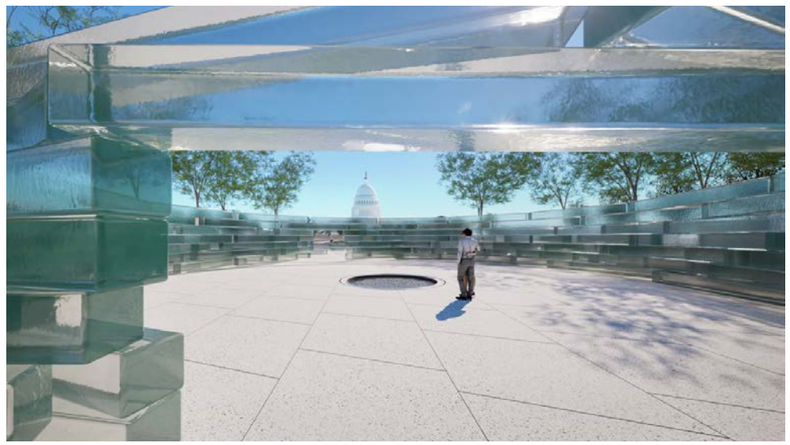


Fallen Journalists Memorial

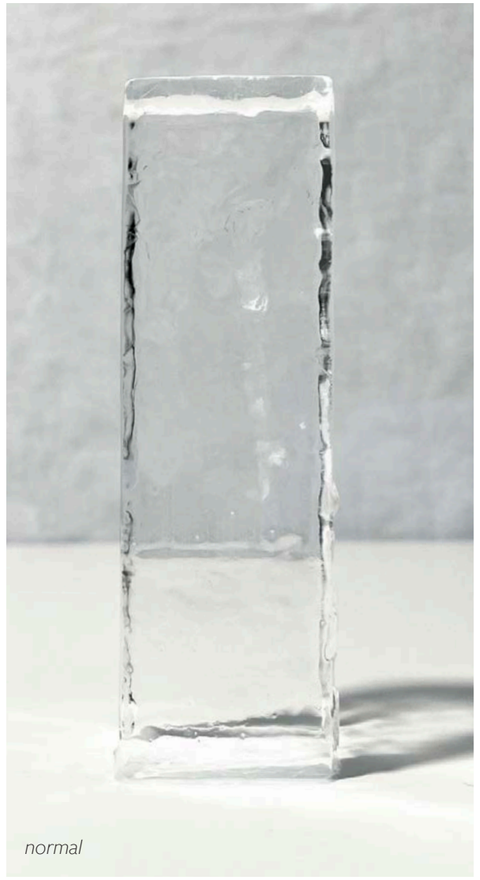
Commission of Fine Arts Meeting

19 September 2024

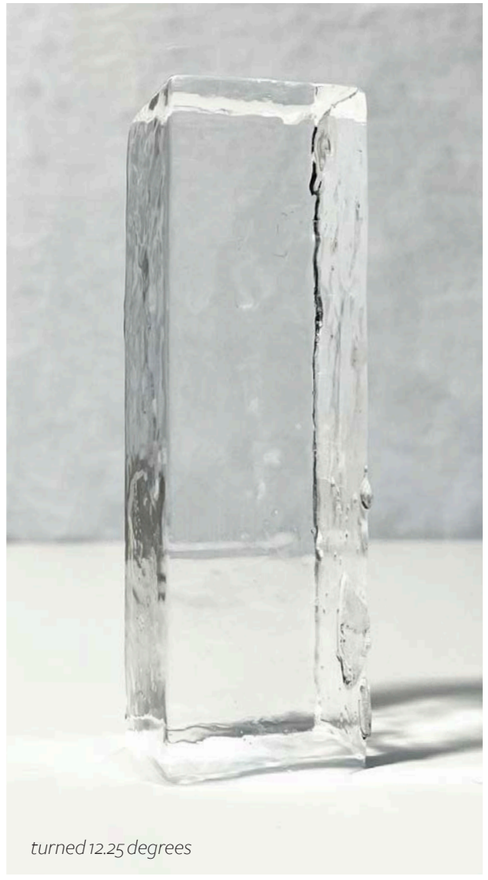
John Ronan Architects Chicago

Table of Contents

An investigative journalist sheds light on issues obscured in darkness. They clarify factual distortions and explain what is difficult to comprehend, making what is opaque become clear. Similarly, the memorial should engage with themes of transparency, opacity, distortion, clarity and light.

