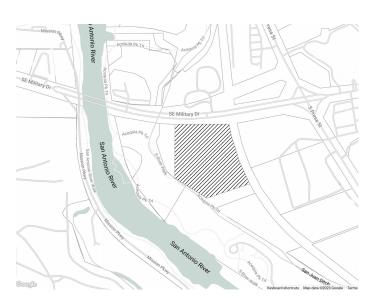


1930 SE Military Drive San Antonio, TX 78223

PRESENTATION BY:
JACKIE BLACK
MICHAELLA DODD
ALYCIANA MUNOZ
JODI PRIESMEYER







BUILD

## San Antoino Missions National Historical Park

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101

Date 11.27.23

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| MM FLOOR PLAN MM RCP MM BUILDING ELEVATIONS NS MM 104 / MM BUILDING SELEVATIONS EW MM BUILDING SECTIONS MM MA BUILDING SECTIONS MM WALL SECTION & DETAIL MM ADA BATHROOM MM BATHROOM DETAIL  LE MAIN BUILDING FLOOR PLAN LE GYM FLOOR PLAN LE GYM FLOOR PLAN LE GARAGE RCP LE GYM ELEVATIONS NS LE 104 A LE ELEVATIONS EW LE 104 B LE GARAGE ELEVATIONS LE BUILDING SECTION LE BUILDING SECTION LE WALL SECTION LE WALL SECTION LE WALL DETAILS LE ADA BATHROOM ENLARGED PLAN  FACILITIES SECTION ROOF & WALL DETAILS FACILITIES EXTERIOR ELEVATIONS FACILITIES EXTERIOR ELEVATIONS FACILITIES BUILDING  FACILITIES BUILDING  SHOP FLOOR PLAN FACILITIES BOULDING SECTIONS FACILITIES EXTERIOR BUILDING SECTIONS FACILITIES EXTERIOR BUILDING SECTIONS FACILITIES BUILDING  FACILITIES BUILDING  FACILITIES EXTERIOR ELEVATIONS FACILITIES BUILDING SECTIONS FACILITIES BUILDING SECTIONS FACILITIES BUILDING SECTIONS FACILITIES BOTH SECTION SEW FACILITIES SECTION SECTIONS FACILITIES SECTION SECTIONS FACILITIES SECTION SECTION SEW FACILITIES SECTION SECTIONS FACILITIES SECTION SECTIONS FACILITIES BOTH SECTION SEW FACILITIES SECTIO |   |  |
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San Antoino Missions National Historical Park Headquarters

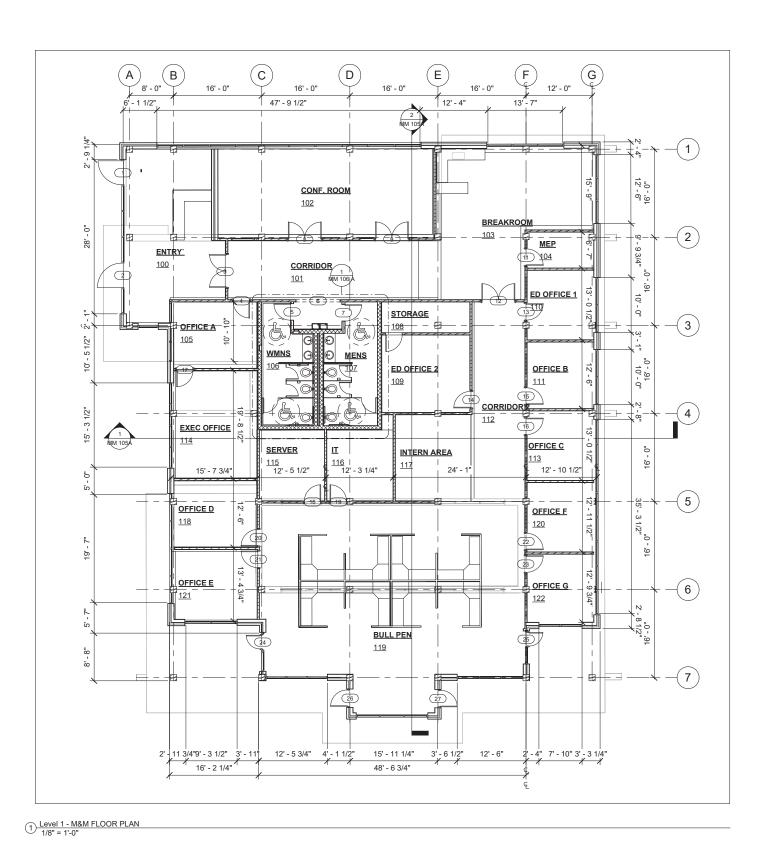
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| Checks  | d by   |        |            |

101 B

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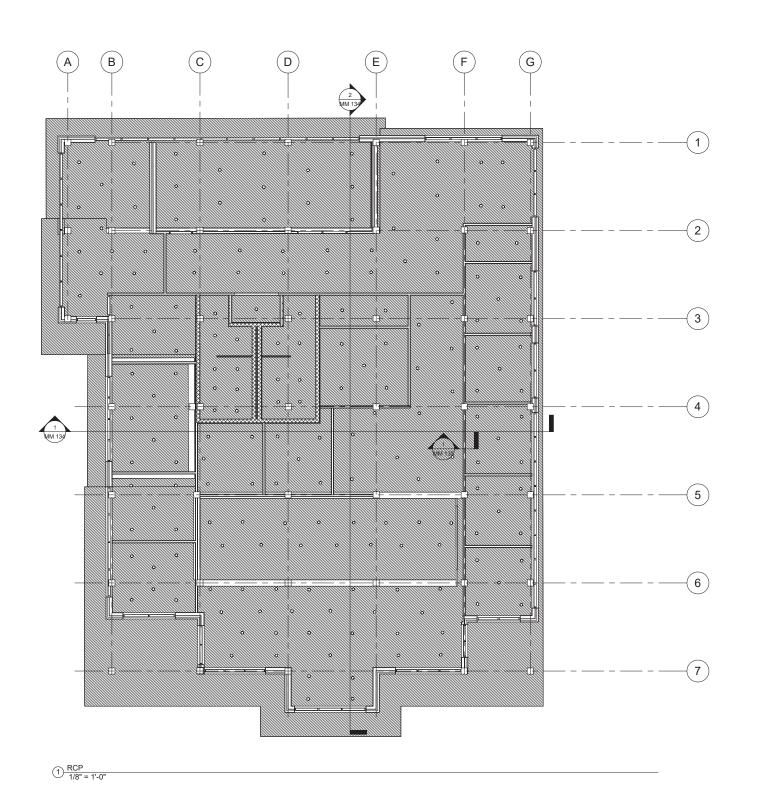


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|          | Michaela Dodd  |
| Drawn by | WIICHACIA DOGG |

MM 102

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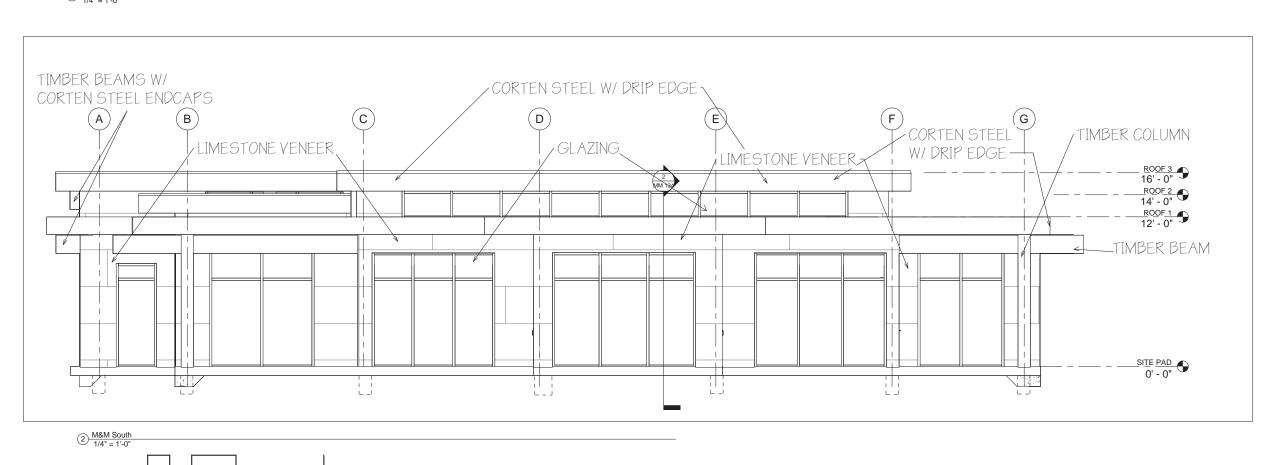


San Antoino Mission National Historical Park Headquarters

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|            | MM 103        |

1/8" = 1'-0"

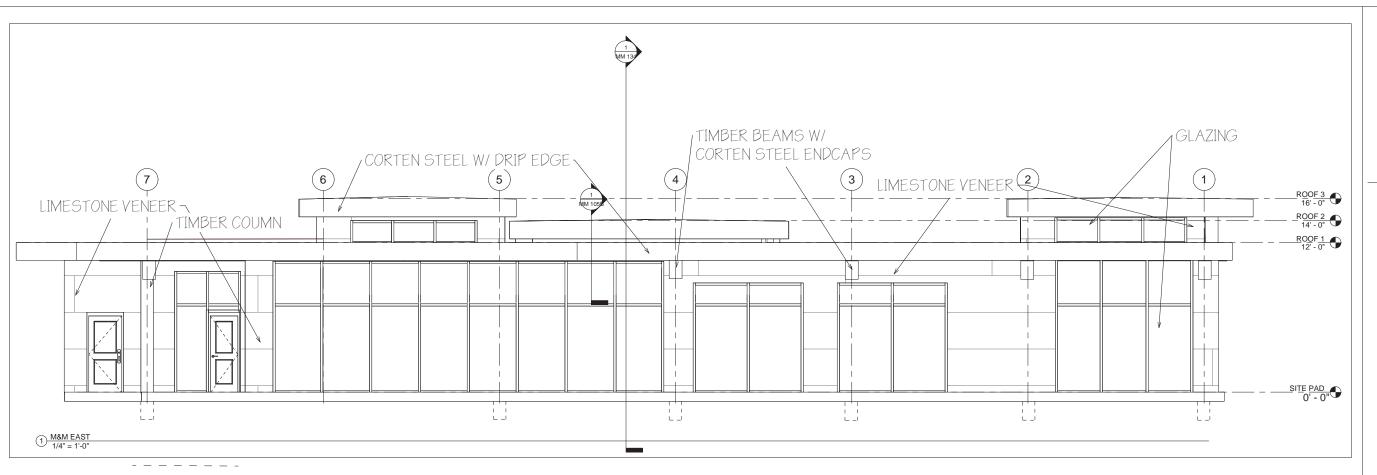




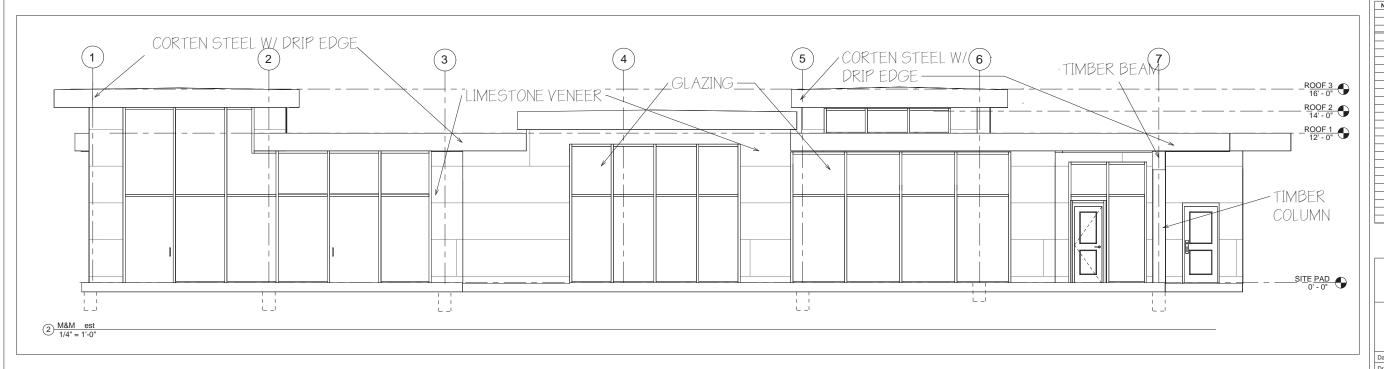
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11.22 Michaela Dodd by -MM 104A 1/4" = 1'-0"







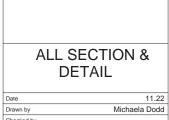


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1/4" = 1'-0"







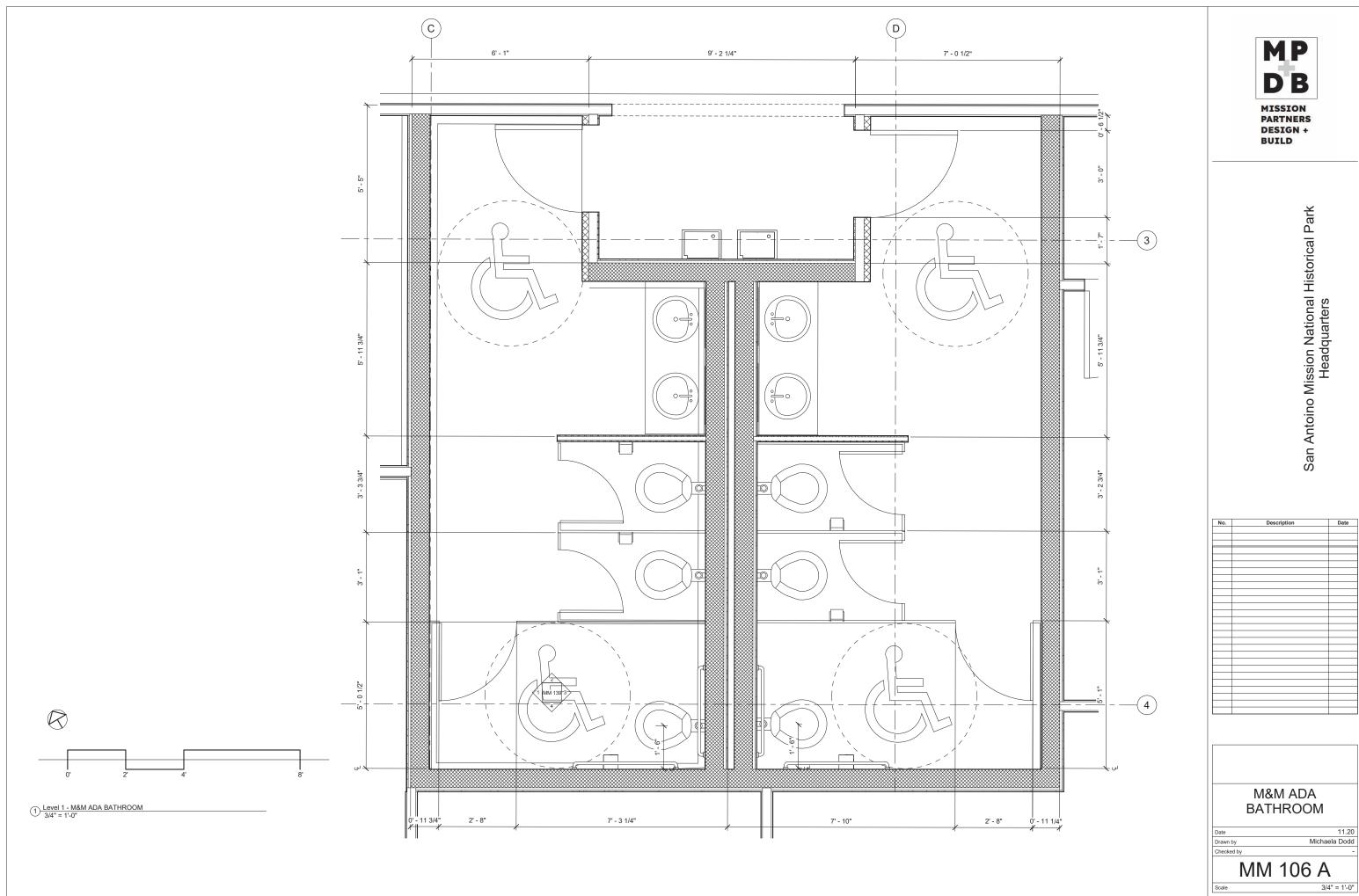
MM 105B

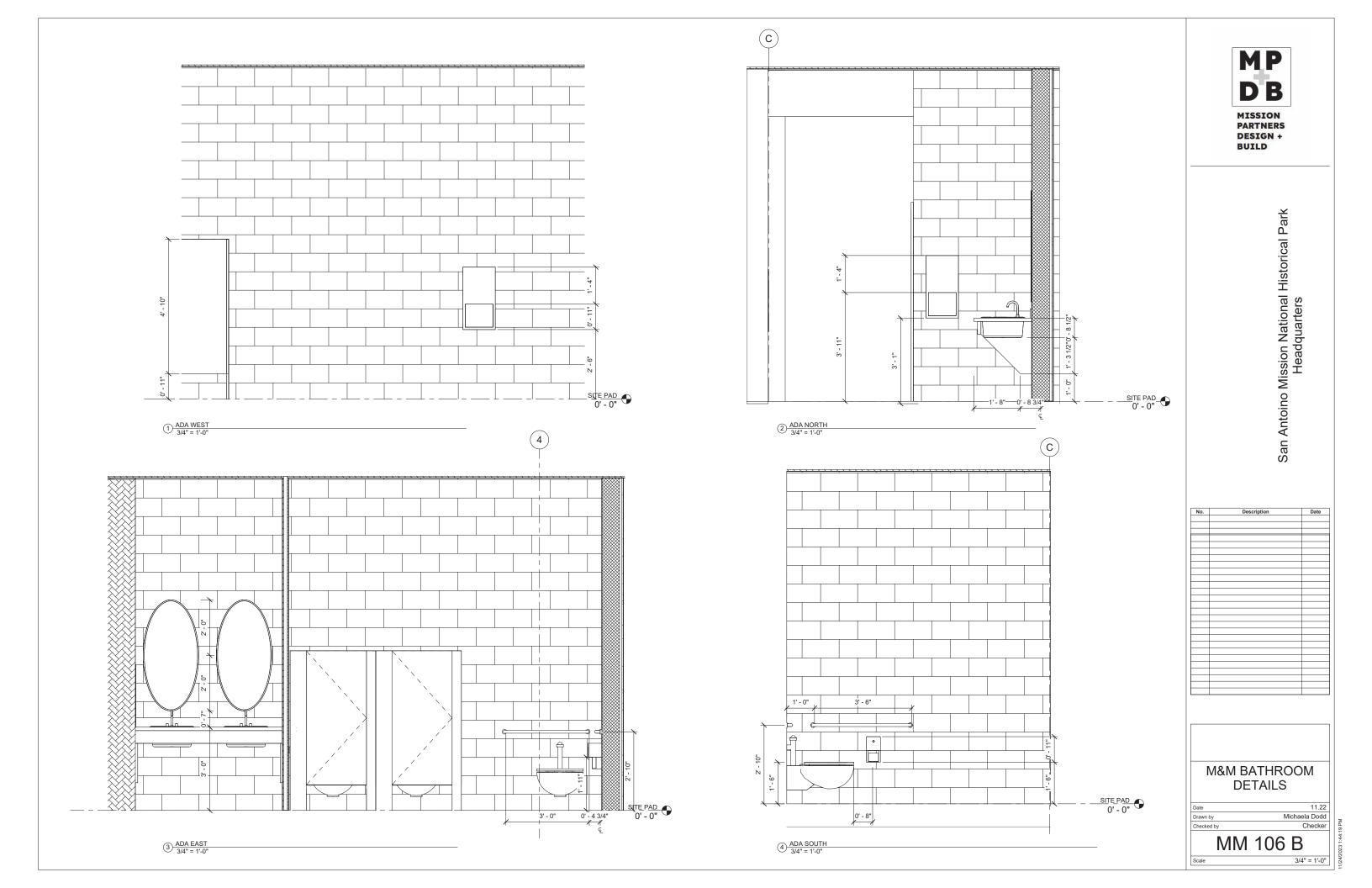
RUBBER ROOFING MEMBRANE -WATERPROOF MEMBRANE RADIANT BARRIER SHEETING -RIGID INSULATION OSB DECKING UNVENTED CAVITY- AIR BATT INSULATION 2 X 10 BLOCKING VAPOR CONTROL LAYER 1 x PLANKING CEILING > 1/2" GYPSUM BOARD 2x6" WOOD STUD

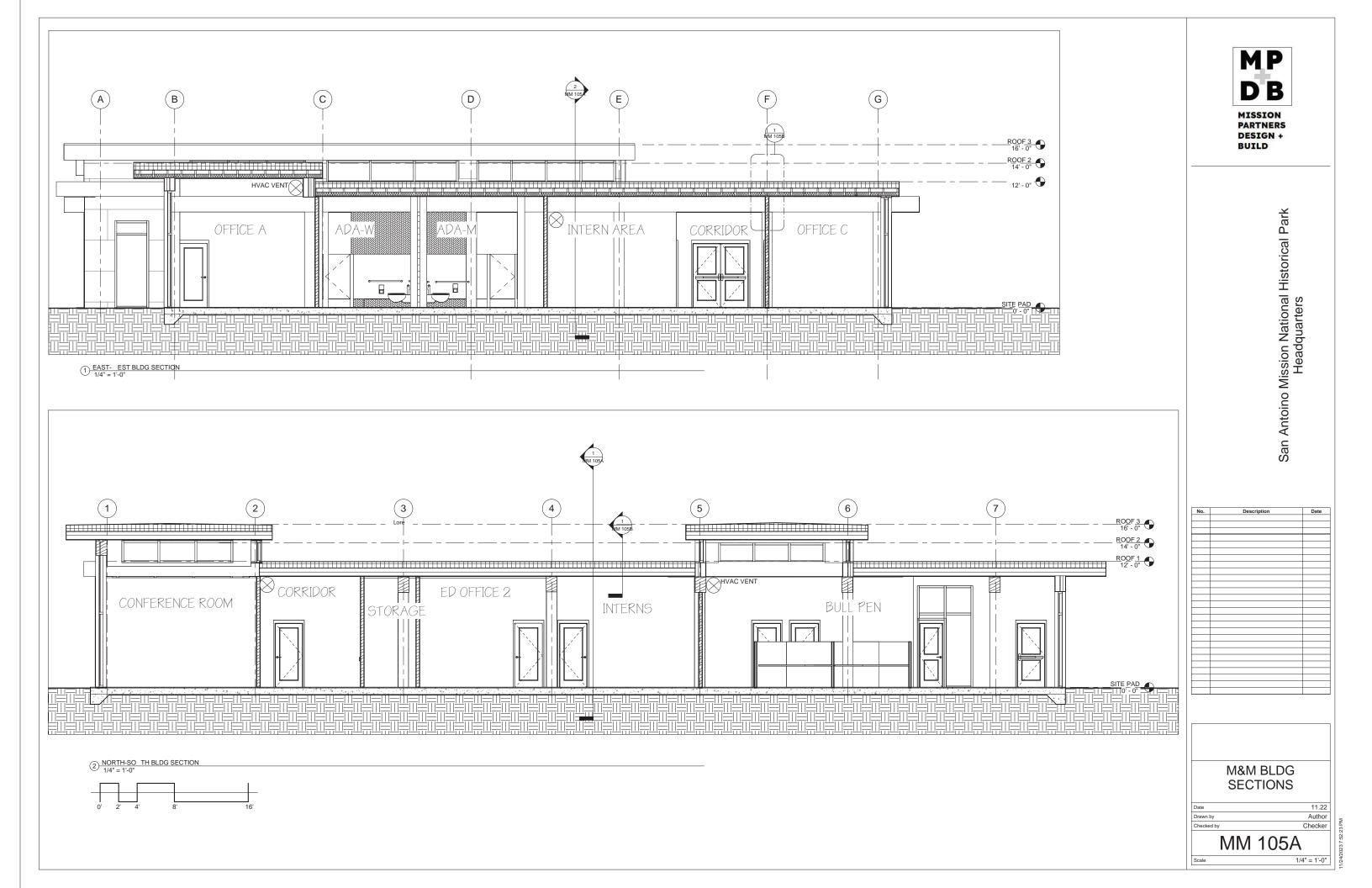
(F) ROOF 1 12' - 0" - RIGID INSULATION OSB DECKING - UNVENTED CAVITY - AIR 2 X 10" BLOCKING BATT INSULATION VAPOR CONTROL LAYER

2 ALL SECTION - Callout 1

1 1/2" = 1'-0"







MP **MISSION PARTNERS** DESIGN + BUILD

SAN ANTONIO MISSIONS NATIONAL HISTORICAL PARK HEADQUARTERS

Description

SAN ANTONIO MISSION'S NPS

LE MAIN BUILDING FLOORPLAN

11/27/2023 Alyciana Munoz

LE102A

3/16" = 1'-0"



-ALL DIMENSIONS ARE FACE OF STRUCTURAL MEMBERS

MP MISSION PARTNERS DESIGN + BUILD



SAN ANTONIO MISSION'S NPS

GYM FLOORPLAN

Alyciana Munoz

LE102B

1/4" = 1'-0"

11/27/2023

SAN ANTONIO MISSION'S NPS

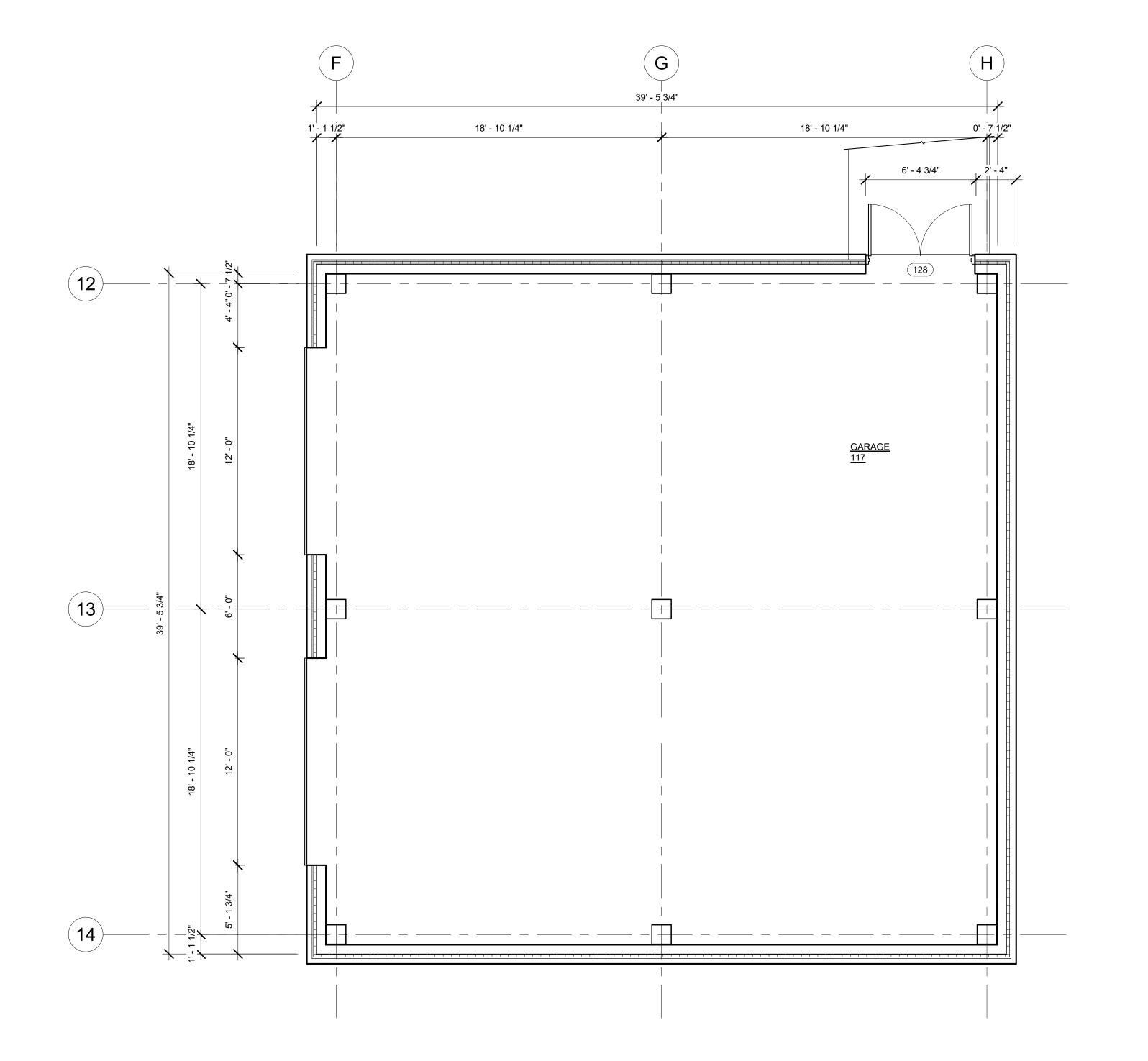
GARAGE FLOOPLAN

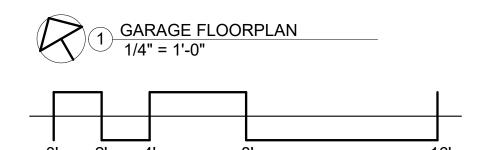
11/27/2023 Alyciana Munoz

Checker

LE102C

1/4" = 1'-0"





GENERAL NOTES

-ALL DIMENSIONS ARE FACE OF STRUCTURAL MEMBERS



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SAN ANTONIO MISSION'S NPS

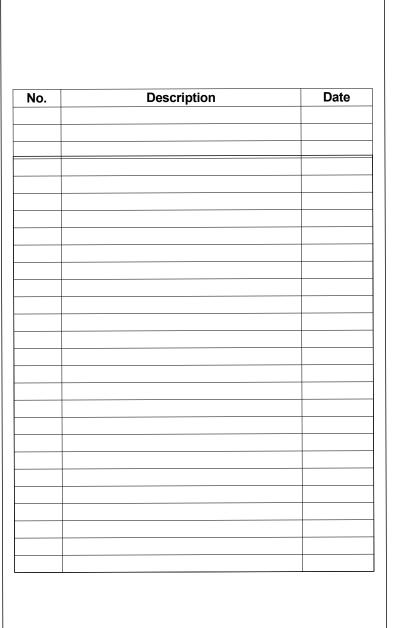
LE MAIN BUILDING RCP

Drawn by Alyciana Munoz

LE103A

3/16" = 1'-0"



