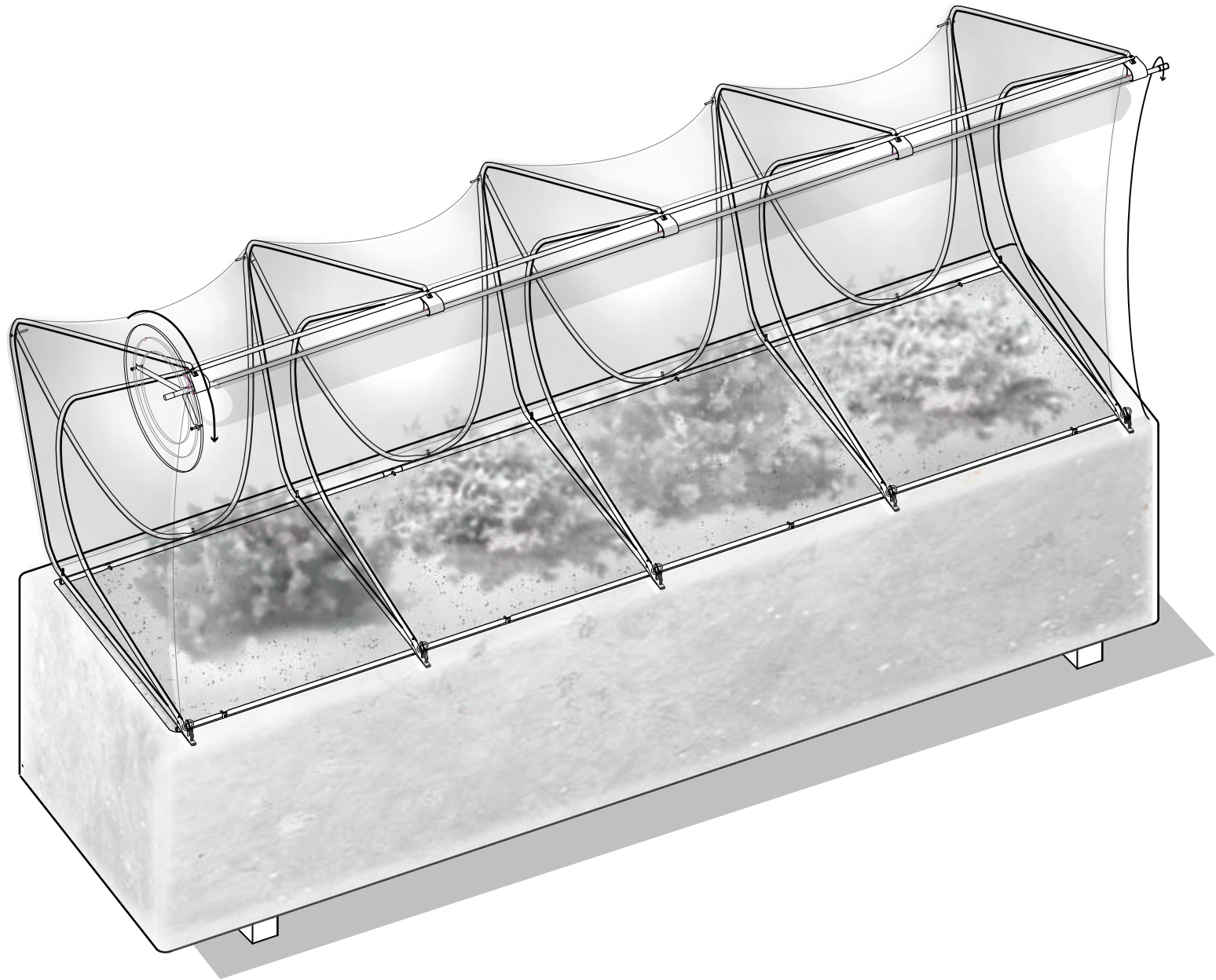




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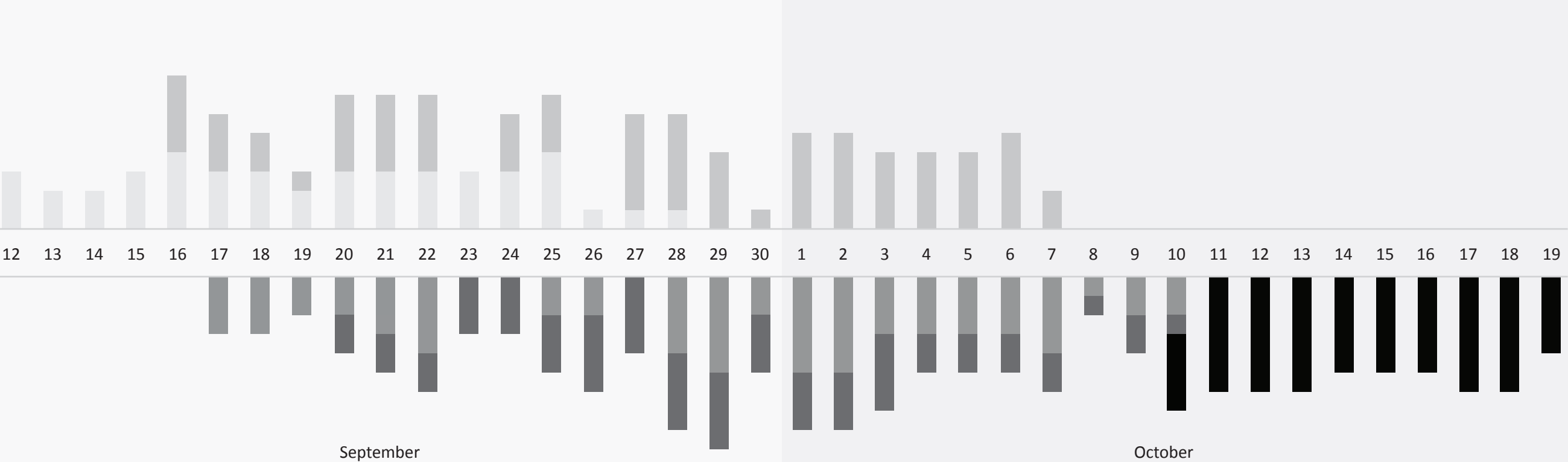


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ITERATION

- Exploration and Consolidation of Ideas
- Digital and Study Models, Testing of Modules and Joints



FINALIZATION

- Technical, Experiential, and Shop Drawings
- Final design with Details and Joints
- Assembly

Citra

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K. Jiang  
D. Kim  
H. Qureshi  
S. Zhen

Hoop House

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Schedule

For Review  
Scale: N/A  
10.10.16  
2 of 26

A1

HARDWARE

| Item                         | Quantity | Brand     | Retailer   | Lead Time  | Weight  | Price Per Unit | Price Per Item |
|------------------------------|----------|-----------|------------|------------|---------|----------------|----------------|
| #8/32 x 1.25" Machine Screws | 18       | Everbilt  | Home Depot | 30 minutes | 0.1 lb  | \$0.20         | \$3.50         |
| #8-32 x 2" in Machine Screws | 50       | Everbilt  | Home Depot | 30 minutes | 0.1 lb  | \$0.10         | \$5.25         |
| #8-32 Machine Screw Hex Nuts | 50       | Everbilt  | Home Depot | 30 minutes | 0.05 lb | \$0.09         | \$4.25         |
| Grommet Tool Kit             | 1        | General   | Home Depot | 30 minutes | 1 lb    | \$10           | \$10           |
| 1/4" Eyebolt with Nut        | 6        | Everbilt  | Home Depot | 30 minutes | 0.25 lb | \$1.13         | \$6.80         |
| #2 S-Biner                   | 5        | Nite Ize  | Home Depot | 30 minutes | 0.1 lb  | \$1.94         | \$9.70         |
| 1/2" Conduit Cap             | 1        | Wheatland | Home Depot | 30 minutes | 0.5 lb  | \$1            | \$1            |
| TOTAL                        |          |           |            |            | 2.1 lb  |                | \$40.50        |

MATERIAL

| Item                             | Quantity | Brand            | Retailer      | Lead Time  | Weight  | Price Per Unit | Price |
|----------------------------------|----------|------------------|---------------|------------|---------|----------------|-------|
| 6"x.025"x18" Sheet Metal         | 1        | Everbilt         | Home Depot    | 30 minutes | 1.5 lb  | \$9            | \$9   |
| 36"x.25"x24" Clear Acrylic Sheet | 1        | Artist's Cabinet | McMaster Carr | 3 days     | 6.75 lb | \$30           | \$60  |
| TOTAL                            |          |                  |               |            | 8.25 lb |                | \$69  |

GIVEN

| Item                                | Quantity | Brand     | Retailer | Lead Time | Weight | Price Per Unit | Price* |
|-------------------------------------|----------|-----------|----------|-----------|--------|----------------|--------|
| 10' Galvanized Steel Conduit, 1/2"D | 18       | Wheatland | JDB      | 1 minute  | 34 lb  | \$0            | \$0    |
| 10'x20' Greenhouse Plastic          | N/A      | UPFD      | JDB      | 1 minute  | 1.2 lb | \$0            | \$0    |

TOTAL

45.55 lb

\$109.50

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Hoop House

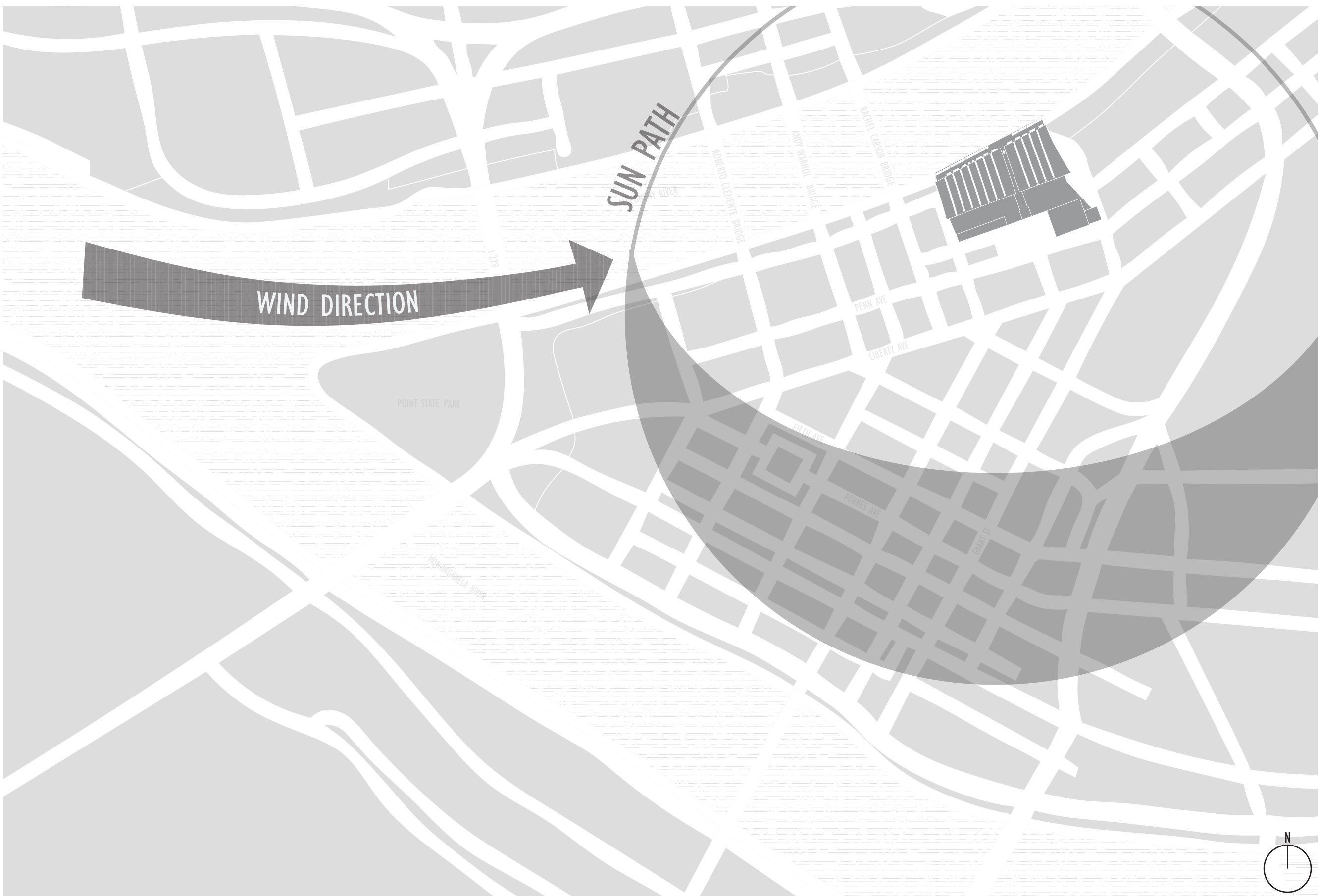
David Lawrence Convention Center (Roof)  
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A2

Budget

For Review  
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10.10.16  
3 of 26





Site Plan - Wind and Sun Path

For Review  
Scale: N/A  
10.10.16  
4 of 26

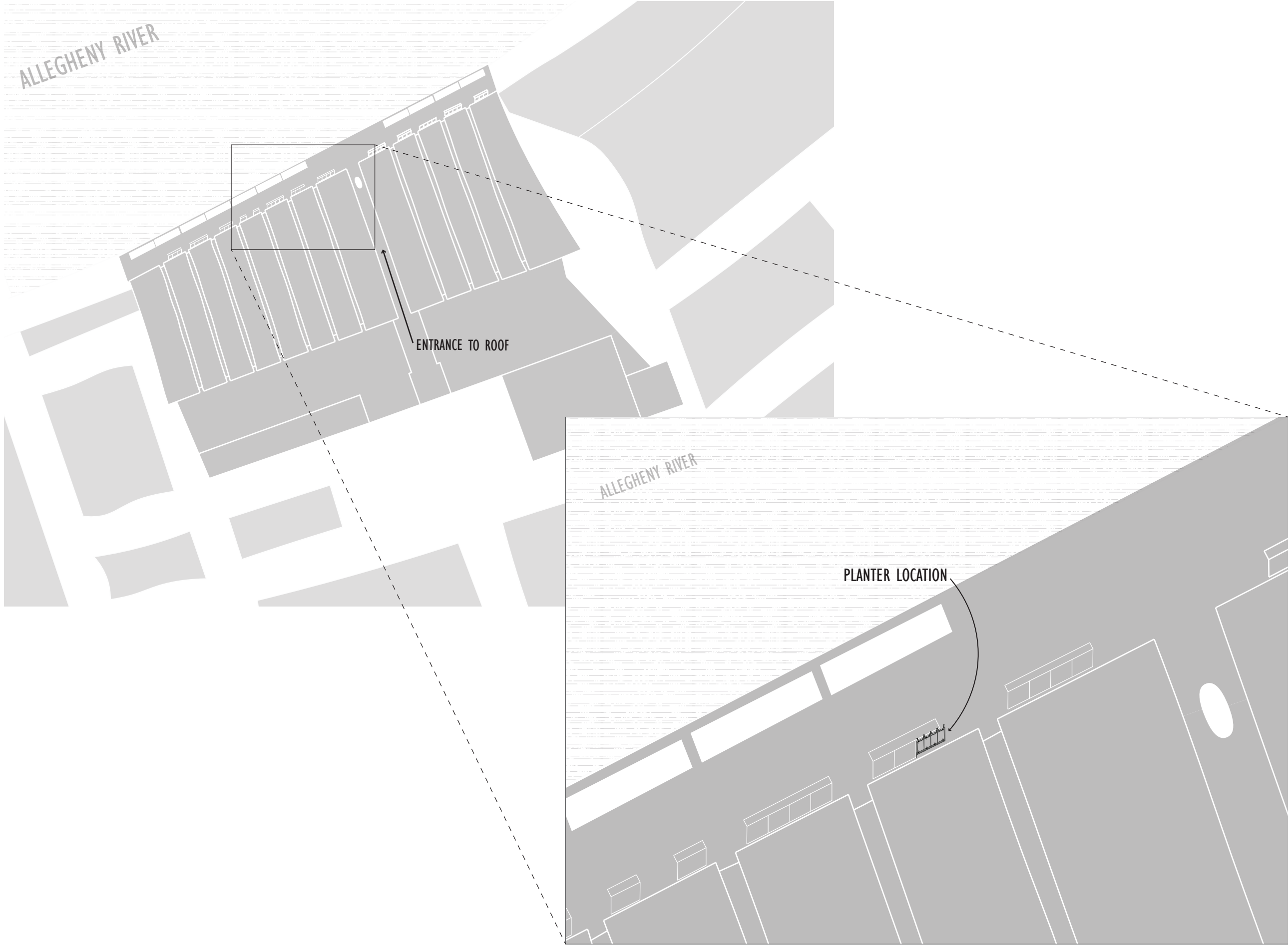
B1

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Site Plan- Building and  
Site Context

