



# PININFARINA BUS SHELTERS

CITY WIDE PROTOTYPES - MIAMI BEACH, FL

## DESIGN INTENT DRAWINGS

06.24.2020

BOARD OF COMMISSIONERS	PROJECT TEAM			
MAYOR DAN GELBER  COMMISSIONER - SEAT 1 MICKY STEINBERG  COMMISSIONER - SEAT 2 MARK SAMUELIAN  COMMISSIONER - SEAT 3 MICHAEL GONGORA  COMMISSIONER - SEAT 4 STEVEN MEINER  COMMISSIONER - SEAT 5 RICKY ARRIOLA  COMMISSIONER - SEAT 6 DAVID RICHARDSON	<div>MIAMIBEACH</div> <div>OWNER CITY OF MIAMI BEACH</div>	<div><div>M.E.P.F. ENGINEER TLC ENGINEERING FOR ARCHITECTURE 5757 Blue Lagoon Drive, Suite 400 Miami, FL 33126 TEL: 305-263-3863</div></div>	<div><div>ARCHITECTURAL DESIGNER PININFARINA OF AMERICA CORP. 501 Brickell Key Drive, Suite 200 Miami, FL 33131 TEL: 305-424-1653</div></div>	<div><div>ARCHITECT OF RECORD: <div>associates, inc architecture engineering roofing consulting construction management</div></div><div><div>PROFESSIONAL IN CHARGE ADOLFO J. COTILLA, JR., AIA REGISTRATION NUMBER AR-0008011</div><div>SEAL</div></div><div>AAC001323 EB0004379 CGC010769 2937 W. Cypress Creek Rd., Suite 200 Fort Lauderdale, FL 33309 Tel: 954.484.4000 Fax: 954.484.5588 www . acaiarchitects . com</div><div>ACAI PROJECT NUMBER: 17-012 G01</div></div>



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S U B M I T T A L S :		
PHASE	DATE	
DESIGN INTENT DRAWINGS	06/24/2020	
R E V I S I O N S :		
NO.	DESCRIPTION	DATE
P R O J E C T     T E A M P R O F E S S I O N A L I N C H A R G E		
ADOLFO J. COTILLA, JR., AIA		
REGISTRATION N U M B E R		AR-0008011
APPROVED BY		AJC
D E S I G N E D B Y		
PININFARINA / ACAI		
D R A W N B Y		
C H E C K E D B Y		
SR		
GVD		

DATE \_\_\_\_\_

DESIGN CONSULTANT

MIAMI BEACH

PININFARINA BUS  
SHELTERS

CITY OF MIAMI BEACH

## GENERAL NOTES

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S H E E T      T I T L E

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[www.acaiarchitects.com](http://www.acaiarchitects.com)  
ARCHITECT OF RECORD

**17-012 G01**

PROJECT NUMBER

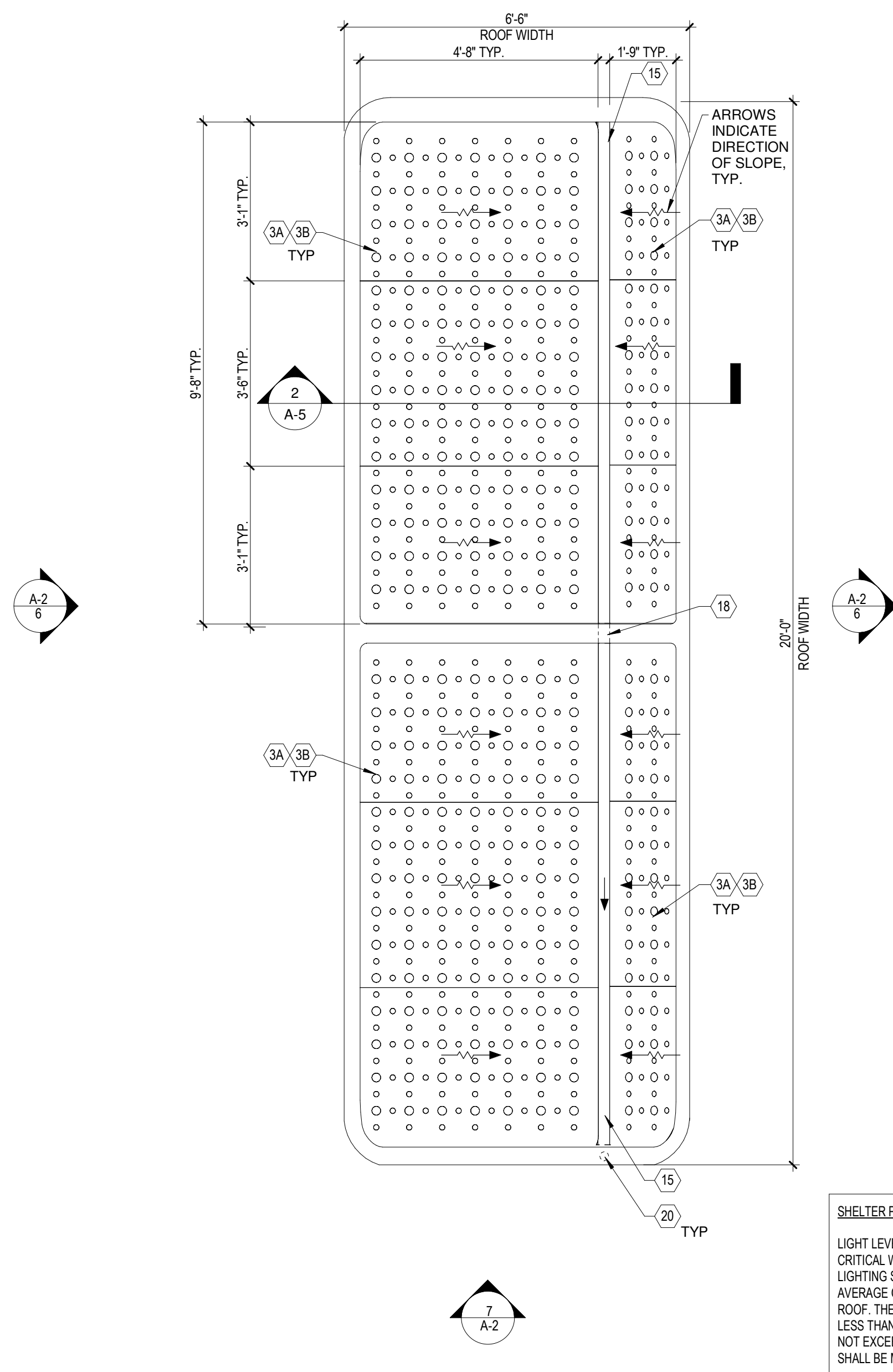
# A-1

**SHEET NUMBER**

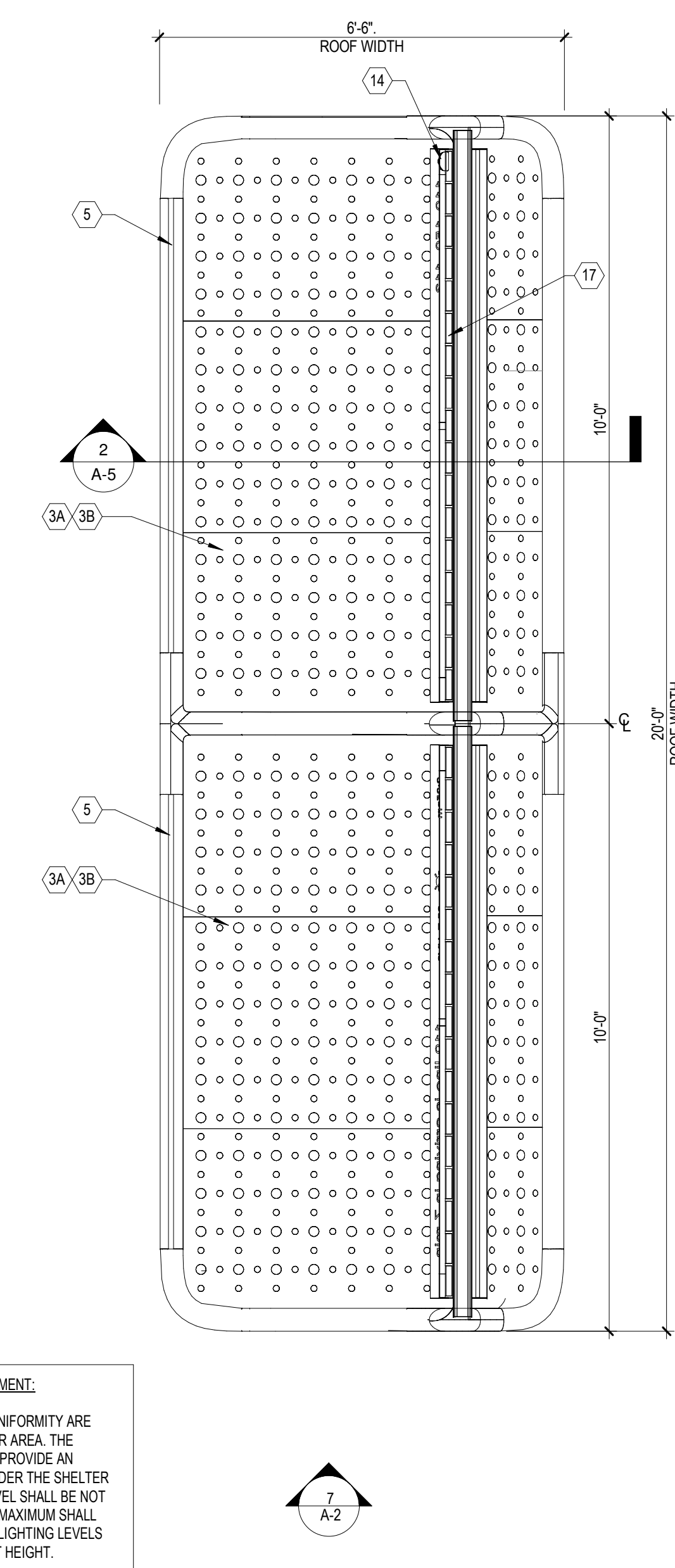
TO THE BEST OF MY KNOWLEDGE  
AND ABILITY THESE PLANS ARE  
COMPLETE AND COMPLY WITH THE  
APPLICABLE BUILDING CODES

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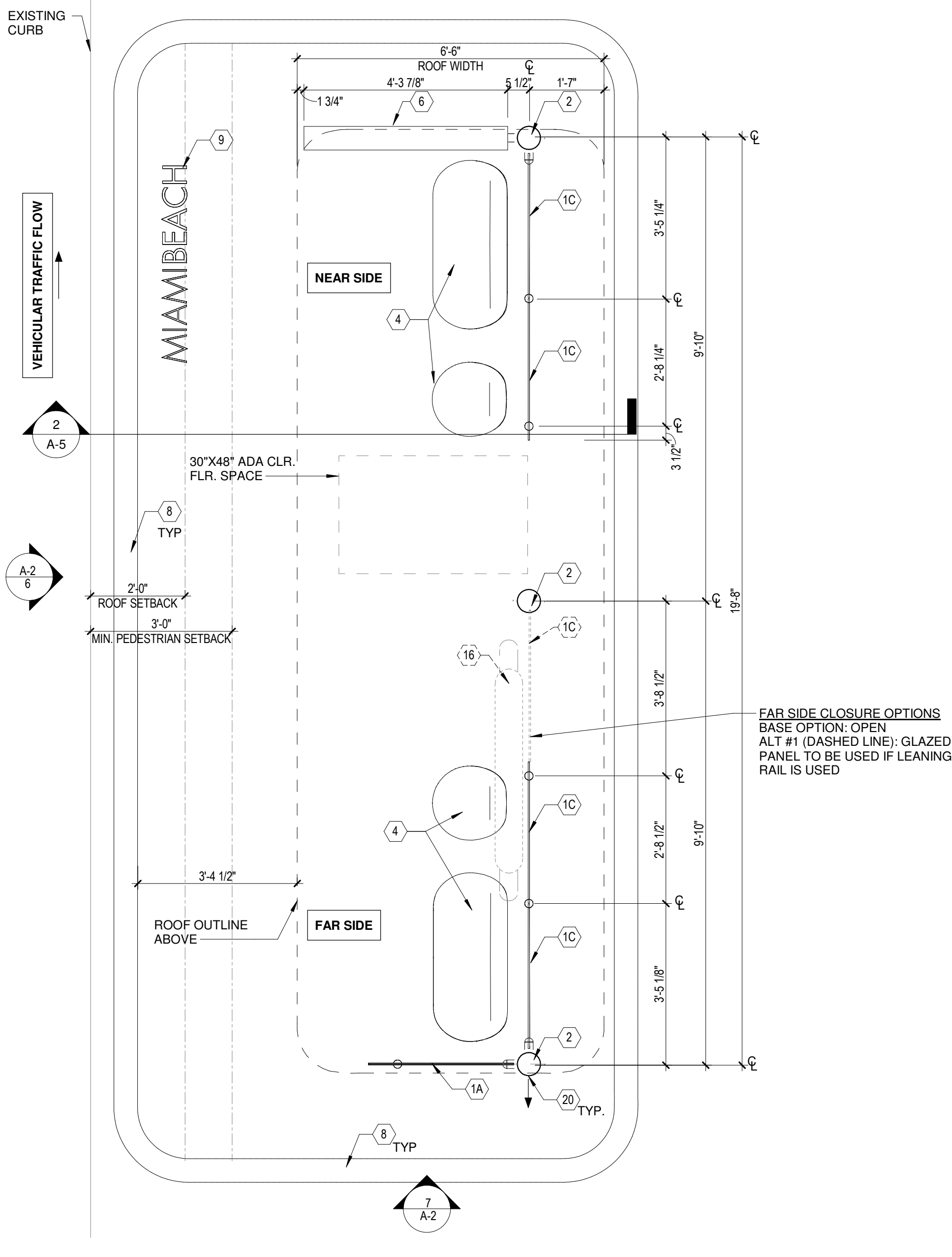