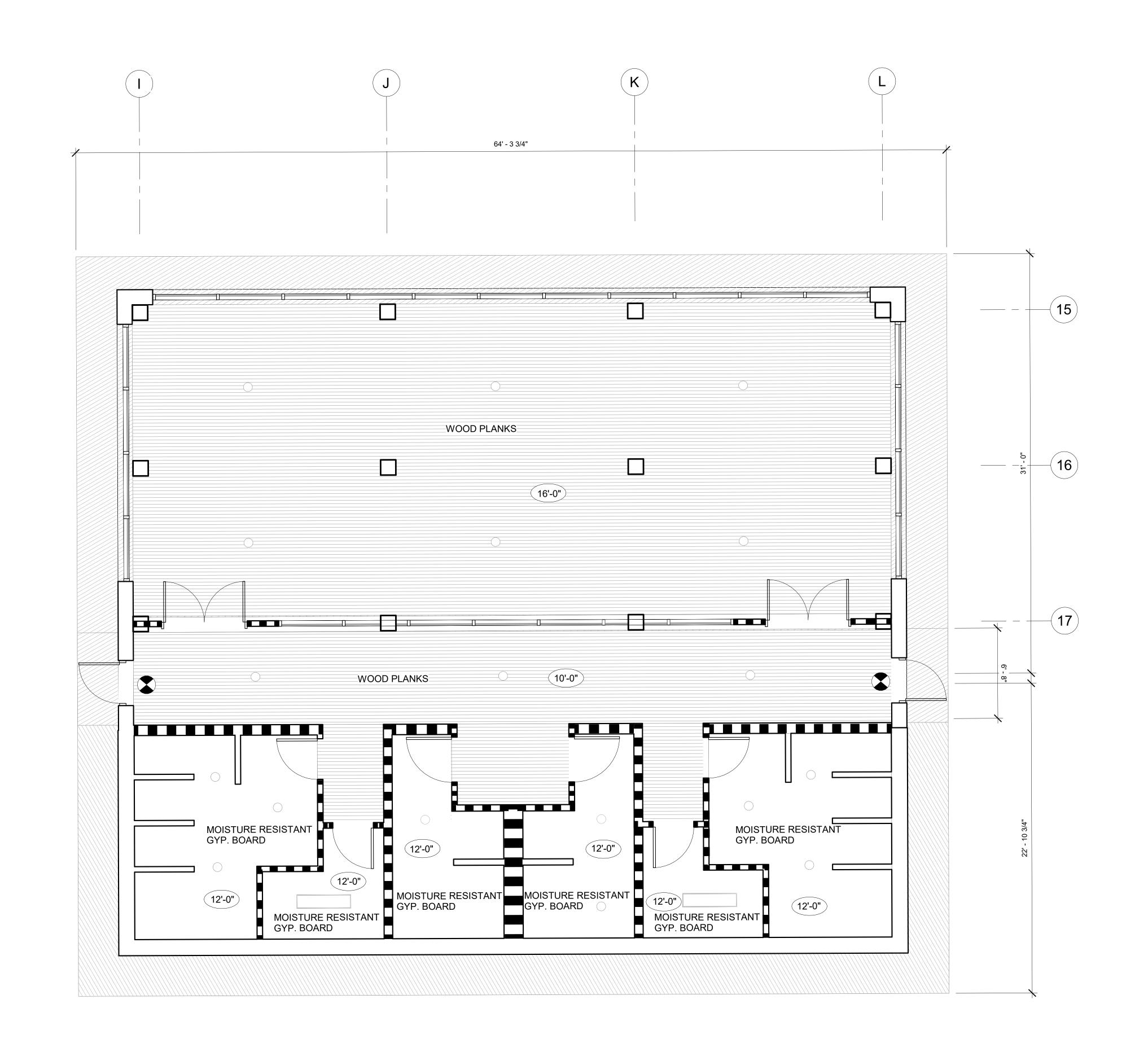


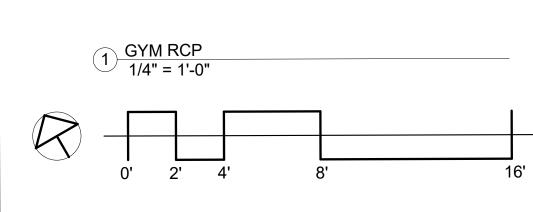
SAN ANTONIO MISSION'S NPS

**GYM RCP** 

11/27/2023 Alyciana Munoz

LE103B 1/4" = 1'-0"





GENERAL NOTES AND SYMBOLS

O RECESSED CAN LIGHT RECESSED LIGHT

EXIT LIGHTS

■ ■ PARTITION PENETRATING CEILING PLANE

CEILING HEIGHTS

Description

SAN ANTONIO MISSION'S NPS

GARAGE RCP

Alyciana Munoz

LE103C

1/4" = 1'-0"

11/27/2023

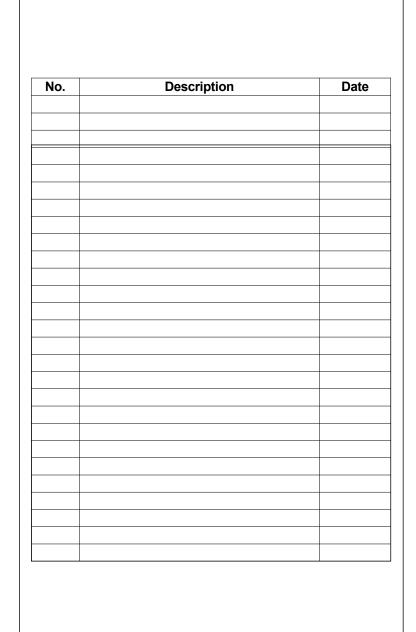
47' - 2" WOOD PLANKS 14'-0"

GENERAL NOTES AND SYMBOLS

O RECESSED CAN LIGHT RECESSED LIGHT EXIT LIGHTS

CEILING HEIGHTS





SAN ANTONIO MISSION'S NPS

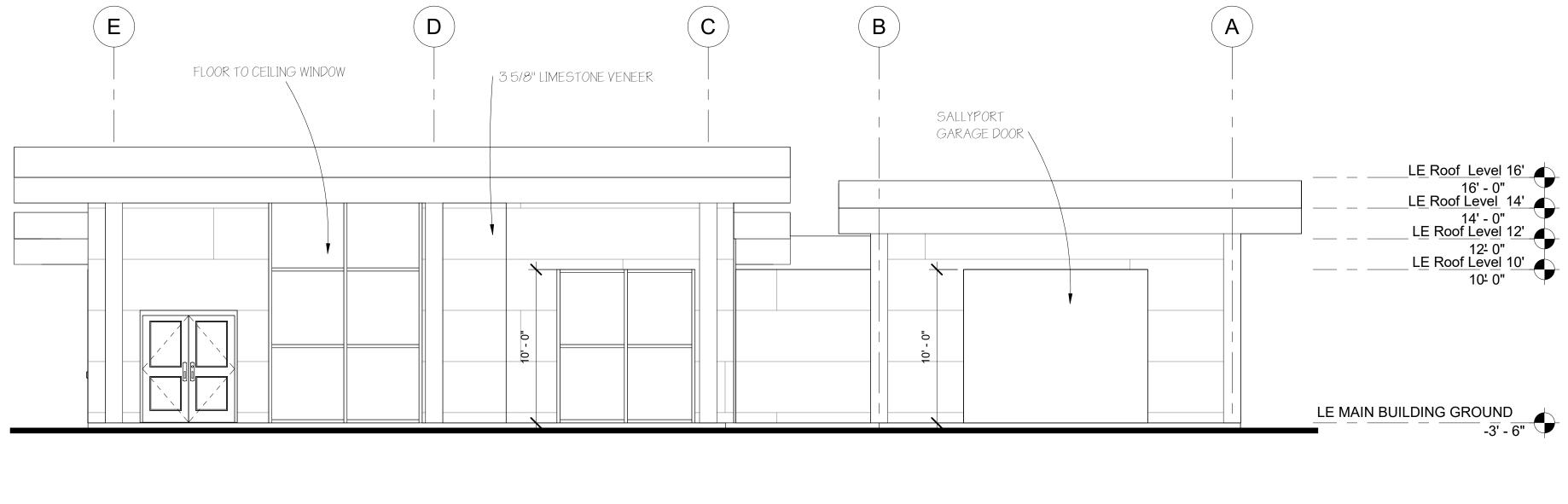
LE ELEVATIONS N/S

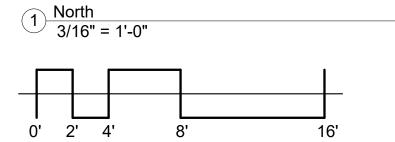
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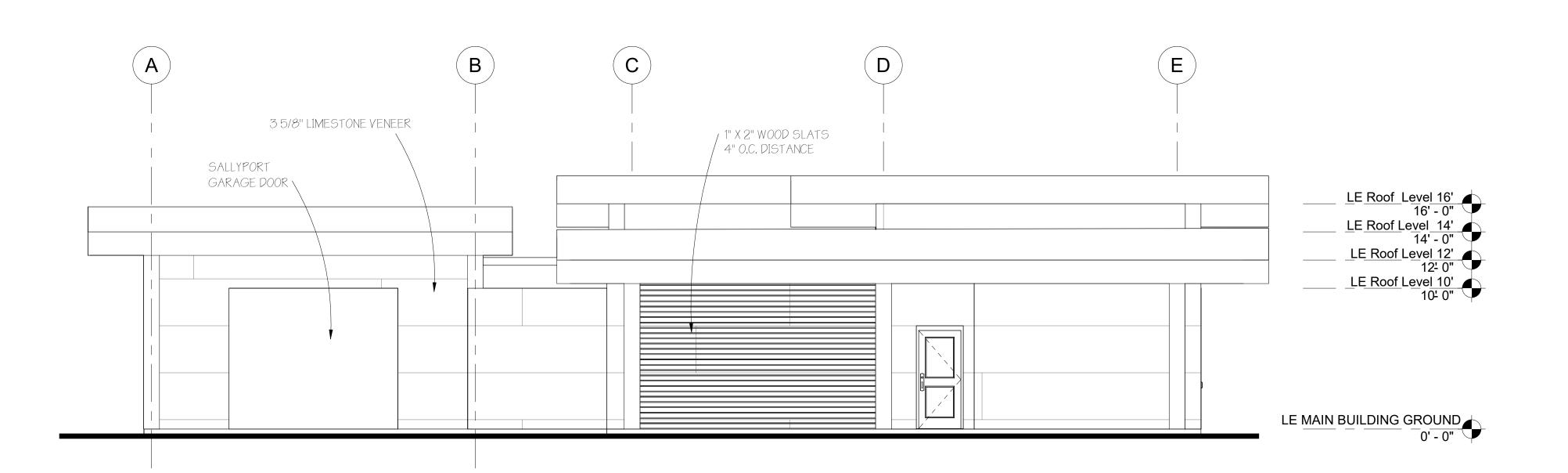
11/27/2023 Alyciana Munoz

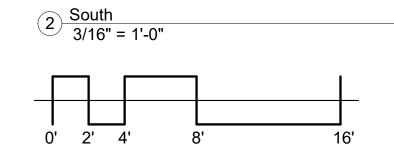
LE104A

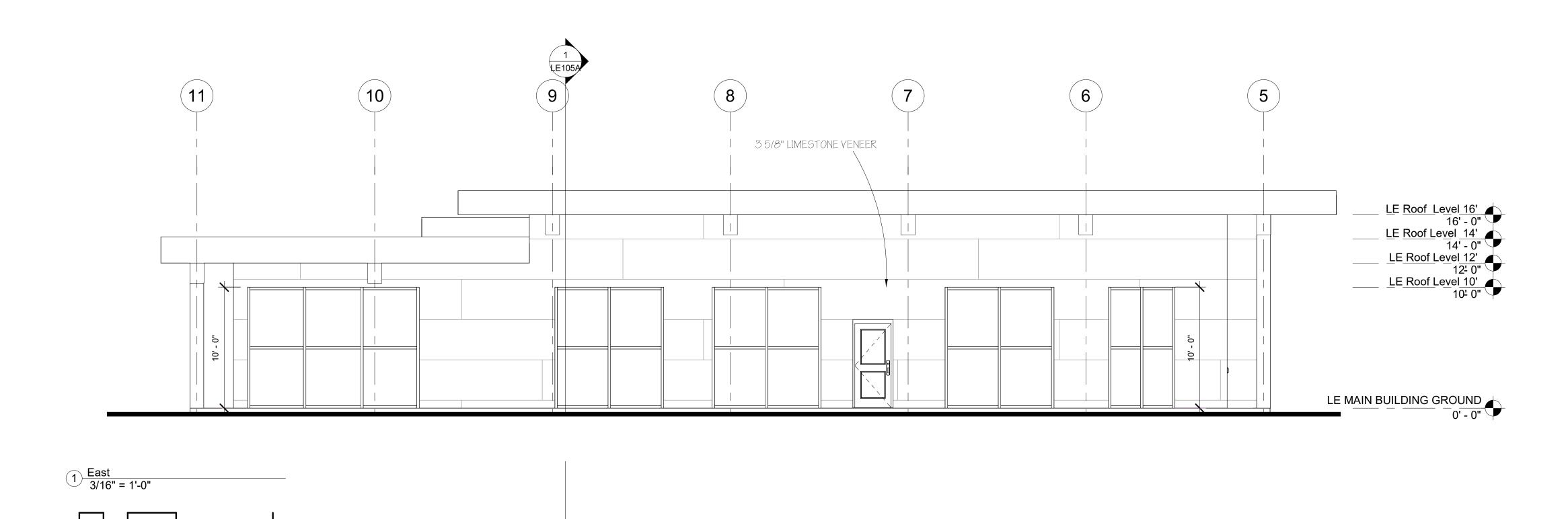
3/16" = 1'-0"

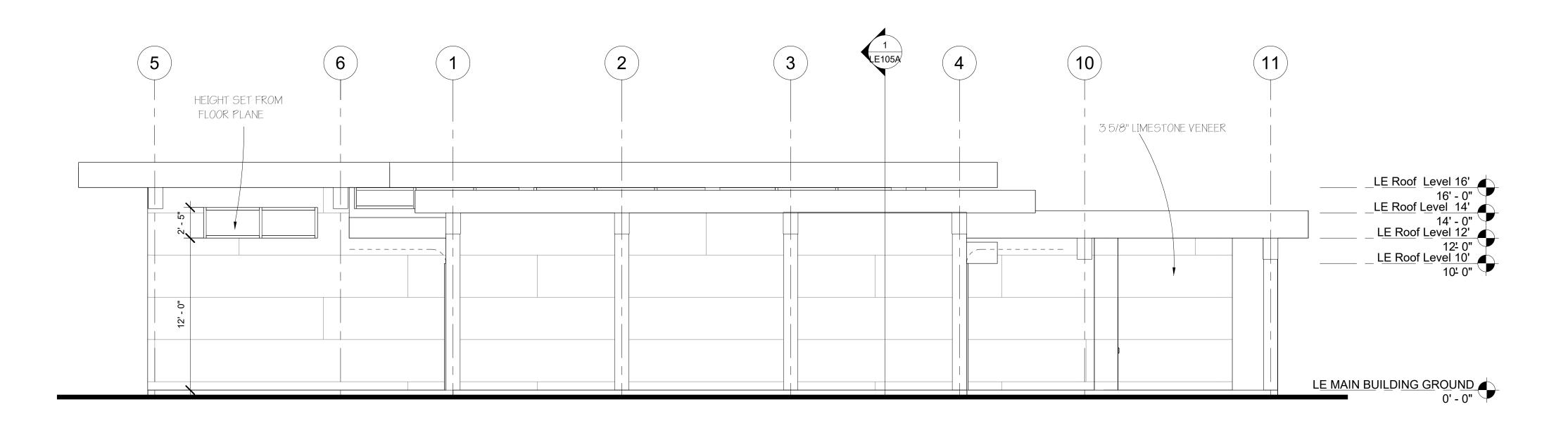


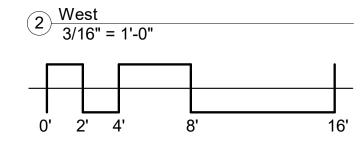














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SAN ANTONIO MISSION'S NPS

LE ELEVATIONS E/W

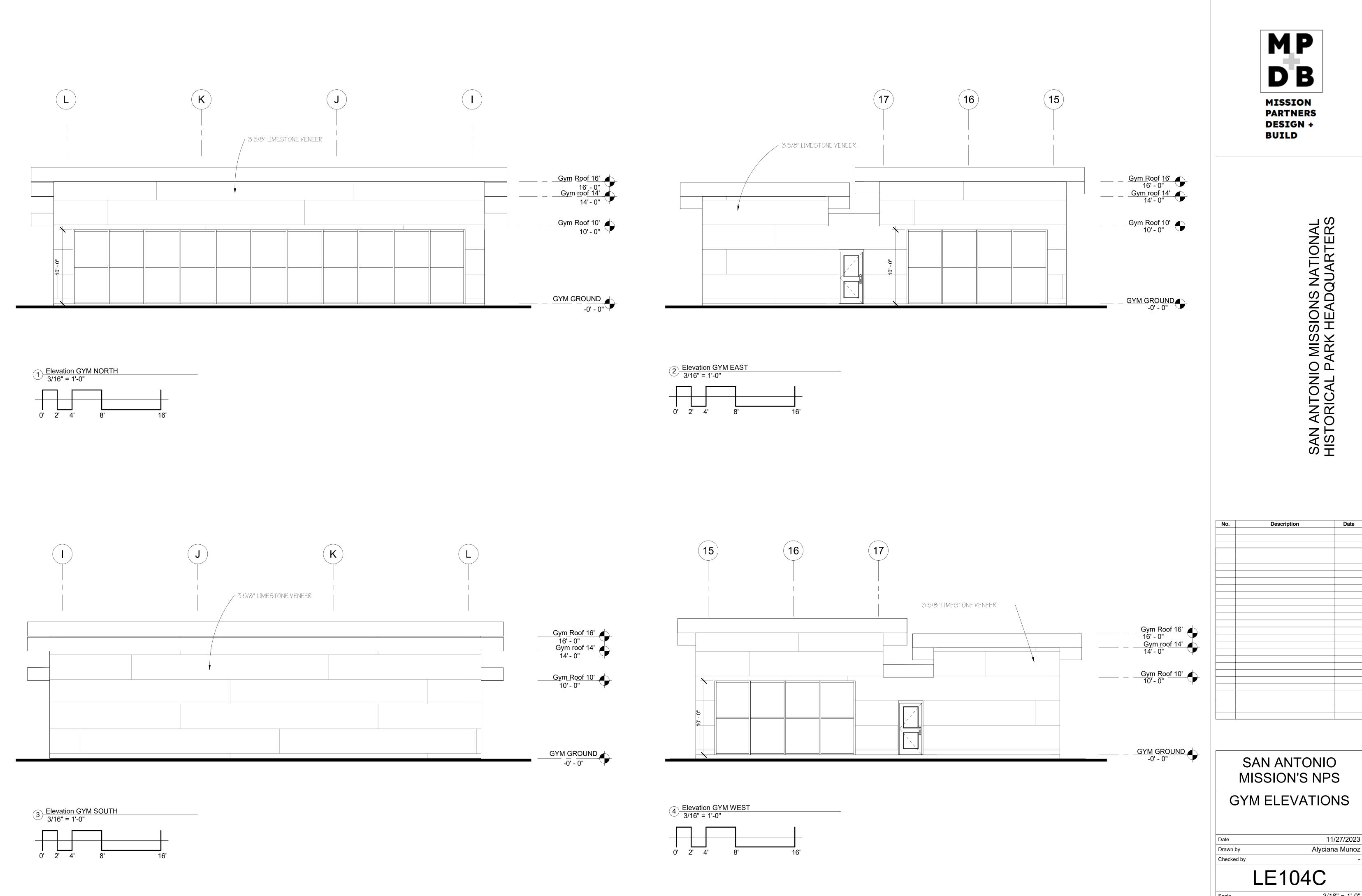
Date

11/27/2023 Alyciana Munoz

LE104B

3/16" = 1'-0"

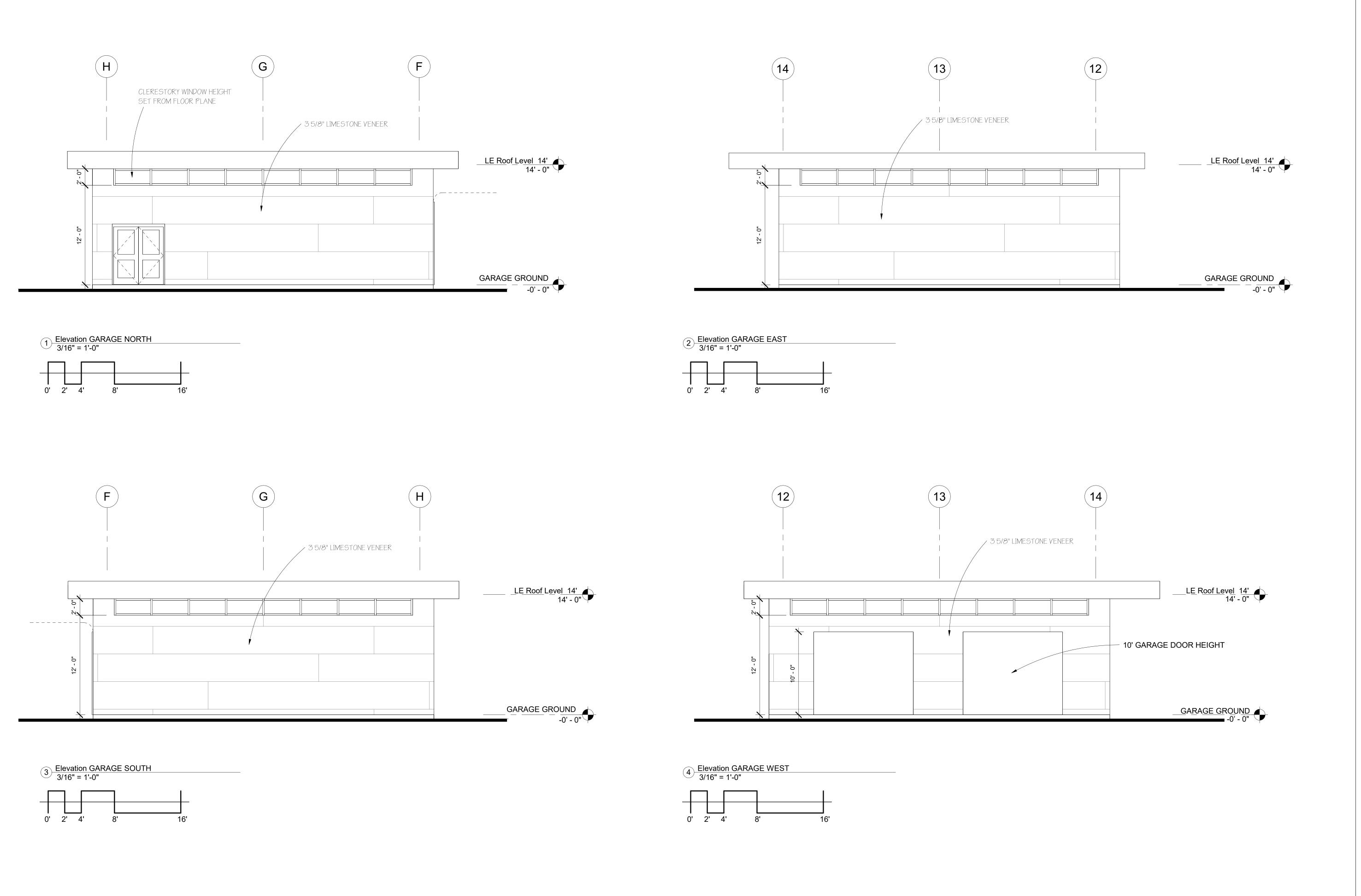
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Date

SAN ANTONIO

3/16" = 1'-0"





Description Date

SAN ANTONIO MISSION'S NPS

GARAGE ELEVATIONS

Date

Drawn by

LE104D

3/16" -

3/16" = 1'-0"

11/27/2023

Alyciana Munoz

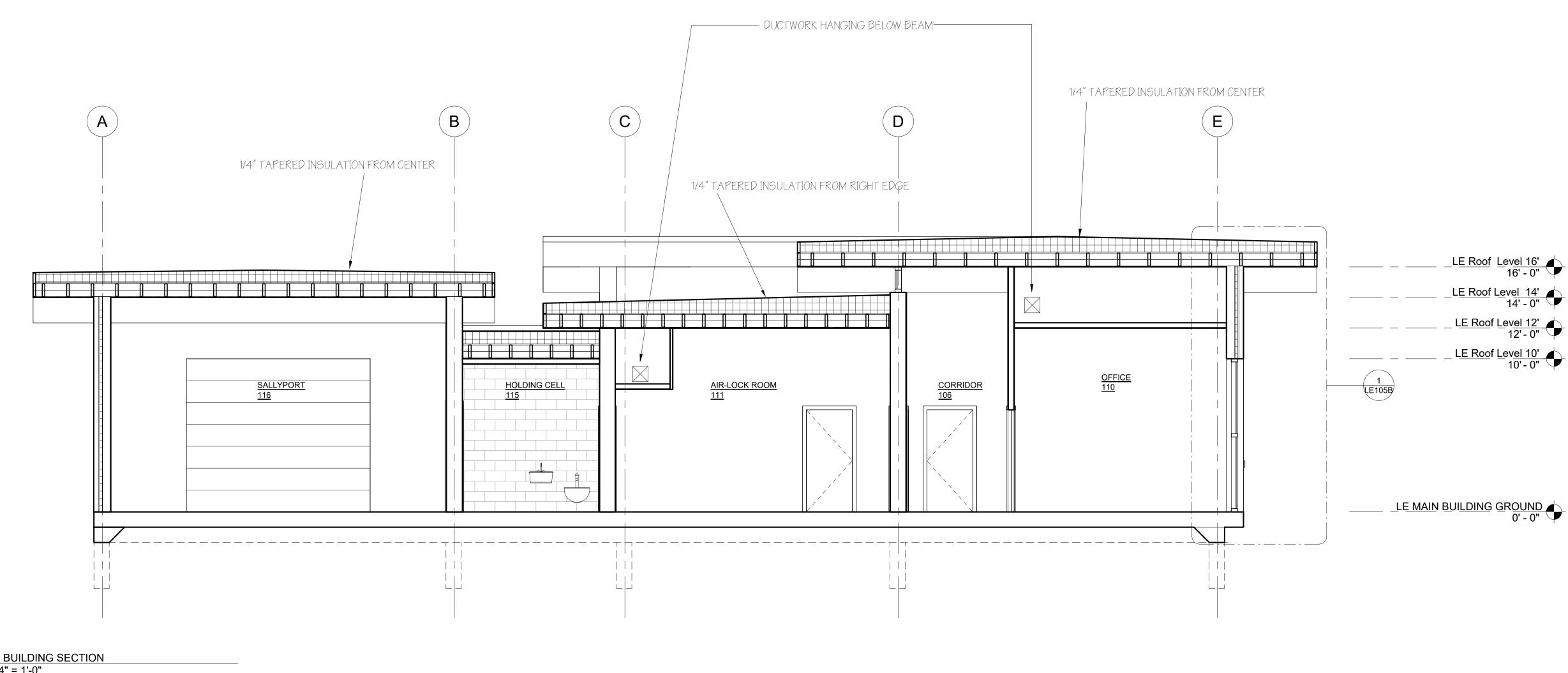


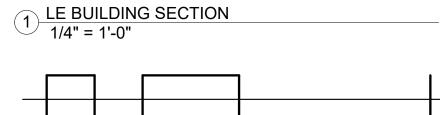
SAN ANTONIO MISSION'S NPS

**BUILDING SECTION** 

11/27/2023 Alyciana Munoz

LE105A 3" = 1'-0"







No. Description Date

SAN ANTONIO MISSION'S NPS

WALL SECTION

te 11/27/2023 awn by Alyciana Munoz

LE105B

1 1/2" = 1'-0"