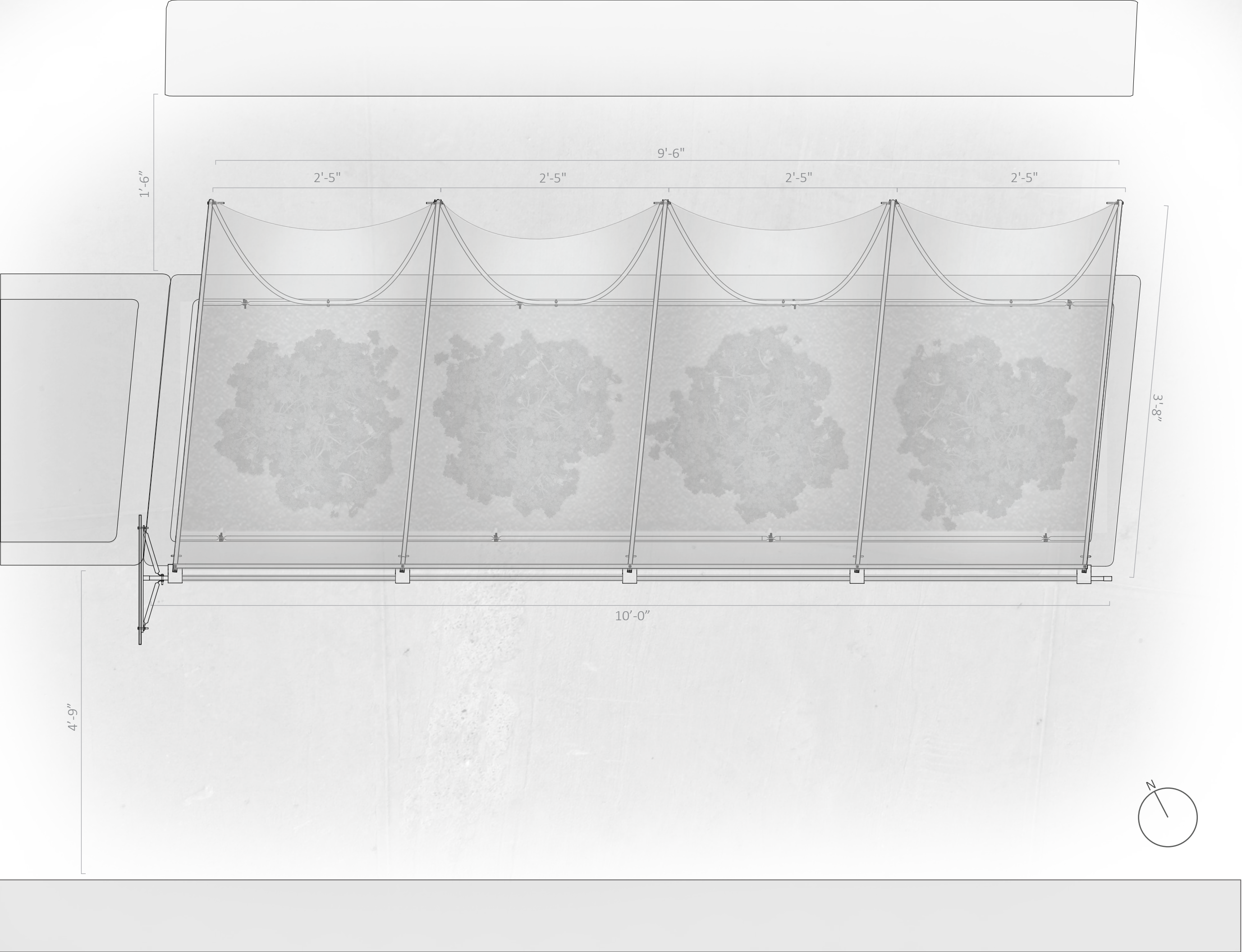
# B2

For Review  
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10.10.16  
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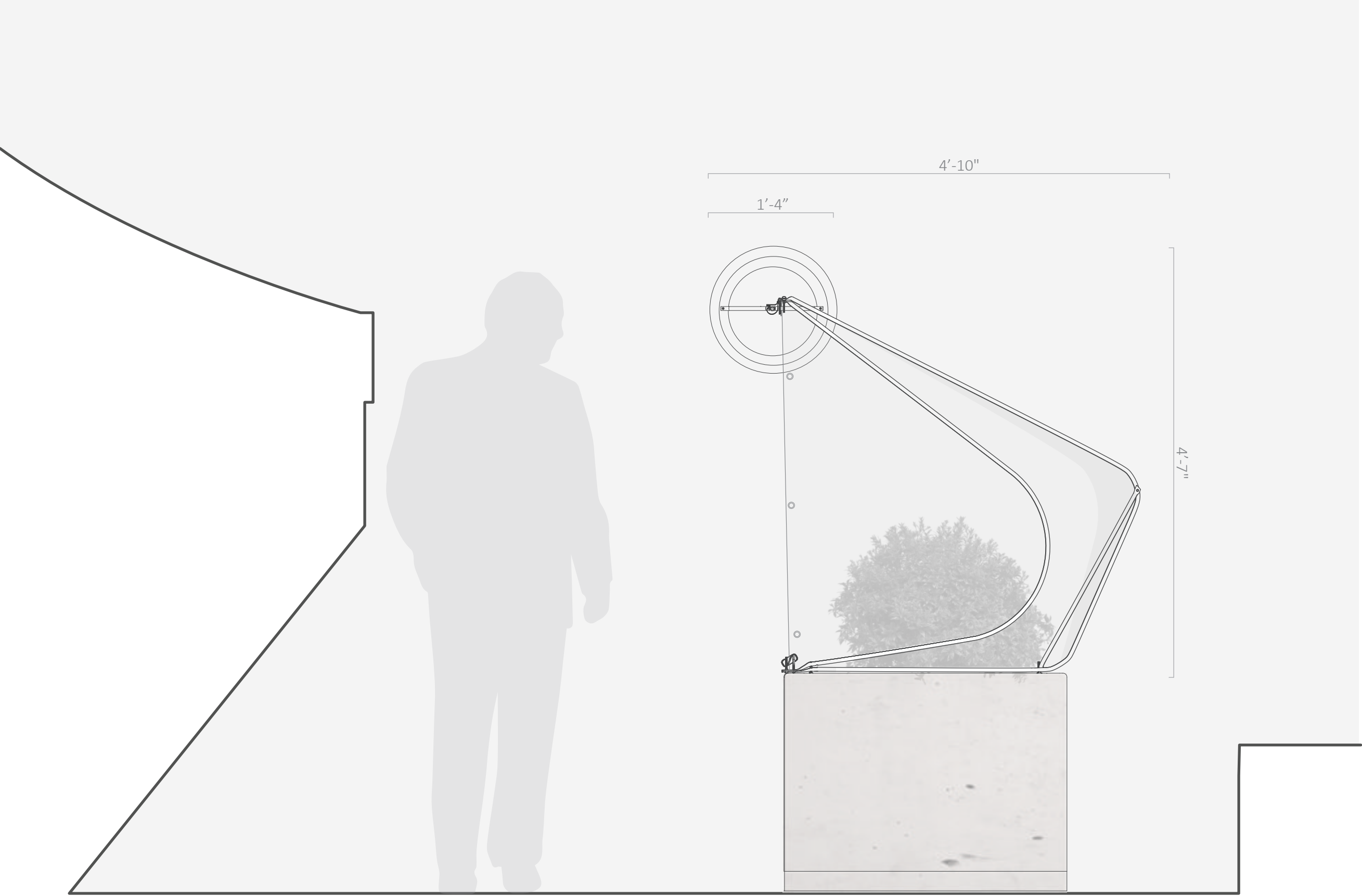


Plan  
For Review  
Scale: 1"=1'  
10.10.16  
6 of 26

B3

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Elevation (Lateral)

For Review  
Scale: 1"=1'  
10.10.16  
7 of 26

B4

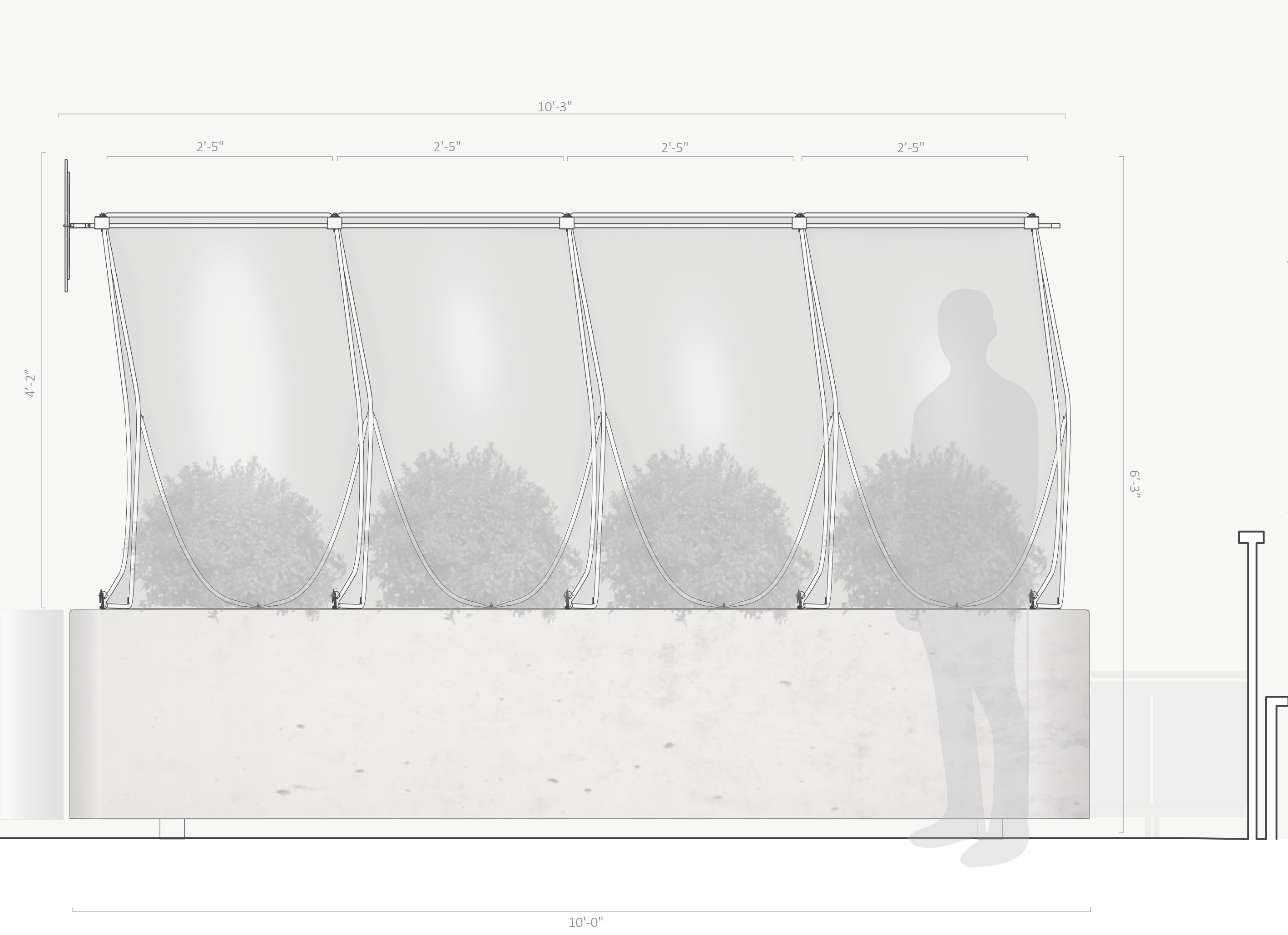
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Elevation (Longitudinal)

For Review  
Scale: 1"=1'  
10.10.16  
8 of 26

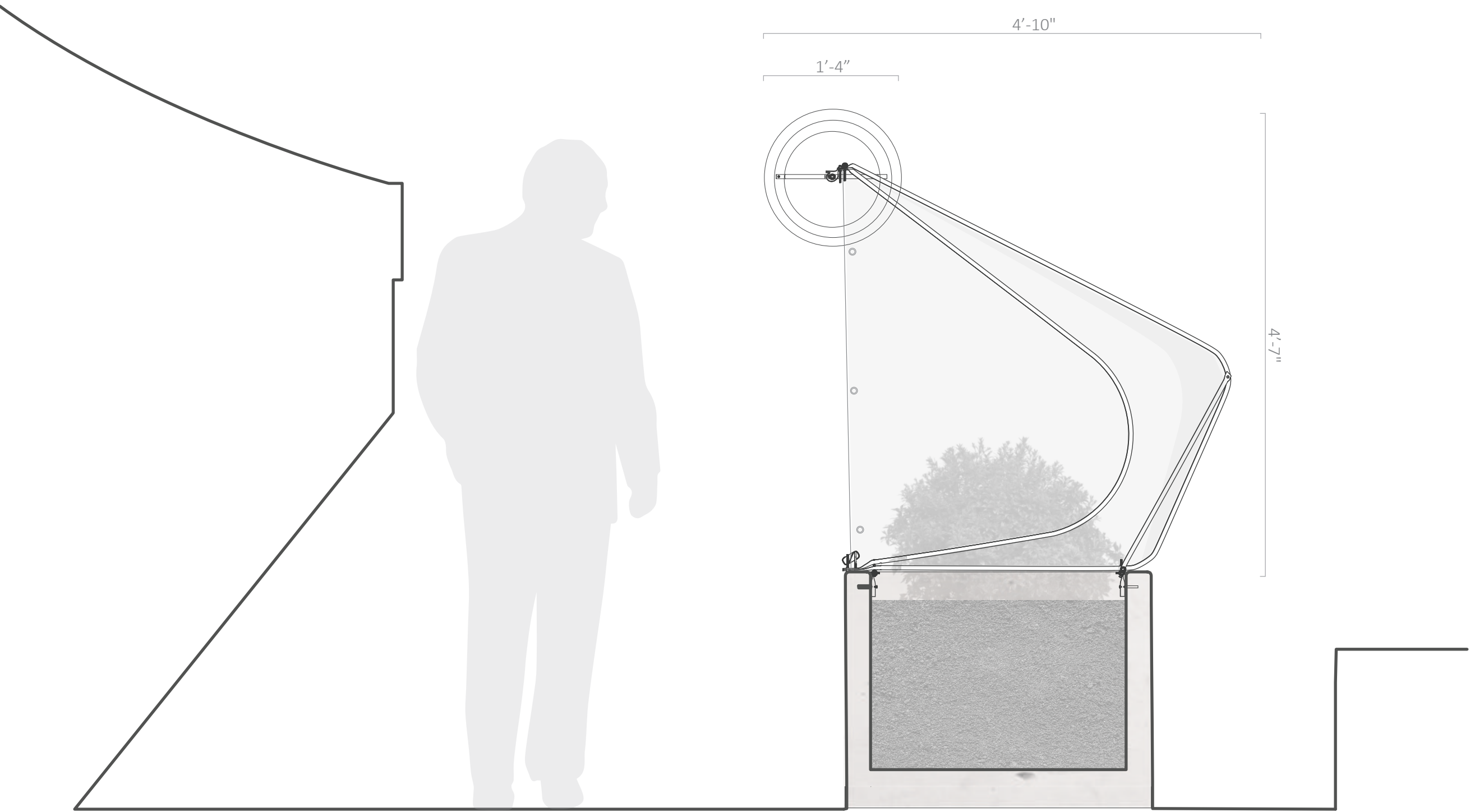
B5

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Section (Lateral)

