



McNair Hall Exterior Facade Repairs Project

NC A&T State University
McNair Hall
1601 East Market Street
Greensboro, NC 27401
SCO NO: 2326582-01A

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ENGINEER STATE LICENSE SEAL

PROJECT NAME AND ADDRESS:

NC A&T State University
McNair Hall
Exterior Facade Repairs Project
SCO NO: 23-26582-01A
McNair Hall
1601 East Market Street
Greensboro, NC 27401

ISSUE DATE:

10.17.2023

ISSUE FOR:
BID DOCUMENTS
NOT FOR CONSTRUCTION

ADDENDUM:
No. DATE DESCRIPTION:

PROJECT TEAM:

DESIGNED BY:
SSS
DRAWN BY:
LJG
APR REVIEWER:
LTH

TERRACON'S PROJECT NUMBER:
FY226138

SHEET TITLE:
COVER SHEET

SHEET NUMBER:

G-101

CLIENT
Mr. Shaban K. Kaji, PE, M ASCE
Project Manager

North Carolina Agricultural and
Technical University

Office of the University Engineer
DeHuguley (Facility) Building
1601 East Market Street
Greensboro, North Carolina 27411

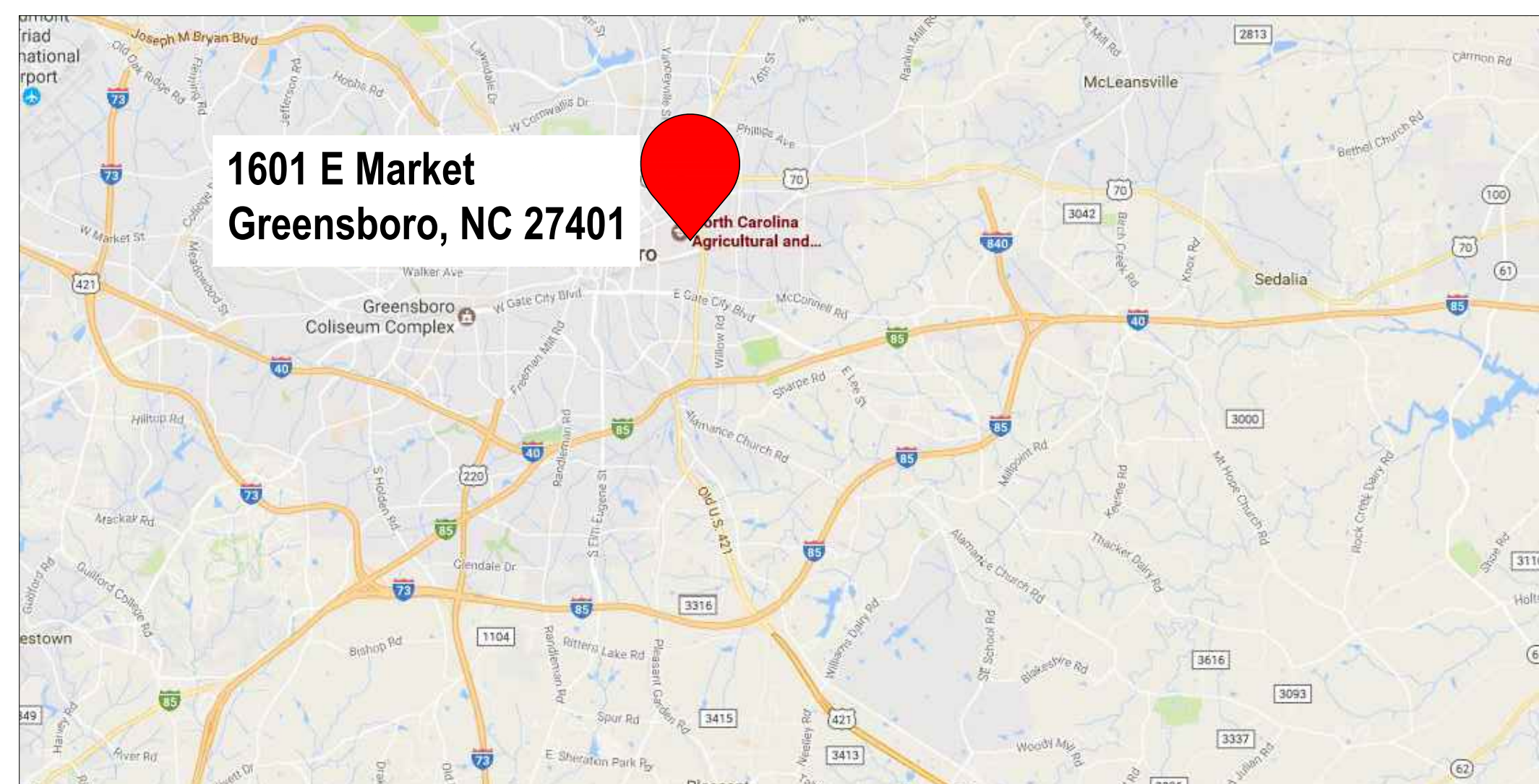
ENGINEERING CONSULTANT

TERRACON CONSULTANTS, INC.
7327-G West Friendly Ave.
Greensboro, North Carolina

Mr. Stewart S. Swing, E.I., RWC, RRC
Senior Project Manager | Facilities
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Project Location



VICINITY MAP



LOCATION MAP

SCOPE OF WORK

1. CONTRACTOR IS TO FIELD VERIFY ALL DIMENSIONS.
2. REMOVE AND REPLACE ALL PERIMETER SEALANT AT WINDOW PERIMETER JOINTS.
3. REMOVE EXISTING GLAZING/GASKETS AT WINDOWS. INSTALL NEW WET GLAZING AT WINDOWS. WET GLAZING SHOULD BE INSTALLED IN A MANNER THAT IS CLEAN AND UNIFORM. SEALANT SHOULD EXTEND A MINIMUM OF A 1/4" ONTO FRAME AND GLAZING.
4. REMOVE EXISTING BRICK MASONRY AND THROUGH-WALL FLASHING AS INDICATED ON DRAWINGS AND REPLACE WITH A NEW THROUGH-WALL FLASHING SYSTEM AS DETAILED. THROUGH-WALL FLASHING ABOVE WINDOWS TO EXTEND BEYOND JAMBS A MINIMUM OF 8 INCHES. END DAMS ARE TO BE INSTALLED AT ALL THROUGH-WALL FLASHING TERMINATIONS.
