

ANGLE SMALL SECTION OF PIPE TO CONNECT VERTICAL BAR AND GUARD, TYP.

2'-0" CLEAR
6'-0" TYP.

1 1/2" DIAMETER (1.9" O.D.) PIPE, TYP.

1'-0"

TOP OF ROOF

HANDRAIL PIPE TO BE SET FLUSH AGAINST WALL, TYP.

1/2" x 2 1/2" BENT ALUMINUM PLATE WITH 3/8" HOLE, TYPICAL.

1/2" x 2 1/2" ALUMINUM FLAT PLATE

1/2" DIA. STAINLESS STEEL ANCHOR, USE EITHER THREADED ROD & EPOXY OR MECHANICAL ANCHOR. SUBMIT PROPOSED ANCHOR TO PSU FOR APPROVAL.

1" DIA. SOLID ROUND ALUMINUM BAR WITH NON-SLIP FINISH, TYP.

1/2" x 7" x 3/4" BENT ALUMINUM PLATE WITH 3/8" HOLE, TYPICAL. SPACE PLATES AT 48" O.C. MAXIMUM.

GRADE/LOW ROOF

7 1/2"

2 1/2"

NOTES:
1. ROOF EDGE DETAIL WILL GOVERN THE LOCATION OF THE LADDER & GUARD TOP ANCHORS. VERIFY FIELD CONDITIONS PRIOR TO FABRICATION AND COORDINATE WITH PSU PERSONNEL FOR APPROVAL OF ATTACHMENT LOCATION.

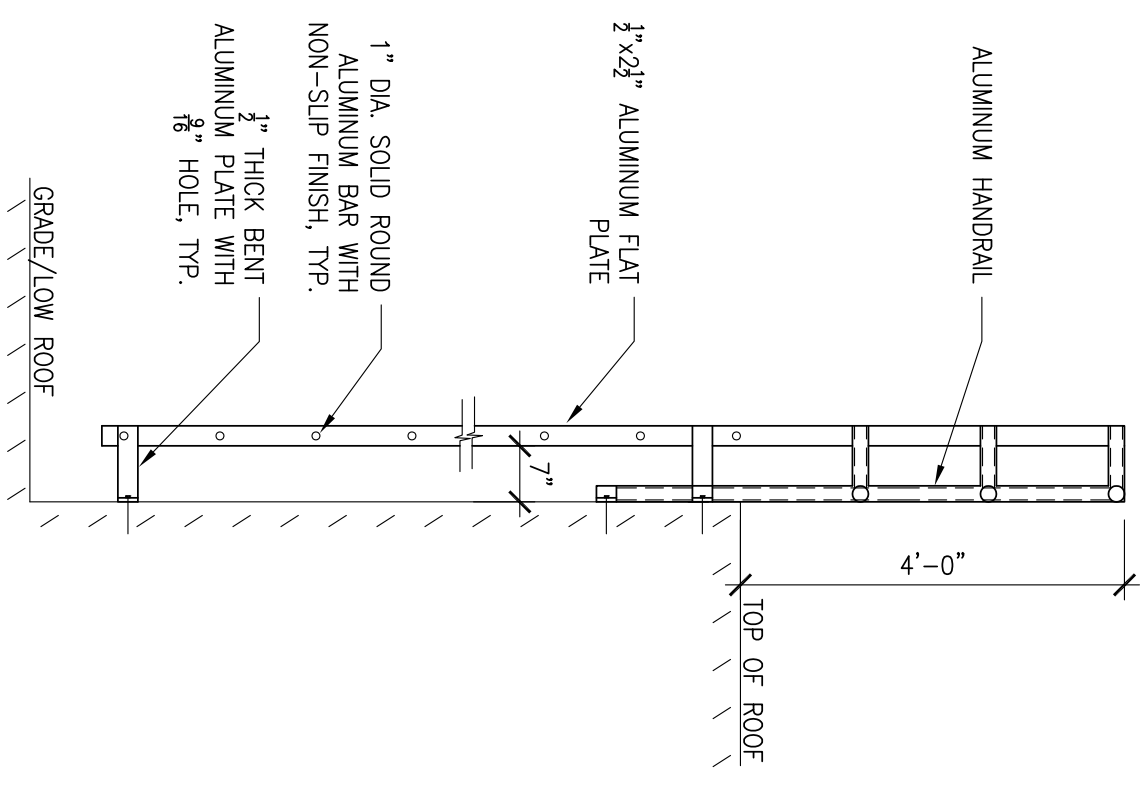
EQUAL EQUAL EQUAL

4'-0"