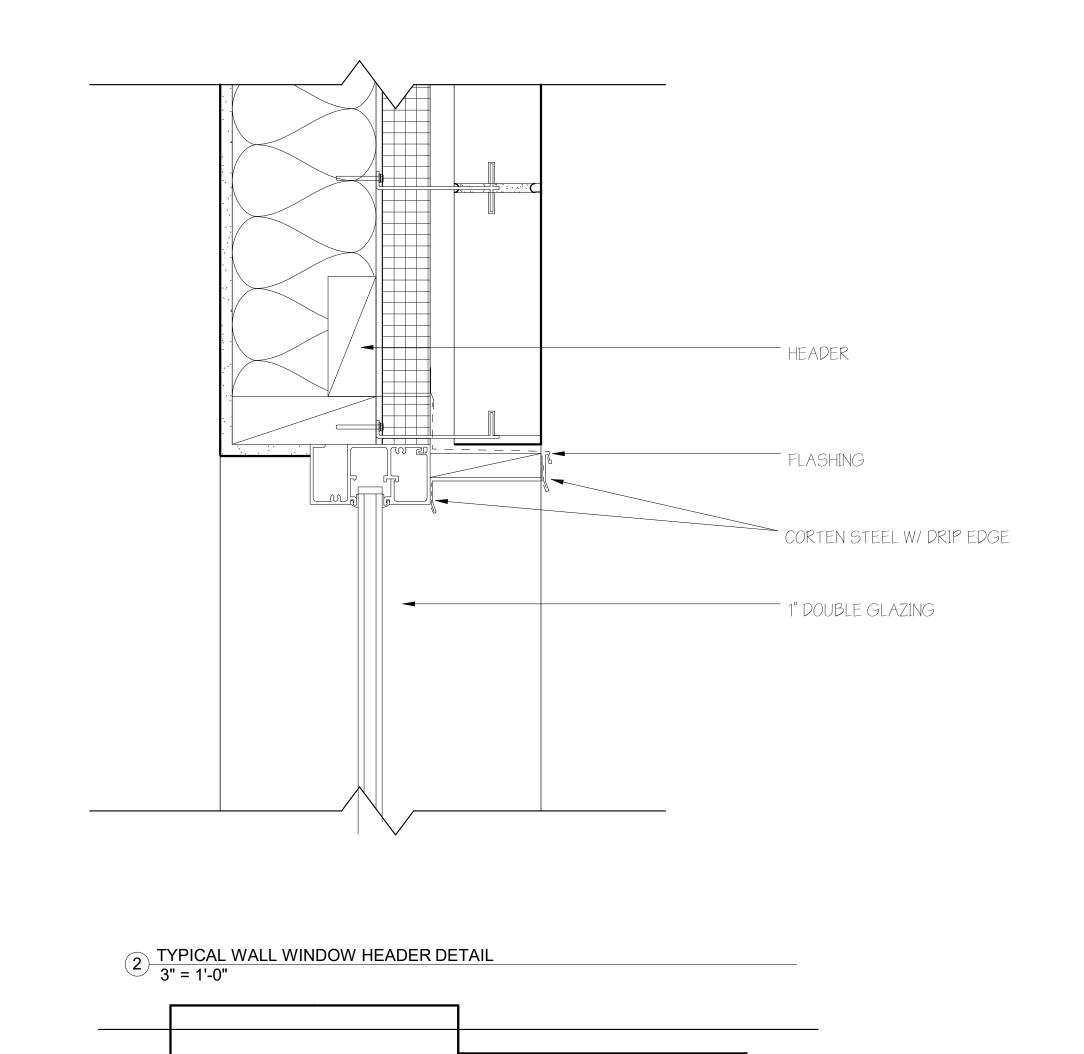
SAN ANTONIO MISSION'S NPS

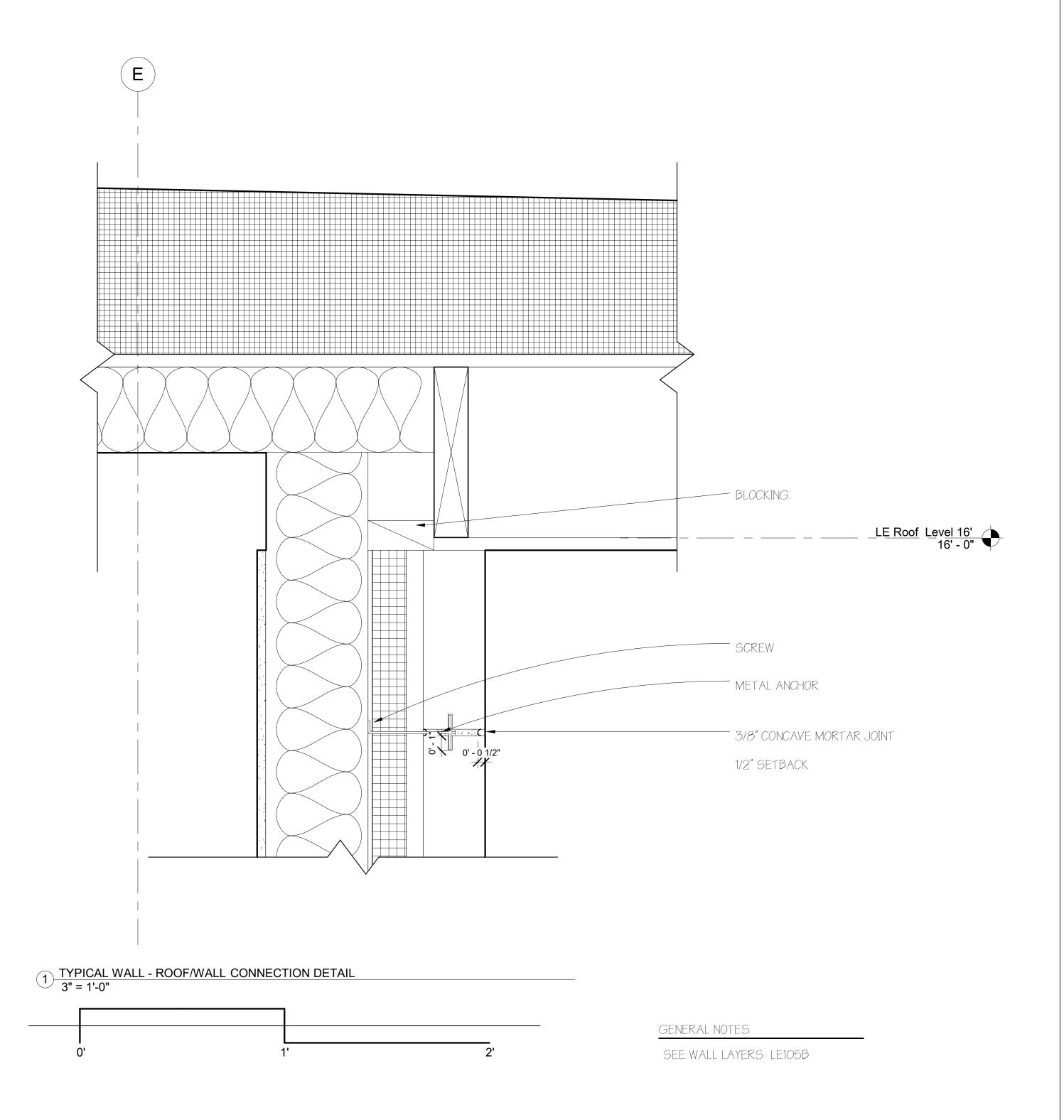
WALL DETAILS

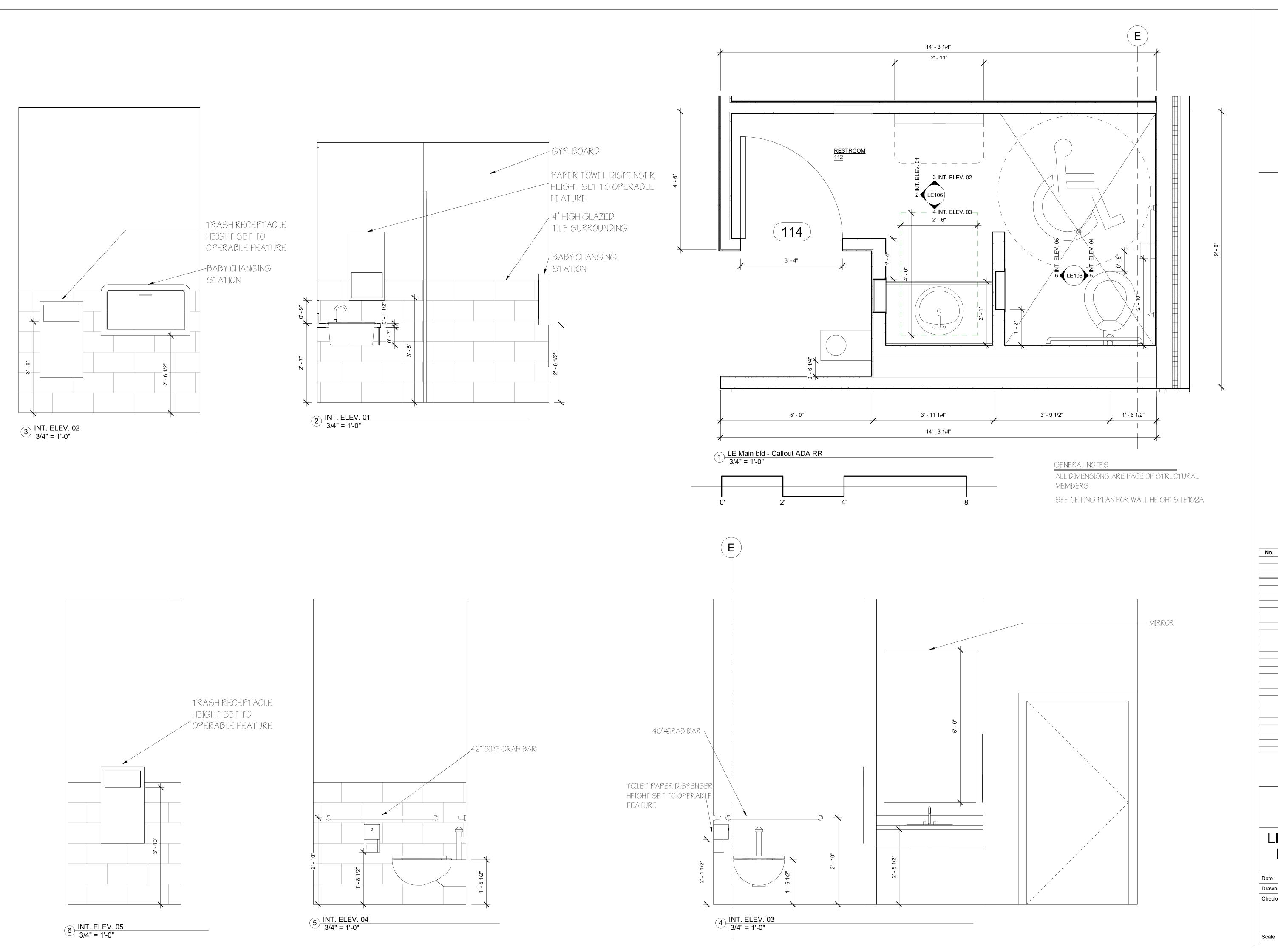
11/27/2023 Alyciana Munoz

LE105C

3" = 1'-0"







MP DB **MISSION PARTNERS** DESIGN + BUILD

SAN ANTONIO MISSIONS NATIONAL HISTORICAL PARK HEADQUARTERS

Description

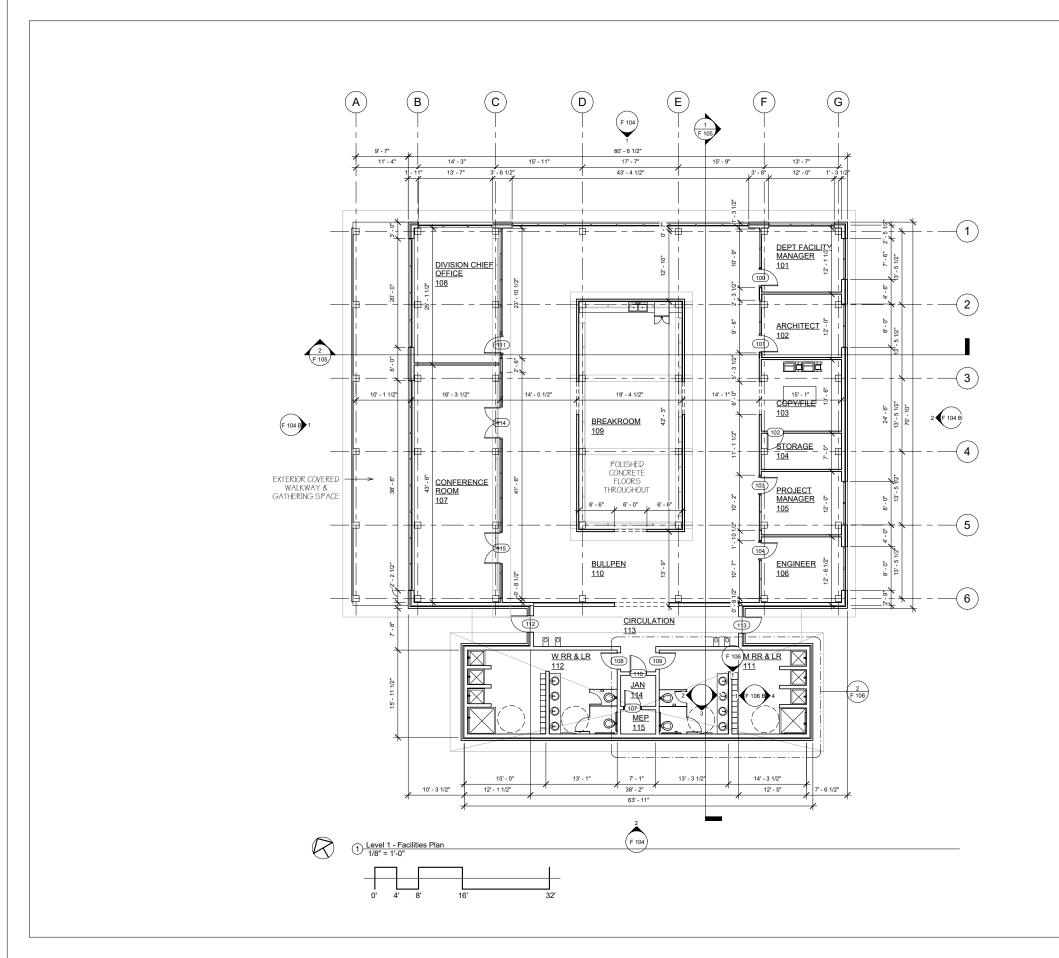
SAN ANTONIO MISSION'S NPS

LE ADA BATHROOM **ENLARGED PLAN** 

11/27/2023 Alyciana Munoz Drawn by

LE106

3/4" = 1'-0"





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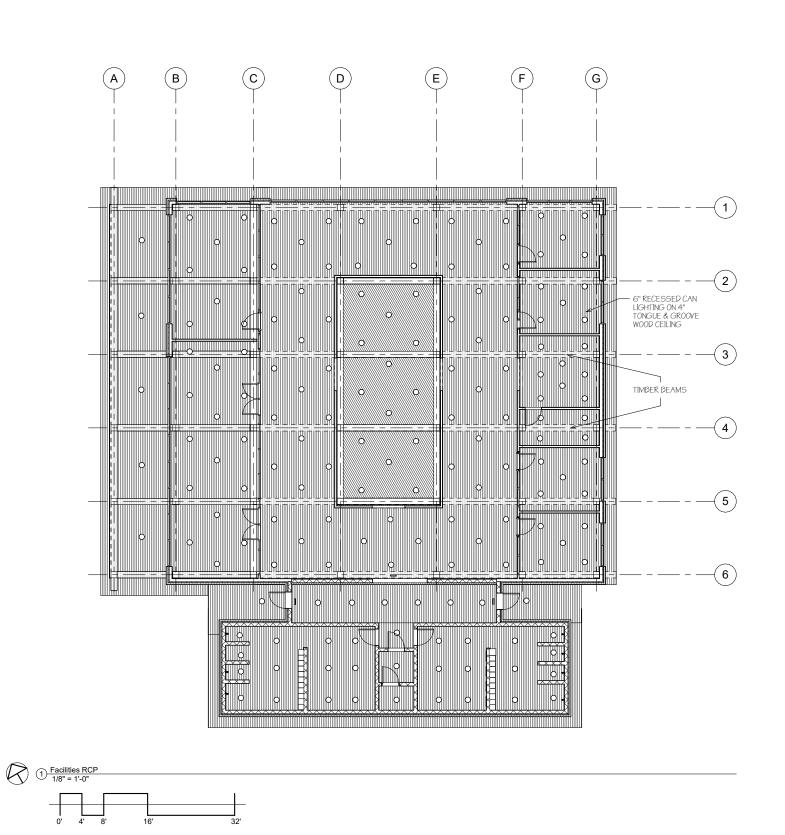
FACILITIES FLOOR PLAN

JODI PRISMEYER

F 102

1/8" = 1'-0"

FACILITIES 11.27.23



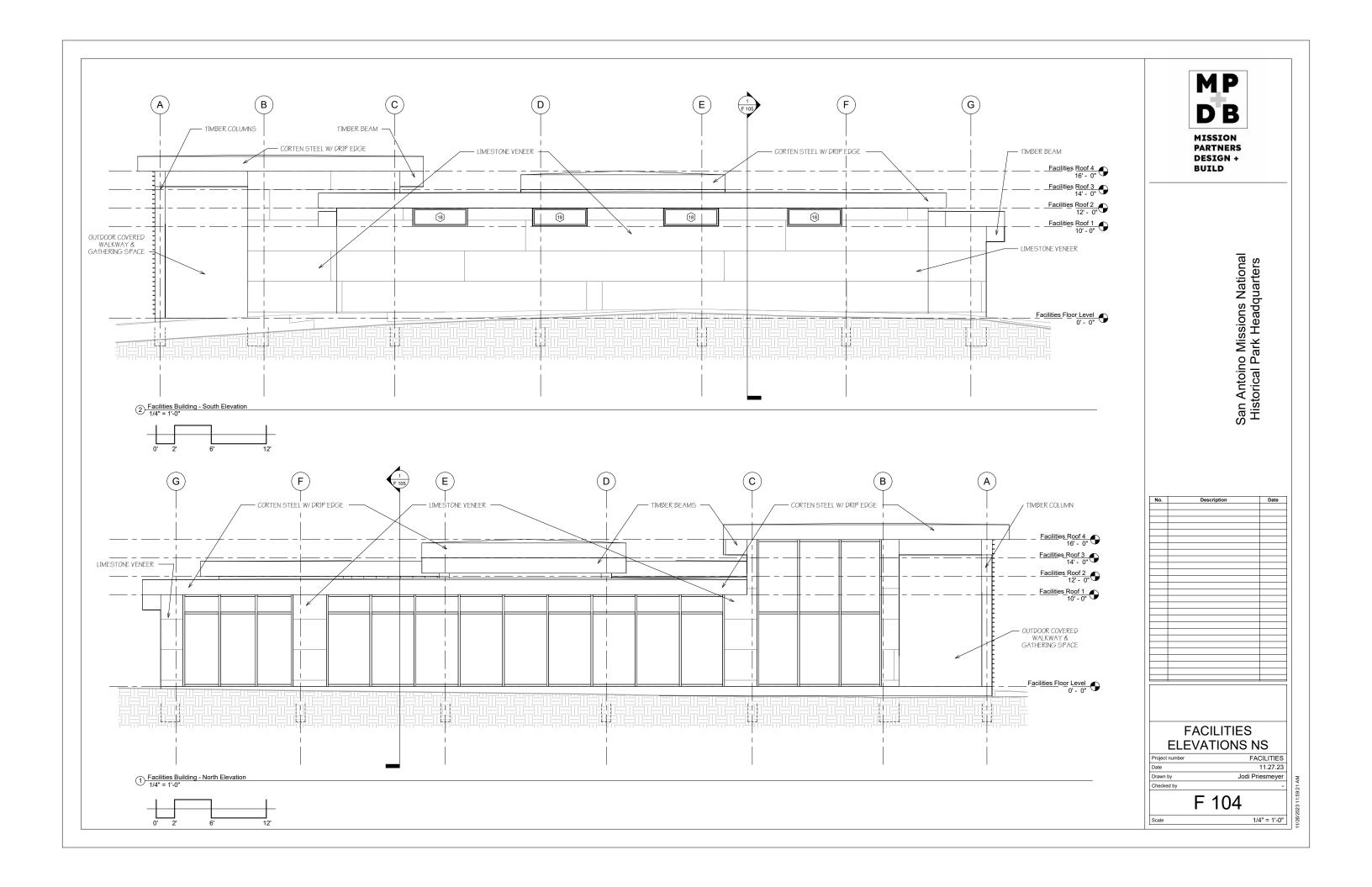


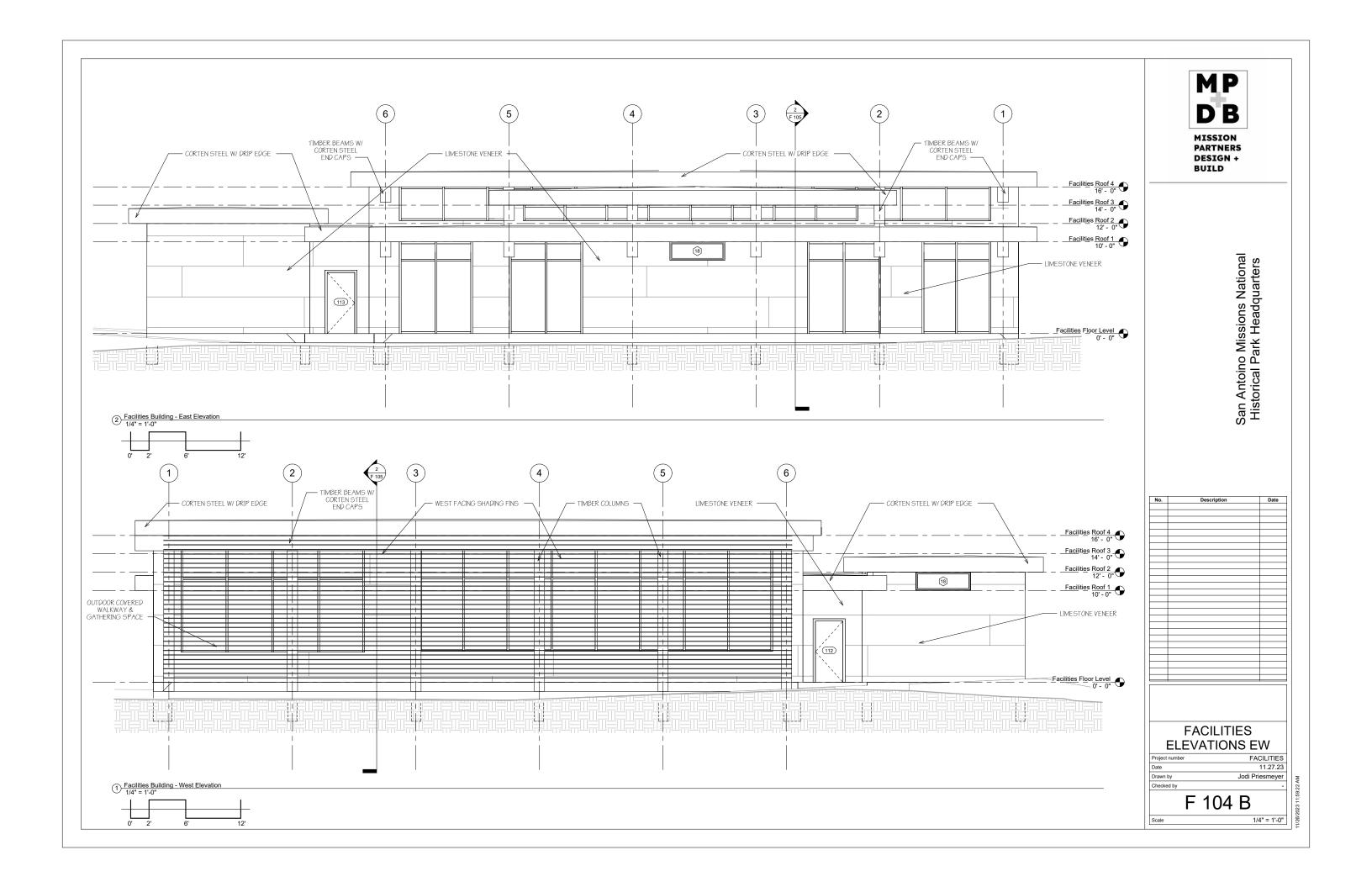


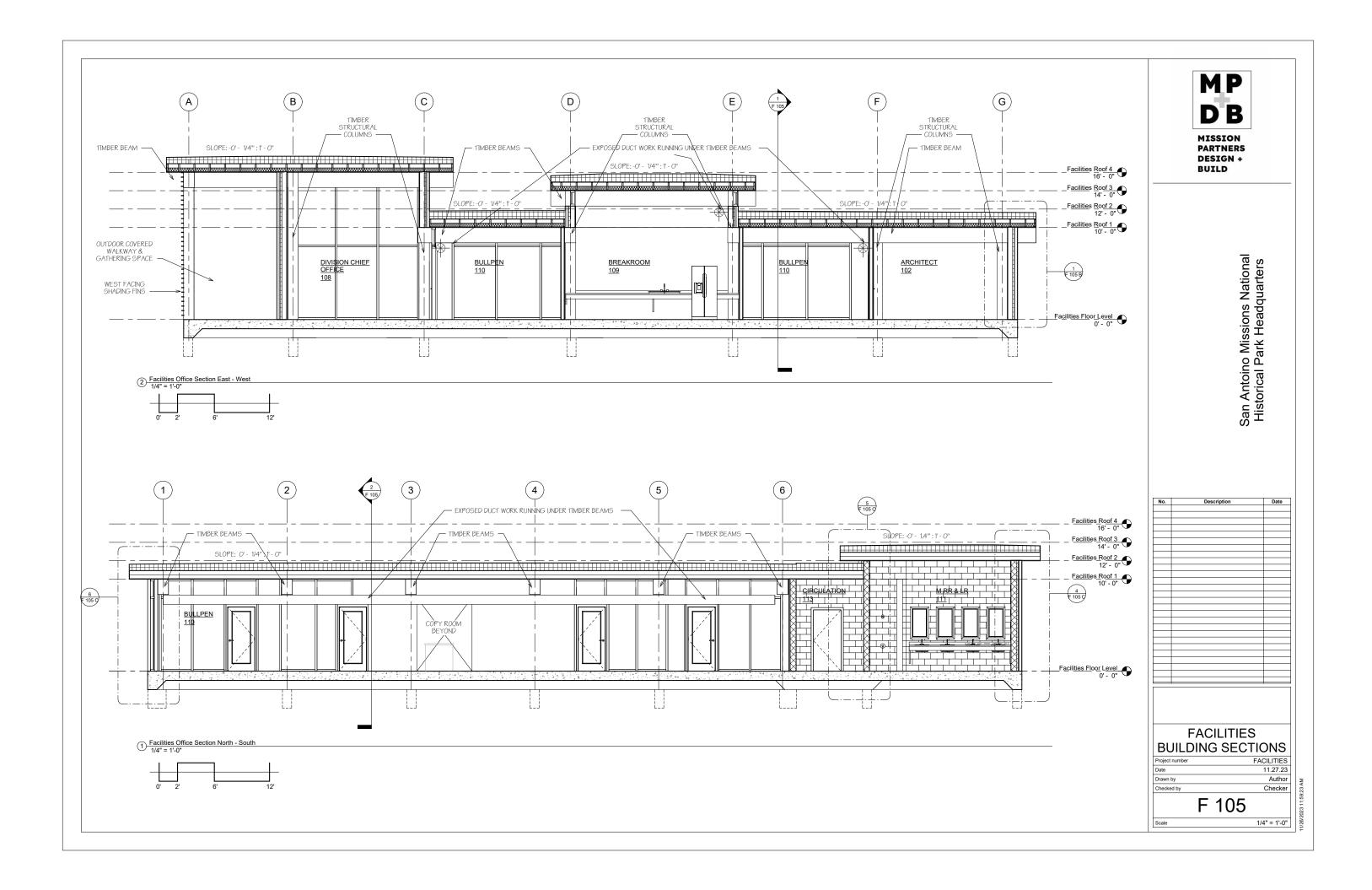
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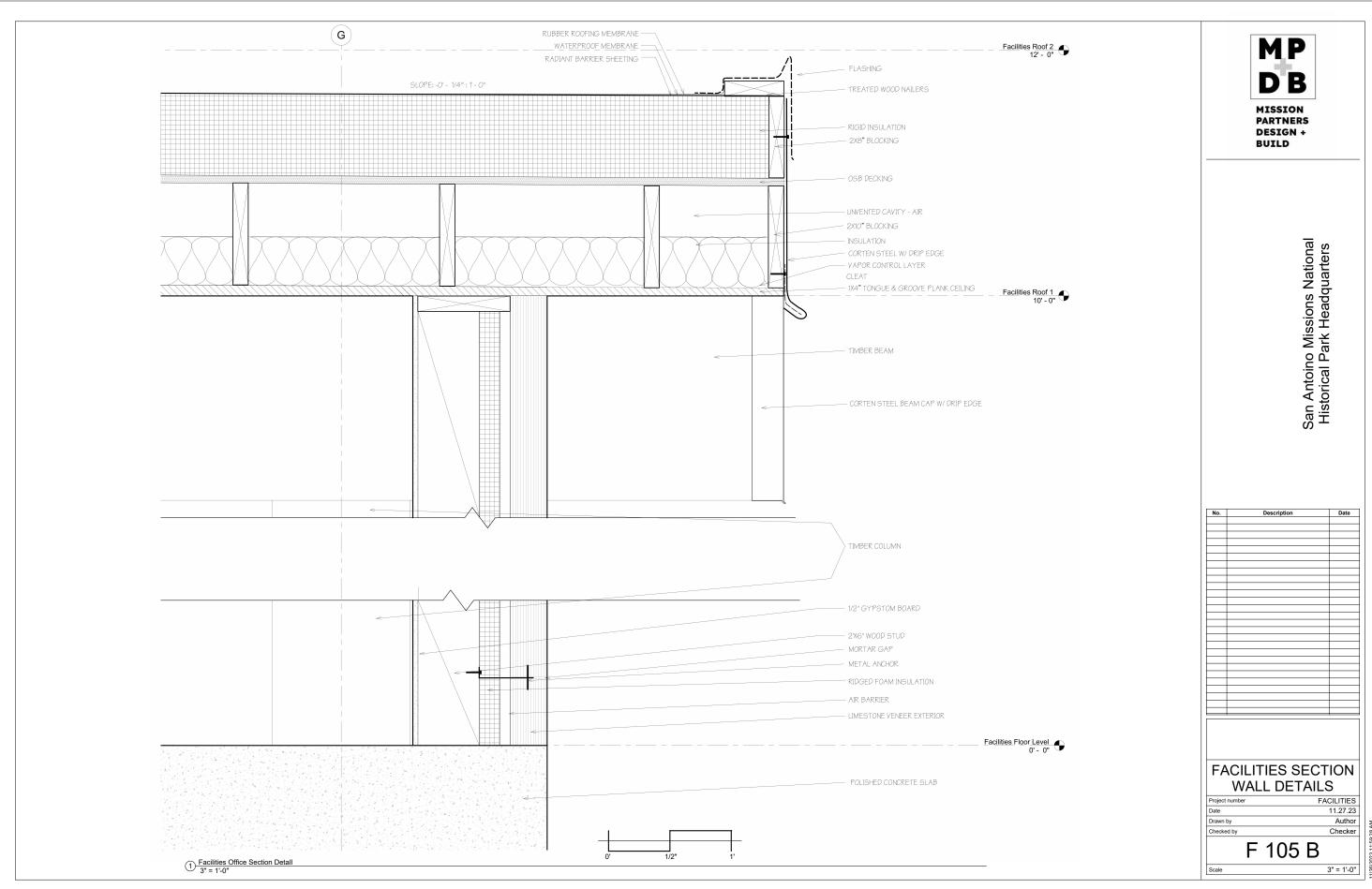
F 103

1/8" = 1'-0"