5. AT RIBBON WINDOWS, REMOVE THE EXISTING BRICK MASONRY, CONCRETE INFILL, THROUGH-WALL FLASHING AND EXISTING WATERPROOFING AND REPLACE WITH NEW COLD APPLIED WATERPROOFING, CONCRETE INFILL, THROUGH-WALL FLASHING AND NEW BRICK MASONRY. END DAMS ARE TO BE INSTALLED AT ALL THROUGH-WALL FLASHING TERMINATIONS.
 - a. CONTRACTOR TO CORE EXISTING CONCRETE INFILL AND TEST FOR COMPRESSIVE STRENGTH.
6. CLEAN AREAS AS INDICATED ON DRAWINGS WITH A MASONRY CLEANER ONCE ALL MASONRY AND SEALANT REMEDIAL REPAIRS ARE COMPLETED AND CURED.
7. INSTALL MASONRY PENETRATING SEALER AT AREAS INDICATED ON DRAWINGS.
8. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL ROOFS AND AREAS WHERE WORK WILL BE CONDUCTED. IF ROOF AREAS ARE DAMAGED, CONTACTOR IS REQUIRED TO FIX ROOF MEMBRANE TO A WARRANTABLE STANDARD.

Symbols

- ELEVATION/DETAIL/SECTION LABEL
- SHEET SHOWN ON
- SHADING IDENTIFIES EXISTING CONDITIONS AND NOT IN SCOPE OF WORK

Abbreviations

- MAX. MAXIMUM
- MIN. MINIMUM
- N.I.C. NOT IN CONTRACT
- O.C. ON CENTER
- TYP. TYPICAL
- SIM. SIMILAR

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)**
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: McNair Hall Exterior
 Address: 1601 E Market Street, Greensboro, NC Zip Code: 27401
 Owner/Authorized Agent: Shaban Kaji Phone # (336) 285 - 4505 E-Mail: Kaji@ncat.edu
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City/Greensboro County/Guilford State

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	Terracon	Christina Gungay, PE	20723	(704) 564-4903	Christina.Gungay@terracon.com
Electrical					
Fire Alarm					
Plumbing					
Mechanical					
Sprinkler-Standpipe					
Structural					
Retaining Walls >5' High					
Other					