NOTES-SPECIFICATIONS:

1. ALUMINUM
- A. EXTRUDED BARS AND TUBING: ASTM B221, ALLOY 6063-T5.
- B. PLATE AND SHEET: ASTM B209, ALLOY 6061-T6.
- C. FINISH: MECHANICAL FINISH, AA-M12.

** THIS DESIGN IS TO BE USED WHERE THERE IS NO PARAPET WALL OR A PARAPET WALL OF HEIGHT 12" OR LESS **
** IF THE HEIGHT FROM THE LOW ROOF TO THE TOP OF THE HIGH ROOF/PARAPET WALL IS 20'-0" OR GREATER, A SAFETY CAGE MUST BE INSTALLED AS SHOWN ON SHEET S3 **



ALUMINUM HANDRAIL

4'-0"

TOP OF ROOF

1/2" x 2 1/2" ALUMINUM FLAT PLATE

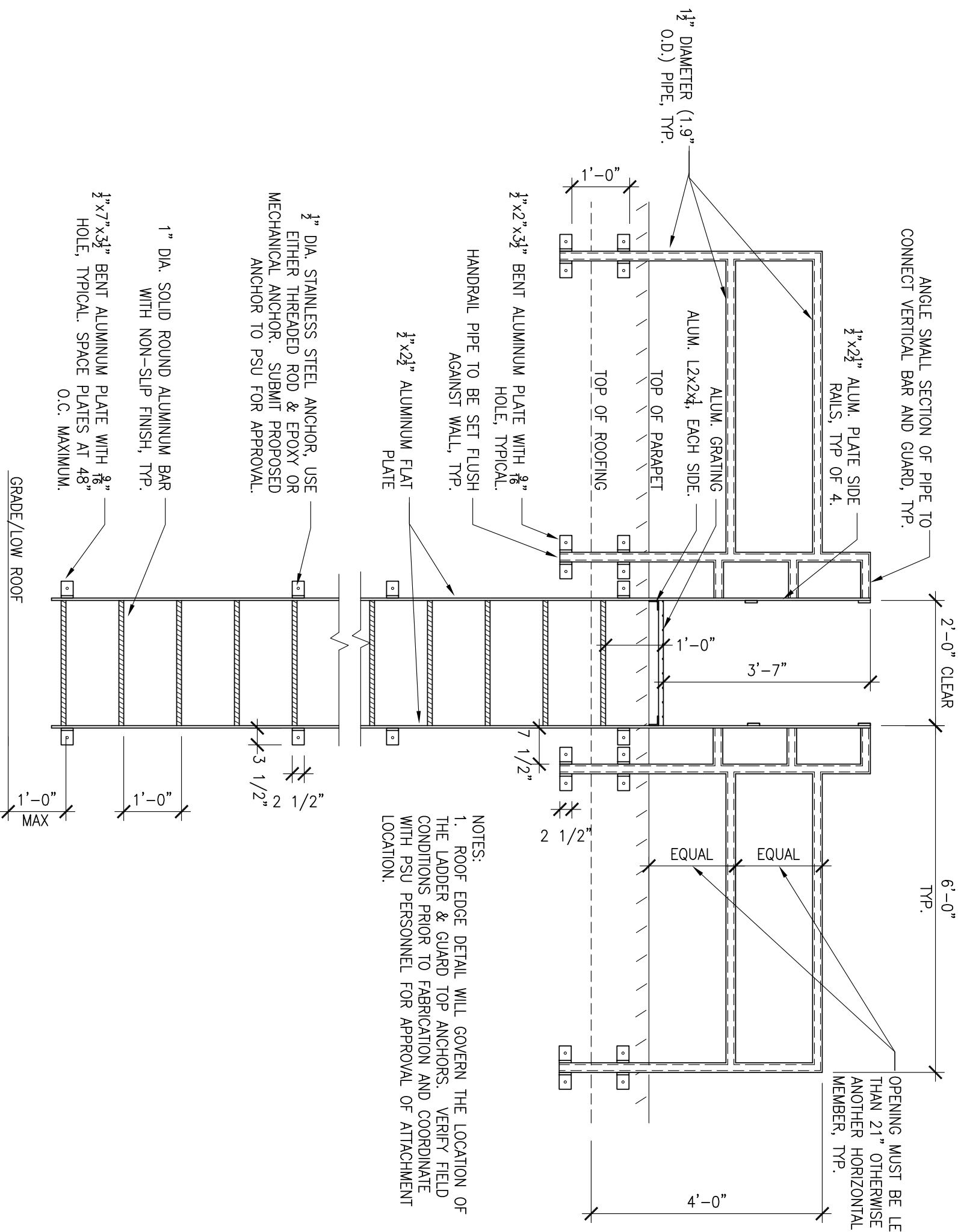
1" DIA. SOLID ROUND ALUMINUM BAR WITH NON-SLIP FINISH, TYP.