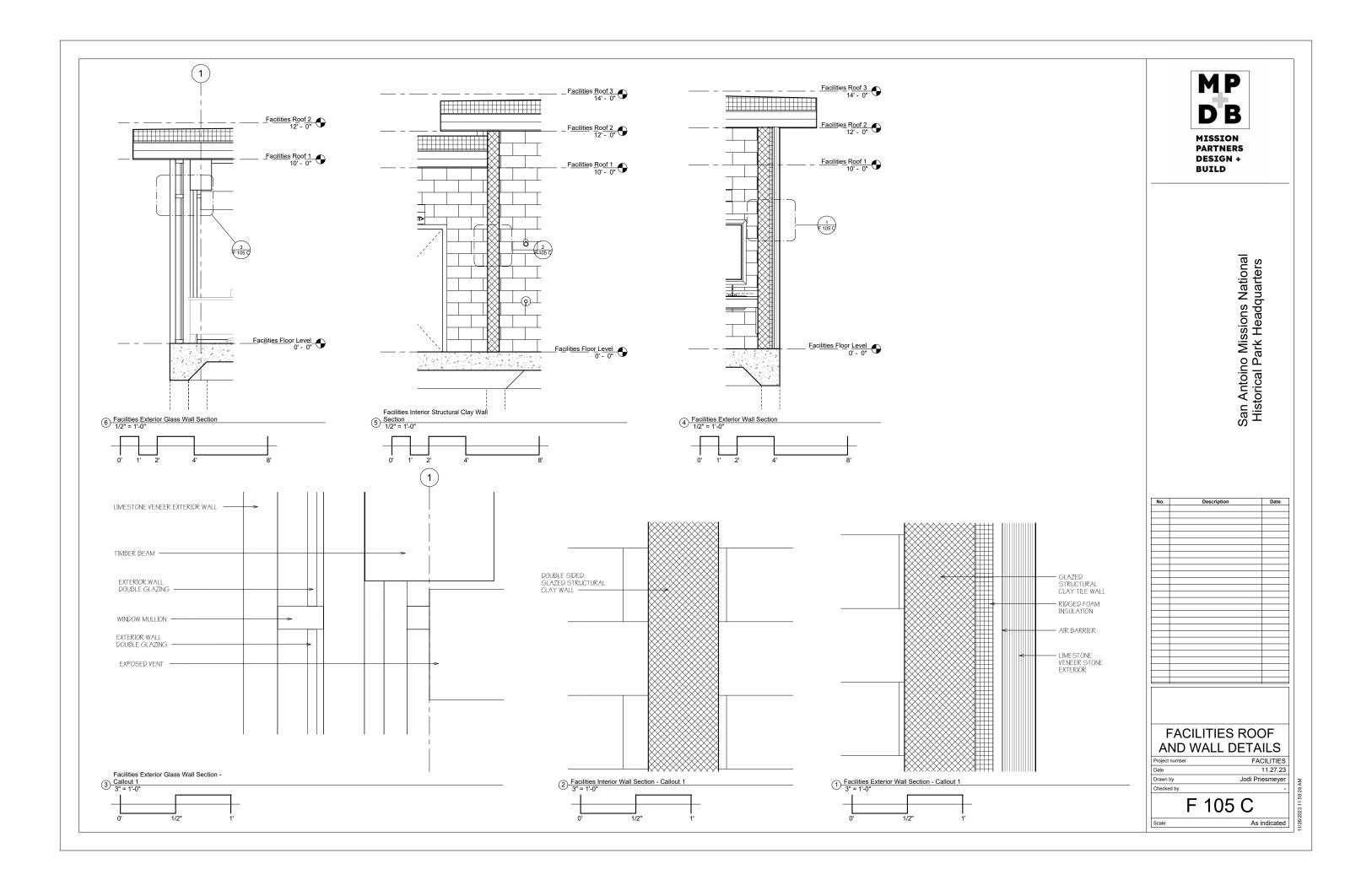


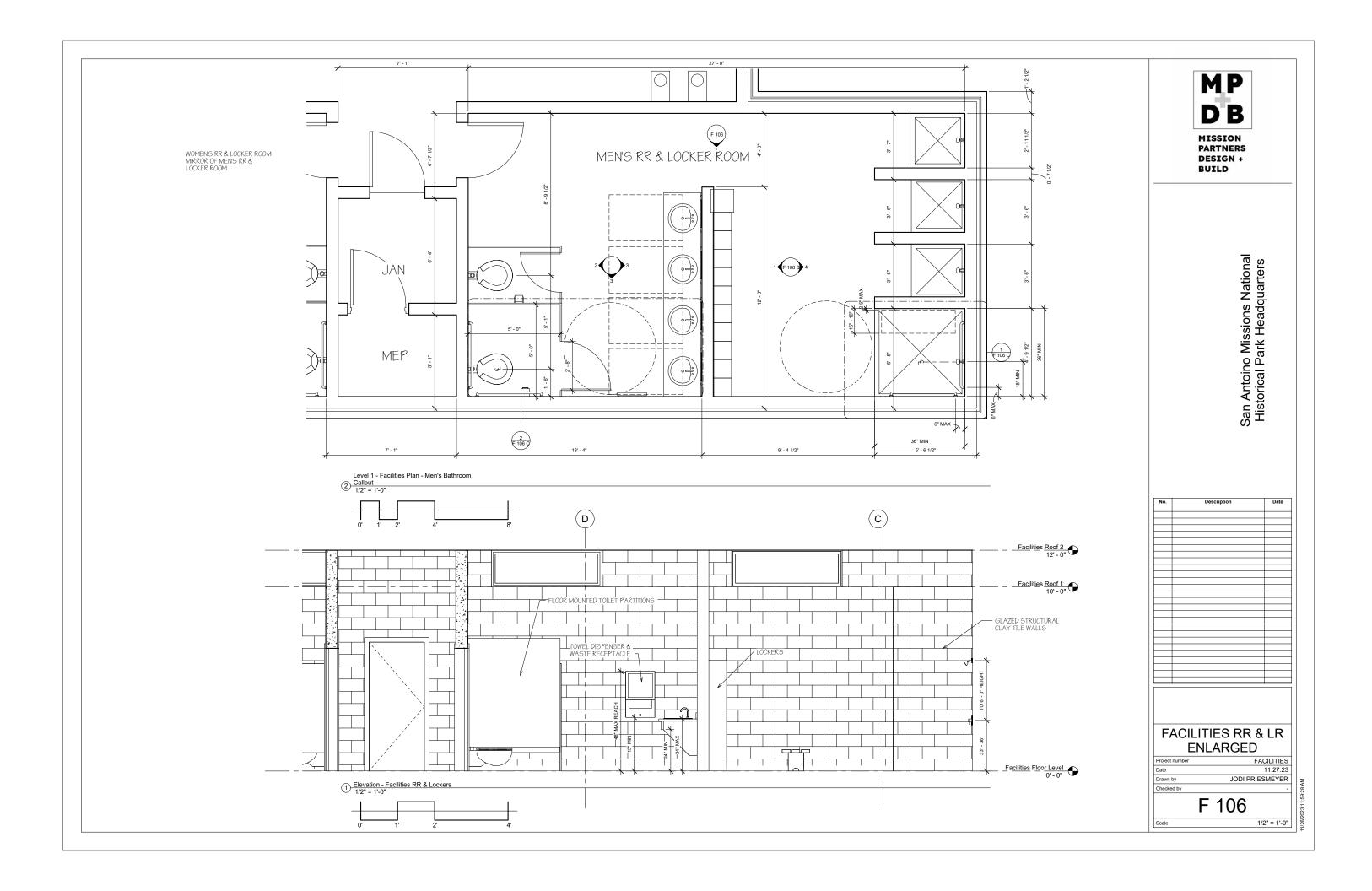


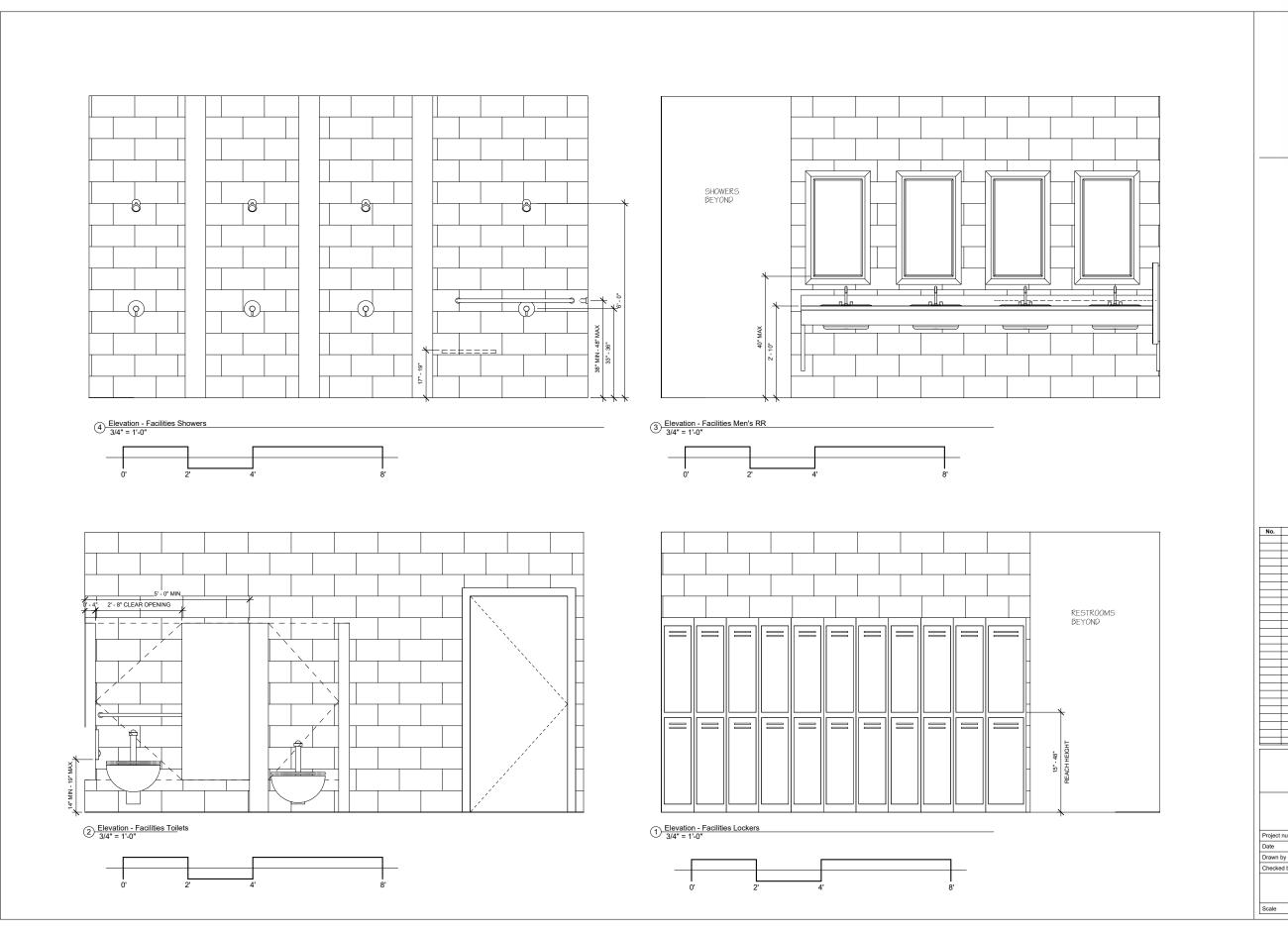


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11.27.23 Author Checker





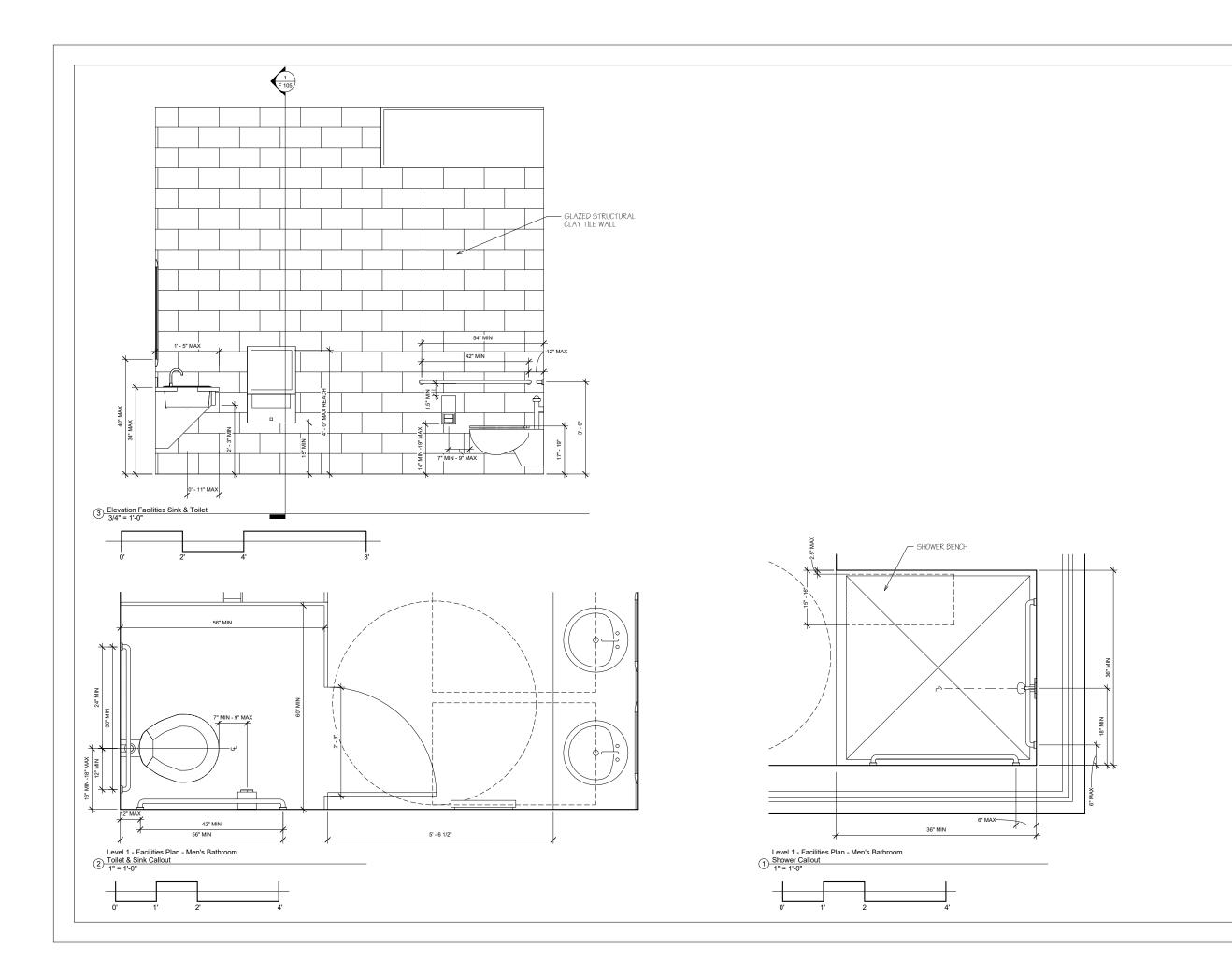




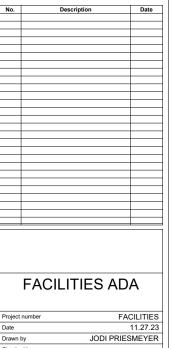
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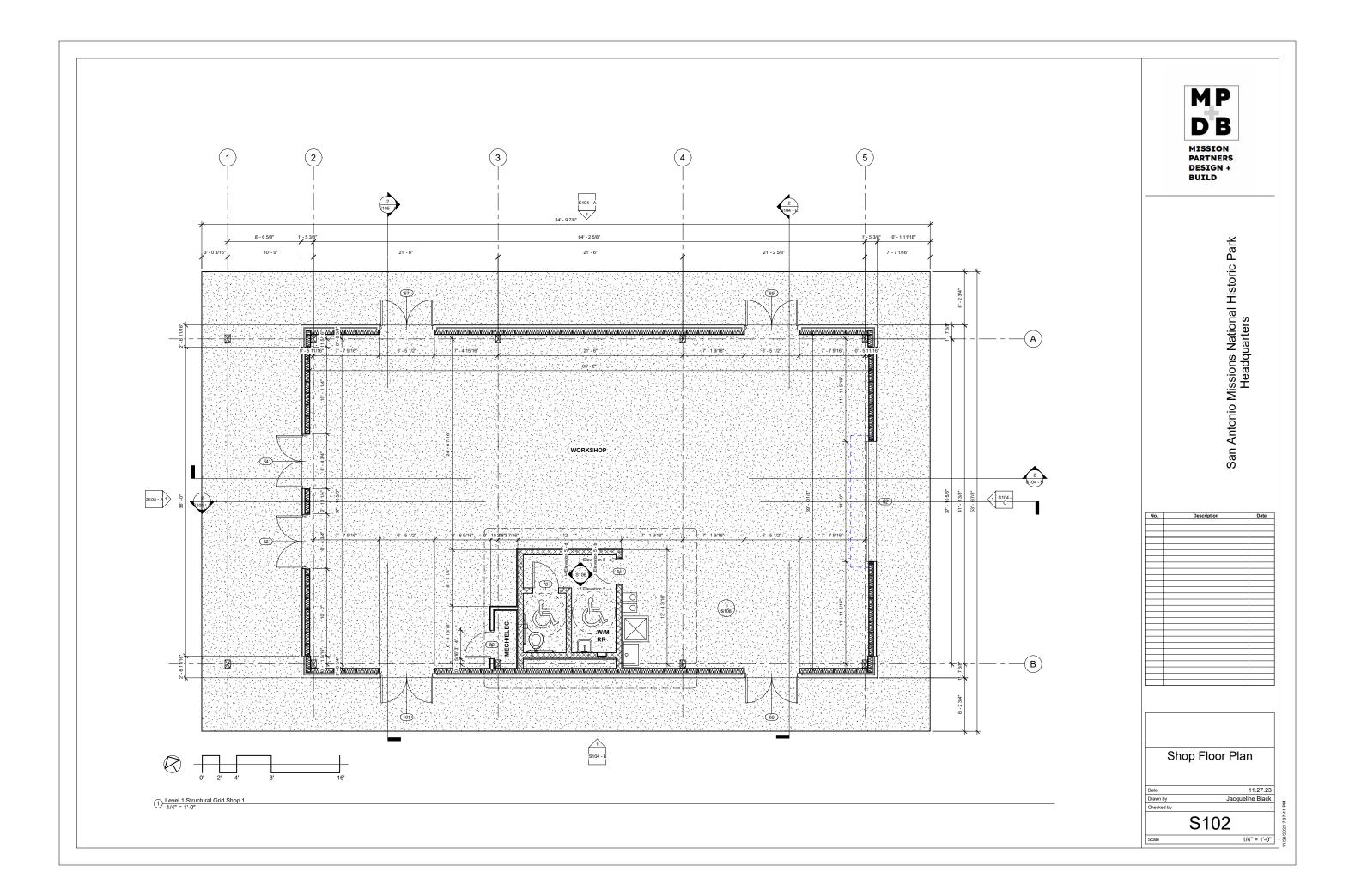


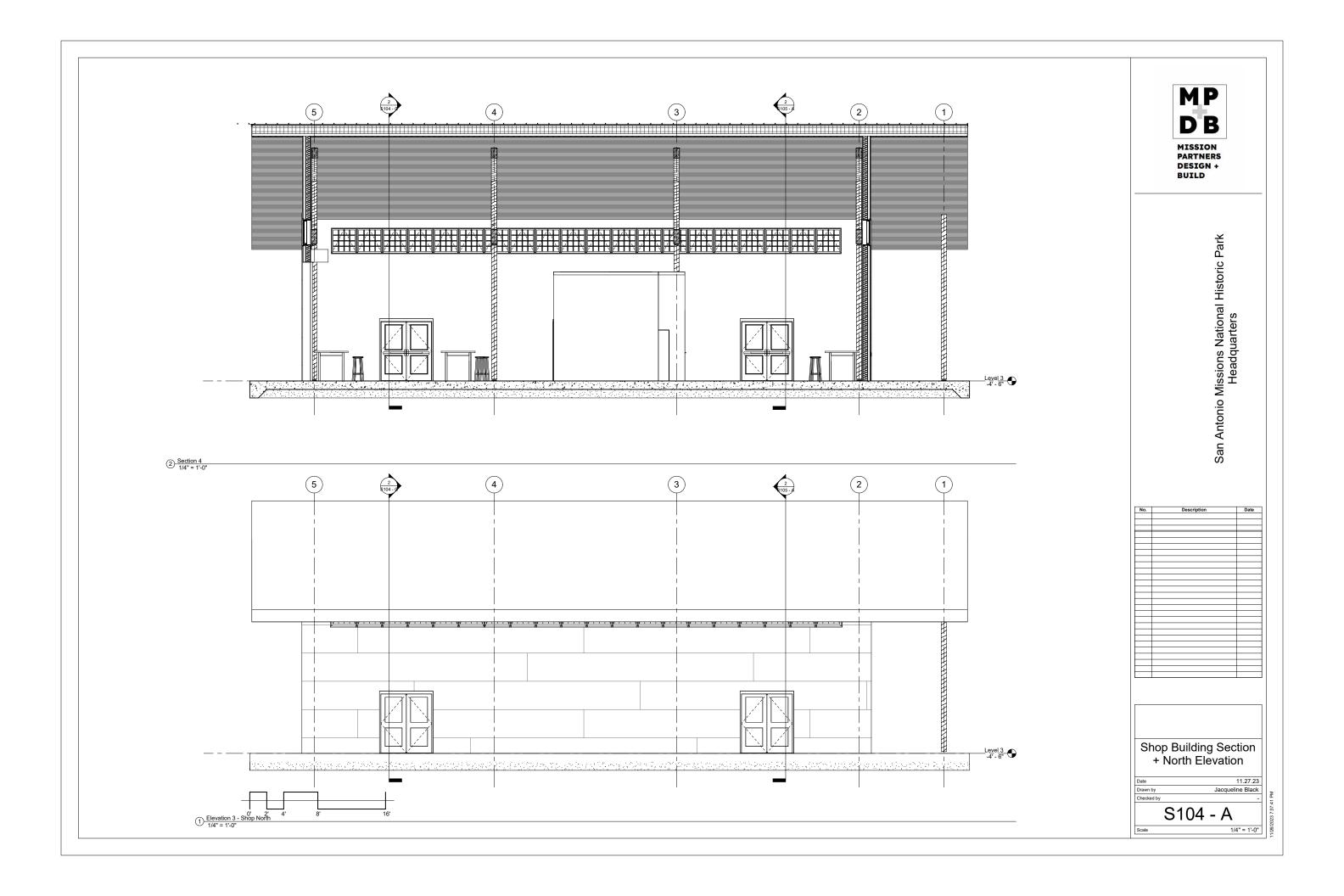


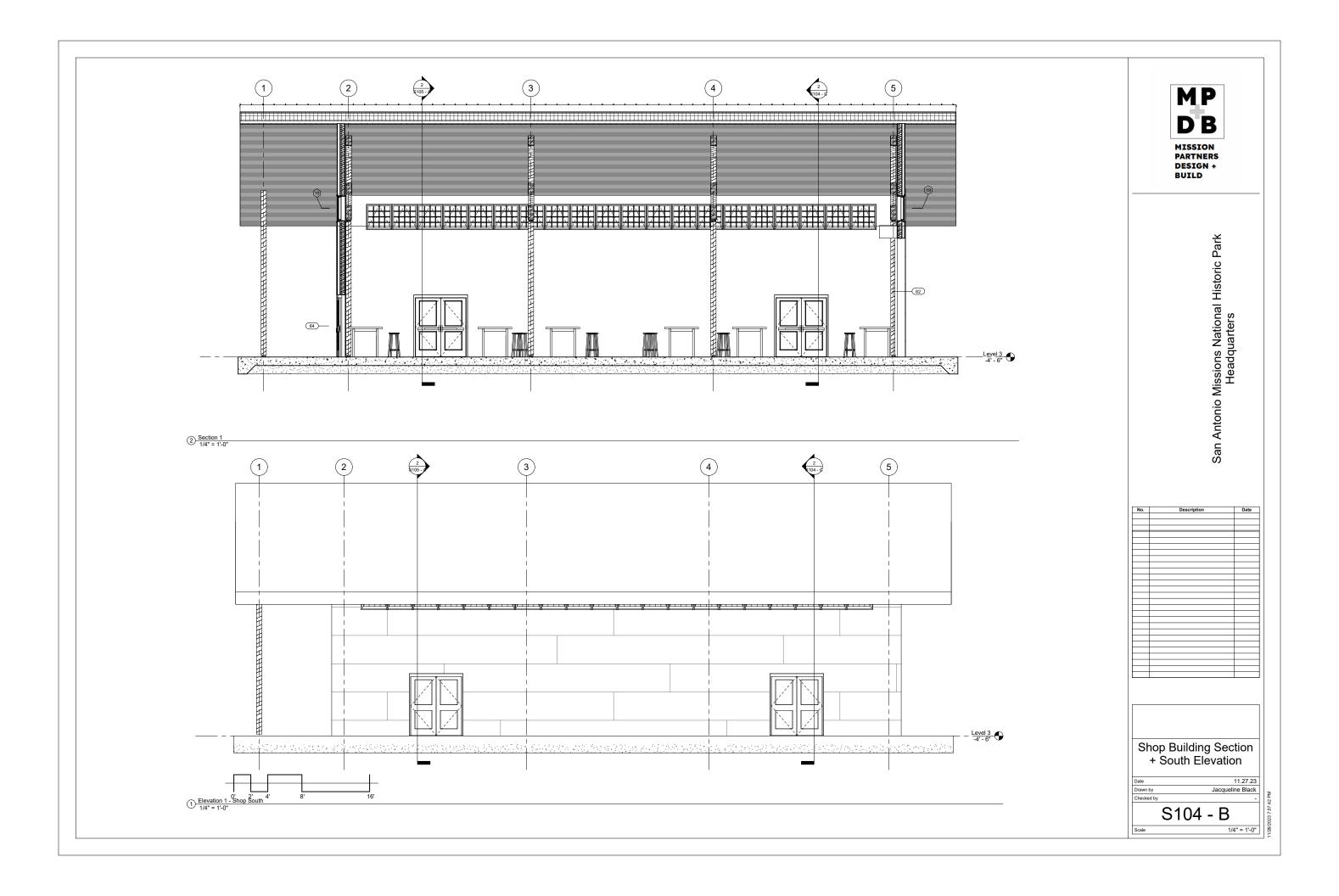
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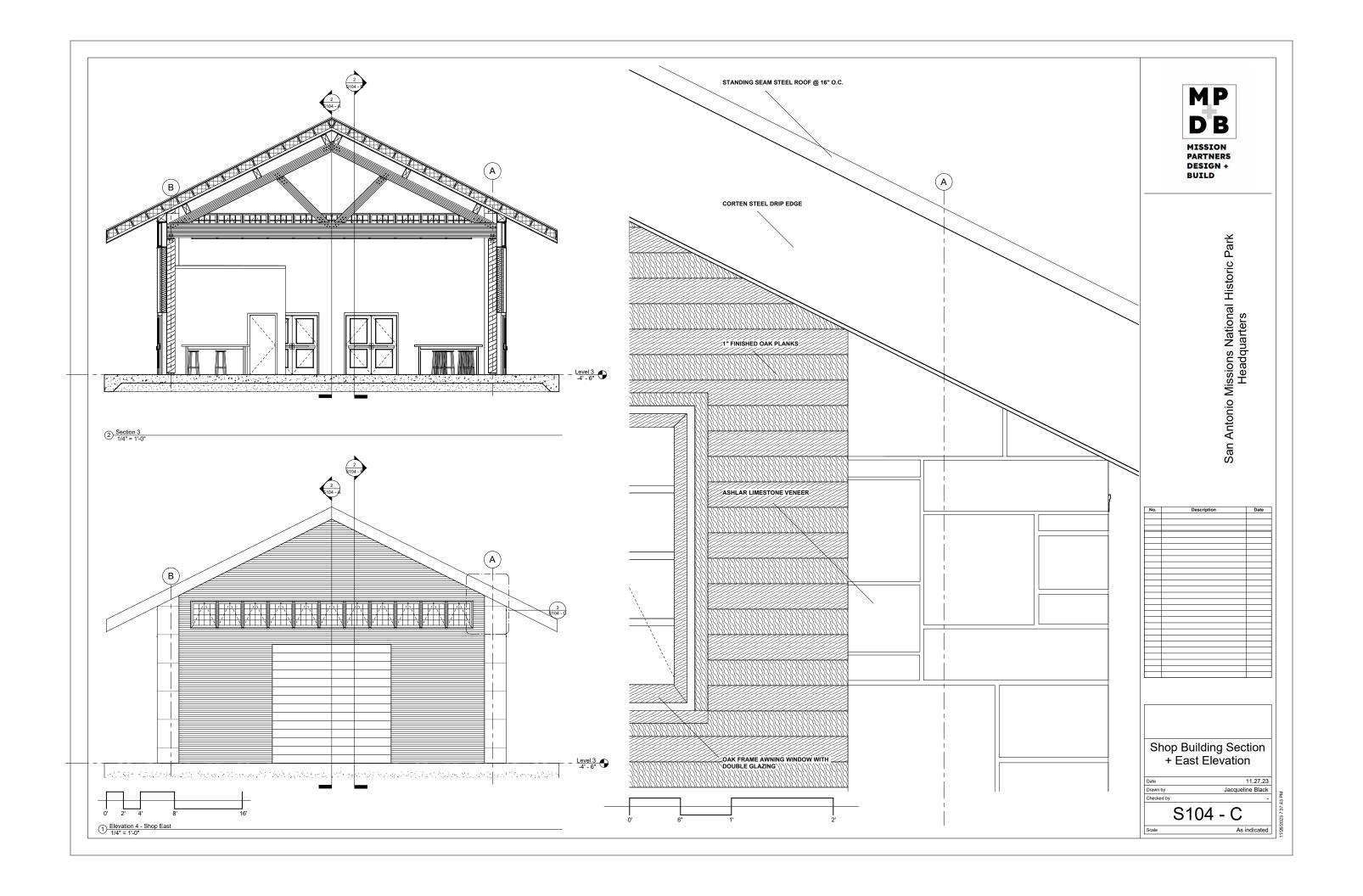
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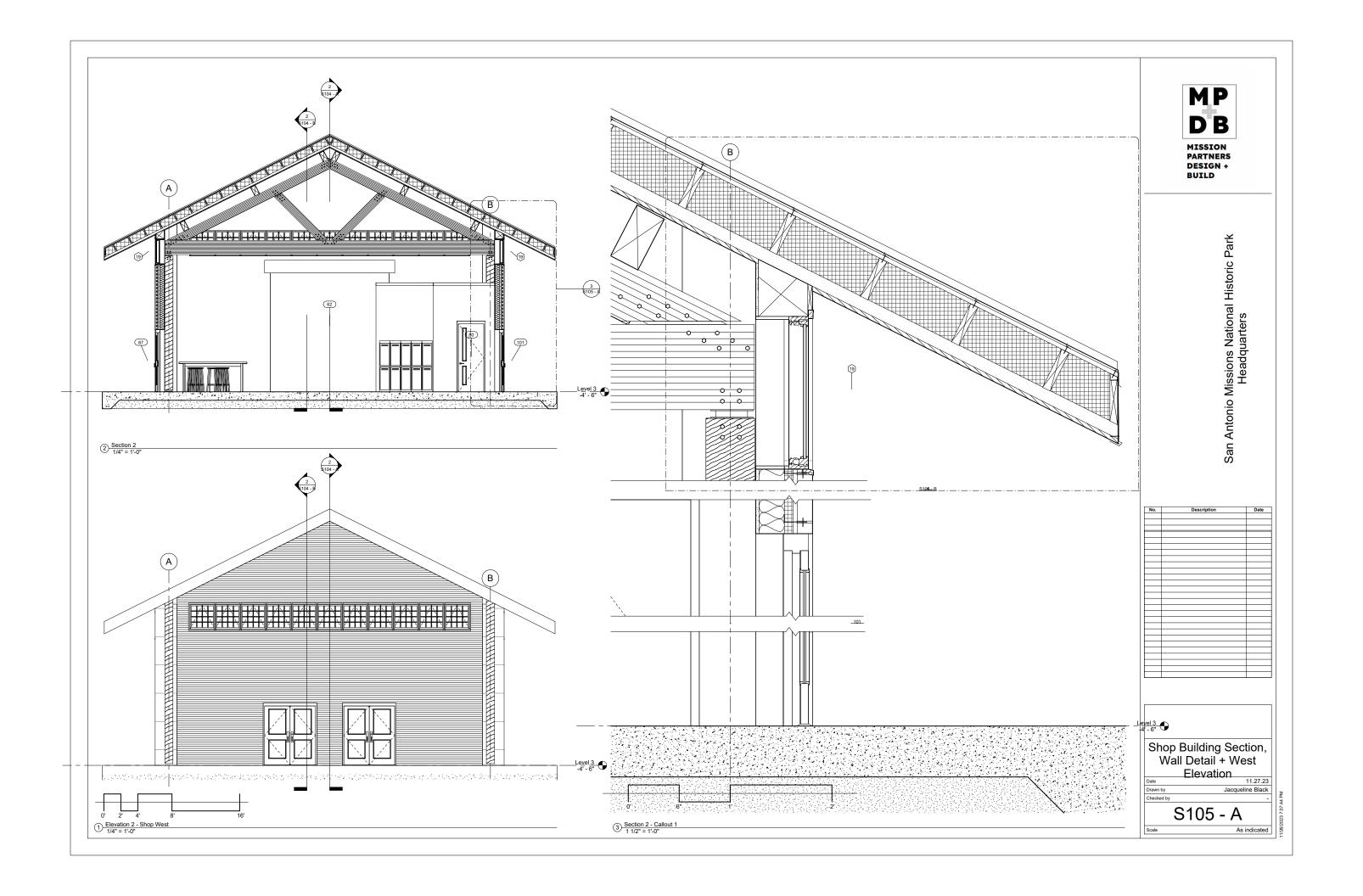
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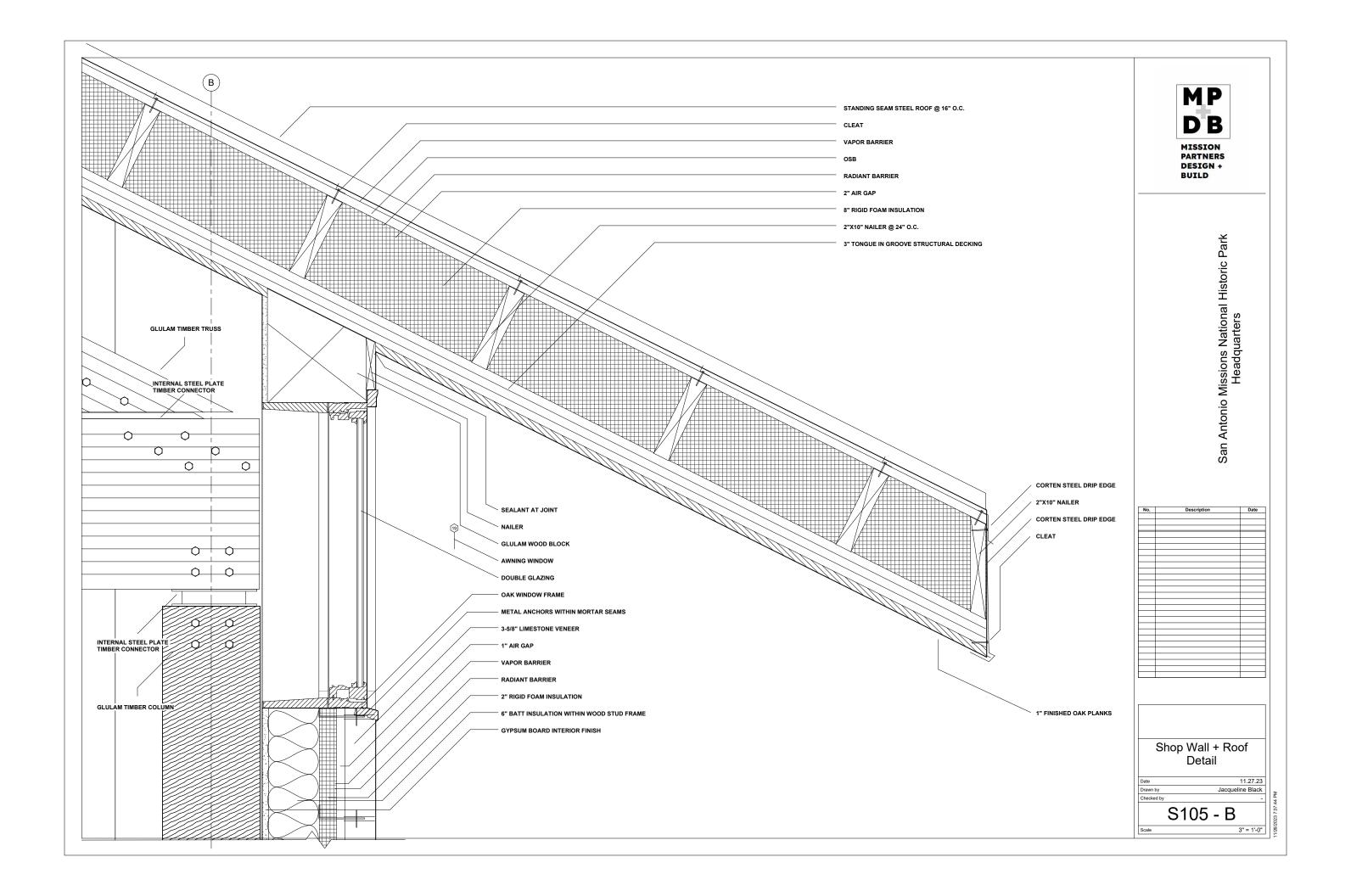


