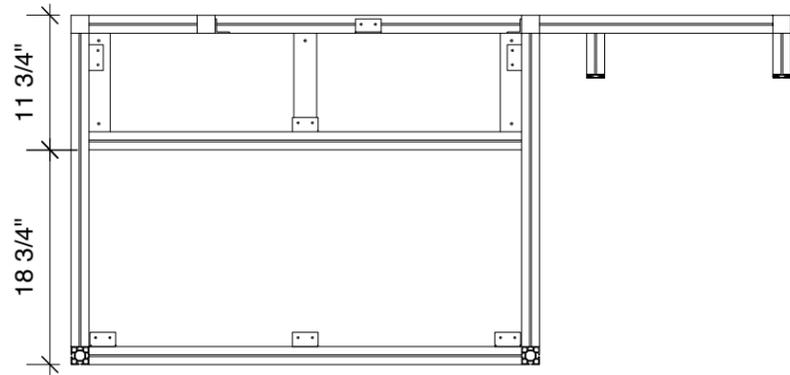


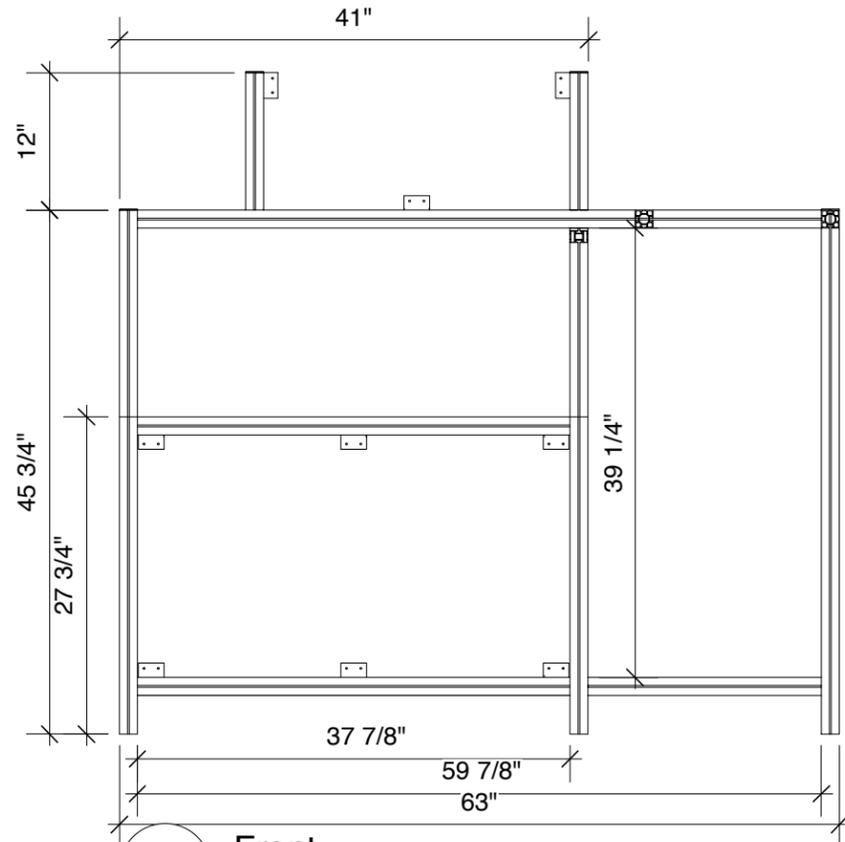
 <p>120 W KELLOGG, ST. PAUL, MN 55102 ©2008 THE SCIENCE MUSEUM OF MINNESOTA</p>	DRAWING TITLE: <b>Way to Glow Overview</b>		DRAWN BY: MDA	DATE DRAWN: 10/19/09
	COMPONENT TITLE: <b>Way to Glow</b>		REVISION DESCRIPTION:	SCALE: as noted
	REVISOR:	DATE REVISED:	SHEET #: 1 of 1	
	EXHIBIT TITLE: <b>NISE Network Exhibits</b>			



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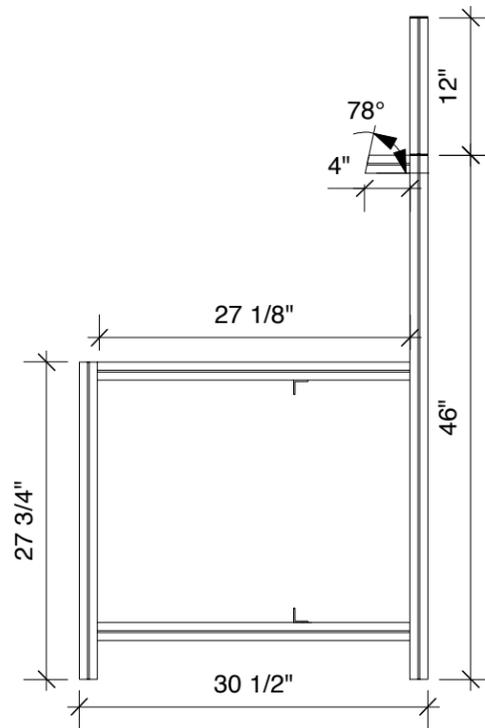
1 Top  
Scale: 3/4" = 1'-0"



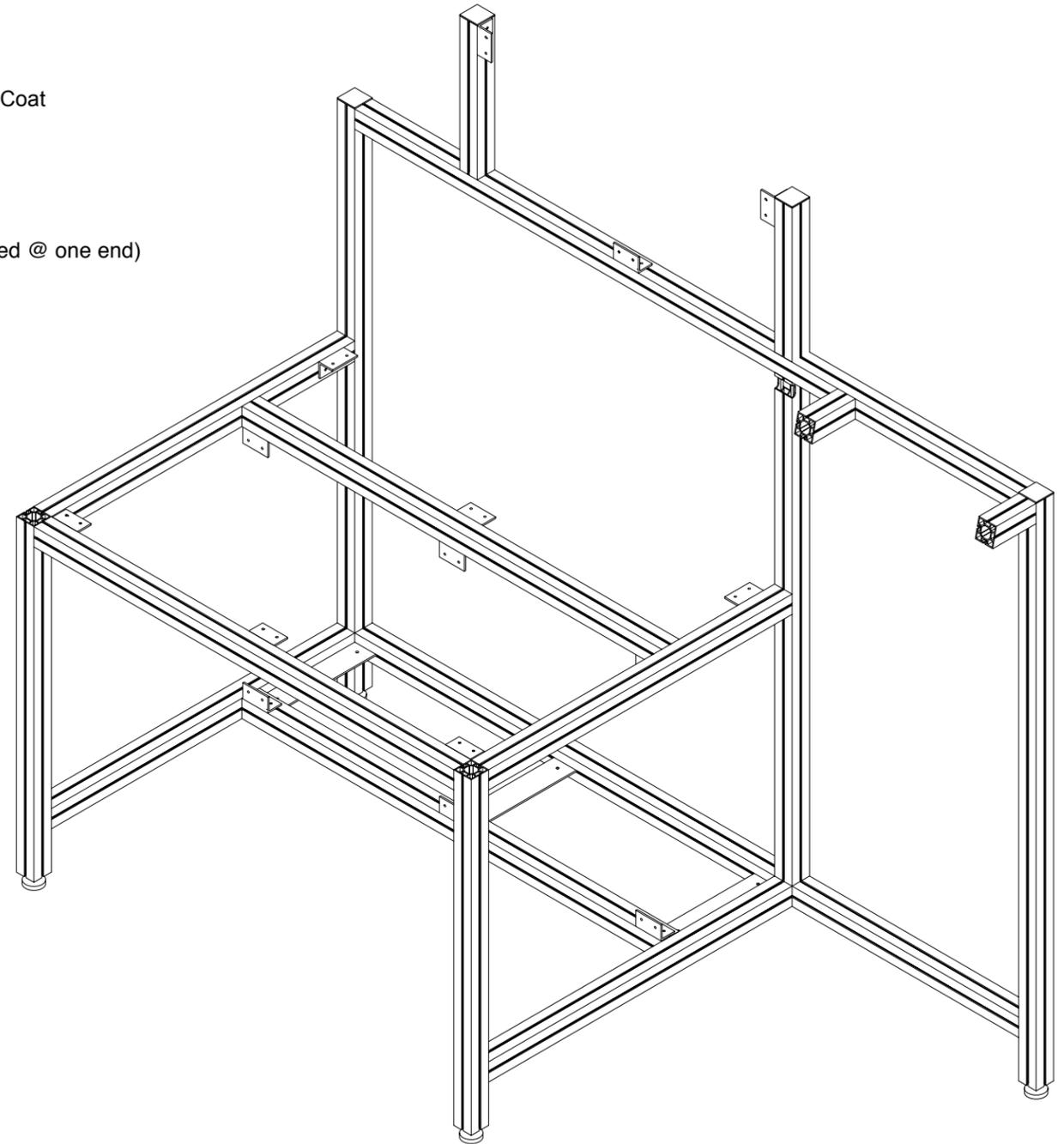
2 Front  
Scale: 3/4" = 1'-0"

All members are Octanorm M1000.  
Tiger Drylac RAL 09/10126 Glossy White Powder Coat

- 2@1520 both ends drilled w/ locks
- 2@1162
- 1@996 both ends drilled w/ locks
- 3@961 both ends drilled w/ locks
- 2@703
- 4@690 both ends drilled w/ locks(1 has locks turned @ one end)
- 2@305 1 end drilled w/ lock
- 2@100 1 end drilled w/ locks\



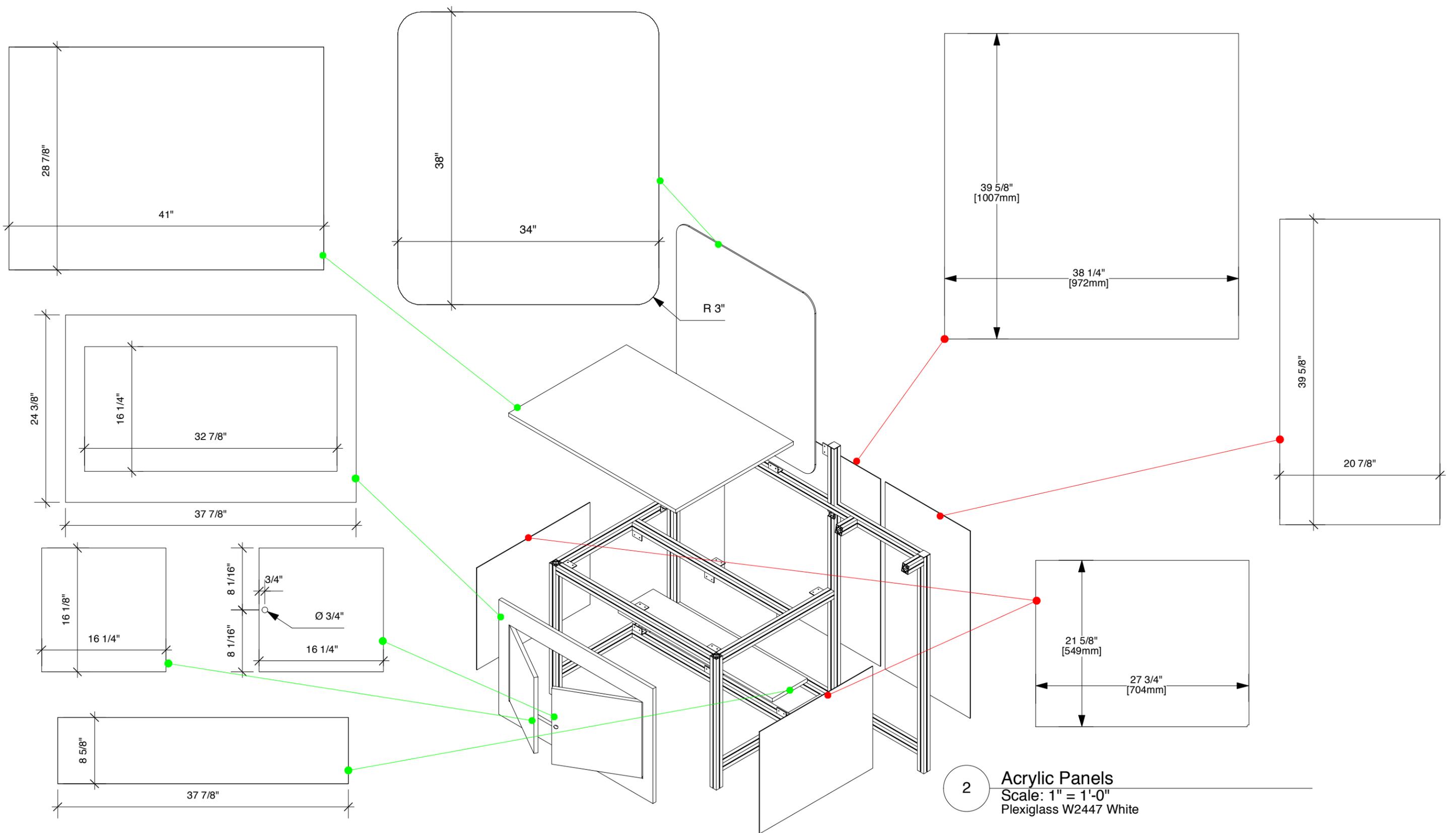
3 Right Side  
Scale: 3/4" = 1'-0"