For Review  
Scale: 1"=1'  
10.10.16  
9 of 26

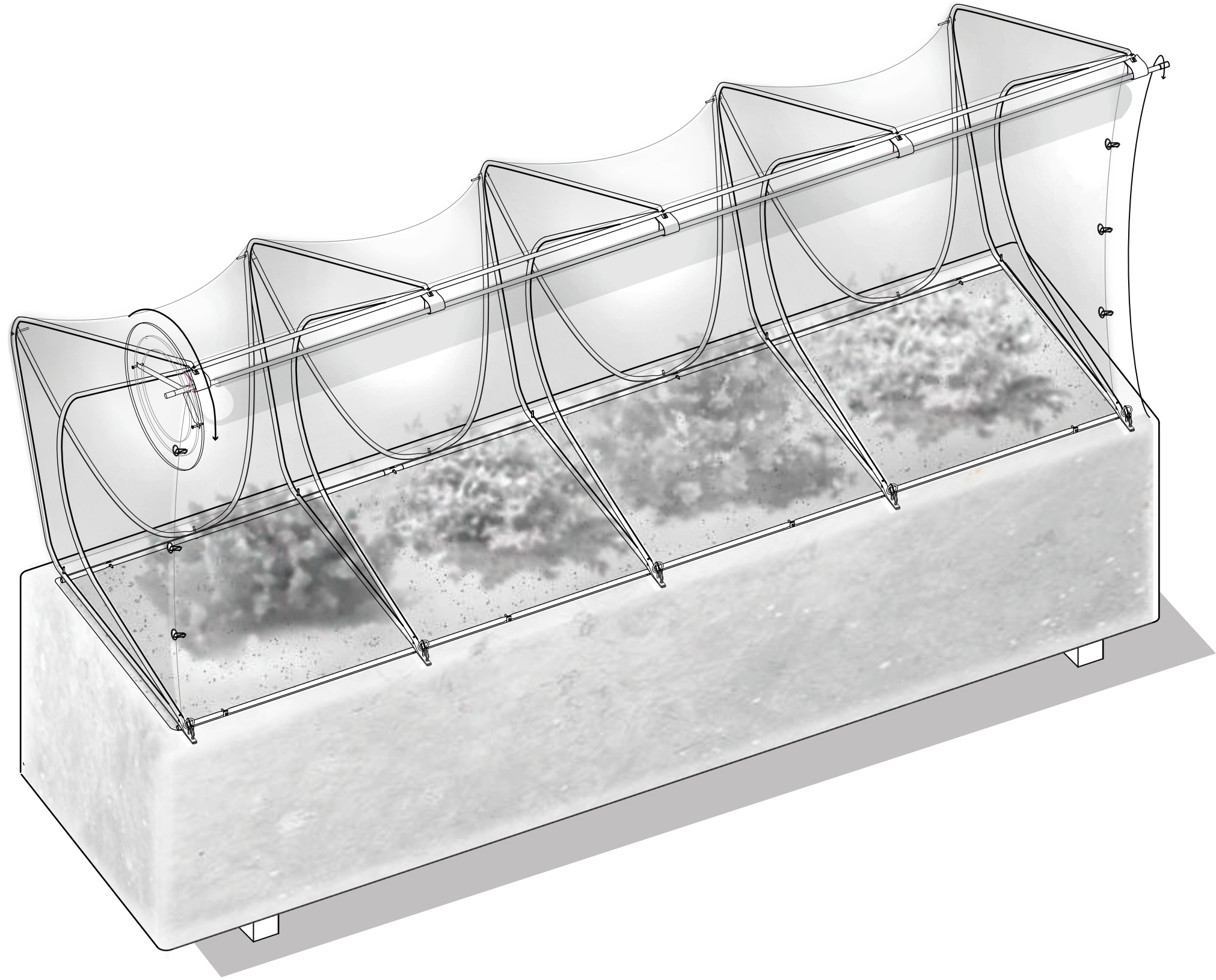
B6

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Axonometric - Open/Closed

For Review  
Scale: 1"=1'  
10.10.16  
10 of 26

B7

Hoop House

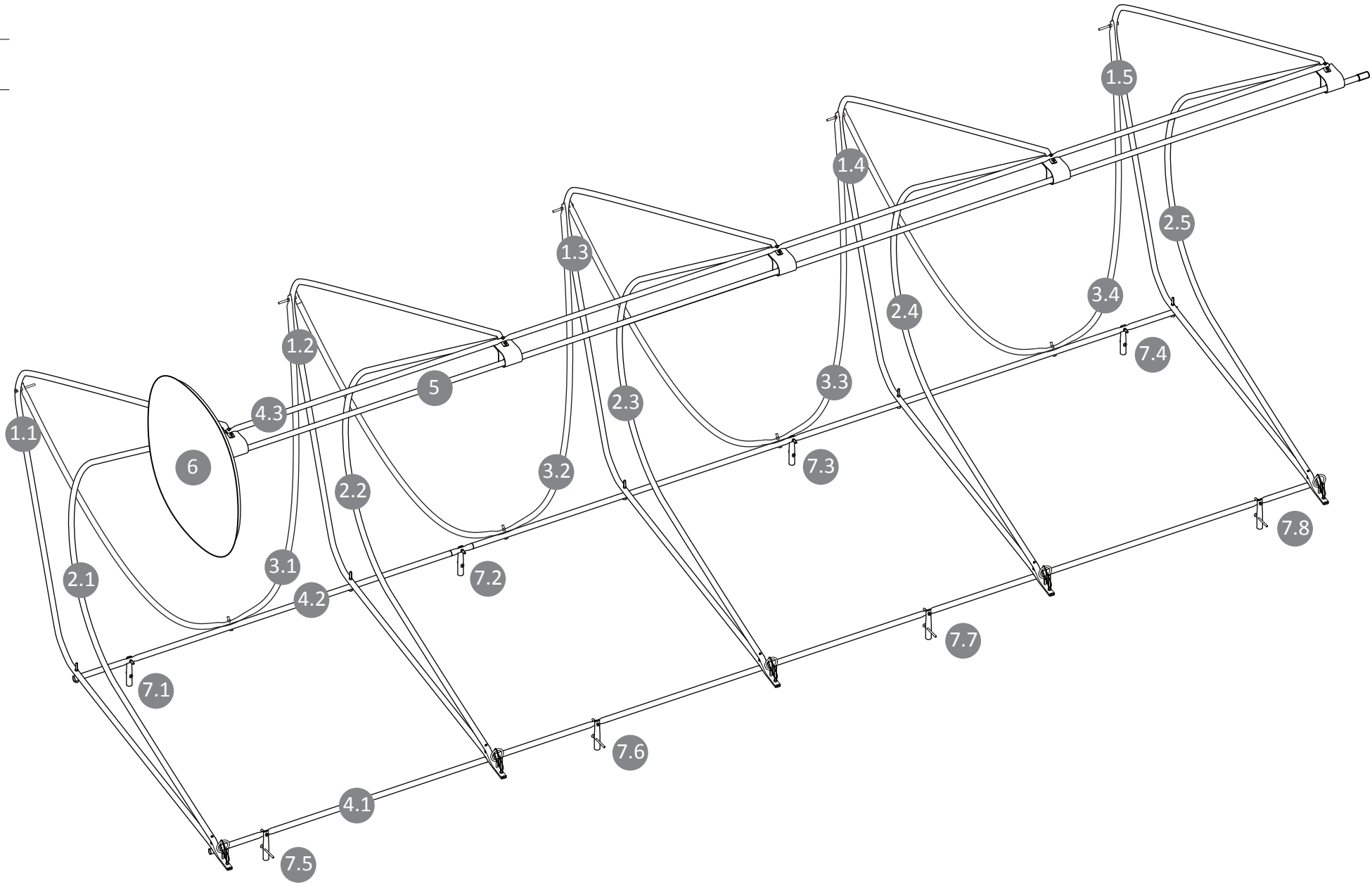
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| LABEL     | ITEM             |
|-----------|------------------|
| 1.1 - 1.5 | outer modules    |
| 2.1 - 2.5 | inner modules    |
| 3.1 - 3.4 | gussets          |
| 4.1 - 4.3 | anchor bars      |
| 5         | spool bar        |
| 6         | acrylic wheel    |
| 7.1 - 7.8 | anchoring pieces |

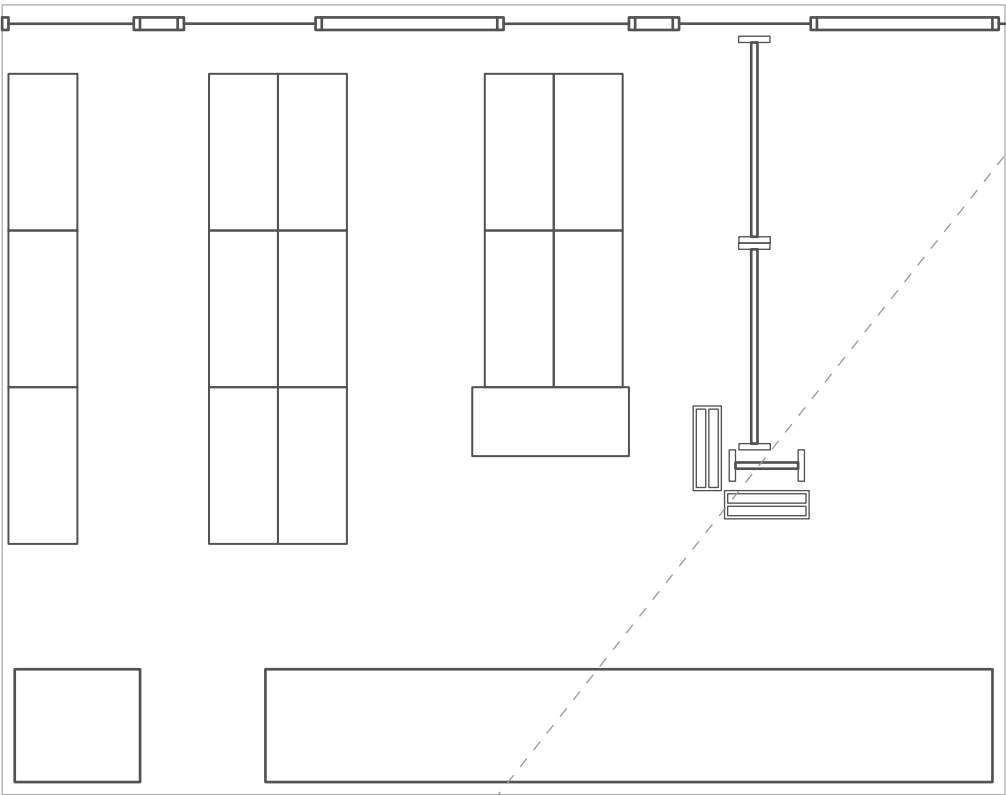


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Axonometric- Labeled  
For Review  
Scale: 1"=1'  
10.10.16  
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B8

CURRENT SETUP



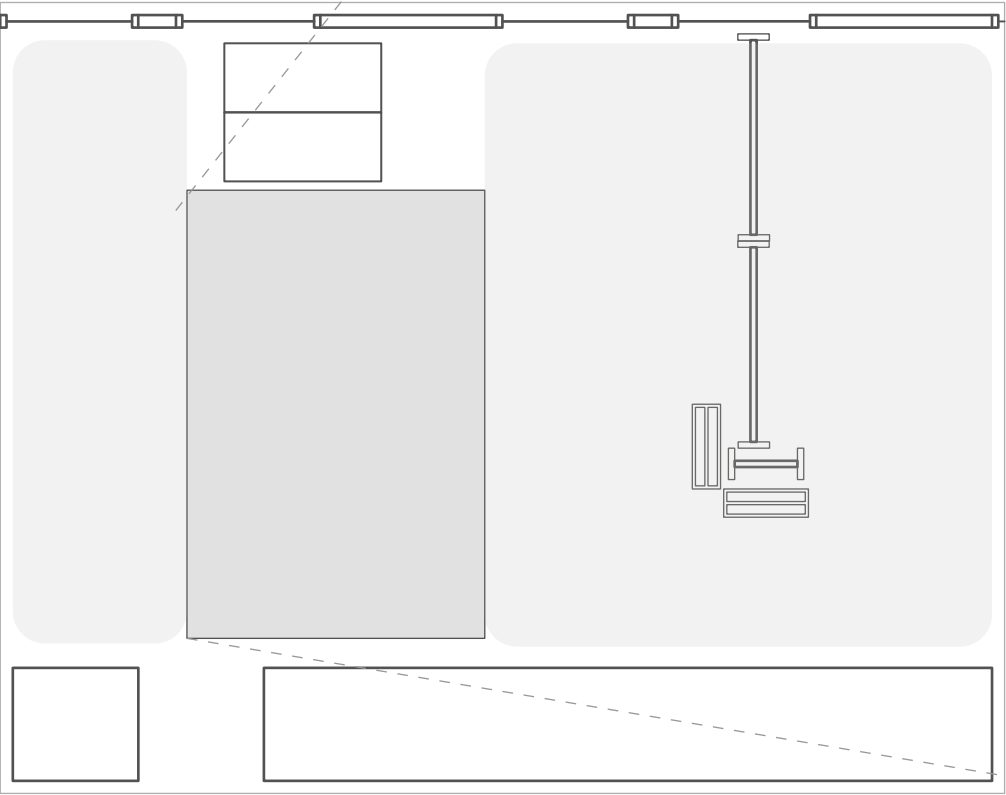
KEY



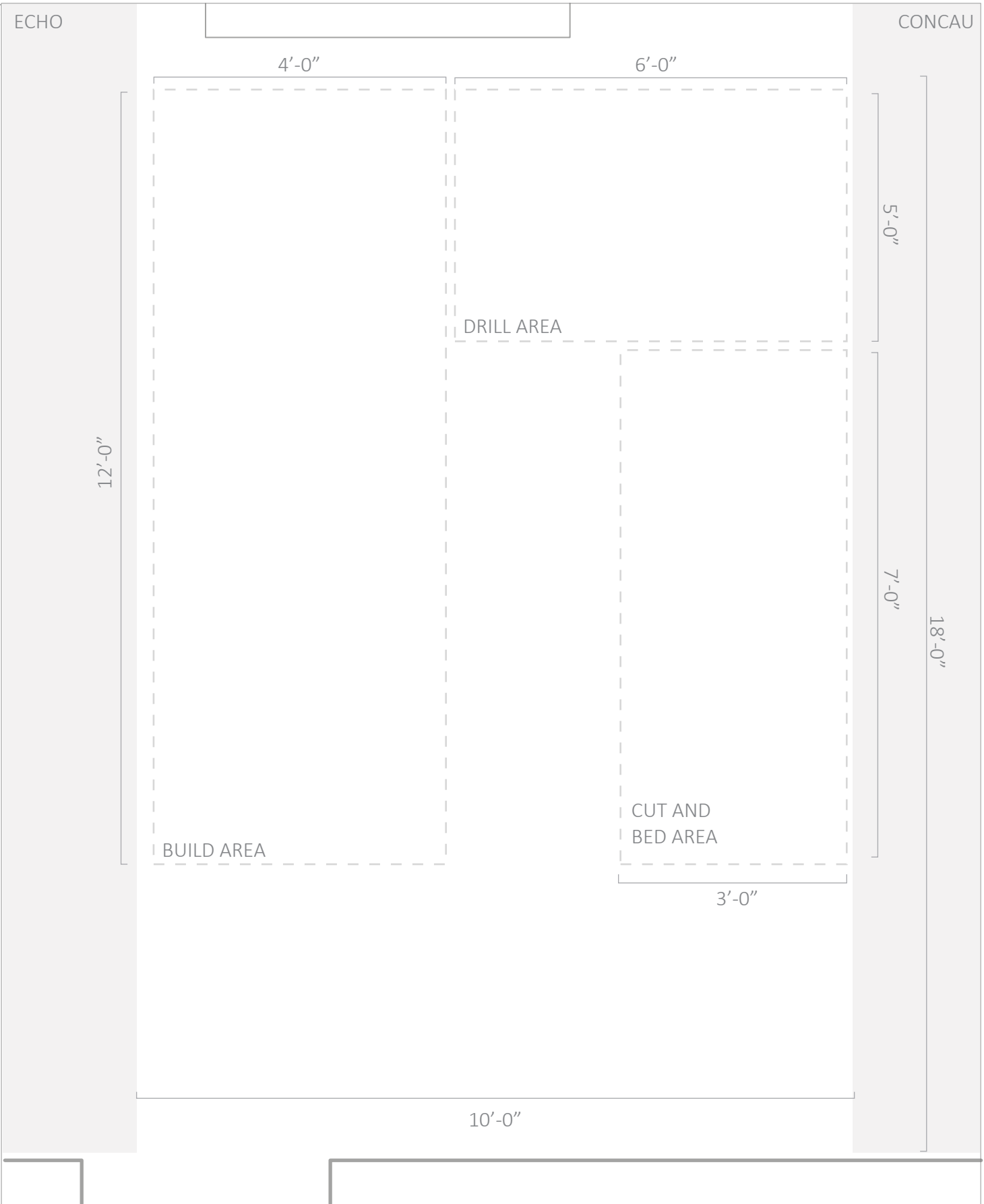
OUTLINED WORKSPACE



UNAVAILABLE SPACE



NEW SETUP



Studio Set-Up

For Review  
Scale: N/A  
10.10.16  
12 of 26

C1

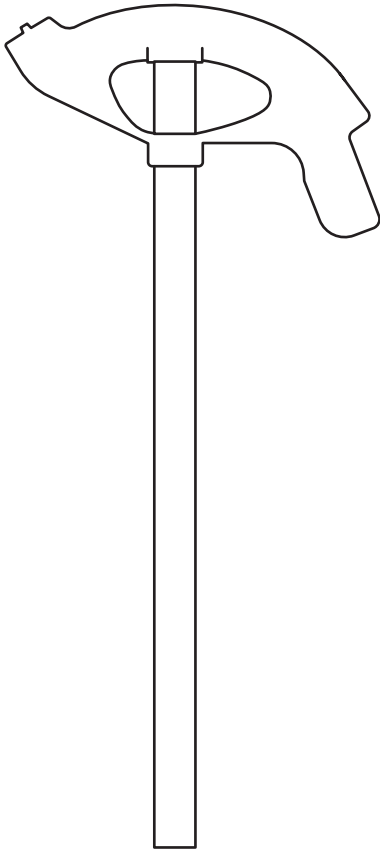
Hoop House

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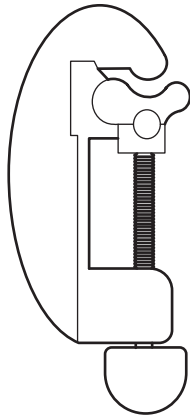
Citra

