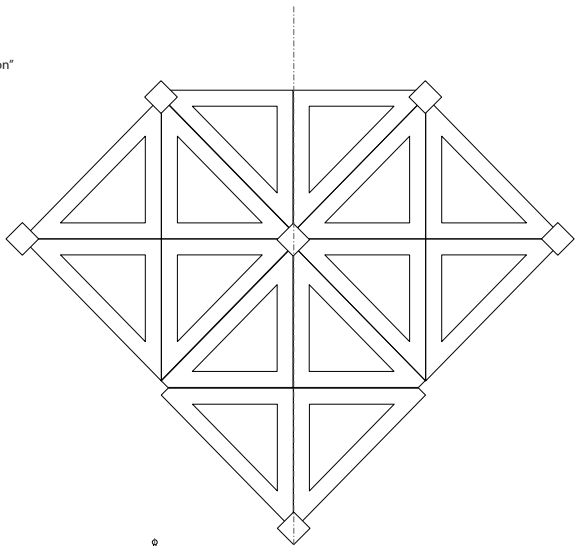
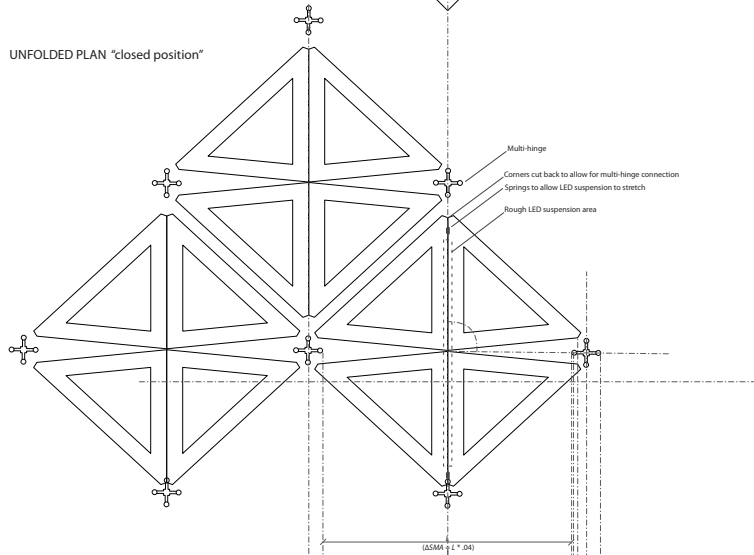


ELEVATION "closed position"

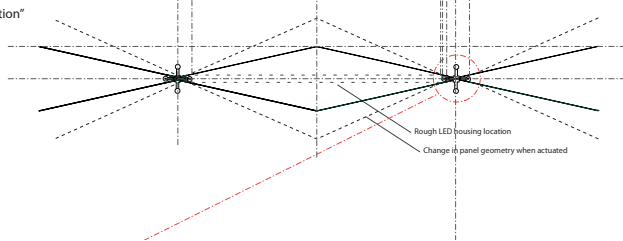


NOTES  
 Panels are still somewhat open in the "closed position" to leave room for the LEDs and PTFE/hinge attachments.  
 This version is shown with fold give more clearance room for attachments without creating a larger angle of opening in the "closed position".  
 Triangles are not right angled in plan so that they lock flush in elevation in the "closed position". This may change the way the multi-hinge works, although it may be okay because the horizontal and vertical axes of motion are maintained in position.  
 Frame shown as having 2" width.

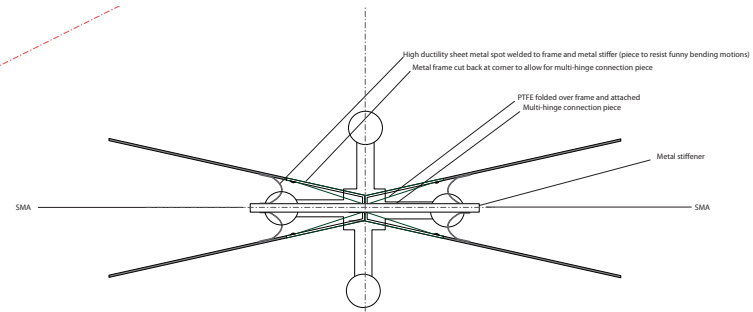
UNFOLDED PLAN "closed position"



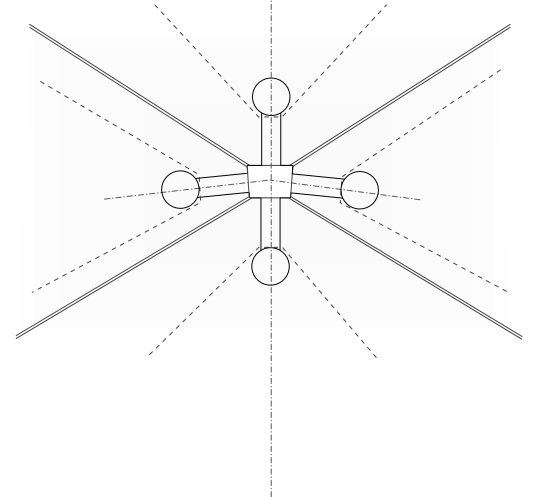
SECTION "closed position"



