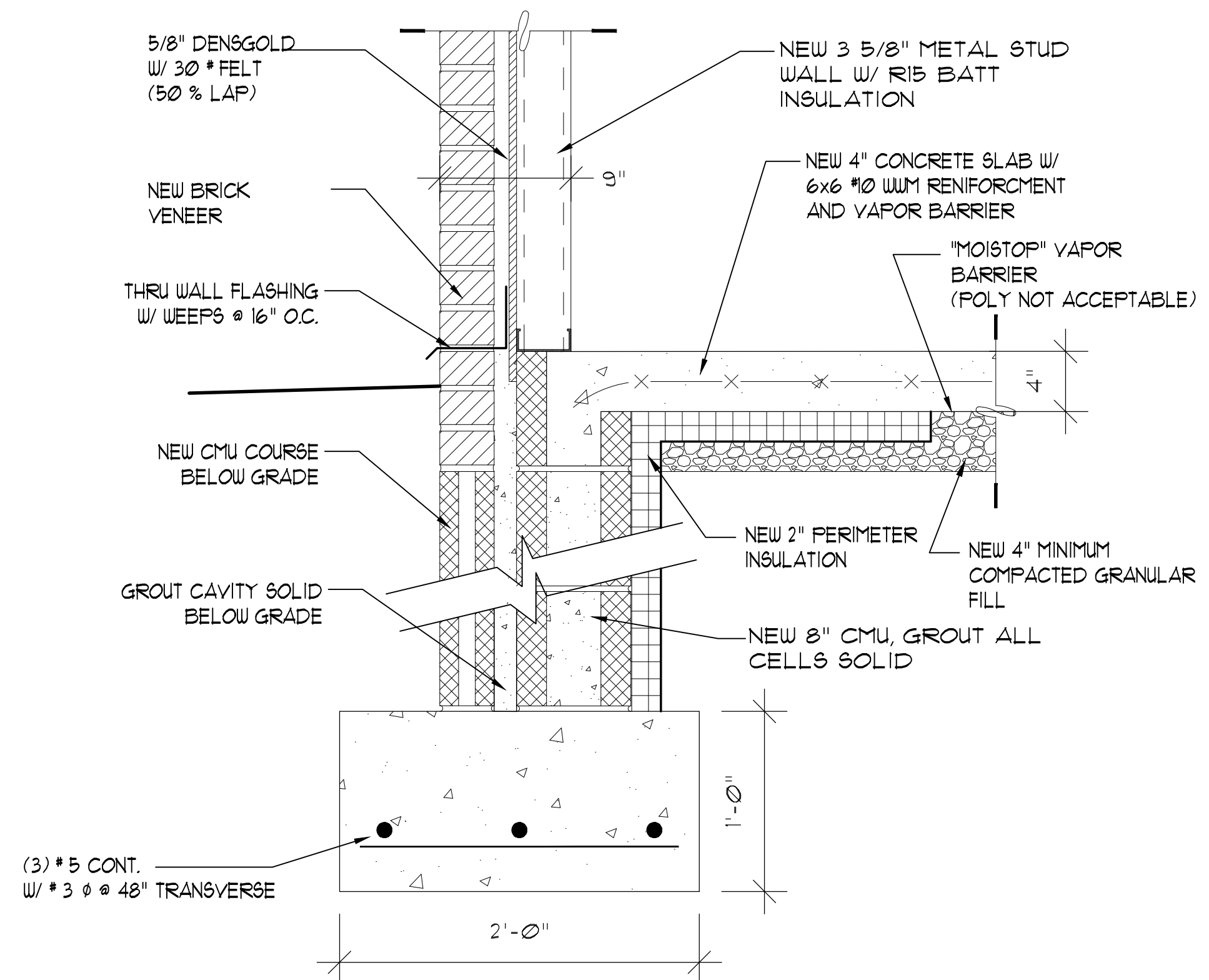
SCALE: N.T.S.



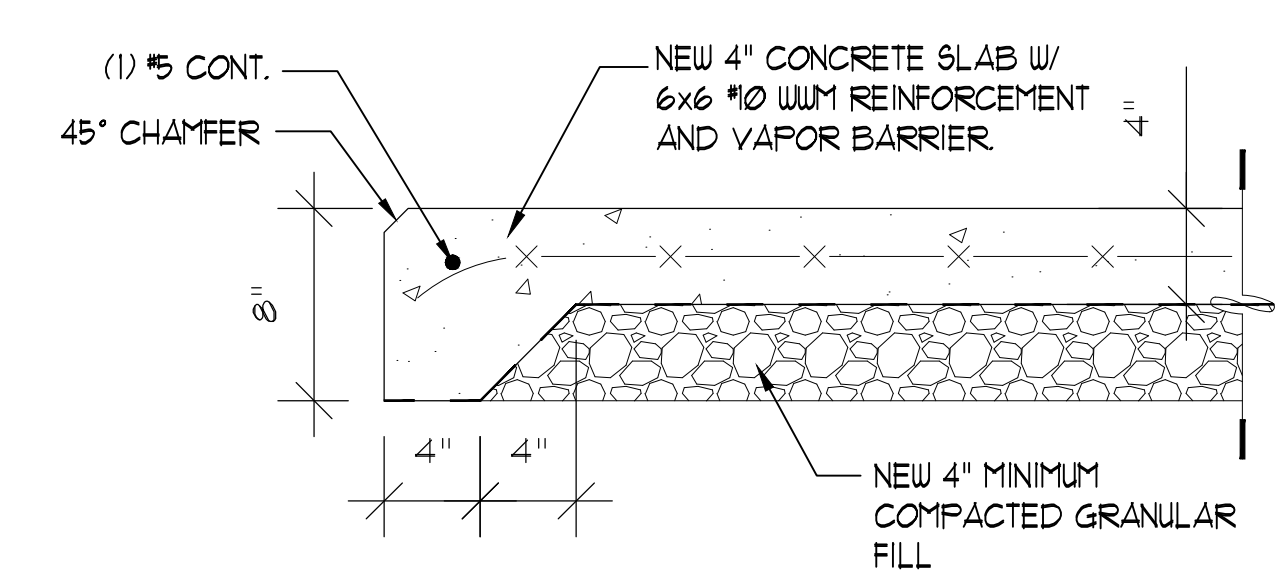
4
S-4 **SLAB JOINT AT NEW TO EXIST SLAB EDGE DETAIL**
SCALE: 1 1/2" = 1'-0"



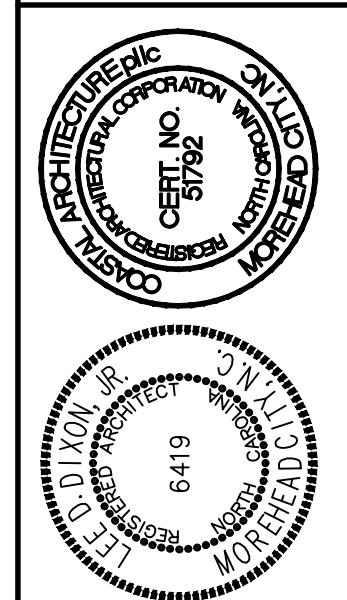
3
S-4 **NEW SLAB TO EXIST. EXTERIOR WALL DETAIL**
SCALE: 1 1/2" = 1'-0"



2
S-4 **NEW WALL FOOTING DETAIL**
SCALE: 1 1/2" = 1'-0"



1
S-4 **SLAB EDGE AT NEW STOOP DETAIL**
SCALE: 1 1/2" = 1'-0"



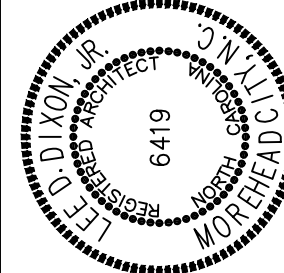
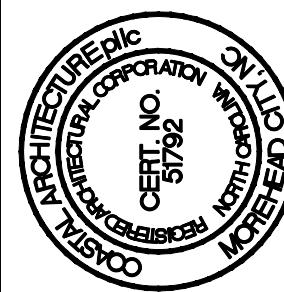
WALL FOOTING DETAILS

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S-4
OF



PILASTER FOOTING
DETAILS

21036

ISSUED: 01/25/23

DWG BY: TRA

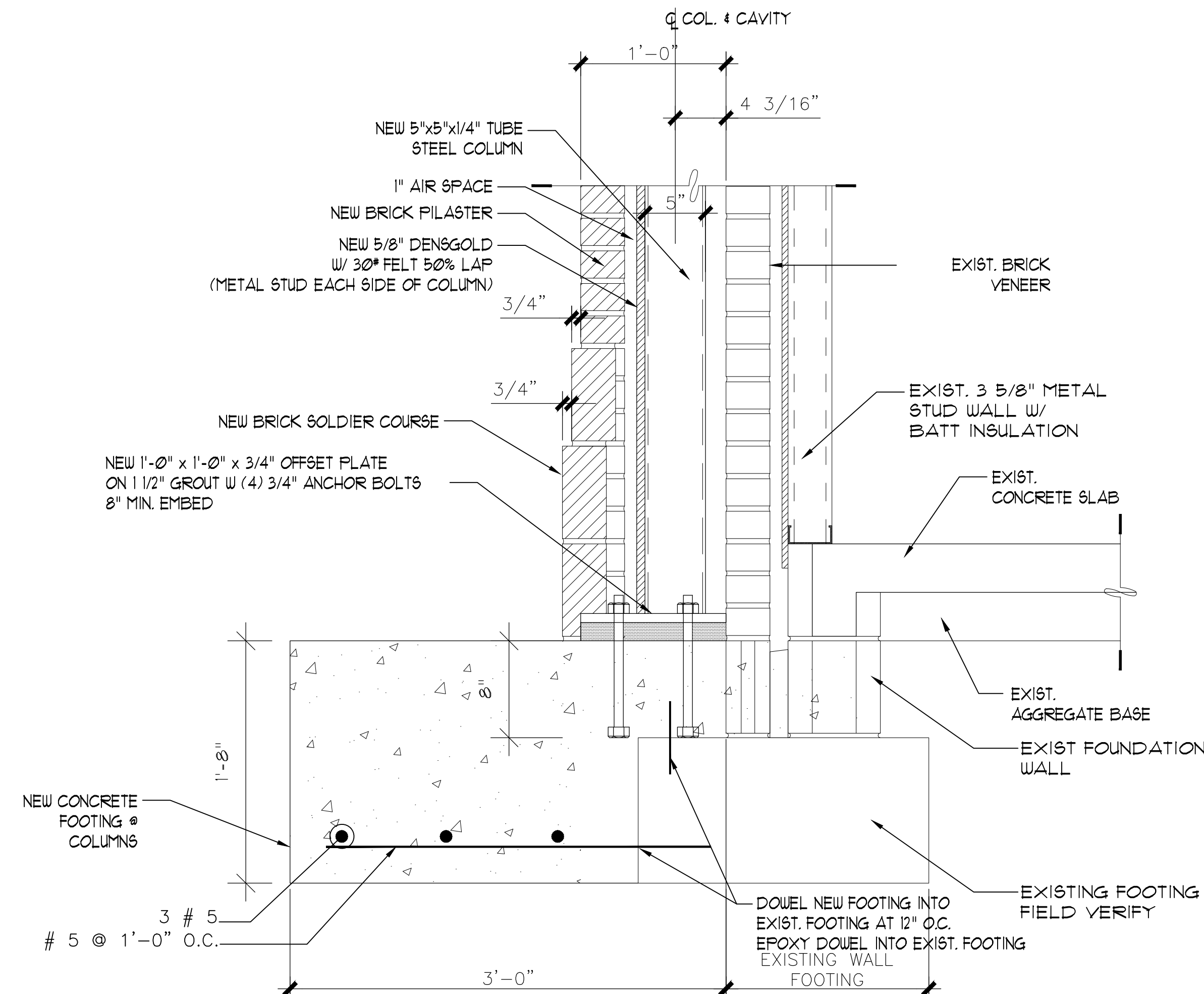
CKD BY: LDD

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SHEET NO.

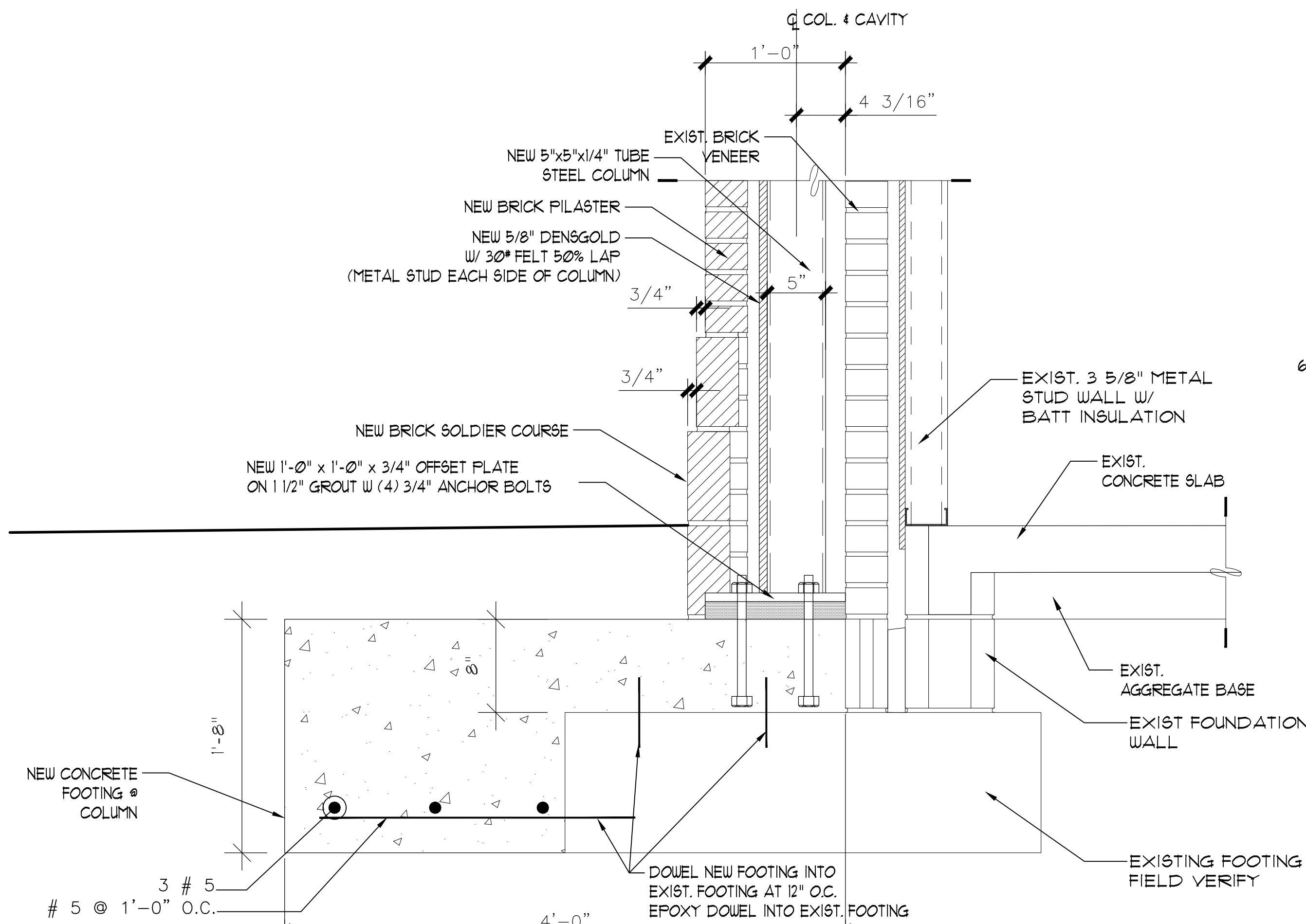
S-5

OF



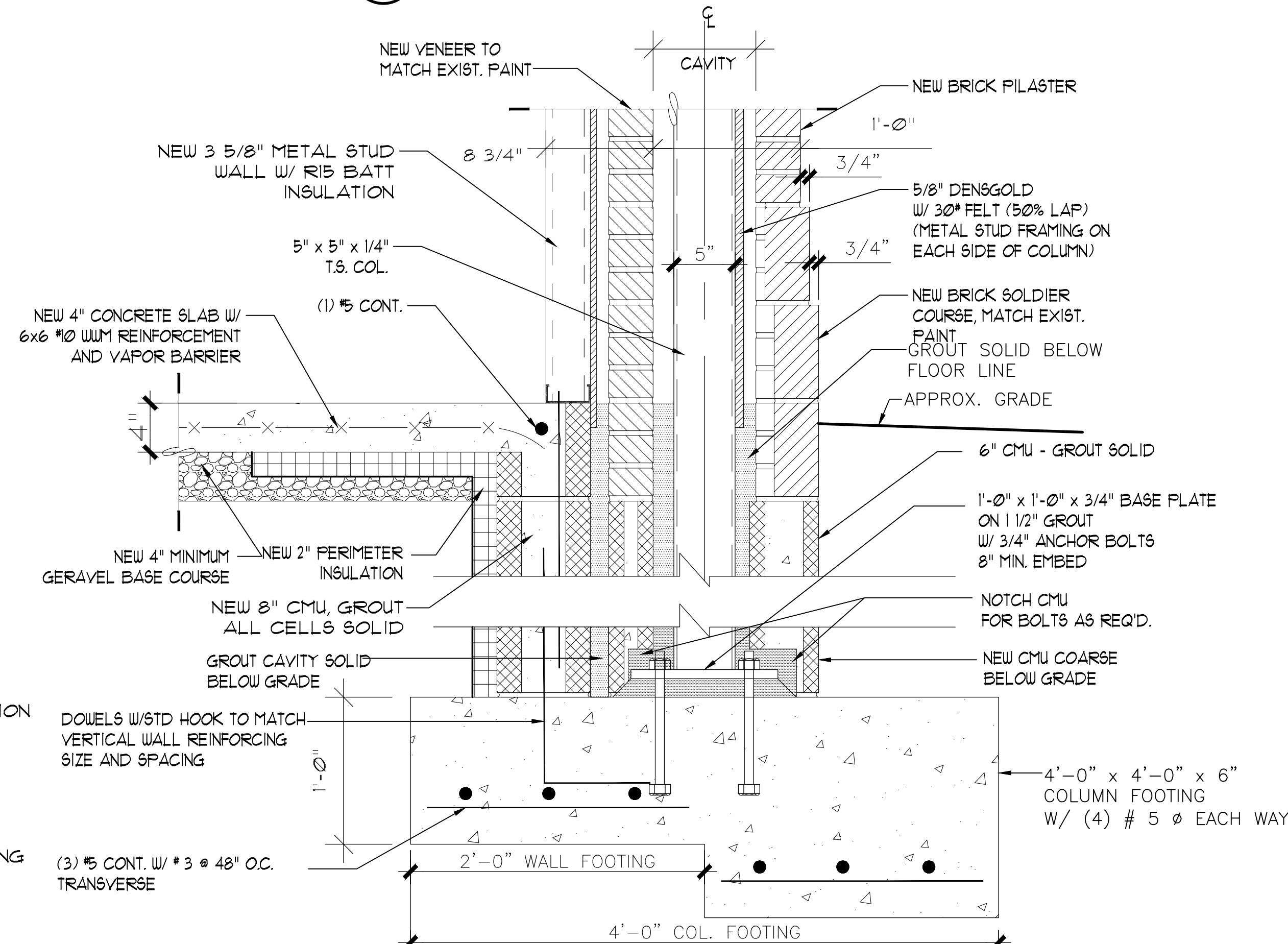
**PILASTER FOOTING DETAIL
AT EXIST. REAR WALL**

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



**PILASTER FOOTING DETAIL
AT EXIST. SIDE WALL**

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



**PILASTER FOOTING DETAIL
AT NEW WALL**

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

GENERAL NOTES:

- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
- ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD AND WITH ALL OTHER DRAWINGS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING (AND ACCOMPANYING FOOTINGS), AND GUTS OR TIEDOWNS.
- ADDITIONAL OBSERVATIONS AS A RESULT OF REJECTION OF WORK COMPLETED AND/OR ADDITIONAL OBSERVATIONS DUE TO THE DISCREPANCIES IN WORK OBSERVED WILL BE AT THE EXPENSE OF THE CONTRACTOR.
- ALL STRUCTURAL SHOP DRAWINGS TO BE REVIEWED BY JOB SUPERINTENDENT IN ADDITION TO ALL PERSONNEL DEEMED NECESSARY BY CONTRACTOR PRIOR TO SUBMITTAL TO ENGINEER FOR APPROVAL.
- ALL SHOP DRAWING RESUBMITTALS SHALL INCLUDE A WRITTEN DETAILED LIST OF LOCATIONS AND DESCRIPTIONS OF ALL CHANGES MADE FROM PREVIOUS SUBMITTAL. LIST SHALL BE SPECIFIC AND GENERAL NOTES SUCH AS 'DIMENSIONS CORRECTED' ARE NOT ACCEPTABLE.