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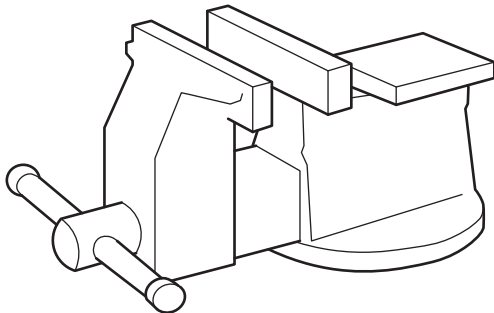
Conduit Bender



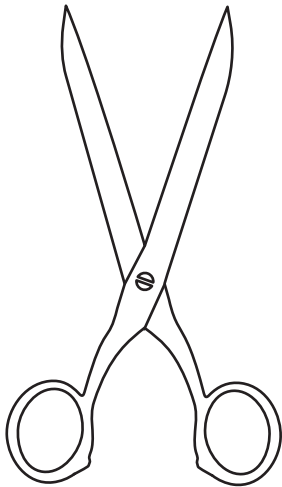
Conduit Cutter



Metal Vice



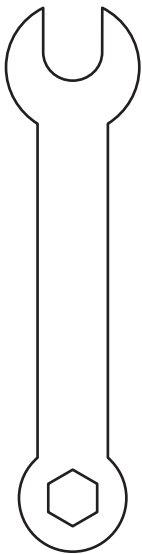
Scissors



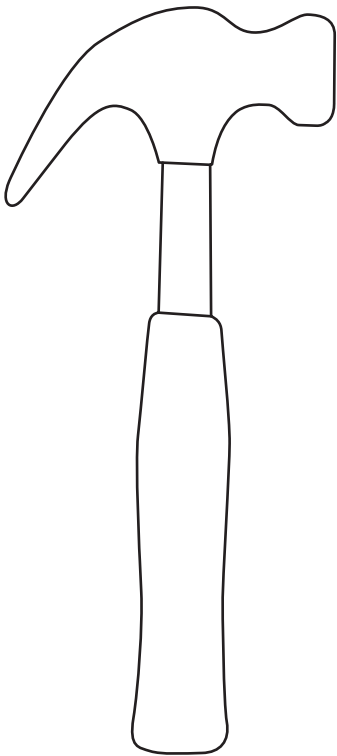
Metal Punch



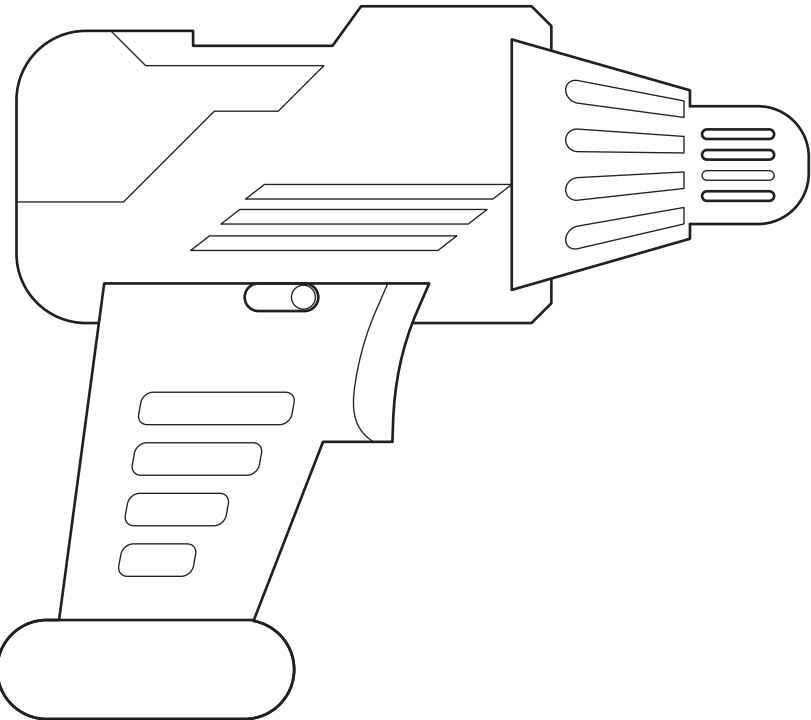
Wrench



Hammer



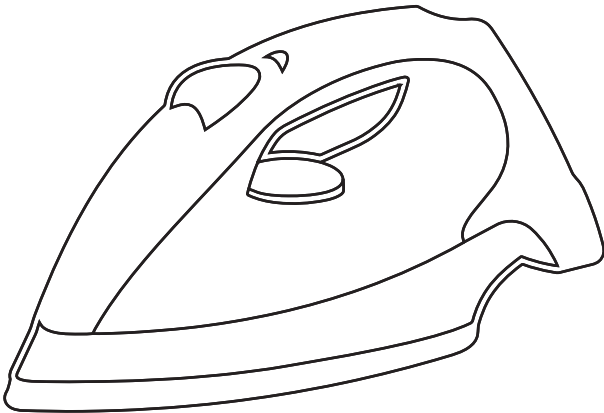
Drill



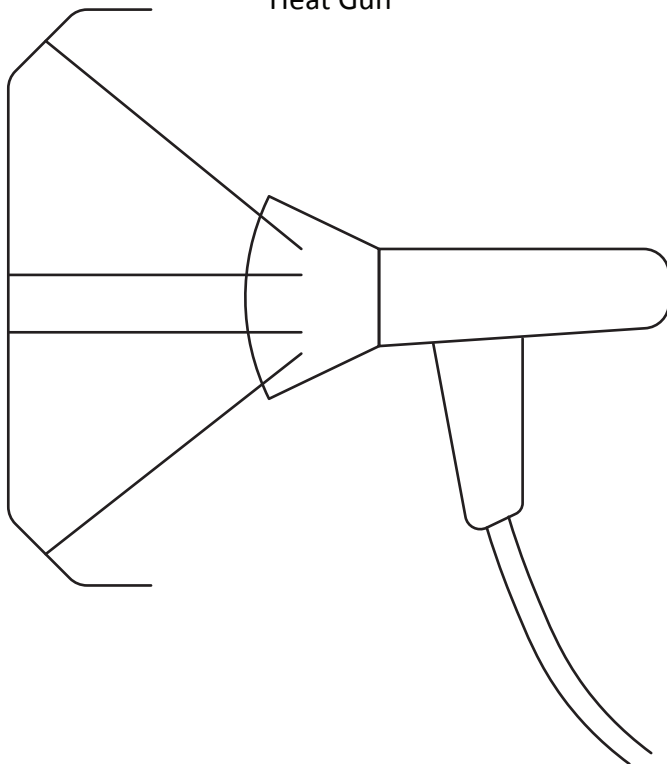
Drill Bit



Iron



Heat Gun



Tool List

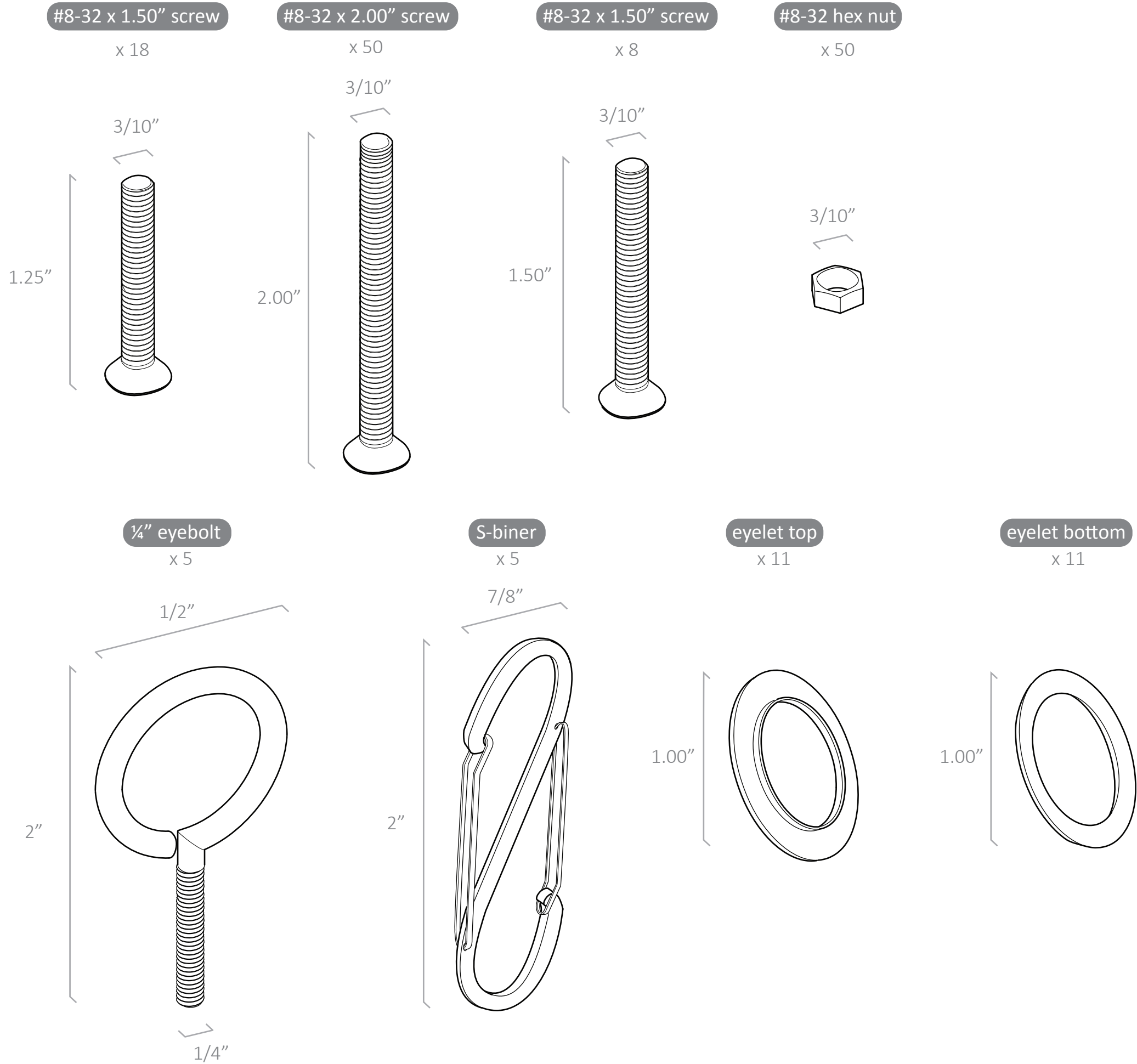
For Review  
Scale: N/A  
10.10.16  
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Hoop House

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## Hardware List

For Review  
Scale: N./A  
07.10.16  
14 of 26

C3

## Hoop House

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conduit cut sheet

7'-5"

2.1

2.2

2.3

2.4

2.5

A diagram showing a rectangular area divided into five horizontal sections. The total dimensions are 9' x 4". The sections are labeled 1.1, 1.2, 1.3, 1.4, and 1.5 from top to bottom. Each section is represented by a horizontal line with a dashed line extending to the right. The label "9'-4\"" is positioned above the top section.

Diagram showing four horizontal bars (3.1, 3.2, 3.3, 3.4) with dimensions and labels:

- Bar 3.1: Dimensions 5'-5" (total length), 3" (segment), 3" (segment), 7" (segment). Labels: 7.1, 7.5, 7.2, 7.6, 7.3, 7.7.
- Bar 3.2: Dimensions 5'-5" (total length), 3" (segment), 3" (segment), 7" (segment). Labels: 7.1, 7.5, 7.2, 7.6, 7.3, 7.7.
- Bar 3.3: Dimensions 5'-5" (total length), 3" (segment), 3" (segment), 7" (segment). Labels: 7.1, 7.5, 7.2, 7.6, 7.3, 7.7.
- Bar 3.4: Dimensions 5'-5" (total length), 3" (segment), 3" (segment), 7" (segment). Labels: 7.1, 7.5, 7.2, 7.6, 7.3, 7.7.

Labels 7.1, 7.5, 7.2, 7.6, 7.3, 7.7 are positioned below the bars. A bracket labeled "wheel attachment pieces" points to the 7" segment of bar 3.1.

total number of 10' conduit pieces : 18

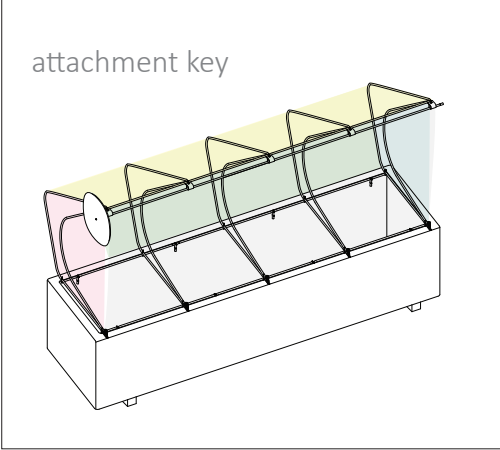
| LABEL     | ITEM             |
|-----------|------------------|
| 1.1 - 1.5 | outer modules    |
| 2.1 - 2.5 | inner modules    |
| 3.1 - 3.4 | gussets          |
| 4.1 - 4.3 | anchor bars      |
| 5         | spool bar        |
| 7.1 - 7.8 | anchoring pieces |

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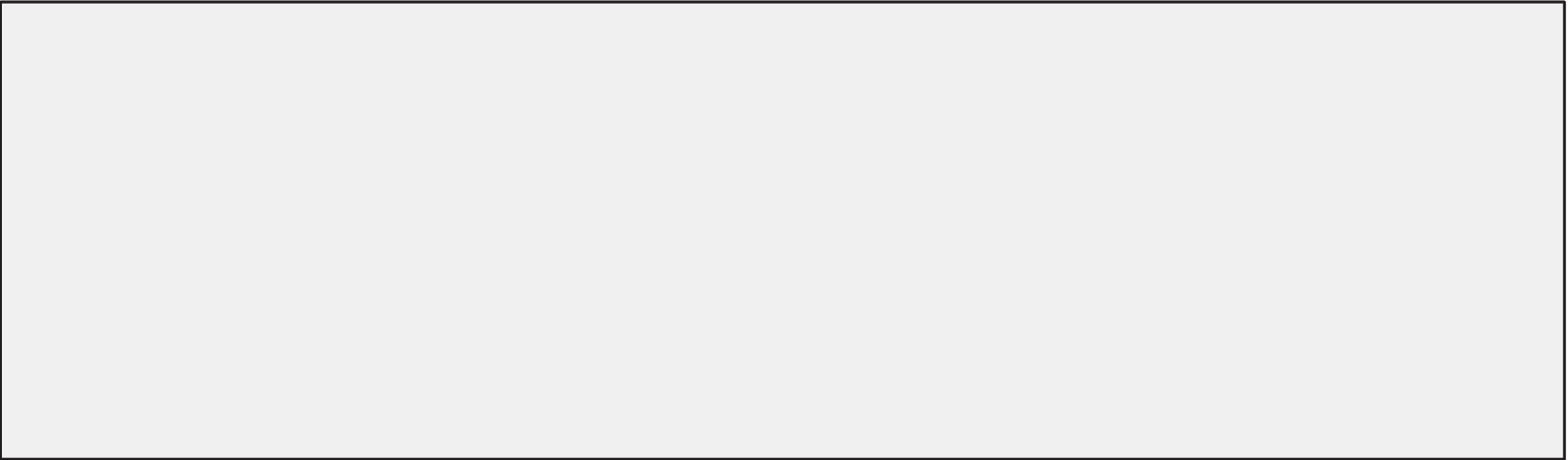
David Lawrence Convention Center (Roof)  
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## Sheet Metal