1 ROOF PLAN  
1/2" = 1'-0"



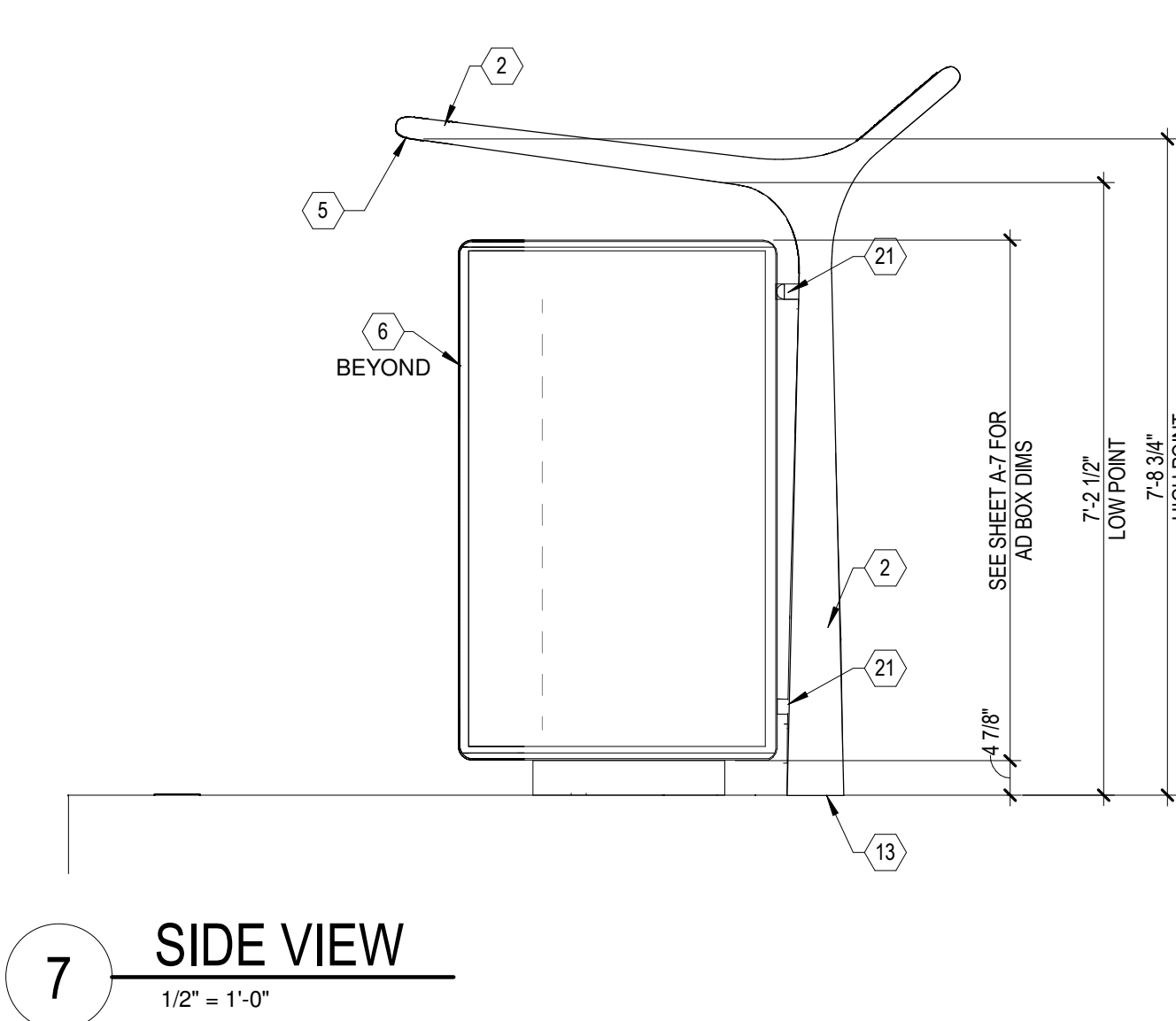
2 REFLECTED CEILING PLAN  
1/2" = 1'-0"



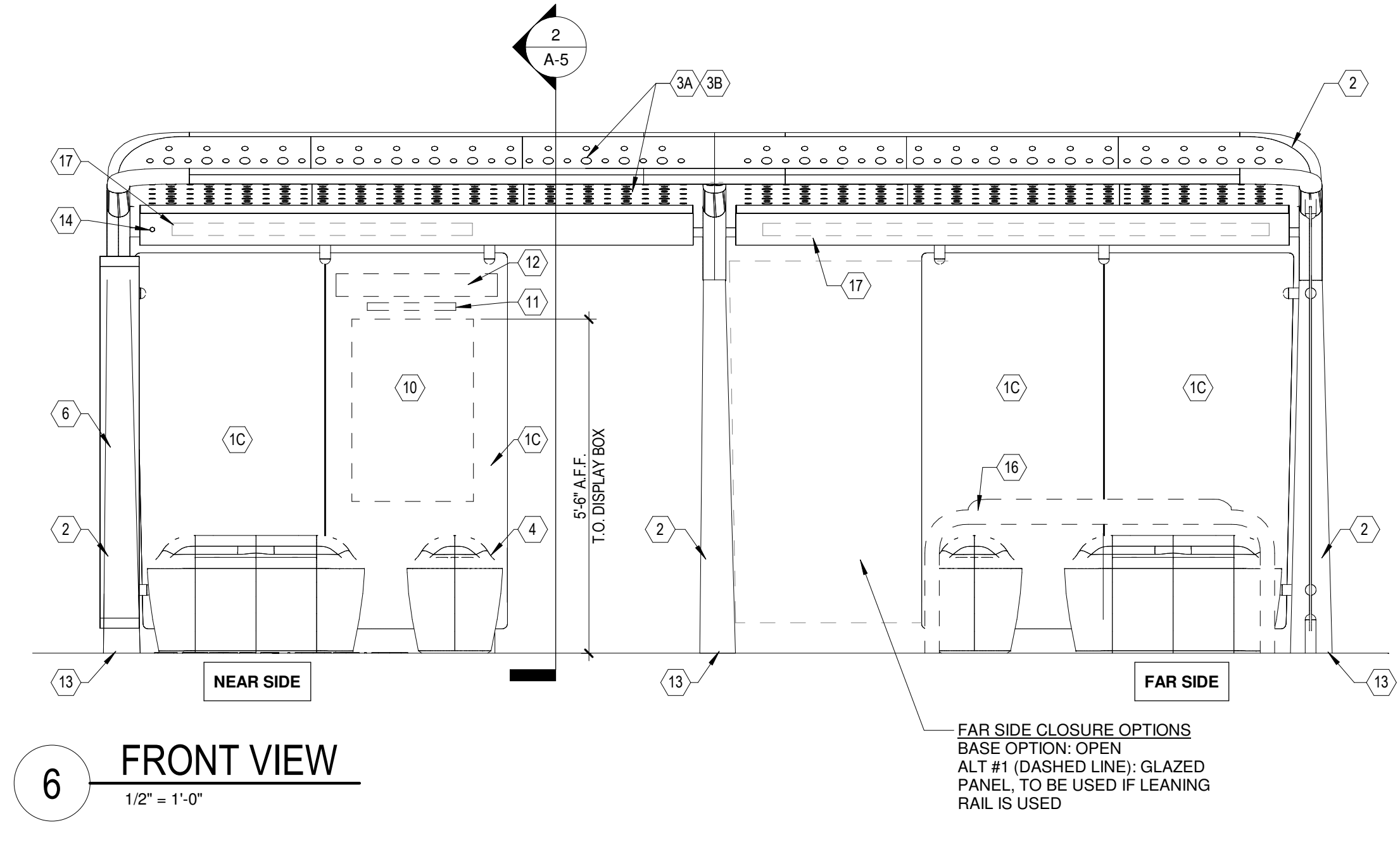
3 FLOOR PLAN  
1/2" = 1'-0"

FLOOR/ROOF PLAN KEY NOTES	
1A	LARGE GLAZED SIDE PANEL, 3/8" THICK, TINTED LAMINATED IMPACT GLAZING, SEE PLACEMENT OPTIONS AND TYPICAL DETAILS ON SHEET A-5. A FULL GLAZED PANEL IS THE PREFERRED OPTION, SEE VALUE ENGINEERING DRAWINGS FOR ALTERNATIVE OPTIONS THAT ALLOW FOR INCORPORATING A COLUMN TO PROVIDE AN EXTRA TIE DOWN POINT TO THE FOUNDATION.
1B	SMALL GLAZED SIDE PANEL, 3/8" THICK, TINTED LAMINATED IMPACT GLAZING, SEE PLACEMENT OPTIONS AND TYPICAL DETAILS ON SHEET A-5. A FULL GLAZED PANEL IS THE PREFERRED OPTION, SEE VALUE ENGINEERING DRAWINGS FOR ALTERNATIVE OPTIONS THAT ALLOW FOR INCORPORATING A COLUMN TO PROVIDE AN EXTRA TIE DOWN POINT TO THE FOUNDATION.
1C	REAR GLAZED PANEL, 3/8" THICK, TINTED LAMINATED IMPACT GLAZING, SEE PLACEMENT OPTIONS AND TYPICAL DETAILS ON SHEET A-5.
2	ALUMINUM SHELTER STRUCTURE, ALUMINUM MAY BE STRUCTURAL OR CLADDING OVER A STEEL STRUCTURE. GEOMETRY SHALL MATCH THE 3D MODELS SUPPLIED BY PININFARINA. THE SIZES IN THE 3D MODEL SHALL BE CONSIDERED "MAXIMUM". SEE INCLUDED VALUE ENGINEERING DRAWINGS FOR MORE INFORMATION. ALUMINUM SHALL HAVE A CONSISTENT FINISH & APPEARANCE THROUGHOUT AND SHALL BE PAINTED PER THE SPECIFICATIONS ON SHEET A-1.
3A	IMPACT GLAZING ROOF SYSTEM WITH INTEGRATED PV CRYSTALLINE SOLAR CELLS. SEE DETAILS ON SHEET A-5.
3B	IMPACT GLAZING ROOF SYSTEM WITHOUT PV CELLS (ONLY AT LOCATIONS THAT ARE HARDWIRED). CUSTOM CERAMIC FRIT PATTERN APPLIED TO UNDERSIDE OF GLAZING. SEE DETAILS ON SHEET A-5.
4	CAST CONCRETE ORTHOPEDIC SEATING, SEE SHEET A-6 FOR TYPICAL DETAILS.
5	INTEGRATED LED LINEAR LIGHTING RECESSED INTO THE STRUCTURE.
6	DOUBLE-FACED AD BOX (DIGITAL OR STATIC). IT IS PREFERRED THAT DIGITAL AD BOXES SHALL HAVE AN INTEGRATED PASSENGER INFORMATION SYSTEM AND SPEAKERS. SEE DETAILS / NOTES ON A-5 & GUIDELINES FOR TECHNOLOGY COMPONENTS.
7	SINGLE-FACED AD BOX (DIGITAL OR STATIC). IT IS PREFERRED THAT DIGITAL AD BOXES SHALL HAVE AN INTEGRATED PASSENGER INFORMATION SYSTEM AND SPEAKERS. SEE DETAILS / NOTES ON A-5 & GUIDELINES FOR TECHNOLOGY COMPONENTS.
8	6" WIDE REFLECTIVE TRAFFIC COATING PAINT OR DURABLE TRAFFIC TAPE, WHITE.
9	MIAMI BEACH CITY LOGO, REFLECTIVE CONCRETE SURFACE PAINT, WHITE.
10	SERVICE MAP LOCATION IN ALUMINUM FRAMED ACCESSIBLE DISPLAY BOX, SURFACE MOUNTED.
11	STATION IDENTIFIER SIGN LOCATION DEPICTED ON GLAZING, EMBOSSED OR ALT.
12	MIAMI BEACH CITY LOGO LOCATION, EMBOSSED ON GLAZING.
13	SEE TYPICAL COLUMN CONNECTION DETAIL ON A-6.
14	CCTV CAMERA INTEGRATED INTO DISPLAY OR AD-BOX HOUSING, LOCATED AT END OF SHELTER TO BE ABLE TO VIEW ON-COMING TRAFFIC, SEE GUIDELINES FOR TECHNOLOGY COMPONENTS.
15	CUSTOM, SEAMLESS INTEGRATED ALUMINUM GUTTER WITH OVERFLOW OPENINGS. SLOPED TO FAR-SIDE COLUMN.
16	OPTIONAL LEANING RAIL IN PLACE OF CONCRETE SEATING, SEE DETAILS ON A-6.
17	DISPLAY HOUSING WITH REMOVABLE FRONT ACCESS PANEL. HOUSING BODY SHALL BE ALUMINUM, COLOR TO MATCH THE STRUCTURAL COMPONENTS. OPENINGS FOR AMENITIES SHALL BE CUSTOM MADE FOR TIGHT FITTING AND SEAMLESS INTEGRATION. SEE INCLUDED VALUE ENGINEERING DRAWINGS.
18	OPENING IN CENTER BEAM FOR GUTTER.
19	NOT USED.
20	INTEGRAL DOWNSPOUT IN FAR-SIDE COLUMN, DISCHARGE TO SIDE OF SHELTER.
21	POSSIBLE STRUCTURAL CONNECTION POINTS TO AD-BOX FRAME FOR SHELTER STABILITY. AESTHETIC REQUIREMENT FOR THESE CONNECTIONS TO BE INCONSPICUOUS. SO CONNECTION SIZING SHALL BE LESS THAN THE SIZE OF THE AD-BOX OR SHELTER FRAMES.

NOTE:  
NON-HARD WIRED (STANDARD) SHELTERS SHALL HAVE THE FUTURE ABILITY TO ADD A DIGITAL AD DISPLAY AND SECURITY CAMERA AS DESCRIBED ABOVE.



7 SIDE VIEW  
1/2" = 1'-0"



6 FRONT VIEW  
1/2" = 1'-0"

PHASE

DESIGN INTENT DRAWINGS

DATE

06.24.2020

NO.

DESCRIPTION

DATE

1

BD COMMENTS

8.23.2019

2

Revision 2

Date 2

PROJECT TEAM

PROFESSIONAL IN CHARGE

ADOLFO J. COTILLA, JR., AIA

REGISTRATION NUMBER

AR-0008011

APPROVED BY

AJC

DESIGNED BY

PININFARINA / ACAI

DRAWN BY

SR

CHECKED BY

GVG

DATE

DESIGN CONSULTANT

MIAMIBEACH

PININFARINA BUS SHELTERS

CITY OF MIAMI BEACH

STANDARD / ENHANCED 20' x 6.5' - FLOOR PLAN, REFLECTED CEILING PLAN, ELEVATIONS

SHEET TITLE

ACAI

associates, inc.

architecture engineering roofing consulting construction management

AAC001323-EB0004379-CGC010769

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Fort Lauderdale, Florida 33309

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ARCHITECT OF RECORD

17-012 G01

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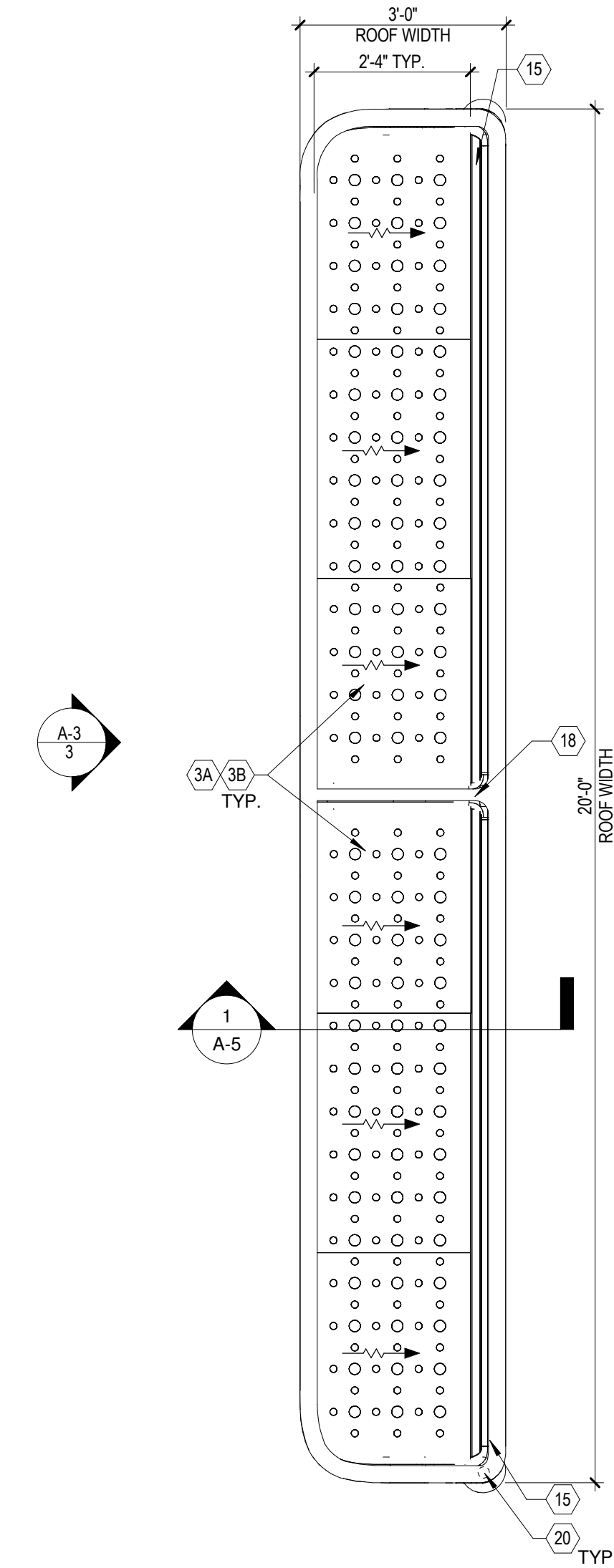
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SHEET NUMBER