DESIGN CODES:

CURRENT NC BUILDING CODE.

ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY.

AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS DESIGN.

DESIGN CRITERIA:

SEE G-2

COMPONENTS & CLADDING:

ALL BUILDING COMPONENTS AND CLADDING ENGINEERED BY THE COMPONENT MANUFACTURER ARE TO BE DESIGNED BY THE MANUFACTURER'S ENGINEER FOR WIND LOADS DETERMINED PER THE INTERNATIONAL BUILDING CODE FOR THE BASIC DESIGN WIND VELOCITY, IMPORTANCE FACTOR, AND EXPOSURE LISTED ABOVE.

FOUNDATION NOTES:

1. Foundation design is based on assumed 1,500psf.

2. Spread and continuous footings shall bear a minimum of 24 inches below lowest adjacent finished grade on properly compacted subgrades and select fill with a net allowable bearing capacity of 2,000 PSF.

3. Contractor shall provide for dewatering at excavations from either surface water or seepage.

4. Contractor shall provide adequate shoring to prevent cave-ins.

5. All foundation excavations and subgrade preparation shall be inspected by a representative of the Geotechnical Engineer prior to placement of reinforcing steel or concrete.

PLUMBING SLEEVES:

MINIMUM SLEEVE SPACING SHALL BE TWO DIAMETERS CENTER TO CENTER TO THE LARGER SLEEVE OR 4" CLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER. PRIOR TO CONSTRUCTION SLEEVE LOCATIONS AND SIZES SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

CHEMICAL ANCHORS:

SHALL BE A POLYMER INJECTION SYSTEM SUCH AS RAMSET "EPOCON", MOLLY "PARAMOUNT HYC", Sika "SKYDUR INJECTION SET", "ULTI-HIGH STRENGTH EPOXY", OR APPROVED EQUAL, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER'S REPRESENTATIVE.

PENETRATIONS:

NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE LOCATED ON THESE DRAWINGS WITHOUT PREVIOUS APPROVAL OF THE ENGINEER.

CONCRETE MIX DESIGN:

1. SHALL BE MIX DESIGNED BY A RECOGNIZED TESTING LABORATORY TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX:

3,500 psi – GRADE BEAMS, FOOTINGS, AND SLABS

2. SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. ALL SLABS SHALL BE CURED USING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE 1 AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. ALL SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY. CALCIUM CHLORIDES SHALL NOT BE UTILIZED. OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.

3. CONCRETE SHALL UTILIZE TYPE I/II CEMENT UNLESS OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER OR GEOTECHNICAL REPORT.

4. THE CONCRETE STRENGTHS SHOWN IN THE SECTION ABOVE AND IN THE SPECIFICATIONS ARE MINIMUM COMPRESSIVE STRENGTHS. THE ENGINEER SHALL DETERMINE IF THE CONCRETE IS ACCEPTABLE, OR TO BE REMOVED, OR TO RECEIVE SPECIAL CURING IF THE COMPRESSIVE STRENGTHS ARE LESS THAN SPECIFIED.

5. ALL CONCRETE EXPOSED TO WEATHER OR EARTH SHALL BE AIR ENTRAINED 5% TO 7%.

6. WATER REDUCING AGENTS MAY BE USED IN THE CONCRETE MIX. PLASTICIZERS AND SUPER-PLASTICIZERS MAY BE USED ONLY WHEN WRITTEN PERMISSION OF THE ENGINEER IS GIVEN.

7. NO SALTS OF ANY KIND MAY BE USED IN CONCRETE BEFORE OBTAINING THE ENGINEER'S WRITTEN PERMISSION FOR THEIR USE.

8. CONCRETE FOR TROWEL-FINISHED INTERIOR CONCRETE FLOORS SHALL NOT INCLUDE AN AIR-ENTRAINING ADMIXTURE; THE MAXIMUM AIR CONTENT IN THESE SLABS SHALL NOT EXCEED .3%.

CONCRETE AND REINFORCING PLACEMENT:

1. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 301 AND ACI 117 EXCEPT AS MODIFIED BELOW:

ACI 117 ITEM 4.3.1.1
ELEVATIONS OF SLABS-ON-GRADE: TOP OF SLAB ELEVATION SHALL BE WITHIN A 3/8" ENVELOPE EITHER SIDE OF THE THEORETICAL DESIGN SURFACE.

ACI 117 ITEM 4.5.7
FLOOR FINISH TOLERANCES AS MEASURED BY PLACING A FREESTANDING (UNWEIGED) 10 FT. STRAIGHTEDGE ANYWHERE ON THE SLAB AND ALLOWING IT TO REST UPON TWO HIGH SPOTS WITHIN 28 DAYS AFTER ALLOWING IT TO REST UPON TWO HIGH SPOTS WITHIN 28 DAYS AFTER STRAIGHTEDGE AND THE FLOOR SHALL NOT EXCEED 1/4".

2. ALL REINFORCING STEEL TO BE ASTM A615, GRADE 60 (#4 AND LARGER), EXCEPT WHERE NOTED OTHERWISE. REINFORCING SHALL NOT BE WELDED.

3. WELDED WIRE FABRIC TO CONFORM TO ASTM A185 AND SHALL BE FREE FROM OIL, SCALE AND RUST. PLACE WVF IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND THE SPECIFICATIONS. MINIMUM LAPS SHALL BE ONE SPACE PLUS 2".

4. ALL REINFORCING STEEL BARS TO BE DETAILED AND PLACED IN ACCORDANCE WITH THE LATEST ACI MANUALS.

5. LAP ALL REINFORCING SPLICES IN CONCRETE A MINIMUM OF 48 BAR DIAMETERS OR 24 INCHES, WHICHEVER IS GREATER, UNLESS NOTE OTHERWISE ON DRAWINGS (CLASS B SPLICE).

6. PROVIDE CORNER BARS OF SAME BAR DIAMETER AS SPECIFIED FOR THE WALL, BEAM OR FOOTING. PROVIDE MINIMUM OF 40 BAR DIAMETER LAP FOR ALL CORNER BARS, UNLESS NOTED OTHERWISE.

7. PROVIDE FOUNDATION DOWELS AS SHOWN. MINIMUM SIZE DOWELS TO BE #4, UNLESS OTHERWISE NOTED. ALL VERTICAL REINFORCING STEEL IN COLUMNS AND PIERIS, OR VERTICAL REINFORCING IN WALLS, SHALL BE TOWELED INTO THE FOOTINGS WITH SAME SIZE AND QUANTITY DOWEL AS THE VERTICAL REINFORCING.

8. WHERE SHOWN ON THE DRAWINGS, PROVIDE WELD PLATES, WELDMENTS, OR CONCRETE INSERTS FOR FASTENING AND SECURING OTHER COMPONENTS. CONCRETE INSERTS SHALL BE FURNISHED BY THE CONTRACTOR. REQUIRING THEM AND INSTALLED BY THE CONTRACTOR CASTING THE CONCRETE AROUND THEM. CLIP ANGLES SHALL BE FURNISHED BY THE CONTRACTOR. REQUIRING THEM.

9. REINFORCING STEEL SHALL RECEIVE CONCRETE COVER AS FOLLOWS:

DESCRIPTIONMINIMUM COVER
CAST AGAINST AND PERMANENTLY"0"
EXPOSED TO EARTH

EXPOSED TO EARTH OR WEATHER
#6 THROUGH #10 BARS"2"
#5 BARS OR SMALLER1 1/2"

NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH THE GROUND:
SLABS AND WALLS
#11 BARS OR SMALLER3/4"
#14 AND #161 1/2"

BEAMS AND COLUMNS1 1/2"

10. PROVIDE TWO (2) #6'S, ONE AT EACH FACE, UNLESS NOTED OTHERWISE, AROUND ALL OPENINGS NOT GREATER THAN 12"x12" IN CAST-IN-PLACE CONCRETE. EXTEND REINFORCING 2'-4" BEYOND OPENING IN BOTH DIRECTIONS. CONTACT ENGINEER FOR ALL OPENINGS GREATER THAN 12"x12" FOR DESIGN.

11. COLD WEATHER AND HOT WEATHER PROVISIONS OF ACI 306 AND 305 (CURRENT EDITIONS), RESPECTIVELY, SHALL BE MAINTAINED.

12. CONTRACTOR TO FURNISH AND INSTALL 500 LINEAR FT. EACH OF ADDITIONAL #4 & #5 REINFORCING STEEL TO BE USED AT ENGINEER'S DISCRETION.

FORMWORK AND SHORING:

NO STRUCTURAL CONCRETE SHALL BE STRIPPED UNTIL IT HAS REACHED AT LEAST TWO-THIRDS OF THE 28 DAY DESIGN STRENGTH. DESIGN, ERECTION AND REMOVAL OF ALL FORMWORK, SHORES AND RESOURCES SHALL MEET THE REQUIREMENTS SET FORTH IN ACI STANDARDS 301 AND 347.

ANCHOR RODS:

1. The building manufacturer shall be responsible for anchor rod size (i.e., diameter), spacing, and location.

2. All anchor rods shall be fabricated in accordance with ASTM F1554 grade 36, class 2A.

3. Anchor rod nuts shall conform to ASTM A563, heavy hex, grade A. All washers shall conform to ASTM F436, type I.

3. Anchor rods shall have a plain finish.

STRUCTURAL STEEL:

1. STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi) FOR ALL W-SHAPES, AND ASTM A36 (Fy=36 ksi) FOR ALL OTHER MISCELLANEOUS SHAPES AND PLATES. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B (Fy=46 ksi). STRUCTURAL PIPE SHALL CONFORM TO ASTM A53, GRADE B, TYPE "E" OR "S" (Fy=42 ksi).

2. STEEL SHALL CONFORM TO THE LATEST EDITION OF "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC. (AISC).

3. ALL STRUCTURAL STEEL EXPOSED TO EXTERIOR SHALL BE HOT-DIPPED GALVANIZED.

4. ALL SHOP CONNECTIONS TO BE WELDED (UTILIZING E70XX ELECTRODES) AND FIELD CONNECTIONS TO BE BOLTED, UNLESS OTHERWISE NOTED. STEEL TO RECEIVE ONE SHOP COAT AND ONE FIELD TOUCH UP COAT OF APPROVED PAINT, EXCEPT WHERE GALVANIZED IS INDICATED ON THE DRAWINGS.

5. WELDS FOR ALL EXPOSED STRUCTURAL STEEL SHALL BE GROUND SMOOTH, UNLESS NOTED OTHERWISE.

6. ALL BOLTED CONNECTIONS SHALL CONSIST OF 3/4" DIAMETER (MIN.) ASTM A325 HIGH STRENGTH BOLTS, UNLESS NOTED OTHERWISE.

MASONRY NOTES:

1. All concrete block units shall conform to ASTM C 90.

2. All concrete block above grade shall be light weight with a minimum ultimate compressive strength (F'm) of 1500 PSI.

3. Mortar shall conform with ASTM C 270, Type S, with a minimum compressive strength of 1800 PSI @ 28 days.

4. Grout shall be classified as fine grout and have a slump of nine (9) inches and a minimum compressive strength of 2500 PSI and shall conform to ASTM C 476. All blocks with vertical reinforcing shall be grouted full height. All bond beams shall be grouted full. The maximum grout pour height shall not exceed five (5) feet.

5. All top of walls shall have bond beams with two (2) #4's continuous unless noted otherwise. Install #4 corner bars at all bondbeam intersections and corners.

6. All concrete block wall intersections and corners shall be built integrally of use "3012" wall anchors by Duro-D-Wall (or equivalent) @ 16" o.c. vertical spacing.

TIMBER FRAMING NOTES:

1. Sawn timber members shall conform to the requirements of the American Institute of Timber Construction Standards, AITC 117 & A190.1, latest edition.

2. Sawn lumber shall be #2 K.D. spruce-pine-fir (SPF), moisture content 15 percent with the following allowable stresses for a 2x4:

F(b) = 975 psi, F(t) = 450 psi, F(c)(parallel to grain) = 1,150 psi
F(c)(perpendicular to grain) = 425 psi, F(v) = 135 psi,
E = 1,400,000 psi

3. N/A

4. All roof trusses (24" o.c.) shall be designed by the fabricator to support 10 PSF dead load on the top chord and 5 PSF dead load on the bottom chord plus 20 psf live load on the top chord, plus all other code loads which apply to the specific geographic region.

5. N/A

6. Truss fabricator shall be responsible for engineering all connections to load bearing walls.

7. Contractor shall provide additional bridging and bracing for truss chords and web members beyond what is shown as required by the truss fabricator's design, net uplift, and temporary bracing for during erection. The floor and roof systems are not stable until sheathing and permanent bracing is in place.

8. The truss fabricator shall submit calculations with shop drawings stamped by a professional engineer registered in the State of North Carolina to the Architect for review prior to fabrication of trusses. The shop drawings must include truss bracing drawings for both the roof and floor trusses.

9. Truss manufacturer shall design and provide truss hangers where trusses are supported by other trusses.

10. Plywood for roof decking shall conform to the requirements in DOC PS 1 or PS 2. Each panel shall be identified for grade and glue type by the trademarks of an approved testing and grading agency. Roof decking shall be 5/8 inch, 5-ply, C-D INT-APA with exterior glue, Exposure 1 (span index 48/24). Plyclips shall be used at all free edges, one at mid-point between all supports. Roof Zone 1/2/3 nailing for plywood roof sheathing shall be 8d nails at 4/4/6 inches on center along plywood edges respectively and 12 inches on center along intermediate members (Ref. ASCE 7-10 Components and Cladding).

11. All sawn lumber members in contact with concrete or masonry shall be pressure treated with a water borne treatment to a net retention of 0.3 PCF.

12. Fasten 3/4" Advantech floor decking to trusses with 10d nails or equivalent at 6 inches on center at panel edges and diaphragm boundaries and at 12 inches on center along intermediate members.



- Architectural Design
- Planning
- Interiors



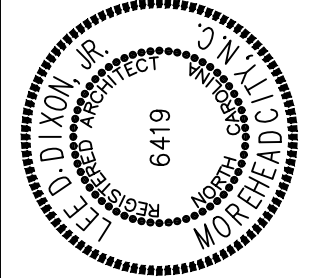
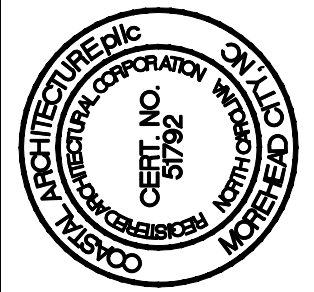
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ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA



STRUCTURAL NOTES

21036

ISSUED: 01/25/23

DWG BY: MES

CKD BY: LDD

REVISIONS

SHEET NO.

S-6
OF

DIVISION 15A – PLUMBING

1.1 DESCRIPTION OF THE WORK

- A. Work under this section includes, but is not necessarily limited to, furnishing and installing the following:
1. Plumbing fixtures, water heaters, and any other equipment necessary.
 2. Cold and hot water piping and insulation.
 3. DWV piping.
 4. Connection of all equipment; drain, vent, water.
- B. All work under this contract shall be installed in compliance with the latest edition of the following codes and standards insofar as they apply.
1. The National Electrical Code.
 2. 2018 N.C. Building Code: Plumbing, and all applicable category codes.
 3. American Society of Sanitary Engineering Standard 1010.
 4. All local codes and ordinances.
- C. These codes are minimum standards. If codes require a more stringent method of construction than the specifications require, the codes shall govern.
- D. The Plumbing Contractor shall be licensed in the State of North Carolina and have all local licenses required for the work.
- E. Obtain all permits, licenses, inspections, etc., required for the work, and pay for the same.
- 1.2 INTENT
- A. The Intent of these specifications and accompanying drawings is to convey as reasonably as possible the requirements for a complete job ready for the building to operate. The Plumbing Contractor shall take this into consideration and include in his base bid allowance for contingencies as will allow him to provide minor pieces of equipment and labor not specifically indicated but required for the job to operate properly, at no additional cost to the Owner. The PC shall determine and coordinate with existing conditions.
- 1.3 COORDINATION
- A. Coordinate work with other contractors. Notify Architect of apparent conflicts early to expedite construction. If structural damage appears imminent, stop work and notify Architect for a decision before resuming operations.
- B. Locations shown are approximate. The Plumbing Contractor shall refer to the architectural drawings for placement of equipment, fixtures, etc. Where locations are not clear, the Contractor shall obtain the exact locations from the Architect.
- C. Coordinate all exterior piping connections w/Architect, site contractor/plans. Verify manhole elevations and provide backwater valves as required if flood level rims are below next upstream manhole cover elevation. Fixtures with flood level rims above upstream manhole shall not discharge thru bw valve. Notify engineer of backwater valve requirement, any issue prior to bid.
- 1.4 SHOP DRAWINGS
- A. Shop drawings shall be submitted for plumbing fixtures and for pipe. These may consist of the manufacturer's standard catalog or tear sheets and shall have the exact items being offered clearly identified.

PART 2 – PRODUCTS

2.1 FIXTURES

- A. Each fixture shall be properly supported from the building structure as required to the end effect that all fixtures and accessories will be held rigidly in place. Water pipes supplying the fixtures must also be held rigidly in place.
- B. Provide loose key angle stops and chrome plated supply pipe water supplies to fixtures.
- C. All exposed piping traps and accessories for fixtures shall be chrome plated. Provide chrome plated escutcheon plates where pipes enter walls.
- D. Provide shutoff valves for all sinks, water heaters, toilets, washing machines, refrigerator icemaker, exterior hose bibbs and all other plumbing fixtures.
- E. Provide trap primers for all floor drains in areas not served by hose bibbs.