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DRAWING TITLE: <b>Octanorm Frame</b>			
COMPONENT TITLE: <b>Table Frame</b>		DRAWN BY: MDA	DATE DRAWN: 7/01/2009
REVISED BY:	DATE REVISED:	REVISION DESCRIPTION:	SCALE: as noted
EXHIBIT TITLE: <b>NISE Network Exhibits</b>			SHEET #: 1 of 3





1 Plywood Parts  
 Scale: 1" = 1'-0"  
 3/4" Plywood  
 Formica Gloss White Laminate on all public surfaces.

2 Acrylic Panels  
 Scale: 1" = 1'-0"  
 Plexiglass W2447 White

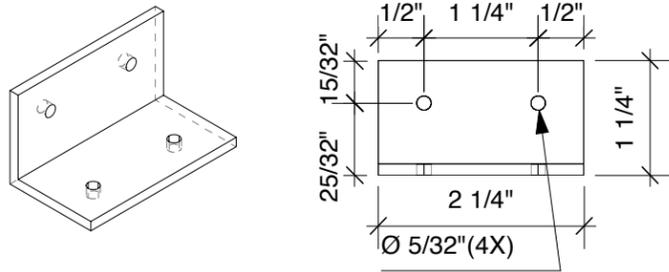


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DRAWING TITLE: <b>Casework Details</b>			
COMPONENT TITLE: <b>Table Frame</b>		DRAWN BY: MDA	DATE DRAWN: 9/29/09
REVISED BY:	DATE REVISED:	REVISION DESCRIPTION:	
EXHIBIT TITLE: <b>NISE Network Exhibits</b>			SCALE: as noted
			SHEET #: 2 of 3

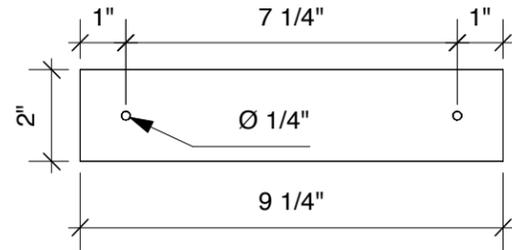


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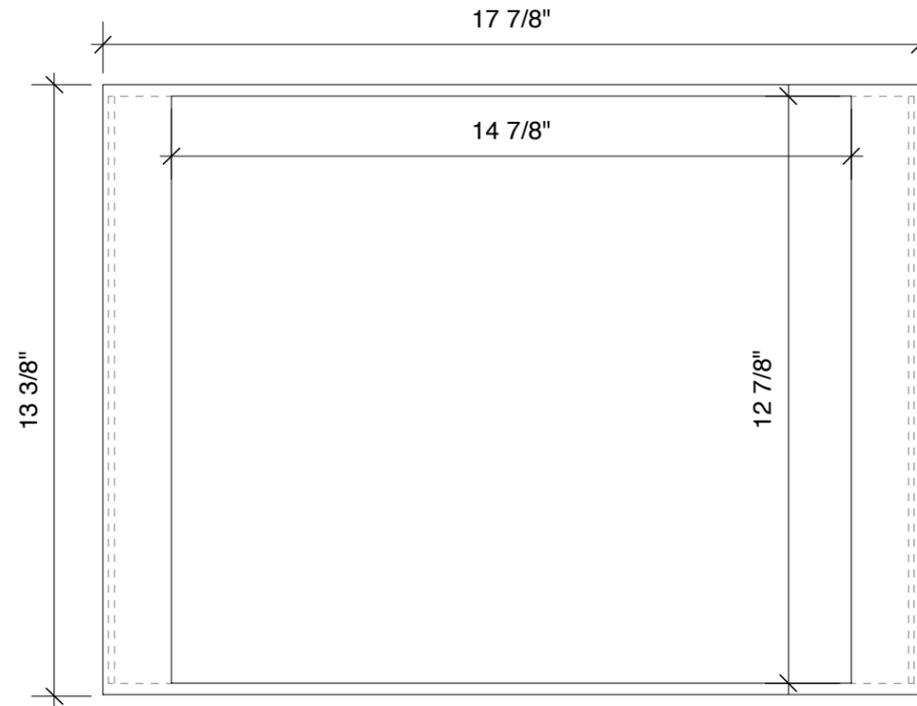
MATERIAL: .125 ALUMINUM ANGLE

**1 Panel Cleats**  
Scale: Half Actual Size  
Make 14

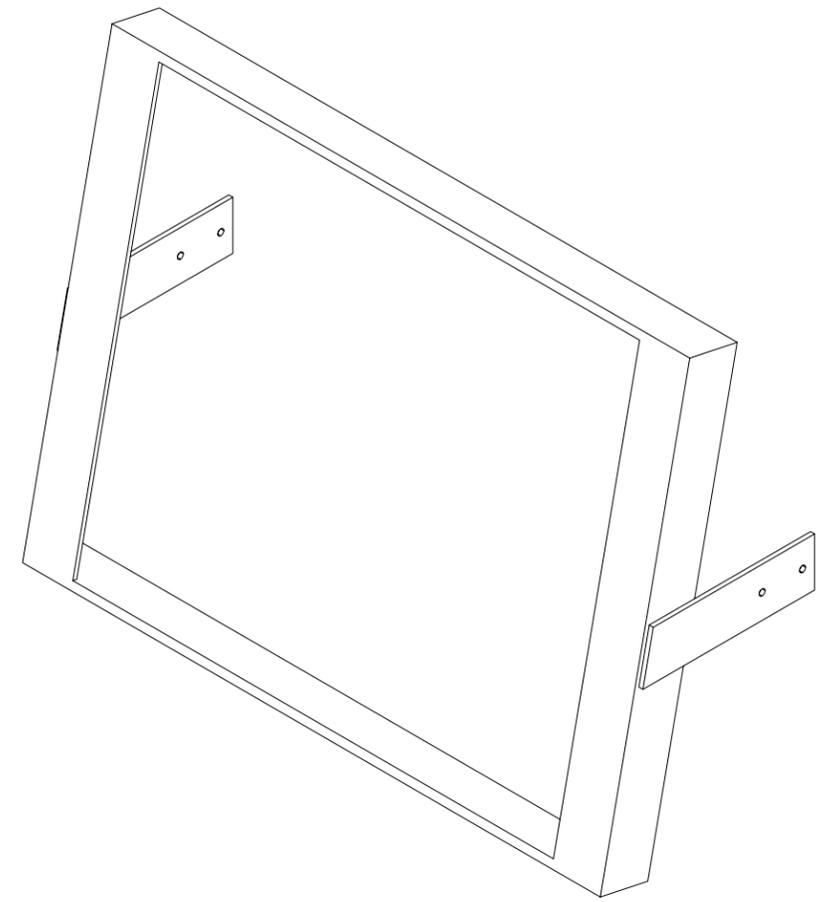


MATERIAL: .125 ALUMINUM

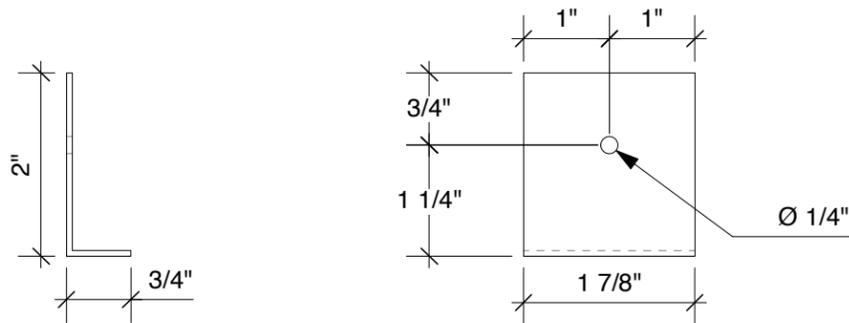
**2 Shelf Cleat**  
Scale: 3" = 1'-0"  
Make 3



**6 Monitor Frame - Front**  
Scale: 3" = 1'-0"  
Verify dimensions against Monitors

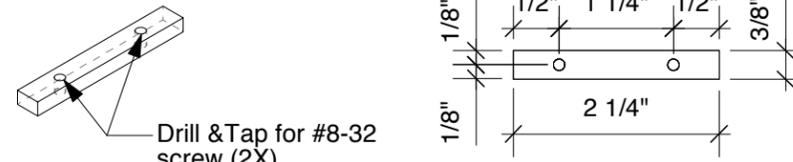


**7 Monitor Frame - Isometric**  
Scale: 3" = 1'-0"  
MATERIAL: STEEL



MATERIAL: 1/16" ALUMINUM

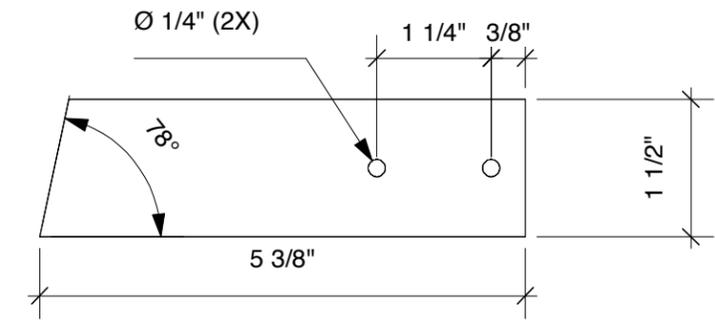
**3 Cable Chase - Horizontal**  
Scale: Half Actual Size



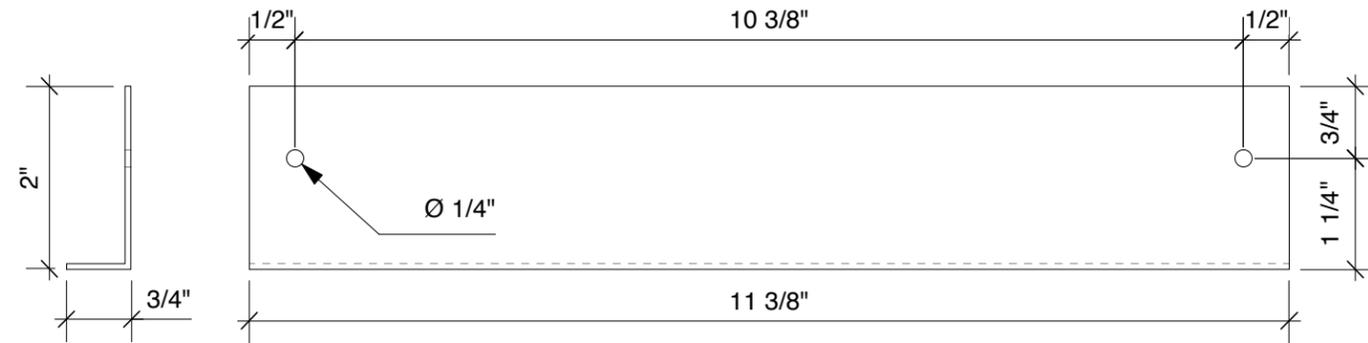
Drill & Tap for #8-32 screw (2X)