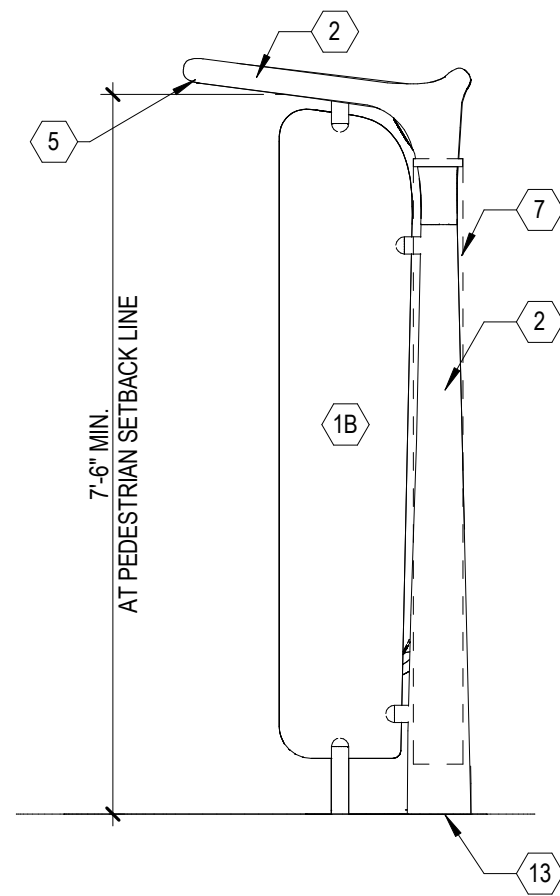
TO THE BEST OF MY KNOWLEDGE AND ABILITY THESE PLANS ARE COMPLETE AND COMPLY WITH THE APPLICABLE BUILDING CODES

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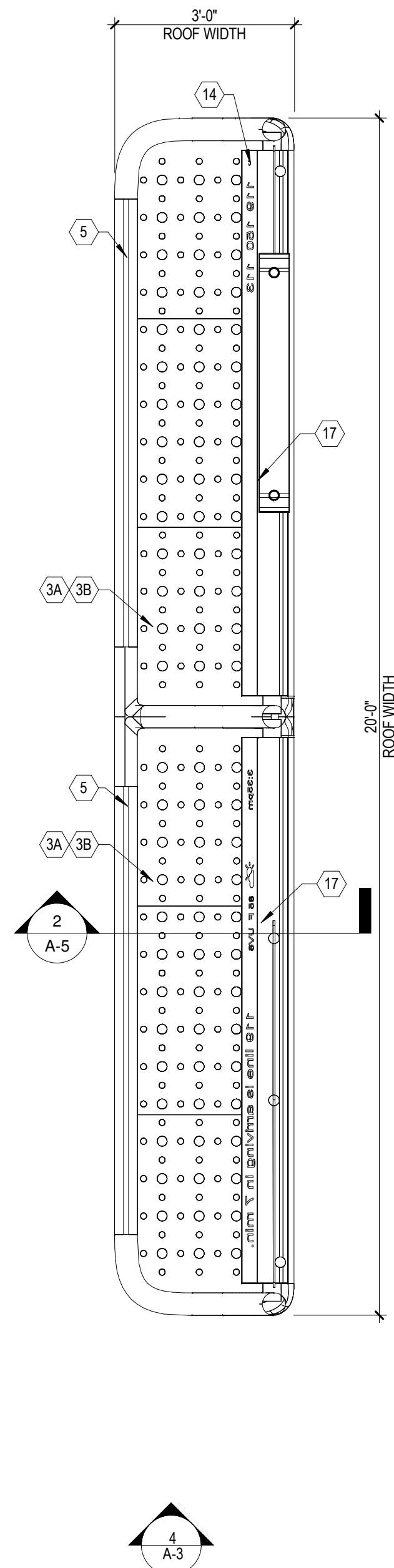


1 ROOF PLAN  
1/2" = 1'-0"



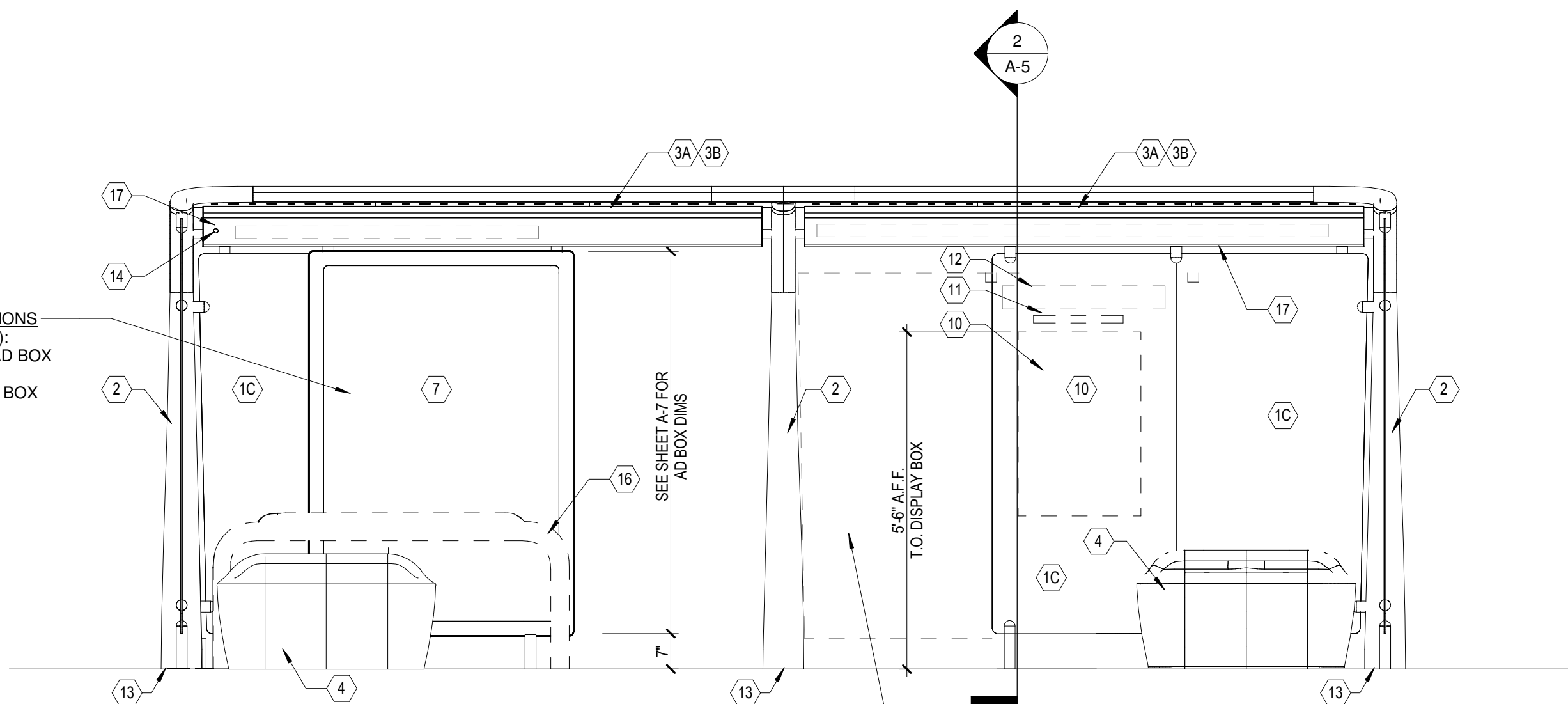
4 SIDE VIEW  
1/2" = 1'-0"

**SHELTER PHOTOMETRIC REQUIREMENT:**  
LIGHT LEVEL DISTRIBUTION AND UNIFORMITY ARE CRITICAL WITHIN THE BUS SHELTER AREA. THE LIGHTING SHALL BE DESIGNED TO PROVIDE AN AVERAGE OF 5 FOOT CANDLES UNDER THE SHELTER ROOF. THE MINIMUM LIGHTING LEVEL SHALL BE NOT LESS THAN 3 FOOT CANDLES AND MAXIMUM SHALL NOT EXCEED 10 FOOT CANDLES. LIGHTING LEVELS SHALL BE MEASURED AT THE SEAT HEIGHT.

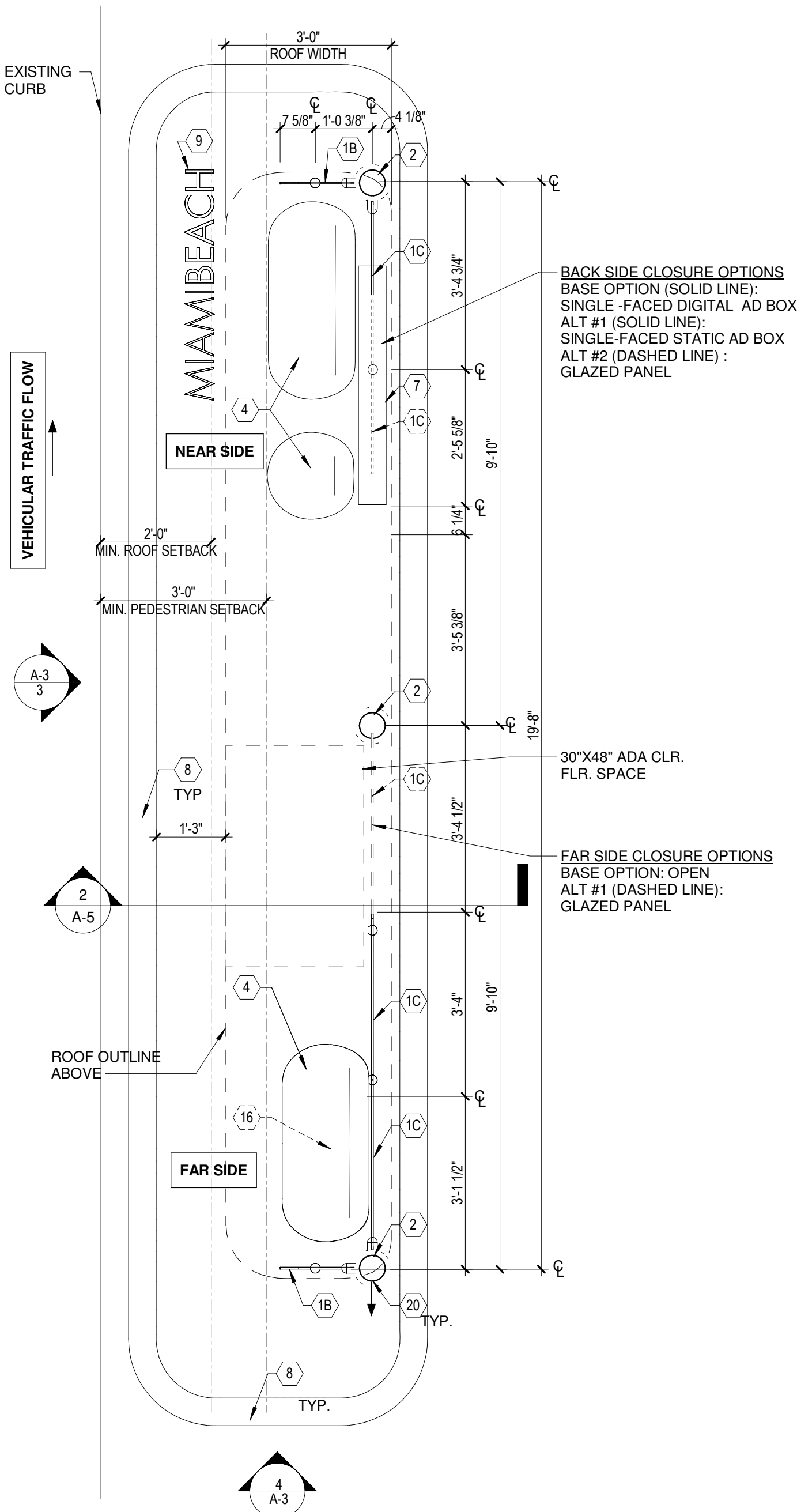


2 REFLECTED CEILING PLAN  
1/2" = 1'-0"

**BACK SIDE CLOSURE OPTIONS**  
BASE OPTION (SOLID LINE):  
SINGLE-FACED DIGITAL AD BOX  
ALT #1:  
SINGLE-FACED STATIC AD BOX  
ALT #2: GLAZED PANEL



3 FRONT VIEW  
1/2" = 1'-0"



5 FLOOR PLAN  
1/2" = 1'-0"

**FAR SIDE CLOSURE OPTIONS**  
BASE OPTION: OPEN  
ALT #1 (DASHED LINE):  
GLAZED PANEL

## FLOOR/ROOF PLAN KEY NOTES

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- 4) CAST CONCRETE ORTHOPEDIC SEATING. SEE SHEET A-6 FOR TYPICAL DETAILS.
- 5) INTEGRATED LED LINEAR LIGHTING RECESSED INTO THE STRUCTURE.
- 6) DOUBLE-FACED AD BOX (DIGITAL OR STATIC), IT IS PREFERRED THAT DIGITAL AD BOXES SHALL HAVE AN INTEGRATED PASSENGER INFORMATION SYSTEM AND SPEAKERS. SEE DETAILS / NOTES ON A-5 & GUIDELINES FOR TECHNOLOGY COMPONENTS.
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SUBMITTALS:  
PHASE DATE  
DESIGN INTENT DRAWINGS 06.24.2020

## REVISIONS:

NO.	DESCRIPTION	DATE
1	BD COMMENTS	8.23.2019
2	Revision 2	Date 2

## PROJECT TEAM

PROFESSIONAL IN CHARGE  
ADOLFO J. COTILLA, JR., AIA  
REGISTRATION NUMBER AR-0008011  
APPROVED BY AJC  
DESIGNED BY PININFARINA / ACAI  
DRAWN BY SR  
CHECKED BY GVG

DATE

## DESIGN CONSULTANT

MIAMI BEACH

PININFARINA BUS SHELTERS

CITY OF MIAMI BEACH

STANDARD /  
ENHANCED 20' x 3' -  
FLOOR PLAN,  
REFLECTED CEILING  
PLAN, ELEVATIONS

## SHEET TITLE

ACAI  
associates, inc.  
architecture engineering  
roofing consulting  
construction management

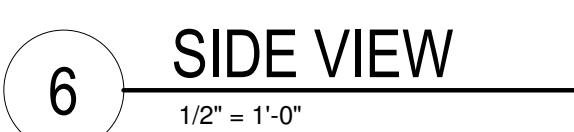
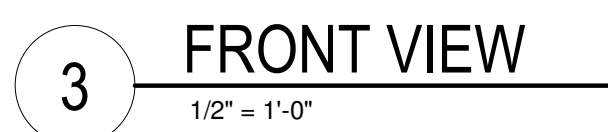
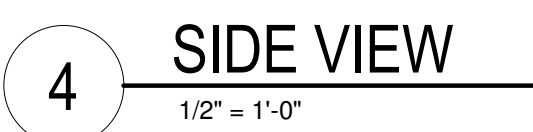
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## PROJECT NUMBER

A-3

SHEET NUMBER  
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PHASE	DATE
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R E V I S I O N S :

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P R O J E C T     T E A M  
P R O F E S S I O N A L   I N   C H A R G E

**ADOLFO J. COTILLA, JR., AIA**

REGISTRATION NUMBER

AR-0008011

APPROVED BY \_\_\_\_\_

AJC

D E S I G N E D   B Y \_\_\_\_\_

PININFARINA / ACAI

D R A W N   B Y \_\_\_\_\_

SR

C H E C K E D   B Y \_\_\_\_\_

GVG

DATE \_\_\_\_\_

DESIGN CONSULTANT \_\_\_\_\_

MIAMI BEACH

PININFARINA BUS  
SHELTERS

CITY OF MIAMI BEACH

TEMPORARY 10' x 6.5'  
& 10' x 3' SHELTER

-----  
S H E E T      T I T L E

**A C A I**  
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architecture engineering  
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construction management

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ARCHITECT OF RECORD

**17-012 G01**  
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**P R O J E C T   N U M B E R**  
  
**A-4**  
-----  
**S H E E T   N U M B E R**  

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AD-BOX DESIGN:

1. LOCATION WITHIN THE SHELTER SHALL FOLLOW THESE DRAWINGS.
2. AD-BOX SIZE SHALL ALLOW THE AD-BOXES TO FIT IN THE LOCATIONS DESIGNATED
3. OVERALL SIZE DEPICTED IN THESE DRAWINGS ARE 4'-4" WIDE X 6'-4" HIGH. VARIATIONS OF THESE DIMENSIONS OVER 6"(INCHES) SHALL BE REVIEWED BY THE CITY, ACAI, AND PININFARINA TO CONFIRM THE AESTHETIC CHARACTER OF THE SHELTER IS STILL BEING MAINTAINED.