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

2018 NC BUILDING CODE: New Building Addition Renovation
 1st Time Interior Completion
 Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements
 Phased Construction - Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements

2018 NC EXISTING BUILDING CODE: EXISTING: Prescriptive Repair Chapter 14
 Alteration: Level I Level II Level III
 Historic Property Change of Use

CONSTRUCTED: (date) 1987 **CURRENT OCCUPANCY(S)** (Ch. 3): N/A
RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S)** (Ch. 3): N/A
RISK CATEGORY (Table 1604.5): **Current:** I II III IV
Proposed: I II III IV

BASIC BUILDING DATA
Construction Type: I-A I-B IIA IIB IIC IIV V-A V-B
 (check all that apply) I-B IIA IIB IIC IIV V-A V-B
Sprinklers: No Partial Yes NFPA 13 NFPA 13R NFPA 13D
Standpipes: No Yes **Class:** I II III Wet Dry
Fire District: No Yes **Flood Hazard Area:** No Yes
Special Inspections Required: No Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

2018 NC Administrative Code and Policies

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
1 st Floor	0	0	0
2 nd Floor	0	0	0
Mezzanine	0	0	0
1 st Floor	0	0	0
Basement	0	0	0
TOTAL	0	0	0

ALLOWABLE AREA

Primary Occupancy Classification(s):
 Assembly A-1 A-2 A-3 A-4 A-5
 Business
 Educational
 Factory F-1 Moderate F-2 Low
 Hazardous H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM
 Institutional I-1 Condition I-2
 I-2 Condition I-1 I-2
 I-3 Condition I-1 I-2 I-3 I-4 I-5
 I-4
 Mercantile
 Residential R-1 R-2 R-3 R-4
 Storage S-1 Moderate S-2 Low High-piled
 Parking Garage Open Enclosed Repair Garage
 Utility and Miscellaneous

Accessory Occupancy Classification(s): _____
Incidental Uses (Table 509): _____
Special Uses (Chapter 4 - List Code Sections): _____
Special Provisions (Chapter 5 - List Code Sections): _____
Mixed Occupancy: No Yes **Separation:** _____ Hr. **Exception:** 608.5.1
 Non-Separated Use (508.3) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
 Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

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

2018 NC Administrative Code and Policies

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 ¹ AREA	(C) AREA FOR FRONTAGE INCREASE ^{2,3}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ³
1	N/A	N/A	N/A	--	N/A
M	N/A	N/A	N/A	--	N/A
2	OFFICE				
3	OFFICE				

¹ Frontage area increases from Section 506.3 are computed thus:
 a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (P)
 b. Total Building Perimeter = _____ (P)
 c. Ratio (P/P) = _____ (P/P)
 d. W = Minimum width of public way = _____ (W)
 e. Percent of frontage increase $I_f = 100(P/P - 0.25) \times W/30 = \text{_____} (\%)$
² Unlimited area applicable under conditions of Section 507.
³ Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
⁴ The maximum height of open parking garages must comply with Table 406.5.4.
⁵ Frontage increase is based on the unspinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE ¹
Building Height in Feet (Table 504.3) ²			
Building Height in Stories (Table 504.4) ³			

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

2018 NC Administrative Code and Policies

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D	RATING PROVIDED (FW - REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		OHR					
Bearing Walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions		OHR					
Exterior walls		OHR					
North							
East							
West							
South							
Interior walls and partitions		OHR					
Floor Construction including supporting beams and joists		OHR					
Floor Ceiling Assembly		OHR					
Columns Supporting Floors		OHR					
Roof Construction, including supporting beams and joists		OHR					
Roof Ceiling Assembly		OHR					
Columns Supporting Roof		OHR					
Shaft Enclosures - Exit		OHR					
Shaft Enclosures - Other		2HR					
Corridor Separation		OHR					
Occupancy/Fire Barrier Separation		OHR					
Party/Fire Wall Separation		N/A					
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation		0 HR					
Incidental Use Separation							

* Indicate section number permitting reduction

2018 NC Administrative Code and Policies

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.5)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)

LIFE SAFETY SYSTEM REQUIREMENTS

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

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: _____

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 (705.5)
 Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
 Occupant loads for each area
 Exit sign locations (1013)
 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)
 Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
 Location of doors with electromagnetic egress locks (1010.1.9.9)
 Location of doors equipped with hold-open devices
 Location of emergency escape windows (1030)
 The square footage of each fire area (202)
 The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
 Note any code exceptions or table notes that may have been utilized regarding the items above

