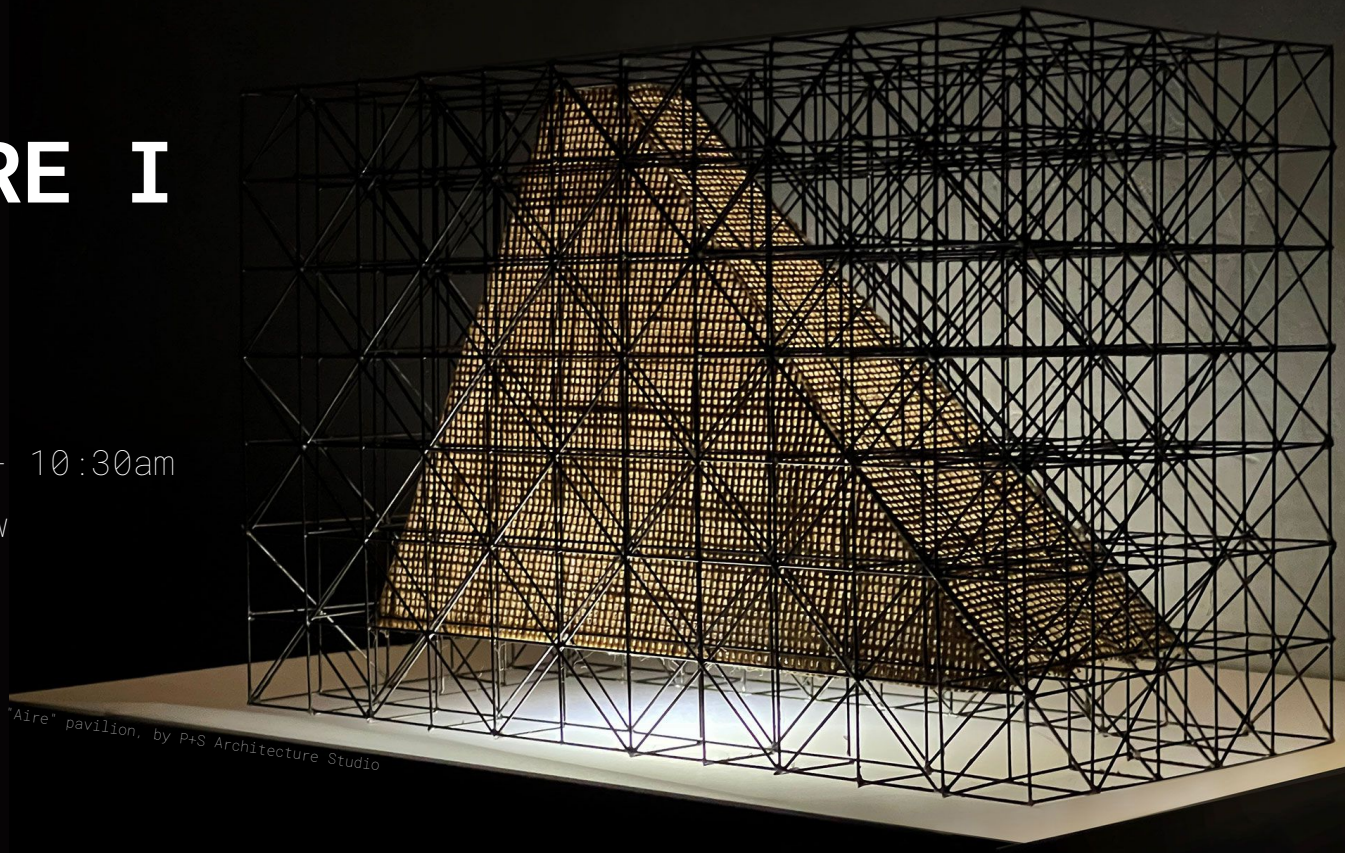
STRUCTURE I

ARCH-314

Friday(s): 9:30am - 10:30am

West Review


"Aire" pavilion, by P+S Architecture Studio

Today:

- Bridge Workshop
- Bridge Tips + Q&A
- Lab 05:Graphic Statics

Bridge Workshop

- Form a group of 2 or 3 with your classmates. Avoid teaming up with the same people you worked with on the bridge project.