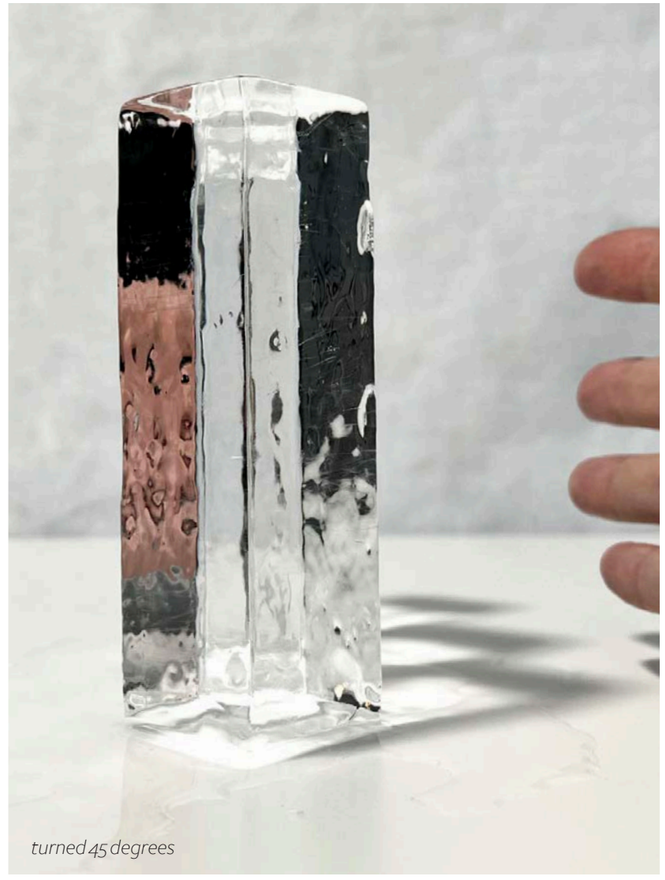


normal



turned 12.25 degrees

turned 22.5 degrees

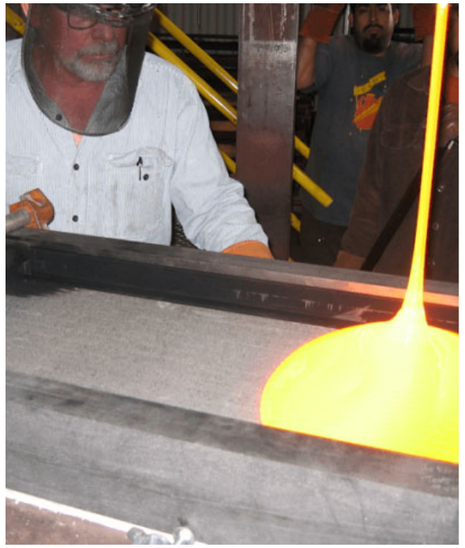


turned 45 degrees

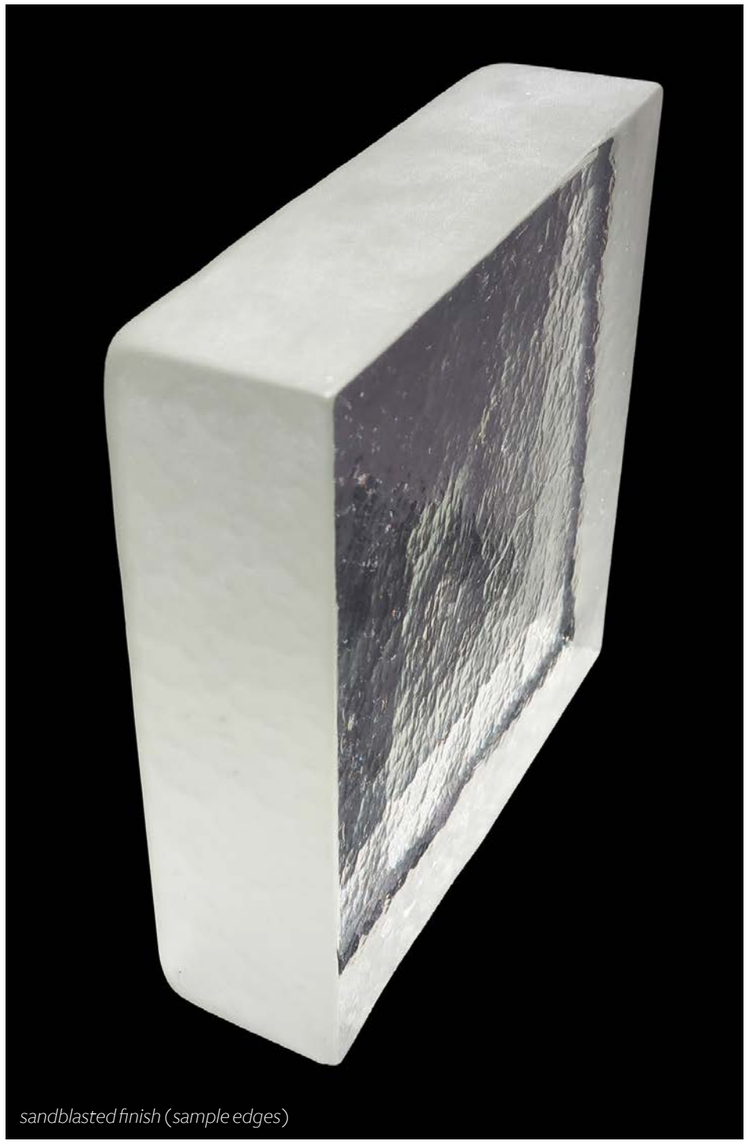
To explore these themes, we began by studying ice, which can be transparent, distorted, or opaque, depending on the viewer's perspective.

Stacking the ice elements, we noticed how reality can be distorted by the positioning of the stacked ice elements.