MATERIAL: 3/16" ALUMINUM OR MILD STEEL

**5 Bolt Plate**  
Scale: Half Actual Size  
Make 16



**8 Monitor Flange**  
Scale: Half Actual Size  
Make 2



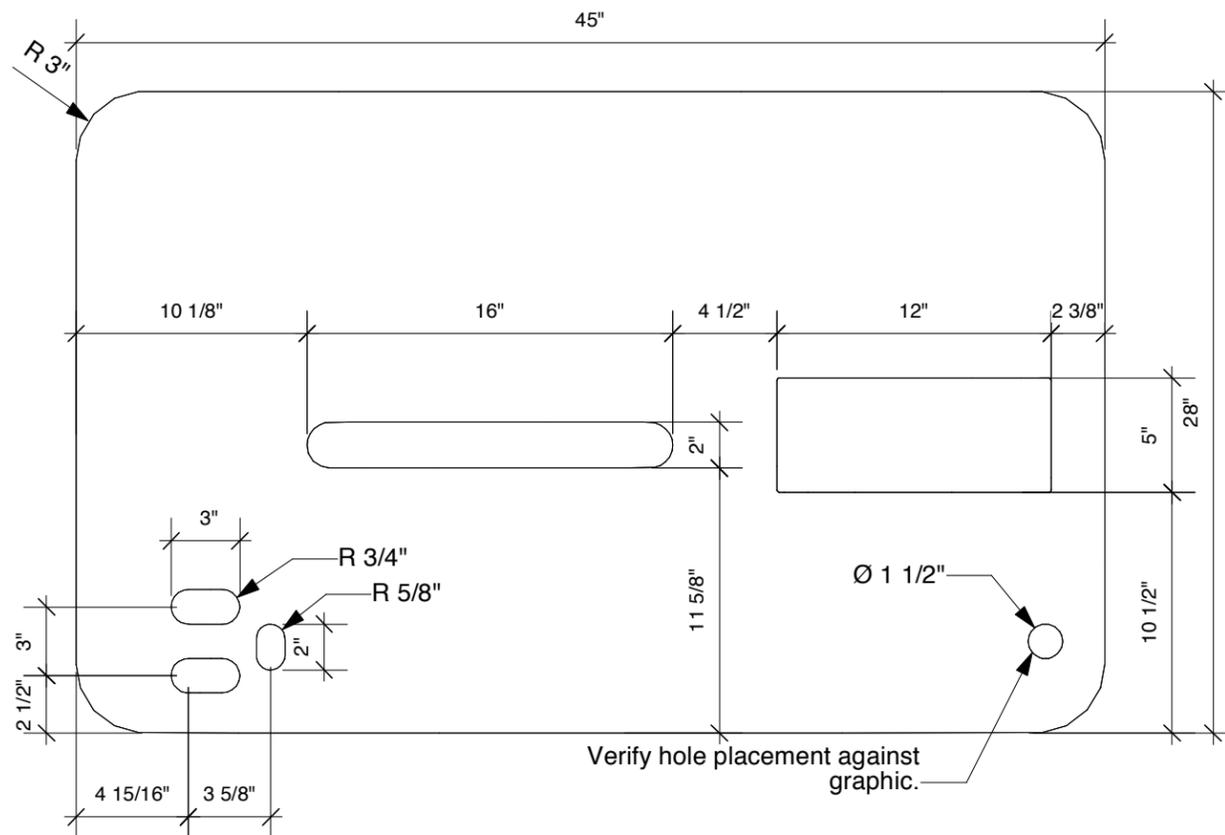
MATERIAL: 1/16" ALUMINUM

**4 Cable Chase - Vertical**  
Scale: Half Actual Size

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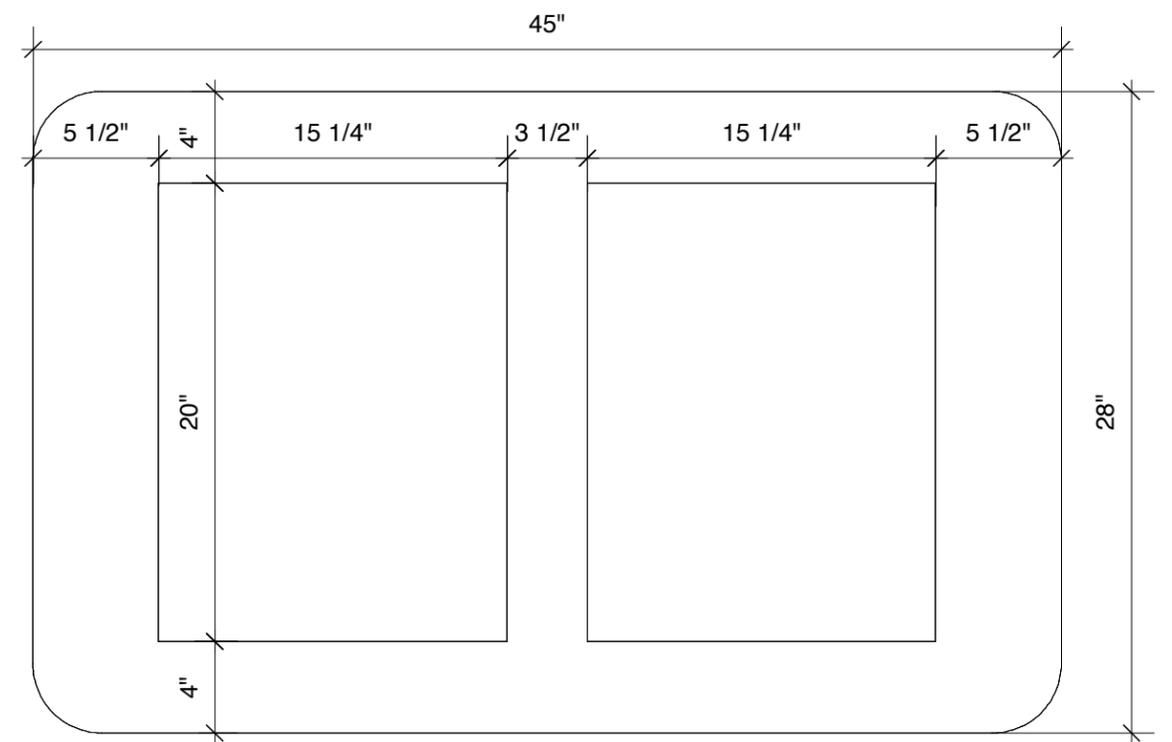
DRAWING TITLE: <b>Details</b>			
COMPONENT TITLE: <b>Table Frame</b>		DRAWN BY: MDA	DATE DRAWN: 9/29/09
REVISED BY:	DATE REVISED:	REVISION DESCRIPTION:	SCALE: as noted
EXHIBIT TITLE: <b>NISE Network Exhibits</b>			SHEET #: 3 of 3

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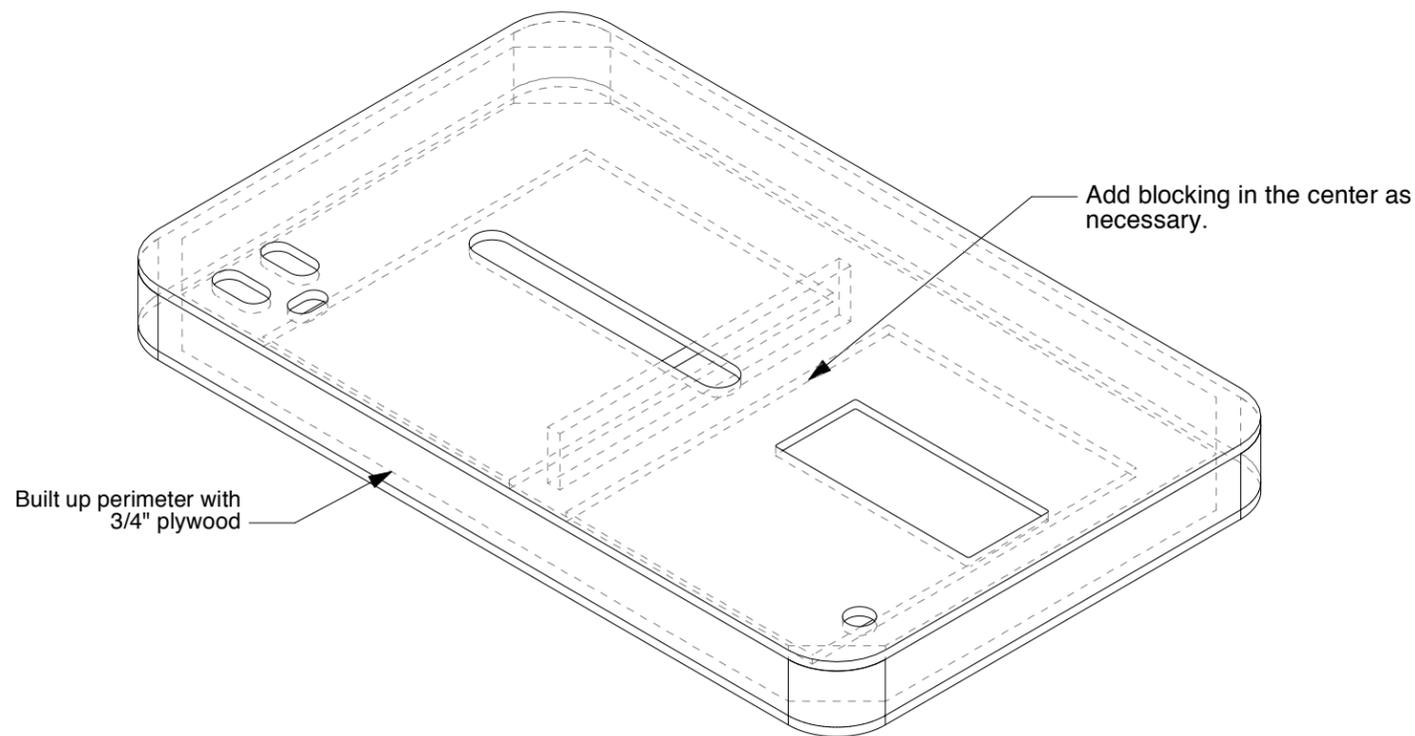
1 Table Top - Top Panel  
Scale: 1 1/2" = 1'-0"

MATERIAL: 1/2" PLYWOOD



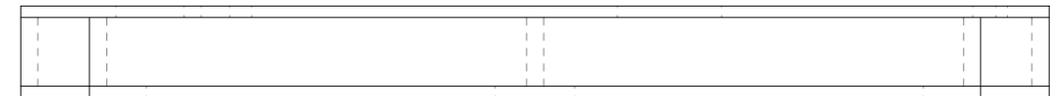
2 Table Top - Bottom Panel  
Scale: 1 1/2" = 1'-0"

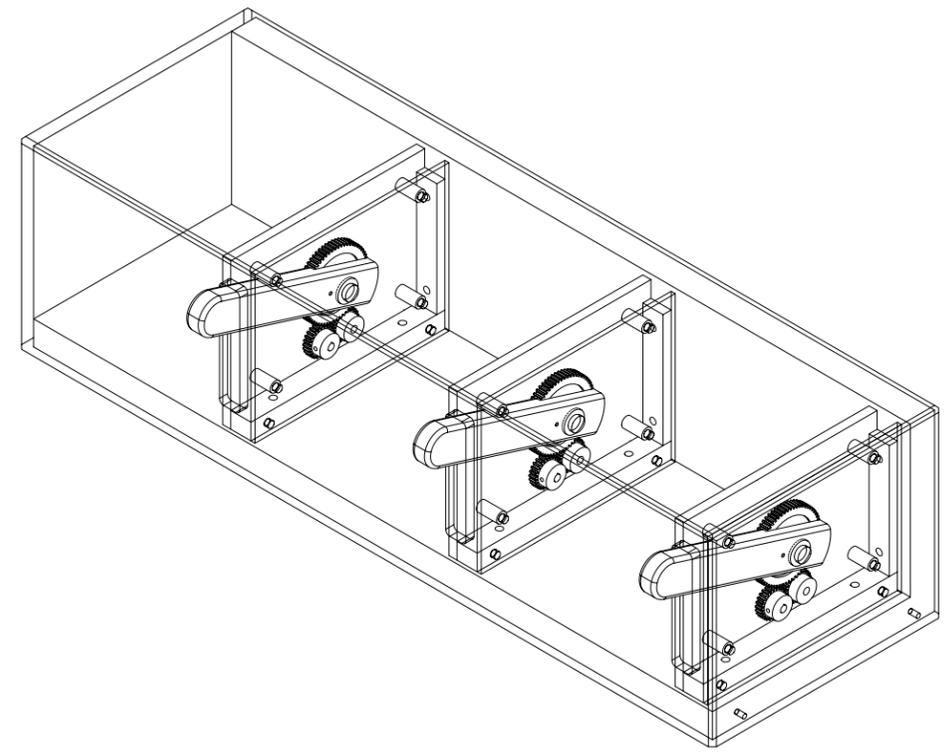
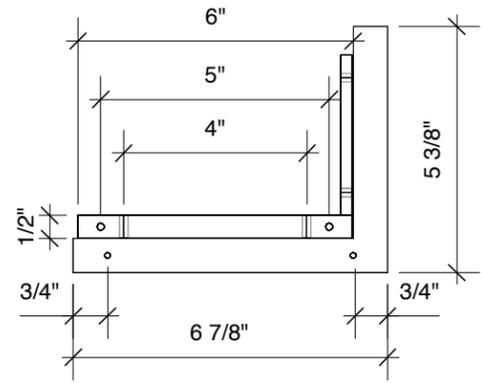
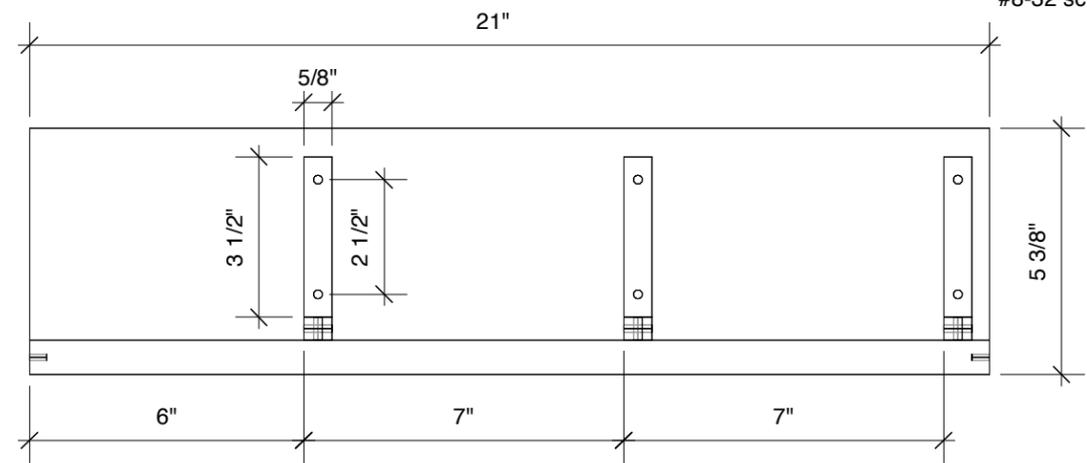
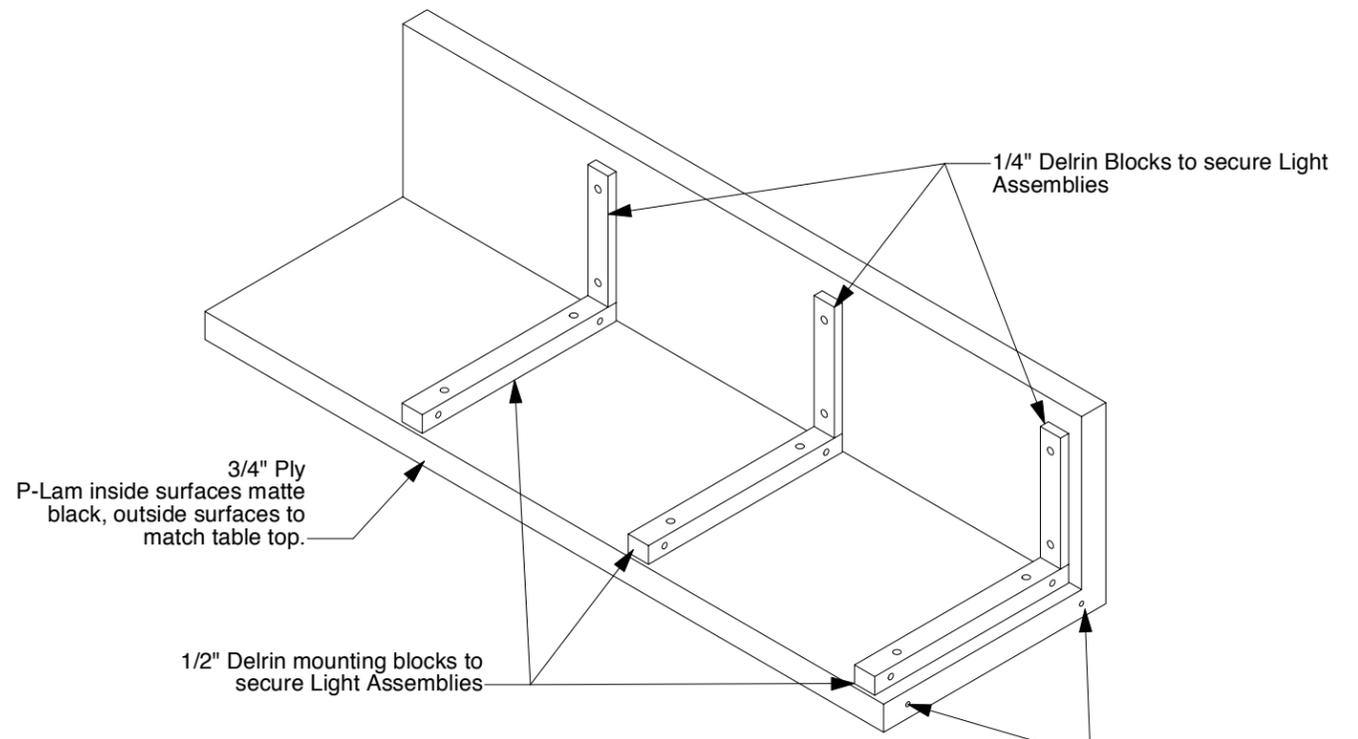
MATERIAL: 1/2" PLYWOOD