For Review  
Scale: N/A  
10.10.16  
15 of 26

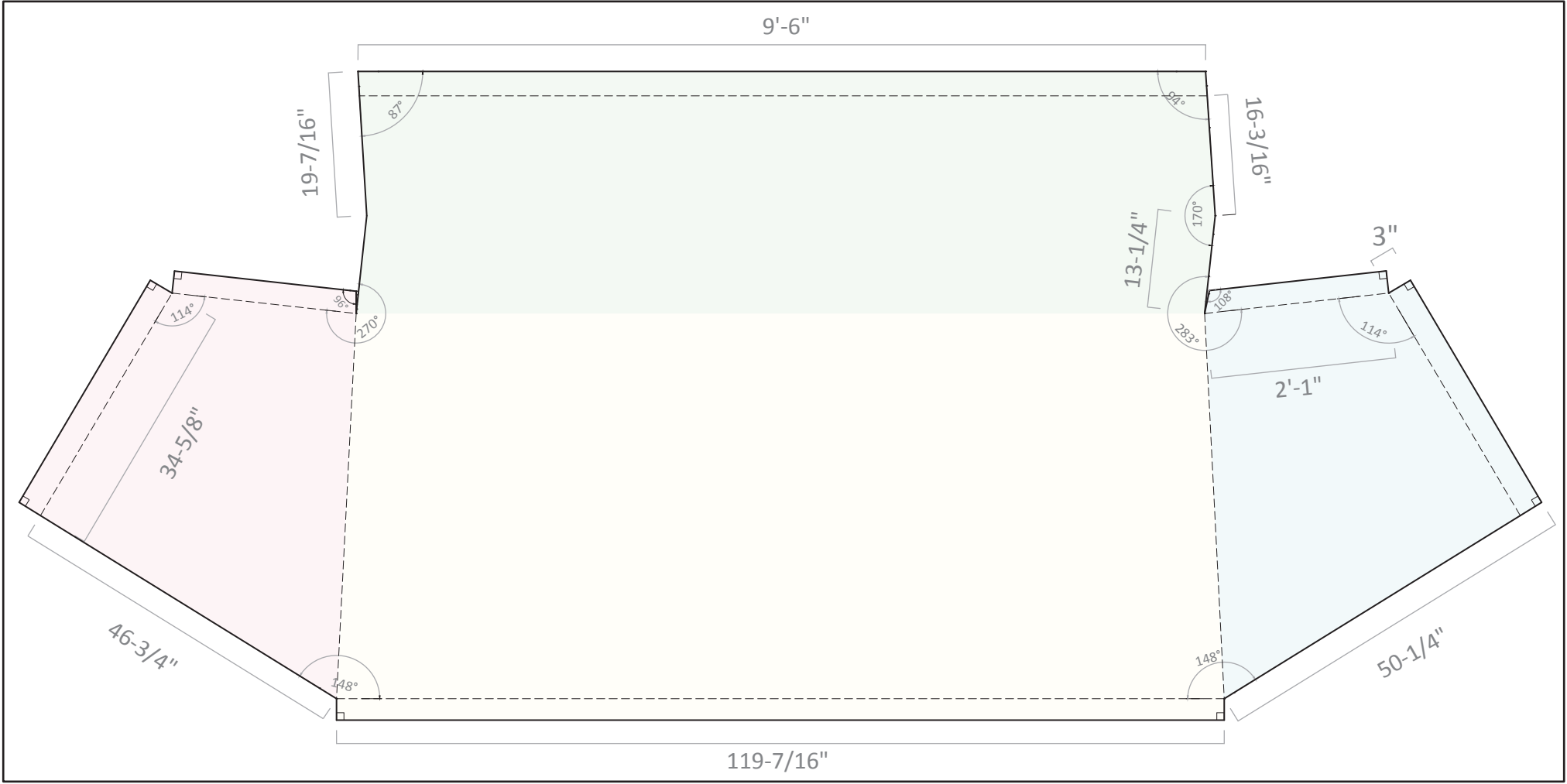


4'-2"



9'-9"

8'-9"



### Cut Sheet II: Plastic

For Review  
Scale: N/A  
10.10.16  
16 of 26

C5

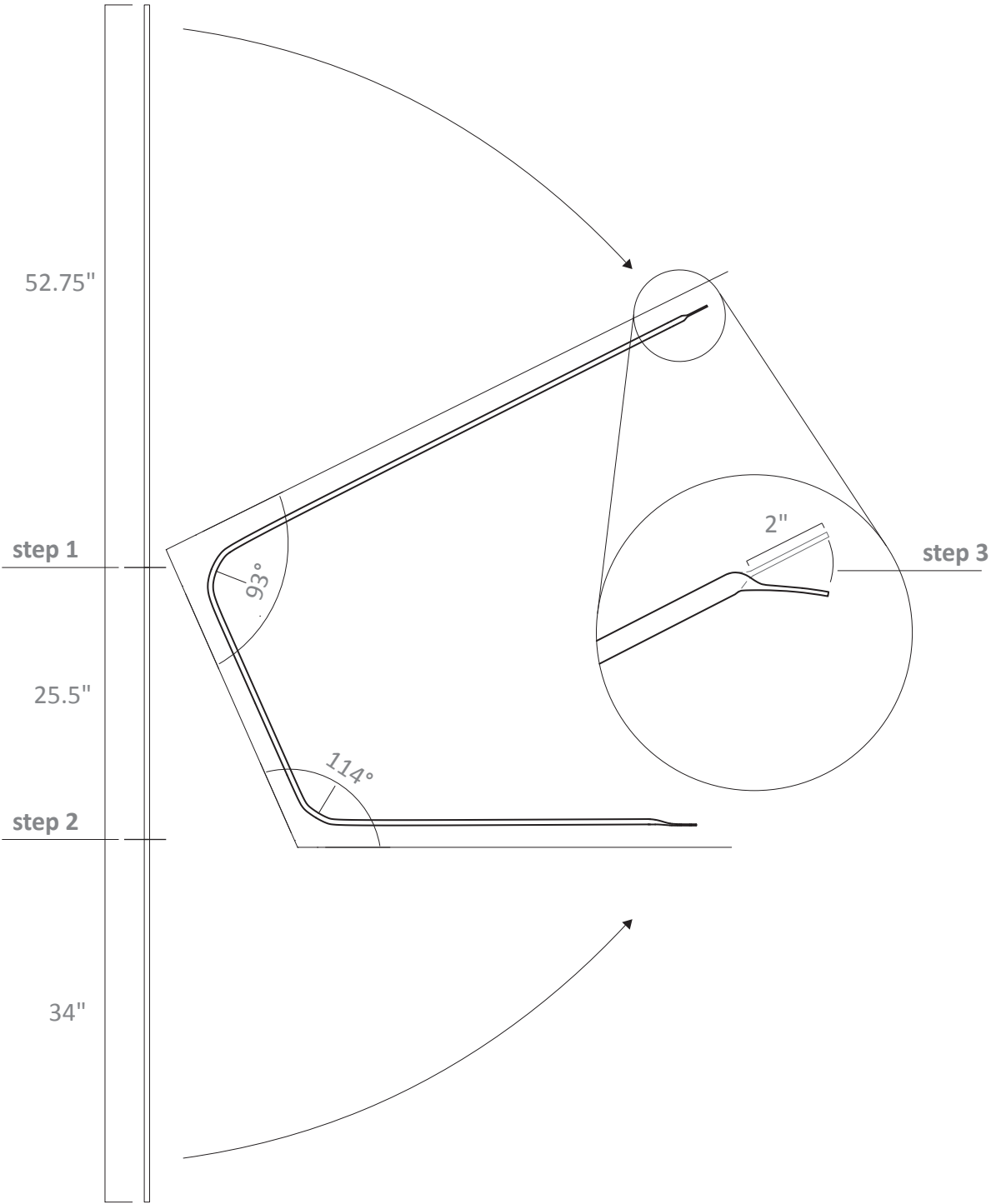
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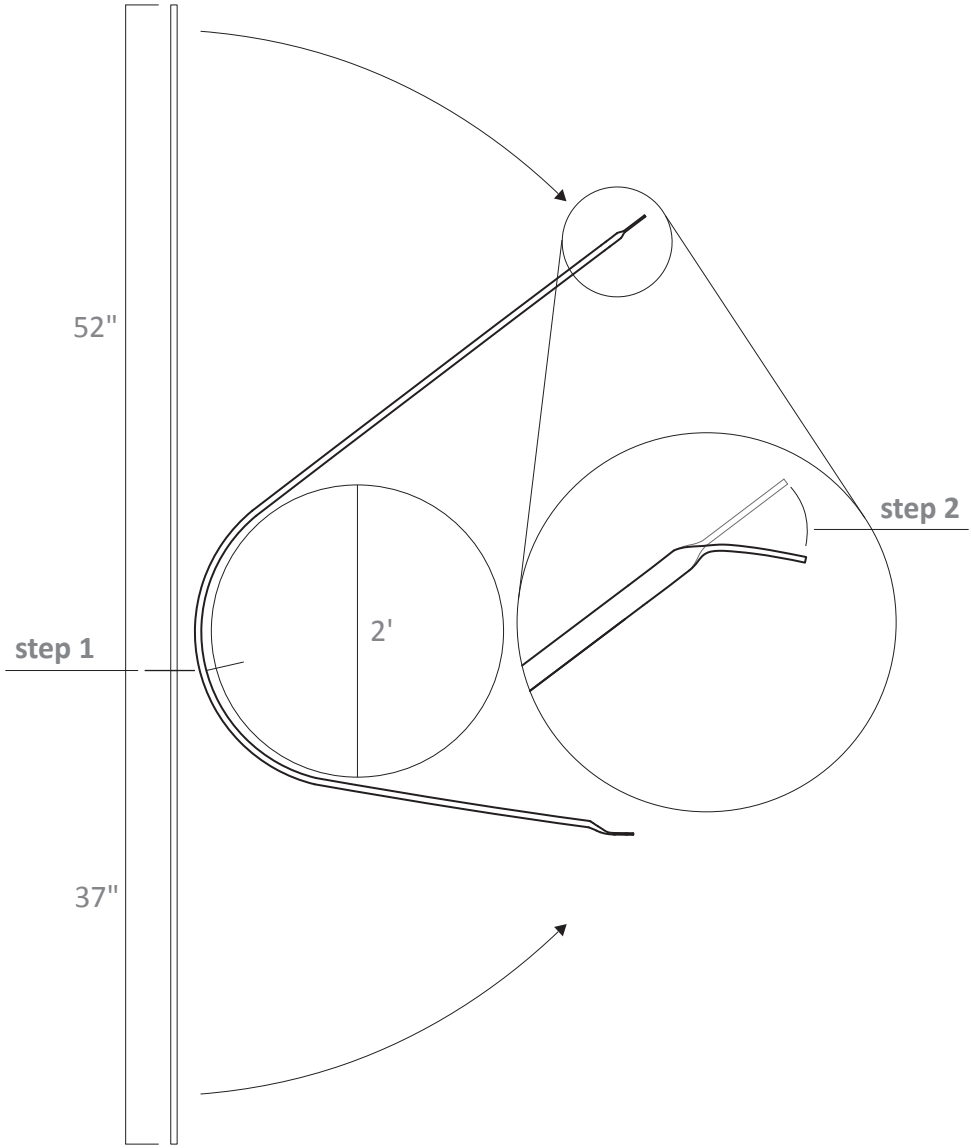
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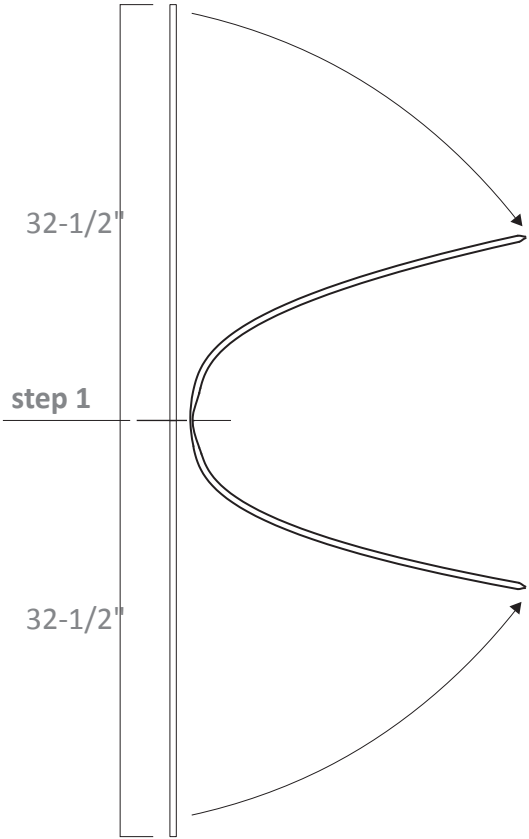
module 1.x



module 2.x



module 3.x



| LABEL     | ITEM          |
|-----------|---------------|
| 1.1 - 1.5 | outer modules |
| 2.1 - 2.5 | inner modules |
| 3.1 - 3.4 | gussets       |
| 4.1 - 4.3 | anchor bars   |
| 5         | spool bar     |
| 6         | acrylic wheel |

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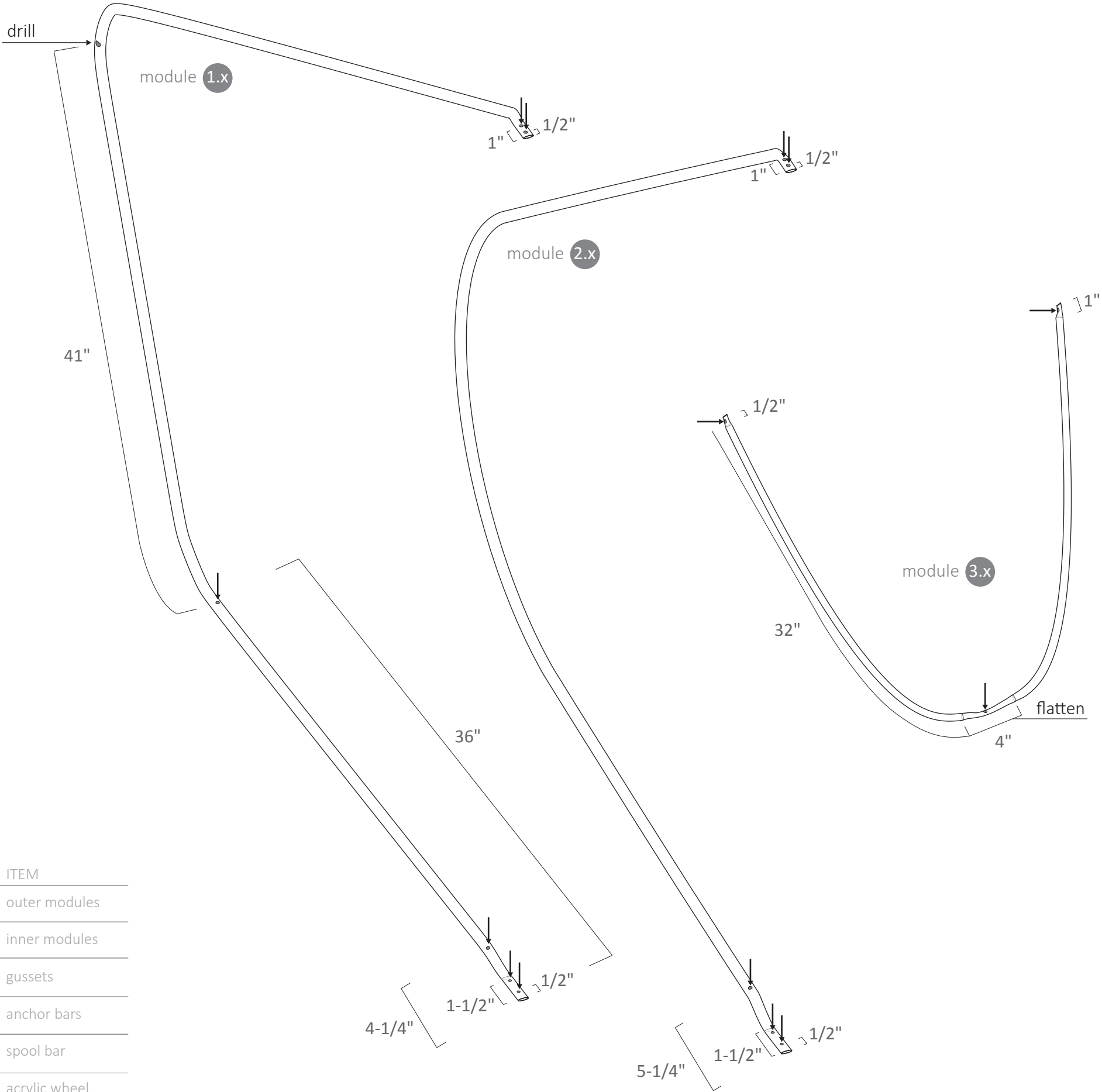
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Bend Sheet: Conduit and  
Sheet Metal

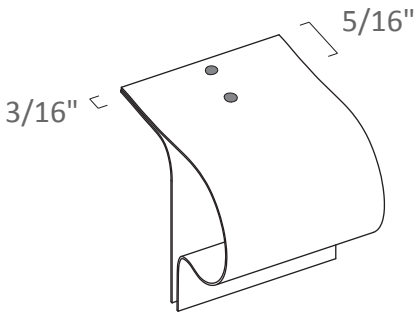
C6

For Review  
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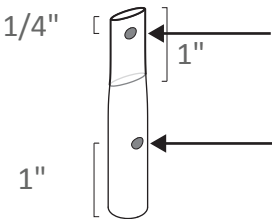
| LABEL     | ITEM             |
|-----------|------------------|
| 1.1 - 1.5 | outer modules    |
| 2.1 - 2.5 | inner modules    |
| 3.1 - 3.4 | gussets          |
| 4.1 - 4.3 | anchor bars      |
| 5         | spool bar        |
| 6         | acrylic wheel    |
| 7.1 - 7.8 | anchoring pieces |