CONNECTION DETAIL SECTION



CONNECTION DETAIL PLAN

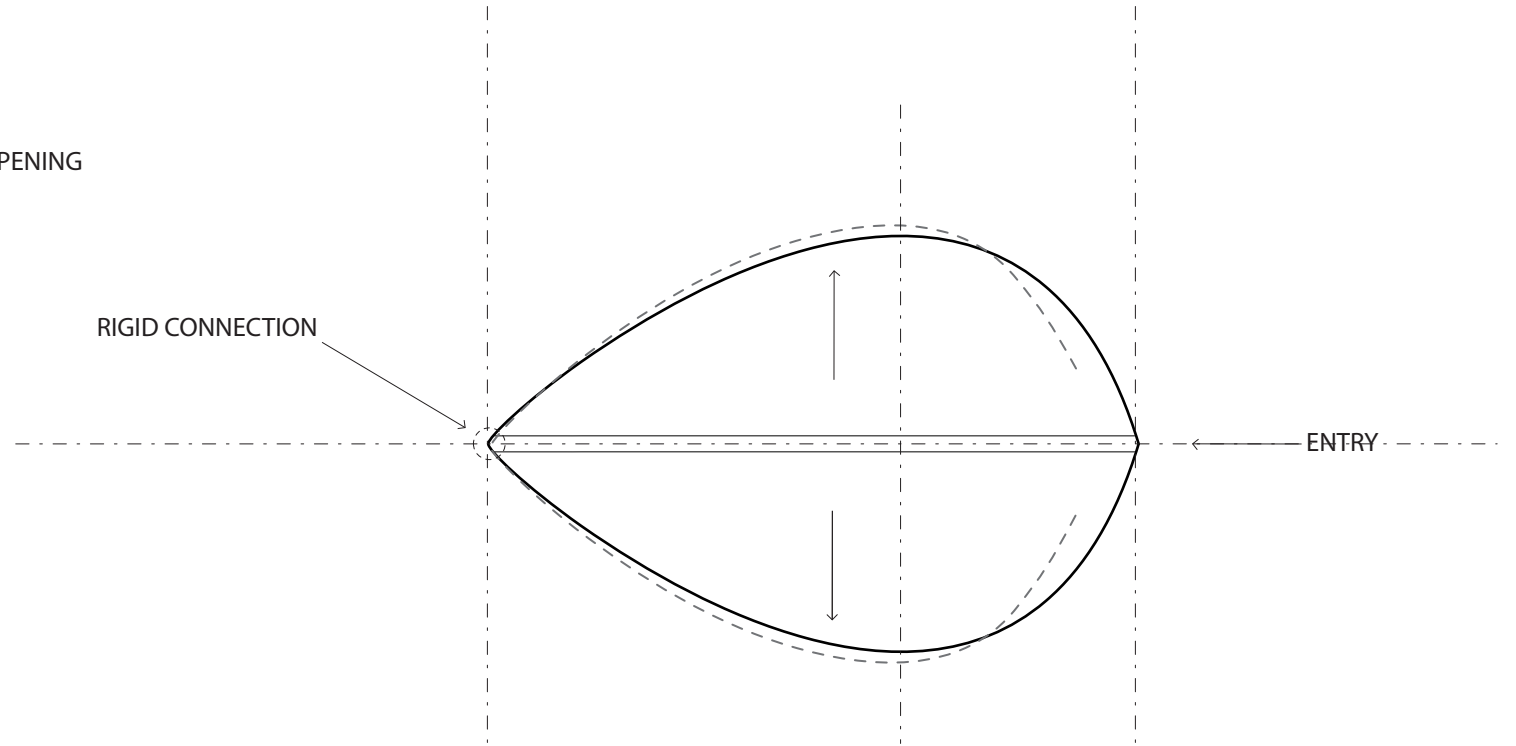


CONNECTION DETAILS

## ACTUATED OPENING

PLAN (TOP) VIEW

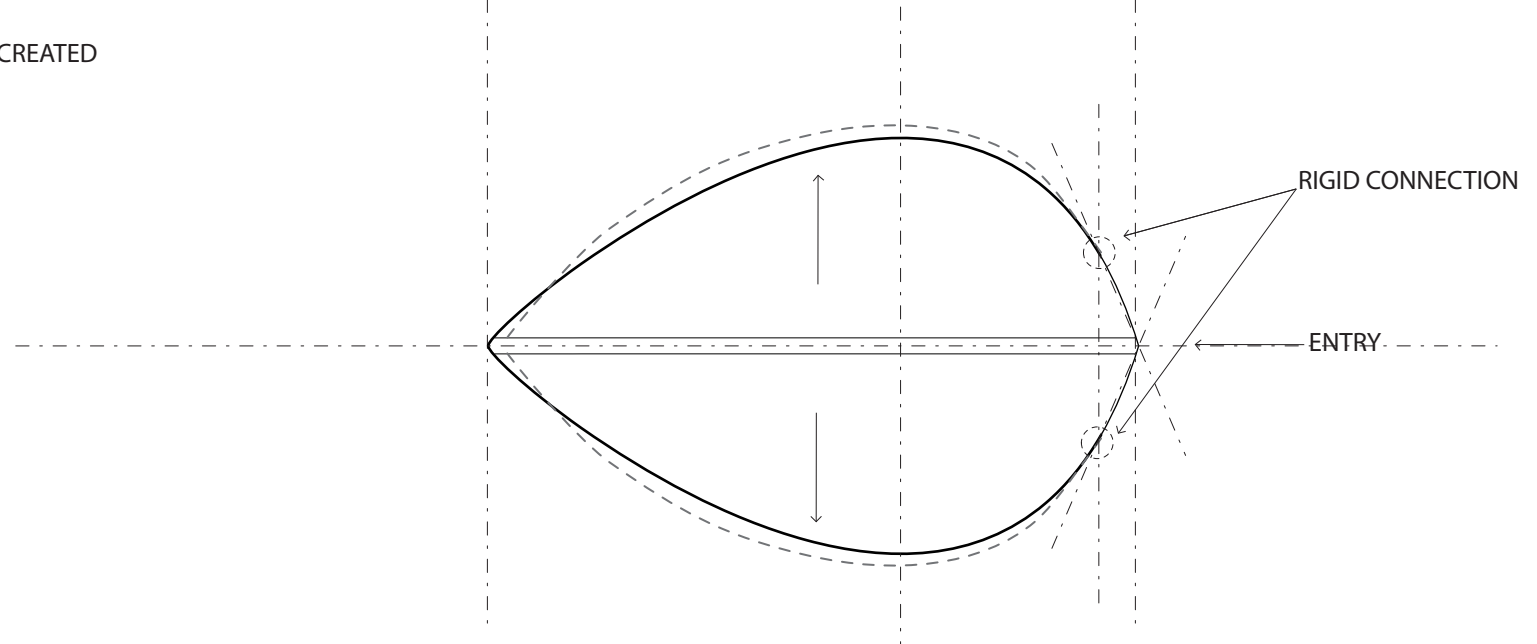
SMA ACTUATION GATHERS STRUCTURE  
TOWARDS RIGID CONNECTION CREATING OPENING



## NON-ACTAUTED OPENING

PLAN (TOP) VIEW

MANUAL OPENING AT RIGID CONNECTION CREATED  
BY SCALE CHANGE OF PANELS



## ENERGY REQUIREMENTS

Energy required to actuate 24 inches of SMA once = .01wH