2.2 PIPING

- A. Drain-Waste-Vent: All DWV piping shall be Schedule 40 PVC-DWV u.o.n., with the following exceptions: Use cast iron piping in all return air plenums, penetrations of rated walls/floors/ceilings, and in areas/walls adjacent to cooking equipment exhaust hoods. Review Arch. and Mech. drawings. ABS or cast iron piping shall be used for drainage/discharge with a temperature greater than 140 deg. F for a minimum distance of 10'-0".
- B. Hot and cold water piping above grade: Type "L" copper w/solder joints (ASTM-B88), hard drawn with wrought copper fittings (ANSI B16.22). PEX piping with copper fittings may be used with owner/tenant approval and as allowed per code. Copper piping shall be used in areas/walls adjacent to cooking equipment exhaust hoods. Review Arch. and Mech. drawings.
- C. Cold water piping below grade: Type "K" copper (ASTM-B8A) soft drawn.
- D. Hangers: Use pipe hangers where required on 8-foot centers with saddles to avoid crushing insulation.
- E. Solder: 95/5. Lead free.
- F. Unions: Provide unions where indicated on drawings, in long runs of piping (except drainage) and at equipment to provide convenient disassembly. Provide dielectric unions when connecting copper tubing to equipment and piping made of ferrous materials.

2.3 CLEANOUTS

- A. Hex plugs in rough areas: Recessed plugs with cover plates in exposed locations.

2.4 SHOCK ARRESTERS

- A. Provide shock arresters as required by codes, manufacturer's recommendations and accepted industry standards for quality construction. Provide for all quick closing valves.

PART 3 – EXECUTION

3.1 CONNECTIONS

- A. This contract includes complete connection of cold water, hot water, drainage, and vent piping as required. All fittings, valves, accessories, cutoffs, drains, etc., required to complete such connections shall be included.
- B. The connection to water closets shall be made watertight with gasket and wax ring. Floor flanges shall be caulked into position. Plastic caps shall be provided on the tie down bolts, and shall be secured in place by screwing down on threaded brass washers.
- C. Where water pipes connect to exposed chrome plated trim, use proper chrome plated escutcheons.

3.2 SERVICE ACCESS

- A. All valves and accessories shall be insulated so that they can be properly serviced. In no case shall the Plumbing Contractor install equipment or other components in situations that do not meet code requirements or manufacturer's requirements. Provide access doors as required to access valves, etc.

3.3 ROUTING OF PIPING

- A. Coordinate routing of piping with others, line up work true to or at right angle to adjacent surfaces and in a workmanlike manner. Support all interior piping from building structure by means of hanger or inserts to maintain pitch of lines, to prevent vibration, and to secure piping place.

- C. Pipe hangers for insulated lines shall have suitable saddles to protect insulation.
- 3.4 INSULATION
- A. All H/W and C/W piping shall be insulated with a min. of 1" inch elastomeric insulation (R=6.5 min.) in unconditioned areas. See NCSBC-Plumbing Sect. 305 for all protection requirements. All H/W piping of circulating systems shall be insulated with 1" insulation per Sect. C404.4 of the NCSBC 2018 Energy Conservation Code.
- B. Provide pre-fabricated insulation kits for all sink and lavatory exposed drain and supply piping.

3.5 INSPECTIONS AND TESTS

- A. Before being concealed, all water, soil and vent piping shall be tested to determine if they are water- and air-tight.
- B. Prior to placing into service, entire system shall be tested for leaks in strict accordance with state and local codes.

3.6 STERILIZATION OF PIPING

- A. Sterilize the new water piping thoroughly with a solution containing not less than 50 parts per million of available chlorine, using liquid chlorine, or sodium hydrochloride solution, introduced into the system in an approved manner. The sterilizing solution shall remain in the system for a period of 24 hours. After sterilization, flush the solution from the system with clean water until the residual chlorine content is not greater than 0.2 parts per million, unless otherwise directed.

3.7 SERVICE PRESSURE

- A. Provide approved water-pressure reducing valve (PRV) if service pressure exceeds 80 psi to reduce pressure to 80 psi static or less and as required per NCSBC-Plumbing Sect. 604.8.

3.8 DRAINDOWN

- A. Contractor to provide for complete plumbing system drain down.
- 3.9 CLEAN UP
- A. During construction, keep the site clear of debris and upon completion, and before final inspection, clean up the premises to remove all evidence of his work. In addition, upon completion of construction, clean, wash, and/or polish all fixtures, equipment and exposed material and leave them bright and clean.

3.10 GUARANTEES

- A. Guarantee all materials and labor included in the plumbing work for a period of one year from date of final acceptance by the Owner.
- B. Any defects in the system which become evident during the guarantee period shall be corrected without cost to the Owner. This shall include the replacing of defective materials where required, and the repair of damage caused by leaking pipes, etc., and damage to building surfaces caused in making repairs.

GENERAL NOTES – PLUMBING

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE CODE, ALL LOCAL AND OTHER APPLICABLE CODES.
2. ALL WORK SHALL BE PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN. THE PLUMBING CONTRACTOR (PC) SHALL COORDINATE ALL OF HIS WORK WITH THE GENERAL CONTRACTOR (GC).
3. THE PLUMBING PLANS AND SPECIFICATIONS SHALL BE THOROUGHLY REVIEWED PRIOR TO PURCHASING MATERIALS AND INSTALLATION AND ALL DISCREPANCIES OR INTERFERENCES BROUGHT TO THE ENGINEERS ATTENTION.
4. THESE PLANS ARE DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS. THE PC SHALL PROVIDE ALL MISC. ITEMS NEEDED FOR A COMPLETE SYSTEM REGARDLESS IF NOTED ON THE DRAWINGS OR NOT. FOR DIMENSIONS REFER TO ARCHITECTURAL PLANS.
5. THE GC SHALL PROVIDE ALL WALL, FLOOR AND ROOF OPENINGS OF THE SIZE AND LOCATION REQUIRED BY THE PC AND SHALL BE RESPONSIBLE FOR PAINTING AND FLOOR FINISHES. THE PC SHALL PROPERLY SEAL ALL PENETRATIONS AND PROVIDE ESCUTCHEON PLATES AT ALL FINISHED LOCATIONS.
6. ALL NEW WATER PIPING SHALL BE INSTALLED TIGHT TO STRUCTURE, ADEQUATELY SUPPORTED AND PROTECTED AND PROPERLY PITCHED TO ALLOW TOTAL DRAINAGE.
7. ALL WATER PIPING SHALL BE HYDROSTATICALLY TESTED FOR A MINIMUM OF 15 MINUTES AT A MINIMUM OF 100 PSIG BEFORE COVERING AND ALL LEAKS CORRECTED. THE ENTIRE WATER DISTRIBUTION SYSTEM SHALL BE DISINFECTED PRIOR TO PLACING IN SERVICE.
8. PROVIDE MIN. 18" SHOCK ABSORBERS WITH STOPS ON ALL HOT AND COLD WATER FIXTURE RUNS AS REQUIRED BY CODE.
9. VENT LINES SHALL SLOPE UP TO ALL STACKS AND TERMINATE A MIN. OF 12" ABOVE ROOF LINE.
10. PROVIDE CUT SHEETS ON ALL PLUMBING/GAS FIXTURES FOR ARCHITECT AND OWNER APPROVAL PRIOR TO ORDERING ANY FIXTURES.
11. PROVIDE/VERIFY HOT WATER TO LAVATORIES AT 110 DEGREES (MAX) F. PROVIDE (ASSE 1070) THERMOSTATIC MIXING VALVE (WATTS FLUSH-B 'LEAD FREE' GUARDIAN OR EQUAL) IF REQUIRED. LOCATE MIXING VALVE IN A MAINTENANCE ACCESSIBLE AREA BELOW FIXTURE, ABOVE CEILING, OR AS REQUIRED.
12. PROVIDE CLEANOUTS AS REQUIRED BY CODE. NOT MORE THAN 100 FEET FOR 4" DRAIN.

SYMBOL LEGEND – PLUMBING

SYMBOL	DESCRIPTION (U.O.N.)
	SANITARY WASTE PIPING (W)
	VENT PIPING (V)
	COLD WATER PIPING (CW)
	HOT WATER PIPING (HW)
	CLEANOUT FINISH FLOOR
	WCO/HCO
	CLEANOUT FINISH GRADE
	DIELECTRIC UNION
	SHUT-OFF VALVE
	VENT THRU ROOF (VTR)
A.A.V.	AIR ADMITTANCE VALVE
A.F.F.	ABOVE FINISHED FLOOR
U.O.N.	UNLESS OTHERWISE NOTED

FIXTURE SCHEDULE – PLUMBING *

LAV * LAVATORY (WALL MOUNT)

KOHLER CHESAPEAKE LAVATORY, K-1728, VITREOUS CHINA, 4" CENTERS, ADA COMPLIANT. PROVIDE DELTA MODEL 523LF-HGMHDF FAUCET, 0.5 GPM MAX WITH GRID STRAINER. PROVIDE P-TRAP AND SHUT-OFF VALVES.

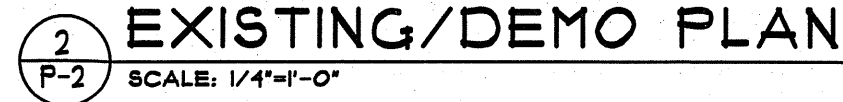
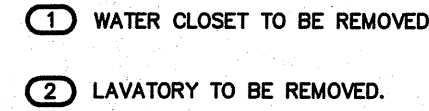
WC * WATER CLOSET (ADA FLUSH TANK)

KOHLER HIGHLINE WATER CLOSET, K-3979, ADA COMPLIANT 1.6 GPF. PROVIDE PROPER OPEN FRONT ADA SEAT, K-7837 SUPPLY AND STOP, WAX SEAL, CLOSET BOLT KIT. PROVIDE MODEL WITH FLUSH CONTROL ON SIDE OPPOSITE GRAB BAR.

* OR APPROVED EQUAL. SUBMIT ALL ITEMS FOR APPROVAL BY TENANT AND ARCHITECT PRIOR TO ORDERING.
ALL OTHER PLUMBING FIXTURES SHOWN ARE PROVIDED BY THE TENANT AND INSTALLED BY THE PLUMBING CONTRACTOR. SEE PLANS FOR NUMBER AND LOCATION. COORDINATE ALL REQUIREMENTS WITH EQUIPMENT SERVED.

ENGINEER

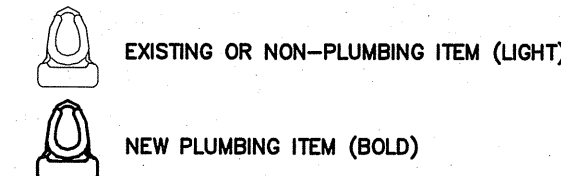
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(VERIFY ALL EQUIPMENT REQUIREMENTS PRIOR TO ROUGH-IN)

PIPE SIZING SCHEDULE				
FIXTURE TYPE	DRAIN	VENT	CW	HW
(LAV) LAVATORY	1 1/2"	1 1/4"	1/2"	1/2"
(WC) FLUSH TANK WATER CLOSET	3"	1 1/2"	1/2"	-

REPRESENTATIVE SIZES ARE GIVEN FOR EACH TYPE OF FIXTURE
SEE PIPE SIZING SCHEDULE.
MINIMUM 2" DRAIN LINE SIZE UNDER SLAB.
MAINTAIN PIPE SIZES SHOWN UNTIL LARGER SIZE IS REACHED.
PIPE SIZES ARE MINIMUMS FOR INDIVIDUAL FIXTURES U.O.N.



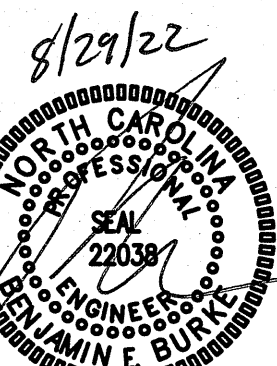
- KEY NOTES FOR DRAWING 1/7-2
1. CONNECT T/O TO EXISTING CW IN AREA OF REMOVED UNIT. EXTEND/PROVIDE PIPING AS REQUIRED. VERIFY EXISTING LINE SIZE REQUIRED PER PIPE SIZING SCHEDULE—THIS SHEET. VERIFY FUTURE SUPPLY TO NEAREST EXISTING CW MAIN IF NECESSARY/AS REQUIRED.
 2. CONNECT LAV TO EXISTING HW/CW IN AREA OF REMOVED UNIT. EXTEND/PROVIDE PIPING AS REQUIRED. VERIFY EXISTING LINE SIZE REQUIRED PER PIPE SIZING SCHEDULE—THIS SHEET. VERIFY FUTURE SUPPLY TO NEAREST EXISTING HW/CW MAINS IF NECESSARY/AS REQUIRED.
 3. CONNECT FIXTURE TO EXISTING DWV IN AREA OF REMOVED UNIT. EXTEND/PROVIDE PIPING AS REQUIRED. VERIFY EXISTING LINE SIZES REQUIRED PER PIPE SIZING SCHEDULE—THIS SHEET. RE-PIPE FIXTURE TO EXISTING MAINS IF NECESSARY/AS REQUIRED.
 4. CONNECT FIXTURE TO EXISTING DWV IN AREA OF REMOVED UNIT. EXTEND/PROVIDE PIPING FOR NEW TOILET FLANG LOCATION AS REQUIRED. VERIFY EXISTING LINE SIZES REQUIRED PER PIPE SIZING SCHEDULE. RE-PIPE FIXTURE TO EXISTING MAINS IF NECESSARY/AS REQUIRED.

REMOVE UNUSED VENT LINES TO ABOVE CEILING AND CAP AT MAIN. REMOVE UNUSED DRAIN STUB-
OUTS AND PROVIDE CLEANOUTS AT FINAL FINISHES TO PREVENT DEAD-ENDS AS REQUIRED BY CODE.

COORDINATE WORK WITH BUILDING OWNER SO AS NOT TO IMPACT OPERATION OF ANY ADJACENT
SPACES/LEVELS. NIGHT AND WEEKEND WORK MAY BE REQUIRED.



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HVAC EQUIPMENT SCHEDULE	
HVAC SYSTEM #1	
AHU-1 DIRECT EXPANSION FAN COIL UNIT	CARRIER MODEL #FX4DNB031, 4 WAY, MULTIPOISE FAN COIL UNIT, 3.8 KW HEATER, NOMINAL CAPACITY = 30,000 BTUH, 1000 CFM NOMINAL, PROVIDE HARD SHUT-OFF TXV VALVE, 2.5 TON NOMINAL, PROVIDE PROGRAMMABLE THERMOSTAT AND FILTER RACK WITH HINGED DOOR, 1/2 HP, 4.1A MOTOR FLA, 18 A HEAT FLA, 208V, 1 PH, 26A MCA, 30A MOCF AHU & HEAT.
HP-1 OUTDOOR HEAT PUMP UNIT	CARRIER MODEL #25HC0530A0030, 2.5 TON OUTDOOR HEAT PUMP UNIT, 15 SEER, PROVIDE CYCLE PROTECTOR, LOW PRESSURE SWITCH, CRANKCASE HEATER, 208 VOLT, 1 PHASE, COMP 14.1A RLA, FAN 1.2A FLA, OUTDOOR HEAT PUMP 18.1A MCA, 30A MOCF.

* OR APPROVED EQUAL

AHU CONTROL NOTE: PROVIDE FOR NEW SYSTEM (AHU-1/HP-1) AND EXISTING HEAT PUMP SYSTEM.

FOR EACH SYSTEM PROVIDE "SIMPLE ENGINEERED SOLUTIONS" MODEL #PDM-XX HEAT PUMP DEHUMIDIFICATION CONTROL MODULE. PROVIDE PROGRAMMABLE ELECTRONIC THERMOSTAT WITH AUTO CHANGEOVER AND HUMIDISTAT FUNCTION. THERMOSTAT SHALL BE COMPATIBLE WITH DEHUMIDIFICATION CONTROL MODULE. PURPOSE OF DEHUMIDIFICATION CONTROL MODULE IS TO INITIATE COOLING MODE WHEN HUMIDISTAT SENSES HUMIDITY OVER SETPOINT AND ENERGIZE AND CONTROL ELECTRIC HEAT TO MAINTAIN SPACE TEMPERATURE. CONTACT SIMPLE ENGINEERED SOLUTIONS FOR INFORMATION ON DEHUMIDIFICATION CONTROL MODULE: (910) 231-9929, email: jnaugge@yahoo.com.

EXHAUST FAN SCHEDULE	
EXHAUST FAN #1 (EF-1)	CARNES MODEL# VCD0010C EXHAUST FAN, 93 CFM @ 1/4" SP, 640 RPM, 1.1 AMPS, 120V, THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE SWITCH AND WIRE THE UNIT. THE HVAC CONTRACTOR SHALL PROVIDE UNIT, 8" RIGID DUCT TO WALL CAP. LOCATE EXHAUST TERMINATION A MINIMUM OF 10'-0" FROM ANY INTAKES.

* OR APPROVED EQUAL

NOTE: RUN EXHAUST DUCTS HORIZONTALLY AS REQUIRED TO MAINTAIN 10'-0" MINIMUM SEPARATION FROM ANY INTAKES.