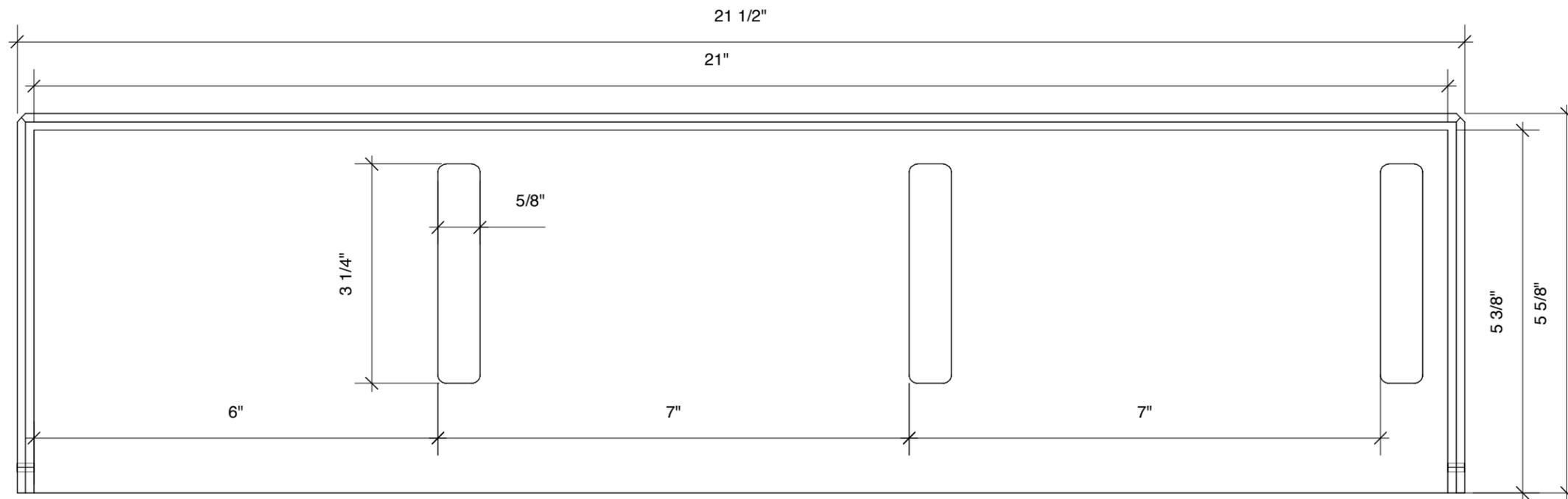
Built up perimeter with 3/4" plywood

Add blocking in the center as necessary.

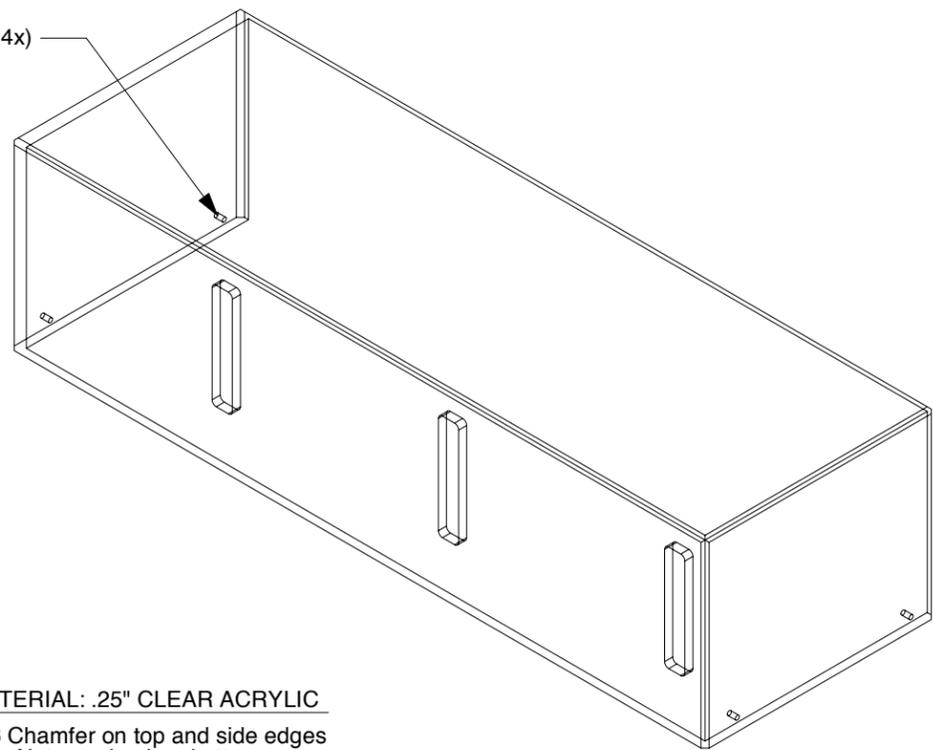




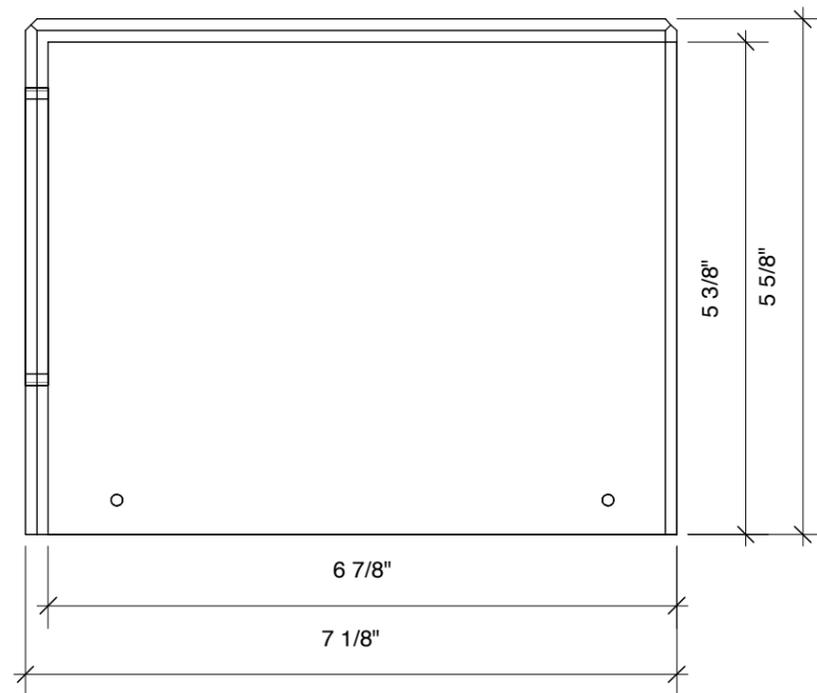
 <p>120 W KELLOGG, ST. PAUL, MN 55102 ©2008 THE SCIENCE MUSEUM OF MINNESOTA</p>	DRAWING TITLE: <b>Butterfly Light Unit</b>			DRAWN BY: MDA	DATE DRAWN: 10/28/2009
	COMPONENT TITLE: <b>Way to Glow</b>		REVISION DESCRIPTION:		
	REVISED BY:	DATE REVISED:	REVISION DESCRIPTION:	SHEET #:	
	EXHIBIT TITLE: <b>NISE Network Exhibits</b>				
	 <p><b>NISE network™</b> NANOSCALE INFORMAL SCIENCE EDUCATION</p>				



Drill through for #8-32 screws (4x)



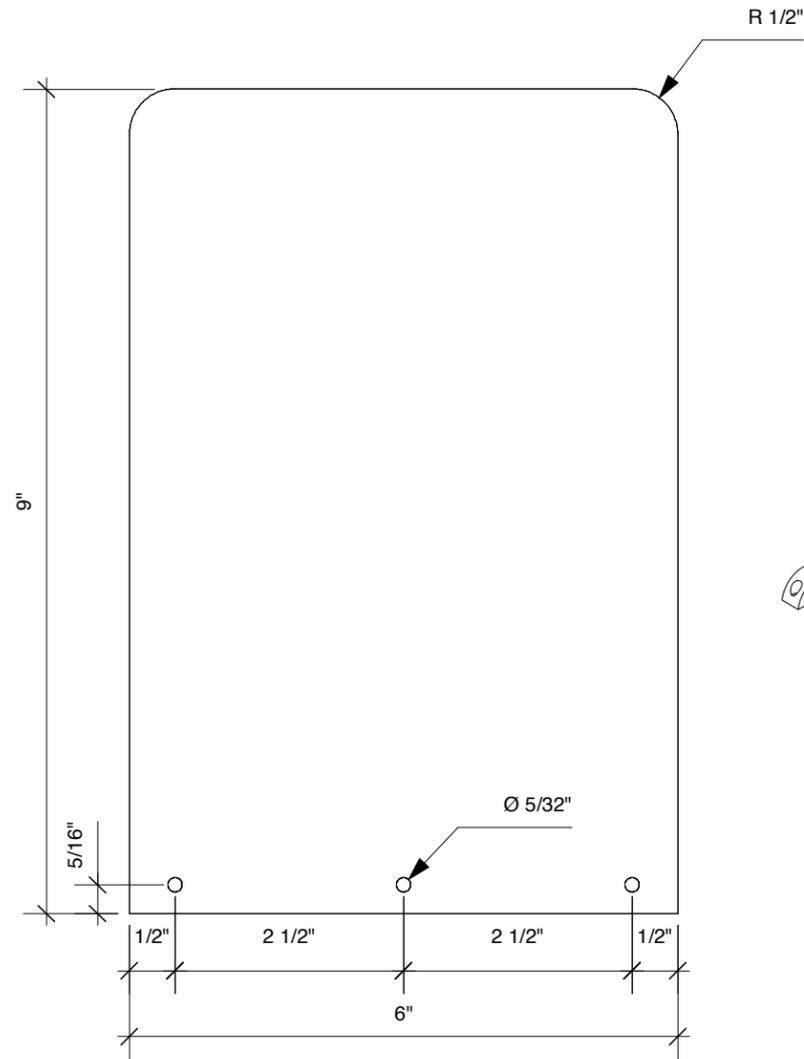
MATERIAL: .25" CLEAR ACRYLIC  
 3/16 Chamfer on top and side edges  
 Note: no back or bottom.