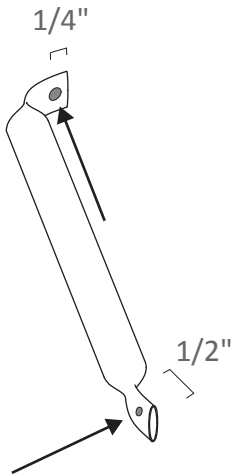
### sheet metal



### anchoring pieces



### wheel attachment pieces



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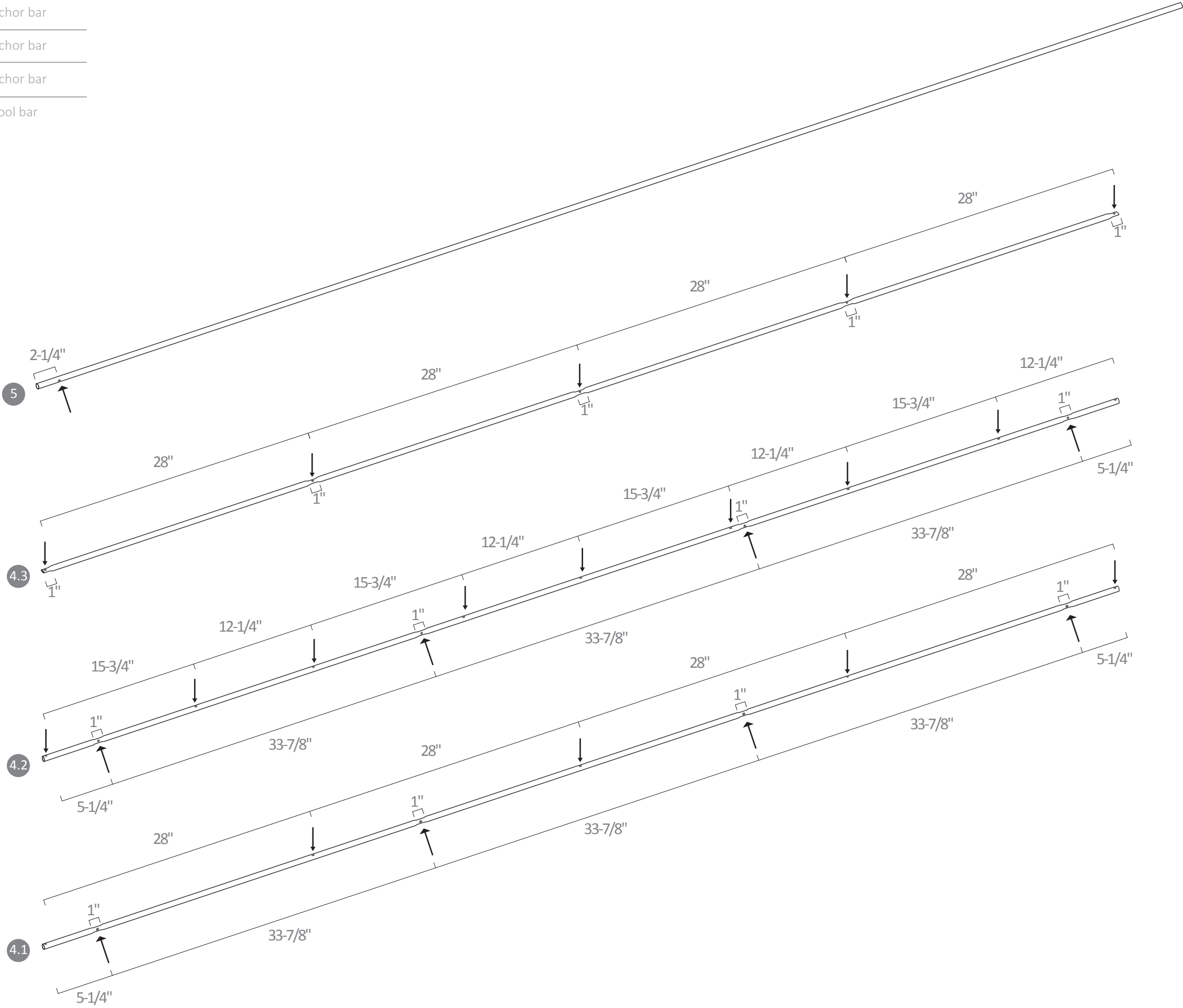
Drilling and Flattening I

For Review  
Scale: N/A  
10.10.16  
18 of 26

C7



| LABEL | ITEM       |
|-------|------------|
| 4.1   | anchor bar |
| 4.2   | anchor bar |
| 4.3   | anchor bar |
| 5     | spool bar  |



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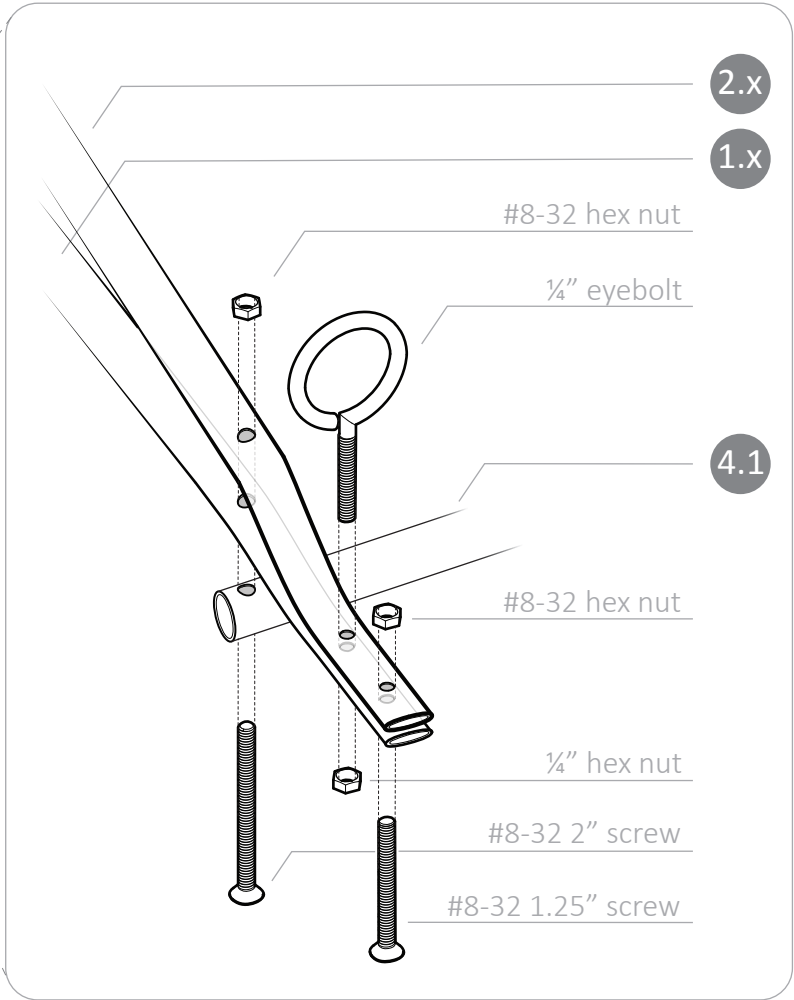
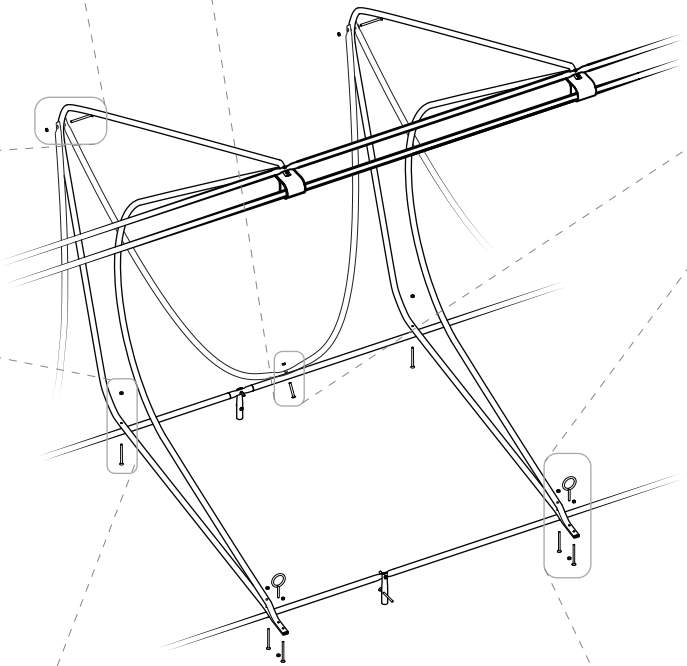
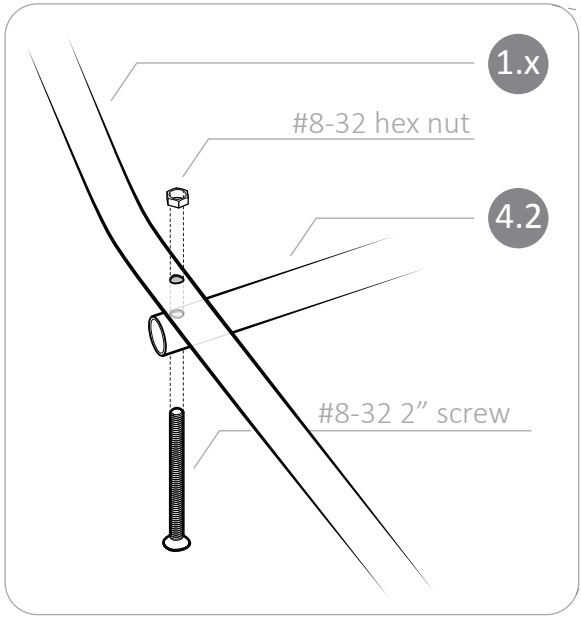
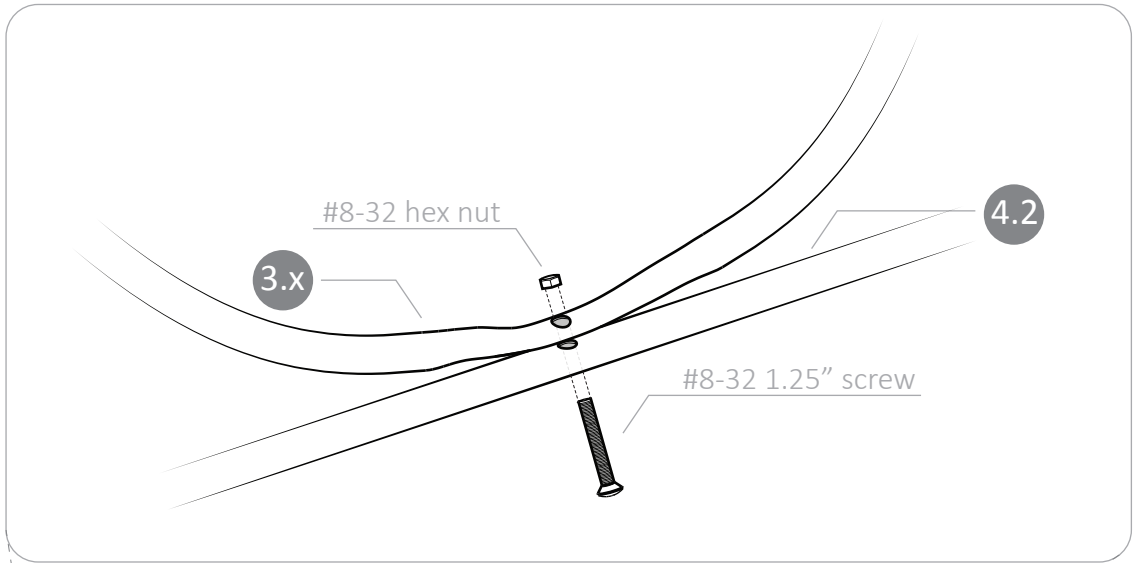
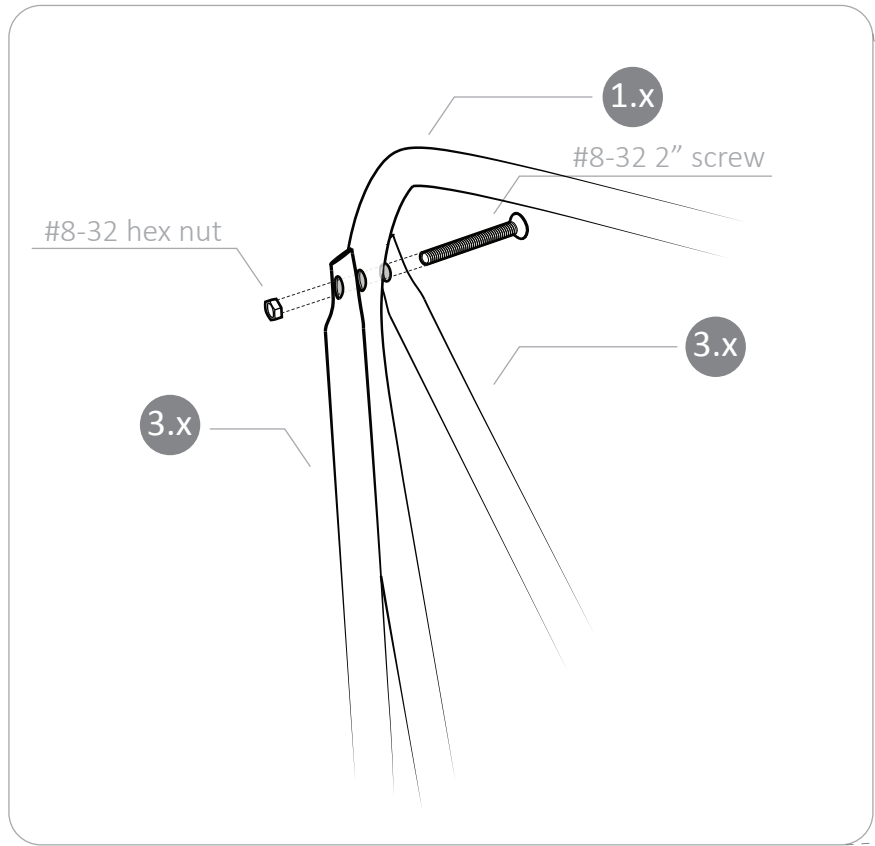
David Lawrence Convention Center (Roof)  
199 10th St, Pittsburgh, PA 15222

Drilling and Flattening II

For Review  
Scale: N/A  
10.10.16  
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C8

| LABEL     | ITEM             |
|-----------|------------------|
| 1.1 - 1.5 | outer modules    |
| 2.1 - 2.5 | inner modules    |
| 3.1 - 3.4 | gussets          |
| 4.1 - 4.3 | anchor bars      |
| 5         | spool bar        |
| 6         | acrylic wheel    |
| 7.1 - 7.8 | anchoring pieces |



## Connection Detail I: Screw Joint

C9

For Review  
Scale: N/A  
10.10.16  
20 of 26

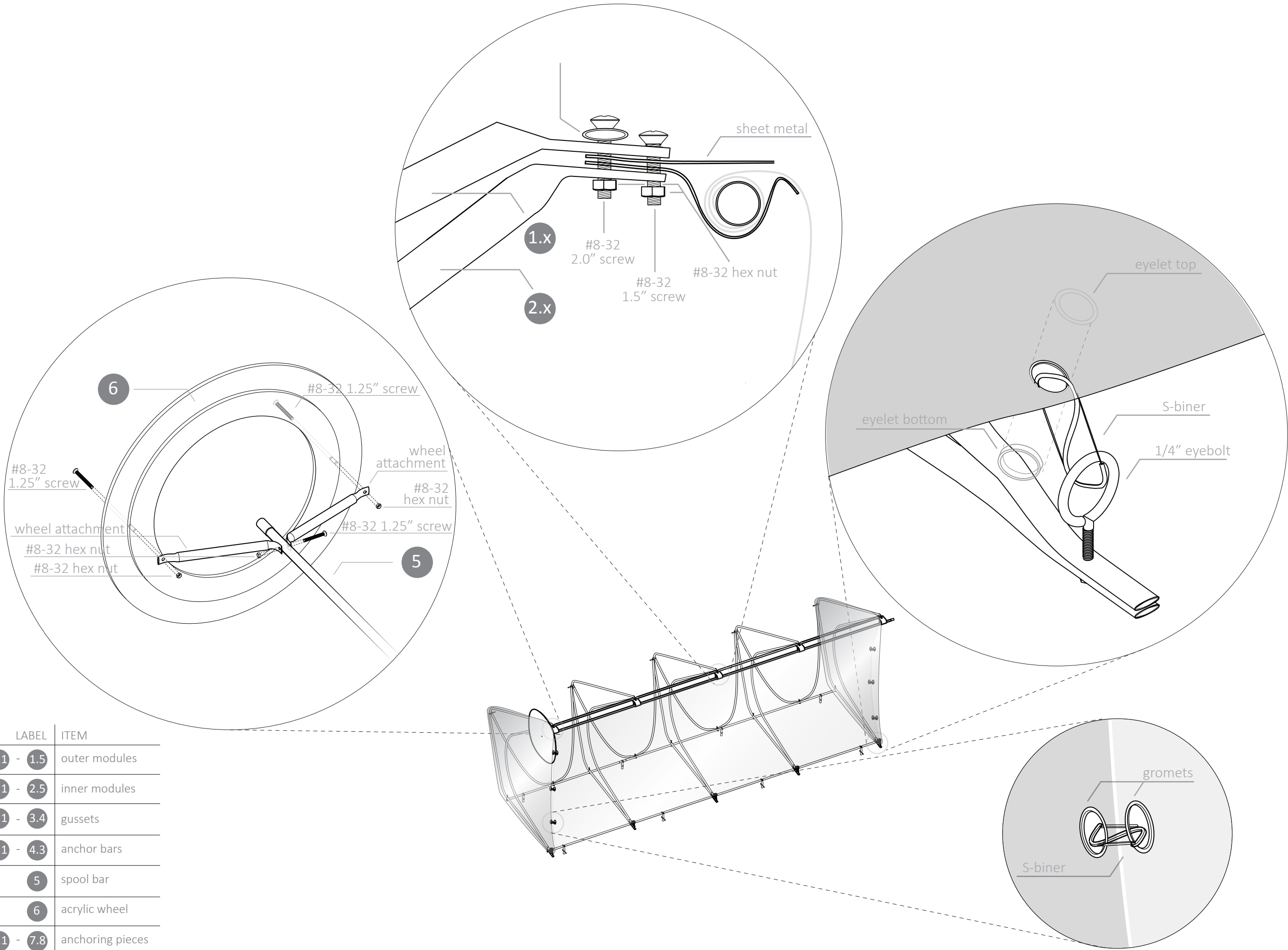
## Hoop House

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| LABEL     | ITEM             |
|-----------|------------------|
| 1.1 - 1.5 | outer modules    |
| 2.1 - 2.5 | inner modules    |
| 3.1 - 3.4 | gussets          |
| 4.1 - 4.3 | anchor bars      |
| 5         | spool bar        |
| 6         | acrylic wheel    |
| 7.1 - 7.8 | anchoring pieces |