AIR DISTRIBUTION SCHEDULE							
MARK	* MANUFACTURER	MODEL NO.	NECK SIZE	FACE SIZE	MATERIAL	SERVICE	NOTES
A	CARNES	SPAB224	SEE FLEXIBLE DUCT SCHEDULE	24" X 24"	STEEL	SUPPLY	LAY-IN CEILING, WHITE 4-WAY BLOW
B	CARNES	RTDBH	9" X 4"	11" X 6"	STEEL	SUPPLY	DUCT MOUNTED WHITE
C	CARNES	SPAB114	SEE FLEXIBLE DUCT SCHEDULE	12" X 24"	STEEL	SUPPLY	LAY-IN CEILING, WHITE 4-WAY BLOW
EX	EXISTING	NA	VARIES	EXISTING	STEEL	SUPPLY	EXISTING SUPPLY DIFFUSER
RA	CARNES	SPRB22	SEE FLEXIBLE DUCT SCHEDULE	24" X 24"	STEEL	RETURN	LAY-IN CEILING, WHITE
RB	CARNES	RSABH	12" X 12"	14" X 14"	STEEL	RETURN	WHITE, SIDEWALL MOUNTED

* OR APPROVED EQUAL

GENERAL NOTES – MECHANICAL

- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE CODE AND ALL LOCAL AND OTHER APPLICABLE CODES.
- ANY PERMITS AND INSPECTION FEES SHALL BE SECURED AND PAID FOR BY THE MECHANICAL CONTRACTOR (MC).
- ALL WORK SHALL BE PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN. THE MC SHALL COORDINATE ALL OF HIS WORK WITH THE GENERAL CONTRACTOR (GC) AND OTHER TRADES.
- THE LOCATION OF ALL DUCT, PIPING AND EQUIPMENT SHALL BE ADJUSTED TO ACCOMMODATE ANTICIPATED OR ENCOUNTERED INTERFERENCES.
- THESE PLANS ARE DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS. FOR DIMENSIONS REFER TO THE ARCHITECTURAL PLANS.
- THE MC SHALL BE RESPONSIBLE FOR ALL ELECTRICAL STARTERS INTERLOCKS, CONTROL WIRING CONDUIT AND POWER WIRING FROM DISCONNECTS TO HIS EQUIPMENT, USING A LICENSED ELECTRICIAN.
- THE MC SHALL USE FIRE DAMPERS FOR PROTECTION OF THE OPENING IN ACCORDANCE WITH STATE AND LOCAL CODES IN ALL LOCATIONS WHERE PENETRATIONS OF RATED WALLS AND FLOORS OCCUR. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS. PROVIDE ACCESS DOORS AT ALL DAMPER LOCATIONS. LOCATE DOORS FOR EASY ACCESS.
- INSTALL FLEXIBLE CONNECTORS ON SUPPLY AND RETURN DUCTWORK AHU. ALL MECHANICAL EQUIPMENT SHALL OPERATE FREE OF OBJECTIONAL NOISE AND VIBRATION.
- INSTALL TURNING VANES IN SUPPLY DUCTS AT ALL ELBOWS AND SPLITTER DAMPERS. PROVIDE BALANCING DAMPERS IN ALL DUCTS WHERE SHOWN OR REQUIRED FOR SYSTEM BALANCING.
- DUCT DIMENSIONS ARE SHOWN INSIDE CLEAR.
- THE MC SHALL KEEP THE PREMISES CLEAR OF DEBRIS FROM HIS WORK DURING CONSTRUCTION AND LEAVE THE AREA AND BUILDING CLEAN AT THE COMPLETION OF HIS WORK. HE SHALL ALSO LEAVE CLEAN ALL EXPOSED EQUIPMENT IN HIS CONTRACT.
- PROVIDE ALL REQUIRED ROOF PENETRATIONS FOR THE INSTALLATION OF THE NEW EQUIPMENT. ALL FLASHINGS ARE BY THE MECHANICAL CONTRACTOR. ALL ROOFING WORK SHALL BE DONE BY A LICENSED ROOFING CONTRACTOR SO AS TO MAINTAIN ORIGINAL WARRANTY.
- THE M.C. SHALL COORDINATE WITH AND PROVIDE EQUIPMENT SPEC. SHEETS TO THE GENERAL AND ELECTRICAL CONTRACTORS FOR REVIEW PRIOR TO ORDERING EQUIPMENT.
- PROPERLY SUPPORT ALL DUCT WORK, AND EQUIP FROM STRUCTURE. PROVIDE ALL STRUCTURAL SUPPORTS FOR THE LOADS AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.

OA SCHEDULE									OUTDOOR VENTILATION AIR PROVIDED PER TABLE 403.3 NCSBC MECHANICAL CODE.	
APPLICATION	SQUARE FOOTAGE (SF)	AREA OUTDOOR AIR FLOW RATE (CFM/SF)	PEOPLE OUTDOOR AIR FLOW RATE (CFM/PERSON)	OCCUPANCY DENSITY RATE (# PEOPLE/ 1000SF)	OCCUPANCY (# PEOPLE)	AREA OUTDOOR AIR FLOW (CFM)	PEOPLE OUTDOOR AIR FLOW (CFM)	TOTAL (CFM)		
OFFICE	83	0.08	5	5	1	5	5	10		
STORAGE	569	0.12	—	—	—	68	—	68		
SHOW ROOM / SALES **	1800	0.12	7.5	15	27	216	203	419		
TOTAL REQUIRED								497		
OUTDOOR AIR PROVIDED FROM EACH HVAC UNIT *										
HVAC UNIT OUTDOOR AIR (CFM)										
AHU-EX (EXISTING)						300 - 10" DIA. O.A. DUCT				
AHU-1						200 - 8" DIA. O.A. DUCT				
TOTAL PROVIDED						500				
APPLICATION						CFM				
TOILETS						70 CFM/FLUSHING FIXTURE				
1 FLUSHING FIXTURE X 70 CFM = 70 CFM										
EXHAUST PROVIDED BY ONE EXISTING EXHAUST FAN, MAKE UP AIR BY TRANSFER AIR										

* SET OUTDOOR AIR DAMPER CONTROLS TO PROVIDE OUTDOOR AIR AS INDICATED IN THIS SCHEDULE.

** NET OCCUPIABLE FLOOR AREA (GROSS AREA - PERMANENT SHELVING).

FLEXIBLE DUCTWORK SIZES		
MAXIMUM CFM'S		
SIZES	SUPPLY	RETURN
6"	100	100
8"	175	175
10"	250	250
12"	400	350
14"	550	500
16"	NA	900

(CHANGE OUT EXISTING FLEX DUCTS AND COLLARS AS REQUIRED TO GET NEW CFM'S SHOWN)

FLEXIBLE DUCTWORK NOTES

- INSTALL FLEXIBLE DUCTWORK RUNS AS STRAIGHT AS POSSIBLE.
- DO NOT ALLOW FLEXIBLE DUCT TO SAG BETWEEN SUPPORTS.
- DO NOT STRETCH A SHORT SECTION TO FIT A SLIGHTLY LONGER SECTION. THIS DISTORTS THE DUCT SHAPE AND IMPEDES AIR FLOW.
- DO NOT CRUSH DUCTWORK TO FIT IN A SPACE SMALLER THAN ITS ORIGINAL OUTSIDE DIAMETER. MAXIMUM ALLOWABLE DEFORMATION IS 15% OF ORIGINAL VOLUME.
- USE RIGID 90 DEGREE ELBOWS AT ANY LOCATION WHERE THE DUCTWORK BECOMES DISTORTED.
- EXTREME CARE SHALL BE TAKEN TO ELIMINATE ANY REDUCTION IN FLOW WITHIN THE FLEXIBLE DUCTS. THE MECH. CONTRACTOR WILL BE REQUIRED TO REPLACE THE FLEXIBLE DUCT WITH RIGID IF PROPER FLOW IS NOT OBTAINED.
- SIZE ALL FLEXIBLE DUCT SO AS NOT TO EXCEED MAXIMUM CFM'S GIVEN IN TABLE.

LEGEND – MECHANICAL

	RECTANGULAR DUCTWORK, INSIDE CLEAR DIMENSION INDICATED (WIDTH X HEIGHT)
	FLEXIBLE DUCTWORK
	DUCT MOUNTED RETURN AIR GRILLE
	DUCT MOUNTED SUPPLY AIR DIFFUSER
	SUPPLY DIFFUSER
	RETURN GRILLE
	WALL MOUNTED THERMOSTAT (UNIT SERVED IS INDICATED)
	GRILLE TYPE MIN. CFM
	CONDENSATE PIPING
	REFRIGERANT PIPING

APPENDIX B

2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)
MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEM AND EQUIPMENT

Thermal Zone	
winter dry bulb	23F
summer dry bulb	93F

Interior Design Conditions

winter dry bulb	72F
summer dry bulb	75F
relative humidity	50%

Building Heating Load (Tenant space only)	47,000 BTU/hr
--	---------------

Building Cooling Load (Tenant space only)	64,300 BTU/hr
--	---------------

Mechanical Spacing Conditioning System

Unitary – The tenant space is served the following systems:
(1) Existing 5 Ton split system heat pump unit
(1) New 2.5 Ton split system heat pump unit

Boiler – Not applicable to this project.

Chiller – Not applicable to this project.

Equipment efficiencies

Efficiencies and outputs are listed on equipment schedules – See drawings.

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Coastal
Architecture
P.L.L.C.

Architectural
Design
Planning
Interiors

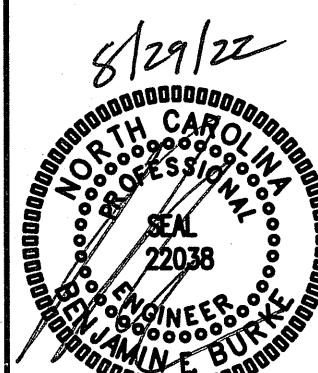


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ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA



HVAC SCHEDULES

21036

ISSUED: 8/22/2022

DWG BY: CLS

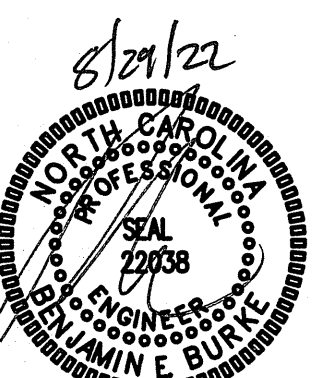
CKD BY: BEB

REVISIONS

SHEET NO.

M-1

ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA



EXISTING HVAC PLAN

21036

ISSUED: 8/22/2022

DWG BY: CLS

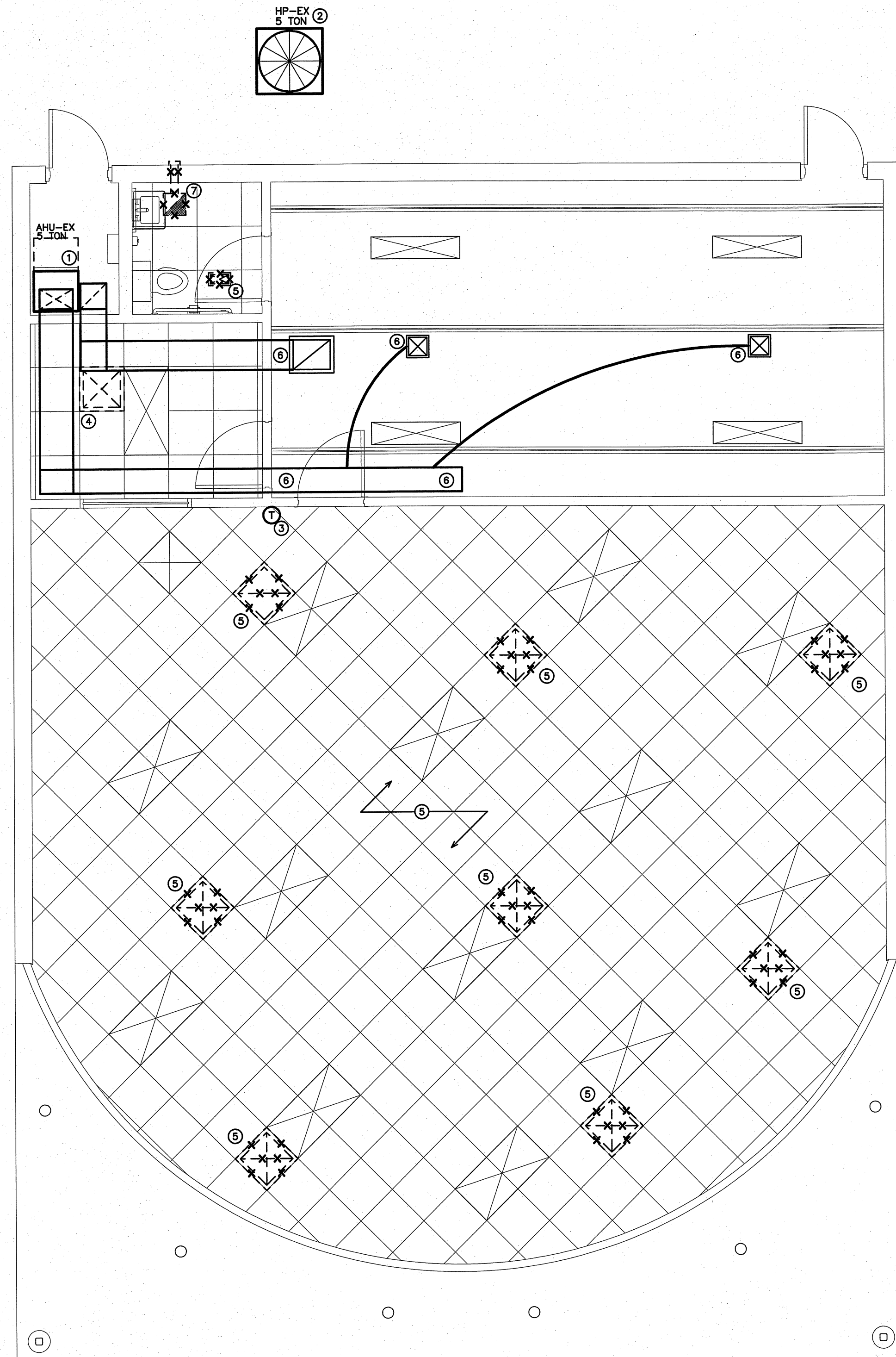
CKD BY: LDD

REVISIONS

SHEET NO.

M-2

NOTE:
THE INFORMATION SHOWN ON THIS DRAWING IS FROM FIELD INVESTIGATION. THE CONTRACTOR
IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION.
THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER
OF ANY DISCREPANCIES NOTED.



1 EXISTING HVAC PLAN
SCALE 1/4"=1'-0"

- ALL EXISTING MECHANICAL ITEMS TO REMAIN IN PLACE.
- ALL EXISTING MECHANICAL ITEMS TO BE RELOCATED
SEE SHEET M3 FOR ADDITIONAL INFORMATION.
- ALL EXISTING MECHANICAL ITEMS TO BE REMOVED AND
DISCARDED. REPAIR ANY DAMAGED WALL OR CEILING, AND
PATCH OR RE-USE DUCT CONNECTION.

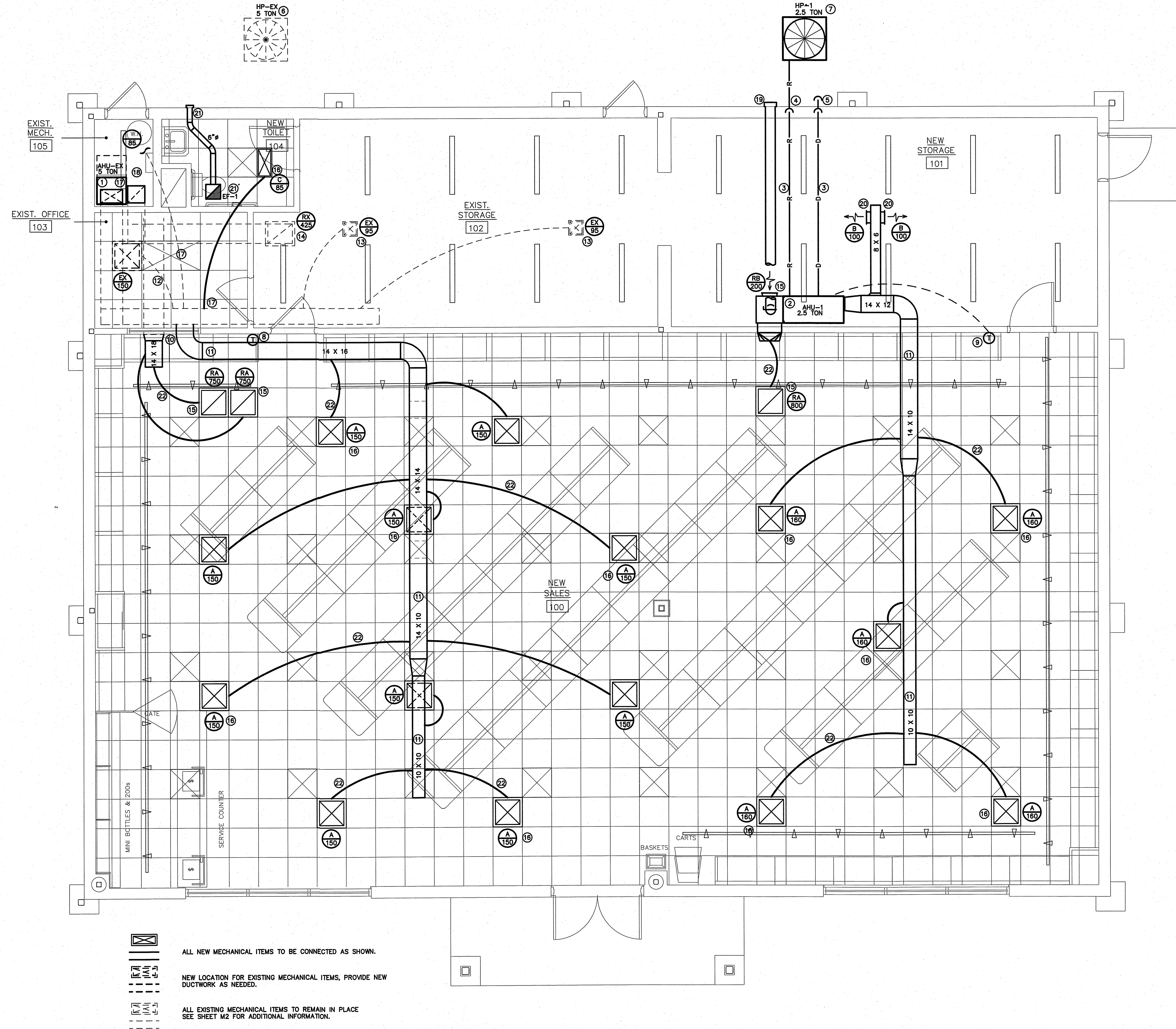
KEY NOTES FOR M2

- 1 EXISTING AIR HANDLING UNIT MOUNTED VERTICAL IN
UTILITY CLOSET, LOCATION UNDETERMINED FROM FIELD
INVESTIGATION. MC TO VERIFY MECHANICAL DUCTWORK
ABOVE OFFICE CEILING. SEE DETAIL 1/M4.
- 2 EXISTING OUTDOOR HEAT PUMP UNIT MOUNTED ON
EXISTING CONCRETE PAD.
- 3 EXISTING THERMOSTAT TO REMAIN.
- 4 RE-LOCATE EXISTING SUPPLY DIFFUSER.
- 5 REMOVE ALL EXISTING GRILLES AND DIFFUSERS, RIGID
AND FLEXIBLE DUCT OVER EXISTING SALES AREA AND
BATHROOM. REMOVE DUCT BACK TO REAR SALES WALL.
- 6 EXISTING GRILLES AND DIFFUSERS, RIGID AND FLEXIBLE
DUCT OVER EXISTING STORAGE AREA TO REMAIN.
- 7 REMOVE EXISTING EXHAUST FAN, DUCT AND EXHAUST
CAP.

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THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER
OF ANY DISCREPANCIES NOTED.



ALL NEW MECHANICAL ITEMS TO BE CONNECTED AS SHOWN.
NEW LOCATION FOR EXISTING MECHANICAL ITEMS, PROVIDE NEW
DUCTWORK AS NEEDED.
ALL EXISTING MECHANICAL ITEMS TO REMAIN IN PLACE
SEE SHEET M2 FOR ADDITIONAL INFORMATION.