2018 NC Administrative Code and Policies

ACCESSIBLE DWELLING UNITS (SECTION 1107)

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

ACCESSIBLE PARKING (SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
		96" SPACES	132" SPACES	
TOTAL				

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

SPACE	USE	WATER CLOSETS		URINALS		LAVATORIES		SHOWERS	DRINKING FOUNTAINS
		MALE	FEMALE	MALE	FEMALE	UNISEX	UNISEX		
	EXIST'G								
	NEW								
	REQ'D								

SPECIAL APPROVALS

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

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DESIGNED BY:
 SSS
 DRAWN BY:
 LJG
 APR REVIEWER:
 LTH

TERRACON'S PROJECT NUMBER:

FY226138

SHEET TITLE:

APPENDIX B

SHEET NUMBER:

G-102

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)**

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

Existing building envelope complies with code: No Yes (The remainder of this section is not applicable)

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

Climate Zone: 3A 4A 5A

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

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

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

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**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)**

**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: _____

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N/A

**2018 APPENDIX B
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 Performance Prescriptive
ASHRAE 90.1 Performance Prescriptive

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

**Additional Efficiency Package Options
(When using the 2018 NCEEC; not required for ASHRAE 90.1)**
 C406.2 More Efficient HVAC Equipment Performance
 C406.3 Reduced Lighting Power Density
 C406.4 Enhanced Digital Lighting Controls
 C406.5 On-Site Renewable Energy
 C406.6 Dedicated Outdoor Air System
 C406.7 Reduced Energy Use in Service Water Heating

****NOTE:
APPENDIX B IS BASED ON CORE AND SHELL DRAWINGS AS
EXISTING CONDITIONS.**

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N/A

N/A

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LJG
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APPENDIX B

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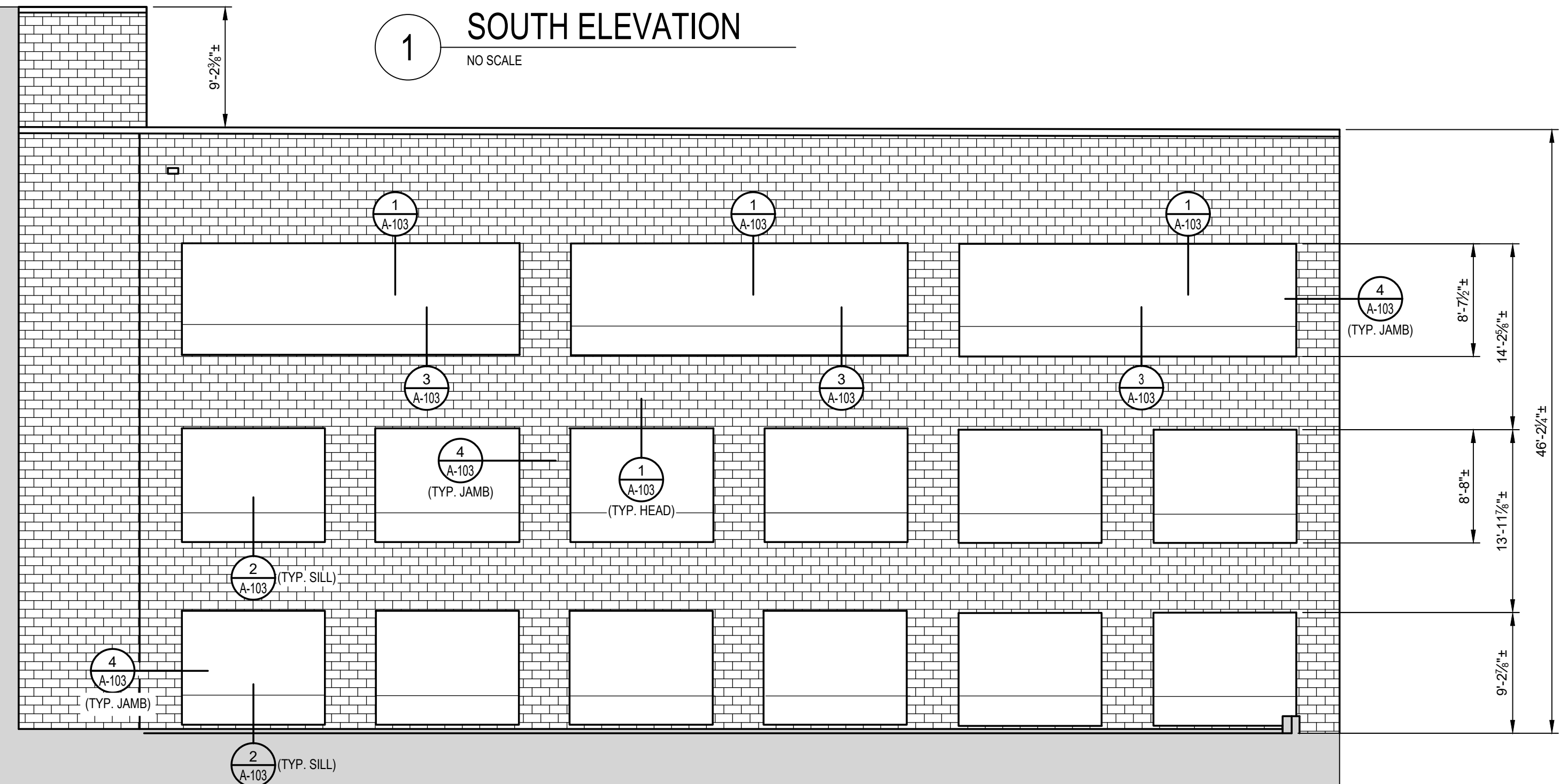
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BUILDING ELEVATIONS