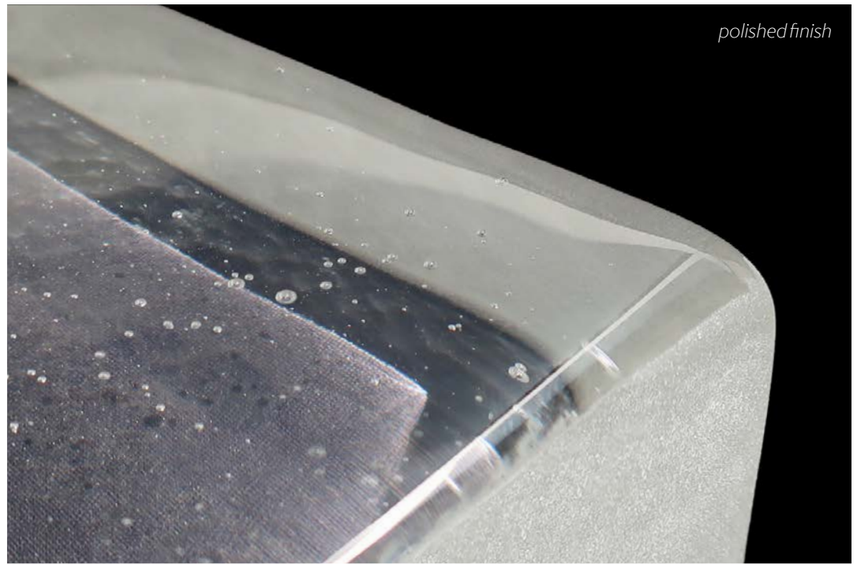
Borosilicate glass is a type of glass containing boron trioxide which allows for a very low coefficient of thermal expansion. It is thermal shock resistant and will not crack under extreme temperature changes like regular soda-lime glass. (Pyrex is a form of borosilicate glass)



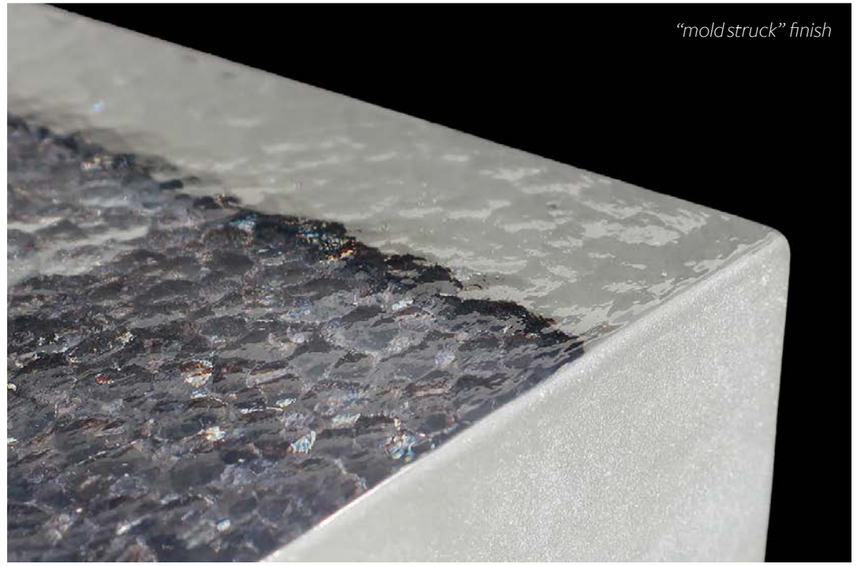
The memorial will need to **be unique** and **unconventional** to stand out amidst a crowded field. Solid elements of cast glass is the proposed material and main protagonist of our story. Each glass element will be unique and slightly different, to represent the unique personal story of each journalist remembered here.



sandblasted finish (sample edges)



polished finish



"mold struck" finish

will the glass become hot to the touch?
glass does not reflect heat, but instead heat passes through glass, with only small amounts absorbed. this is why thermometers still use glass, and why the heat from the sun passes through a window and can be felt on the inside of a house (it should be noted that the bench-height glass elements in our scheme are located under shade trees for added human comfort).

will the glass break?
high grade borosilicate glass is the strongest glass made and is resistant to thermal shock.

how long does glass last?
essentially, the decomposition rate of glass is none. there are no microorganisms on planet earth able to break down glass materials, and since it takes thousands of years, there is not a single glass bottle on the planet that has even come close to decomposing. it is speculated that it takes over 4000 years for glass to break up and decompose.

how will the glass elements be connected?
stacked glass elements will be installed with a silicone pad between them to cushion and adhere them together.

is glass easy to maintain?
yes. periodic cleanings (every 4-6 weeks) using ordinary water from the municipal supply will supplement the natural cleaning provided by rain water. glass elements are scratch resistant, they change little over time and will not rust or fade. in addition, graffiti can be removed easily from glass without special tools or chemicals that might stain or change the appearance of other materials.

What is the difference between soda-lime and borosilicate glass?

Soda-Lime glass is the most common type of glass due to its workability and affordability (over 90% of glass used in commercial applications is soda-lime glass). It consists of roughly 60-70% silica, 13% sodium dioxide (soda), and 9% calcium oxide (lime), along with other trace elements.[1][2][5]

Borosilicate glass is a specialty glass invented in the 1880's by Otto Schott, designed to withstand extreme thermal, chemical, and mechanical conditions.[3] It contains roughly 80% silica and 13% boron oxide.[2][4][5] The high concentration of both silica and boron oxide gives the borosilicate glass a number of benefits over traditional soda-lime glass, including:

- Toughness and Scratch Resistance

  borosilicate glass has significantly increased durability and surface hardness compared to soda-lime.[3]

- Thermal Expansion and Shock Resistance

  borosilicate glass has less than half the thermal expansion and contraction rate of soda-lime glass, making it highly resistant to cracks and breakage as a result of thermal shock.[2][3]

- Chemical Stability

  borosilicate glass is very chemically stable, meaning it will resist attack by corrosive agents. [2][3]

- Optical Clarity

  borosilicate is used in optical applications due to its clarity and high light transmittance. (in comparison, soda-lime glass is less clear and often has a blue-green tint due to its high iron content.)[3]

borosilicate glass

Borosilicate glass is used in many different applications where high performance is required, including laboratory glassware, cookware and kitchen equipment, optics, medical devices, and electronic components.