1 NEW HVAC PLAN
SCALE 1/4"=1'-0"

KEY NOTES FOR M3

- 1 EXISTING AIR HANDLING UNIT SUSPENDED FROM STRUCTURE ABOVE CEILING. SEE 1/M2.
- 2 NEW AIR HANDLING UNIT SUSPENDED FROM STRUCTURE ABOVE CEILING. SEE DETAIL 1/M4.
- 3 RUN PIPING TIGHT TO UNDERSIDE OF STRUCTURE. (TYPICAL).
- 4 RUN REFRIGERANT PIPING DOWN CONCEALED IN EXTERIOR WALL.
- 5 RUN CONDENSATE PIPING DOWN CONCEALED IN EXTERIOR WALL TO 6" ABOVE FINISH GRADE. TERMINATE IN ELBOW TURNED DOWN.
- 6 EXISTING OUTDOOR HEAT PUMP UNIT MOUNTED ON EXISTING CONCRETE PAD.
- 7 NEW OUTDOOR HEAT PUMP UNIT MOUNTED ON NEW CONCRETE PAD.
- 8 EXISTING THERMOSTAT, TO REMAIN.
- 9 NEW THERMOSTAT LOCATION, MOUNT AT 48" AFF.
- 10 CONNECT NEW DUCT TO EXISTING DUCT ABOVE OFFICE.
- 11 NEW RECTANGULAR RIGID DUCT MOUNTED TO STRUCTURE ABOVE NEW CEILING. SEE DETAIL 1/M-4.
- 12 REUSE EXISTING FLEXIBLE DUCT TO RELOCATE EXISTING SUPPLY DIFFUSER.
- 13 EXISTING SUPPLY DIFFUSERS TO REMAIN.
- 14 EXISTING RETURN AIR GRILLE TO REMAIN.
- 15 NEW RETURN AIR GRILLE. (TYP)
- 16 NEW SUPPLY DIFFUSERS. (TYP)
- 17 MC SHOULD FIELD VERIFY ACTUAL DUCT LAYOUT ABOVE THE EXISTING OFFICE AND ANY MECHANICAL SYSTEMS IN THE UTILITY ROOM, THAT WAS INACCESSIBLE AT THE TIME OF THE FIELD INVESTIGATION.
- 18 MC SHOULD FIELD VERIFY THE EXISTENCE OF MAKE UP AIR DUCT TO THE EXISTING AHU, AND PROVIDE DUCT AND CAP IF ABSENT. SEE SHEET M-1 AND DETAIL 1/M-4 FOR ADDITIONAL INFORMATION.
- 19 WALL MOUNTED OUTSIDE AIR INTAKE HOOD TO 8" DIA. RIGID DUCT SUPPLYING AHU-1. AIR INTAKE SHALL BE 10'-0" MIN. FROM ANY OUTSIDE EXHAUST DISCHARGE. SEE DETAIL 1/M-4 FOR ADDITIONAL INFORMATION.
- 20 NEW DUCT MOUNTED SUPPLY AIR REGISTER.
- 21 NEW EXHAUST FAN, 6" DIA DUCT AND EXHAUST WALL CAP. EXHAUST DISCHARGE SHALL BE 10'-0" MIN. FROM ANY OUTSIDE AIR INTAKE.
- 22 NEW FLEXIBLE DUCT. (TYP)

ENGINEER

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DIVISION 15 B - HEATING, VENTILATING AND AIR CONDITIONING

1.1 DESCRIPTION OF THE WORK

- A. Work under this section includes, but is not necessarily limited to, furnishing and installing the following:
1. Heating, ventilation, and air conditioning equipment.
 2. Ductwork.
 3. Grilles and diffusers.
 4. Controls and control wiring.
 5. Condensate piping.

- B. All work under this contract shall be installed in compliance with the latest edition of the following codes and standards insofar as they apply:

1. ASHRAE Guide.
2. National Electric Code.
3. 2018 NC State Building Code: Mech Code.
4. The Electrical Specifications for this project.
5. SMACNA HVAC Duct Construction Standards.
6. All local codes and ordinances.
7. ARI rating.
8. 2018 NC State Building Code: Energy Conservation Code.

- C. These codes are minimum standards. If codes require a more stringent method of construction than the specifications require, the codes shall govern.

- D. The HVAC Contractor shall be licensed in North Carolina and have all local licenses required for the work.

1.2 INTENT

- A. The intent of these specification and the accompanying drawing is to convey as reasonably as possible the requirements for a complete job ready for the building to operate. The HVAC Contractor shall take this into consideration and include in his bid allowance for contingencies as will allow him to provide minor pieces of equipment and labor not specifically indicated but required for the job to operate properly, at no additional cost to the Owner.

1.3 COORDINATION

- A. Coordinate work with other contractors. Notify Owner of apparent conflicts early to expedite construction. If structural damage appears imminent, stop work and notify Owner for a decision before resuming operations.

- B. Locations shown are approximate. The HVAC Contractor shall verify with owner, the placement of equipment, fixtures, outlets, etc. The drawings do not give exact details as to elevations and locations of various pipes, fittings, ducts, conduit, etc., and do not show all offsets and other installation details which may be required.

- C. Changes in duct or piping design caused by obstructions shall be submitted to Engineer in sketch form for study and comment prior to execution. Additional cost will not be allowed for this type of work.

1.4 SHOP DRAWINGS

- A. Shop drawings shall be submitted for all major items of equipment. These may consist of the manufacturer's standard catalog or tear sheets and shall have the exact items being offered clearly identified. Shop drawings shall include but are not limited to the following:

1. All equipment and accessories.
2. Grilles and diffusers.
3. Unit sizes and requirements.

PART 2 - PRODUCTS

2.1 EQUIPMENT

- A. All air handling devices must have the manufacturer's recommended filter rack, for 1" thick filters.

2.2 PIPING

- A. Condensate drain piping shall be PVC pipe. Provide tee and plug at changes in direction. Route pipe to proper termination point. All condensate piping shall be insulated with flexible elastomeric insulation. Provide copper piping in plenum areas.

2.3 DUCTWORK

- A. Ductwork shall be built in accordance with SMACNA HVAC Duct construction standards. Furnish and install all supply, return, and ventilation ductwork shown, together with splitters, defectors, dampers, etc. This work shall be constructed of new galvanized prime grade steel sheets. The gauges of metal to be used and the construction and bracing of joints shall be in accordance with the SMACNA recommendations.

- B. Seal all sheet metal joints with fiber impregnated mastic.
- C. Support from building structure on strap hangers not over 8 feet apart.

- D. Use manufactured turning vanes in each elbow where required or where indicated on drawings.

- E. Flexible connectors shall be 3 inches wide, of fireproof material and used to isolate noise between equipment and ductwork on supply and return side of all units.

- F. Round runouts, where used, shall be built in accordance with the above standards, and each runout shall also have manufactured side take off, adjustable quadrant damper at all accessible locations and shall be of Owens Corning NL-25 flexible duct with UL label. Flex duct lengths allowed up to 14 feet. Duct must be supported with sufficient hangers in order to prevent sags. Serpentine routing will not be permitted. Quadrant damper to be 22 gauge easily adjustable manually with exterior handle (similar to H&C Kwik-set) and is not to be mounted in side take-off.

2.4 DUCT INSULATION (LOW PRESSURE)

- A. All insulation, linings, coverings and adhesives shall have a flame spread classification of 25 or less and a smoke developed rating of not more than 50, exposed exterior piping.
- B. All duct insulation shall comply with Section 604, of the N. C. Building Code: Mechanical Code

- C. All supply and return ductwork shall be completely insulated, either internally or externally.

- D. Rectangular ductwork shall be lined with two-inch thick, 1.5 lb. per cubic foot density, duct liner, Armstrong, CSO Ultraliner, Johns Manville or approved equal.

- E. As an alternative to duct liner, rectangular duct may be wrapped with Class I - 2", 3/4 lb. density (R-6.5) thick reinforced foil back fiberglass insulation, Owens-Corning Series ED or equal. Tape shall be Kraft reinforced foil tape or equal.

- F. Exhaust air duct does not require insulation, unless otherwise noted on the plans.

- G. Insulation shall be held in place with adhesive and welding pins 16" on center.

- H. Duct dimensions shown on the drawings are Net Inside Dimensions

2.5 THERMOSTATS

- A. Provide programmable electronic thermostats.
- B. Submit proposed thermostats for approval.

2.6 ROOF PENETRATIONS

- A. Provide pre-manufactured roof flashings compatible with equipment served.
- B. Coordinate roof work with roof system used. Provide proper flashing as required.
- C. Provide 1 year warranty on all roof work performed.

2.7 DUCT SMOKE DETECTORS

- A. Duct detectors are not required since units air flows are 2000 cfm or less per NCBC: Mechanical Code, Section 606.2.

PART 3 - EXECUTION

3.1 PIPING

- A. The HVAC Contractor shall coordinate such routing with others, to line his work true to adjacent spaces and in a workmanlike manner and to use only short radius 90 degree elbows. Where required, piping to be sturdily supported and separated in a manner satisfactory to the Engineer.

- B. The HVAC Contractor shall paint all exterior refrigerant piping, with UV resistant paint as recommended by the closed cell insulation manufacturer.

- C. Insulate all condensate lines for their entire length with 1/2" closed cell insulation. Install insulation per the manufacturers recommendations.

3.2 ELECTRICAL WORK

- A. The electrical contractor shall provide all switches, starters, wire conduit for the air conditioning, heating and ventilation equipment. Control wiring shall be by the heating and air conditioning contractor.

- B. HVAC Contractor is responsible for verifying that power terminals have been properly grounded prior to operating equipment and must find connections to all equipment including control wiring.

- C. All materials and workmanship shall be in accordance with the electrical specifications for the project. All wiring shall be color coded, and as-built wiring diagram prepared showing all connections and colors of wiring and delivered to the Owner.

- D. Furnish certification for acceptance of control wiring from local electrical inspector prior to acceptance.

3.3 CLEAN UP

- A. During construction, keep the site clean of debris. Upon completion, and before final inspection, clean up the premises to remove all evidence of work. In addition upon completion of construction leave equipment clean.

- B. Furnish one box of clean filters, for each size required, at the time of final inspection to the owner.

3.4 OPERATOR'S MANUAL AND DIAGRAM

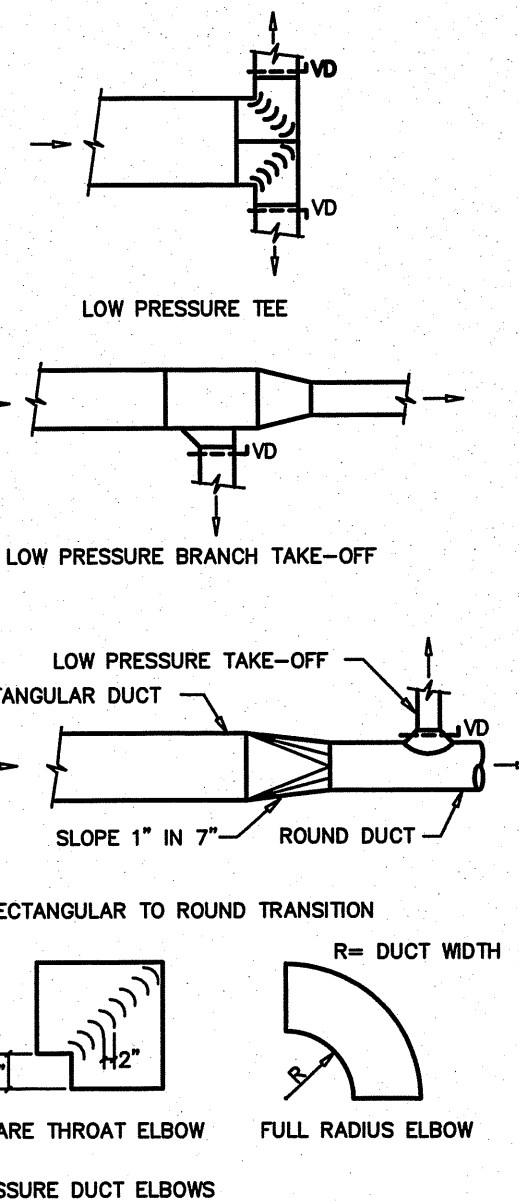
- A. The HVAC Contractor shall prepare in one copy a manual describing the proper maintenance and operation of the systems. This manual shall not consist of standard factory instructions (although these may be included) but shall be prepared to describe this particular job.

- B. The manual shall be bound, indexed, dated and signed by the HVAC Contractor.

- C. Qualified representative of the HVAC contractor shall meet with the designated representatives of the Owner and the Owner's representative shall be instructed in the proper operation and maintenance of the control system and other systems.

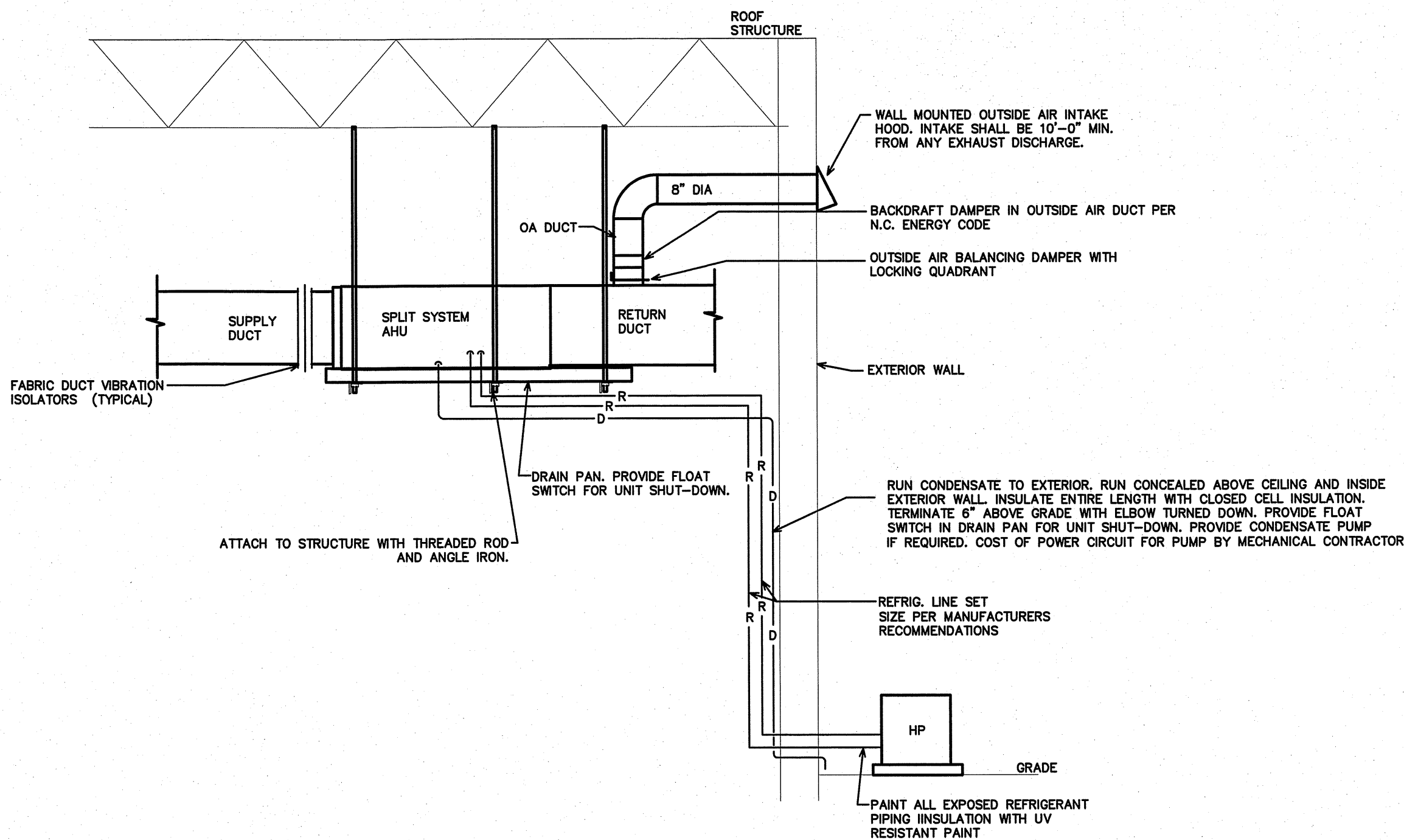
3.5 GUARANTEE

- A. Guarantee all materials and labor included in the HVAC work for a period of one year from date of final acceptance by the owner. In addition, motor compressors shall be a non-prorated five year warranty. Any part or parts of the work or equipment which prove to be defective during the guarantee period shall be replaced at no additional cost to the owner or tenant.
- B. All air flows must be measured and balanced to within 10% of design airflow. All equipment used must have a current certification. Provide two copies of the balance report to the owner at closeout. The HVAC contractor shall return and re-balance to occupant comfort after 90 days from close-out. Provide all balance dampers needed for satisfactory operation regardless if shown on the drawings or not, and shift location of thermostats thermostats if required for occupancy comfort.



2 DUCT CONSTRUCTION DETAIL

SCALE: NOT TO SCALE



1 AIR HANDLING UNIT DETAIL

SCALE: NOT TO SCALE

ENGINEER

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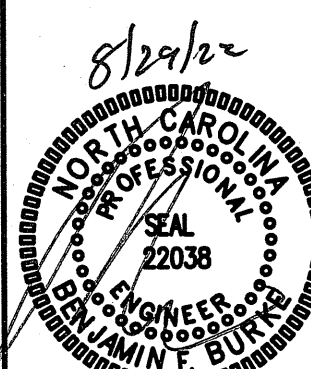
Coastal
Architecture
P.L.L.C.
Architectural
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Planning
Interiors



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ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA



HVAC SPECIFICATIONS
& DETAILS

21036

ISSUED: 8/22/2022

DWG BY: CLS

CKD BY: BEB

REVISIONS

SHEET NO.

M-4

DIVISION 16 – ELECTRICAL

PART 1 – GENERAL

1.1 DESCRIPTION OF THE WORK

- A. Work under this section includes, but is not necessarily limited to, furnishing and installing the following:
1. Electrical service and service equipment.
 2. Lighting and power distribution system.
 3. Provide lighting fixtures selected by owner with lamps to match.
 4. Wiring devices, boxes, cover plates, etc.
 5. Source of power for all items of equipment.
 6. Grounding.
 7. Other requirements and/or systems where shown.

- B. All work shall be complete and items, equipment, etc., shall be electrically connected for proper and correct operation.

- C. All work under this contract shall be installed in accordance with the latest edition of the following codes and standards insofar as they apply:

1. The 2020 National Electrical Code.
2. The National Electrical Safety Code.
3. Underwriter's Laboratories, Inc., Standards and approved listings.
4. Electrical Testing Laboratories standards.
5. North Carolina Building Code, Latest Edition and Revisions.
6. All local codes and ordinances.

- D. The Electrical Contractor shall be licensed in the State of North Carolina and have all local licenses required for the work.

- E. Obtain all permits, licenses, inspections, etc., required for the work and pay for the same. Furnish final certificate of inspection and approval from the electrical inspector having jurisdiction prior to acceptance of the work.

- F. All work shall be done by skilled mechanics and shall present a neat, trim, workmanlike condition when complete.

1.2 INTENT

- A. The intent of these specifications and the accompanying drawings is to convey as reasonably as possible the requirements for a complete job ready for the building to operate. The Electrical Contractor shall take this into consideration and include in his bid allowance for contingencies as will allow him to provide minor pieces of equipment and labor not specifically indicated but required for the job to operate properly, at no additional cost to the Owner.