## Connection Detail II: Wheel and Spool Joint

# C10

For Review  
Scale: N/A  
10.10.16  
21 of 26

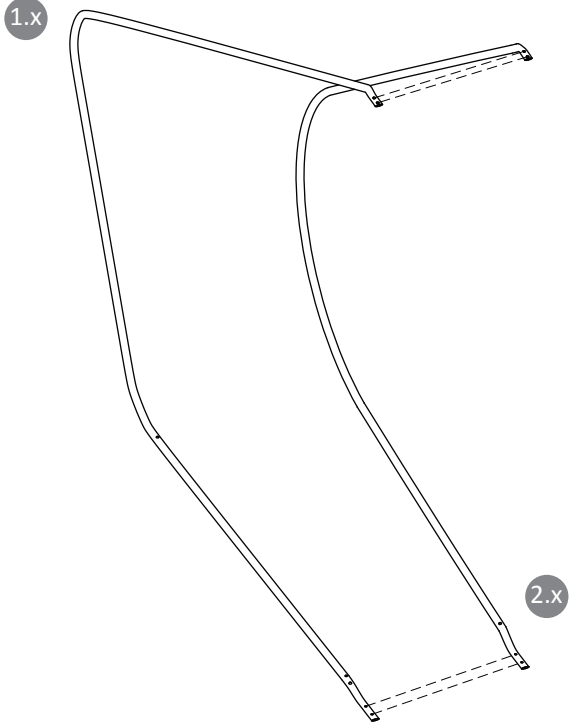
### Hoop House

David Lawrence Convention Center (Roof)  
199 10th St, Pittsburgh, PA 15222

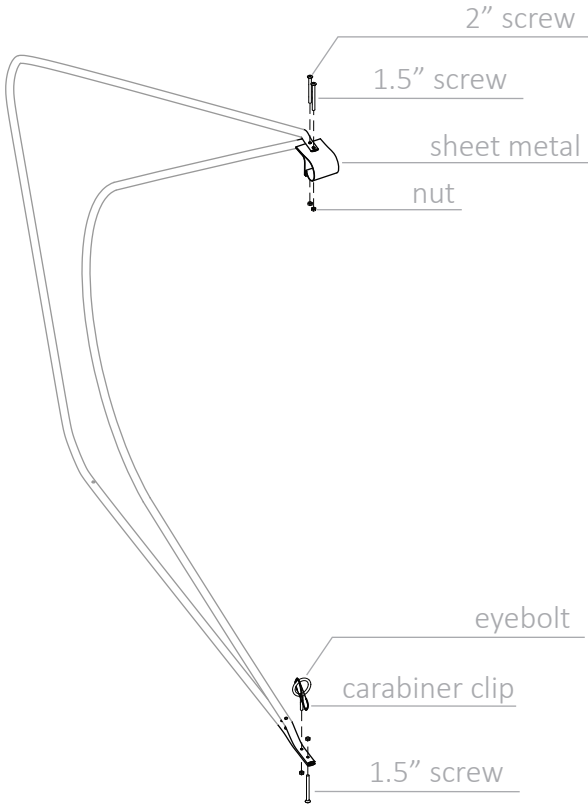
### Citra

K. Euchukanonchai  
K. Jiang  
D. Kim  
H. Qureshi  
S. Zhen

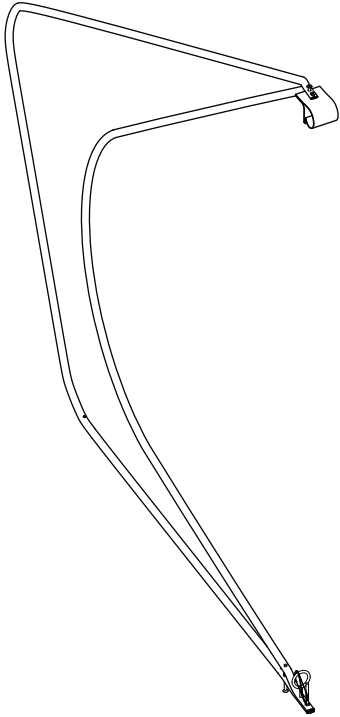
| LABEL     | ITEM          |
|-----------|---------------|
| 1.1 - 1.5 | outer modules |
| 2.1 - 2.5 | inner modules |
| 3.1 - 3.4 | gussets       |



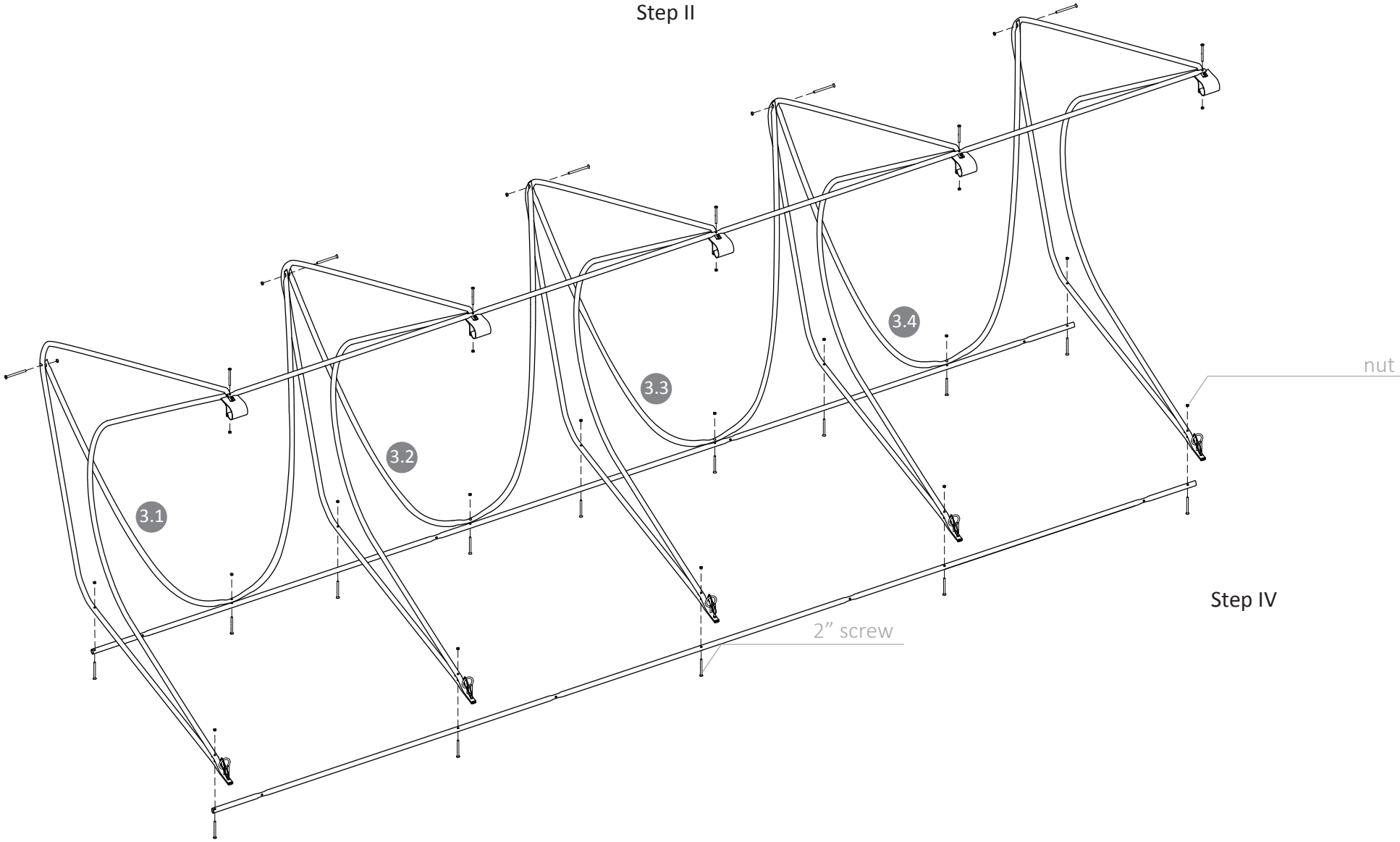
Step I



Step II



Step III



Step IV

## Assembly I: Modules

For Review  
Scale: N/A  
10.10.16  
22 of 26

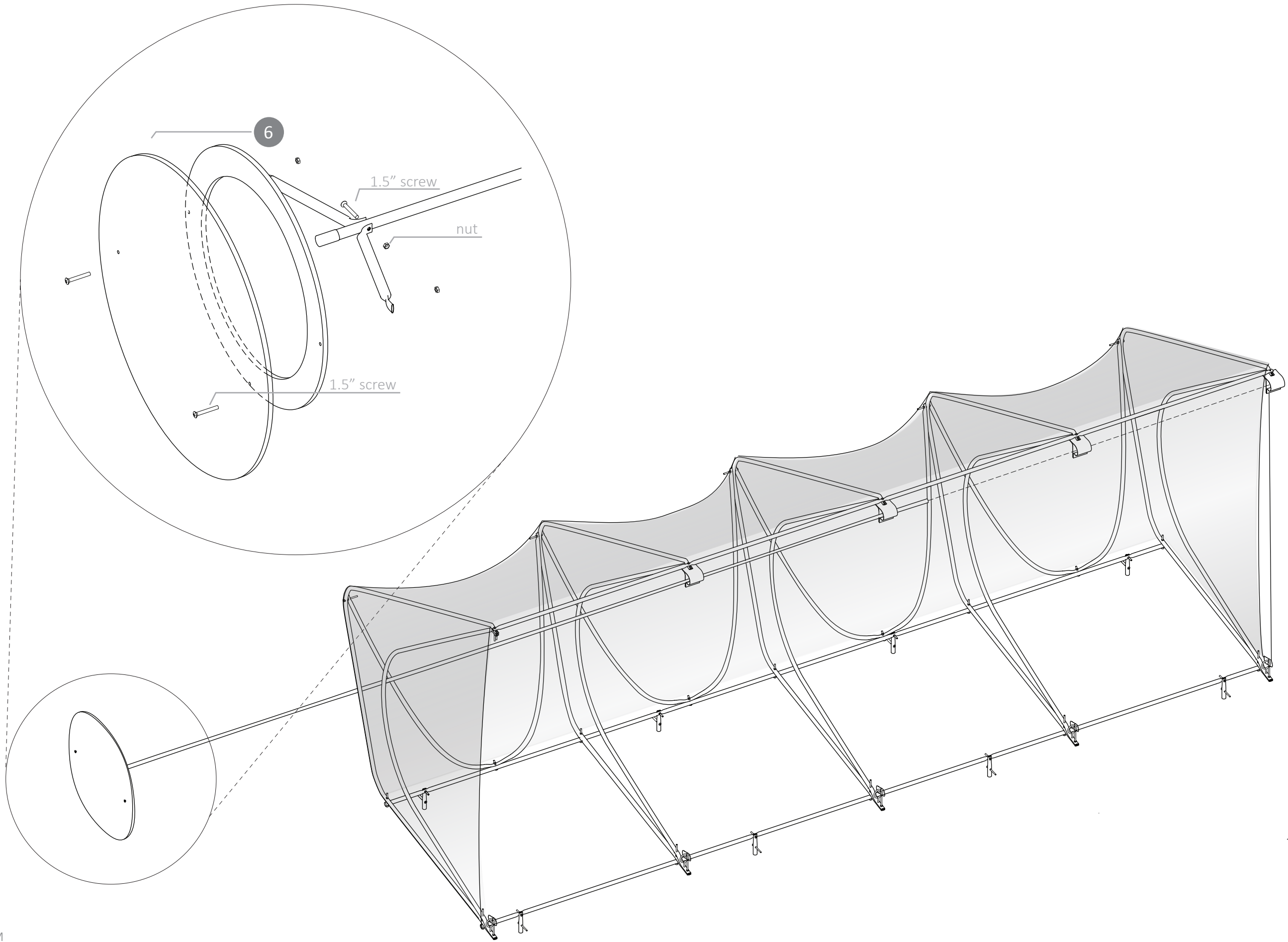
## Hoop House

David Lawrence Convention Center (Roof)  
199 10th St, Pittsburgh, PA 15222

## Citra

K. Euchukanonchai  
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D. Kim  
H. Qureshi  
S. Zhen

# C11



Assembly II: Spool and Wheel

For Review  
Scale: N/A  
10.10.16  
23 of 26

Hoop House

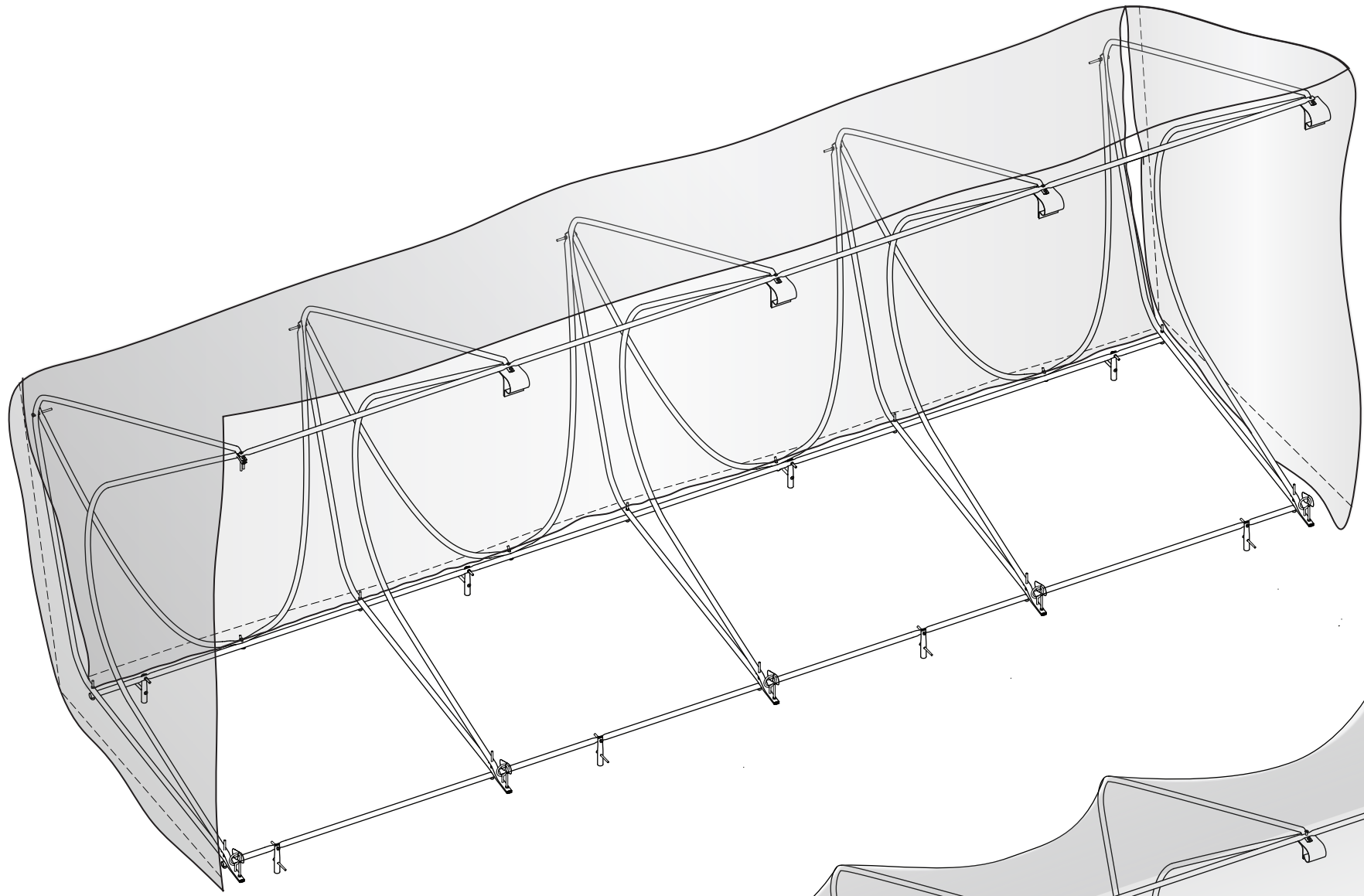
David Lawrence Convention Center (Roof)  
199 10th St, Pittsburgh, PA 15222