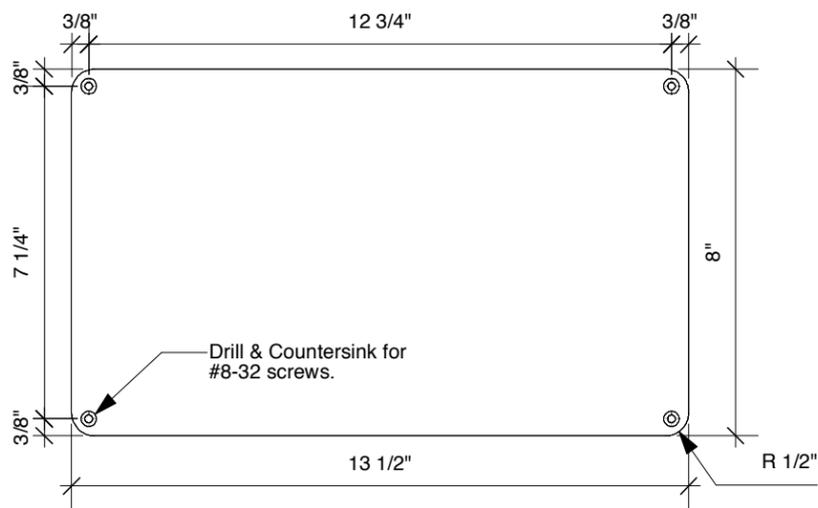
 <p>120 W KELLOGG, ST. PAUL, MN 55102        ©2008 THE SCIENCE MUSEUM OF MINNESOTA</p>	DRAWING TITLE: <b>Vitrine</b>		DRAWN BY: MDA	DATE DRAWN: 10/28/2009
	COMPONENT TITLE: <b>Way to Glow</b>		REVISION DESCRIPTION:	SCALE: as noted
	REVISED BY:	DATE REVISED:		SHEET #:
	EXHIBIT TITLE: <b>NISE Network Exhibits</b>			



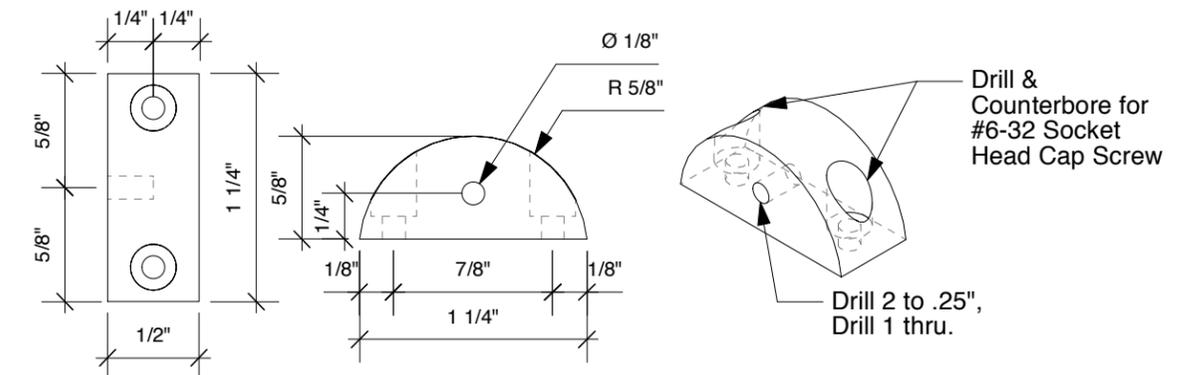
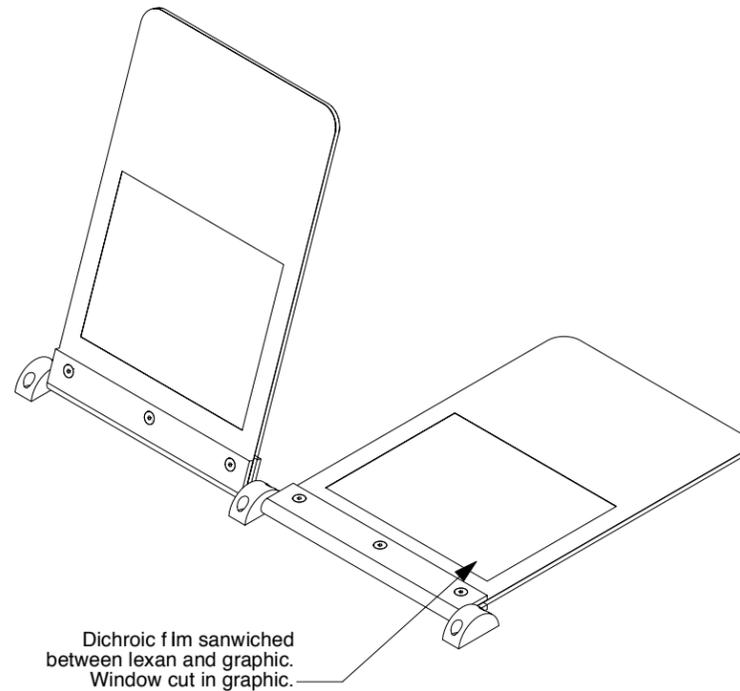
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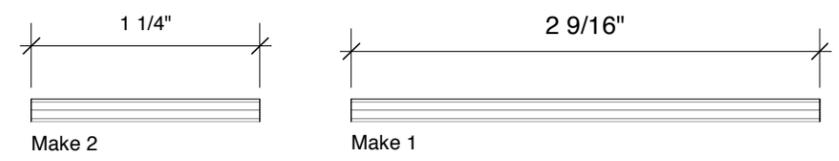
**1 Flipbook Substrate**  
 Scale: Half Actual Size  
 Make 2  
 MATERIAL: AR POLYCARBONATE



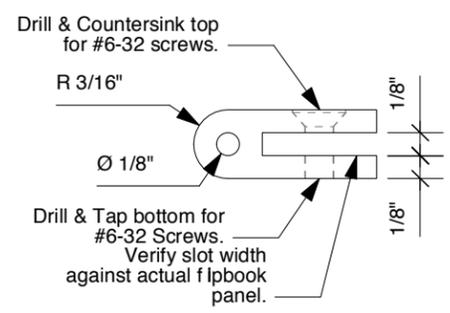
**3 Light Box Panel**  
 Scale: 3" = 1'-0"  
 MATERIAL: ACRYLITE DARK GREY RP



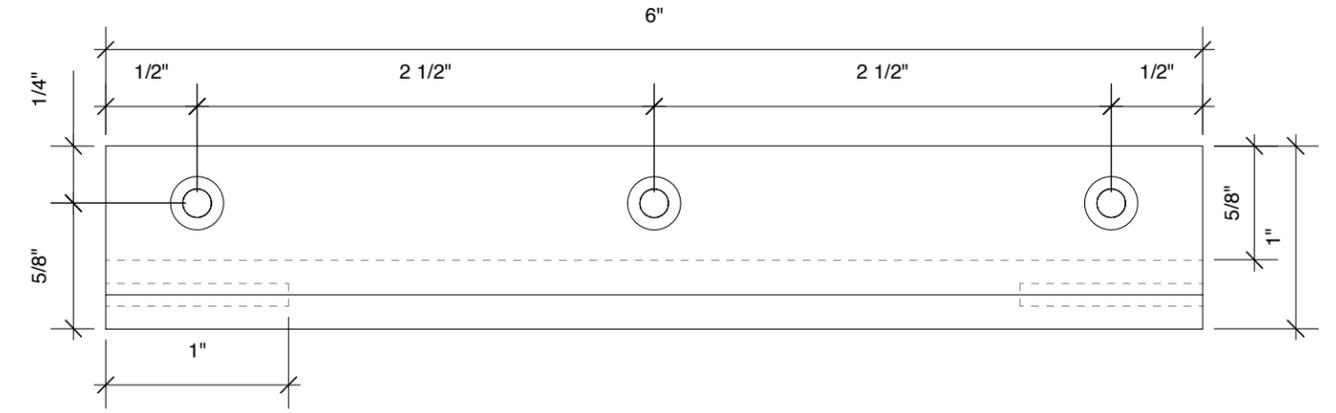
**2 Flipbook Blocks**  
 Scale: Actual Size  
 Make 3  
 MATERIAL: BLACK ACETAL



**3 Flipbook Rods**  
 Scale: Actual Size  
 MATERIAL: .125" STAINLESS ROD



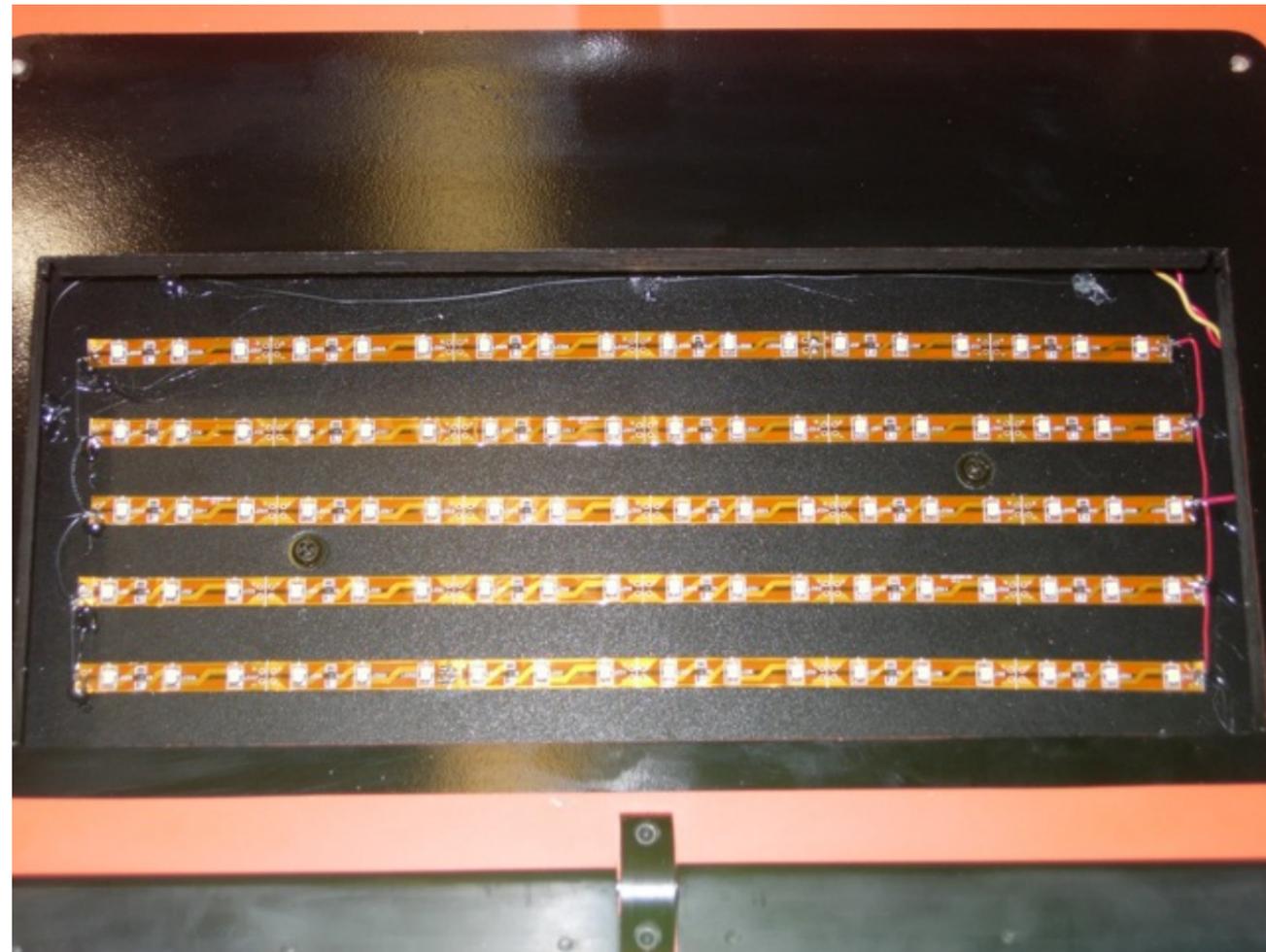
**4 Flipbook Hinge**  
 Scale: Actual Size  
 Make 2  
 MATERIAL: BLACK ACETAL