telescope mirror blank

vacuum tube housing

kitchen cookware

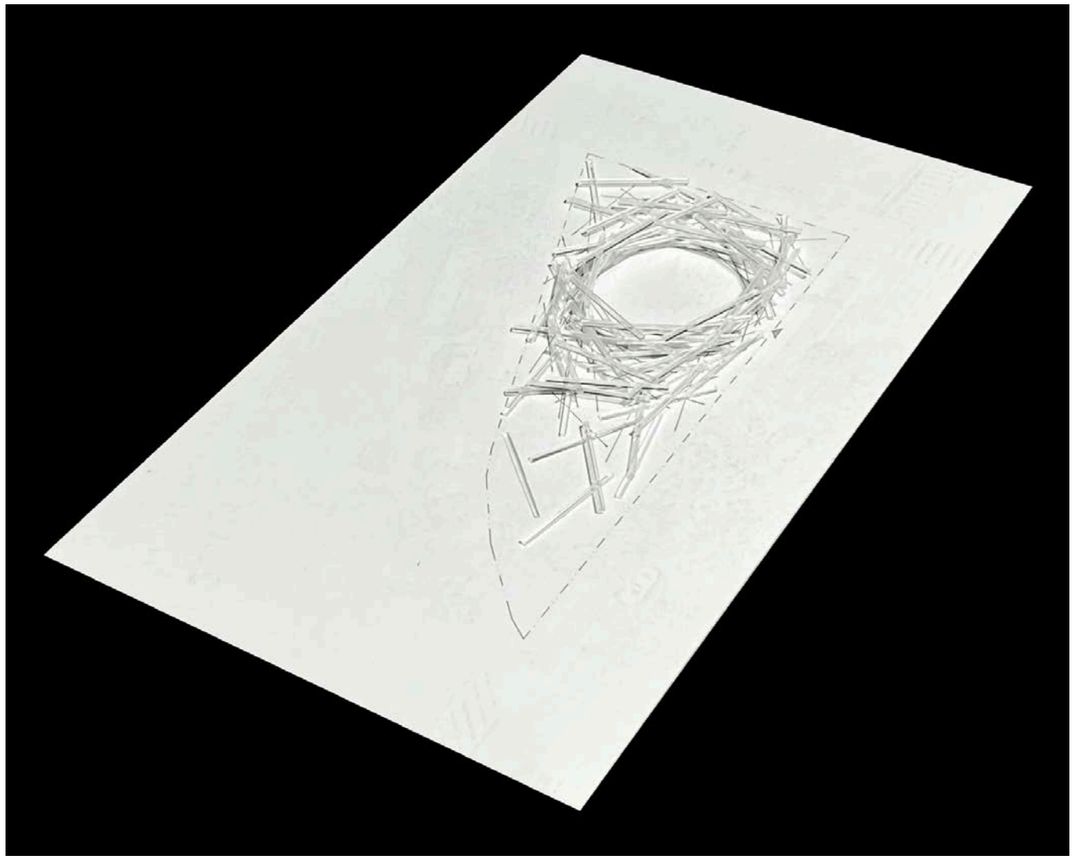
laboratory glassware

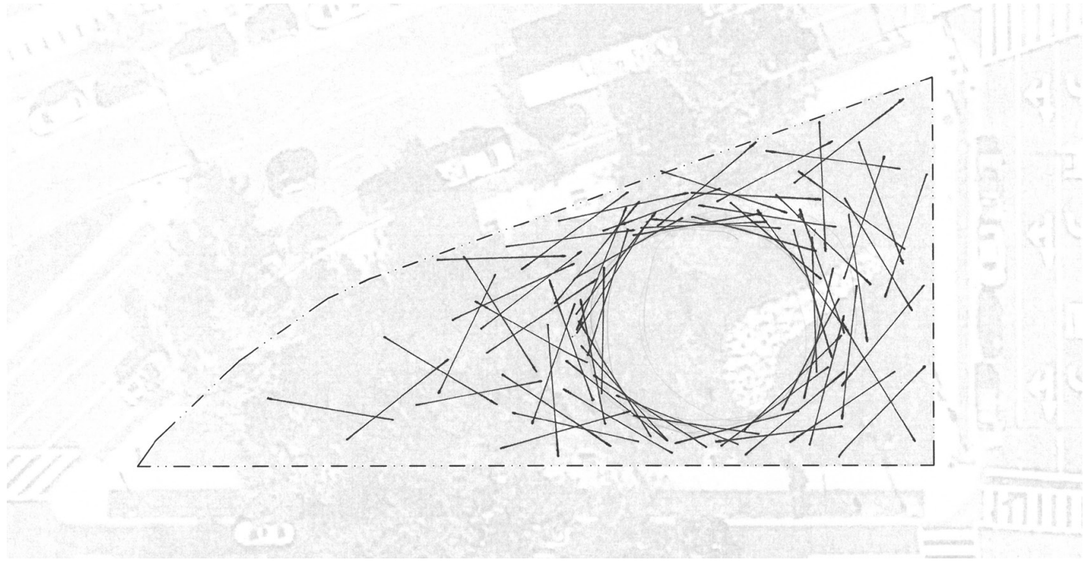
optical lens

footnotes: **1.** Britannica, "soda-lime glass." *https://www.britannica.com/technology/soda-lime-glass* **2.** Wondrwood, "What is Borosilicate Glass." *https://wondrwood.com/blogs/what-were-working-with/what-is-borosilicate-glass-why-is-it-better-than-regular-soda-lime-glass* **3.** Schott, "Borosilicate Glass." *https://www.schott.com/en-dk/expertise/materials/borosilicate-glass* **4.** Schott, "Schott - Technical Glasses - Physical and Technical Properties." Mar. 2020 (*see appendix*) **5.** camlab, "Borosilicate glass vs Soda Lime glass vs Pyrex - what is the difference?" *https://www.camlab.co.uk/what-types-laboratory-glassware-should-you-use*