RAINWATER DISCHARGE NOTE:

THE DETAILS HERE-IN SHOW AN INTEGRATED GUTTER THAT CONNECTS TO A CONCEALED DOWNSPOUT WITH A DISCHARGE OUT THE SIDE OF THE SHELTER. THE FABRICATOR IS OPEN TO PROVIDE ALTERNATIVE DETAILS AS LONG AS IT ACHIEVES THE FOLLOWING:

1. RAINWATER MUST NOT DRAIN DIRECTLY FROM THE ROOF TO THE GROUND SURFACE BELOW (SHEET DRAINING), USE OF A GUTTER AND DOWNSPOUT WILL BE REQUIRED.
2. THE GUTTER AND ASSOCIATED DOWNSPOUT MUST BE CAREFULLY INTEGRATED INTO THE SHELTER DESIGN TO BE CONCEALED. NOT "STUCK-ON" OR ADDED ELEMENTS TO THE SHELTER STRUCTURE WILL BE PERMITTED
3. THE DISCHARGE FROM THE DOWNSPOUT MUST BE DISCHARGED TO THE SIDE OF THE SHELTER, DISCHARGES TO THE FRONT, BACK, OR WITHIN THE SHELTER WILL NOT BE ALLOWED.

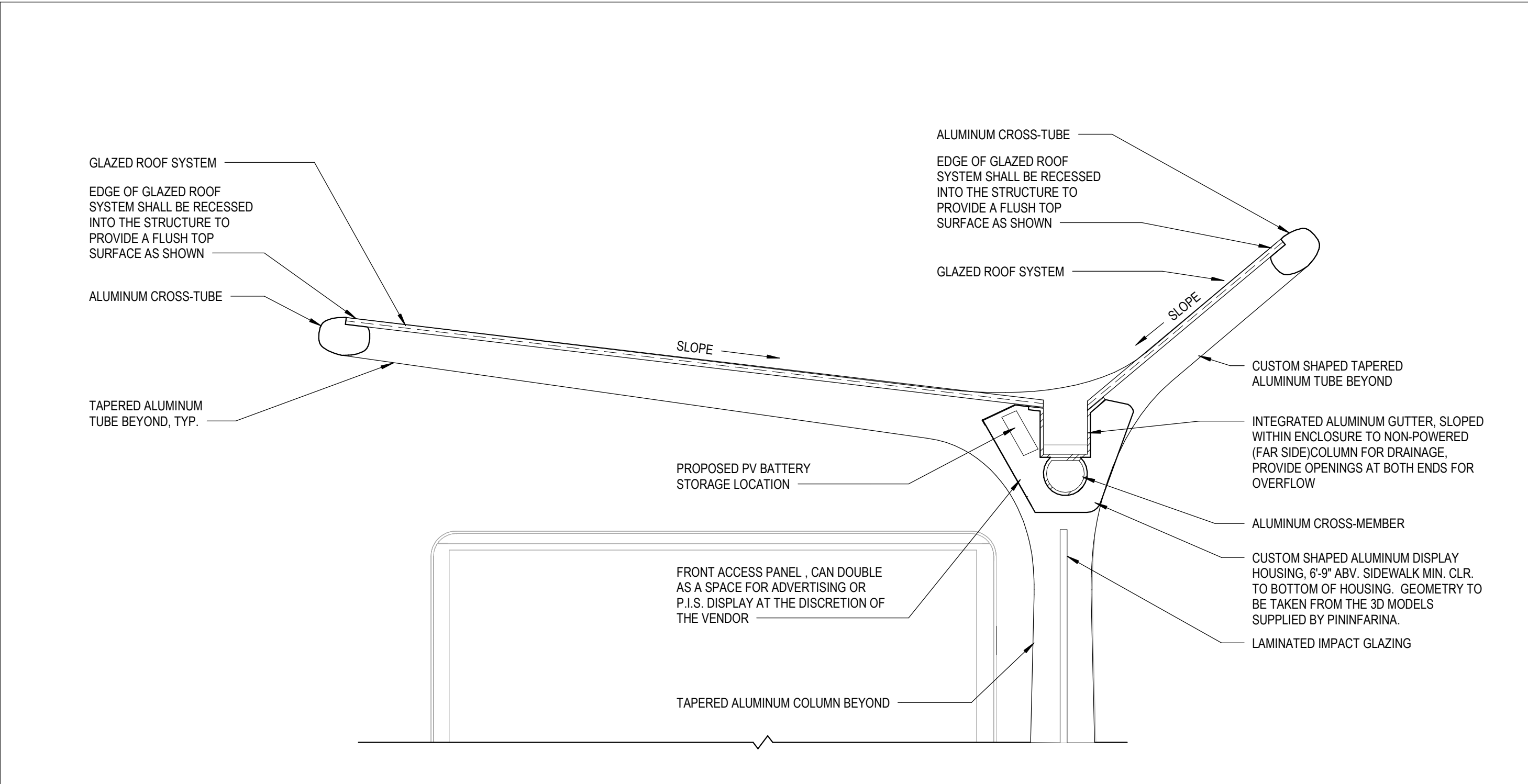
SUCH ALTERNATIVES SHALL BE REVIEWED AND APPROVED BY THE CITY, ACAI, AND PININFARINA.

VERTICAL GLAZING:

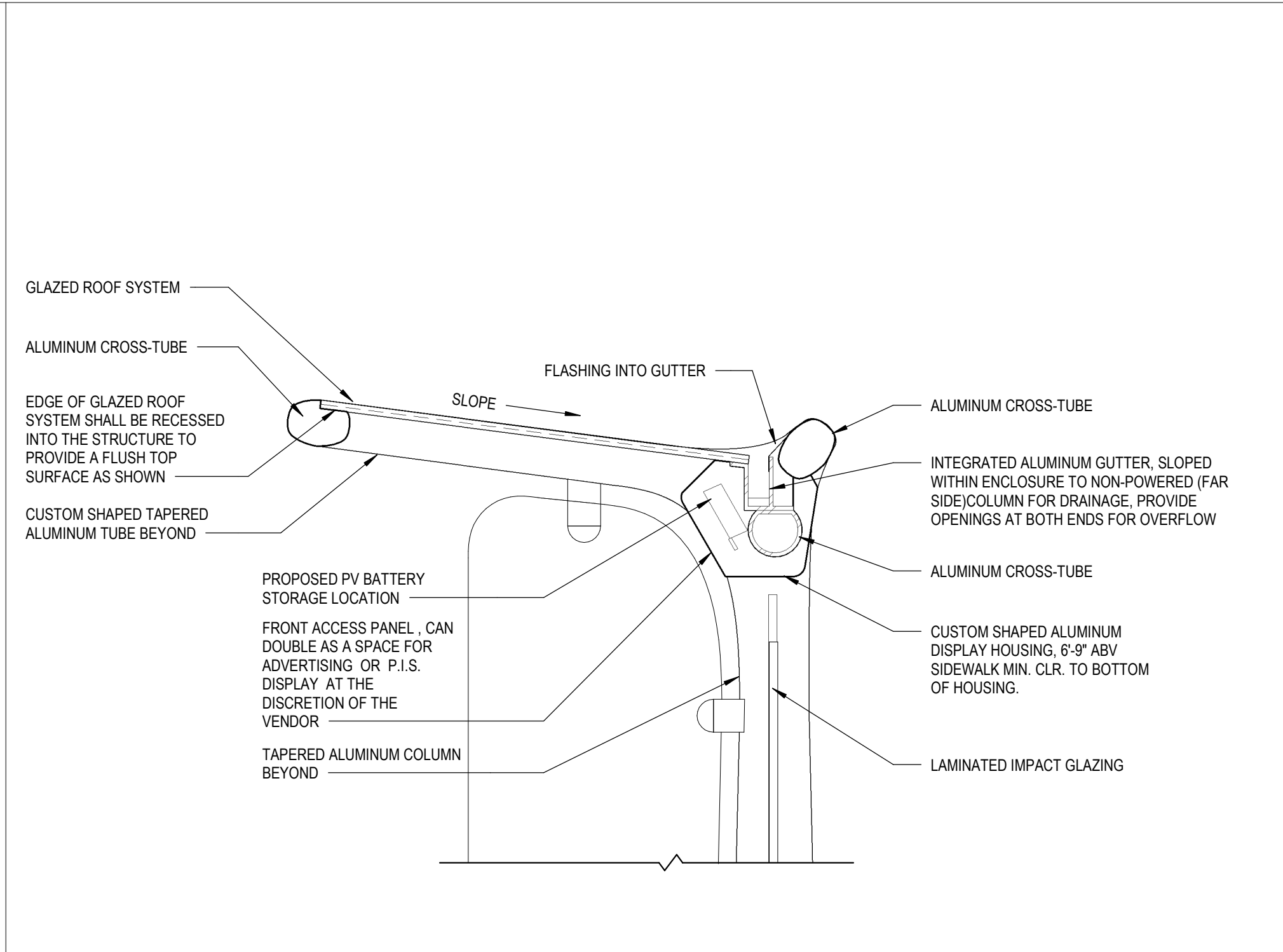
THE DETAILS HERE-IN SHOW THE DESIGN INTENT FOR THE VERTICAL GLAZING LAYOUT, SIZING, AND CONNECTIONS:

1. THE DIMENSIONS LISTED HERE SHALL ONLY BE INTERPRETTED AS A GUIDE. SPECIFIC MANUFACTURES AND / OR ENGINEERING MAY HAVE DIFFERENT TOLERANCES.
2. STAND-OFF TYPE CONNECTIONS AS SHOWN ARE DESIRED. THE FABRICATOR MAY PRESENT ALTERNATIVES TO BE REVIEWED AND APPROVED.
3. IF TAPERED COLUMNS ARE USED, THE GLAZING EDGE ABUTTING THE COLUMNS MUST BE ANGLED TO MATCH THE TAPER (AS DEPICTED BELOW). THE SAME APPLIES TO THE ANGLED ROOF BEAM.

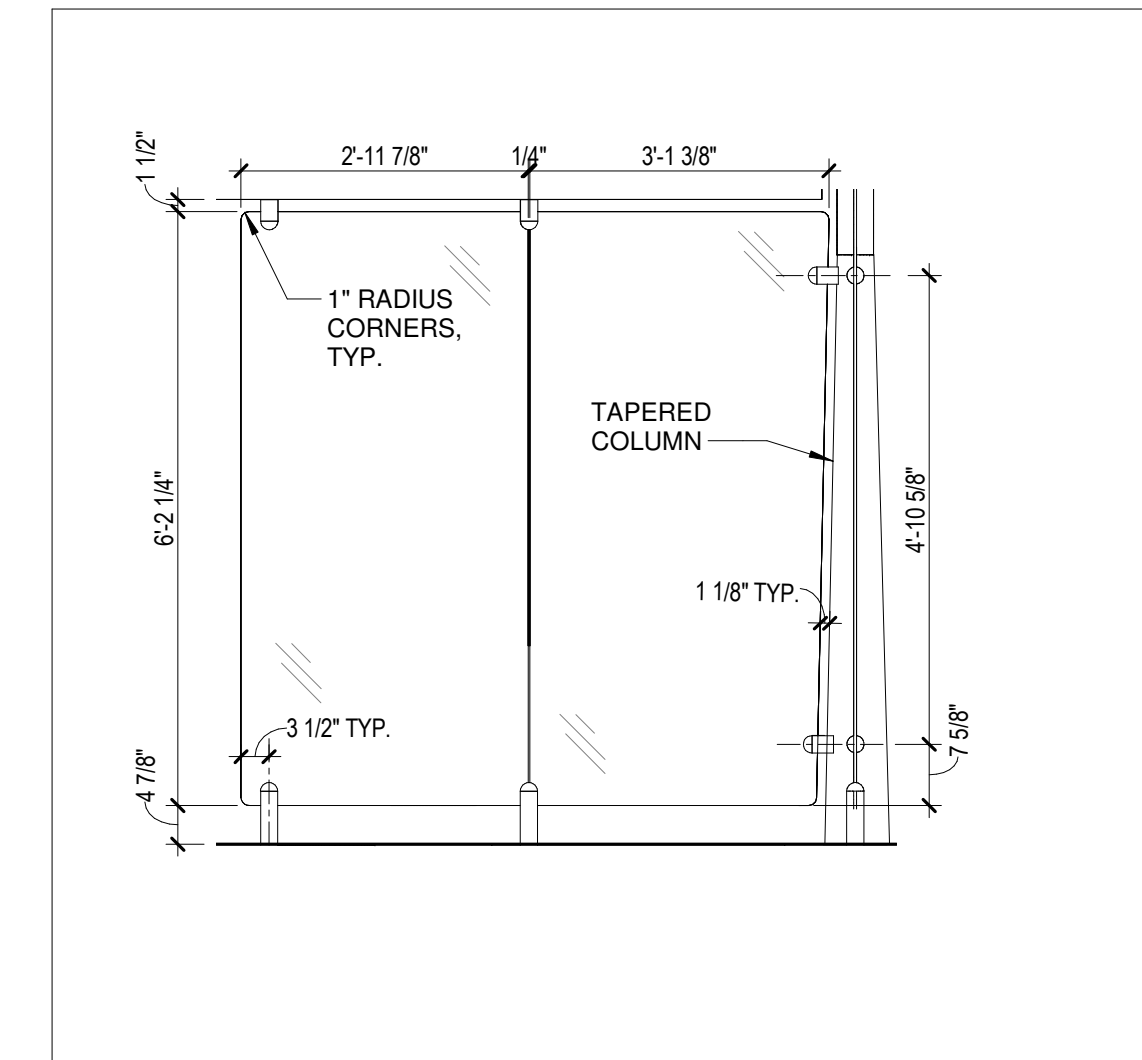
ANY DEVIATION FROM THESE DRAWINGS SHALL BE REVIEWED AND APPROVED BY THE CITY, ACAI, AND PININFARINA.