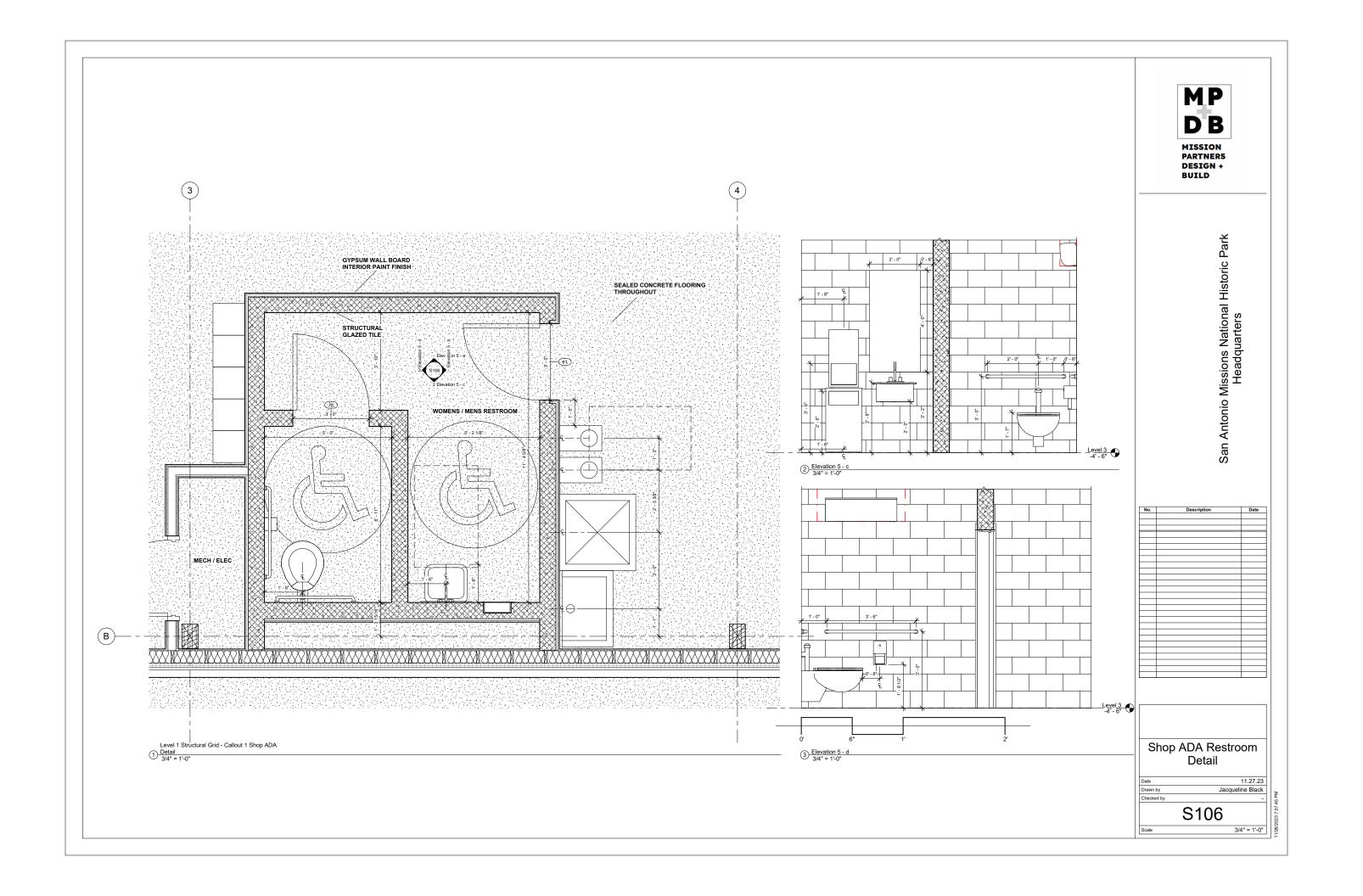












# **SECTION 09 54 26**

Linear Wood Ceiling Panels, Tongue & Groove by ASi Architectural

# **PART 1 GENERAL**

# **SECTION INCLUDES**

Linear wood veneer, solid wood, and laminate ceiling planks with tongue and groove.

B. Accessories for ceiling installation.

# 2. PAYMENT PROCEDURES

A. Deposits for materials may be required.

# **SUBMITTALS**

Product Data: Manufacturer's technical data sheet and installation instructions for each type of ceiling plank required.

- Shop Drawings: Submit shop drawings, including details, for all ceilings. Coordinate ceiling layout, installation, and suspension system components with construction elements that penetrate tile ceilings or are supported by them. Show overall layout with dimensions and details for penetrations and intersections with other materials or building components.
- Samples: Submit three (3) full size samples of each plank type and veneer type required.
- Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.
- Test Reports: Upon request, submit certified test reports from recognized test laboratories.

# 4. MAINTENANCE MATERIAL

# B. Extra Materials:

- Deliver no less than two percent (2%) of each type, color and pattern of material.
- Extra materials shall be from the same production run as the original materials.
- Extra materials shall remain in the manufacturer's original packaging and given to the building owner upon substantial completion of the work. Store extra materials per instructions as described in storage and handling requirements.

# **QUALITY ASSURANCE**

# A. Qualifications:

- 1. Manufacturers: Provide wood ceiling planks with tongue and groove from a single manufacturer.
- 2. Installers: Utilize an installer having demonstrated experience on projects of comparable size and complexity.

# DELIVERY, STORAGE, AND HANDLING

- Delivery and Handling Requirements:
  - 1. Handle products carefully to avoid damage or chipping edges.
  - Store products in a clean, cool, dry place, and out of direct sunlight.
  - Store products in a space where the ambient temperature and humidity conditions are being maintained at the levels indicated for the project when occupied for its intended use.

# SITE CONDITIONS

# A. Ambient Conditions:

- 1. Permit planks to reach room temperature, 50 to 86 degrees Fahrenheit. Stabilize moisture content, 25 to 55 percent RH, for at least 72 hours before installation per AWI standards.
- Maintain ambient temperature and humidity conditions at levels indicated for the project when occupied for its intended use.
- Do not install products under environmental conditions outside manufacturer 's recommended limits.
- B. Existing Conditions: Do not install ceiling planks until space is enclosed and weather proofed, wet work is completely dry, and work above ceilings is complete.

# WARRANTY

A. Provide manufacturer's written product warranty per Section 01 77 00 – Closeout Procedures.

# **PART 2 PRODUCTS**

# **MANUFACTURERS**

A. ASI Architectural, 123 Columbia Court N, Chaska, MN 55318.

Phone: 888-258-4637. Fax: 952-448-2613. Website: www.asiarchitectural.com

# **DESCRIPTION**

Product Description: Linear wood ceiling planks with tongue and groove as manufactured by ASI Architectural.

Product Options: For each item listed below, please select one (1) option from the choices.

- Plank Composition: (Wood veneer) / (Solid wood) / (Laminate)
- Veneer and Laminate: Interior: (Class A FR Particle Board) / (Class Core:

A FR MDF Board) / Exterior: (MR Particle Board) lacquer topcoat) / (Clear lacquer topcoat)

Finish: Veneer Only: (Custom stain to match architect sample with clear

Laminate Only: (Laminate to match architect's selection) Solid Only: (Custom stain to match architect sample with clear Class A topcoat) / (Clear Class A topcoat)

Wood Species:

(Custom to match architect sample) / (Choose from list of standard species on ASI Architectural website)

Plank Face Width: (3") / (4") / (5") / (Custom)

All plank composition options: (8') / (10') Plank Length:

Solid wood only: (Random 3' – 10')

7. Joint Condition: Wood veneer and solid wood: (Butt Joint) / (Flat V-Groove Joint) / (V-Groove Joint)

# Laminate: (Butt Joint)

# 2. ACCESSORIES Attachment hardware for ceiling planks as specified by manufacturer for installation.

- Accessories with Options: Select one (1) option from the choices for each of the following accessories.
- Vertical trim: 3/4" x (4") / (6") / (Custom) x (96") / (120"). Vertical trim finish to match finish of ceiling planks.

# PART 3 EXECUTION

# **EXAMINATION**

- A. Verification of Conditions:
  - Inspect installation area and conditions under which work is to be performed for compliance with all manufacturers 'environmental requirements.
  - All wet work in the installation area must be complete, cured, and dry prior to installation.
  - Work above ceilings shall be complete, inspected, and accepted before ceiling work begins.

### **INSTALLATION** 3.2

- Comply with manufacturer's instructions and recommendations for installation of ceiling planks and industry standards.
- Coordinate the exact size, location, and sequencing of penetrations of ceiling planks by all building components.
- C. Lay out ceiling pattern per approved shop drawings if required. Where not otherwise indicated, lay out planks so margins on opposite sides of rooms are equal or greater than half (1/2) the plank width.
- D. Where ceilings of different heights abut, install acoustical material matching ceiling at vertical surface of ceiling break to match ceiling.

A. Adjust planks after installation so that surfaces are aligned, flush, and level with gaps between units consistent in width and straight.

# **CLEANING**

- Clean surfaces of ceiling planks per manufacturer's instructions.
- B. Remove and replace damaged or discolored material and material that cannot be properly cleaned.

# 3.5 PROTECTION

A. Protect installed work from damage due to subsequent construction activity, including temperature and humidity limitations and dust control, so that the work will be without damage and deterioration at the time of acceptance by the owner.



# **LEED for New Construction v2.1 Registered Project Checklist**

| es ? No  | Sust <u>ai</u>   | nable Sites   | <b>14</b> Point            |
|--|--|---|----------------------------|
|  |  | Function 2 On dimension Countries   |                            |
|  | rereq 1<br>redit 1   | Erosion & Sedimentation Control Site Selection  | Require                    |
|  | redit 2  | Development Density   |                            |
|  | redit 3  | Brownfield Redevelopment  |                            |
|  | redit 4.1<br>redit 4.2   | Alternative Transportation, Public Transportation Access  |                            |
|  | redit 4.3  | Alternative Transportation, Bicycle Storage & Changing Rooms Alternative Transportation, Alternative Fuel Vehicles  |                            |
|  | redit 4.4  | Alternative Transportation, Parking Capacity and Carpooling   |                            |
|  | redit 5.1  | Reduced Site Disturbance, Protect or Restore Open Space   |                            |
|  | redit 5.2<br>redit 6.1   | Reduced Site Disturbance, Development Footprint Stormwater Management, Rate and Quantity  |                            |
|  | redit 6.2  | Stormwater Management, Rate and Quantity  Stormwater Management, Treatment  |                            |
|  | redit 7.1  | Landscape & Exterior Design to Reduce Heat Islands, Non-Roof  |                            |
|  | redit 7.2  | Landscape & Exterior Design to Reduce Heat Islands, Roof  |                            |
|  | redit 8  | Light Pollution Reduction   |                            |
| es ? No<br>2                                   | Water  | Efficiency  | <b>5</b> Point             |
| 1 C  | redit 1.1  | Water Efficient Landscaping, Reduce by 50%  |                            |
|  | redit 1.2  | Water Efficient Landscaping, No Potable Use or No Irrigation  |                            |
|  | redit 2<br>redit 3.1   | Innovative Wastewater Technologies  |                            |
|  | redit 3.1  | Water Use Reduction, 20% Reduction Water Use Reduction, 30% Reduction   |                            |
|  |  |   |                            |
| es ? No<br>4                                   | Energy   | y & Atmosphere  | <b>17</b> Point            |
|  | rereq 1  | Fundamental Building Systems Commissioning  | Require                    |
| Y P  | rereq 2<br>rereq 3   | Minimum Energy Performance CFC Reduction in HVAC&R Equipment  | Require                    |
|  | rereq 3<br>redit 1   | Optimize Energy Performance   | Required<br>1 to 1         |
|  |  | 15% New Buildings or 5% Existing Building Renovations   |                            |
|  |  | 20% New Buildings or 10% Existing Building Renovations  |                            |
|  |  | 25% New Buildings or 15% Existing Building Renovations 30% New Buildings or 20% Existing Building Renovations   | ,                          |
|  |  | 35% New Buildings or 25% Existing Building Renovations  |                            |
|  |  | 40% New Buildings or 30% Existing Building Renovations  |                            |
|  |  | 45% New Buildings or 35% Existing Building Renovations 50% New Buildings or 40% Existing Building Renovations   |                            |
|  |  | 55% New Buildings or 45% Existing Building Renovations  |                            |
|  |  | 60% New Buildings or 50% Existing Building Renovations  | 1                          |
|  | redit 2.1  | Renewable Energy, 5%  |                            |
|  | redit 2.2<br>redit 2.3   | Renewable Energy, 10% Renewable Energy, 20%   |                            |
|  | realt 2.5  | Nellewable Life gy, 2070  |                            |
|  | redit 3  | Additional Commissioning  |                            |
| С  | redit 4  | Ozone Depletion   |                            |
| C  | redit 4<br>redit 5   | Ozone Depletion Measurement & Verification  |                            |
| C C C  | redit 4  | Ozone Depletion   |                            |
| C  | redit 4<br>redit 5<br>redit 6  | Ozone Depletion Measurement & Verification  | <b>13</b> Point            |
| C C C C C                                      | redit 4<br>redit 5<br>redit 6<br>Materia   | Ozone Depletion Measurement & Verification Green Power  | 13 Point                   |
| C C C C  | redit 4<br>redit 5<br>redit 6<br>Materia<br>rereq 1<br>redit 1.1   | Ozone Depletion Measurement & Verification Green Power  als & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell   |                            |
| C C C C C C C C C C C C C C C C C C C          | redit 4 redit 5 redit 6  Materia rereq 1 redit 1.1 redit 1.2   | Ozone Depletion Measurement & Verification Green Power  als & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell  |                            |
| P C C C C                                      | redit 4<br>redit 5<br>redit 6<br>Materia<br>rereq 1<br>redit 1.1   | Ozone Depletion Measurement & Verification Green Power  als & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell   |                            |
| C C C C C C C C C C C C C C C C C C C          | redit 4 redit 5 redit 6  Materia rereq 1 redit 1.1 redit 1.2 redit 1.3 redit 2.1 redit 2.2   | Ozone Depletion Measurement & Verification Green Power  als & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75%  |                            |
| P C C C C C C C C C C C C C C C C C C C        | redit 4 redit 5 redit 6  Materia rereq 1 redit 1.1 redit 1.2 redit 1.3 redit 2.1 redit 2.2 redit 3.1   | Ozone Depletion Measurement & Verification Green Power  als & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5%   |                            |
| P C C C C C C C C C C C C C C C C C C C        | redit 4 redit 5 redit 6  Materia rereq 1 redit 1.1 redit 1.2 redit 1.3 redit 2.1 redit 2.1 redit 3.1 redit 3.2   | Ozone Depletion Measurement & Verification Green Power  als & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10%   |                            |
| P C C C C C C C C C C C C C C C C C C C        | redit 4 redit 5 redit 6  Materia rereq 1 redit 1.1 redit 1.2 redit 2.1 redit 2.1 redit 2.1 redit 3.1 redit 3.1 redit 3.2 redit 4.1 redit 4.2   | Ozone Depletion Measurement & Verification Green Power  als & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5%   |                            |
| ₹ ? No  P C C C C C C C C C C C C C C C C C C  | redit 4 redit 5 redit 6  Materia rereq 1 redit 1.1 redit 1.2 redit 2.1 redit 2.1 redit 2.2 redit 3.1 redit 3.2 redit 3.1 redit 4.1 redit 4.2 redit 4.2   | Ozone Depletion Measurement & Verification Green Power  Als & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 5% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally  |                            |
| P C C C C C C C C C C C C C C C C C C C        | redit 4 redit 5 redit 6  Materia rereq 1 redit 1.1 redit 1.2 redit 2.1 redit 2.1 redit 3.1 redit 3.2 redit 3.1 redit 4.1 redit 4.2 redit 4.1 redit 5.1 redit 5.1   | Ozone Depletion Measurement & Verification Green Power  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally  |                            |
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| P C C C C C C C C C C C C C C C C C C C        | redit 4 redit 5 redit 6  Materia rereq 1 redit 1.1 redit 1.2 redit 2.1 redit 2.2 redit 3.1 redit 4.1 redit 4.2 redit 5.1 redit 5.1 redit 5.2 redit 6 redit 7  Indoor  Prereq rereq 2 redit 1 redit 2 redit 3.1 redit 3.2   | Ozone Depletion Measurement & Verification Green Power  Als & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Environmental Quality  Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy  | Required  15 Point         |
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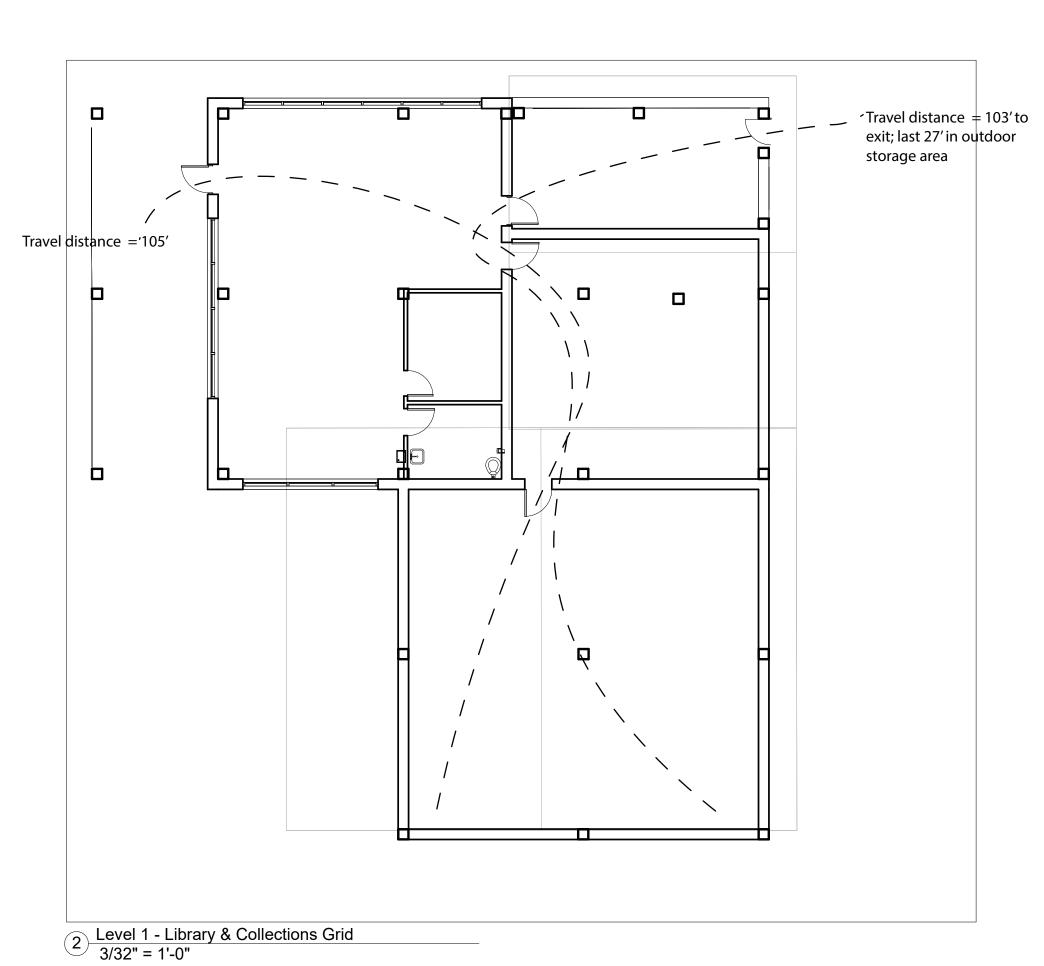


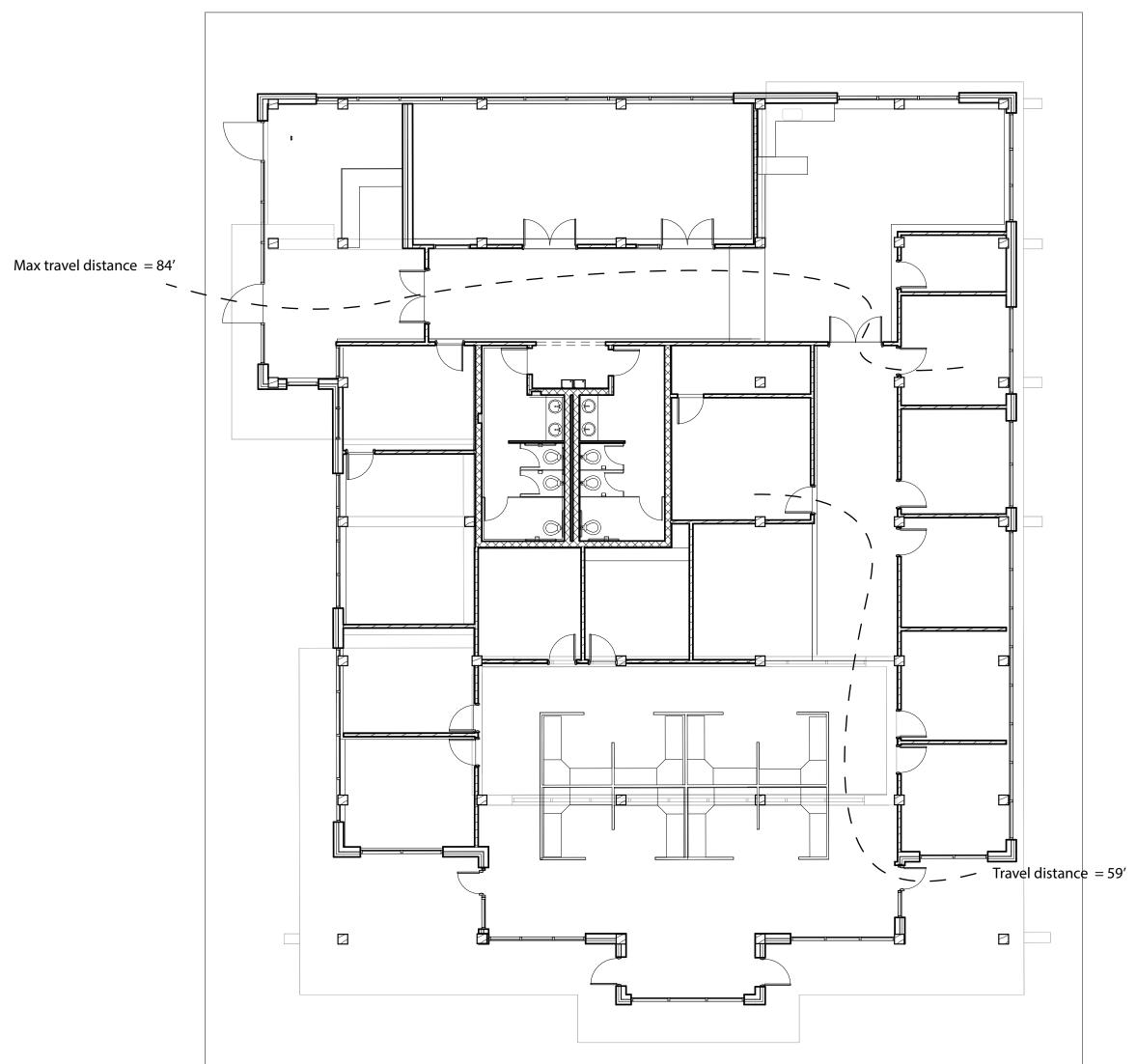
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1 Level 1 - M&M FLOOR PLAN Copy 1 3/32" = 1'-0"