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A-101



1 SOUTH ELEVATION
NO SCALE



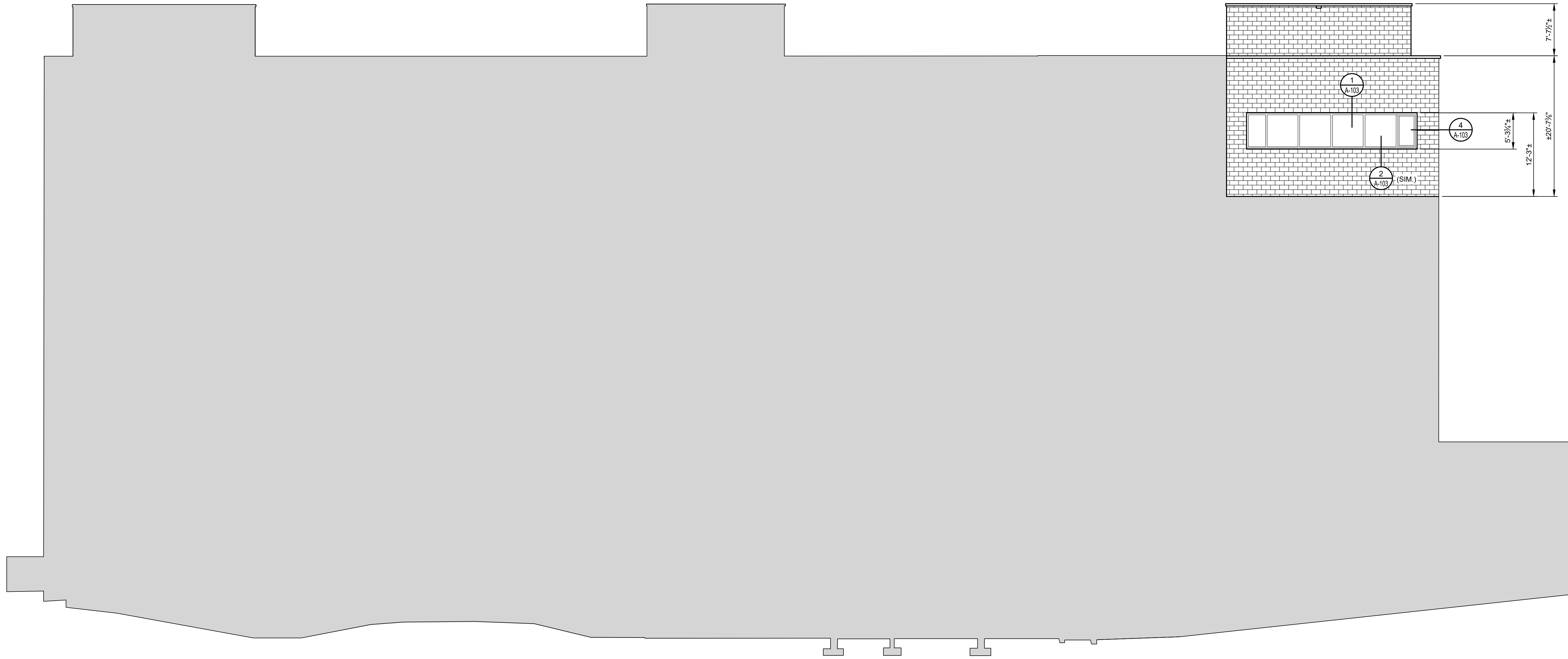
2 SOUTH ELEVATION
Scale: 1/8" = 1'-0"