Energy required light 12 LEDs for 1 hour = 12wH

Energy required to continuously power microcontrollers = ?

\* 10 times per hour = .1 wH

Per panel energy hourly requirement estimate: 12.1 wH

## ENERGY INPUT OPTIONS

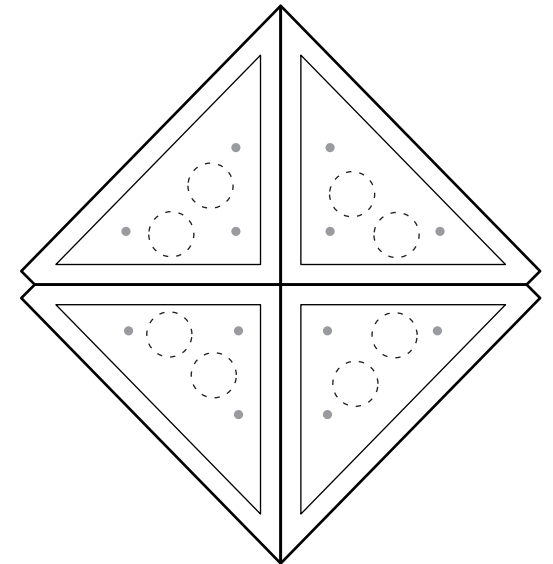
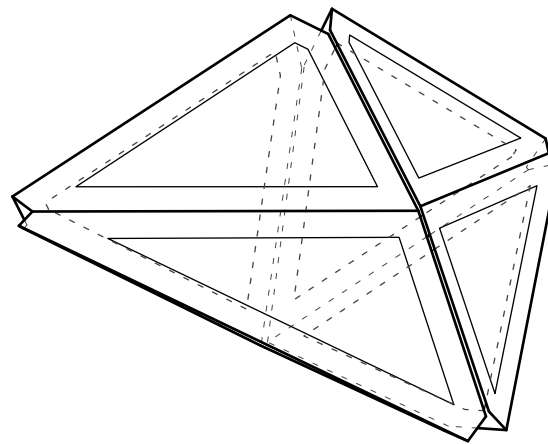
Ideal: solar cells



3 in. diameter silicon solar cell: 4.5 watts per hour max

Next best: solar cells + batteries

Least appealing: long extension cord



## ENERGY BALANCE