# LEED for New Construction v2.1 Registered Project Checklist

Project Name:Library & Collections San Antonio Missions NHPH

| 'es ?   |         | Sustai   | inable Sites   | <b>14</b> Point            |
|---|---------|--|--|----------------------------|
| Y_  |         | Prereg 1   | Erosion & Sedimentation Control  | Require                    |
| 1   |         | Credit 1   | Site Selection   | rtequire                   |
| 1   |         | Credit 2   | Development Density  |                            |
| 1   |         | Credit 3   | Brownfield Redevelopment   |                            |
| 1   |         | Credit 4.1   | Alternative Transportation, Public Transportation Access   |                            |
| 1   | +       | Credit 4.2<br>Credit 4.3   | Alternative Transportation, Bicycle Storage & Changing Rooms Alternative Transportation, Alternative Fuel Vehicles   |                            |
| 1   |         | Credit 4.3   | Alternative Transportation, Alternative Fuel Vehicles  Alternative Transportation, Parking Capacity and Carpooling   |                            |
| 1   |         | Credit 5.1   | Reduced Site Disturbance, Protect or Restore Open Space  |                            |
| 1   |         | Credit 5.2   | Reduced Site Disturbance, Development Footprint  |                            |
| 1   |         | Credit 6.1   | Stormwater Management, Rate and Quantity   |                            |
| 1   | +       | Credit 6.2<br>Credit 7.1   | Stormwater Management, Treatment  Landscape & Exterior Design to Reduce Heat Islands, Non-Roof   |                            |
| 1   |         | Credit 7.1   | Landscape & Exterior Design to Reduce Heat Islands, Non-Roof   |                            |
| 1   |         | Credit 8   | Light Pollution Reduction  |                            |
| 'es ?   | No      |  | Efficiency   | <b>5</b> Point             |
| 1   |         | Credit 1.1   | Water Efficient Landscaping, Reduce by 50%   |                            |
|   | +       | Credit 1.2<br>Credit 2   | Water Efficient Landscaping, No Potable Use or No Irrigation Innovative Wastewater Technologies  |                            |
|   |         | Credit 3.1   | Water Use Reduction, 20% Reduction   |                            |
| 1   |         | Credit 3.2   |  |                            |
| 'es ?   | No      |  | y & Atmosphere   | <b>17</b> Point            |
| Y   |         | Prereq 1   | Fundamental Building Systems Commissioning   | Require                    |
| Y   |         | Prereq 2   | Minimum Energy Performance   | Require                    |
| Y   |         | Prereq 3<br>Credit 1   | CFC Reduction in HVAC&R Equipment  | Require<br>1 to 1          |
|   |         |  | Optimize Energy Performance  15% New Buildings or 5% Existing Building Renovations   | ı (O 1                     |
|   |         |  | 20% New Buildings or 10% Existing Building Renovations   |                            |
|   |         |  | 25% New Buildings or 15% Existing Building Renovations   | ,                          |
|   |         |  | 30% New Buildings or 20% Existing Building Renovations   |                            |
|   |         |  | 35% New Buildings or 25% Existing Building Renovations 40% New Buildings or 30% Existing Building Renovations  | :                          |
|   |         |  | 40% New Buildings or 30% Existing Building Renovations 45% New Buildings or 35% Existing Building Renovations  |                            |
|   |         |  | 50% New Buildings or 40% Existing Building Renovations   |                            |
|   |         |  | 55% New Buildings or 45% Existing Building Renovations   | !                          |
| 4   |         | la   | 60% New Buildings or 50% Existing Building Renovations   | 1                          |
| 1   |         | Credit 2.1   | Renewable Energy, 5%   |                            |
| 1   |         | Credit 2.2<br>Credit 2.3   | Renewable Energy, 10% Renewable Energy, 20%  |                            |
|   |         | Credit 2.3   | Additional Commissioning   |                            |
|   |         | Credit 4   | Ozone Depletion  |                            |
|   |         | Credit 5   | Measurement & Verification   |                            |
| 1   |         |  |  |                            |
| 1 /os 2   | NI~     | Credit 6   | Green Power  |                            |
| es ?  | No      | Credit 6   |  | 13 Point                   |
|   | No      | Credit 6  Materi Prereq 1  | Green Power  ials & Resources  Storage & Collection of Recyclables   |                            |
|   | No<br>I | Credit 6  Materi  Prereq 1  Credit 1.1   | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell  | 13 Point                   |
|   | No      | Credit 6  Materi  Prereq 1 Credit 1.1 Credit 1.2   | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell   |                            |
| 6 Y   | No      | Credit 6  Materi  Prereq 1  Credit 1.1  Credit 1.2  Credit 1.3   | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell   |                            |
| 6 Y   | No      | Credit 6  Materi  Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1   | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50%   |                            |
|   | No      | Credit 6  Materi  Prereq 1  Credit 1.1  Credit 1.2  Credit 1.3   | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell   |                            |
| 6 Y   | No      | Credit 6  Materi  Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2  | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75%   |                            |
| 6 Y   | No      | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1   | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial)   |                            |
| 6   Y   1   1   1                                     | No      | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2  | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial)   |                            |
| 6 Y   | No      | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 5.1   | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally  |                            |
| 1<br>1<br>1   | No      | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2  | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally  |                            |
| 6   Y   1   1   1   1   1   1   1   1   1             | No      | Prereq 1 Credit 1.1 Credit 1.2 Credit 2.1 Credit 2.1 Credit 3.1 Credit 3.1 Credit 4.1 Credit 4.2 Credit 4.2 Credit 5.1 Credit 5.2  | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally  |                            |
| 6   Y   1   1   1   1   1   1   1   1   1             |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 2.1 Credit 2.1 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7   | Green Power  ials & Resources  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials  | Require                    |
| 6   Y   1   1   1   1   1   1   1   1     1     Y   Y |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 2.1 Credit 2.1 Credit 3.1 Credit 3.1 Credit 4.1 Credit 4.2 Credit 4.1 Credit 5.1 Credit 5.2 Credit 6 Credit 7  | Green Power  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  | Require  15 Point  Require |
| 6   Y   1   1   1   1   1   1   1   1   1             |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7  | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  ### Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control  | Require  15 Point  Require |
| 6   Y   1   1   1   1   1   1   1   1   1             |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7   | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 5% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  # Environmental Quality  Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring  | Require  15 Point  Require |
| 6   Y   1   1   1   1   1   1   1   1     Y   Y       |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 5.1 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor Prereq Prereq 2 Credit 1 Credit 2   | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Quality  Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness  | Require  15 Point  Require |
| 6   Y   |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 1 Credit 2 Credit 3.1  | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Quality  Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction  | Require  15 Point  Require |
| 6   Y   |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 5.1 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor Prereq Prereq 2 Credit 1 Credit 2   | Green Power  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy   | Require  15 Point  Require |
| 6   Y   1   1   1   1   1   1   1   1   1             |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 5.1 Credit 5.2 Credit 5.1 Credit 7  Indoor Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2   | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Quality  Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction  | Require  15 Point  Require |
| 6   Y   |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 4.3 Credit 4.3   | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Quality  Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints Low-Emitting Materials, Carpet  | Require  15 Point  Require |
| 6   Y   |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.1 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 4.3 Credit 4.3 Credit 4.4  | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Quality  Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber   | Require  15 Point  Require |
| 6   Y   |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 3.2 Credit 4.3 Credit 4.3 Credit 4.4 Credit 5.   | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Quality  Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control   | Require  15 Point  Require |
| 6   Y   |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.2 Credit 5.2 Credit 5.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 1 Credit 2 Credit 3.1 Credit 3.1 Credit 4.2 Credit 4.3 Credit 4.3 Credit 5 Credit 5.1   | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Perimeter   | Require  15 Point  Require |
| 6   Y   |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 3.2 Credit 4.3 Credit 4.3 Credit 4.4 Credit 5.   | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Quality  Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control   | Require  15 Point  Require |
| 6   Y   |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.1 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.1 Credit 2 Credit 4.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7  | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Perimeter Controllability of Systems, Perimeter Thermal Comfort, Comply with ASHRAE 55-1992 Thermal Comfort, Permanent Monitoring System   | Require  15 Point  Require |
| 6   Y   |         | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 3.2 Credit 4.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7.1 Credit 6.1 Credit 7.1 Credit 7.2 Credit 8.1   | Green Power  Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Quality  Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Perimeter Controllability of Systems, Non-Perimeter Thermal Comfort, Comply with ASHRAE 55-1992 Thermal Comfort, Permanent Monitoring System Daylight & Views, Daylight 75% of Spaces  | Require  15 Point  Require |
| 6   Y   | No      | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7   | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Perimeter Controllability of Systems, Perimeter Thermal Comfort, Comply with ASHRAE 55-1992 Thermal Comfort, Permanent Monitoring System   | Require  15 Point  Require |
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| 6   Y   | No      | Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.1 Credit 2 Credit 4.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 4.3 Credit 4.1 Credit 5 Credit 6.1 Credit 6.2 Credit 7.1 Credit 7.2 Credit 8.1 Credit 8.2  Innova   | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, 20% Manufactured Locally Rapidly Renewable Materials Certified Wood  Tenvironmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Perimeter Controllability of Systems, Non-Perimeter Thermal Comfort, Comply with ASHRAE 55-1992 Thermal Comfort, Permanent Monitoring System Daylight & Views, Daylight 75% of Spaces Daylight & Views, Views for 90% of Spaces Innovation in Design: Provide Specific Title  | 15 Point Require Require   |
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| 6   Y   | No      | Prereq 1 Credit 1.1 Credit 1.2 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 2 Credit 1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 4.3 Credit 4.3 Credit 4.4 Credit 5 Credit 6.1 Credit 6.2 Credit 7.1 Credit 7.1 Credit 7.2 Credit 8.1 Credit 8.2  Innova  Credit 1.3 Credit 1.4 | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  r Environmental Quality  g Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Non-Perimeter Thermal Comfort, Comply with ASHRAE 55-1992 Thermal Comfort, Comply with ASHRAE 55-1992 Thermal Comfort, Permanent Monitoring System Daylight & Views, Views for 90% of Spaces Daylight & Views, Views for 90% of Spaces Innovation in Design: Provide Specific Title | 15 Point Require Require   |
| 6   Y   | No      | Prereq 1 Credit 1.1 Credit 1.2 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 2 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 4.3 Credit 4.3 Credit 4.3 Credit 6.1 Credit 6.2 Credit 7.1 Credit 7.1 Credit 7.2 Credit 8.1 Credit 8.2 Credit 1.3 Credit 1.3                                       | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Rapidly Renewable Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  r Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Paints Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Non-Perimeter Thermal Comfort, Comply with ASHRAE 55-1992 Thermal Comfort, Permanent Monitoring System Daylight & Views, Davlight 75% of Spaces Daylight & Views, Views for 90% of Spaces  Innovation in Design: Provide Specific Title   | 15 Point Require Require   |
| 6   Y   | No      | Prereq 1 Credit 1.1 Credit 1.2 Credit 2.2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 5.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7  Indoor  Prereq Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.1 Credit 3.2 Credit 4.1 Credit 3.2 Credit 4.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 4.1 Credit 4.2 Credit 4.1 Credit 5 Credit 6.1 Credit 6.1 Credit 6.2 Credit 7.1 Credit 7.2 Credit 8.1 Credit 8.2  Innova  Credit 1.3 Credit 1.4 Credit 2   | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  r Environmental Quality  g Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Non-Perimeter Thermal Comfort, Comply with ASHRAE 55-1992 Thermal Comfort, Comply with ASHRAE 55-1992 Thermal Comfort, Permanent Monitoring System Daylight & Views, Views for 90% of Spaces Daylight & Views, Views for 90% of Spaces Innovation in Design: Provide Specific Title | 15 Point Require Require   |



San Antoino Mission National Historical Park Headquarters

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rawn by Author

MM 107

3/32" = 1'-0"

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# **LEED for New Construction v2.1** Registered Project Checklist

Project Name: Project Address:

| Yes | s ? | No |            |  |           |
|-----|-----|----|------------|--|-----------|
| 14  |     |    | Sustai     | nable Sites  | 14 Points |
|     |     |    |            |  |           |
| Y   |     |    | Prereq 1   | Erosion & Sedimentation Control                              | Required  |
| 1   |     |    | Credit 1   | Site Selection   | 1         |
| 1   |     |    | Credit 2   | Development Density  | 1         |
| 1   |     |    | Credit 3   | Brownfield Redevelopment                                     | 1         |
| 1   |     |    | Credit 4.1 | Alternative Transportation, Public Transportation Access     | 1         |
| 1   |     |    | Credit 4.2 | Alternative Transportation, Bicycle Storage & Changing Rooms | 1         |
| 1   |     |    | Credit 4.3 | Alternative Transportation, Alternative Fuel Vehicles        | 1         |
| 1   |     |    | Credit 4.4 | Alternative Transportation, Parking Capacity and Carpooling  | 1         |
| 1   |     |    | Credit 5.1 | Reduced Site Disturbance, Protect or Restore Open Space      | 1         |
| 1   |     |    | Credit 5.2 | Reduced Site Disturbance, Development Footprint              | 1         |
| 1   |     |    | Credit 6.1 | Stormwater Management, Rate and Quantity                     | 1         |
| 1   |     |    | Credit 6.2 | Stormwater Management, Treatment                             | 1         |
| 1   |     |    | Credit 7.1 | Landscape & Exterior Design to Reduce Heat Islands, Non-Roof | 1         |
| 1   |     |    | Credit 7.2 | Landscape & Exterior Design to Reduce Heat Islands, Roof     | 1         |
| 1   |     |    | Credit 8   | Light Pollution Reduction                                    | 1         |

| Ye | s ? | No | 1          |  |                |
|----|-----|----|------------|--|----------------|
| 5  |     |    | Water      | Efficiency   | <b>5</b> Point |
|    |     |    | _          |  |                |
| 1  |     |    | Credit 1.1 | Water Efficient Landscaping, Reduce by 50%                   |                |
| 1  |     |    | Credit 1.2 | Water Efficient Landscaping, No Potable Use or No Irrigation |                |
| 1  |     |    | Credit 2   | Innovative Wastewater Technologies                           |                |
| 1  |     |    | Credit 3.1 | Water Use Reduction, 20% Reduction                           |                |
| 1  |     |    | Credit 3.2 | Water Use Reduction, 30% Reduction                           |                |

| Yes ? N | lo<br>Energ | y & Atmosphere   | 17 Points |
|---------|-------------|--|-----------|
| Υ       | Prereq 1    | Fundamental Building Systems Commissioning               | Require   |
| Y       | Prereq 2    | Minimum Energy Performance                               | Require   |
| Y       | Prereq 3    | CFC Reduction in HVAC&R Equipment                        | Require   |
| 8       | Credit 1    | Optimize Energy Performance                              | 1 to 10   |
|         |             | 15% New Buildings or 5% Existing Building Renovations    |           |
|         |             | 20% New Buildings or 10% Existing Building Renovations   | 4         |
|         |             | 25% New Buildings or 15% Existing Building Renovations   | 4         |
|         |             | 30% New Buildings or 20% Existing Building Renovations   | 4         |
|         |             | 35% New Buildings or 25% Existing Building Renovations   |           |
|         |             | 40% New Buildings or 30% Existing Building Renovations   | (         |
|         |             | 45% New Buildings or 35% Existing Building Renovations   |           |
|         |             | 8 50% New Buildings or 40% Existing Building Renovations |           |
|         |             | 55% New Buildings or 45% Existing Building Renovations   |           |
|         |             | 60% New Buildings or 50% Existing Building Renovations   | 10        |
| 1       | Credit 2.1  | Renewable Energy, 5%                                     |           |
| 1       | Credit 2.2  | Renewable Energy, 10%                                    |           |
| 1       | Credit 2.3  | Renewable Energy, 20%                                    |           |
| 1       | Credit 3    | Additional Commissioning                                 |           |
| 1       | Credit 4    | Ozone Depletion  |           |
| 1       | Credit 5    | Measurement & Verification                               |           |
| 1       | Credit 6    | Green Power  | •         |

| Yes | ? | No |            |   |           |
|-----|---|----|------------|---|-----------|
| 8   | 2 | 3  | Materi     | als & Resources   | 13 Points |
|     |   |    |            |   |           |
| Y   |   |    | Prereq 1   | Storage & Collection of Recyclables                               | Required  |
|     |   | 1  | Credit 1.1 | Building Reuse, Maintain 75% of Existing Shell                    | 1         |
|     |   | 1  | Credit 1.2 | Building Reuse, Maintain 100% of Shell                            | 1         |
|     |   | 1  | Credit 1.3 | Building Reuse, Maintain 100% Shell & 50% Non-Shell               | 1         |
| 1   |   |    | Credit 2.1 | Construction Waste Management, Divert 50%                         | 1         |
| 1   |   |    | Credit 2.2 | Construction Waste Management, Divert 75%                         | 1         |
|     | 1 |    | Credit 3.1 | Resource Reuse, Specify 5%  | 1         |
|     | 1 |    | Credit 3.2 | Resource Reuse, Specify 10%                                       | 1         |
| 1   |   |    | Credit 4.1 | Recycled Content, Specify 5% (post-consumer + ½ post-industrial)  | 1         |
| 1   |   |    | Credit 4.2 | Recycled Content, Specify 10% (post-consumer + ½ post-industrial) | 1         |
| 1   |   |    | Credit 5.1 | Local/Regional Materials, 20% Manufactured Locally                | 1         |
| 1   |   |    | Credit 5.2 | Local/Regional Materials, of 20% Above, 50% Harvested Locally     | 1         |
| 1   |   |    | Credit 6   | Rapidly Renewable Materials                                       | 1         |
| 1   |   |    | Credit 7   | Certified Wood  | 1         |

| 15 | Indoo      | or Environmental Quality                              | <b>15</b> Point |
|----|------------|---|-----------------|
| Υ  | Prere      | q Minimum IAQ Performance                             | Require         |
| Υ  | Prereq 2   | Environmental Tobacco Smoke (ETS) Control             | Require         |
| 1  | Credit 1   | Carbon Dioxide (CO <sub>2</sub> ) Monitoring          |                 |
| 1  | Credit 2   | Ventilation Effectiveness                             |                 |
| 1  | Credit 3.1 | Construction IAQ Management Plan, During Construction |                 |
| 1  | Credit 3.2 | Construction IAQ Management Plan, Before Occupancy    |                 |
| 1  | Credit 4.1 | Low-Emitting Materials, Adhesives & Sealants          |                 |
| 1  | Credit 4.2 | Low-Emitting Materials, Paints                        |                 |
| 1  | Credit 4.3 | Low-Emitting Materials, Carpet                        |                 |
| П  | Credit 4.4 | Low-Emitting Materials, Composite Wood & Agrifiber    |                 |
| 1  | Credit 5   | Indoor Chemical & Pollutant Source Control            |                 |
| 1  | Credit 6.1 | Controllability of Systems, Perimeter                 |                 |
| 1  | Credit 6.2 | Controllability of Systems, Non-Perimeter             |                 |
| 1  | Credit 7.1 | Thermal Comfort, Comply with ASHRAE 55-1992           |                 |
| 1  | Credit 7.2 | Thermal Comfort, Permanent Monitoring System          |                 |
| 1  | Credit 8.1 | ,               |                 |
| 1  | Credit 8.2 | Paylight & Views, Views for 90% of Spaces             |                 |

| .       0,, | edit 7.1 Thermal Comfort, Comply with ASHRAE 55-1992  | i i                                 |
|-------------|---|-------------------------------------|
| Cre         | edit 7.2 Thermal Comfort, Permanent Monitoring System   | 1                                   |
| Cre         | edit 8.1 Daylight & Views, Daylight 75% of Spaces   | 1                                   |
| Cre         | edit 8.2 Daylight & Views, Views for 90% of Spaces  | 1                                   |
|             |   |                                     |
| es ? No     |   |                                     |
|             |   |                                     |
|             | Innovation & Design Process   | <b>5</b> Points                     |
| 110         | Innovation & Design Process   | <b>5</b> Points                     |
|             | Innovation & Design Process edit 1.1 Innovation in Design: Provide Specific Title                           | <b>5</b> Points<br>1                |
| Cre         |   | <b>5</b> Points<br>1<br>1           |
| Cre<br>Cre  | edit 1.1 Innovation in Design: Provide Specific Title   | <b>5</b> Points<br>1<br>1<br>1      |
| Cre<br>Cre  | edit 1.1 Innovation in Design: Provide Specific Title edit 1.2 Innovation in Design: Provide Specific Title | <b>5</b> Points<br>1<br>1<br>1<br>1 |

54 5 3 Project Totals (pre-certification estimates) 69 Po Certified: 26-32 points, Silver: 33-38 points, Gold: 39-51 points, Platinum: 52-69 points

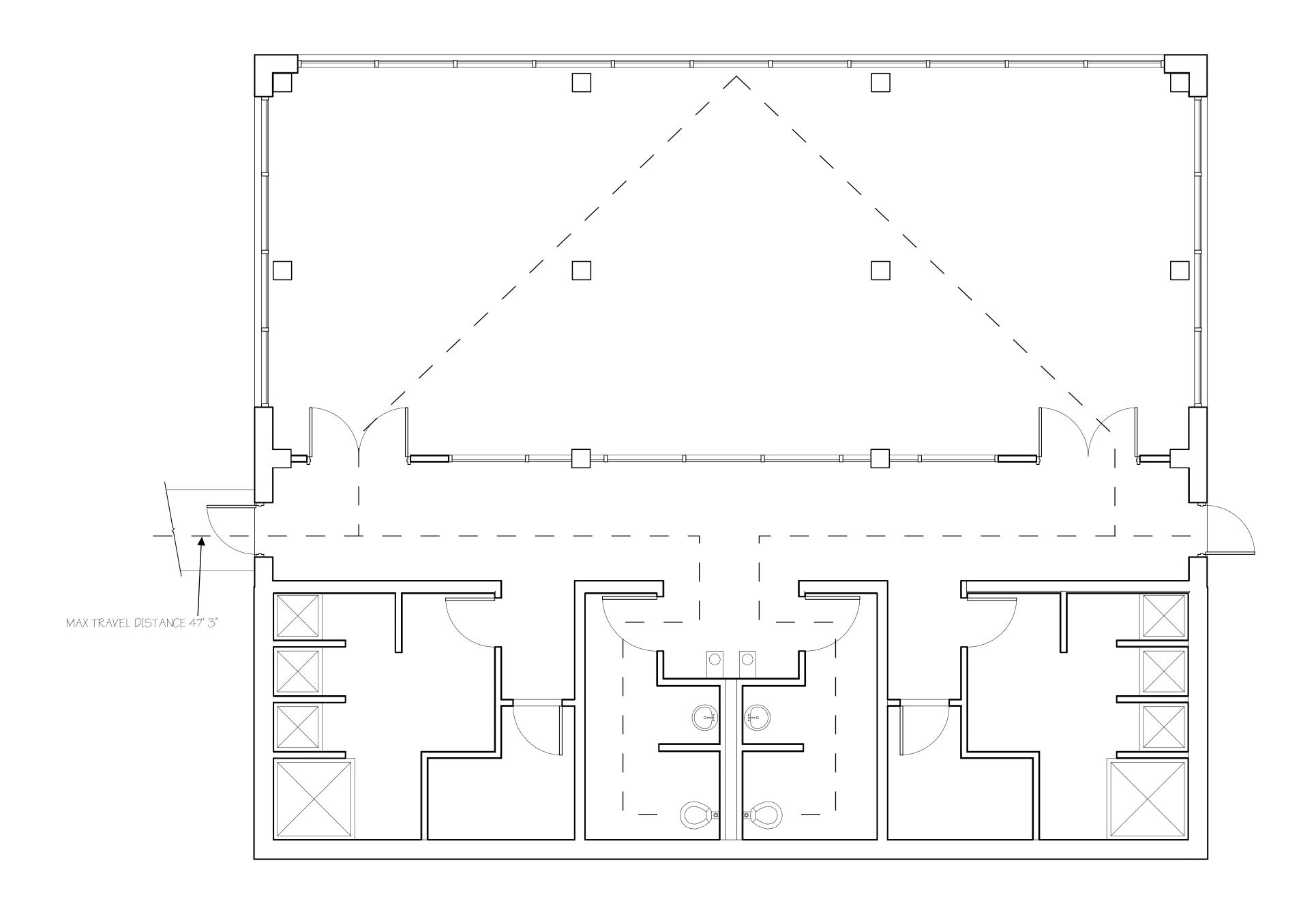


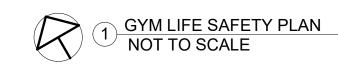
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SAN ANTONIO MISSION'S NPS LE MAIN BUILDING LIFE SAFETY PLAN AND LEED

12/8/2023 Alyciana Munoz

LE110A







# LEED for New Construction v2.1 Registered Project Checklist

Project Name: Project Address:

| 14     | Sustai      | inable Sites   | <b>14</b> Points |
|--------|-------------|--|------------------|
| Υ      | Prereq 1    | Erosion & Sedimentation Control                              | Required         |
| 1      | Credit 1    | Site Selection   | . 1              |
| 1      | Credit 2    | Development Density  | •                |
| 1      | Credit 3    | Brownfield Redevelopment                                     | •                |
| 1      | Credit 4.1  | Alternative Transportation, Public Transportation Access     | •                |
| 1      | Credit 4.2  | Alternative Transportation, Bicycle Storage & Changing Rooms | •                |
| 1      | Credit 4.3  | Alternative Transportation, Alternative Fuel Vehicles        | •                |
| 1      | Credit 4.4  | Alternative Transportation, Parking Capacity and Carpooling  | •                |
| 1      | Credit 5.1  | Reduced Site Disturbance, Protect or Restore Open Space      | •                |
| 1      | Credit 5.2  | Reduced Site Disturbance, Development Footprint              | •                |
| 1      | Credit 6.1  | Stormwater Management, Rate and Quantity                     | •                |
| 1      | Credit 6.2  | Stormwater Management, Treatment                             | •                |
| 1      | Credit 7.1  | Landscape & Exterior Design to Reduce Heat Islands, Non-Roof | •                |
| 1      | Credit 7.2  | Landscape & Exterior Design to Reduce Heat Islands, Roof     |                  |
| 1      | Credit 8    | Light Pollution Reduction                                    | ,                |
| es ? I | No          |  |                  |
| 5      |             | Efficiency   | <b>5</b> Points  |
| 4      | Orodit 1 1  | Mater Efficient Landscaping Deduce by 500/                   |                  |
| 1      | Credit 1.1  | Water Efficient Landscaping, Reduce by 50%                   |                  |
|        | Credit 1.2  | Water Efficient Landscaping, No Potable Use or No Irrigation |                  |
| 1      | Credit 2    | Innovative Wastewater Technologies                           |                  |
| 1      |             | Water Use Reduction, 20% Reduction                           |                  |
|        | TCreatt 3.2 | Water Use Reduction, 30% Reduction                           |                  |

| Yes ? No 12 3 Energy   | y & Atmosphere   | 17 Point                                |
|--|--|---|
| Y Prereq 1 Y Prereq 2 Y Prereq 3 R Credit 1  | Fundamental Building Systems Commissioning Minimum Energy Performance CFC Reduction in HVAC&R Equipment Optimize Energy Performance  15% New Buildings or 5% Existing Building Renovations 20% New Buildings or 10% Existing Building Renovations 25% New Buildings or 15% Existing Building Renovations 30% New Buildings or 20% Existing Building Renovations 35% New Buildings or 25% Existing Building Renovations 40% New Buildings or 35% Existing Building Renovations 45% New Buildings or 35% Existing Building Renovations 50% New Buildings or 40% Existing Building Renovations 55% New Buildings or 45% Existing Building Renovations | Require<br>Require<br>Require<br>1 to 1 |
| 1 Credit 2.1 1 Credit 2.2 1 Credit 2.3 1 Credit 3 1 Credit 4 1 Credit 5 1 Credit 6 | 60% New Buildings or 50% Existing Building Renovations Renewable Energy, 5% Renewable Energy, 10% Renewable Energy, 20% Additional Commissioning Ozone Depletion Measurement & Verification Green Power  | 1                                       |

| 8 | 2 | 3 | Materi     | als & Resources   | 13 Points |
|---|---|---|------------|---|-----------|
| Υ |   |   | Prereq 1   | Storage & Collection of Recyclables                               | Required  |
|   |   | 1 | Credit 1.1 | Building Reuse, Maintain 75% of Existing Shell                    | 1         |
|   |   | 1 | Credit 1.2 | Building Reuse, Maintain 100% of Shell                            | 1         |
|   |   | 1 | Credit 1.3 | Building Reuse, Maintain 100% Shell & 50% Non-Shell               | •         |
| 1 |   |   | Credit 2.1 | Construction Waste Management, Divert 50%                         | •         |
| 1 |   |   | Credit 2.2 | Construction Waste Management, Divert 75%                         | •         |
|   | 1 |   | Credit 3.1 | Resource Reuse, Specify 5%  | •         |
|   | 1 |   | Credit 3.2 | Resource Reuse, Specify 10%                                       | •         |
| 1 |   |   | Credit 4.1 | Recycled Content, Specify 5% (post-consumer + ½ post-industrial)  | ,         |
| 1 |   |   | Credit 4.2 | Recycled Content, Specify 10% (post-consumer + ½ post-industrial) | •         |
| 1 |   |   | Credit 5.1 | Local/Regional Materials, 20% Manufactured Locally                | •         |
| 1 |   |   | Credit 5.2 | Local/Regional Materials, of 20% Above, 50% Harvested Locally     | •         |
| 1 |   |   | Credit 6   | Rapidly Renewable Materials                                       |           |
| 1 |   |   | Credit 7   | Certified Wood  |           |

| 15 | Indoor     | Environmental Quality                                 | <b>15</b> Points |
|----|------------|---|------------------|
| Υ  | Prereq     | Minimum IAQ Performance                               | Required         |
| Υ  | Prereq 2   | Environmental Tobacco Smoke (ETS) Control             | Required         |
| 1  | Credit 1   | Carbon Dioxide (CO <sub>2</sub> ) Monitoring          | 1                |
| 1  | Credit 2   | Ventilation Effectiveness                             | 1                |
| 1  | Credit 3.1 | Construction IAQ Management Plan, During Construction | 1                |
| 1  | Credit 3.2 | Construction IAQ Management Plan, Before Occupancy    | 1                |
| 1  |            | Low-Emitting Materials, Adhesives & Sealants          | 1                |
| 1  | Credit 4.2 | Low-Emitting Materials, Paints                        | 1                |
| 1  | Credit 4.3 | Low-Emitting Materials, Carpet                        | 1                |
| 1  | Credit 4.4 | Low-Emitting Materials, Composite Wood & Agrifiber    | 1                |
| 1  | Credit 5   | Indoor Chemical & Pollutant Source Control            | 1                |
| 1  | Credit 6.1 | Controllability of Systems, Perimeter                 | 1                |
| 1  | Credit 6.2 | Controllability of Systems, Non-Perimeter             | 1                |
| 1  | Credit 7.1 | Thermal Comfort, Comply with ASHRAE 55-1992           | 1                |
| 1  | Credit 7.2 | Thermal Comfort, Permanent Monitoring System          | 1                |
| 1  | Credit 8.1 | Daylight & Views, Daylight 75% of Spaces              | 1                |
| 1  | Credit 8.2 | Daylight & Views, Views for 90% of Spaces             | 1                |

|                 | Credit 5   | Indoor Chemical & Pollutant Source Control   | 1                                  |
|-----------------|--|--|------------------------------------|
| 1               | Credit 6.1   | Controllability of Systems, Perimeter  | 1                                  |
| 1               | Credit 6.2   | Controllability of Systems, Non-Perimeter  | 1                                  |
| 1               | Credit 7.1   | Thermal Comfort, Comply with ASHRAE 55-1992  | 1                                  |
| 1               | Credit 7.2   | Thermal Comfort, Permanent Monitoring System   | 1                                  |
| 1               | Credit 8.1   | Daylight & Views, Daylight 75% of Spaces   | 1                                  |
| 1               | Credit 8.2   | Daylight & Views, Views for 90% of Spaces  | 1                                  |
| Yes ? No        |  | ation & Design Process   | <b>5</b> Points                    |
|                 |  |  |                                    |
|                 |  |  |                                    |
|                 | Credit 1.1   | Innovation in Design: Provide Specific Title   | 1                                  |
|                 | Credit 1.1<br>Credit 1.2                           | Innovation in Design: Provide Specific Title Innovation in Design: Provide Specific Title  | 1<br>1                             |
|                 |  | · · · · · · · · · · · · · · · · · · ·  | 1<br>1<br>1                        |
|                 | Credit 1.2   | Innovation in Design: Provide Specific Title   | 1<br>1<br>1<br>1                   |
|                 | Credit 1.2<br>Credit 1.3                           | Innovation in Design: Provide Specific Title Innovation in Design: Provide Specific Title  | 1<br>1<br>1<br>1                   |
|                 | Credit 1.2<br>Credit 1.3<br>Credit 1.4             | Innovation in Design: Provide Specific Title Innovation in Design: Provide Specific Title Innovation in Design: Provide Specific Title                               | 1<br>1<br>1<br>1                   |
| Yes ? No        | Credit 1.2<br>Credit 1.3<br>Credit 1.4<br>Credit 2 | Innovation in Design: Provide Specific Title Innovation in Design: Provide Specific Title Innovation in Design: Provide Specific Title LEED™ Accredited Professional | 1<br>1<br>1<br>1                   |
| Yes ? No 54 5 3 | Credit 1.2<br>Credit 1.3<br>Credit 1.4<br>Credit 2 | Innovation in Design: Provide Specific Title Innovation in Design: Provide Specific Title Innovation in Design: Provide Specific Title                               | 1<br>1<br>1<br>1<br>1<br>69 Points |