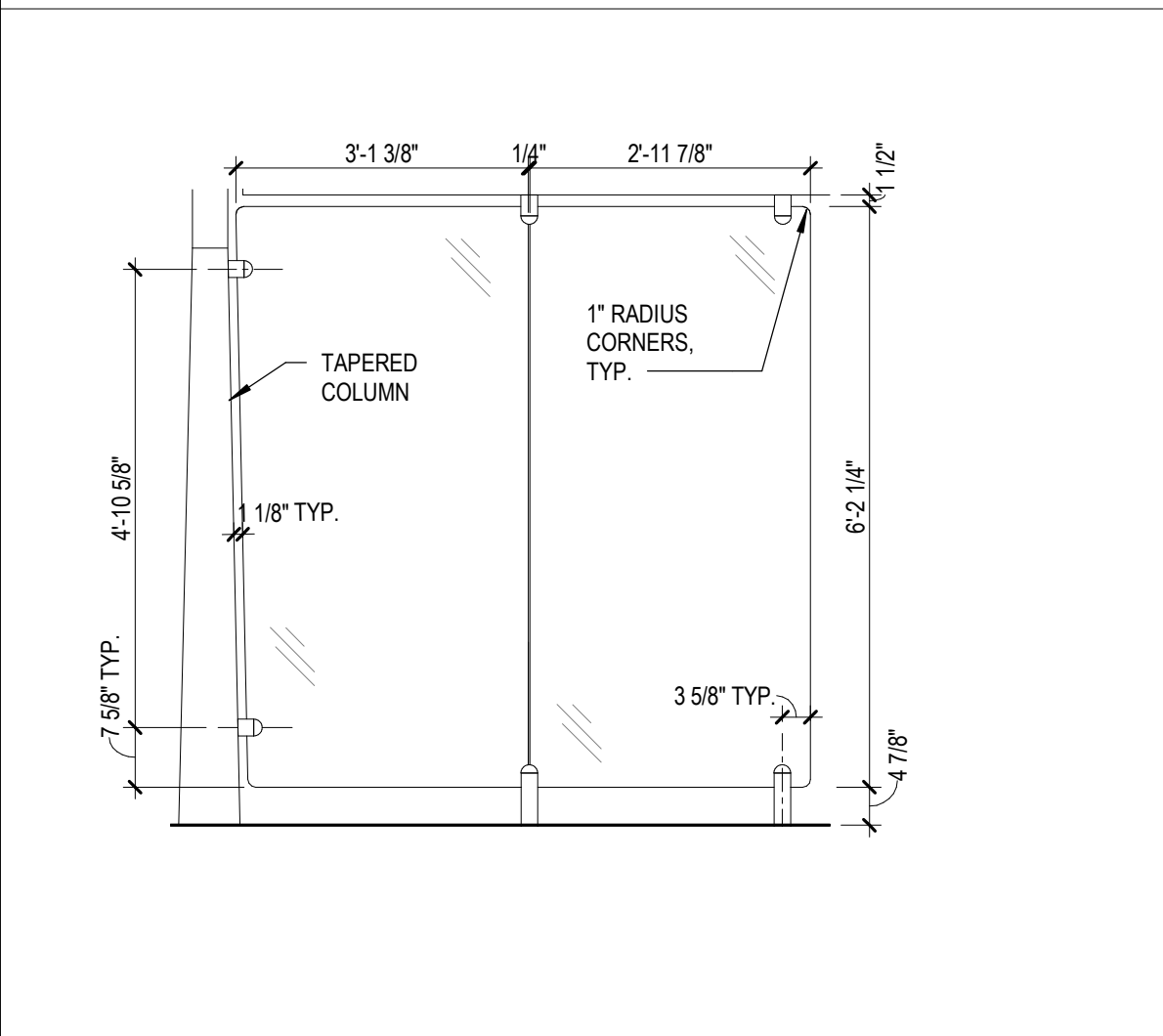
2 TYPICAL 6.5' SHELTER ROOF SECTION  
1 1/2" = 1'-0"



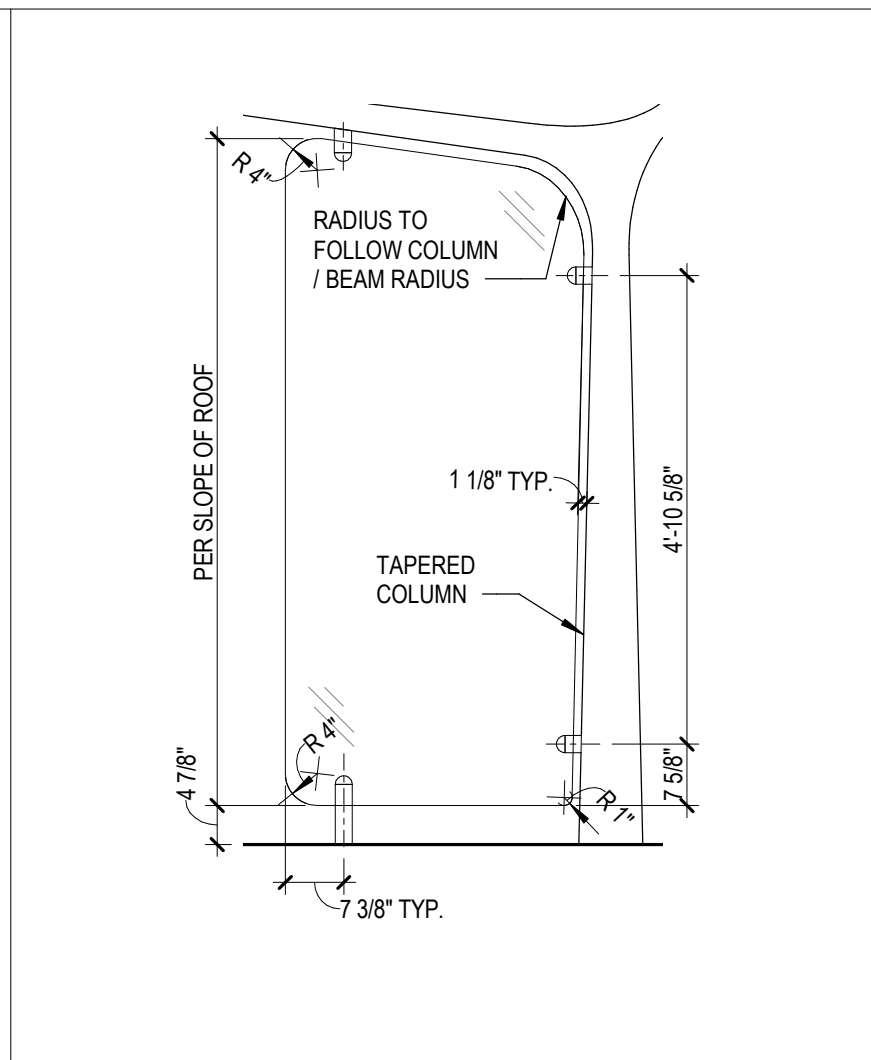
1 TYPICAL 3' SHELTER ROOF SECTION  
1 1/2" = 1'-0"



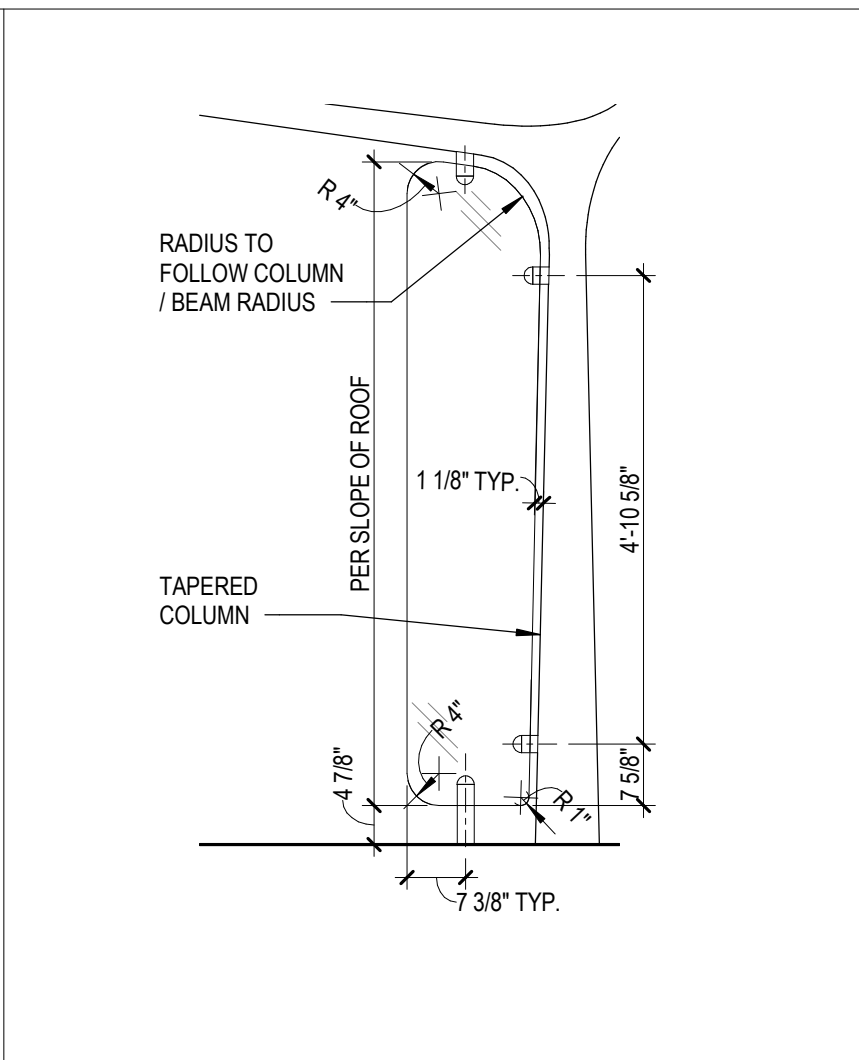
8 FAR SIDE REAR GLAZING  
1/2" = 1'-0"



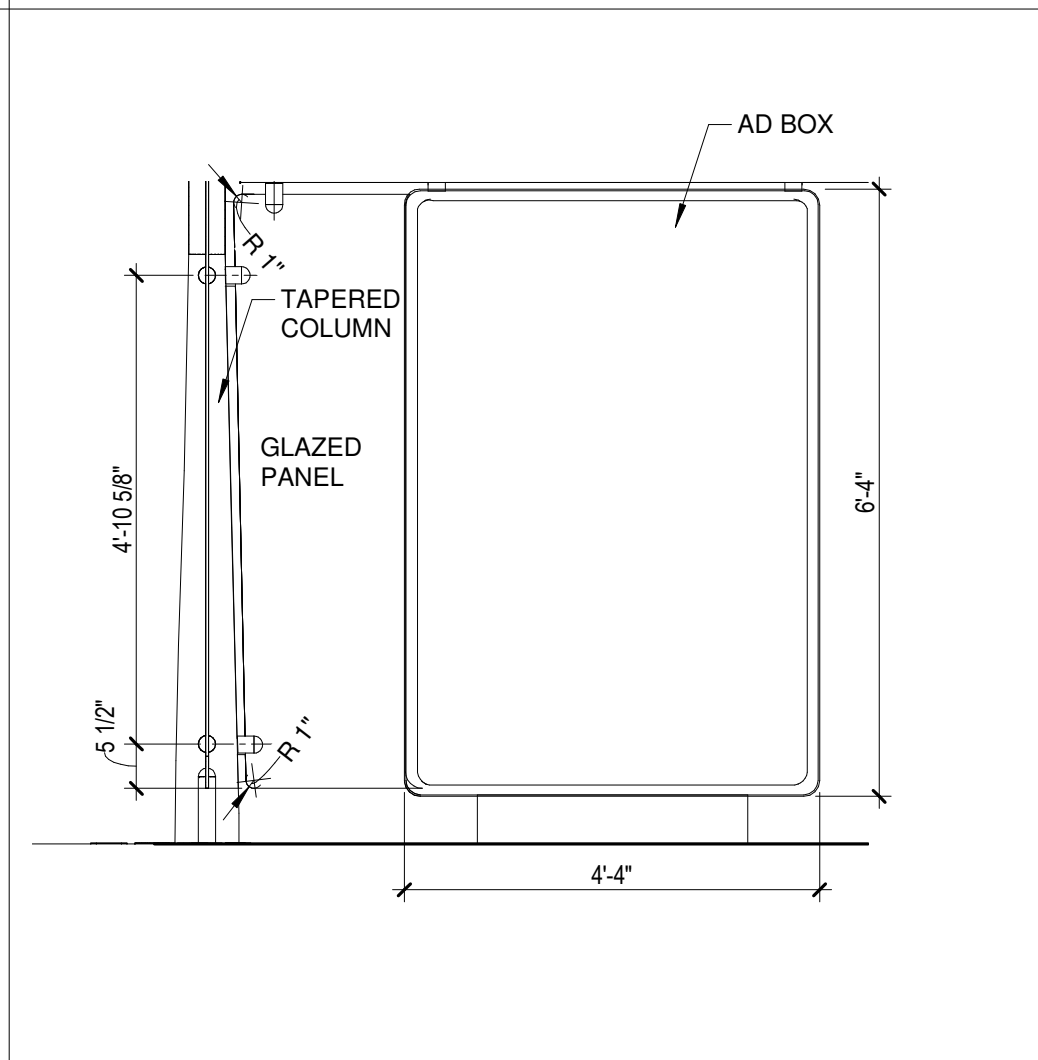
7 NEAR SIDE REAR GLAZING  
1/2" = 1'-0"



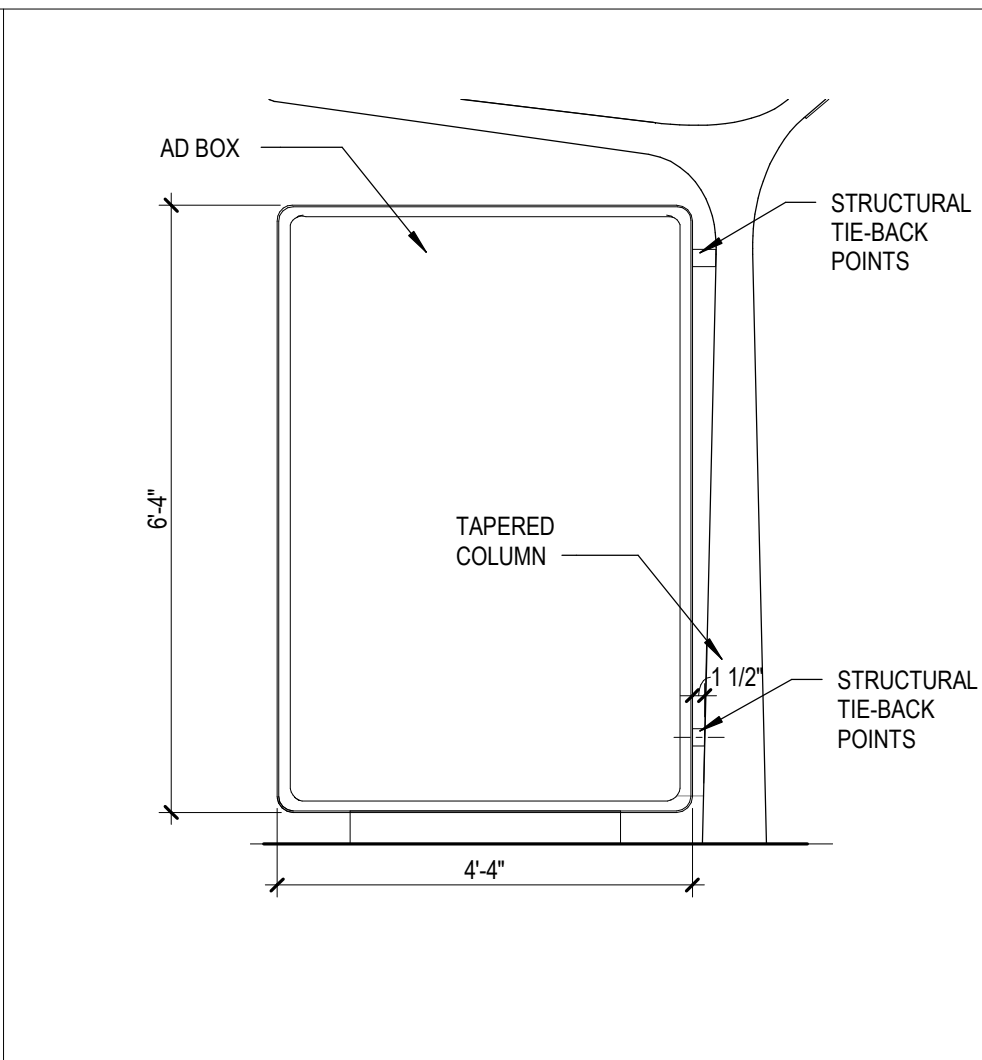
6 LARGE SIDE GLAZING  
1/2" = 1'-0"