1.3 COORDINATION

- A. Coordinate work with other contractors. Notify Architect of apparent conflicts early to expedite construction. If structural damage appears imminent, stop work and notify Architect for a decision before resuming operations.

- B. Locations shown are approximate. The drawings do not give exact details as to elevations and locations of various pipes, fittings, ducts, conduit, etc., and do not show all offsets and other installation details which may be required. Coordinate all locations with architect before any rough-in.

1.4 SHOP DRAWINGS

- A. Shop drawings shall be submitted for panels and service equipment, lighting, wiring devices, and cover plates. These may consist of the manufacturer's standard catalog or tear sheets and shall have the exact items being offered clearly identified.

PART 2 – PRODUCTS AND MATERIALS

2.1 GENERAL

- A. All material shall be new and shall bear the manufacturer's name, trade name, and UL label where such standard has been established for the particular material. Materials shall be the standard products of manufacturer's regularly engaged in the manufacturer of the required type of equipment and the manufacturer's latest approved design.

1. Boxes installed in concealed locations shall be set flush with the finished surfaces.
2. Provide rated boxes in all fire barriers & walls installed per code.

2.2 NOT USED

2.3 CONDUCTORS

- A. Conductors shall be color coded, sizes #8 and larger may be color taped on the job. Color coding shall be: Standard Practice.
- B. Conductors shall be manufactured by Dodge, Southwire or approved equal. Conductors shall meet the latest requirements of NEMA and IPCEA and shall be UL approved.
- C. Metallic sheathed "MC" cable may be used where allowed by N.E.C.

- D. Conductors shall be spliced and taped as follows:
1. Size #10 and #12, use Ideal "Wing Nuts" or T&B "Piggy" connectors. Connectors shall be rated for 150 degrees C for use in recessed lighting fixtures.
 2. Size #8 and larger shall be solderless screw and screw-clamping type, smoothly covered and shaped with rubber gum type with final cover vinyl plastic electrical type. In lieu of rubber gum and vinyl plastic type, factory fabricated approved preformed insulating covers may be used. All connectors shall be UL approved.
 3. No split-bolt type connectors may be used.

- E. All branch wire and connections shall be copper and sized per National Electric Code.

- F. All conductors shall be continuous without splice between junction, outlet, device boxes, etc. No splicing will be permitted in panelboard cabinets, safety switches, etc.

- G. All wiring in mechanical spaces shall be plenum rated.

- H. Provide GFI protection within 6'-0" of any sink.

- I. All multi-wire branch circuits shall comply with 2020 NEC, 210.4(B).

- J. All wiring at medical facilities shall comply with 2020 NEC, 517.1.

2.4 PANELBOARDS, SAFETY SWITCHES

- A. Panelboards shall comply with NEMA Standard PB 1 – Latest Edition and as manufactured by Square D or ITE-Siemens.
- B. The contractor shall be responsible for correctly phasing the circuits in the panelboards.

- C. Safety switches shall be general duty type, size and rating as required for load service. Safety switches shall be fused or unfused as shown and/or as required. Safety switches serving motor loads shall be horsepower rated for load served.

- D. All wiring at medical facilities shall comply with 2020 NEC, 517.1.

2.5 NOT USED

2.6 WIRING DEVICES

- A. Wiring devices shall be commercial grade by Bryant, Leviton, or approved equal. With matching cover. Color by Architect.
- B. Wiring devices installed under a Kitchen Hood shall have stainless steel covers.
- C. Wiring devices installed over counters shall comply with ANSI A117.1.

2.7 NOT USED

2.8 CONDUIT

- A. PVC conduit will be allowed where N.E.C. approved.
- B. All service conduit shall be rigid where exposed below 8'-0" AFF or exposed to the elements or hazardous conditions.

PART 3 – EXECUTION

3.1 CIRCUIT GROUNDING

- A. All circuits shall contain an insulated, green, copper grounding conductor, sized in accordance with Table 250-95 of the NEC. Grounding conductors shall be connected to equipment grounding bus in panelboard and securely attached and grounded to the device or enclosure at the other end.

- B. Grounding type convenience outlets and switches
- A. Outlets and switches shall be solidly grounded to equipment grounding system with a green colored insulated conductor. Electrical connections shall be continuous from equipment ground bus in panelboard to the hex nut on the convenience outlet or switch.

- C. MOTORS
- A. All motors shall be connected to conduit system with short length (minimum length 24" and maximum length 36") of flexible liquidtight conduit.

3.4 NOT USED

3.5 EQUIPMENT LABELING

- A. Provide permanent name plates for all panelboards, safety switches, wiring troughs, etc., for identification of equipment controlled, services, etc. Nameplates shall be securely and permanently attached to equipment with stainless steel screws. Nameplates shall include the name of the equipment and where it is fed from.

- B. All switch plates, receptacle plates and outlet covers shall be labeled with machine printed vinyl labels identifying the circuit(s) within.

- C. All empty conduit runs shall be identified and indicated where they terminate.

- D. Provide typewritten directory in each panelboard to clearly identify each circuit, service, etc.

3.6 NOT USED

3.7 NOT USED

3.8 JUNCTION AND/OR PULL BOXES

- A. Boxes shall be installed where necessary to avoid excessive runs and/or too many bends between outlets.

3.9 PULL WIRE

- A. Leave pull wire in each empty conduit run.

3.10 NOT USED

3.11 GROUNDING

- A. All grounding shall be in accordance with Article 250 of the NEC. In addition, the following requirements shall be met:
1. Grounding conductors shall be installed so as to permit the shortest and most direct path from equipment to ground. All connections to grounding conductors shall be accessible.
 2. Equipment ground continuity shall be maintained through flexible metal conduit.
 3. All wiring devices equipped with grounding connection shall be solidly grounded to ground system with grounding conductors.
 4. The frame of all lighting fixtures shall be securely grounded to the equipment ground system with grounding conductors.
 5. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.
 6. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.

- B. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.

- C. All wiring devices equipped with grounding connection shall be solidly grounded to ground system with grounding conductors.

- D. The frame of all lighting fixtures shall be securely grounded to the equipment ground system with grounding conductors.

- E. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.

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- N. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.

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- Z. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.

- AA. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.

- AB. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.

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- AK. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ALL LOCAL CODES HAVING JURISDICTION.
2. ALL BRANCH CIRCUIT CONDUCTORS TO BE COPPER (SERVICE CONDUCTORS MAY BE ALUMINUM WITH SAME AMPACITY AS COPPER CONDUCTORS. RE-SIZE CONDUCTORS AND CONDUIT PER NEC).
3. ALL CIRCUITS TO BE 2 #12, 1 #12 GND IN 1/2" EMT CONDUIT AS A MINIMUM. PROVIDE WIRING FOR LARGER CIRCUITS AS REQUIRED BY NEC. RIGID CONDUIT IS REQUIRED WHERE EXPOSED BELOW 8'-0" A.F.F.
4. ALL EMPTY CONDUIT RUNS IN EXCESS OF 10 FEET SHALL BE PROVIDED WITH A PULL WIRE OR FISH TAPE/CORD.
5. CONTRACTOR SHALL VERIFY THAT ALL DOOR SWINGS ARE CORRECT BEFORE INSTALLING LIGHT SWITCH OUTLETS.
6. ALL BRANCH CIRCUIT CONDUCTORS FROM THE PANEL TO THE FIRST OUTLET SHALL BE INCREASED TO THE NEXT LARGER SIZE WHERE THE LENGTH OF THE HOME RUN EXCEEDS 120 FEET ON 120V AND 208V CIRCUITS.
7. THE CORRECT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS, ONLY THOSE WHERE CLARIFICATION IS NECESSARY. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON DRAWINGS OR NOT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANELBOARDS.
9. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE TYPE OF CEILING SYSTEM WITH THE GENERAL CONTRACTOR TO INSURE THAT ALL LIGHTING FIXTURES ARE COMPATIBLE WITH THE CEILING SYSTEM BEING INSTALLED. LIGHTING FIXTURES SHOULD NOT BE ORDERED UNTIL TYPE OF CEILING HAS BEEN VERIFIED.
10. ELECTRICAL REQUIREMENTS INDICATED ON DRAWINGS MAY DIFFER FROM ACTUAL EQUIPMENT FURNISHED. IF FURNISHED EQUIPMENT DIFFERS FROM RATINGS ON DRAWINGS CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER FOR APPROPRIATE ACTION TO BE TAKEN.
11. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE EXACT BREAKER REQUIREMENTS FOR ALL EQUIPMENT PRIOR TO ORDERING PANEL. ADJUST BREAKER AND WIRE SIZES AS REQUIRED.
12. PROVIDE BOXES, JACKS, WIRING AND CONDUIT FROM LOCATIONS SHOWN TO MTP LOCATION. VERIFY EXACT REQUIREMENTS WITH OWNER.
13. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL DISCONNECTS FOR MECHANICAL & PLUMBING EQUIPMENT. DISCONNECTS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS AND FUSED PER NAME PLATE. PROVIDE NEMA 3R ENCLOSURES ON EXTERIOR. COORDINATE FUSE SIZES.
14. THE EC SHALL MEET WITH THE ARCHITECT AND TENANT PRIOR TO INSTALLING OUTLET BOXES TO VERIFY LOCATIONS AND MOUNTING HEIGHTS OF RECEPTACLES AND TELEPHONE OUTLETS.

ELECTRICAL LEGEND

- ⊠ X LIGHT FIXTURE. LETTER DENOTES FIXTURE TYPE (REFER TO LIGHTING PLAN AND FIXTURE SCHEDULE).
NL = NIGHT LIGHT (NOT SWITCHED/ALWAYS ON)
- ⊠ WP/GFI DUPLEX RECEPTACLE – 120V; MOUNT 18" TO CENTER AFF UNLESS NOTED OTHERWISE. "WP" INDICATES WEATHER PROOF. "GFI" INDICATES GROUND FAULT CURRENT INTERRUPT PROTECTED. "U" INDICATES RECEPTACLE WITH (2) USB PORTS.
- ⊠ QUADRUPLEX RECEPTACLE – 120V
- ⊠ FLOOR OR CEILING OUTLET (AS NOTED) – 120V
- ⊠ SPECIAL PURPOSE RECEPTACLE – REFER TO POWER PLAN AND PANEL SCHEDULE
- S LIGHT SWITCH
- S_M SWITCH WITH INTEGRAL PIR/US MOTION SENSOR FOR AUTOMATIC SHUT-OFF WITH UP TO 2 HOUR ADJUSTABLE DELAY.
- S_D DIMMABLE LIGHT SWITCH
- ⊠ MOTOR RATED SWITCH
- ⊠ JUNCTION BOX
- ▽ TELE/DATA OUTLET – PROVIDE JUNCTION BOX WITH CONDUIT BACK TO MTP. PROVIDE (1) TELEPHONE JACK AND (1) CAT 5 DATA JACK
- ← SINGLE-POLE HOMERUN TO PANELBOARD
- ← TWO-POLE OR 3-POLE HOMERUN TO PANELBOARD
- EXIT EXIT LIGHT
- ⊠ EMERGENCY EGRESS FIXTURE
- ⊠ PHOTOCELL (LED COMPLIANT)
- BRANCH CIRCUIT WIRING
- SWITCH LEG
- ⊠ GROUND CONNECTION
- ⊠ PANEL A DISTRIBUTION PANELBOARD
- ⊠ DISCONNECTING MEANS AS REQUIRED BY CODE

APPENDIX B

2018 BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS

ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)
ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance

- Energy Code: Prescriptive ☒ Energy Cost Budget ☐
- ASHRAE 90.1: Prescriptive ☒ Energy Cost Budget ☐

Lighting Schedule

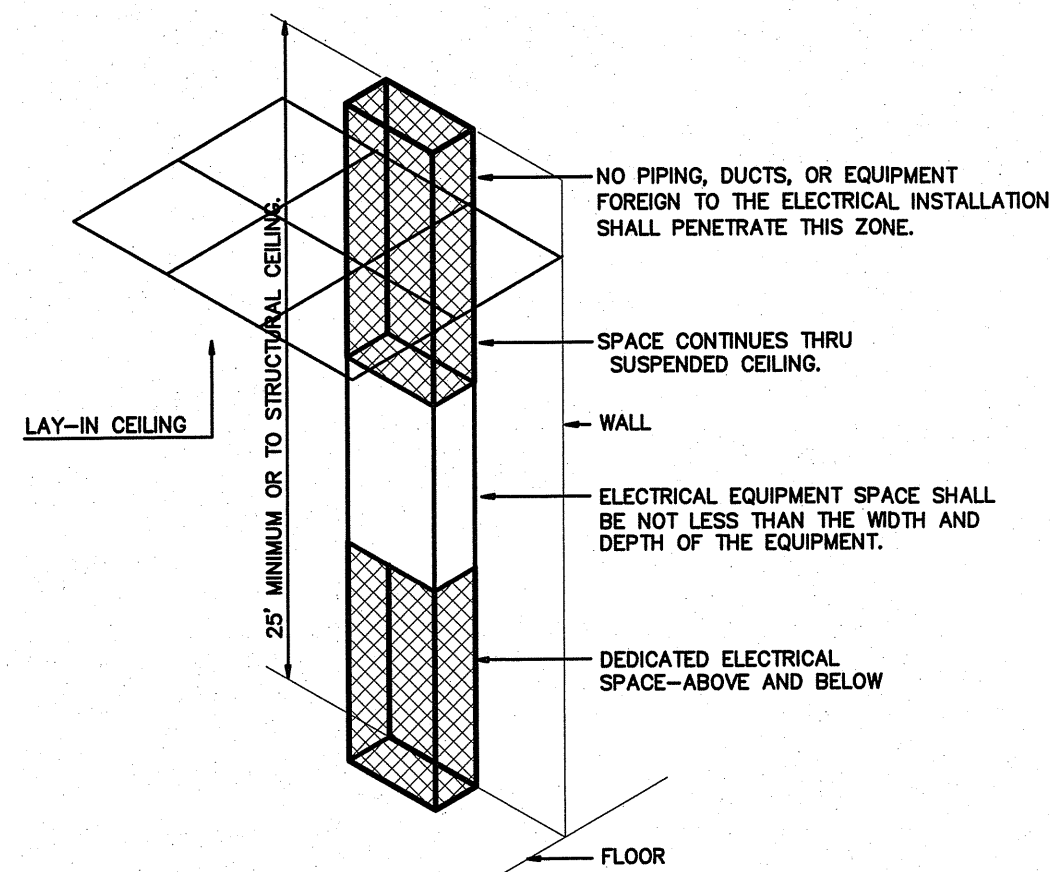
Lamp type required in fixture
number of lamps in fixture
ballast type used in fixture
number of ballasts in fixture
total wattage in fixture
total interior wattage specified vs. allowed
total exterior wattage specified vs. allowed

See Light Fixture Schedule

3235VA / 4520VA
141VA / 750VA

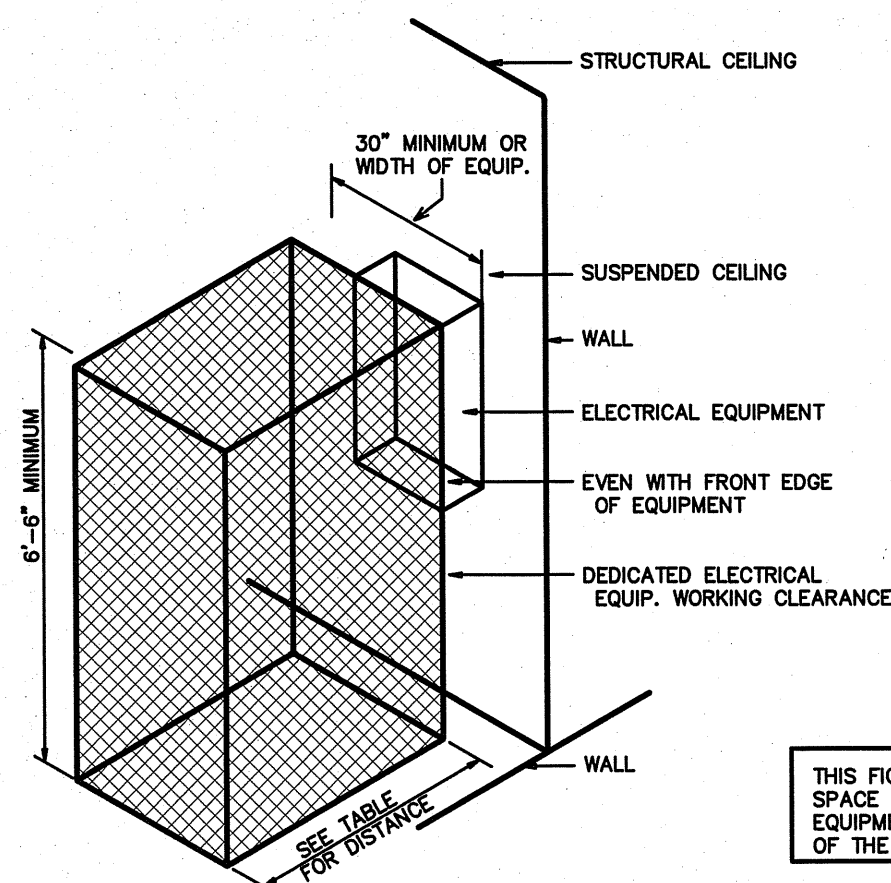
Additional Prescriptive Compliance

- 508.2.1 More Efficient Mechanical Equipment
- 508.2.2 Reduced Lighting Power Density
- 508.2.3 Energy Recovery Ventilation Systems
- 508.2.4 Higher Efficiency Service Water Heater
- 508.2.5 On-Site Supply of Renewable Energy
- 508.2.6 automatic Daylighting Control System



ELECTRICAL EQUIPMENT DEDICATED SPACE
PER ARTICLE 110.26.F.1 OF N.E.C.

1 DEDICATED SPACE
SCALE: NTS



ELECTRICAL EQUIPMENT WORKING CLEARANCE
PER ARTICLE 110-26 OF N.E.C.