1/2" THICK BENT ALUMINUM PLATE WITH 3/8" HOLE, TYP.

GRADE/LOW ROOF

REFERENCE	BUILDING	DESIGNED BY	SHEET	DESIGN SERVICES PENN STATE UNIVERSITY <small>DO NOT SCALE DRAWINGS. CHECK AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS ON SITE.</small>	SYM	DATE	DESCRIPTION
CASE	DRAWER	SECT.	NO.		TYPICAL FIXED LADDER DESIGN #1 - NO PARAPET		
				SCALE: AS NOTED	DATE: 9-7-16		

S1



ANGLE SMALL SECTION OF PIPE TO CONNECT VERTICAL BAR AND GUARD, TYP.

1/2" x 2 1/2" ALUM. PLATE SIDE RAILS, TYP OF 4.

ALUM. GRATING ALUM. L2x2x1/4, EACH SIDE.

TOP OF ROOFING TOP OF PARAPET

HANDRAIL PIPE TO BE SET FLUSH AGAINST WALL, TYP.

1/2" x 2" x 3 1/2" BENT ALUMINUM PLATE WITH 1/8" HOLE, TYPICAL.

1/2" x 2 1/2" ALUMINUM FLAT PLATE

1/2" DIA. STAINLESS STEEL ANCHOR, USE EITHER THREADED ROD & EPOXY OR MECHANICAL ANCHOR. SUBMIT PROPOSED ANCHOR TO PSU FOR APPROVAL.

1" DIA. SOLID ROUND ALUMINUM BAR WITH NON-SLIP FINISH, TYP.

1/2" x 7" x 3 1/2" BENT ALUMINUM PLATE WITH 1/8" HOLE, TYPICAL. SPACE PLATES AT 48" O.C. MAXIMUM.

2'-0" CLEAR TYP. 6'-0"

OPENING MUST BE LESS THAN 21" OTHERWISE ADD ANOTHER HORIZONTAL MEMBER, TYP.