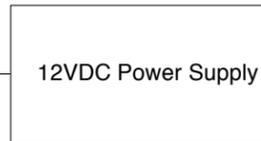
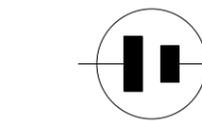
 <p>120 W KELLOGG, ST. PAUL, MN 55102          ©2008 THE SCIENCE MUSEUM OF MINNESOTA</p>	<b>Flipbook Details</b> COMPONENT TITLE:		DRAWN BY: MDA	DATE DRAWN: 7/24/2009
	<b>Way to Glow</b> REVISED BY:		SCALE: as noted	SHEET #: 1 of 2
	DATE REVISED:		REVISION DESCRIPTION:	
	EXHIBIT TITLE: NISE Network Exhibits		SHEET #: 1 of 2	



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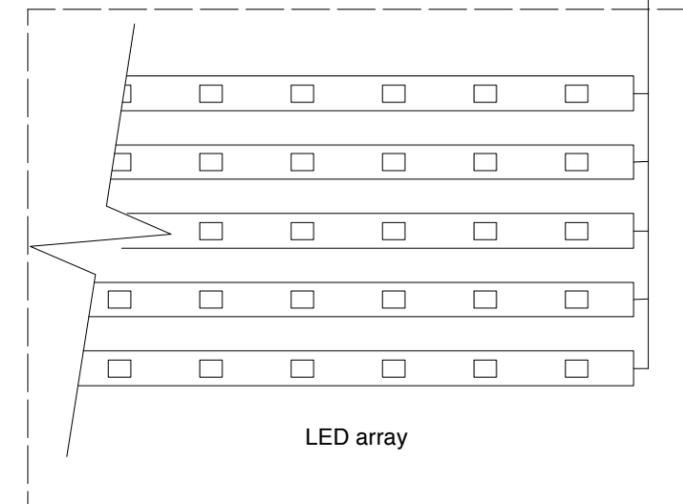
Black vinyl applied to table top



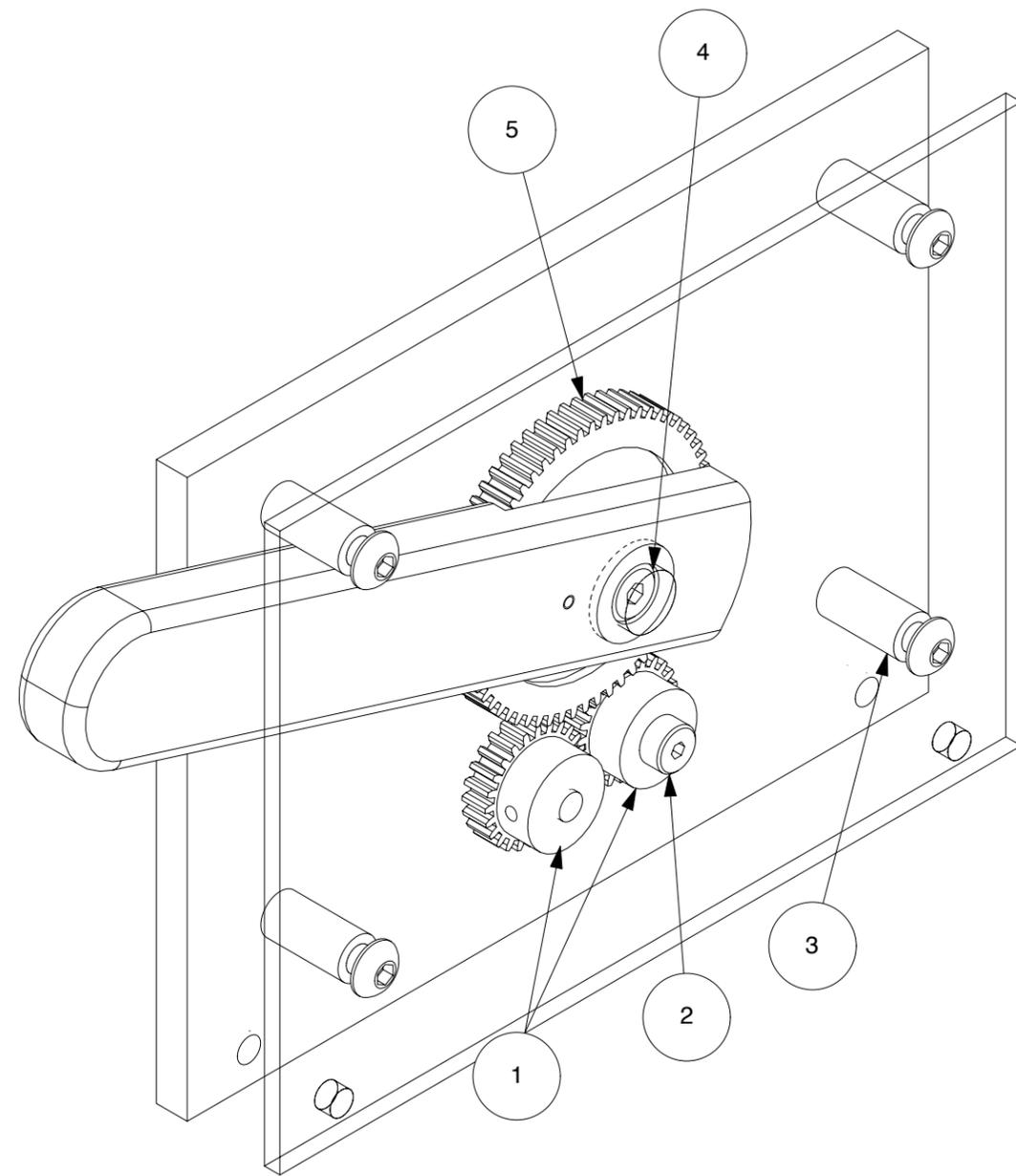
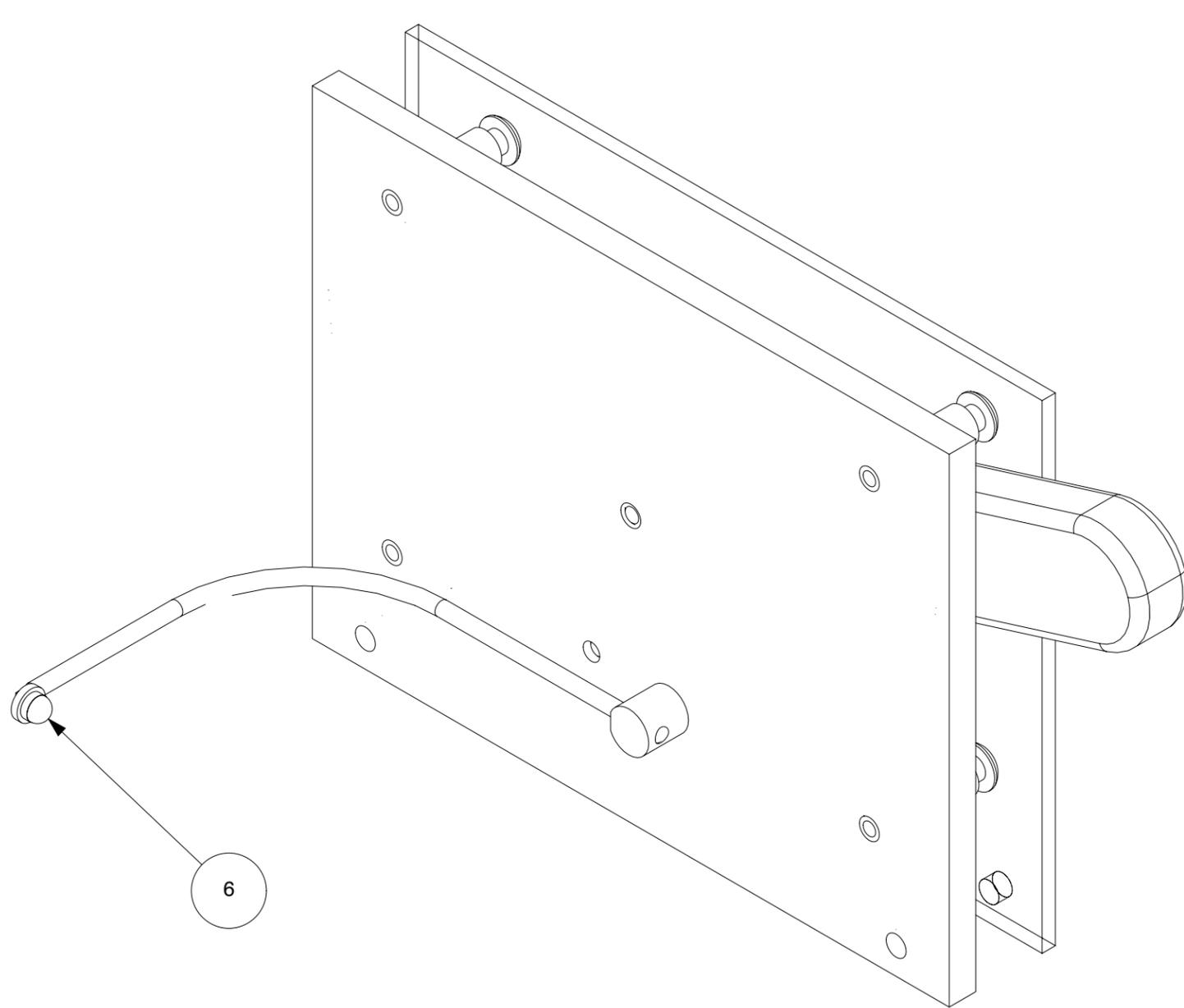
12VDC Power Supply



LED light strip  
(Digi-key #365-1504-2-ND)



LED array



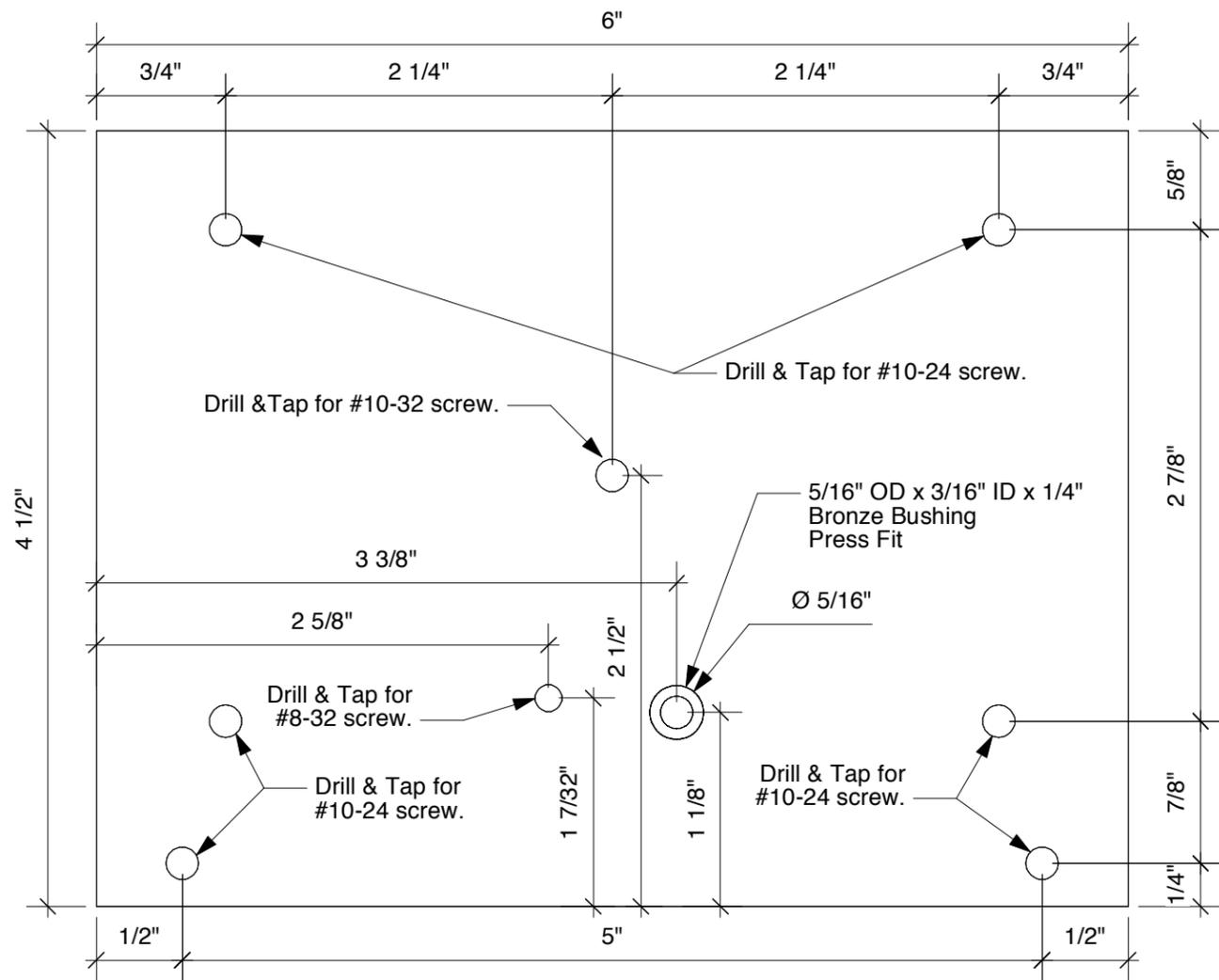
Stock Parts				
Item #	Description	Part #	Supplier	Qty
1	24 T 14.5° Nylon Spur Gear	57655K38	McMaster-Carr	2
2	3/16" x 7/16" Shoulder Bolt	93996A721	McMaster-Carr	1
3	3/5" OD x 3/16" ID x 5/8" Nylon Spacer	94639A456	McMaster-Carr	4
4	1/4" x 1/2" Shoulder Bolt	93996A847	McMaster-Carr	1
5	62 T 14.5° Nylon Spur Gear	57655K49	McMaster-Carr	1
6	White LED	c535a-WJN-CU0V0231-ND	Digi-Key	1