		definition	borosilicate glass	granite	marble	unreinforced concrete	stainless steel	remarks
mechanical properties	**density**	amount of mass per unit volume	**140** lb/cu ft [12]	**162** lb/cu ft [10]	**168** lb/cu ft [10]	**140** lb/cu ft [3]	**490** lb/cu ft [2]	borosilicate glass is a similar density to granite, marble, and concrete.
	compressive strength	resistance of a material to breaking under compression	**290** ksi [7]	**320** ksi [8]	**78** ksi [9]	**3** ksi [3]	**30** ksi [2]	borosilicate glass has **greater** compressive strength than marble, unreinforced concrete, and stainless steel. it is similar to granite.
	tensile strength	resistance of a material to breaking under tension	**41** ksi [7]	**5.1** ksi [8]	**1.3** ksi [9]	**0.3** ksi [3]	**74** ksi [2]	borosilicate glass has **greater** tensile strength than granite, marble, and unreinforced concrete
	flexural strength	resistance of a material to breaking under bending	**5** ksi [7]	**3.5** ksi [8]	**2.2** ksi [10]	**0.3** ksi [3]	**30** ksi [2]	borosilicate glass has **greater** flexural strength than granite, marble, and unreinforced concrete
	knoop hardness	measure of a material's surface hardness, or its resistance to scratching and abrasion.	**480** [12]	**550 - 650** [1]	**140 - 180** [1]	**550-850** [14]	**166** [6]	borosilicate glass is **harder** than marble and stainless steel, and is similar to granite.
thermal properties	**thermal expansion coefficient**	rate at which a material expands with increase in temperature	**3.3 x 10^{-6}** K [11]	**7.9 - 8.4 x 10^{-6}** K [5]	**5.5 - 14.1 x 10^{-6}** K [5]	**13 - 14 x 10^{-6}** K [5]	**16 x 10^{-6}** K [2]	borosilicate glass will be the **most stable** material when undergoing temperature changes.
	thermal conductivity	the ability of a material to transfer heat energy to and from its surroundings.	**1.2** W/m-K [12]	**1.7 - 4.0** W/m-K [4]	**2.0 -2.9** W/m-K [4]	**1.0 -1.8** w/m-K [4]	**16.2** W/m-k [6]	borosilicate glass will conduct over **10x less heat** than stainless steel, and is similar to concrete.
	specific heat capacity	the amount of energy required to raise the temperature of a material by 1 unit.	**0.83** [7]	**0.79** [13]	**0.88** [13]	**0.88** [13]	**0.50** [6]	borosilicate glass will gain **less hea**t than stainless steel, and a similar amount to granite, marble, and concrete.

footnotes: **1.** AutoDrill, "Knoop Material Hardness Scale." www.autodrill.com/wp-content/uploads/2012/06/HardnessScaleChart.pdf **2.** AZoM, "Properties: Stainless Steel - Grade 304." 11 June 2024, www.azom.com/properties.aspx?ArticleID=965 **3.** Engineeringtoolbox, "Concrete Properties." 8 Sept. 2023, www.engineeringtoolbox.com/concrete-properties-d_1223.html **4.** Engineeringtoolbox, "Solids, Liquids and Gases - Thermal Conductivities." 22 Apr. 2024, www.engineeringtoolbox.com/thermal-conductivity-d_429.html **5.** Engineeringtoolbox. "Thermal Expansion - Linear Expansion Coefficients." 2 Nov. 2023, www.engineeringtoolbox.com/linear-expansion-coefficients-d_95.html **6.** EZLOK, "316 Stainless Steel Mechanical Properties." www.ezlok.com/316-stainless-steel-properties **7.** Make It From. "Borosilicate Glass." https://www.makeitfrom.com/material-properties/Borosilicate-Glass **8.** Make It From. "Granite." https://www.makeitfrom.com/material-properties/Granite **9.** Make It From. "Marble." https://www.makeitfrom.com/material-properties/Marble **10.** Modul Marble, "Physical Mechanical Characteristics Natural Stone." modulmarble.com/wp-content/uploads/2019/05/Natural-Stone-Physical-Mechanical-Characteristics.pdf **11.** Schott, "Schott - Technical Glasses - Physical and Technical Properties." Mar. 2020 **12.** Schott, "Schott Borofloat 33 - Technical Data" **13.** Wikipedia, "Table of Specific Heat Capacities." 30 May 2024, en.wikipedia.org/wiki/Table_of_specific_heat_capacities. **14.** Becosan, "How to measure the hardness of concrete and why it is important." https://www.becosan.com/how-to-measure-the-hardness-of-concrete-and-why-it-is-important/





Memorial as Story

The memorial design consists of a collection of transparent, solid glass elements arranged on the site in a seemingly accidental manner which aggregate to form a pure cylindrical space at the heart of the site, suggesting the way ostensibly disconnected facts coalesce to form a journalist's story.