VOLTAGE TO GROUND NOMINAL	WORKING CLEARANCES			
	MIN. CLEAR DISTANCE IN FEET			
0-150	CONDITION: 1	2	3	
151-600		3	3-1/2	4

2 ELECTRICAL CLEARANCES
SCALE: NTS

ENGINEER

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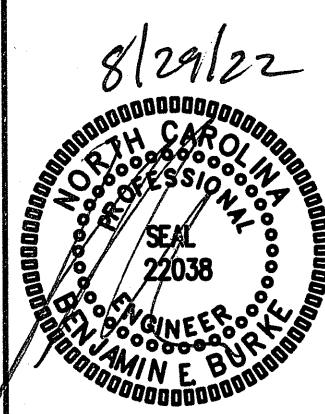
Coastal
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ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA



ELECTRICAL
SPECIFICATIONS

21036

ISSUED: 8/22/2022

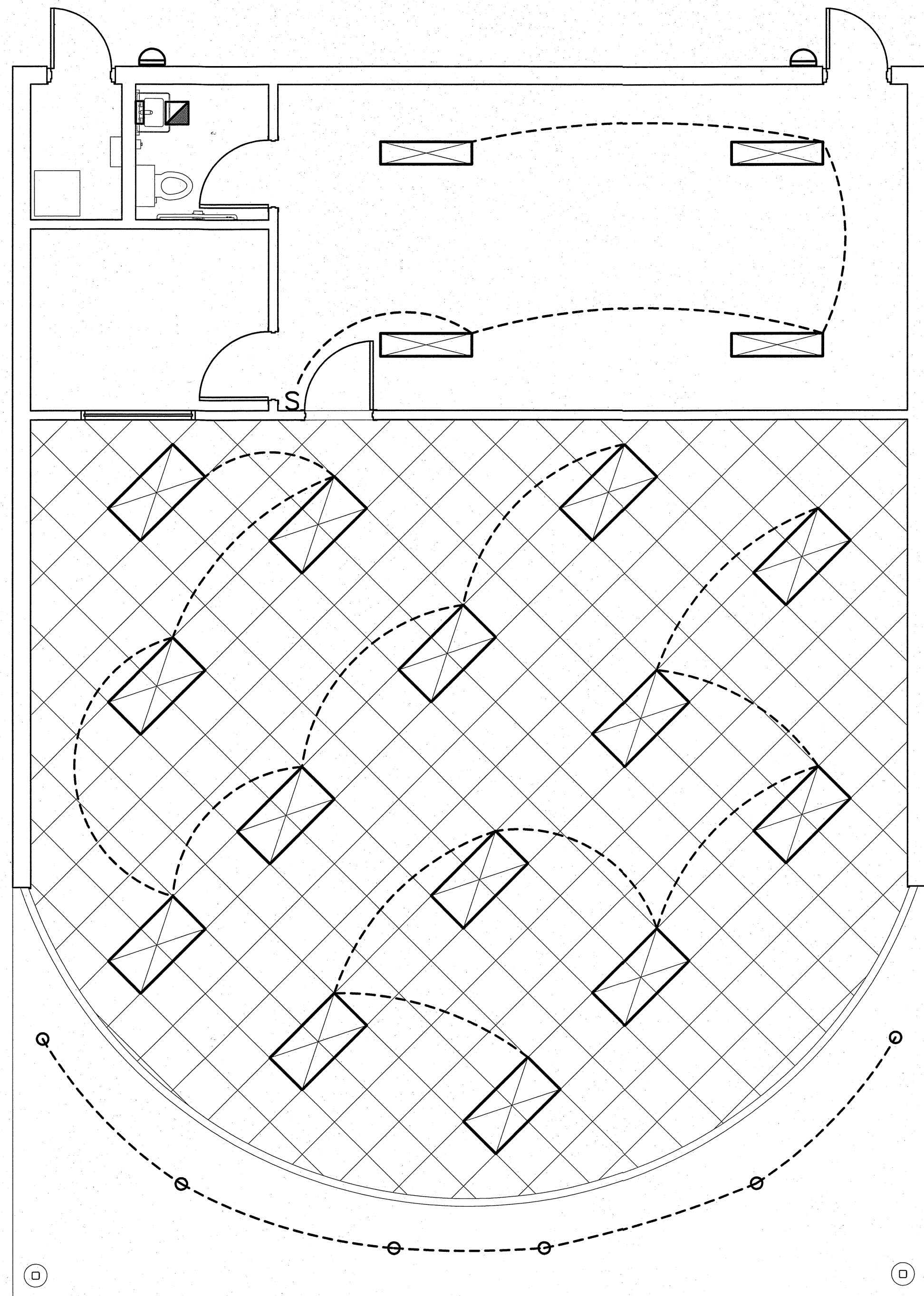
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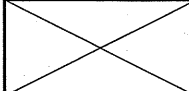
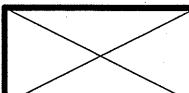
CHK BY: BEB

REVISIONS

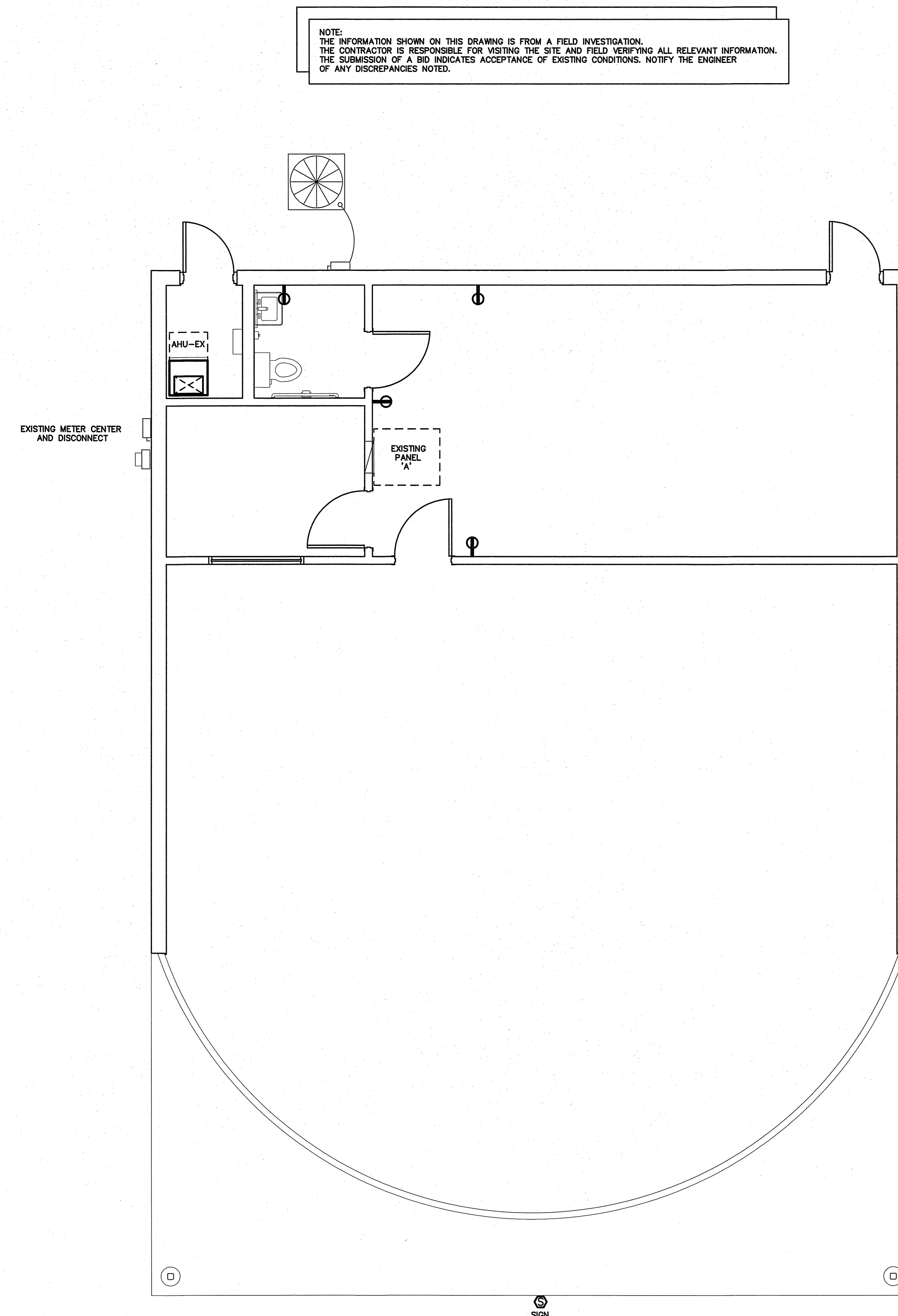
SHEET NO.

E-1



-  = EXISTING FIXTURE TO REMAIN
 = EXISTING FIXTURE TO BE RELOCATED/REMOVED

1 EXISTING LIGHTING PLAN
SCALE 1/4"=1'-0"



-  = EXISTING DEVICE TO REMAIN
 = EXISTING DEVICE TO BE RELOCATED/REMOVED

2 EXISTING POWER PLAN
SCALE 1/4"=1'-0"

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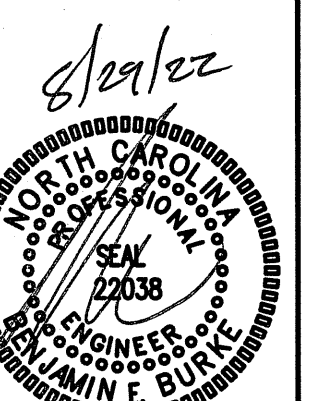
Coastal
 Architecture
 PLLC
 Architectural
 Design
 Planning
 Interiors



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ADDITION TO
 ABC NEWPORT
 NEWPORT, NORTH CAROLINA



EXISTING ELECTRICAL PLAN

21036
 ISSUED: 8/22/2022
 DWG BY: JQ
 CKD BY: BEB
 REVISIONS

SHEET NO.
 E-2

LIGHTING SCHEDULE *									
MARK	MANUFACTURER	CATALOG NO.	VOLT.	LAMPS NO. TYPE W	BALLAST TYPE	W/ FIXTURE	REMARKS		
A	COLUMBIA	LCA122-35MWG-EDU	120	- LED -	-	25	2X2 LAY-IN LED FIXTURE	*	
B	HALO	(LZR) L806-FL-80-(5000K)-P	120	- LED -	-	10W/FT	MULTI-CIRCUIT LED TRACK LIGHTS, PROVIDE LIMITER FOR 10W/FT	*	
C	JUNO	(C22)LED-G4-14LM-35K	120	- LED -	-	30	6" LED RECESSED CAN FIXTURE (WL= WET LOCATION)	*	
D	COLUMBIA	MP54-4000KMW-CW-EDU	120	- LED -	-	45	4' ENCLOSED LED GASKETED STRIP	*	
E	COMPASS	CUSO	120	- LED -	-	17	EXTERIOR NORMAL/EMERGENCY LIGHT FIXTURE- COLOR BY ARCH	*	
EXIT	COMPASS	CER	120	- LED -	-	2	LED EXIT SIGN, COLOR BY ARCH	*	
EM	COMPASS	CU2	120	- LED -	-	10	EMERGENCY LIGHT, BATTERY BACKUP, BATTERY DIAGNOSTICS, COLOR BY ARCH	*	

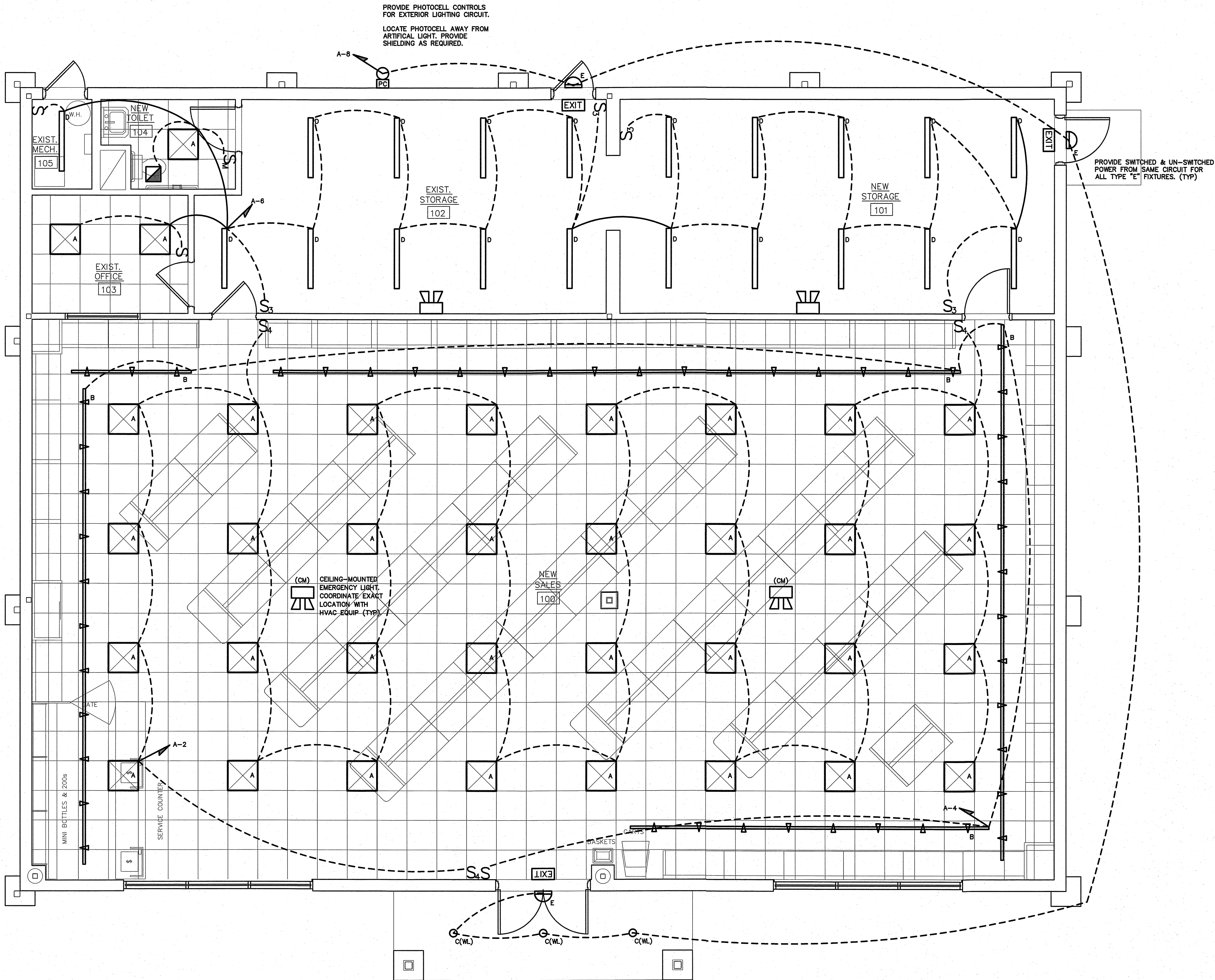
* OR APPROVED EQUAL. PROVIDE CUT SHEETS FOR OWNER APPROVAL PRIOR TO ORDERING FIXTURES.
CATALOG NUMBERS ARE FOR REFERENCE ONLY, ACTUAL NUMBERS MAY VARY.
THE EMERGENCY LIGHTS AND EXIT SIGNS MUST HAVE INTEGRAL BATTERIES, CHARGERS AND TEST SWITCHES.

NOTE:
PROVIDE LABELING ON EACH
SWITCH NOTING CIRCUIT SERVED.

AUTOMATIC LIGHTING SHUTOFF IS NOT SHOWN IN THE
EGRESS PATH LIGHTING AS ALLOWED PER 405.2.1-3
EXCEPTION #3, WHERE AUTOMATIC SHUTOFF WOULD
ENDANGER OCCUPANT SAFETY.

TIE ALL EXIT AND EMERGENCY LIGHTS
TO NEAREST AVAILABLE UNSWITCHED
LIGHTING CIRCUIT IN THE AREA SERVED.

VERIFY HEIGHT/LOCATION OF ALL SWITCHES
AND DEVICES PRIOR TO INSTALLATION.



1
E-3
REVISED LIGHTING PLAN
SCALE: 1/4"=1'-0"

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Interiors

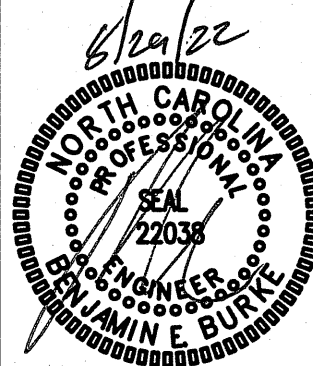


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ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA



ELECTRICAL
PLAN

21036

ISSUED: 8-22-22
DWG BY: TRA
CKD BY: LDD
REVISIONS

SHEET NO.
E-3

LIGHTING SCHEDULE *									
MARK	MANUFACTURER	CATALOG NO.	VOLT.	LAMPS NO. TYPE W	BALLAST TYPE	W/ FIXTURE	REMARKS		
A	COLUMBIA	LCAT22-35MWG-EDU	120	- LED -	-	25	2X2 LAY-IN LED FIXTURE		
B	HALO	(LZR) L806-FL-80-(5000K)-P	120	- LED -	-	10W/FT	MULTI-CIRCUIT LED TRACK LIGHTS, PROVIDE LIMITER FOR 10W/FT		
C	JUNO	IC22LED-G4-14LM-35K	120	- LED -	-	30	6" LED RECESSED CAN FIXTURE (WL= WET LOCATION)		
D	COLUMBIA	MPS4-4000KMW-CW-EDU	120	- LED -	-	45	4" ENCLOSED LED GASKETED STRIP		
E	COMPASS	CUSO	120	- LED -	-	17	EXTERIOR NORMAL/EMERGENCY LIGHT FIXTURE- COLOR BY ARCH		
EXIT	COMPASS	CER	120	- LED -	-	2	LED EXIT SIGN, COLOR BY ARCH		
EM	COMPASS	CU2	120	- LED -	-	10	EMERGENCY LIGHT, BATTERY BACKUP, BATTERY DIAGNOSTICS, COLOR BY ARCH		

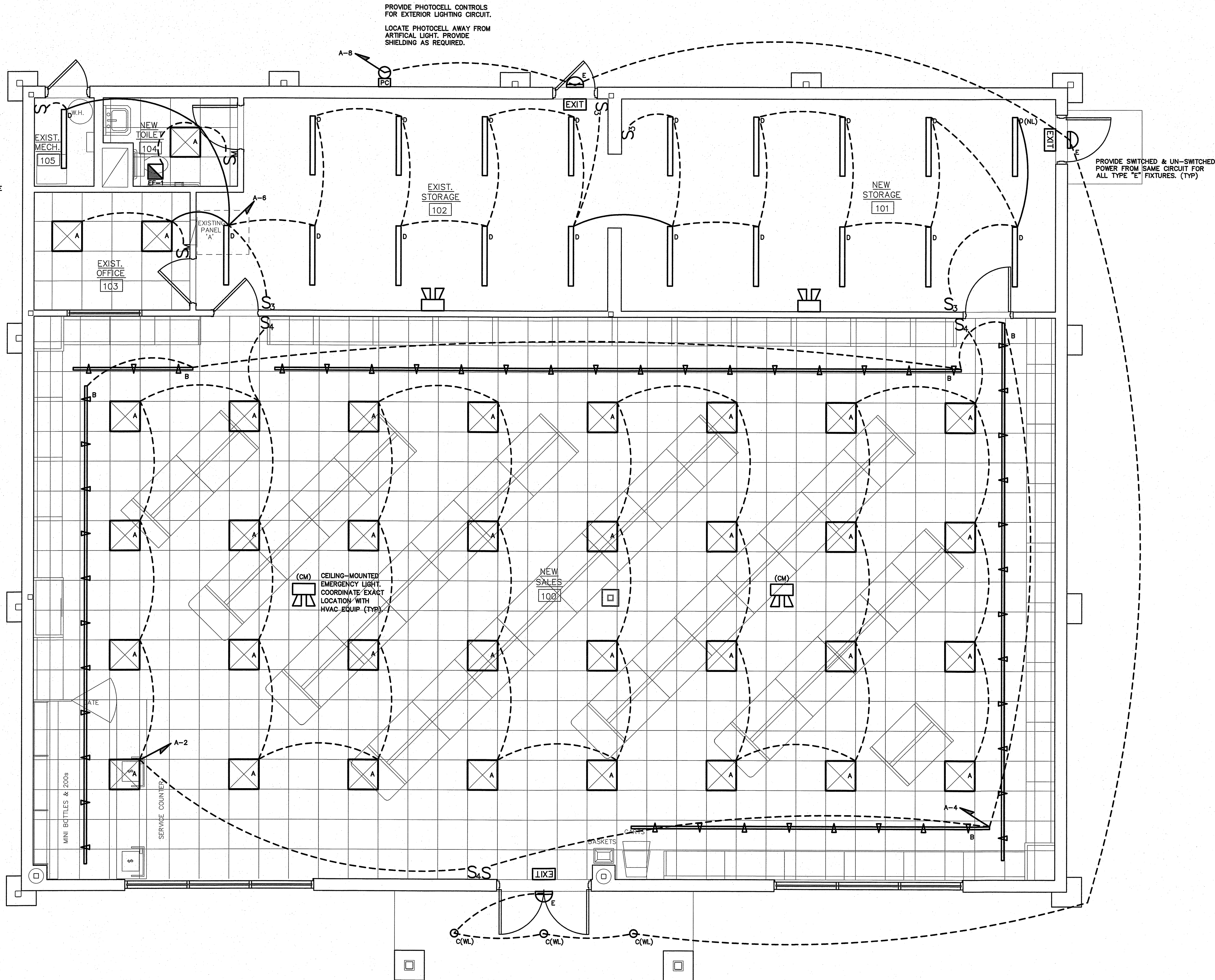
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NOTE:
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SWITCH NOTING CIRCUIT SERVED.