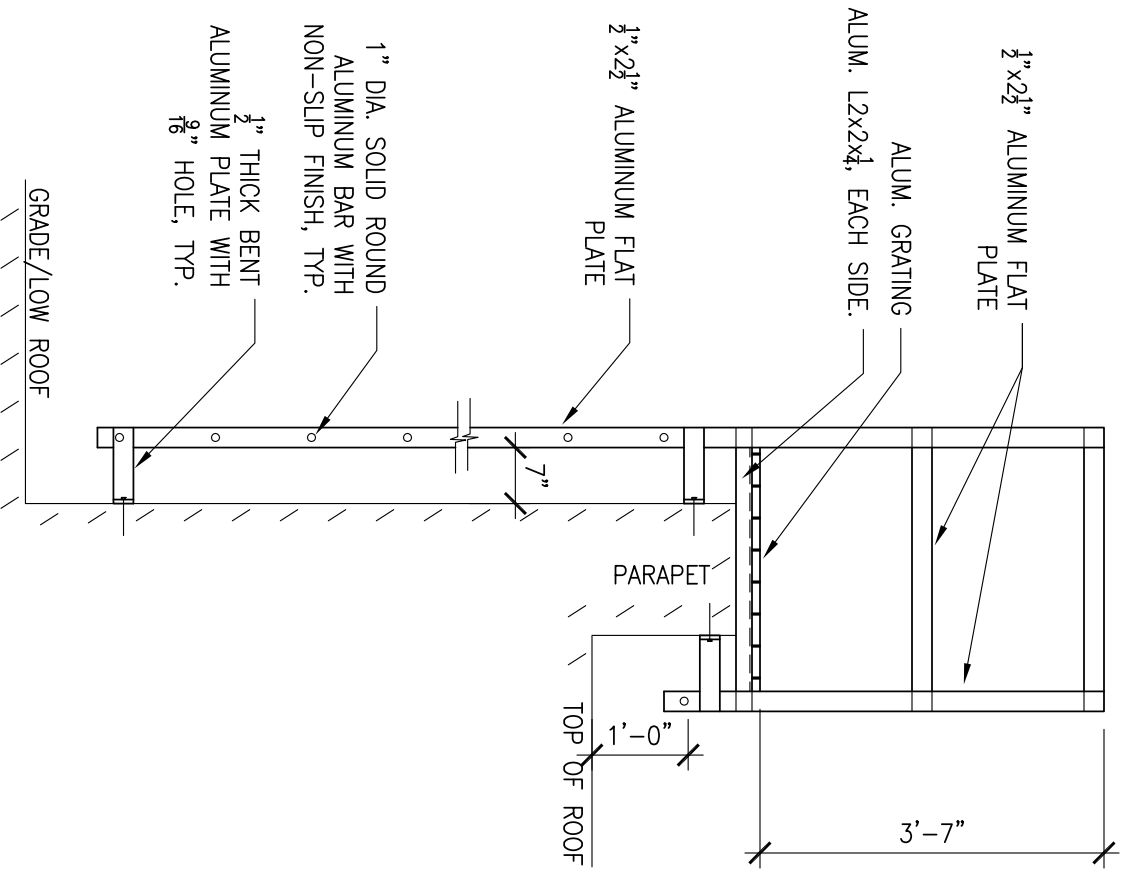
EQUAL EQUAL

4'-0"

NOTES:
1. ROOF EDGE DETAIL WILL GOVERN THE LOCATION OF THE LADDER & GUARD TOP ANCHORS. VERIFY FIELD CONDITIONS PRIOR TO FABRICATION AND COORDINATE WITH PSU PERSONNEL FOR APPROVAL OF ATTACHMENT LOCATION.

NOTES-SPECIFICATIONS:

1. ALUMINUM
 - A. EXTRUDED BARS AND TUBING: ASTM B221, ALLOY 6063-T5.
 - B. PLATE AND SHEET: ASTM B209, ALLOY 6061-T6.
 - C. FINISH: MECHANICAL FINISH, AA-M12.
 - D. GRATING: 1" x 3/8" ALUMINUM RECTANGULAR BAR GRATING 19-SG-2 WITH SERRATED SURFACE.