Experiencing the memorial is a **journey of discovery** that unfolds slowly, space by space like a story, and casts the visitor in the role of investigative journalist pursuing truth wherever it leads.

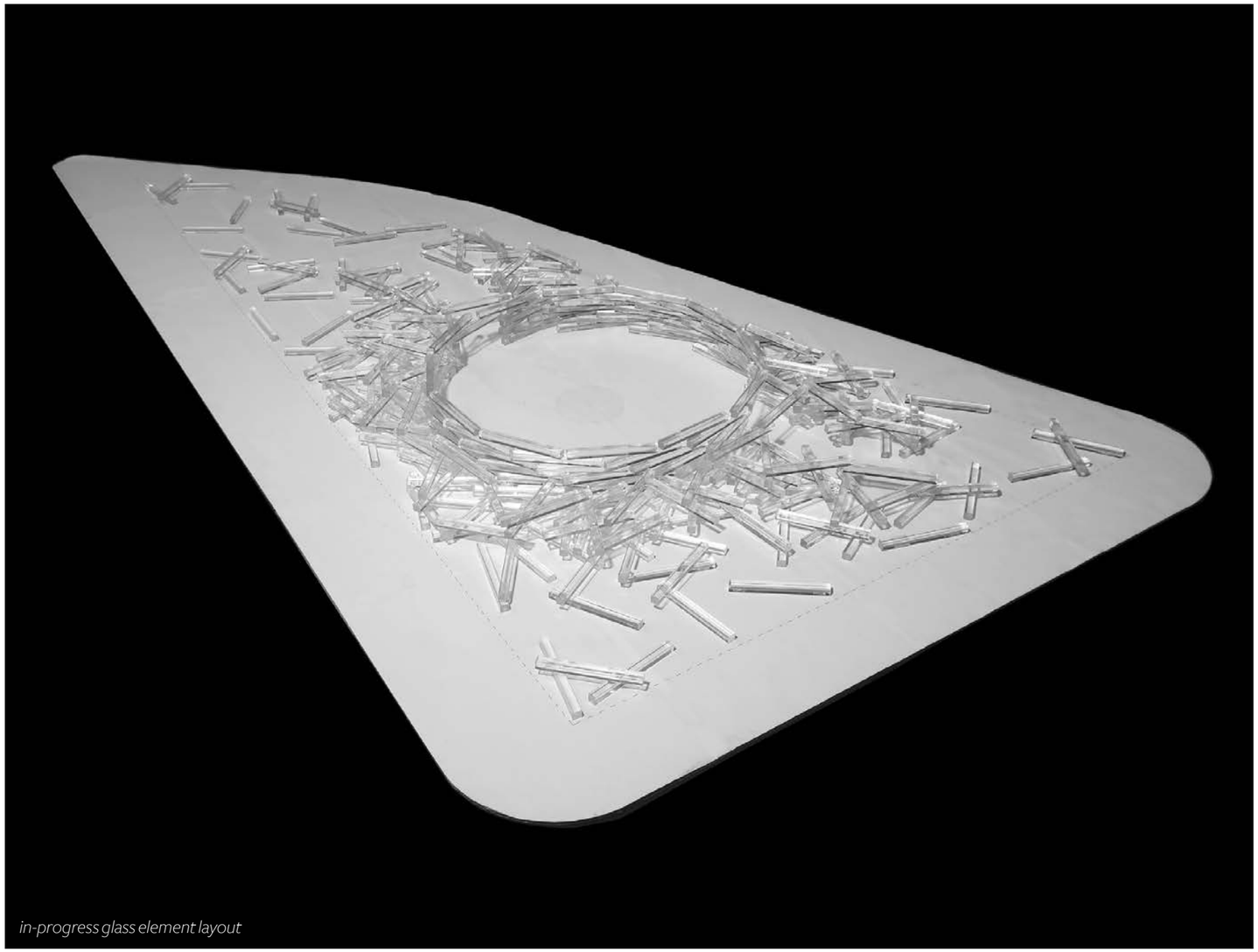
Site

The memorial can be entered from multiple sides with all paths leading to the circular Remembrance Hall, suggesting that there are many paths to the truth, none of which are linear.