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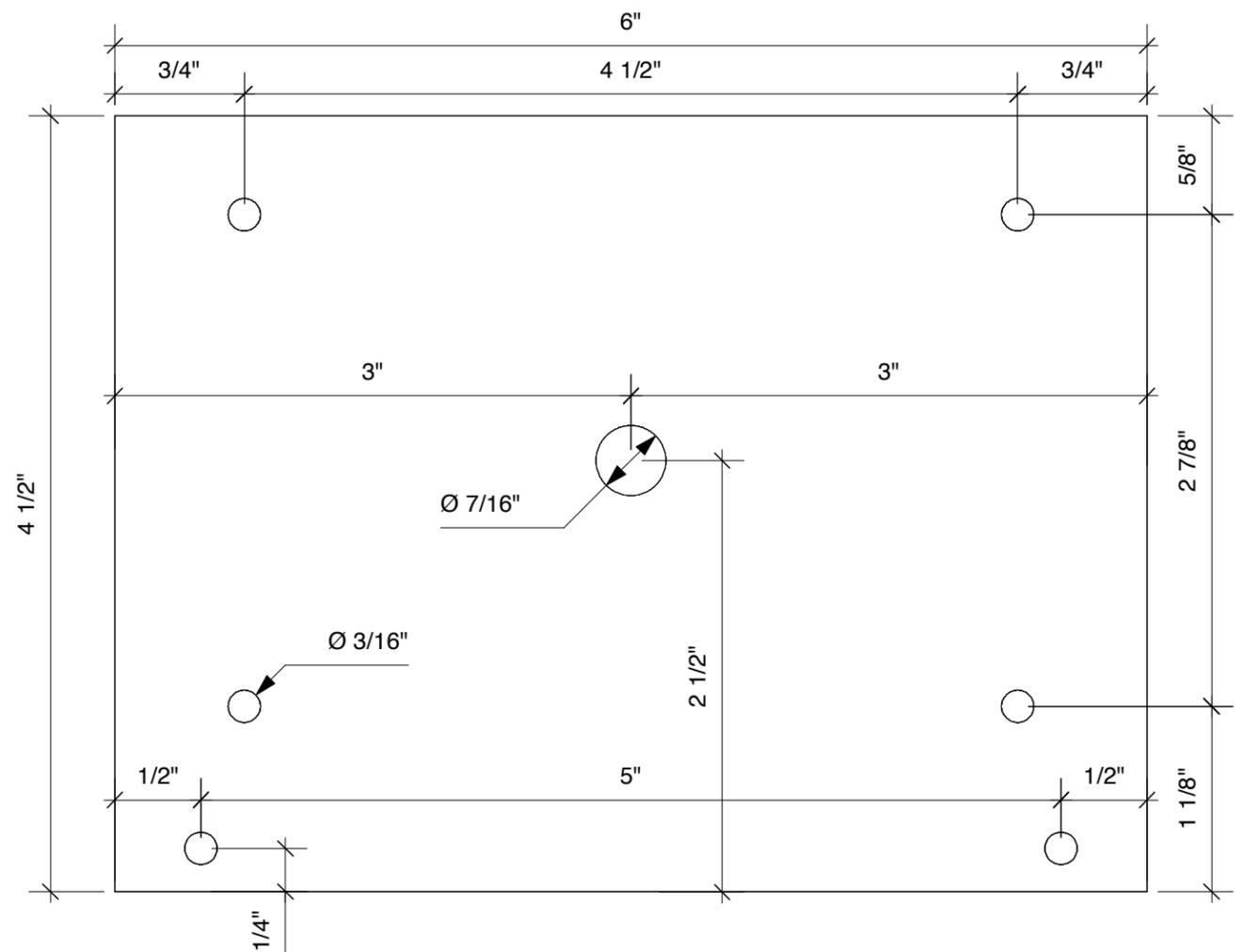
DRAWING TITLE: <b>LED Assembly Overview</b>			
COMPONENT TITLE: <b>Way to Glow</b>		DRAWN BY: <b>MDA</b>	DATE DRAWN: <b>06/19/2009</b>
REVISED BY:	DATE REVISED:	REVISION DESCRIPTION:	SCALE:
EXHIBIT TITLE: <b>NISE Network Exhibits</b>			SHEET #: <b>1 of 4</b>





1 Aluminum Plate  
Scale: Actual Size

MATERIAL: .25" ALUMINUM  
Anodized Black



2 Lexan Plate  
Scale: Actual Size

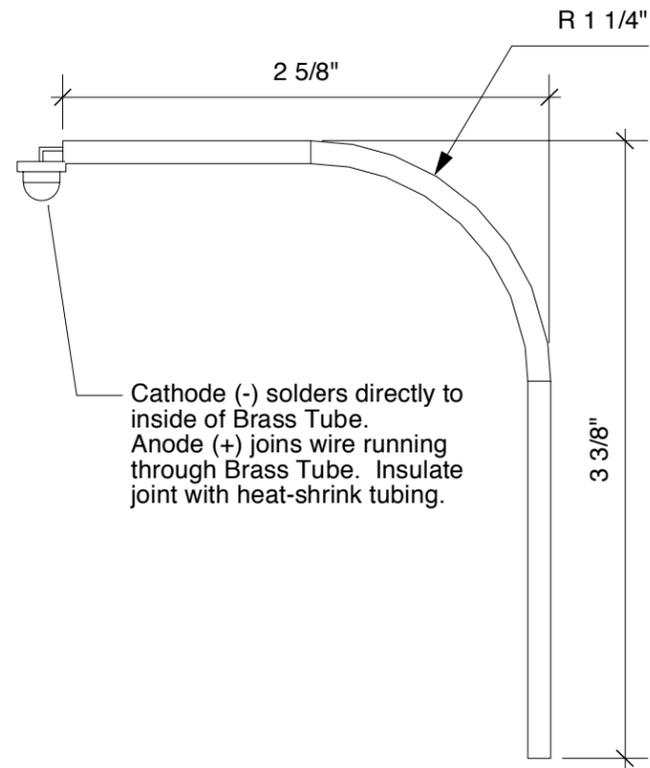
MATERIAL: .125" LEXAN

The plates are reversible in order to allow the LED to swing either to the front or back of the specimen, according to the requirements of the specimens obtained for each exhibit.

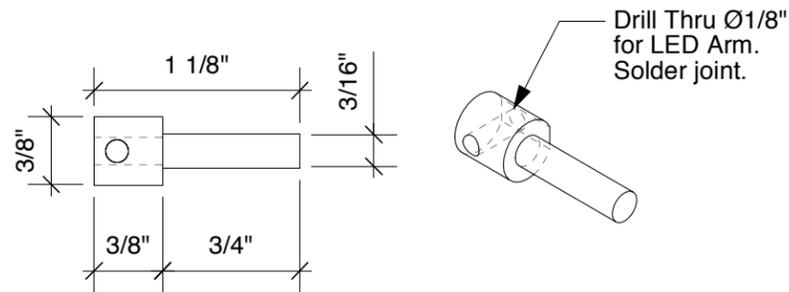
 <p>120 W KELLOGG, ST. PAUL, MN 55102 ©2008 THE SCIENCE MUSEUM OF MINNESOTA</p>	DRAWING TITLE: <b>LED Assembly Details</b>		DRAWN BY: MDA	DATE DRAWN: 06/19/2009	
	COMPONENT TITLE: <b>Way to Glow</b>		SCALE: as noted	SHEET #: 2 of 4	
	REVISED BY:	DATE REVISED:	REVISION DESCRIPTION:		
	EXHIBIT TITLE: <b>NISE Network Exhibits</b>				



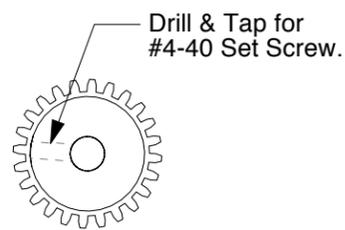
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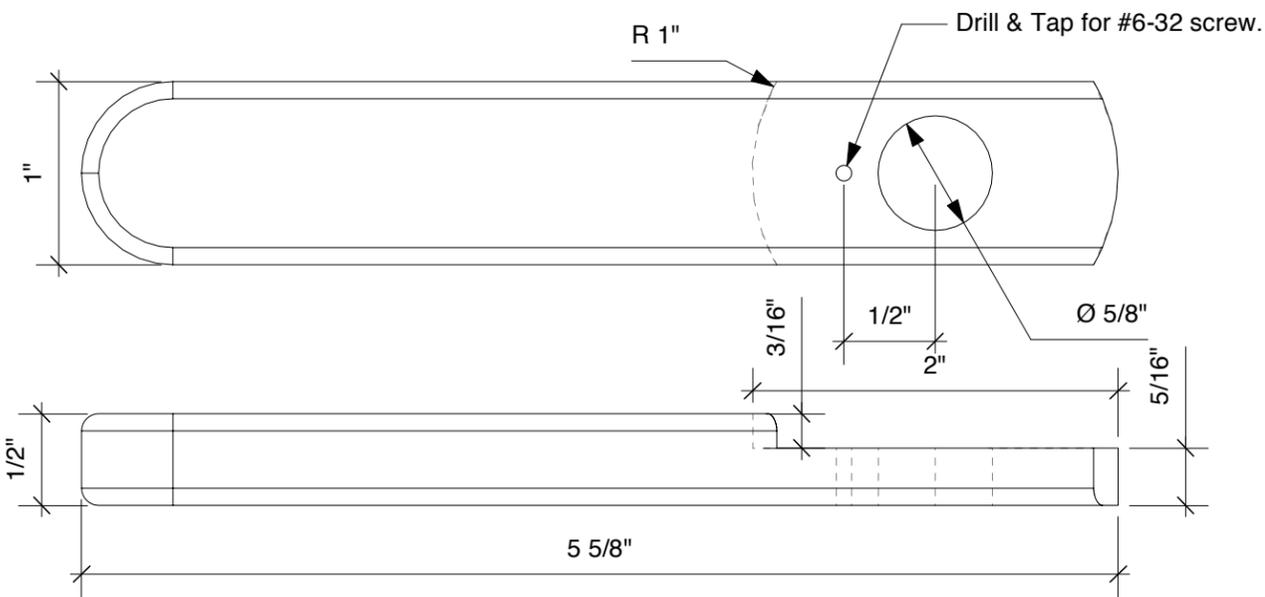
1 LED Arm  
MATERIAL: .125" BRASS TUBE  
Scale: Actual Size



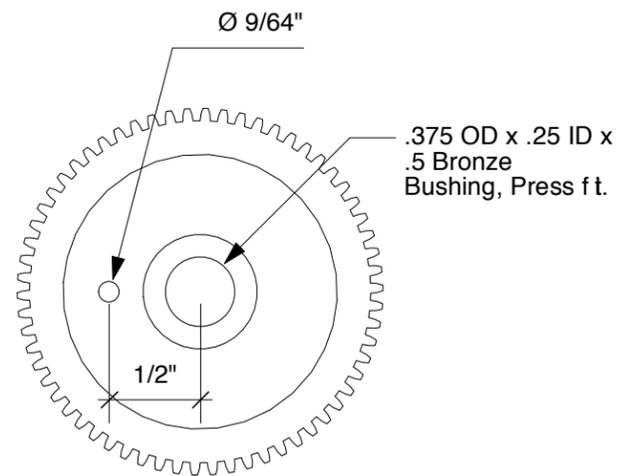
2 Brass Hub  
MATERIAL: .375" BRASS ROD  
Scale: Actual Size