AUTOMATIC LIGHTING SHUTOFF IS NOT SHOWN IN THE
EGRESS PATH LIGHTING AS ALLOWED PER 405.2.1-3
EXCEPTION #5, WHERE AUTOMATIC SHUTOFF WOULD
ENDANGER OCCUPANT SAFETY.

TIE ALL EXIT AND EMERGENCY LIGHTS
TO NEAREST AVAILABLE UNSWITCHED
LIGHTING CIRCUIT IN THE AREA SERVED.

VERIFY HEIGHT/LOCATION OF ALL SWITCHES
AND DEVICES PRIOR TO INSTALLATION.



1 REVISED LIGHTING PLAN
E-3 SCALE: 1/4"=1'-0"

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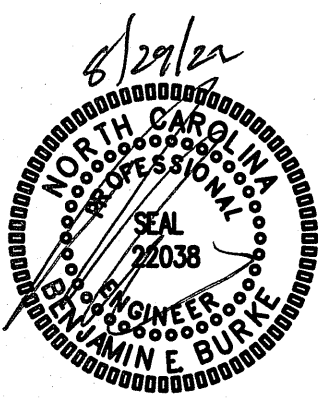


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ADDITION TO
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NEWPORT, NORTH CAROLINA



REVISED
LIGHTING PLAN

21036

ISSUED: 8/22/2022

DWG BY: JQ

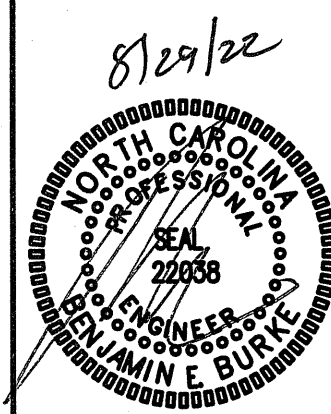
CKD BY: BEB

REVISIONS

SHEET NO.

E-3

ADDITION TO
ABC NEWPORT
NEWPORT, NORTH CAROLINA



REVISED
POWER PLAN

21036

ISSUED: 8/22/2022

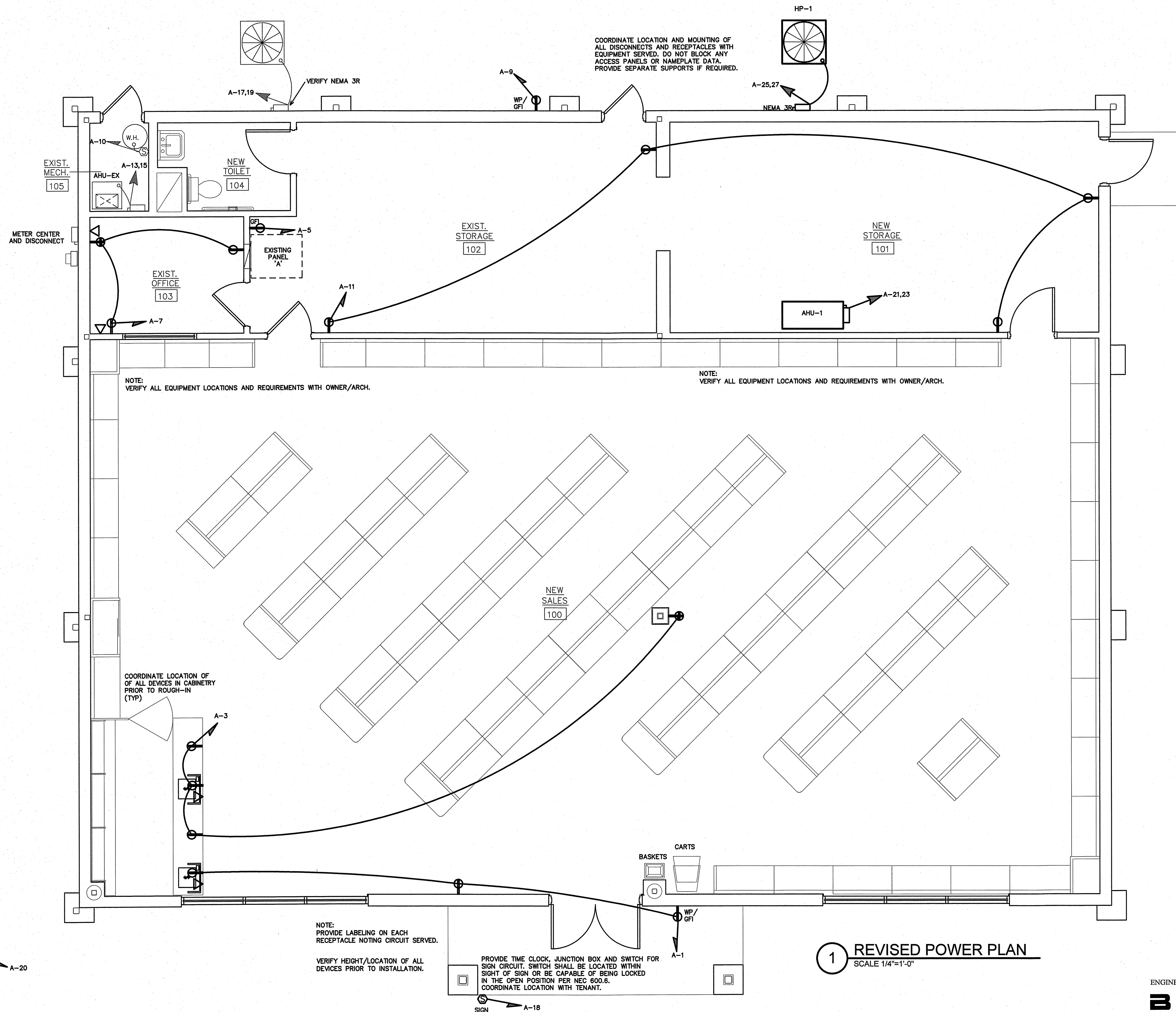
DWG BY: JQ

CKD BY: BEB

REVISIONS

SHEET NO.

E-4



1 REVISED POWER PLAN
SCALE 1/4"=1'-0"

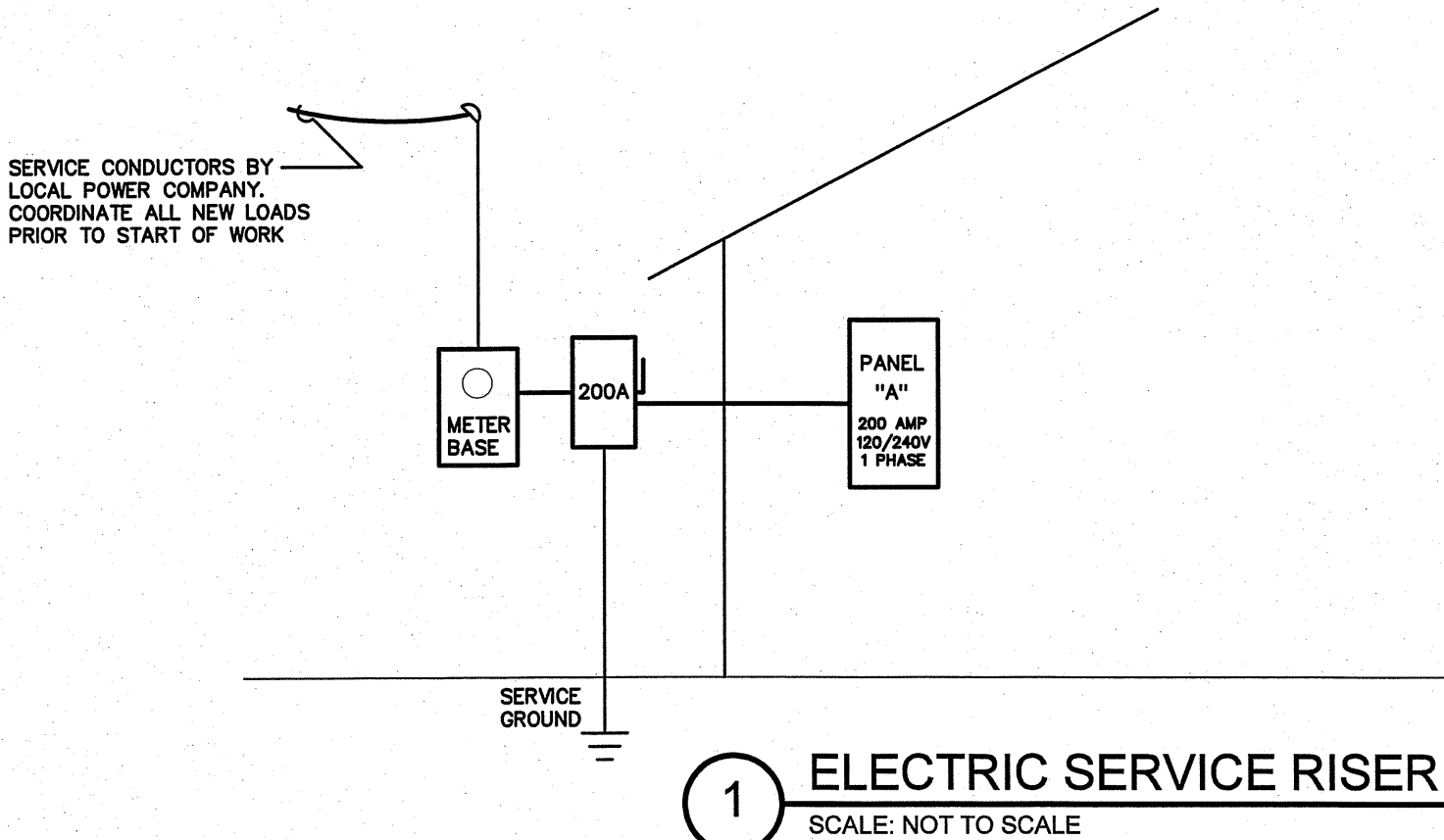
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ABC Newport Add. E5				MAKE: SIEMENS		RATING: 120/240V 1 PHASE 3 WIRE				200A MAIN CIRCUIT BREAKER			
EXISTING PANEL- 'A'				TYPE: IN LOAD CENTER		MOUNTING: FLUSH				EQUIPMENT GROUND BUS ☒ YES ☐ NO			
						MINIMUM AIC: VERIFY				SERVICE ENTRY RATED ☐ YES ☒ NO			
LOAD SERVICE		CKT BRKR	WATTS PER PHASE A B	CKT NO	NEUTRAL A B	CKT NO	WATTS PER PHASE A B	CKT BRKR	LOAD SERVICE				
NIGHT LIGHTS		20A	----	1	✓	2	----	20A	REC. STOR. & SALES				
LIGHTS SALES		20A	----	3	✓	4	----	20A	REC. OFFICE				
LIGHTS SALES		20A	----	5	✓	6	----	20A	REC. CASH REG.				
LIGHTS STORAGE		20A	----	7	✓	8	----	20A	SPARE				
SIGN		20A	----	9	✓	10	----	20A	REC. CASH REG.				
CANOPY LIGHTS		20A	----	11	✓	12	----	20A	WATER HEATER				
AIR HANDLER		125A	----	13	✓	14	----	20A	WELL PUMP				
			----	15	✓	16	----	20A	SITE LIGHT				
COND. UNIT		60A	----	17	✓	18	----	20A	DISPLAY LIGHTS				
			----	19	✓	20	----		SPACE				
SPACE			----	21	✓	22	----		SPACE				
SPACE			----	23	✓	24	----		SPACE				
SPACE			----	25	✓	26	----		SPACE				
SPACE			----	27	✓	28	----		SPACE				
SPACE			----	29	✓	30	----		SPACE				
SPACE			----	31	✓	32	----		SPACE				
SPACE			----	33	✓	34	----		SPACE				
SPACE			----	35	✓	36	----		SPACE				
SPACE			----	37	✓	38	----		SPACE				
SPACE			----	39	✓	40	----		SPACE				
SPACE			----	41	✓	42	----		SPACE				
NOTES		SUB-TOTALS 'B'		----	----	200A BUS	----	SUB-TOTALS 'A'		TOTAL CONNECTED LOAD			
				----	----	200A LUGS	----	SUB-TOTALS 'B'					
				----	----	200A FEED	----	GRAND TOTAL					
				----	----	VERIFY SIZE	----	AMPS/PHASE					

VERIFY AHU-X
IS FUSED PER
CODE

ABC Newport Add. E5				MAKE: SIEMENS		RATING: 120/240V 1 PHASE 3 WIRE		200A MAIN CIRCUIT BREAKER	
REVISED PANEL- 'A'				TYPE: IN LOAD CENTER		MOUNTING: FLUSH		EQUIPMENT GROUND BUS ☒ YES ☐ NO	
						MINIMUM AIC: VERIFY		SERVICE ENTRY RATED ☐ YES ☒ NO	
LOAD SERVICE		CKT BRKR	WATTS PER PHASE A B	CKT NO	NEUTRAL A B	CKT NO	WATTS PER PHASE A B	CKT BRKR	LOAD SERVICE
REC- CASH REGISTER		20A	540	1	✓	2	800	20A	LTS- SALES
REC- CASH REGISTER		20A		360	3	4		1460	20A
REC- PANEL		20A	180	5	✓	6	975	20A	LTS- BACK AREA
REC- OFFICE		20A		720	7	8		141	20A
REC- EXTERIOR		20A	180	9	✓	10	1650	20A	WATER HEATER
REC- STORAGE		20A		720	11	12		980	20A
AHU-X		125A	5520	13	✓	14	1200	20A	WELL PUMP
				5520	15	16		1200	20A
HP-X		60A	3324	17	✓	18	1200	20A	SITE LIGHT
				3324	19	20		1200	20A
AHU-1		30A	2496	21	✓	22	----	20A	SIGN
				2496	23	24	----	20A	MONUMENTAL SIGN
HP-1		30A	2172	25	✓	26	----	20A	SPARE
				2172	27	28	----	20A	SPARE
SPACE			----	29	✓	30	----	20A	SPARE
SPACE			----	31	✓	32	----	20A	SPACE
SPACE			----	33	✓	34	----	20A	SPACE
SPACE			----	35	✓	36	----	20A	SPACE
SPACE			----	37	✓	38	----	20A	SPACE
SPACE			----	39	✓	40	----	20A	SPACE
SPACE			----	41	✓	42	----	20A	SPACE
NOTES		SUB-TOTALS 'B'		14412	15312	200A BUS	5825	4981	SUB-TOTALS 'A'
NEW/REVISED CIRCUIT						200A LUGS	14412	15312	SUB-TOTALS 'B'
EXISTING CIRCUIT						200A FEED	20237	20273	GRAND TOTAL
						VERIFY SIZE	169A	169A	AMPS/PHASE
NEC ALLOWABLE DEMAND FACTORS				DIVERSIFIED LOAD SUMMARY					
① DEMAND FACTORS PER NEC 220				LOAD TYPE				DEMAND FACTOR	
② LARGEST OF: NEC TABLE 220.12 OR CONNECTED LOAD				GENERAL LIGHTING				125%	2219
③ NEC TABLE 220.56				TRACK LIGHTING				125%	----
④ NEC 220.51				GENERAL USE				100%/NEC	900
⑤ NEC 220.43A, 200 VA/LINEAR FT				RECEPTACLES				100%/NEC	1800
⑥ NON-COINCIDENT LOADS, LARGEST OF THE TWO LOADS IS COUNTED				MOTORS AND EQUIPMENT				LARGEST 100% ALL OTHERS 125%	900
				WATER HEATERS				125%	900
				KITCHEN EQUIPMENT				100%	7992
				FIX. ELEC. SPACE HEAT.				100%	8952
				SHOW WINDOW LIGHTS				125%	18644
				SIGN				125%	2063
				MISC				100%	----
				PHASE (TOTAL VA)				21574	21153
				TOTAL VA				180A	176A
				TOTAL AMPS					
				VOLT AMPS = 178A					TOTAL AMPS
				VOLTS					

VERIFY AVAILABLE FAULT CURRENT AT SERVICE LOCATION WITH LOCAL POWER COMPANY. PROVIDE INFORMATION TO ENGINEER TO CALCULATE MINIMUM PANEL AIC RATING PRIOR TO RELEASING GEAR. AIC RATING ON PANELS ARE FOR PERMIT REVIEW AND PRICING ONLY. EC SHALL PROVIDE LABELING INDICATING FAULT CURRENT AT SERVICE ENTRY AND ON ALL PANELS PRIOR TO ENERGIZING.



1 ELECTRIC SERVICE RISER
SCALE: NOT TO SCALE

NOTE:
THE ELECTRICAL SERVICE IS EXISTING AND SHOWN FOR REFERENCE ONLY.
NO NEW WORK IS REQUIRED.

ABC Newport Add. E5					
EQUIPMENT WIRING SCHEDULE					
EQUIPMENT	MCA	MOCP	VOLTS	PH	WIRE SIZE
AHU-1	28A	30A	240V	1	2-#10, 1-#10 GND IN 3/4" CONDUIT
HP-1	18.1A	30A	240V	1	2-#10, 1-#10 GND IN 3/4" CONDUIT

NOTE:
THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT ELECTRICAL REQUIREMENTS PRIOR TO ROUGH-IN AND RELEASING GEAR. ADJUST BREAKER, WIRE SIZES, ETC. AS REQUIRED.

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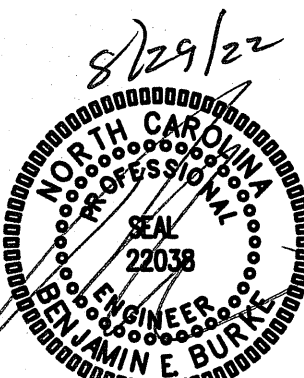
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PANELS & RISER

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