MP DB MISSION PARTNERS DESIGN + BUILD

SAN ANTONIO MISSIONS NATIONAL

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SAN ANTONIO MISSION'S NPS

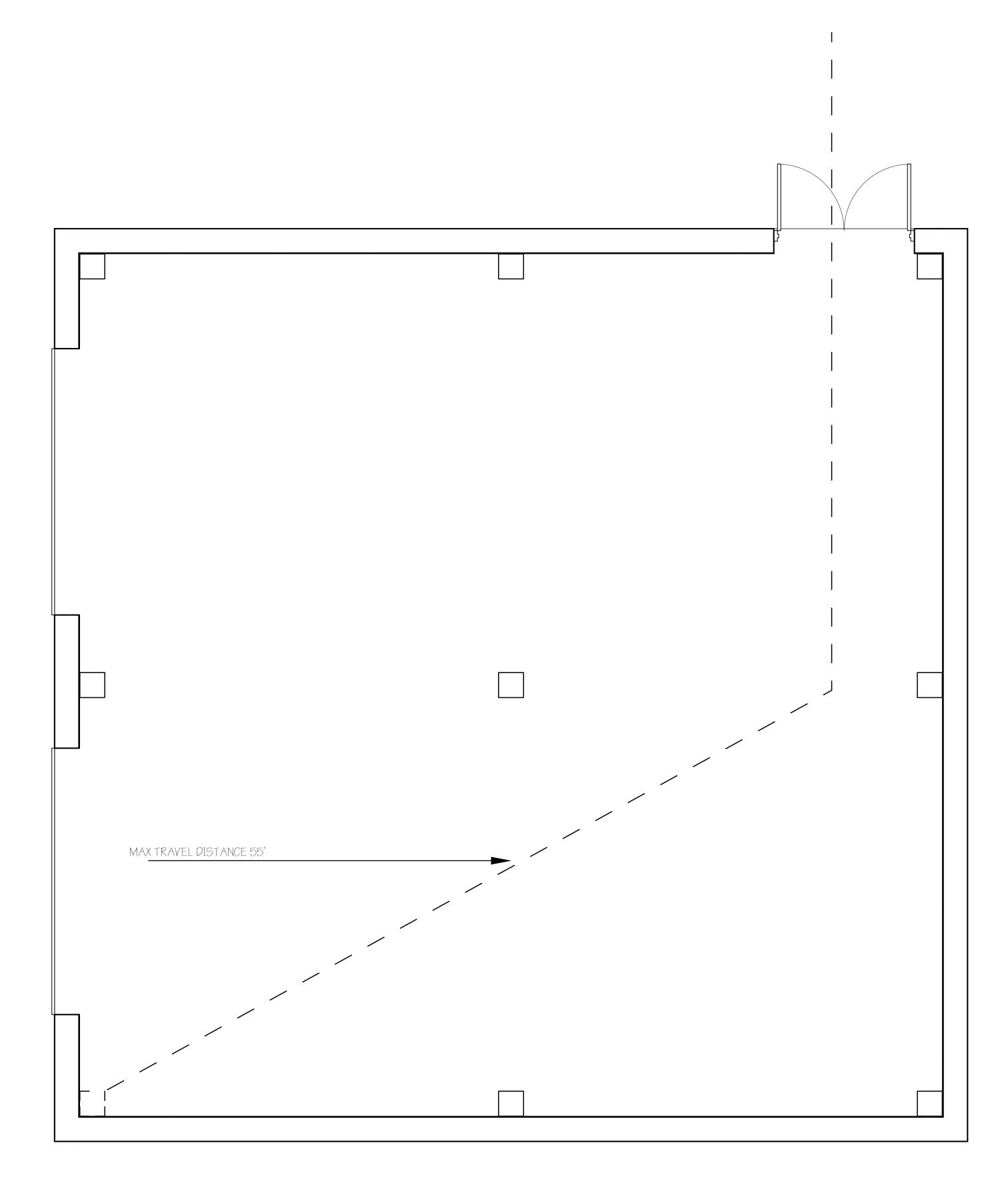
GYM LIFE SAFETY PLAN AND LEED

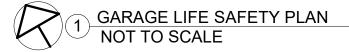
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# LEED for New Construction v2.1 Registered Project Checklist

| USGBC   |  |  |
|---|--|--|
| Project Name:<br>Project Address:   |  |  |
| Yes ? No  | nabla Sitas  | 14 Points  |
| Y Prereq 1 1 Credit 1 1 Credit 2 1 Credit 3 1 Credit 4.1 1 Credit 4.2 1 Credit 4.3 1 Credit 4.4 1 Credit 5.1 1 Credit 5.2 1 Credit 6.1  | Erosion & Sedimentation Control Site Selection Development Density Brownfield Redevelopment Alternative Transportation, Public Transportation Access Alternative Transportation, Bicycle Storage & Changing Rooms Alternative Transportation, Alternative Fuel Vehicles Alternative Transportation, Parking Capacity and Carpooling Reduced Site Disturbance, Protect or Restore Open Space Reduced Site Disturbance, Development Footprint Stormwater Management, Rate and Quantity Stormwater Management, Treatment Landscape & Exterior Design to Reduce Heat Islands, Non-Roof Landscape & Exterior Design to Reduce Heat Islands, Roof Light Pollution Reduction        | 14 Points  Required  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| Yes ? No Water  | Efficiency   | <b>5</b> Points  |
|   | Water Efficient Landscaping, Reduce by 50% Water Efficient Landscaping, No Potable Use or No Irrigation Innovative Wastewater Technologies Water Use Reduction, 20% Reduction Water Use Reduction, 30% Reduction   | 1<br>1<br>1<br>1   |
| Yes ? No 12 3 Energy  | y & Atmosphere   | 17 Points  |
| Y Prereq 1 Y Prereq 2 Y Prereq 3 R Credit 1   | Fundamental Building Systems Commissioning Minimum Energy Performance CFC Reduction in HVAC&R Equipment Optimize Energy Performance  15% New Buildings or 5% Existing Building Renovations 20% New Buildings or 10% Existing Building Renovations 25% New Buildings or 15% Existing Building Renovations 30% New Buildings or 20% Existing Building Renovations 35% New Buildings or 25% Existing Building Renovations 40% New Buildings or 30% Existing Building Renovations 45% New Buildings or 35% Existing Building Renovations 55% New Buildings or 45% Existing Building Renovations 55% New Buildings or 45% Existing Building Renovations                           | Required Required Required 1 to 10 1 2 3 4 5 6 7 8 9 10  |
| 1   | 60% New Buildings or 50% Existing Building Renovations Renewable Energy, 5% Renewable Energy, 10% Renewable Energy, 20% Additional Commissioning Ozone Depletion Measurement & Verification Green Power  | 1<br>1<br>1<br>1<br>1<br>1<br>1                          |
| Yes ? No 8 2 3 Materia  | als & Resources  | 13 Points  |
| Prereq 1 Credit 1.1 Credit 1.2 Credit 1.3 Credit 2.1 Credit 2.2 Credit 3.1 Credit 3.1 Credit 4.1 Credit 4.2 Credit 4.2 Credit 5.1 Credit 5.2 Credit 6 Credit 7                                    | Storage & Collection of Recyclables Building Reuse, Maintain 75% of Existing Shell Building Reuse, Maintain 100% of Shell Building Reuse, Maintain 100% Shell & 50% Non-Shell Construction Waste Management, Divert 50% Construction Waste Management, Divert 75% Resource Reuse, Specify 5% Resource Reuse, Specify 10% Recycled Content, Specify 5% (post-consumer + ½ post-industrial) Recycled Content, Specify 10% (post-consumer + ½ post-industrial) Local/Regional Materials, 20% Manufactured Locally Local/Regional Materials, of 20% Above, 50% Harvested Locally Rapidly Renewable Materials Certified Wood  | Required   |
| Yes ? No 11 4 Indoor  | · Environmental Quality  | <b>15</b> Points   |
| Y Prereq Prereq 2 1 Credit 1 1 Credit 2 1 Credit 3.1 1 Credit 3.2 1 Credit 4.1 1 Credit 4.2 1 Credit 4.3 1 Credit 4.4 1 Credit 5 1 Credit 6.1 1 Credit 7.1 1 Credit 7.2 1 Credit 8.1 1 Credit 8.2 | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints Low-Emitting Materials, Carpet Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Perimeter Controllability of Systems, Non-Perimeter Thermal Comfort, Comply with ASHRAE 55-1992 Thermal Comfort, Permanent Monitoring System Daylight & Views, Daylight 75% of Spaces | Required Required 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |
| Yes ? No Innova   | ntion & Design Process   | <b>5</b> Points  |
| Credit 1.1 Credit 1.2 Credit 1.3 Credit 1.4 Credit 2  | Innovation in Design: Provide Specific Title LEED™ Accredited Professional  | 1<br>1<br>1<br>1   |

Yes ? No

50 5 7 Project Totals (pre-certification estimates)

Certified: 26-32 points, Silver: 33-38 points, Gold: 39-51 points, Platinum: 52-69 points



SAN ANTONIO MISSIONS NATIONAL HISTORICAL PARK HEADQUARTERS

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**GARAGE LIFE** SAFETY PLAN AND

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Alyciana Munoz

12/8/2023

# **SECTION 04 43 13.16**

# ADHERED NATURAL THIN VENEER STONE **PART 1: GENERAL**

# 1.1SUMMARY

A. Section Includes: Natural thin stone veneer masonry for exterior.

# B. Related Sections:

1. Preparing the backup surface for mortar application Apply sheathing over the studs. Sheathing can be exterior OSB, plywood, exterior grade drywall, wallboard, or cementitious board. Apply 2" rigid foam polyisocyanurate insulation over sheathing. Staple the building paper to the rigid foam polyisocyanurate. Attach the building paper in horizontal strips. Start at the bottom and overlap 2" (like shingles). Overlap the vertical joints by at least 6". Install support brackets (anchors), before proceeding to the next step. Nail the metal lath to the studs. Overlap the metal lath at least 1/2" for horizontal and 1" for vertical joints. At corners, overlap the vertical joints at least 16" around the corner to avoid corner cracking. Use barbed galvanized nails at 6" o.c. vertically for exterior work. Minimum nail penetration is 1" into the studs. Apply a scratch coat that is 3/8" to 1/2" thick over and embedded into the metal lath. Use a toothed scraper, notched trowel, or small piece of lath to lightly rake horizontal grooves in the scratch coat. Allow the scratch coat to cure for a minimum of 24 hours before installing adhered stone.

2. Mortar Application and stone Placement

Starting Point You can start laying stones at the top or the bottom of the wall. Working from the top down may keep mortar droppings from staining stones below, but make sure the mortar is strong enough to hold the suspended stone in place. If beginning from the bottom, use a straight-edge and start 4" above soil or 2" above concrete to keep moisture from being absorbed from the ground. If your wall requires corner pieces, place these stones first. After your corner pieces are in place you can continue with the field stones. At the beginning of the workday, sponge, or hose down the entire surface of the wall. This keeps the moisture from the wet mortar from being absorbed by the wall. Remoisten your work area with a fog spray or wet brush every hour. You want your work area to be damp, but not wet. Using a trowel, apply mortar 3/8" to 3/4" thick to your work area. Push the mortar layer directly into the scratch coat for studs, with firm pressure on the trowel. Keep your work area limited to 10 square feet, so the mortar on the wall will not set before you can place the stones. Do not pre-wet the stones. Natural stones do not absorb much water and saturated stones will not adhere to the mortar. Just before placing the stone, cover 100% of the back of the stone with 1/2" of mortar. Place a slight excess of mortar at the edges of the stone. This will allow some mortar to squeeze out the stone edges and fill the joints when pressure is applied. Once the stone has been firmly pressed into the mortar bed, gently tap the stone with a soft mallet to set it in place. Be careful not to tap too hard. Some stud systems may be flexible and setting adjacent stones by tapping may dislodge a stone. Do not disturb or tap the stone after it has been set. The resulting total mortar thickness behind the stone should be between 3/8" and 1 1/4".

3. Cutting and Trimming Stones: When placing a stone, try to find one that looks like a good fit with its neighbor. Some of

these stones will still need to be trimmed to fit neatly and maintain uniform joint widths. To cut the stone, use a handheld A. Ensure proper temperature requirements are met during grinder with a diamond cutting wheel or a chisel and hammer. If you prefer a rougher cut, score the back of the stone with the grinder, and then use the hammer to break the unwanted pieces off. After the stone has been cut and trimmed, use a sponge or brush to assure that all grinding residue and dust have been removed.

# 1.2REFERENCES

A. ANSI A118.4 – Specifications for Latex-Portland Cement Mortar.

B. ANSI A118.15 – Specifications for Premium latex-Portland Cement Mortar.

C. ASTM C 207 – Standard Specification for Hydrated Lime for Masonry Purposes.

D. ASTM C 270 – Standard Specification for Mortar for Unit Masonry.

E. ASTM C 847 – Standard Specification for Metal Lath. F. ASTM C 1063 – Standard Specification for Installation of Lathing and Exterior Portland Cement-Based Plaster.

G. AC-38 – Acceptance Criteria for Weather Resistive Barriers. 1.3SUBMITTALS

A. Reference Section (01 33 00) – Submittal Procedures as follows

- 1. Product data including suppliers cut-sheet.
- 2. Samples: Sample board of specified material
- 3. Verification sample: Upon approval of initial sample, provide installed mock-up sample using selected stone and mortar showing complete size and color range. Mockup sample should be 2' x 2'
- 4. Quality Assurance / Control Submittals Quarry Mill's installation instructions. Installation instructions for other applicable materials. 3.1 EXAMINATION Quarry Mills statement of warranty.

# 1.4QUALITY ASSURANCE

- A. Qualifications
  - a. Distributor routinely engaged in the sourcing or manufacturing of natural thin stone veneer products.
  - b. Installer experienced in the installation of natural thin stone veneer products
- B. Field Panel:

Prepare 2' x 2' mockup sample at the location of project as selected and designed by Architect.

- a. Use materials and techniques as selected by Architect.
- b. Obtain Architect's approval of finished mockup panel
- c. Retain mockup for validation throughout project as necessary.

# 1.5DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials onsite in original unopened packaging. Product should be clearly labeled with product names and identifiers.
- B. Storage and Handling:
- 1. Store pallets on level surface, and protect from harsh weather.
- 2. Mortar should be stored in a cool dry area. Do not allow B. Remove protection from adjacent surfaces or fixtures. mortar to get wet. Do not open before use.
- 3. Handle product with care to prevent package damage prior to installation.

# 1.6PROJECT ENVIRONMENTAL REQUIREMENTS

- installation of stone and curing of mortar. Comply with requirements contained in ACI 530.1/ASCE 6/TMS 602.
- 1. Air temperature must remain at or above 40 Degrees F (4.5) Degrees C) during installation.
- 2. Work area and surface should be tarped/tented and heated to above 50 Degrees F during cold weather as described above.
- 3. No mortar accelerants may be used.

# **PART 2: PRODUCTS**

# 2.1 DISTRIBUTION PLANT

A. Quarry Mill (920) 213-7792 2670 Stone Rd

Sturgeon Bay, WI quarrymill.com

# 2.2MATERIALS

A. Natural Thin Stone Veneer:

Product: Alpine

- 1. Substitutions: None Allowed.
- 2. Include matching corners if available.
- A. Moisture Barrier

[ASTM D 226, Type 1, No. 15, non-perforated asphalt-saturated felt paper] [UBC Standard 14-1, kraft waterproof building paper] [ICC AC-38 Acceptance Criteria for Water Resistive Barriers C. Lath:

[ASTM C 847, 2.5lb/yd2 (1.4kg/m2) galvanized expanded metal lath] [ASTM C 847, 3.4lb (1.8 kg/m2) galvanized 3/8" rib lath] complying with code agency requirements for the type of substrate over which stone veneer is installed.

A. Bonding Mortar:

Latex-Portland Polymer Modified Mortar meeting ANSI A118.4 or ANSI A118.15.

# **PART 3: EXECUTION**

- A. Examine substrates to receive natural thin veneer stone.
- B. Notify responsible party to correct any problems to substrate.
- C. Work may begin once substrate is considered acceptable.

# **3.2PREPARATION**

- A. Protection: Protect adjacent surfaces or fixtures from contact with mortar and grout.
- B. Surface Preparation: Prepare substrates in accordance with manufacturer's installation instructions and local building code.

# 3.3INSTALLATION

- A. Install natural thin stone veneer in accordance with manufacturer's installation instruction. Perform a grouted installation.
- B. Clean stone as necessary before bonding to the wall.
- C. Work out of multiple pallets of material to ensure an accurate blend of colors.
- D. Cutting and Fitting:
- 1. Cut and fit stone veneer as necessary so that they fit with desired gap for installation.
- 2. Use a wet saw to cut back on airborne dust during cutting.

# 3.4CLEANING

- A. Remove mortar on the face of stones before it is allowed to dry.
- C. Clean natural stone units as required with a soft bristle brush and mild detergent solution. Rinse after cleaning.
- D. Do not use acids or other hard cleaners.

# END OF SECTION



**MISSION PARTNERS DESIGN + BUILD** 

> MISSIONS NATIONAL ARK HEADQUARTERS SAN ANTONIO I HISTORICAL PA

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Limestone **Specification** 

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### Specification for Structural Glazed Tile

SECTION 04 21 26

GLAZED STRUCTURAL CLAY TILE MASONRY

### 1.1 SUMMARY

A. System Description: Work described in this section covers requirements for Structural Glazed Tile Unit Masonry and its installation and maintenance

Products installed but not furnished in this section:

### Section 04 05 13: Masonry Mortaring

### Section 04 05 23: Masonry Access

### 1.2 REFERENCES

A. Applicable standards of the following as referenced: 1. American Society for Testing and Materials (ASTM)

2 Brick Industry Association (BIA)

3. Underwriters Laboratories, Inc. (UL)

Ceramic Glazed Masonry Institute (CGMI)
 Building Code Requirements for Masonry Structures (ACI 530-05/ASCE 5-05/TMS 402-05)
 1.3 DEFINITIONS

A. Terms

1. Structural Glazed Tile: SGT, extruded and manufactured clay masonry unit with a ceramic glazed face that is a

structural unit which can be loadbearing masonry.

2. Glazed Face: Exposed ceramic glazed face(s) on SGT.

3. Bed Joint: Horizontal mortar joint between two SGT.

4. Head Joint: Vertical mortar joint between two SGT.

### 1.4 SUBMITA LS:

A. Strap Samples: Submit three samples to indicate the approximate range of color and texture to be expected in the completed wall for each color or texture.

B Certificates:

. Material Safety Data Sheet (MSDS)

2. Certification Letter: Submit a certified letter from manufacturer prior to delivery of SGT to jobsite for compliance of

### 1.5 QUALITY ASSURANCE:

A. Sample Field Panel: Construct a wall panel 4' (1.2m) wide and 4' (1.2m) high for SGT work. Locate as directed by Architect.

B. Panel to indicate quality representation of: . SGT color and texture range.

2. Bonding pattern.

Mortar color.

4. Joint tooling.

5. Reinforcement/Ties.

Workmanship.

C. Sample Field Panel should be erected at least 14 days prior to shipment of the SGT to the jobsite. If necessary, additional panels will be erected until Architect approval is received.

D. Approved Sample Panel shall act as the standard of comparison and quality to be expected throughout the work E. Approved Sample Panel should be maintained through job completion and not destroyed until instructed by the

F. Erect separate Sample Panels for each color and texture, mortar color or combinations specified or as indicated on

### 1.6 DELIVERY, STORAGE AND HANDLING:

A. Deliver SGT to jobsite as packaged by manufacturer. Offload SGT packages using equipment that will not damage SGT. No SGT is allowed to be in direct contact with the ground. Do not double stack cubes of SGT.

B. Cover SGT with non-staining waterproof membrane covering. Keep units dry. Allow air circulation around stacked

units. Installation of wet or stained SGT is prohibited.

C. Keep SGT units in the individual cardboard packaging provided by the manufacturer until the unit is ready to be laid in the wall. Never use brick tongs or "pitch" the SGT to upper levels of scaffolding.

### 1.7 PROJECT CONDITIONS:

A. Environmental requirements. Use normal procedures when temperatures are between 100°F to 40°F (37.8°C to 4.4 C) (see current reference BIA Technical Note 1):

1. See Brick Industry Association Technical Note 1, Table 1 "Requirements for Masonry Construction in Hot and Cold

Weather" for temperatures outside this range unless specific written approval from Architect. (Reference: BIA Technical Notes for Guide Specifications for Brick Masonry.)

B. Take all precautions necessary to protect units from damage

C. Handle and store in protective cartons or trays until actual installation in the wall.

D. Damaged units will not be accepted in the wall.

### 2.0 PRODUCTS:

## 2.1 STRUCTURAL GLAZED TILE:

A. Pattern or Type: 6PCSU 3 5/8" x 3 5/8" x 11 5/8" glazed one face Storm Cloud #4444 Ultra Matte B. As detailed and required (running bond or stack bond).

C. Characteristics:

 Meet ASTM C-126 for grade (S) Select (or grade [SS] Sized Select) quality.
 Must meet ASTM C-84 (UL723) requirements and rated zero flame spread, zero smoke developed and zero fuel contribution. Also will not release any toxic or noxious fumes when burned at 2000°F (1093°C).

3. Nominal Face stretcher dimensions standard 6T Series (Horizontal or Vertical Cell) 5-1/3" (135mm) height x 12"

(304mm) length, or 4W Series (Horizontal Cell) 8" (203mm) height x 8" (203mm) length, or 8W Series (Horizontal Cell) 8" (203mm) height x 16" (406mm) length, as specified. All dimensions are +/- allowable tolerance.

4. Nominal Bed Depths: 2" (50mm), 4" (101mm), 6" (152mm) or 8" (203mm) thickness (limited production of 8W in

8" [203mm] bed depth). As required.

5. Shapes: Furnished as shown on the plans in accordance with manufacturers current standard production. All

external corners, sills and jambs shall be bullnose, unless otherwise noted. Lintels and internal corners shall be square, unless otherwise noted. The base course is straight as shown on the drawings.

6. Color(s) to be selected by Architect from Elgin Butler Company current standard color offering

7. Approved manufacturer:
a. Eigin Butler Company, Elgin, Texas, (512) 285-3356.

# b. Or approved equal. 2.2 ACCESSORIES:

A. Mortar: As specified in mortar section.

B. Joint Reinforcement: for stack bonding pattern on a bearing wall, or as required, use continuous horizontal joint reinforcement in lengths of 10 to 12 (3 to 4 m). Use #9 gauge wire or 3/16" (5 mm) diameter wire. Ladder-type (or Tab-type) horizontal joint reinforcement recommended. Masonry joint reinforcing as specified in Masonry Accessories section.

C. Wall Ties for multi-wythe wall construction: Installed as per BIA recommendations use corrosion resistant metal ties, minimum of one 3/16" (5mm) diameter steel wall tie in every 4-1/2 ft2 (m2); for vertical-cell hollow masonry units the tie shall be rectangular or U-shaped, or for horizontal-cell, solid masonry units shall be rectangular or Z-shaped (Reference BIA Tech Note 21C). Maximum distance of 16" (406mm) vertically and 36" (913mm) horizontally. D. Lateral support, as required.

### 3.0 EXECUTION:

# A Protection of work

Protect the surfaces of the installed SGT. Cover freshly laid weather exposed masonry at the end of each day or the start of each shut down period, with non-staining waterproof material in such a manner which will ensure that the covering will overhang the masonry not less than 2' (50mm) on each side of the masonry. Anchor on each side of wall. Finished walls to be covered with #15 felt paper and erect wooden barriers to protect walls at areas that are subject to large amounts of construction traffic or material movement. Protect glazed face from exposure to

### velding burns, stains, etc. 3.2 INSTAIL ATION

1. Lay only dry masonry units.

. Lay masonry plumb, level and true to line.

Lav units in bonding pattern, as specified.

4. Cut units with masonry saw using a wet diamond blade. Do not use units less than 4 " in length. B. Build in work of other trades indicated to be built-in with SGT as work progresses.

. Lay joints of each first course in full width bed of mortar.

Horizontally cored units:
 a. Bed Joint: Full

C. Mortar Joints:

b. Head Joint: Face shell thickness

Vertically cored units:
 Bed Joint: Face shell thickness.

b. Head Joint: Full

4. Remove and replace mortar with fresh mortar where adjustment must be made after mortar has started to set. 5. Keep bed and head joints uniform in width, except for minor variations required to maintain bond and locate

6. Both bed and head mortar joints standard thickness of 3/8" (10mm) except for 6T Series use 5/16" (8mm), +/- 1/16" (1.6mm) or to course out with the existing material.

Elgin Butler Company | 365 FM 696 | Elgin Texas 78621 | p 512.285.3356 | f 512.281.2487 | www.elginbutler.com

D. Joint Treatment:

Tool or strike mortar joints on exposed face when they are "thumb print" hard.

2. Tool all SGT joints concave using a non-metallic tool 1-1/4" (31mm) in diameter or larger unless otherwise noted.

Sanitary Epoxy Mortar, where required:
 Rake mortar joints 1/4" (6mm) to 3/8" (10mm) deep. Mix and install vertical wall, non-sag sanitary

epoxy grout in strict accordance with manufacturer's directions.

Removal of Existing Structural Glazed Tile: 1. Cut out existing material where indicated on the drawings. Do not leave pieces of tile in the wall smaller than 4 " (101mm) in length. Use care in cutting out units at the mortar joints as to not chip the existing tile. Chips larger than a 3/8" (10mm) square will require replacement of the units. Smaller chips may be repaired. Contact the manufacturer for instructions.

### 3.3 APPLICATION:

A. Acceptable Tolerances:
 Walls must be straight in plane.

2. Maximum variation from plumb: 1/4" (6mm) in 10' 0" (3.05m); not exceeding 3/8" (10mm) in 20' 0" (6.1m).

2. Maximum variation from level: 1/4" (6mm) in 20' 0" (6.1m); not exceeding 1/2" (13mm) in 40' 0" (12.2m) or more.

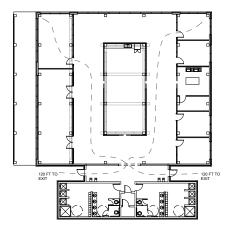
4. Maximum variation in linear building line from location indicated: 1/4" (6mm) in 20' 0" (6.1m).

# 3.4 CLEANING:

A. It is intended that with careful adherence to this specification that extensive final cleaning will not be necessary. During construction, wipe glazed surface clean after tooling of joints or within 30 minutes after laying, with course rag. Keep wall clean as work progresses to avoid more difficult cleanup later. Use no metal scrapers, abrasive powders or unauthorized cleaning agents. Use wooden paddles or scrapers to clean away mortar residue or lumps. Wash with clean water. A mild detergent may be used. Rinse with clean water. Wipe with clean cloths, sponges or similar item.