McNair Ha

APPROX. SCOPE OF WORK

1 NORTH/EAST ELEVATION
NO SCALE



2 NORTH ELEVATION
Scale: 1/8" = 1'-0"



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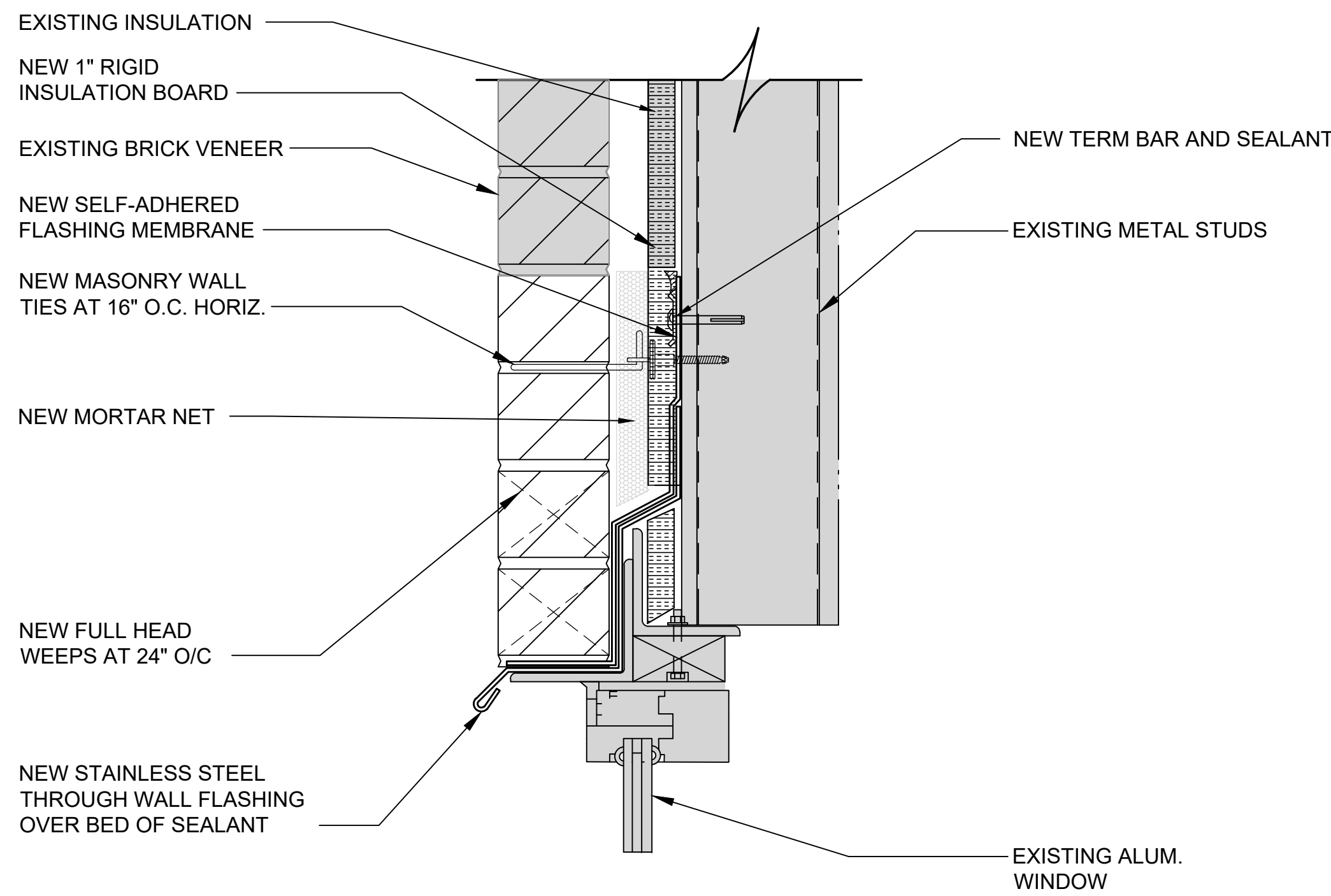
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A-102