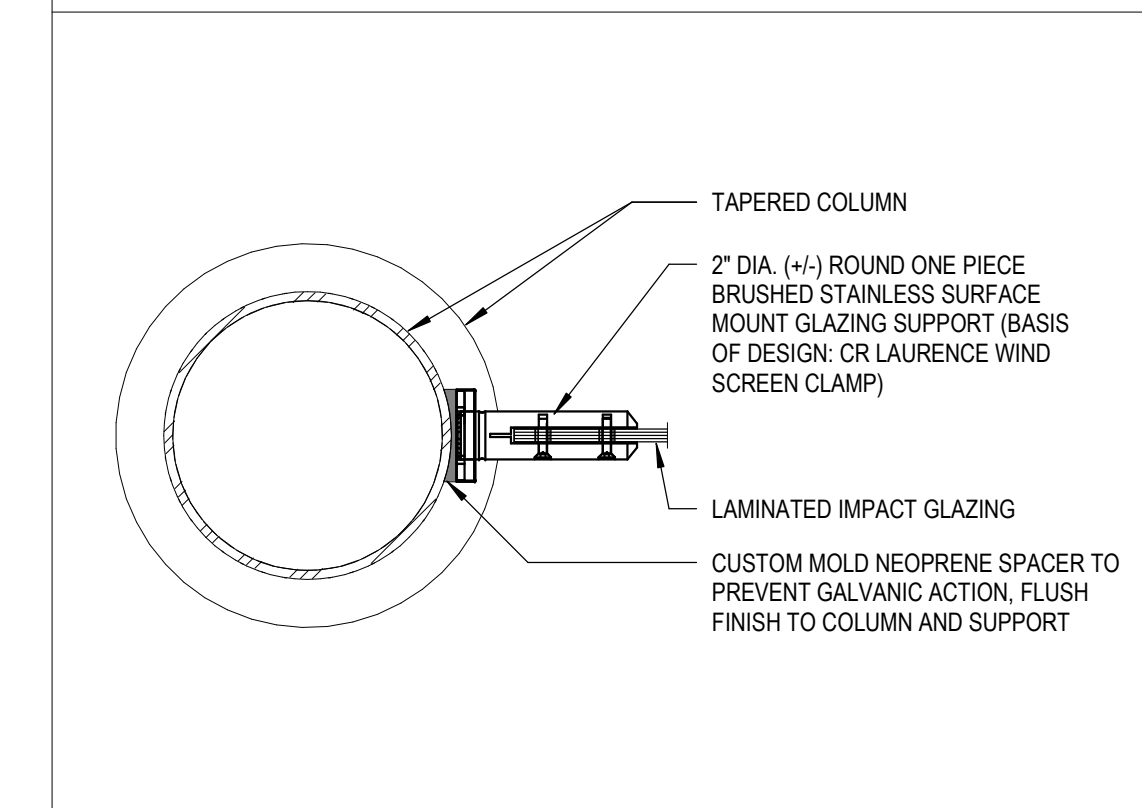
5 SMALL SIDE GLAZING  
1/2" = 1'-0"



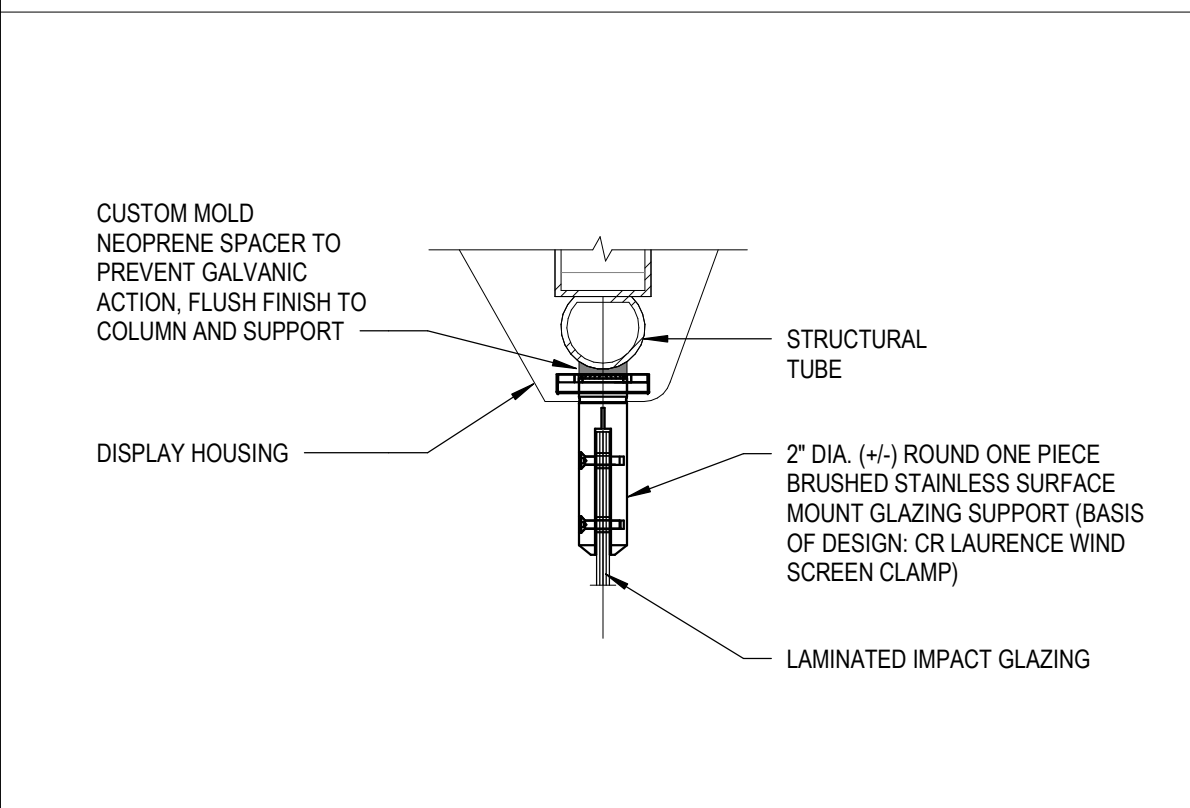
4 FAR SIDE REAR AD BOX  
1/2" = 1'-0"



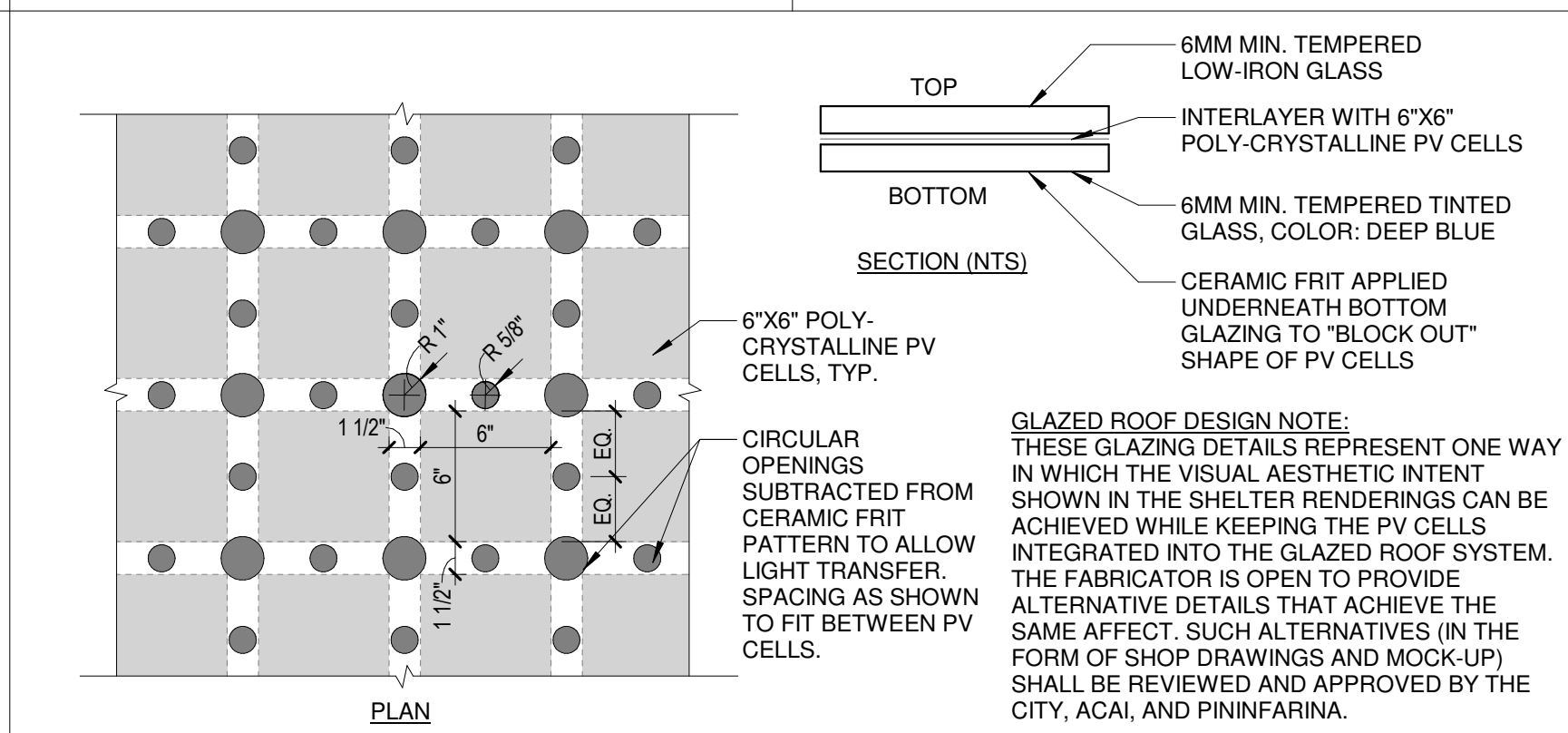
3 SIDE AD BOX  
1/2" = 1'-0"



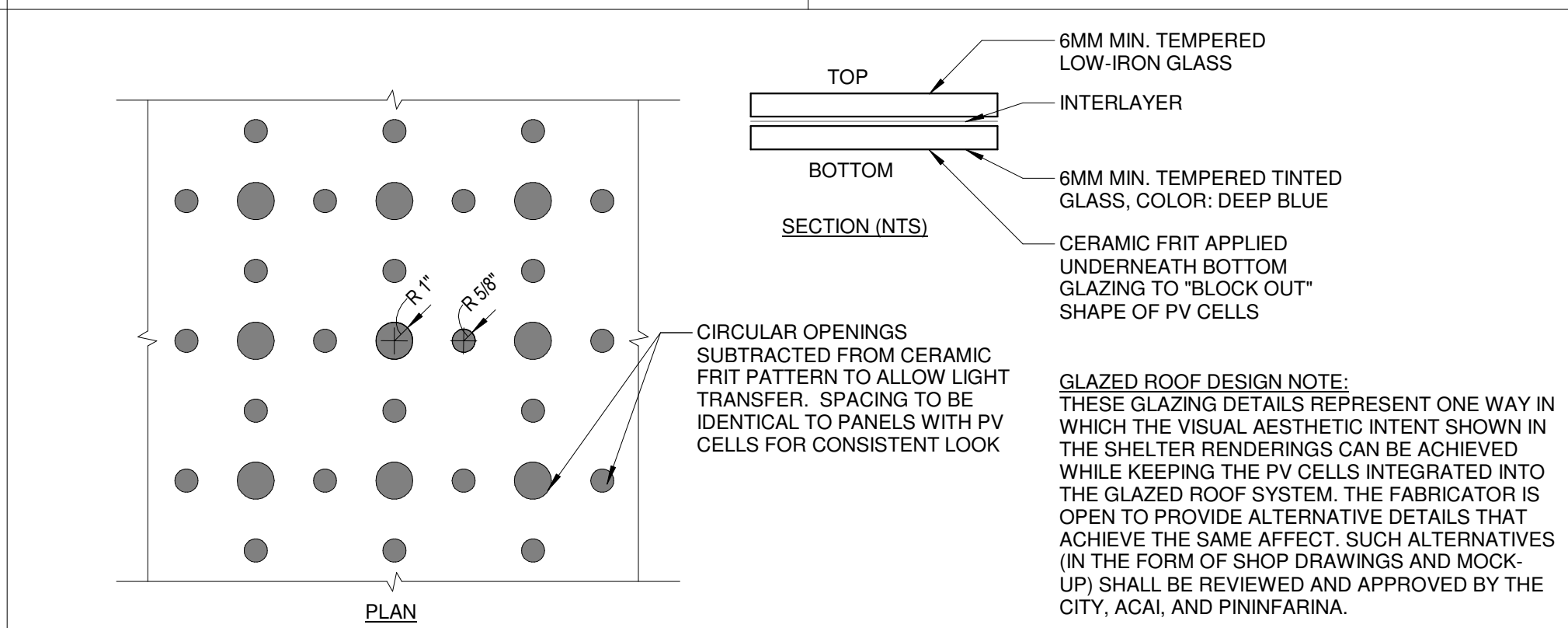
12 GLASS TO COLUMN  
1 1/2" = 1'-0"



11 GLASS TO DISPLAY HOUSING  
1 1/2" = 1'-0"



10 GLAZED ROOF DETAILS - WITH PV CELLS  
1 1/2" = 1'-0"



9 GLAZED ROOF DETAILS - WITHOUT PV CELLS  
1 1/2" = 1'-0"

SUBMITTALS:	DATE:
PHASE:	06.24.2020
DESIGN INTENT DRAWINGS:	

REVISIONS:

NO.	DESCRIPTION	DATE

PROJECT TEAM

PROFESSIONAL IN CHARGE

ADOLFO J. COTILLA, JR., AIA

REGISTRATION NUMBER AR-0008011

APPROVED BY AJC

DESIGNED BY PININFARINA / ACAI

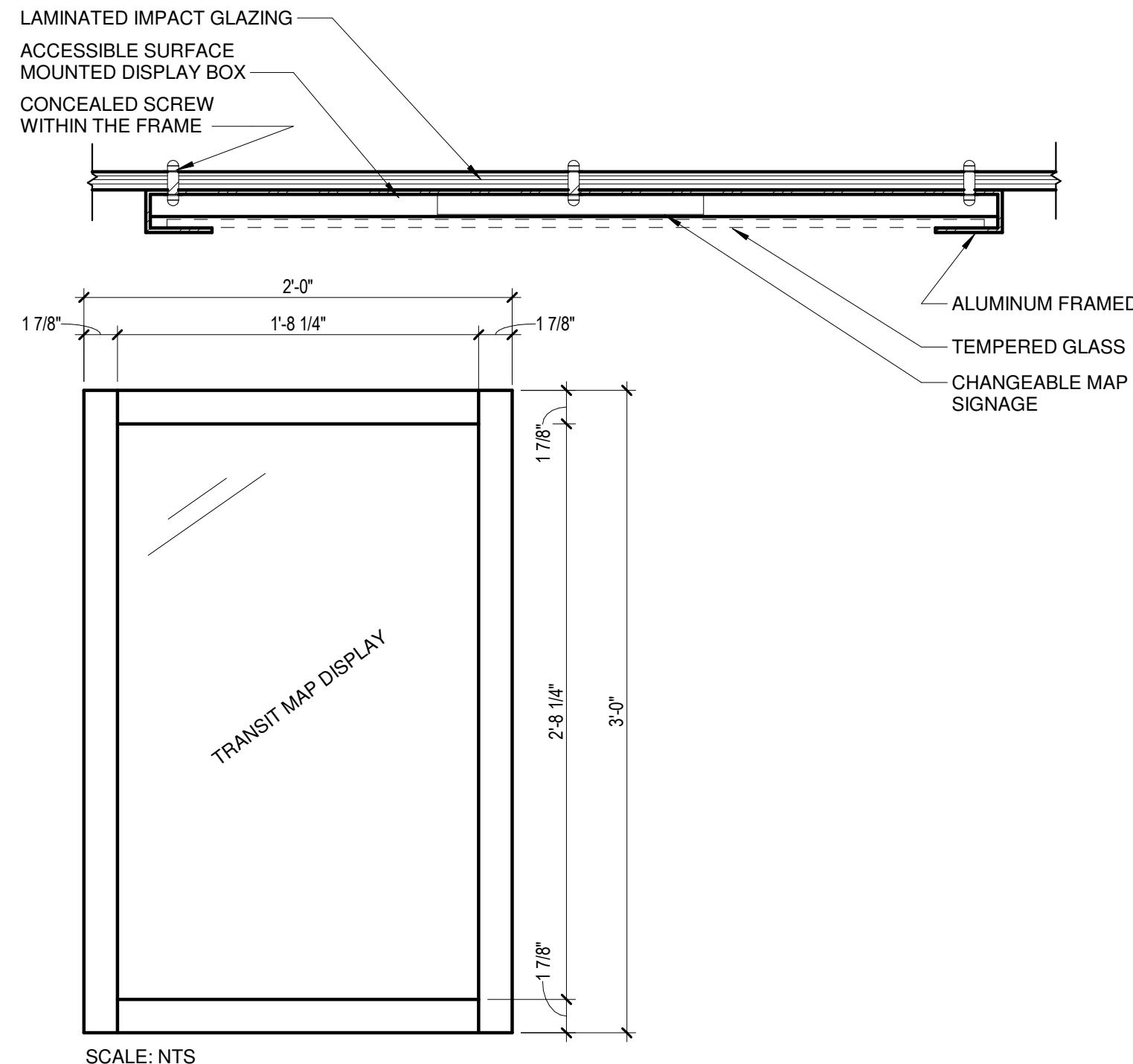
DRAWN BY SR

CHECKED BY GVG

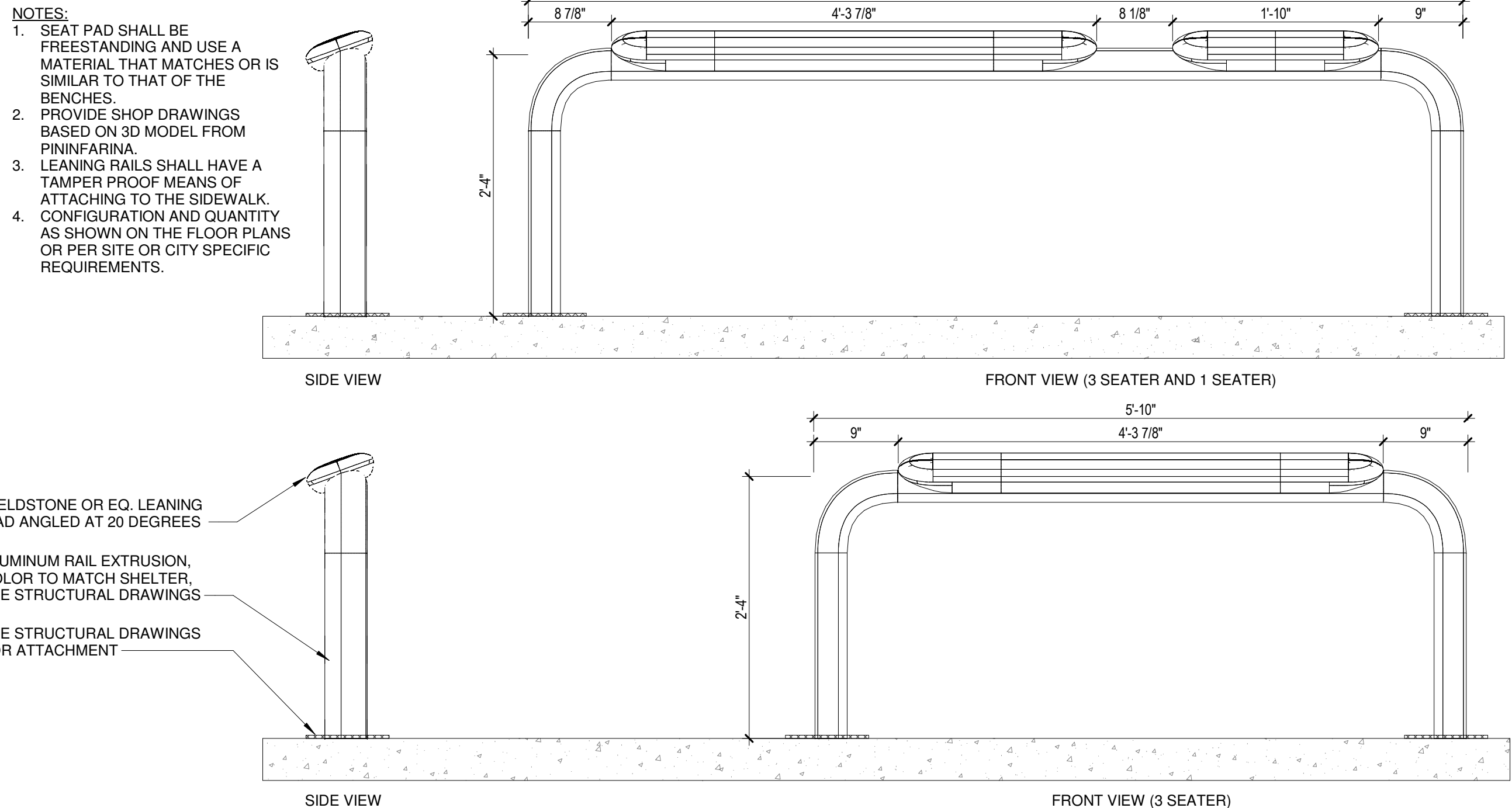


7/10/2020 3:46:00 PM D:\UserDocs\gvongleich\Revit\17-012 G01 - COMB BUS STOPS\_gvongleich.rvt

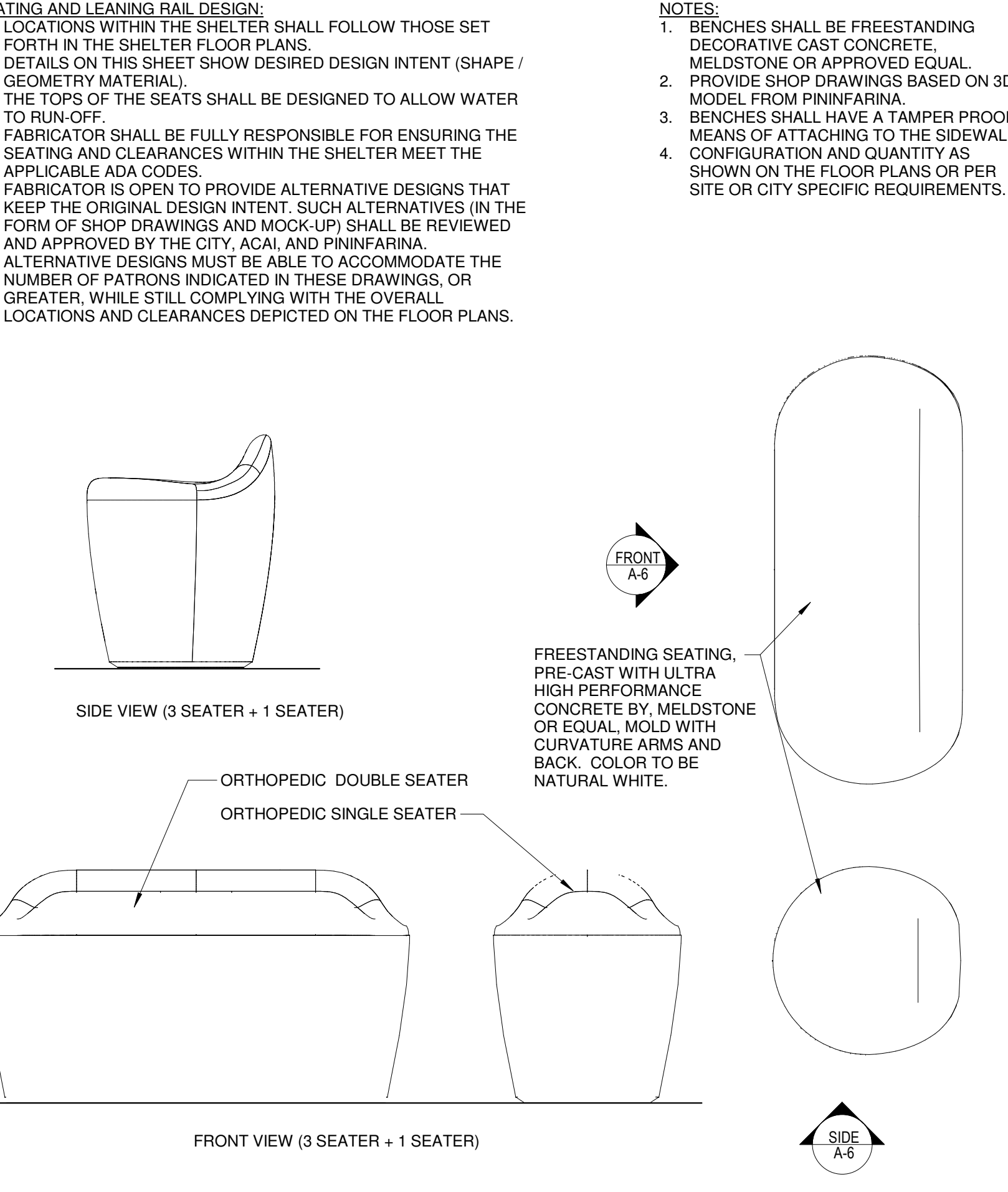
10 SURFACE MOUNTED DISPLAY CASE



9 LEANING RAIL



8 CONCRETE SEATING



SUBMITTALS:  
PHASE DATE  
DESIGN INTENT DRAWINGS 06.24.2020

REVISIONS:

NO.	DESCRIPTION	DATE

PROJECT TEAM  
PROFESSIONAL IN CHARGE

ADOLFO J. COTILLA, JR., AIA

REGISTRATION NUMBER AR-0008011

APPROVED BY AJC

DESIGNED BY PININFARINA / ACAI

DRAWN BY SR

CHECKED BY GVG

DATE

DESIGN CONSULTANT

MIAMI BEACH

PININFARINA BUS SHELTERS

CITY OF MIAMI BEACH

DETAILS

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17-012 G01  
PROJECT NUMBER

A-6  
SHEET NUMBER

TO THE BEST OF MY KNOWLEDGE  
AND ABILITY THESE PLANS ARE  
COMPLETE AND COMPLY WITH THE  
APPLICABLE BUILDING CODES  
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*City of Miami Beach*

**GUIDELINES FOR TECHNOLOGY COMPONENTS**

**for**

**the Bus Shelters project in the City of Miami Beach**

**July 2020**





## CONTENTS

<b>1</b>	<b>GENERAL .....</b>	<b>2</b>
1.1	DESCRIPTION OF WORK .....	2
1.2	ADDITIONAL GENERAL REQUIREMENTS .....	2
1.3	DOCUMENT ORGANIZATION .....	3
<b>2</b>	<b>CCTV CAMERA SYSTEM .....</b>	<b>4</b>
2.1	DESCRIPTION .....	4
2.2	DESIGN REQUIREMENTS .....	4
2.3	PROJECT SPECIFIC REQUIREMENTS .....	5
<b>3</b>	<b>DIGITAL DISPLAYS .....</b>	<b>5</b>
3.1	DESCRIPTION .....	5
3.2	DESIGN REQUIREMENTS .....	6
3.3	PROJECT SPECIFIC REQUIREMENTS .....	6
<b>4</b>	<b>ADDITIONAL DEVICE CABINET .....</b>	<b>7</b>
4.1	DESCRIPTION .....	7
<b>5</b>	<b>CONTENT MANAGEMENT SOFTWARE .....</b>	<b>7</b>
5.1	DESCRIPTION .....	7
5.2	PROJECT SPECIFIC REQUIREMENTS .....	8
<b>6</b>	<b>VALUE ADDED COMPONENTS: .....</b>	<b>9</b>
6.1	DIGITAL DISPLAYS FOR ETA ONLY .....	9
6.2	PUBLIC ACCESS WI-FI .....	9
6.3	DIGITAL DISPLAYS WITH TOUCHSCREEN CAPABILITY .....	9
<b>7</b>	<b>RETIREMENT AND REPLACEMENT .....</b>	<b>9</b>



## 1 General

The City of Miami Beach (the City) intends to issue an Invitation to Negotiate (ITN) to solicit competitive bids and proposals from contractors (the Successful Proposer) for the construction, operation, and maintenance of the City's Bus Shelters project (the Project).

From a technology perspective, at the selected bus stops, the Project will incorporate Closed Circuit Television (CCTV) cameras and digital displays capable of supporting: passenger information systems, estimated time of arrival messaging/ notifications, digital advertisements, and audio messaging with speakers in accordance with the ADA (American with Disabilities Act) Standards at bus shelter locations. The Successful Proposer is responsible for recommending the locations of digital displays at bus shelters.

The Successful Proposer shall establish and utilize a redundant cellular communications network to support all field devices and equipment installed for the bus shelters. The Successful Proposer is responsible to establish, operate and maintain the systems and components described in this document at an uptime availability of 95%. The maximum response time to assess and diagnosis the cause of a failure to any systems and components is 6 hours. The maximum response time to restore functionality to any system or component that has failed is 24 hours, this includes failures that require device or component replacement.

### 1.1 Description of Work

This document provides a set of Guidelines for Technology Components for the construction, operation, and maintenance of the bus shelters that incorporate the technology components as part of the ITN.

The proposed components include the construction, operations, and maintenance of the following:

#### **Systems**

- Digital Displays
- Field cabinets
- Content Management Software (also compatible with existing bus components)
- Closed Circuit Television (CCTV) Cameras (Furnish and Install only)

Components, devices and materials provided by the Successful Proposer must be operated and maintained by the Successful Proposer to allow for 95% uptime availability of these devices. The 95% uptime availability does not apply to the CCTV Camera, as this device will be operated and maintained by the City.

### 1.2 Additional General Requirements

Unless otherwise noted herein, the Successful Proposer shall comply with all applicable requirements of Florida Department of Transportation's (FDOT) Standard Specifications for Road and Bridge Construction latest edition (here and after known as FDOT Standard Specifications).

The Successful Proposer shall become familiar with the project design documents and utilize the Firm's expertise in the field of communications systems and modern bus shelter components to incorporate innovation in its project delivery while maintaining all requirements of the ITN.