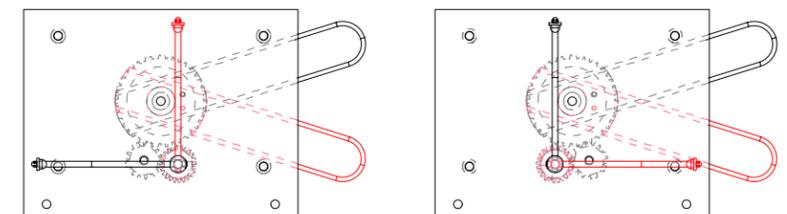
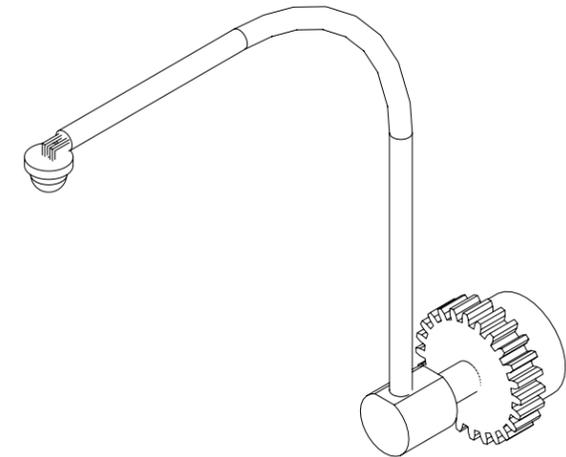
3 LED Arm Gear  
Scale: Actual Size  
24 Tooth 14.5° Nylon Spur Gear  
McMaster-Carr Part # 57655K38



4 Lever  
MATERIAL: WHITE DELRIN  
Scale: Actual Size



5 Large Gear  
Scale: Actual Size  
62 Tooth 14.5° Nylon Spur Gear  
McMaster-Carr Part #57655K49

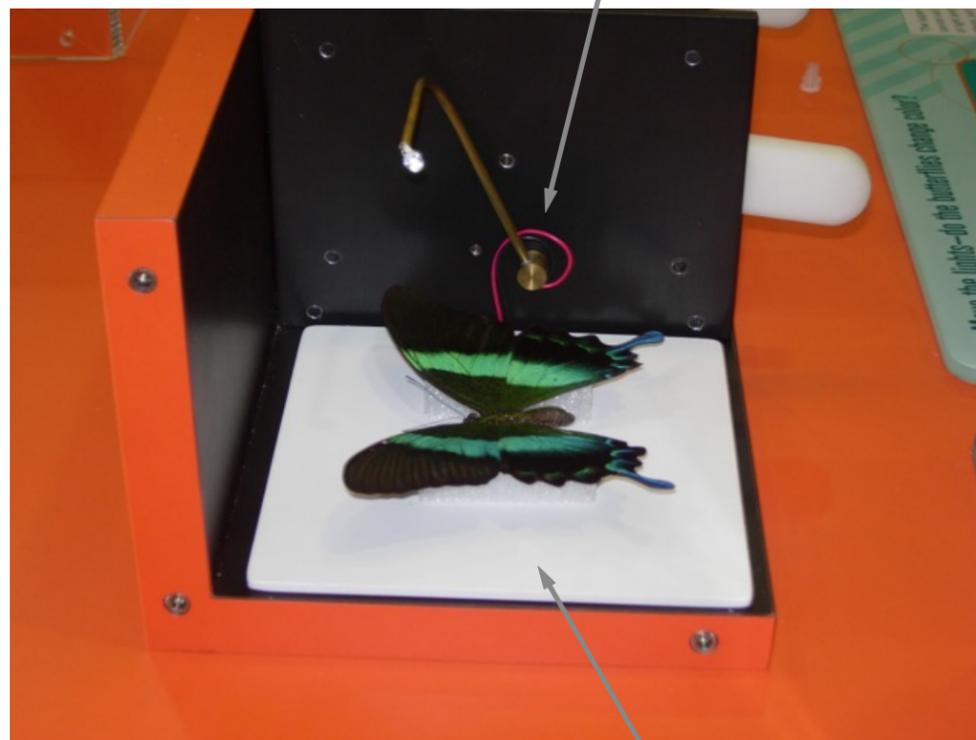


This assembly can swing the LED either behind or in front of the specimen as required. Simply turn the Aluminum and Lexan Plates.

 <p>120 W KELLOGG, ST. PAUL, MN 55102 ©2008 THE SCIENCE MUSEUM OF MINNESOTA</p>	DRAWING TITLE: <b>LED Assembly Details</b>		DRAWN BY: MDA		DATE DRAWN: 06/19/2009	
	COMPONENT TITLE: <b>Way to Glow</b>		REVISION DESCRIPTION:		SCALE: as noted	
	REVISED BY:	DATE REVISED:	SHEET #:		3 of 4	
	EXHIBIT TITLE: <b>NISE Network Exhibits</b>					

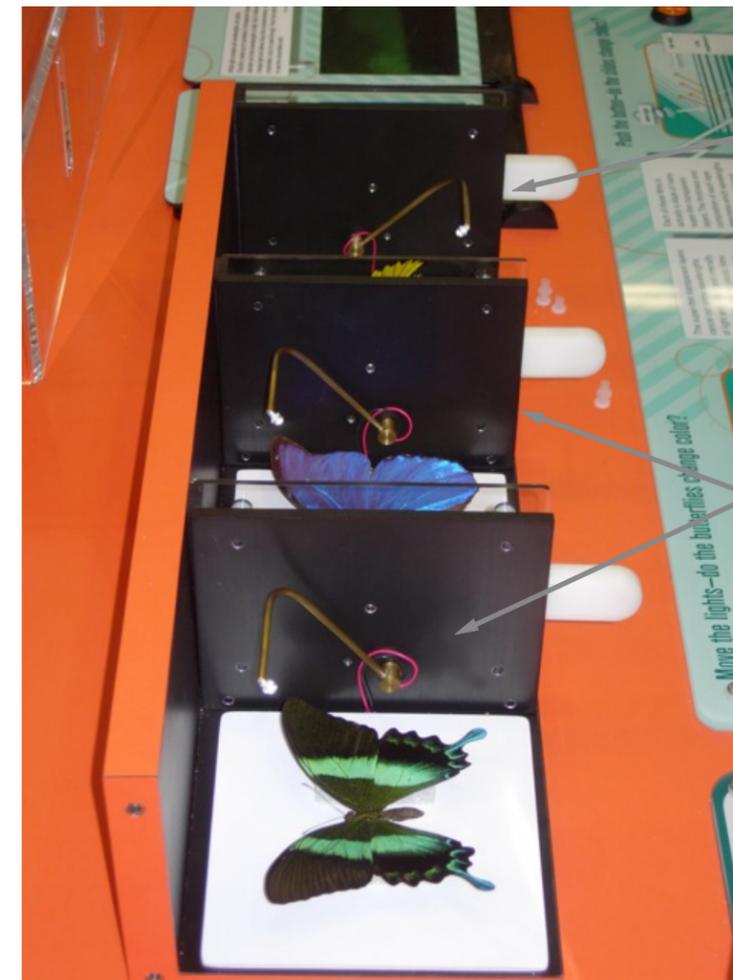


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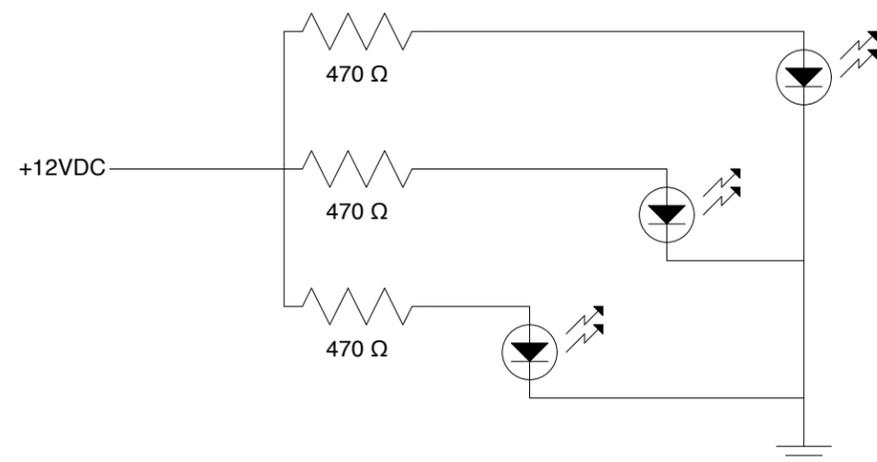
Continuous-Flex Miniature Wire  
20 Awg  
(McMaster-Carr #7071K633)  
Wind once around post to  
minimize strain.

1/8" Sintra card.  
Mount butterfly in optimal  
position and secure with a few  
drops of silicone. This seems to  
hold well enough without  
damaging the scales.



Mechanism reversed to better  
demonstrate effect on some  
specimens.

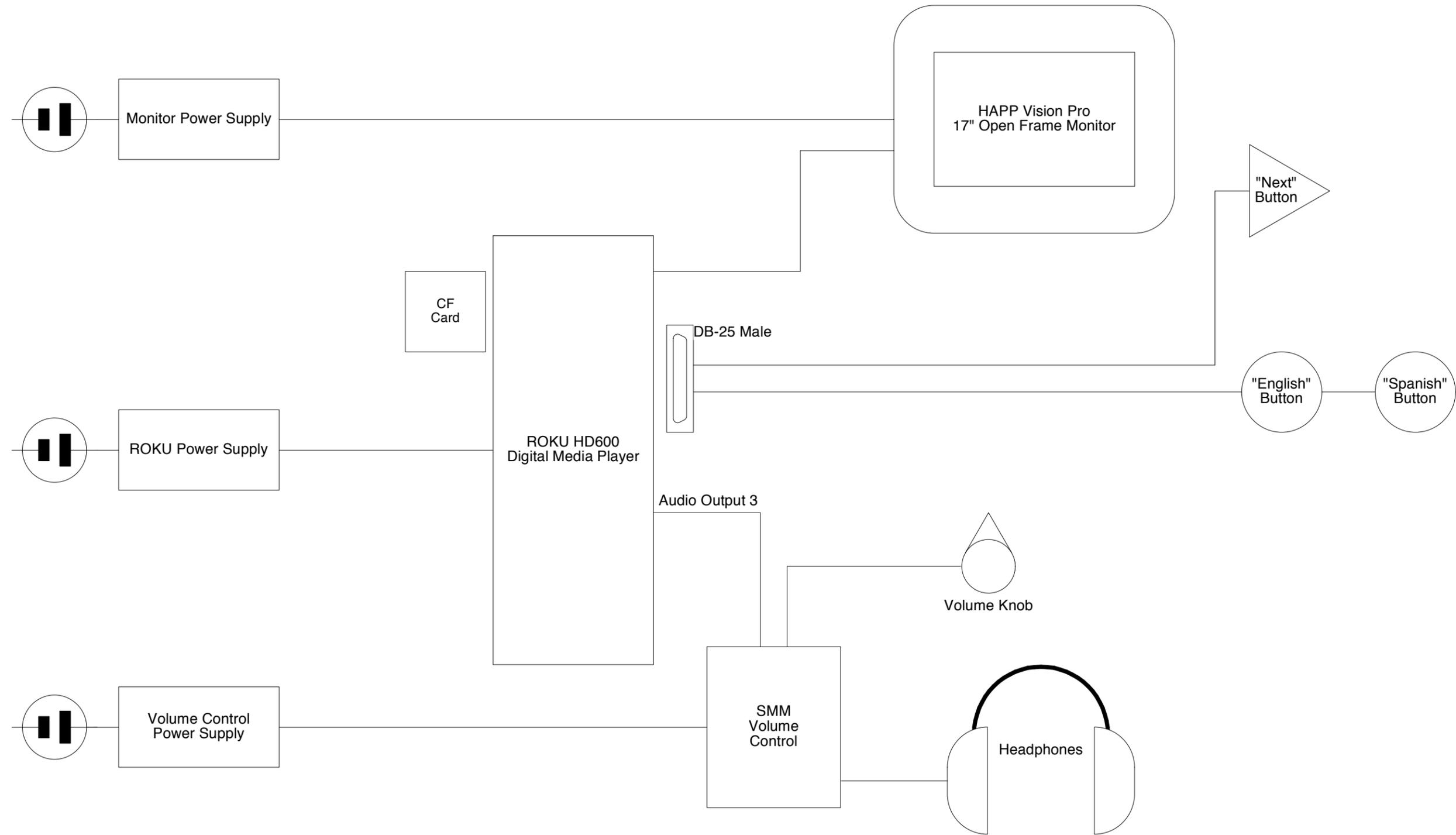
"Standard" assembly.



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DRAWING TITLE: <b>Light and mount details</b>			
COMPONENT TITLE: <b>Way to Glow</b>		DRAWN BY: MDA	DATE DRAWN: 10/19/09
REVISED BY:	DATE REVISED:	REVISION DESCRIPTION:	SCALE: NA
EXHIBIT TITLE: <b>NISE Network Exhibits</b>			SHEET #: 4 of 4





 <p>120 W KELLOGG, ST. PAUL, MN 55102 ©2008 THE SCIENCE MUSEUM OF MINNESOTA</p>	DRAWING TITLE: <b>A/V Block Diagram</b>			DRAWN BY: <b>MDA</b>	DATE DRAWN: <b>10/25/2009</b>	
	COMPONENT TITLE:		REVISION DESCRIPTION:			
	REVISED BY:	DATE REVISED:	SCALE: <b>NA</b>			
	EXHIBIT TITLE: <b>NISE Network Exhibits</b>				SHEET #:	
						 <p><b>NISE network™</b> NANOSCALE INFORMAL SCIENCE EDUCATION</p>