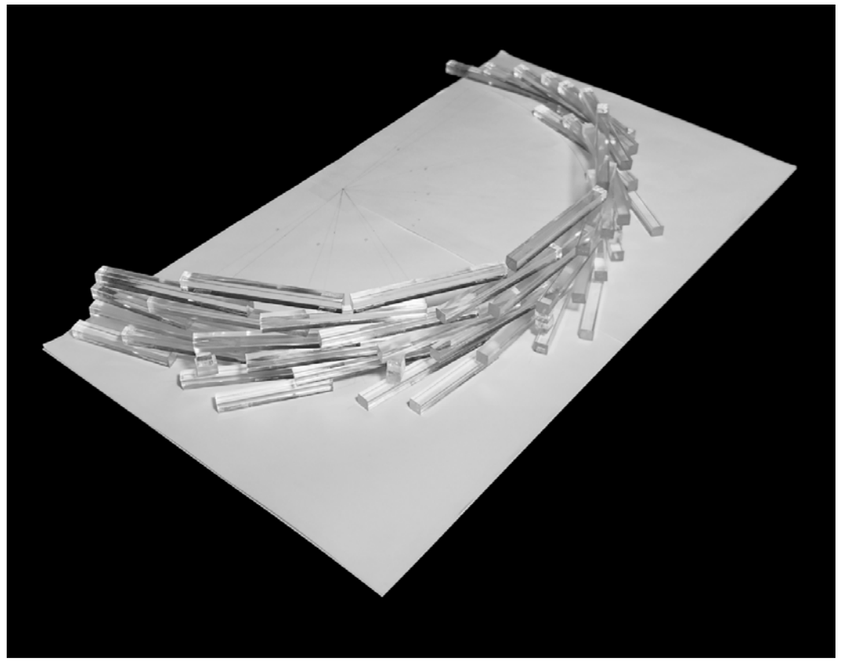
19 september 2024 **view looking west**

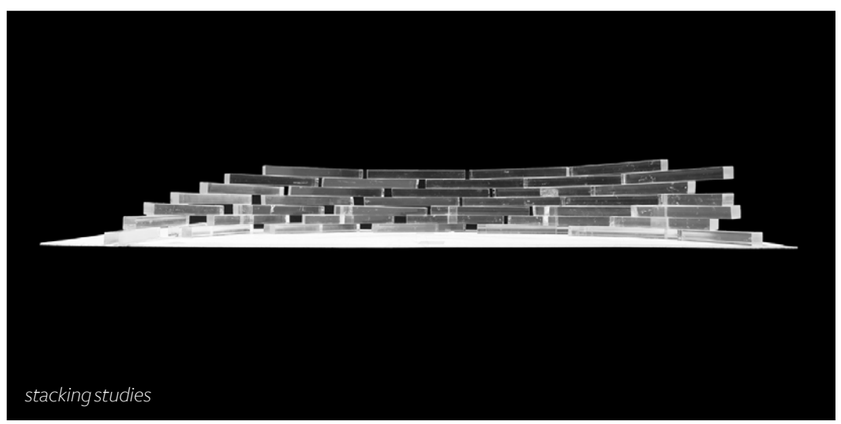
Like a newspaper headline, the memorial appears intriguing at first glance, inviting the visitor in to explore further. As visitors are drawn into the memorial, the glass elements increase in number and density, like facts in a journalist's story.

At night, a soft glow emanates from the site, and the memorial becomes a beacon of truth. Symbolizing the role journalists play in shedding light on conditions obscured in darkness.



in-progress glass element layout

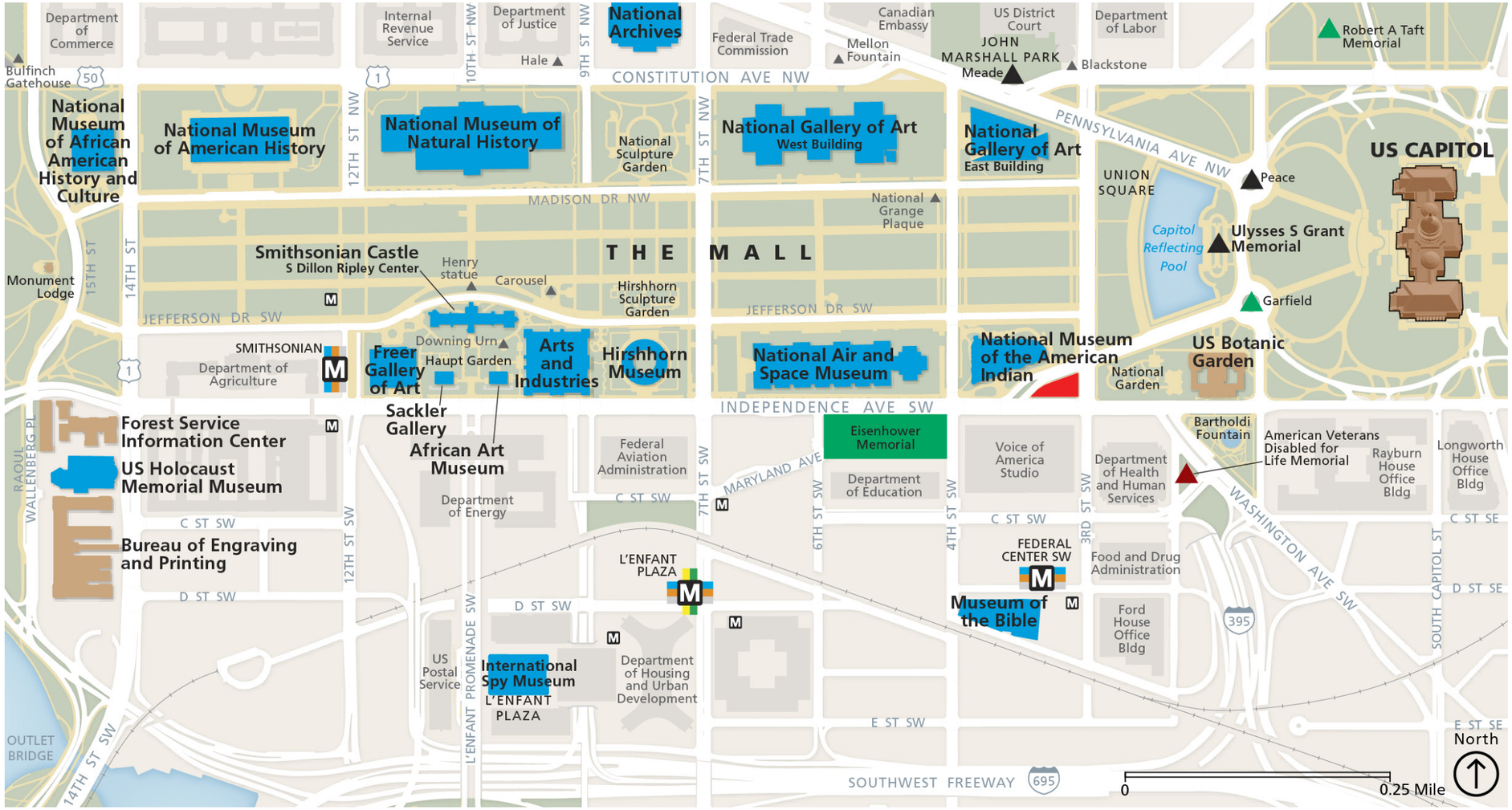




stacking studies

Solid clear acrylic bars are used to study empirically the disposition on the site of the glass elements that form the memorial's path of discovery.