The Successful Proposer is responsible for delivering all systems, subsystems, devices, and ancillary components required to provide a complete project that fulfills the requirement of its contract. The Successful Proposer shall determine the exact location of these devices and components based on the



proposed design elements. Any specific locations and provided quantities of the devices to meet the requirements must also meet the manufacturers' specifications for installation and functionality of all project devices and ancillary components. The City and the Successful Proposer will mutually agree to the quantities and locations of shelter types and the associated systems, devices, and components.

All proposed project components and devices must be 100% compatible with existing City of Miami Beach Trolley and Miami-Dade County Transit systems and their operational requirements. Validation for compatibility of project devices and components shall be performed by the Successful Proposer. When installing devices and infrastructure, including but not limited to Digital displays, cabinets, poles, conduit, etc., the devices, all supporting infrastructure, and the routing and placement thereof shall be context sensitive in design with regard to the design, surrounding properties and urban form.

All subsystem devices and ancillary components shall possess the latest version of hardware and software (at the time of installation) and provide the City and/or Miami-Dade County Transit software updates at no cost when any software updates become available throughout the duration of the contract. Neither untried nor prototype units will be approved or accepted by the City. The Successful Proposer shall not use reconditioned equipment. All subsystem devices and ancillary components shall be new Commercial Off-The-Shelf (COTS) products in current production.

The Successful Proposer shall submit a list of all selected technologies/products, selection alternatives, reasons for selection, anticipated device locations, and mounting types to the City for review and approval. Approvals will be necessary for an initial typical section of each bus shelter type. Additional approval will be required at the discretion of the City.

The Successful Proposer shall install the subsystem devices and ancillary components that are detailed in the City's approved final design plans and specifications including, but not limited to, all required structures.

The Successful Proposer shall not install subsystem devices and ancillary components until the City has reviewed and approved the final device or component selection and associated specifications.

The Successful Proposer is responsible for ensuring that the bus shelters are constructed to be compliant with all ADA Standards.

The Successful Proposer shall ensure that all devices, systems, and components of the project must be manufactured, tested, certified, and registered through the Nationally Recognized Testing Laboratory (NRTL) Program.

The Successful Proposer shall provide the City with access of up to two (2) users of the systems, components, and software used to fulfill the requirements of this project.

All devices and components installed in the field must have an Ingress Protection (IP) rating of 66.

### **1.3 Document Organization**

This document summarizes the requirements unique to each project component in a section specifically devoted to the respective field device. For each project component, the following areas are discussed:

- Description
- Design Requirements
- Project Specific Requirements



## **2 CCTV Camera System**

### **2.1 Description**

CCTV cameras are desirable at each enhanced bus shelter type (locations of high ridership). Mainly used for security, these cameras provide City police and system operators with live streams of bus stop activity and traffic flow. Operations staff use these devices to monitor conditions for the proper coordination of resources. Proactive use of CCTV cameras will assist with enforcement productivity, dispatch response times, and performance measures by providing early detection, event verification, increased visual coverage and most importantly, rider safety.

### **2.2 Design Requirements**

The new CCTV camera shall conform to the current specifications for video equipment and corresponding Design Standards associated with the project design. The Successful Proposer shall furnish, construct, install, and integrate the Axis® P3245-LVE CCTV Camera system, or other vendors and/or models approved by the City, and Subsystem to provide the Miami Beach Police Department and transit operator with complete video coverage of the bus shelter locations. The installed system shall have the functionality to view the bus shelter and the provide coverage of the surrounding area through digital pan, tilt, and zoom (PTZ), position presets, and provide Wide-Dynamic Range (WDR) capabilities. The CCTV Camera Subsystems shall be compatible with the existing VMS (Milestone Video Management Software) in use by the City's Police Department.

The CCTV Camera must be installed including any necessary wiring between the camera and camera router/router cabinet by the Successful Proposer.

The CCTV camera assembly shall be consistent with the design plans developed for the project. The Successful Proposer shall furnish, install, integrate, and test CCTV cameras at locations as required to meet or exceed these Guidelines for Technology Components.

The Successful Proposer shall construct and test the CCTV camera system that consists of cameras providing high-quality streaming video coverage. The Successful Proposer shall ensure the CCTV camera views provide the Police Department with the ability to determine the nature of activity taking place at the bus stop, view bus arrivals and departures, and view roadway conditions in proximity to the bus shelter. Successful Proposer shall perform cleaning of camera lenses when deemed necessary by the City, as well as, during any maintenance activities. Other aspects of the maintenance of bus shelter CCTV Cameras will be performed by the City.

The Successful Proposer will be responsible for any camera replacement that is required for full functionality of the camera and its components. Replacement of the camera, mounting equipment, and ancillary equipment is required to be assessed during any preventative, scheduled and emergency maintenance activities or as deemed necessary by the City. The Successful Proposer is required to replace any camera that has been subject to damage from vandalism, natural disasters, and 3<sup>rd</sup> party damage. It is the responsibility of the Successful Proposer to recover funds for any third-party damage.



## **2.3 Project Specific Requirements**

### **2.3.1 Camera Type**

The Successful Proposer shall use the Axis® P3245-LVE CCTV Camera system, and/or models approved by the City. The CCTV cameras shall have a built-in memory card slot that enables local storage of high-definition video, at least 1080 resolution with progressive scan (1080p). The Successful Proposer is responsible for providing a memory card, installed at the time of the camera installation, for all cameras. The memory card must be a minimum of 128 gigabytes and be rated for high endurance and outdoor use.

### **2.3.2 CCTV Camera Wiring and Housing Type**

CCTV camera housings shall be of the dome type and shall have a clear dome. The CCTV must be able to operate in outdoor conditions with a temperature range of -40° F to 122° F, humidity range of 10 to 100% relative humidity.

The camera shall be powered via the Ethernet (Power-Over-Ethernet) power source or may be powered directly via 12-24VDC or 24VAC.

### **2.3.4 Camera Communications**

Router for the camera: The City will purchase install, operate and maintain the router required to communicate with the CCTV camera. The Successful Proposer for the bus shelters shall provide a separate cabinet for camera router, equipped with the necessary power requirements to operate it and any necessary wiring from the camera to the router. The Successful Proposer shall not have access to this cabinet once the camera router is installed. The Successful Proposer must establish a protocol for managing access to the camera communications equipment when necessary for the Successful Proposer to fulfill the requirements of this contract.

## **3 Digital Displays**

### **3.1 Description**

The Successful Proposer shall furnish, construct, install, integrate, operate and maintain advertisement displays, both static and digital. The Digital Displays will consist of outdoor LCD display. The Successful Proposer is required to ensure the proposed digital display is capable of fulfilling the design requirements of the bus shelter. Any proposed digital displays are subject to approval by the City. Other bus shelters types, at selected locations mutually agreed between the Successful Proposer and the City may also have digital displays added to them at a later date. The digital displays shall be compatible with the proposed content management software platform. The Successful Proposer is responsible for recommending the locations of digital displays at bus shelters. Digital display locations will be subject to final approval from the City.

The Digital Displays must be equipped with a speaker that is hardened and suitable for outdoor, commercial applications and capable of interfacing with the Content Management Software for text-to-speech functionality associated with ADA (Americans with Disabilities Act) requirements for public information infrastructure.



Any double face Digital Display must be capable of displaying a digital image or video on one side and a static display illuminated for night applications on the opposite side within the same unit. All installed devices shall be contextual to the surrounding properties and urban form.

The digital display will provide passenger information/ estimated time of arrival messaging and notifications for both Miami-Dade Transit buses and City of Miami Beach Trolleys. Notifications should provide messages regarding the next available route/bus, location destination, and estimated time of arrival based on bus/trolley location. The digital display should provide current time & date, bus stop location, Estimated Time of Arrival (ETA) of next bus/trolley, bus/trolley route number, bus stop name/number and routes serviced at the stop location. Additional information being displayed on the sign shall be made available for display at the discretion of the City. The Successful Proposer shall furnish, install, integrate, test, operate, and maintain displays, providing proper and exact information, at each bus stop location. The Digital Display must be compliant with all ADA Standards. Chapter 703, of the ADA Standards defines requirement related to signs and Chapter 8 (Section 810) defines requirement related to Transportation Facilities.

### **3.2 Design Requirements**

The Successful Proposer shall furnish, install, integrate, test, operate, and maintain Digital Displays as required to meet or exceed these Guidelines for Technology Components. The Digital Display shall conform to the design documentation and latest edition of Specifications available. The Successful Proposer shall furnish and install the displays at bus stop locations as required by the design to accommodate the Guidelines for Technology Components set forth herein. The Successful Proposer is responsible for recommending the locations of digital displays at bus shelters.

The Successful Proposer shall adhere to the requirements herein and in other contract documents for the procurement, installation, integration, operation, maintenance, training, documentation, and warranty requirements for full color, LCD assembly, including requirements of the Miami- Dade County Code for size, placement and installation of digital and interactive displays (defined as Kiosk Signs in the Miami-Dade County Code). Each assembly shall include but not be limited to the sign case with all associated internal components, display controller, communications devices, controller cabinet, cabling, connectors, conduits, electrical service, surge suppression, and hardware and software associated with a complete installation.

All new and replacement signs shall be integrated into the Successful Proposer-provided content management software and have the ability to display messages remotely generated from the end user's computer. The sign shall comply with the additional requirements and specifications and the following project specific requirements.

### **3.3 Project Specific Requirements**

#### **3.3.1 Digital Displays Type**

The Digital Displays furnished and installed shall be full color. The Successful Proposer shall be responsible for determining the appropriate Digital Displays type to be furnished and installed at each location. The Successful Proposer shall only use one manufacturer and model of Digital Displays, models may vary in size and functionality per location.



### **3.3.2 Physical Conditions**

Field equipment shall be hardened for outdoor conditions and require minimal maintenance. All audio equipment shall have a minimum operating temperature range of -4 degrees F to 158 degrees F and humidity range of 0 percent to 95 percent. Volume levels of the speaker and audible messages must be adjustable remotely from the Content Management Software.

## **4 Additional Device Cabinet**

### **4.1 Description**

The cabinet required to separately house the CCTV camera router must have dimensions no greater than 12"x12"x8" and shall be NEMA 4 rated. The location of the CCTV camera router and cabinet are subject to approval from the City. Additional devices and components that are not considered in the design or are being used for the CCTV camera router must be housed in a separate cabinet with the location, size, style and mounting is subject to approval from the City.

Turnover to the City of this cabinet will take place after an inspection by the City is requested from the Successful Proposer and approved by City staff or their delegate.

## **5 Content Management Software**

### **5.1 Description**

The Successful Proposer shall furnish, install, integrate, test, operate, and maintain the Content Management software for the Digital Displays, Passenger Information Display, Outdoor Speakers, and ancillary equipment.

The software must be equipped with an enterprise-level Content Management System (CMS) software solution. In lieu of utilizing separate Successful Proposer-provided management/ configuration software packages, the Successful Proposer must utilize an "umbrella" software package solution capable of managing all devices via one GUI (Graphical User Interface) platform. The Successful Proposer shall furnish and install devices compatible with the software being used as defined in these Guidelines for Technology Components.

The Successful Proposer shall integrate and test new digital display signs, and communication devices with the equipment's respective vendor-provided software. The Successful Proposer shall furnish, install, and integrate all the equipment including the software licenses necessary for the operation of the devices. This will be achieved by using the respective Successful Proposer-provided software package. The Successful Proposer will operate and maintain the software throughout the duration of the project. The Successful Proposer is required to provide the necessary licenses for the software to the City, for the City to have general access to the software.

## **5.2 Project Specific Requirements**

### **5.2.1 Servers**

The Successful Proposer shall furnish, install, integrate, test, operate, and maintain any server(s) required to operate the bus shelter devices managed or operated through the Content Management Software provided under this project.

### **5.2.2 Device Protocol Compliance**

For the devices being deployed that are to be communicated with, monitored and/or controlled via software the Successful Proposer shall ensure that the protocol(s) used by these devices is compliant with the governing equipment stated in the specifications for that device. The Successful Proposer shall coordinate with the City of Miami Beach and Miami-Dade County Transit, or its designated representative, as necessary.

### **5.2.3 Device Worksheets**

The Successful Proposer shall coordinate with City of Miami Beach and/or Miami-Dade County Transit, or its designated representative, to collect and provide the required information about each device that is to be interconnected with; communicated through; communicated with; monitored and/or controlled via the device and content management/configuration software. The exact information to be provided for the devices involved shall be obtained from City of Miami Beach and/or Miami-Dade County Transit or their designated representative. The City of Miami Beach and/or Miami-Dade County Transit shall approve the format and naming conventions used to ensure compatibility with existing devices in the City and/or County device database.

### **5.2.4 Device Database Tables and Configuration Files**

The Successful Proposer shall populate all device database tables and configuration files using the data collected in the device worksheets.

### **5.2.5 Create Device Map Links**

The Successful Proposer shall create the device map link layer for the respective devices (i.e. Digital Displays). The Successful Proposer shall display all field devices on the map. The City and Miami-Dade County Transit shall approve the format and naming conventions used to ensure compatibility with existing devices in the City and County Transit's device GIS map link layer.

### **5.2.6 Device Software Training**

The Successful Proposer shall coordinate with the City of Miami Beach and Miami-Dade County Transit to schedule the Device Software administrator and operator training. The Successful Proposer must present a minimum of five (5) dates/times for the City and County staff to select an available time for training. Two (2) weeks' notice must be given to the City and County staff of when the training will take place. The Successful Proposer is responsible for coordinating the location and content of the training. At a minimum the content of the training must incorporate modules for the following aspects of the project:

- Digital Displays
- Content Management Software (also compatible with existing bus components)



## **6 Value Added Components:**

This section provides a summary of the discretionary requirements that have not yet been approved by the City. These components are intended to bring additional features and functions to the project. The value-added components being considered for this project include:

- Digital Displays for ETA Only
- Public access Wi-Fi
- Digital Displays with touchscreen capability

### **6.1 Digital Displays for ETA Only**

For bus stop locations that do not require the technology components described in these guidelines the City will consider Digital Displays for ETA information only. This component will be considered for use at locations not subject to the other components described in these Guidelines for Technology Components. These components will be required to provide information related to Miami-Dade County transit buses and the City of Miami Beach trolleys route/ route number and ETA. This component may be a standalone feature at specific bus stop locations and using technology solution mutually agreed between the City and the Successful Proposer. Solar or battery power may be used for this component only. The Digital Displays for ETA must be compliant with all ADA Standards. Chapter 703, of the ADA Standards defines requirement related to signs and Chapter 8 (Section 810) defines requirement related to Transportation Facilities.

### **6.2 Public Access Wi-Fi**

These requirements are pending City approval. If approved, additional field communications devices shall be provided and be able to provide the public with unlimited, free Wi-Fi access while in proximity of the bus shelters requiring this equipment. The City requires the ability to turn this feature off from a remote location, at their discretion. The Successful Proposer shall be prepared to provide the Wi-Fi services throughout the duration of the project. These services may be requested by the City to be included on the project at any stage of the project. These services will be the sole responsibility of the Successful Proposer to deploy, integrate, operate and maintain.

### **6.3 Digital Displays with Touchscreen Capability**

It is desirable for the digital displays to have interactive touchscreen capabilities. The use and inclusion of the touchscreen feature will be determined at the time of installation and will be at the discretion of the City, which may change throughout the duration of the project.

## **7 Retirement and Replacement**

All technology components that the Successful Proposer is responsible for operating and maintaining shall be retired and replaced after ten (10) years of use. This includes the technology components and the ancillary equipment necessary to operate the device and/or system. The technology components that are replaced with new equipment will be subject to approval from the City.