- Make sure you have access to your preliminary report info and file.

- Each group member will have 5 minutes to present their project and answer questions from the other team members. Please keep your presentation concise, aiming for 2-3 minutes. Dedicate the remaining 2 minutes to addressing questions about your project.

Bridge Tips + Q&A

Finalize your design, find,and get your materials ASAP

- (Pierpont Commons) 2101 Bonisteel Blvd, Ann Arbor, MI 48109

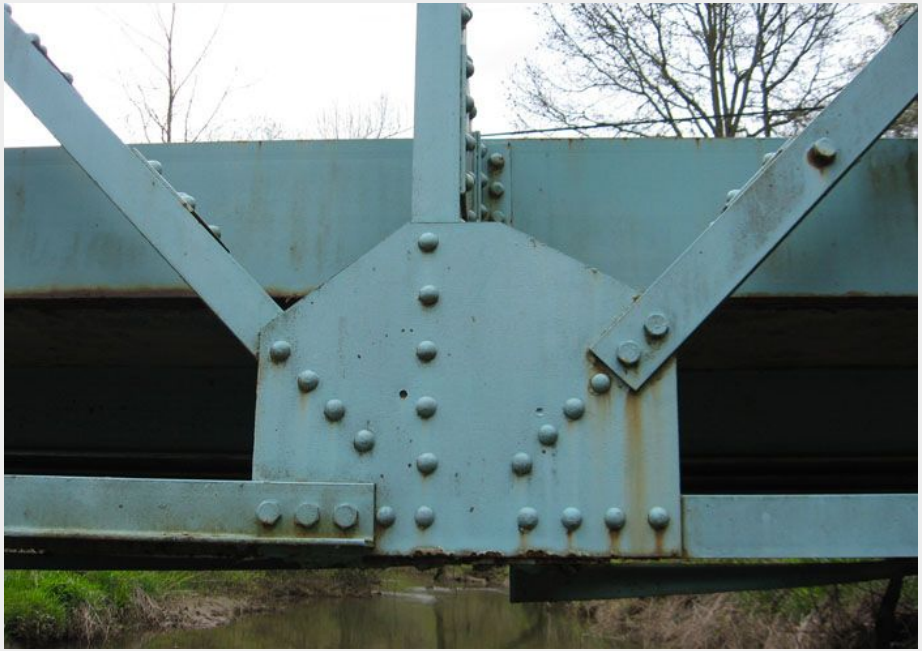
- 3352 Washtenaw Ave, Ann Arbor, MI 48104
- 2105 W Stadium Blvd, Ann Arbor, MI 48103

- 3300 Carpenter Rd, Ypsilanti, MI 48197

- 4501 Woodward Ave, Detroit, MI 48201
- 14339 Michigan Ave, Dearborn, MI 48126

Bridge Tips + Q&A

If your bridge is under weight (<4.00 OZ)



Bridge Gusset Plate

Note: Gusset plates will add weight to your bridge.

Bridge Tips + Q&A

If your bridge is under weight (<4.00 OZ)

Wood Glue + Sawdust

Note: Sawdust will add weight to your bridge.

Bridge Tips + Q&A

If your bridge is over weight (>4.00 OZ)

Sanding

Bridge Tips + Q&A

If your bridge is over weight (>4.00 OZ)

Drying

Lab 05: Graphic Statics

Description

This project provides opportunity to explore the graphic method of truss analysis

Goals

To draw a graphic force diagram for a given truss.
To determine the member forces.

Procedure

1. Determine the end reactions for the given king post truss.
2. Label the external cells. (A, B, C)
3. Label the internal cells. (1, 2)
4. Draw the force vectors. (*AB*, *BC*, *CA*)
5. Draw vector *C1* through point C.
6. Draw vector *A1* through point A.
7. Label the intersection of *C1* and *A1* as point 1.
8. Draw vector *B2* through point B.
9. Draw vector *A2* through point A.
10. Label the intersection of B2 and A2 as point 2.
11. Draw vector *12* connecting points 1 and 2.
12. Measure each vector to determine the force in the member.
13. Record the force value next to the member on the truss drawing.