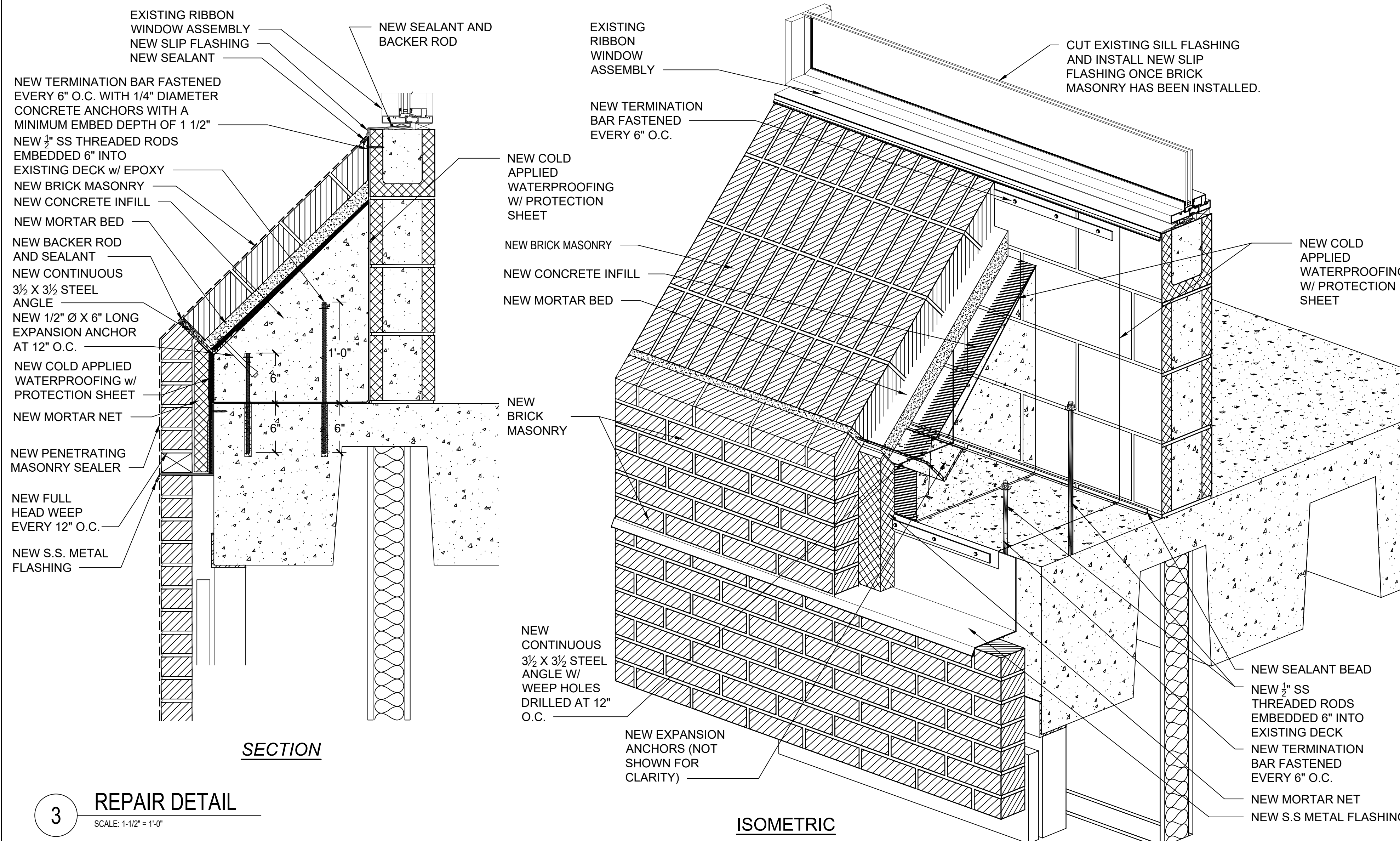


1 WINDOW HEAD DETAIL
Scale: NTS

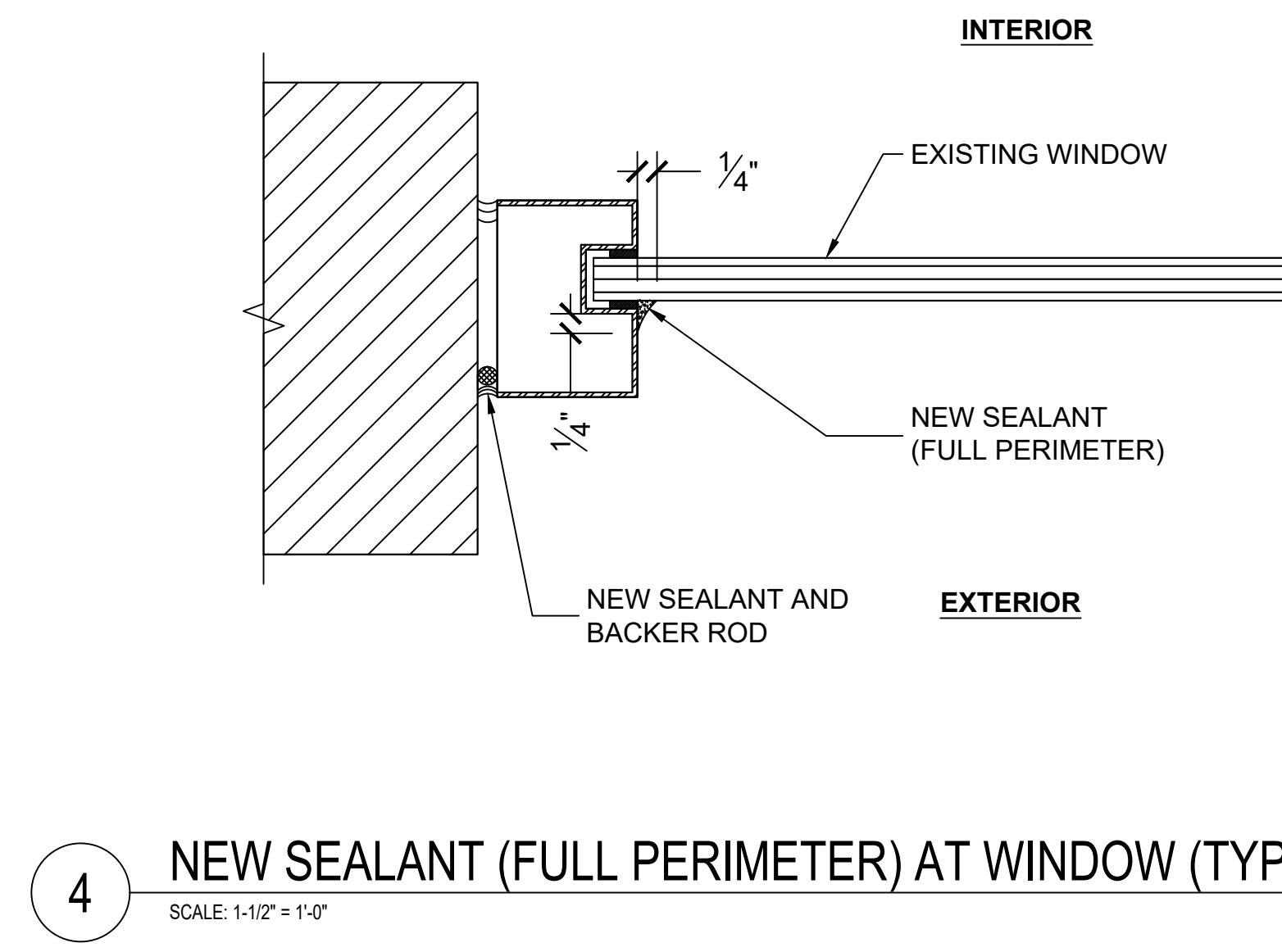


2 WINDOW SEALANT DETAIL
Scale: NTS

4
A-103
TYP.



3 REPAIR DETAIL
SCALE: 1-1/2" = 1'-0"



4 NEW SEALANT (FULL PERIMETER) AT WINDOW (TYP.)
SCALE: 1-1/2" = 1'-0"

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