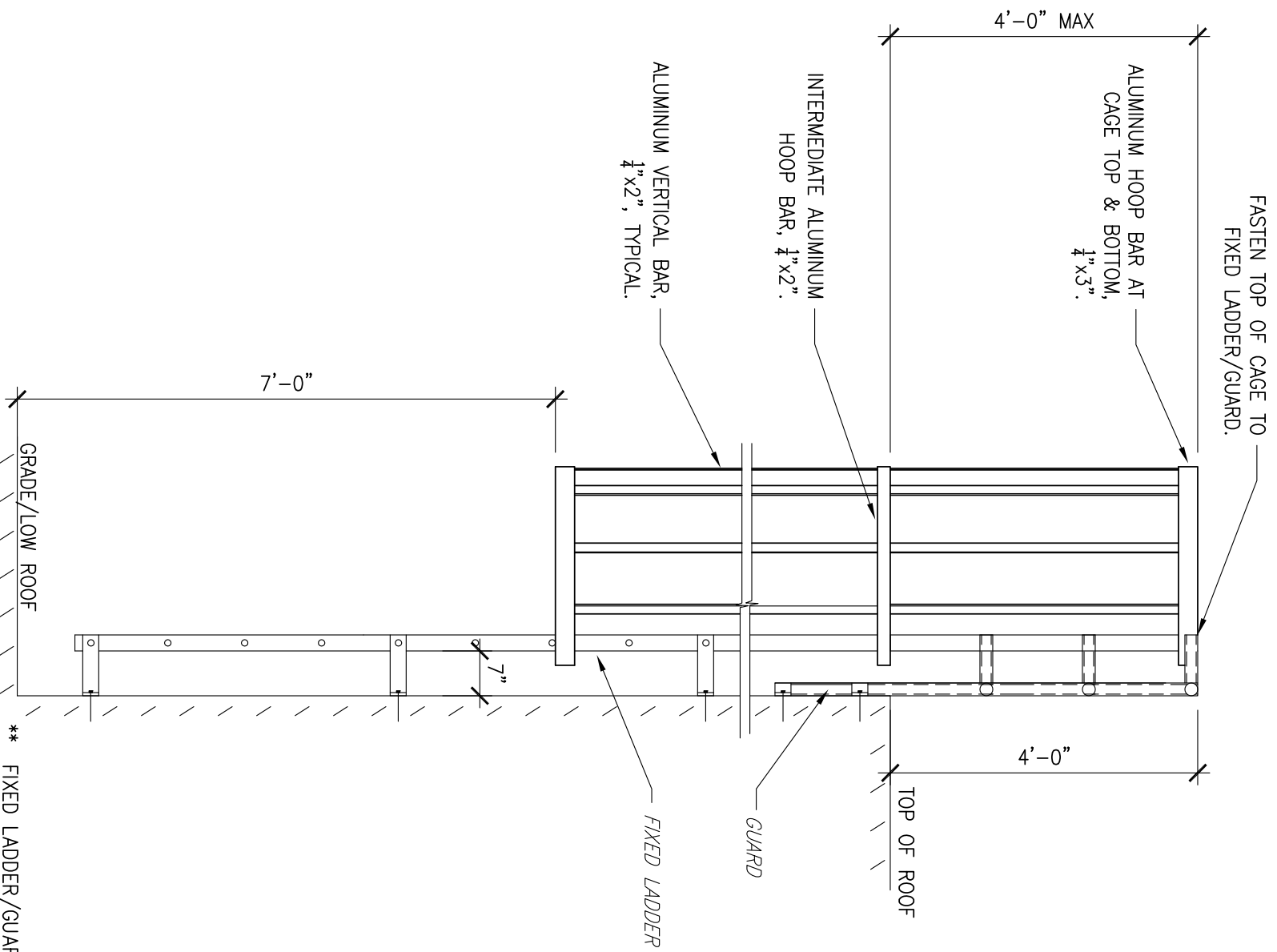


PARAPET

TOP OF ROOF

** THIS DESIGN IS TO BE USED WHERE THERE IS PARAPET WALL OF HEIGHT GREATER THAN 12" **
 ** IF THE HEIGHT FROM THE LOW ROOF TO THE TOP OF THE HIGH ROOF/PARAPET WALL IS 20'-0" OR GREATER, A SAFETY CAGE MUST BE INSTALLED AS SHOWN ON SHEET S3 **

REFERENCE	BUILDING	DESIGNED BY	SHEET	DESIGN SERVICES PENN STATE UNIVERSITY <small>DO NOT SCALE DRAWINGS. CHECK AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS ON SITE.</small>	SYM	DATE	DESCRIPTION
CASE	DRAWER	SECT.	NO.		SCALE: AS NOTED	DATE: 9-7-16	TYPICAL FIXED LADDER DESIGN #2 - PARAPET
<h1 style="font-size: 48pt; margin: 0;">S2</h1>							