Citra

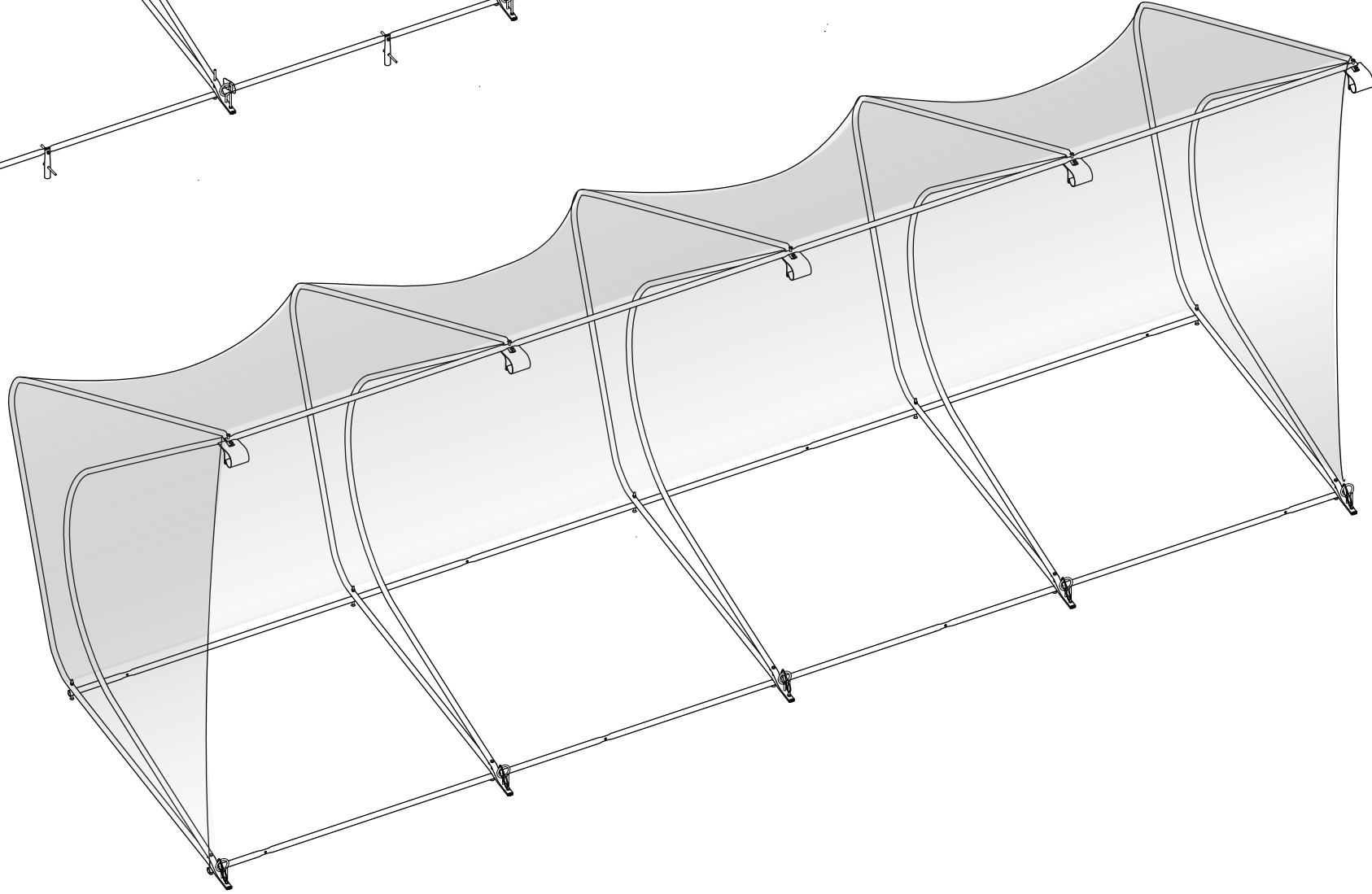
K. Euchukanonchai  
K. Jiang  
D. Kim  
H. Qureshi  
S. Zhen

C12





unshrunk plastic



shrunken plastic

## Assembly III: Plastic

For Review  
Scale: N/A  
10.10.16  
23 of 26

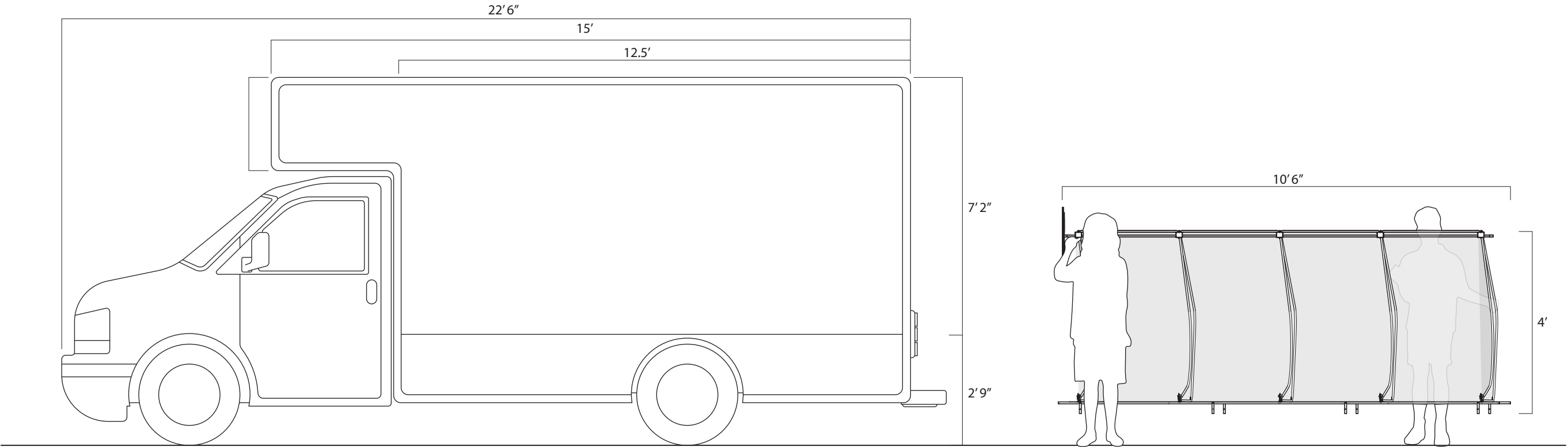
# C13

## Hoop House

David Lawrence Convention Center (Roof)  
199 10th St, Pittsburgh, PA 15222

## Citra

K. Euchukanonchai  
K. Jiang  
D. Kim  
H. Qureshi  
S. Zhen

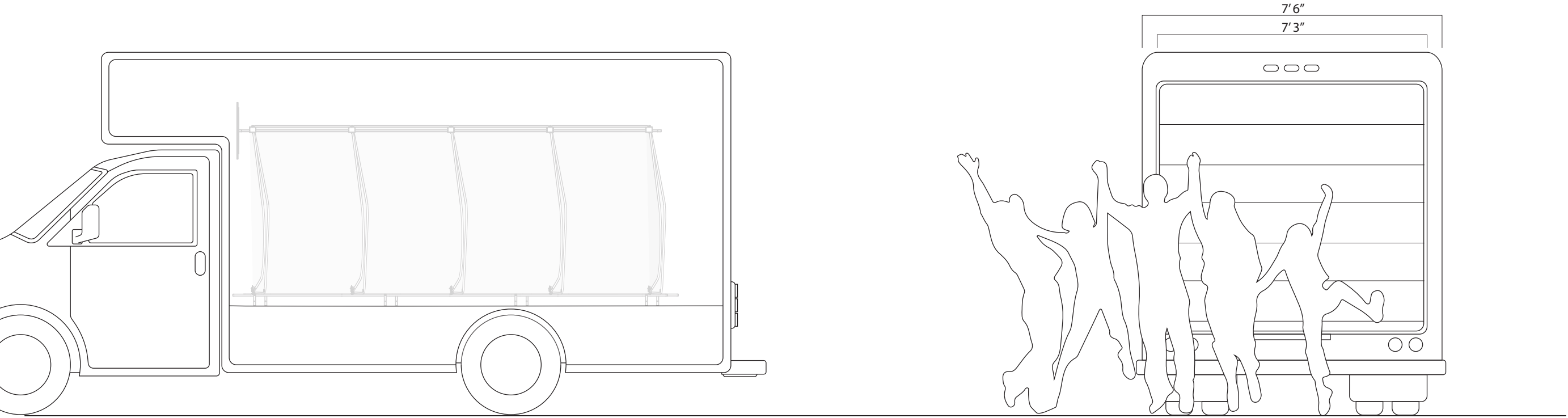


Citra

K. Euchukanonchai  
K. Jiang  
D. Kim  
H. Qureshi  
S. Zhen

Hoop House

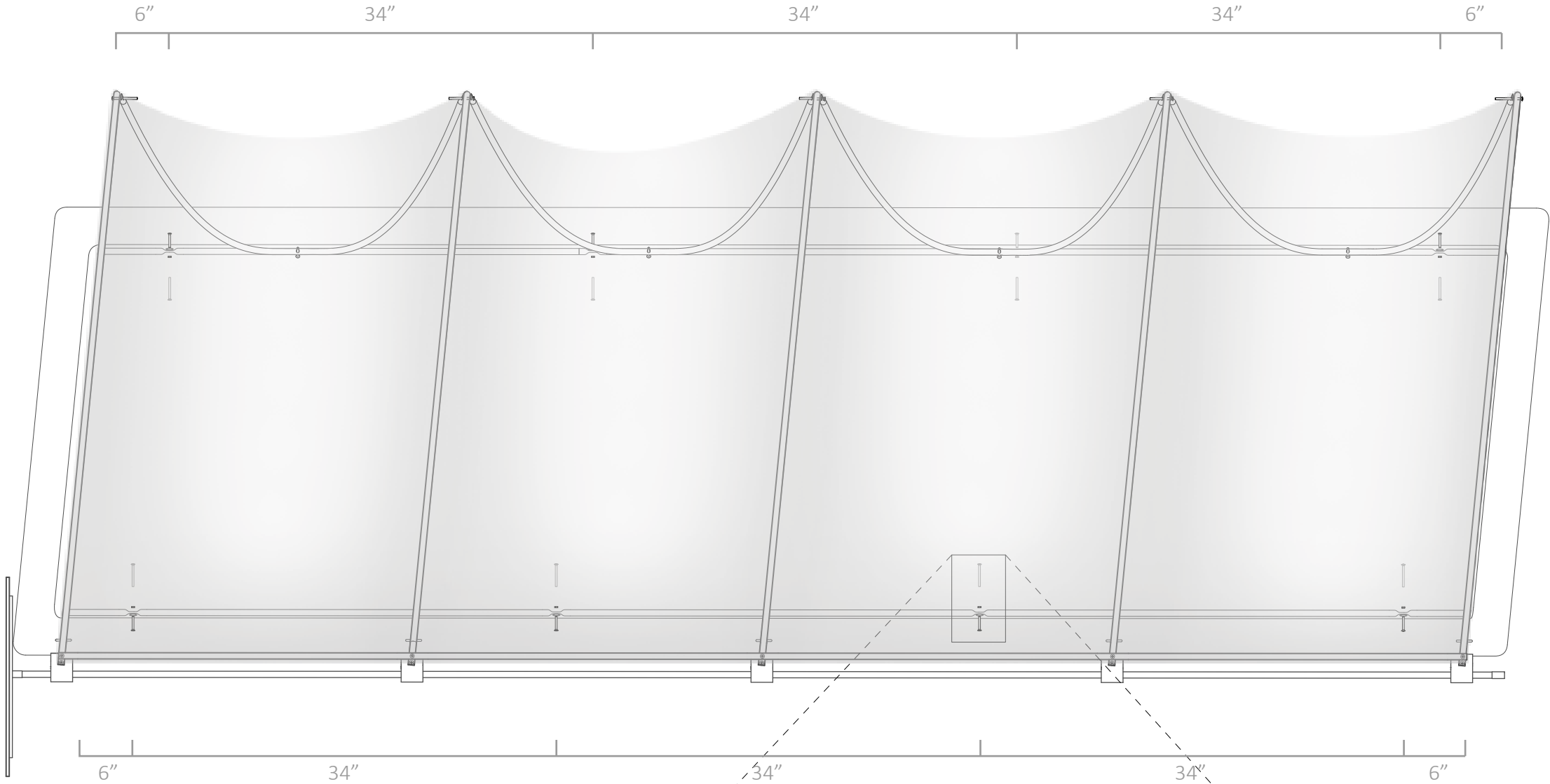
David Lawrence Convention Center (Roof)  
199 10th St, Pittsburgh, PA 15222



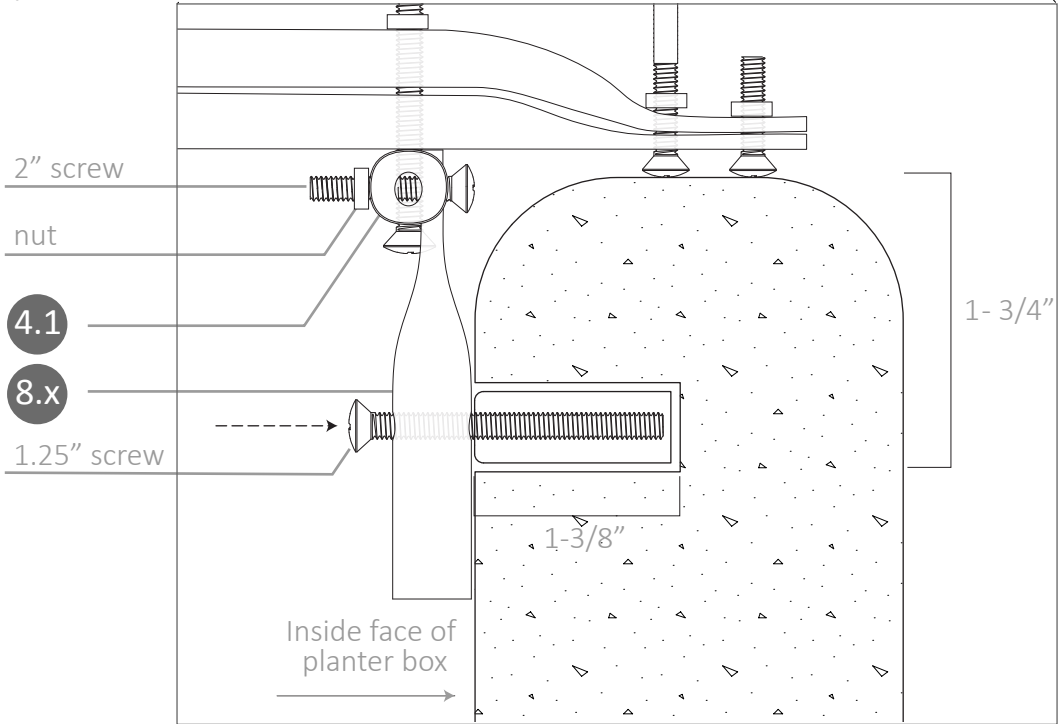
Packing and Shipping

For Review  
Scale: N/A  
10.10.16  
25 of 26

| LABEL     | ITEM             |
|-----------|------------------|
| 1.1 - 1.5 | outer modules    |
| 2.1 - 2.5 | inner modules    |
| 3.1 - 3.4 | gussets          |
| 4.1 - 4.3 | anchor bars      |
| 5         | spool bar        |
| 6         | acrylic wheel    |
| 7.1 - 7.8 | anchoring pieces |



anchoring system



### Citra

K. Euchukanonchai  
K. Jiang  
D. Kim  
H. Qureshi  
S. Zhen

### Hoop House

David Lawrence Convention Center (Roof)  
199 10th St, Pittsburgh, PA 15222

### Installation and Removal

For Review  
Scale: N/A  
10.10.16  
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D2