B. In event of unexpected contaminations of SGT walls, perform any cleaning with other than a non-metallic scraper, stiff nylon or natural bristled brush or wooden paddle only after approval by Architect and necessary tests to insure

against any wall damage.
END OF SECTION 04 21 26 EBC081307KG





### LEED for New Construction v2.1 Registered Project Checklist

| 14       | Sustai     | inable Sites   | 14 Points |
|----------|------------|--|-----------|
| Y        | Prerea 1   | Erosion & Sedimentation Control  | Required  |
|          | Credit 1   | Site Selection   | require   |
|          | Credit 2   | Development Density  |           |
|          | Credit 3   | Brownfield Redevelopment   |           |
|          | Credit 4.1 | Alternative Transportation, Public Transportation Access   |           |
|          | Credit 4.1 | Alternative Transportation, Public Transportation Access  Alternative Transportation, Bicycle Storage & Changing Rooms |           |
|          | Credit 4.3 | Alternative Transportation, Bicycle Storage & Changing Rooms Alternative Transportation, Alternative Fuel Vehicles     |           |
|          | Credit 4.4 | Alternative Transportation, Alternative Fuel Vehicles  Alternative Transportation, Parking Capacity and Carpooling     |           |
|          | Credit 5.1 | Reduced Site Disturbance, Protect or Restore Open Space  |           |
|          | Credit 5.1 | Reduced Site Disturbance, Protect of Restore Open Space  |           |
|          | Credit 6.1 | Stormwater Management. Rate and Quantity   |           |
|          | Credit 6.2 | Stormwater Management, Treatment   |           |
|          | Credit 7.1 | Landscape & Exterior Design to Reduce Heat Islands, Non-Roof   |           |
|          | Credit 7.1 | Landscape & Exterior Design to Reduce Heat Islands, North Cool   | ,         |
|          | Credit 8   | Light Pollution Reduction  |           |
|          | orount 0   | Eight i ollullon reduction   |           |
| es ? No  |            |  |           |
| 5        | Water      | Efficiency   | 5 Points  |
|          |            |  |           |
|          | Credit 1.1 | Water Efficient Landscaping, Reduce by 50%   |           |
|          | Credit 1.2 | Water Efficient Landscaping, No Potable Use or No Irrigation   |           |
|          | Credit 2   | Innovative Wastewater Technologies   |           |
|          | Credit 3.1 | Water Use Reduction, 20% Reduction   |           |
| 1 (      | Credit 3.2 | Water Use Reduction, 30% Reduction   |           |
| Yes ? No |            |  |           |
| 12       | Energ      | y & Atmosphere   | 17 Point  |
| TOTAL .  |            |  |           |
|          | Prereq 1   | Fundamental Building Systems Commissioning   | Require   |
|          | Prereq 2   | Minimum Energy Performance   | Require   |
|          | Prereq 3   | CFC Reduction in HVAC&R Equipment  | Require   |
| 8        | Credit 1   | Optimize Energy Performance  | 1 to 1    |
|          |            | 15% New Buildings or 5% Existing Building Renovations  |           |
|          |            | 20% New Buildings or 10% Existing Building Renovations   |           |
|          |            | 25% New Buildings or 15% Existing Building Renovations   |           |
|          |            | 30% New Buildings or 20% Existing Building Renovations   |           |
|          |            | 35% New Buildings or 25% Existing Building Renovations   |           |
|          |            | 40% New Buildings or 30% Existing Building Renovations   |           |
|          |            | 45% New Buildings or 35% Existing Building Renovations   |           |
|          |            | 8 50% New Buildings or 40% Existing Building Renovations   |           |
|          |            | 55% New Buildings or 45% Existing Building Renovations   |           |
|          |            | 60% New Buildings or 50% Existing Building Renovations   | 1         |
|          | Credit 2.1 | Renewable Energy, 5%   |           |
|          | Credit 2.2 | Renewable Energy, 10%  |           |
|          | Credit 2.3 | Renewable Energy, 20%  |           |
|          | Credit 3   | Additional Commissioning   |           |
|          | Credit 4   | Ozone Depletion  |           |

| 8                                       | Materi   | ials & Resources  | 13 Points                   |
|---|--|---|-----------------------------|
| Υ                                       | Prereg 1   | Storage & Collection of Recyclables   | Required                    |
|   | Credit 1.1   | Building Reuse, Maintain 75% of Existing Shell  | . 1                         |
|   | Credit 1.2   | Building Reuse, Maintain 100% of Shell  | 1                           |
|   | Credit 1.3   | Building Reuse, Maintain 100% Shell & 50% Non-Shell   | 1                           |
| 1                                       | Credit 2.1   | Construction Waste Management, Divert 50%   | 1                           |
| 1                                       | Credit 2.2   | Construction Waste Management, Divert 75%   | 1                           |
|   | Credit 3.1   | Resource Reuse, Specify 5%  |                             |
|   | Credit 3.2   | Resource Reuse, Specify 10%   |                             |
| 1                                       | Credit 4.1   | Recycled Content, Specify 5% (post-consumer + 1/2 post-industrial)  |                             |
| 1                                       | Credit 4.2   | Recycled Content, Specify 10% (post-consumer + 1/2 post-industrial)   |                             |
| 1                                       | Credit 5.1   | Local/Regional Materials, 20% Manufactured Locally  |                             |
| 1                                       | Credit 5.2   | Local/Regional Materials, of 20% Above, 50% Harvested Locally   |                             |
| 1                                       | Credit 6   | Rapidly Renewable Materials   |                             |
| 1                                       | Credit 7   | Certified Wood  |                             |
| Yes ?                                   | No<br>Indoo  | r Environmental Quality   | 15 Points                   |
|   | Indoo  | · · · · · · · · · · · · · · · · · · ·   |                             |
| 14 Y                                    | Indoo  | Minimum IAQ Performance   | Required                    |
| 14 Y                                    | Prered<br>Prered 2   | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control   | Required                    |
| 14<br>Y<br>Y                            | Prered 2 Credit 1  | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide ( $CO_2$ ) Monitoring  | Require                     |
| 14<br>Y<br>Y<br>1                       | Prerec<br>Prereq 2<br>Credit 1<br>Credit 2   | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness  | Require                     |
| 14<br>Y<br>Y<br>1<br>1                  | Prered 2 Credit 1 Credit 2 Credit 3.1  | Minimum IAQ Performance<br>Environmental Tobacco Smoke (ETS) Control<br>Carbon Dioxide (CO <sub>2</sub> ) Monitoring<br>Ventilation Effectiveness<br>Construction IAQ Management Plan, During Construction  | Required                    |
| Y Y 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Prerec<br>Prereq 2<br>Credit 1<br>Credit 2<br>Credit 3.1<br>Credit 3.2   | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy   | Require                     |
| Y Y 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Prerec<br>Prereq 2<br>Credit 1<br>Credit 2<br>Credit 3.1<br>Credit 3.2<br>Credit 4.1   | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CQ <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Defore Occupancy Low-Emitting Materials, Adhesives & Sealants  | Required                    |
| Y Y 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Prerec<br>Prereq 2<br>Credit 1<br>Credit 2<br>Credit 3.1<br>Credit 3.2<br>Credit 4.1<br>Credit 4.2                             | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAC Management Plan, During Construction Construction IAC Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints   | Required                    |
| Y Y 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Prerec Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 4.3                                       | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CO <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAC Management Plan, During Construction Construction IAC Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints Low-Emitting Materials, Carpet  | Required                    |
| Y Y 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Prerec Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 4.2 Credit 4.1 Credit 4.3 Credit 4.4 Credit 4.4                            | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CQ <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paris Low-Emitting Materials, Carpet Low-Emitting Materials, Carpet  | Required                    |
| Y Y 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Prerec<br>Prereq 2<br>Credit 1<br>Credit 2<br>Credit 3.2<br>Credit 4.1<br>Credit 4.2<br>Credit 4.4<br>Credit 4.4<br>Credit 4.5 | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CQc) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Andesives & Sealants Low-Emitting Materials, Paints Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control  | Required                    |
| Y Y 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Prerec Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.3 Credit 4.4 Credit 5. Credit 6.1                  | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CC) Monitoring Ventilation Effectiveness Construction IAG Management Plan, During Construction Construction IAG Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Carpet Low-Emitting Materials, Carpet Low-Emitting Materials, Carpet Convenition (Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Perimeter   | Required                    |
| Y Y 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Prerec Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 4.1 Credit 4.2 Credit 4.4 Credit 4.4 Credit 4.6 Credit 6.1 Credit 6.1      | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CQ <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adnesives & Sealants Low-Emitting Materials, Paints Low-Emitting Materials, Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Perimeter Controllability of Systems, Perimeter   | 15 Points Requirec Requirec |
| Y Y 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Prerec Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.3 Credit 4.4 Credit 5. Credit 6.1                  | Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Carbon Dioxide (CC <sub>2</sub> ) Monitoring Ventilation Effectiveness Construction IAG Management Plan, During Construction Construction IAG Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Carpet Low-Emitting Materials, Carpet Low-Emitting Materials, Carpet Comercial Composite Wood & Agrifiber Indoor Chemical & Pollutant Source Control Controllability of Systems, Perimeter Controllability of Systems, Non-Perimeter Thermal Comfort, Comply with ASHRAE 55-1992 | Required                    |

redit 8.1 Daylight & Views, Daylight 75% of Spaces redit 8.2 Daylight & Views, Views for 90% of Spaces

MISSION **PARTNERS DESIGN +** BUILD

San Antoino Missions National Historical Park Headquarters

SPEC - LEED - LSP

FACILITIES 12.06.23 JODI PRIESMEYER Drawn by Checked by

Project number

1" = 20'-0"

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LIFE SAFETY PLAN - NOT TO SCALE

### **SECTION 06 18 13**

### STRUCTURAL GLUED LAMINATED TIMBER

### PART 1 GENERAL

### 1.1 SUMMARY

A. This section includes structural glued laminated timber elements.

### 1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

### 1.3 REFERENCES

- A. American Institute of Timber Construction (AITC)
- 1. AITC Timber Construction Manual Latest Edition
- 2. AITC 109 Standard for Preservative Treatment for Glulam
- 3. AITC 110 Standard Appearance Grades for Glulam
- 4. AITC 111 Recommended Practice for the Erection of Glulam
- 5. AITC 117 Design Standard Specifications for Glulam
- 6. AITC 200 Inspection Manual for Glulam (Separate Publication)
- B. National Design Specifications for Stress-Grade Lumber And Its Fastenings
- C. American Institute of Steel Construction (AISC)
- D. American Society of Testing and Materials (ASTM):
- E. American Wood Preservers Association (AWPA)

### 1.04 DEFINITIONS

A. Glued-Laminated timber is hereby defined to include wood members fabricated from 1" or 2" nominal thickness lumber glued face-to-face with the grain of all laminated approximately parallel longitudinally. Glued-Laminated timber is also referred to as glulam.

### 1.05 SYSTEM DESCRIPTION

- A. Design Requirements and Performance Requirements:
- 1. The extent of glued laminated timber work is shown on the drawings either by terminology used in this specification or by the abbreviations as indicated.
- 2. Provide sizes and shapes shown on the plans. Final cross sections will be based on manufacturers' standard widths and depths. Manufacturer to provide design values (stresses) to fulfill structural demand in accordance with applicable provisions of AITC 117.
- 3. All laminated wood members must be manufactured by a single AITC licensed manufacturer bearing AITC stamp on each member.
- 4. The glulam manufacturer or laminator is to be fully responsible for the structural integrity of the material they furnish. The laminator shall have an Engineer in their permanent employment to certify his design by stamping the shop drawings. The engineer must be registered in the State of Kansas, no exceptions.

### 1.06 SUBMITTALS

## A. General:

- 1. Submit in accordance with Section 1300.
- B. Product Data:
- 1. Submit manufacturer's descriptive literature and product specifications.
- 2. Submit certification, indicating glued-laminated timbers comply with requirements of the ANSI/AITC A190.1-latest edition.
- C. Shop Drawings:
- 1. Submit shop drawings showing full dimensions of each member. Indicate species and stress grade of lumber, type of glue, and other variables in required work. Manufacturer shall furnish (4) sets of shop drawings for architect's approval prior to fabrication. The general contractor shall verify dimensions and be responsible for coordinating same.
- D. Samples:
- 1. Submit samples of standard factory stain colors for architect's approval prior to fabrication.

### 1.07 QUALITY ASSURANCE

- A. Standards
- 1. Comply with "Structural Glued-Laminated Timber" ANSI/AITC A190.1- latest edition.
- B. Manufacturer
- 1. Provide factory-glued timber units, produced by an AITC licensed firm, qualified to issue the
- "Quality Inspected" Mark. Factory mark each piece of glued-laminated timber with the AITC Quality Inspected Mark, Place AITC Mark on timber surfaces which will not be exposed in completed work. C. Erector
- 1. Erector Qualification: company specializing in the erection of glue laminated units with a minimum of 10 years documented experience.

# 1.08 PACKING, DELIVERY, STORAGE, AND HANDLING

- A. Packing, Shipping, Handling, and Unloading:
- 1. Before shipping or exposing to outdoor conditions, individually wrap each member with manufacturer's standard opaque, durable, water-resistant, plastic coated paper covering with water resistant seams.
- 2. Schedule delivery and installation of glued-laminated wood members to avoid extended on-site storage. Comply with AITC 111 - "Recommended Practice for Protection of Structural Glued-Laminated Timber during Transit, Storage and Erection".
- B. Storage and Protection:
- 1. Keep laminated wood members as dry as possible during all phases. General contractor is responsible for protection of the construction. If jobsite storage is necessary, place members on blocking a minimum of 6" off the ground, away from ponding water, avoiding ground contact and separated with blocking to allow air circulation around each member. Cover glulam with a waterproof covering which will not allow ultraviolet ray penetration of the materials at the jobsite or at temporary storage area.
- 2. Time of removal of factory wrapping is optional, but it must be emphasized that the factory applied wrapping provides temporary protection from moisture, soiling, and damage in handling and in-transit only. If further utilization of the wrap is desired for protection after shipment, the members should be inspected and provided with additional protection as necessary. If it is impractical to replace wrapping, ALL of it should be removed. Do not leave members partially exposed due to potential sun bleaching. Do not allow moisture to accumulate inside wrapping.
- 3. Do not remove wrapping on individually wrapped members until it will serve no useful purpose, including protection from the weather, soiling and damage from other work trades,
- 4. It is imperative that the field handling instructions sheet (brown envelope) that comes with the material shipment be thoroughly reviewed before unloading.

# 1.08 PROJECT/SITE CONDITIONS

### A. Environmental Requirements

1. After completion of glulam work the general contractor is responsible for proper protection of all wood members. Initial building heat shall be elevated gradually to the desired level. To minimize checking the relative humidity of the building shall not be reduced rapidly.

### 1.09 WARRANTY

- A. Comply with provisions of Section 01700.
- B. Warrant installed glued laminated structural units to be free from defects in material and workmanship for a period of 1 year.



PARTNERS DESIGN + BUILD

> National Historic Park Larters San Antonio Missions Headqı

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|    | Shop Glulam Timber<br>Spec Sheet |
|----|----------------------------------|
| Da | e 11.27.23                       |

S110 - A

Jacqueline Black

### PART 2 PRODUCTS

# 2.01 MANUFACTURERS

### A. Manufacturers:

- 1. Manufacture of glued laminated timber shall be by Structural Wood Systems -(www.structuralwood.com - Contact: Construction Sales Co., Inc. - 1-800-526-9663 or 870 234 6474) 321 Dohrimer Street Greenville, AL 36037.
- 2. Other manufacturers will be considered upon written request for approval which has been received by the Architect 10 days prior to bid date. Each request shall include the name of the manufacturer, product data, and a list of 5 similar size projects in the area in the past year which the manufacturer seeking approval has provided.

### 2.02 MATERIALS

### A. Materials:

- 1. Lumber shall comply with ANSI/AITC A190.1 and applicable lumber association standards cited therein required to achieve glued laminated timber requirements for allowable stress. appearance, fabrication limitations and species.
- 2. Lumber species shall be Southern Pine.
- 3. Adhesives shall be wet-use (waterproof) complying to ANSI/AITC A190.1
- 4. (Optional) Pressure Preservative treat members which are directly exposed to the weather 3.04 ERECTION, INSTALLATION, APPLICATION INSTRUCTION or in constant moisture (ie. pool enclosure) in conformance with AITC 109. Pressure treat the grade applications and to .6lbs/cuft for below grade. Two coats of matte varnish to be applied after treatment and staining.

### 2.03 FABRICATION

### A. Wood:

- 1. Lumber shall be fabricated in accordance with ANSI/AITC A190.1.
- 2. Appearance Grade shall be AITC Premium.
- 3. Except as otherwise indicated, fabricate horizontal straight load-bearing members, with a camber as shown on the drawings.
- 4. Drilling, end cutting, dapping, and addition fabrication to be done in AITC manufacturers plant.

# B. Steel Connections:

- 1. Provide fabricated steel connections to join laminated to laminated, and laminated to supports, exclusive of items embedded in concrete, masonry, welded to structural steel, or connected to stud walls.
- 2. Steel work to conform to AISC Specifications.
- 3. Steel shall conform to Mild Steel M-1020.
- 4. Bolts shall conform to ASTM A-307 and are primed painted.
- 5. Bolts to be provided by glulam manufacturer for steel connections provide by others.
- 6. Shop paint fabricated steel with one coat of rust inhibitive primer.
- 7. Note: Connections and bolts directly exposed to the weather, not under roof covered, shall be hot dipped galvanized.

### 2.04 FINISHES

### A. Wood:

- 1. Glue laminated members to receive a factory finish of (1) coat of an approved standard semi-transparent stain offered by the manufacturer.
- 2. Immediately after end-cutting each member to final length, the factory shall apply a saturation coat of end sealer to ends and other cross-cut surfaces.

### PART 3 EXECUTION

# 3.01 ACCEPTABLE INSTALLERS

### A. Erector:

- 1. Installation of glulam timbers shall be by manufacturer's installers where available.
- 2. Other installers shall be considered upon written request for approval which has been received by the Architect 10 days prior to bid date. Each request shall include the name of the installer, years in business, insurance coverage, and a list of 5 similar size projects in the area in the past year which the installer seeking approval has provide.

### 3.02 EXAMINATION

A. Examine conditions and proceed with work in accordance with Section 01400.

### 3.03 PREPARATION

A. Anchor bolt settings / or embedded weld plates and bearing elevations (not Structural Wood Systems responsibility) are extremely critical and must be held within 1/8" of the dimensions shown on the shop drawings. The general contractor is responsible for setting the anchor bolts and/or bearing elevations in the field.

A. Comply with AITC 111 "Recommended Practice For the Erection of Glulam", manufacturer's lumber prior to gluing with Pentachlorophenol in mineral spirits to .3 lbs/cuft retention for above instructions, and approved shop drawings. Handle and temporarily support members to prevent damage. All members must be adequately braced until the complete structural system (all pertinent construction materials) has been installed. Correction of minor misfits and a reasonable amount of cutting, reaming, re-drilling, or alignment with drift pins will be considered a legitimate expense of erection.

### **END OF SECTION**



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|--|-------|--|--|---|
| 14   |       | Susta  | inable Sites   | 14 Point                                |
| Y  |       | Prereg 1   | Erosion & Sedimentation Control  | Require                                 |
| 1  |       | Credit 1   | Site Selection   |   |
| 1  |       | Credit 2   | Development Density  |   |
| 1  |       | Credit 3   | Brownfield Redevelopment   |   |
| 1  |       | Credit 4.1   | Alternative Transportation, Public Transportation Access   |   |
| 1  |       | Credit 4.2   | Alternative Transportation, Bicycle Storage & Changing Rooms   |   |
| 1  |       | Credit 4.3   | Alternative Transportation, Alternative Fuel Vehicles  |   |
| 1  |       | Credit 4.4   | Alternative Transportation, Parking Capacity and Carpooling  |   |
| 1  |       | Credit 5.1   | Reduced Site Disturbance, Protect or Restore Open Space  |   |
| 1  |       | Credit 5.2   | Reduced Site Disturbance, Development Footprint  |   |
| 1  |       | Credit 6.1   | Stormwater Management, Rate and Quantity   |   |
| 1  |       | Credit 6.2   | Stormwater Management, Treatment   |   |
| 1  |       | Credit 7.1   | Landscape & Exterior Design to Reduce Heat Islands, Non-Roof   |   |
| 1  |       | Credit 7.2   | Landscape & Exterior Design to Reduce Heat Islands, Roof   |   |
| 1  |       | Credit 8   | Light Pollution Reduction  |   |
| /ne  | ? No  |  |  |   |
| 5  | - 140 |  | Efficiency   | 5 Point                                 |
|  |       |  |  |   |
| 1  |       | Credit 1.1   |  |   |
|  |       |  |  |   |
| 1  |       | Credit 1.2   |  |   |
| 1  |       | Credit 2   | Innovative Wastewater Technologies   |   |
| 1  |       | Credit 2<br>Credit 3.1   | Innovative Wastewater Technologies<br>Water Use Reduction, 20% Reduction   |   |
| 1  |       | Credit 2   | Innovative Wastewater Technologies<br>Water Use Reduction, 20% Reduction   |   |
| 1 1  | 2 N/  | Credit 2<br>Credit 3.1<br>Credit 3.2   | Innovative Wastewater Technologies<br>Water Use Reduction, 20% Reduction   |   |
| 1<br>1<br>1  | ? No  | Credit 2<br>Credit 3.1<br>Credit 3.2   | Innovative Wastewater Technologies<br>Water Use Reduction, 20% Reduction   | 17 Point                                |
| 1<br>1<br>1<br>Yes                                       | ? No  | Credit 2<br>Credit 3.1<br>Credit 3.2   | Innovative Wastewater Technologies Water Use Reduction, 20% Reduction Water Use Reduction, 30% Reduction  y & Atmosphere   | 17 Point                                |
| 1<br>1<br>1<br>(es                                       | ? No  | Credit 2 Credit 3.1 Credit 3.2 Energ   | Innovative Wastewater Technologies Water Use Reduction, 20% Reduction Water Use Reduction, 30% Reduction  y & Atmosphere Fundamental Building Systems Commissioning  | Require                                 |
| 1<br>1<br>1<br>(es                                       | ? No  | Credit 2 Credit 3.1 Credit 3.2 Energ Prereq 1 Prereq 2   | Innovative Wastewater Technologies Water Use Reduction, 20% Reduction Water Use Reduction, 30% Reduction  y & Atmosphere Fundamental Building Systems Commissioning Minimum Energy Performance   | Require<br>Require                      |
| 1<br>1<br>1<br>1<br>12<br>Y<br>Y<br>Y                    | ? No  | Credit 2 Credit 3.1 Credit 3.2 Energ Prereq 1 Prereq 2 Prereq 3  | Innovative Wastewater Technologies Water Use Reduction, 20% Reduction Water Use Reduction, 30% Reduction  y & Atmosphere Fundamental Building Systems Commissioning Minimum Energy Performance CFC Reduction in HVAC&R Equipment   | Require<br>Require<br>Require           |
| 1<br>1<br>1<br>/es                                       | ? No  | Credit 2 Credit 3.1 Credit 3.2 Energ Prereq 1 Prereq 2   | Innovative Wastewater Technologies Water Use Reduction, 20% Reduction Water Use Reduction, 30% Reduction  y & Atmosphere Fundamental Building Systems Commissioning Minimum Energy Performance CFC Reduction in HVAC&R Equipment Optimize Energy Performance   | Require<br>Require                      |
| 1<br>1<br>1<br>1<br>12<br>Y<br>Y<br>Y                    | ? No  | Credit 2 Credit 3.1 Credit 3.2 Energ Prereq 1 Prereq 2 Prereq 3  | Innovative Wastewater Technologies Water Use Reduction, 20% Reduction Water Use Reduction, 30% Reduction  y & Atmosphere Fundamental Building Systems Commissioning Minimum Energy Performance CFC Reduction in HVAC&R Equipment Optimize Energy Performance 15% New Buildings or 5% Existing Building Renovations   | Require<br>Require<br>Require           |
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| 1<br>1<br>1<br>1<br>12<br>Y<br>Y<br>Y                    | ? No  | Credit 2 Credit 3.1 Credit 3.2 Energ Prereq 1 Prereq 2 Prereq 3  | Innovative Wastewater Technologies Water Use Reduction, 20% Reduction Water Use Reduction, 20% Reduction Water Use Reduction, 30% Reduction  Y. Atmosphere  Fundamental Building Systems Commissioning Minimum Energy Performance CFC Reduction in HVACSR Equipment Optimizer Straings Performance CFC Reduction in HVACSR Equipment Optimizer Straings Performance 20% New Buildings or 10% Estisting Building Renovations 20% New Buildings or 10% Estisting Building Renovations 30% New Buildings or 10% Estisting Building Renovations 30% New Buildings or 10% Estisting Building Renovations 40% New Buildings or 20% Estisting Building Renovations 40% New Buildings or 20% Estisting Building Renovations  | Require<br>Require<br>Require           |
| 1<br>1<br>1<br>1<br>1<br>12<br>Yes<br>12<br>Y            | ? No  | Credit 2 Credit 3.1 Credit 3.2 Energ Prereq 1 Prereq 2 Prereq 3  | Innovative Wastewater Technologies Water Use Reduction, 20% Reduction Water Use Reduction, 20% Reduction Water Use Reduction, 20% Reduction  Y. Altmosphere Fundamental Building Systems Commissioning Minimum Energy Performance CFC Reduction in HVAC&R Equipment Optimize Energy Performance 115% New Buildings or 5% Existing Building Renovations 20% New Buildings or 15% Existing Building Renovations 20% New Buildings or 15% Existing Building Renovations 35% New Buildings or 15% Existing Building Renovations 45% New Buildings or 20% Existing Building Renovations 45% New Buildings or 20% Existing Building Renovations 45% New Buildings or 20% Existing Building Renovations 45% New Buildings or 30% Existing Building Renovations 45% New Buildings or 30% Existing Building Renovations   | Require<br>Require<br>Require           |
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| 1 1 1 1 Yes 12 Y Y Y 8 8                                 | ? No  | Credit 2. Credit 3.1 Credit 3.2 Energ Prereq 1 Prereq 2 Prereq 3 Credit 1.1 Credit 2.1 Credit 2.2 Credit 2.2 Credit 2.2                  | Innovative Wastewater Technologies Water Use Reduction, 20% Reduction Water Use Reduction, 20% Reduction Water Use Reduction, 30% Reduction  Y. Atmosphere Fundamental Building Systems Commissioning Minimum Energy Performance OFC Reductive in HWACASE Equipment Optimize Energy Performance 15% New Buildings or 5% Existing Building Renovations 20% New Buildings or 5% Existing Building Renovations 30% New Buildings or 15% Existing Building Renovations 30% New Buildings or 15% Existing Building Renovations 40% New Buildings or 20% Existing Building Renovations 40% New Buildings or 30% Existing Building Renovations 50% New Buildings or 40% Existing Building Renovations 50% New Buildings or 40% Existing Building Renovations 50% New Buildings or 40% Existing Building Renovations 60% New Buildings or 40% Existing Building Renovations Renewable Energy, 10% Renewable Energy, 20% Additional Commissioning Cozeo Depletion   | Require<br>Require<br>Require<br>1 to 1 |
| 1 1 1 1 Yes 12 Y Y Y 8 8                                 | ? No  | Credit 2. Credit 3.1 Credit 3.1 Credit 3.2  Prereq 1 Prereq 2 Prereq 2 Credit 1.1 Credit 2.2 Credit 2.3 Credit 2.3 Credit 2.3 Credit 2.7 | Innovative Wastewater Technologies Water Use Reduction, 20% Reduction  Fundamental Building Systems Commissioning Minimum Energy Performance CFC Reduction in HVAC&R Equipment Optimize Energy Performance 175% New Buildings or 5% Existing Building Renovations 20% New Buildings or 5% Existing Building Renovations 30% New Buildings or 20% Existing Building Renovations 40% New Buildings or 20% Existing Building Renovations 45% New Buildings or 30% Existing Building Renovations 45% New Buildings or 40% Existing Building Renovations 55% New Buildings or 40% Existing Building Renovations 55% New Buildings or 40% Existing Building Renovations 55% New Buildings or 40% Existing Building Renovations Renovable Energy, 10% Renewable Energy, 10% Renewable Energy, 10% Renewable Energy, 10% Renewable Energy, 10%  | Require<br>Require<br>Require<br>1 to 1 |

| 8      |        | Materi                   | als & Resources  | 13 Points |
|--------|--------|--------------------------|--|-----------|
| Υ      |        | Prereg 1                 | Storage & Collection of Recyclables  | Required  |
|        |        | Credit 1.1               | Building Reuse, Maintain 75% of Existing Shell                                     |           |
| $\neg$ |        | Credit 1.2               | Building Reuse, Maintain 100% of Shell   | 1         |
| $\neg$ |        | Credit 1.3               | Building Reuse, Maintain 100% Shell & 50% Non-Shell                                | 1         |
| 1      | $\top$ | Credit 2.1               | Construction Waste Management, Divert 50%  | 1         |
| 1      |        | Credit 2.2               | Construction Waste Management, Divert 75%  | 1         |
|        |        | Credit 3.1               | Resource Reuse, Specify 5%   |           |
| Т      |        | Credit 3.2               | Resource Reuse, Specify 10%  | 1         |
| 1      |        | Credit 4.1               | Recycled Content, Specify 5% (post-consumer + 1/2 post-industrial)                 | 1         |
| 1 _    |        | Credit 4.2               |  | 1         |
| 1      |        | Credit 5.1               | Local/Regional Materials, 20% Manufactured Locally                                 | 1         |
| 1      |        | Credit 5.2               | Local/Regional Materials, of 20% Above, 50% Harvested Locally                      | 1         |
| 1      |        | Credit 6                 | Rapidly Renewable Materials  | 1         |
| 1      |        | Credit 7                 | Certified Wood   | 1         |
| es 1   | ? No   | )                        |  |           |
| 14     |        | Indoo                    | Environmental Quality  | 15 Points |
| v      |        | D                        | Minimum IAQ Performance  | Required  |
| Y      |        | Prereg 2                 | Environmental Tobacco Smoke (ETS) Control  | Required  |
| 1      | _      | Credit 1                 |  |           |
|        | +      |                          | Carbon Dioxide (CO <sub>2</sub> ) Monitoring                                       | 1         |
| 1      | -      | Credit 2                 | Ventilation Effectiveness  | 1         |
|        | -      | Credit 3.1               |  | 1         |
| #      | -      | Credit 3.2               |  | 1         |
| +      | +      | Credit 4.1               | Low-Emitting Materials, Adhesives & Sealants                                       | 1         |
|        | -      |                          | Low-Emitting Materials, Paints   |           |
| 4      | +      | Credit 4.3               | Low-Emitting Materials, Carpet   | 1         |
| Т      | -      | Credit 4.4               | Low-Emitting Materials, Composite Wood & Agrifiber                                 | 1         |
|        | -      | Credit 5                 | Indoor Chemical & Pollutant Source Control   | 1         |
| 1      | -      | Credit 6.1               | Controllability of Systems, Perimeter  | 1         |
| 1      | +      | Credit 6.2               | Controllability of Systems, Non-Perimeter  | 1         |
| 1      | -      | Credit 7.1               | Thermal Comfort, Comply with ASHRAE 55-1992  | 1         |
| 1      | +      | Credit 7.2               | Thermal Comfort, Permanent Monitoring System                                       | 1         |
| 1      | -      | Credit 8.1<br>Credit 8.2 | Daylight & Views, Daylight 75% of Spaces Daylight & Views, Views for 90% of Spaces | 1         |
| _      | _      | _Credit 6.2              | Daylight & Views, Views for 90% or Spaces  | '         |
| es 1   | ? No   |                          |  |           |
|        |        | Innova                   | ntion & Design Process   | 5 Points  |
|        |        | Credit 1.1               | Innovation in Design: Provide Specific Title                                       | 1         |
| +      | +      | Credit 1.2               |  | i         |
| +      | +      | Credit 1.3               | Innovation in Design: Provide Specific Title                                       | i         |
| +      | +      |                          | Innovation in Design: Provide Specific Title                                       | i         |
| +      | +      | Credit 2                 | LEED™ Accredited Professional  | 1         |
|        |        | -                        |  |           |
| es 1   | ? No   |                          | t Totals (pre-certification estimates)   | 69 Points |
| 53     |        |                          |  |           |



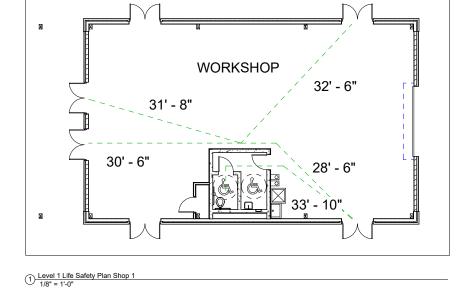
Antonio Missions National Historic Park Headquarters

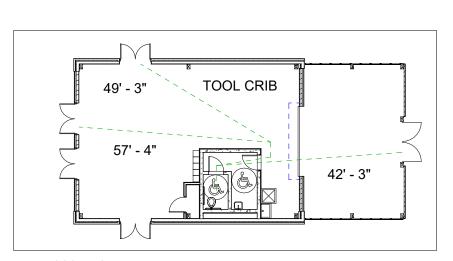
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| Shop Glulam Tim<br>Spec Sheet | nber     |
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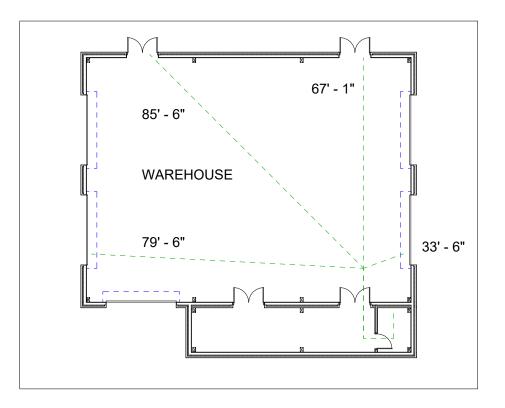
Checker





2 Level 1 Life Safety Plan Shop 2
1/8" = 1'-0"





MP DΒ MISSION PARTNERS DESIGN + BUILD

San Antonio Missions National Historic Park Headquarters

| No. | Description | Date |
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| Shops Life | Safety Plan      |
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| Date       | 11.27.23         |
| Drawn by   | Jacqueline Black |

S111

1/8" = 1'-0"