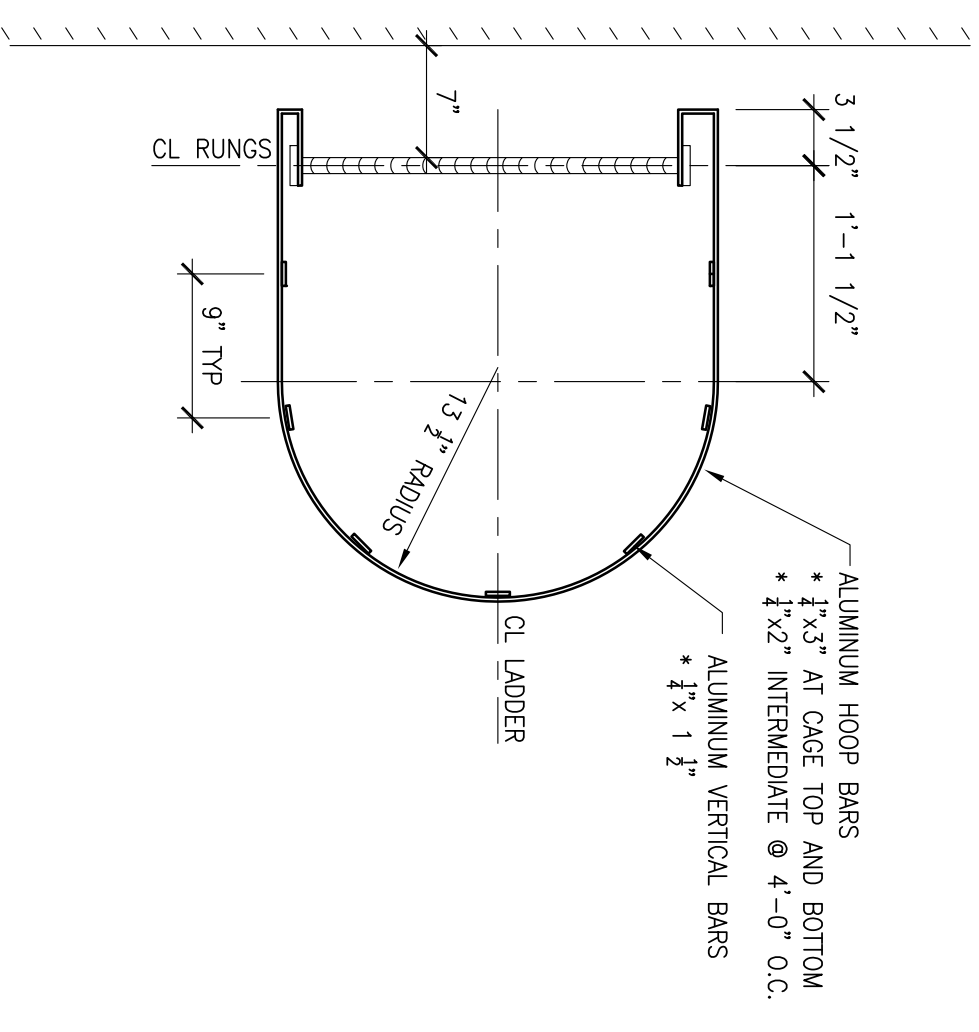


** IF THE HEIGHT FROM THE LOW ROOF TO THE TOP OF THE HIGH ROOF/PARAPET WALL IS 20'-0" OR GREATER, A SAFETY CAGE MUST BE INSTALLED **

** FIXED LADDER/GUARD SPECIFICATIONS NOT SHOWN ON THIS SHEET FOR CLARITY. REFER TO SHEETS S1 AND S2 FOR SPECIFIC LADDER/GUARD CRITERIA **

NOTES-SPECIFICATIONS:

1. ALUMINUM
 - A. EXTRUDED BARS AND TUBING: ASTM B221, ALLOY 6063-T5.
 - B. PLATE AND SHEET: ASTM B209, ALLOY 6061-T6.
 - C. FINISH: MECHANICAL FINISH, AA-M12.



REFERENCE	BUILDING	DESIGNED BY	SHEET
CASE	DRAWER	SECT.	NO.

DESIGN SERVICES
 PENN STATE UNIVERSITY
DO NOT SCALE DRAWINGS. CHECK AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS ON SITE.

SYM	DATE	DESCRIPTION
		TYPICAL LADDER CAGE

SCALE: AS NOTED	DATE: 9-7-16
-----------------	--------------

S3