National Mall Context



Thematic Links

1. US Capitol Building

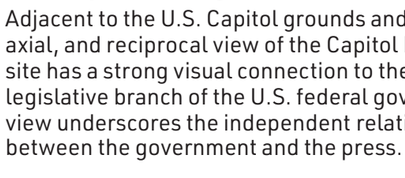
Adjacent to the U.S. Capitol grounds and with a direct, axial, and reciprocal view of the Capitol Dome, the site has a strong visual connection to the seat of the legislative branch of the U.S. federal government. This view underscores the independent relationship between the government and the press.

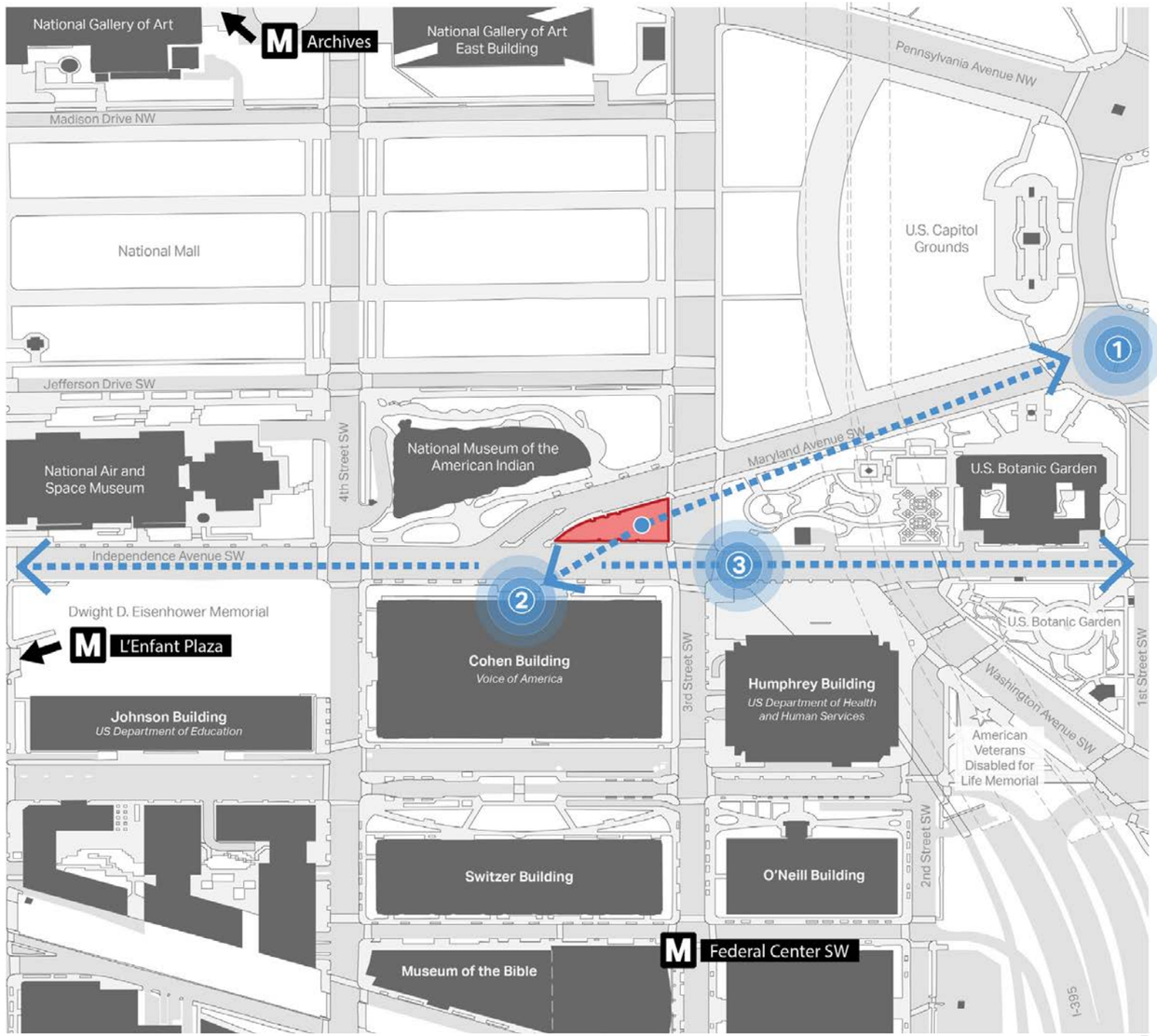
2. Voice of America (Cohen Building)

Directly north of the Cohen Building, the site has a strong visual connection to the headquarters of Voice of America, the oldest and largest American international broadcaster. Voice of America produces media in 47 languages and distributes throughout the world.

3. Independence Avenue

Independence Avenue forms the southern border of the site, emphasizing the importance of an independent free press.





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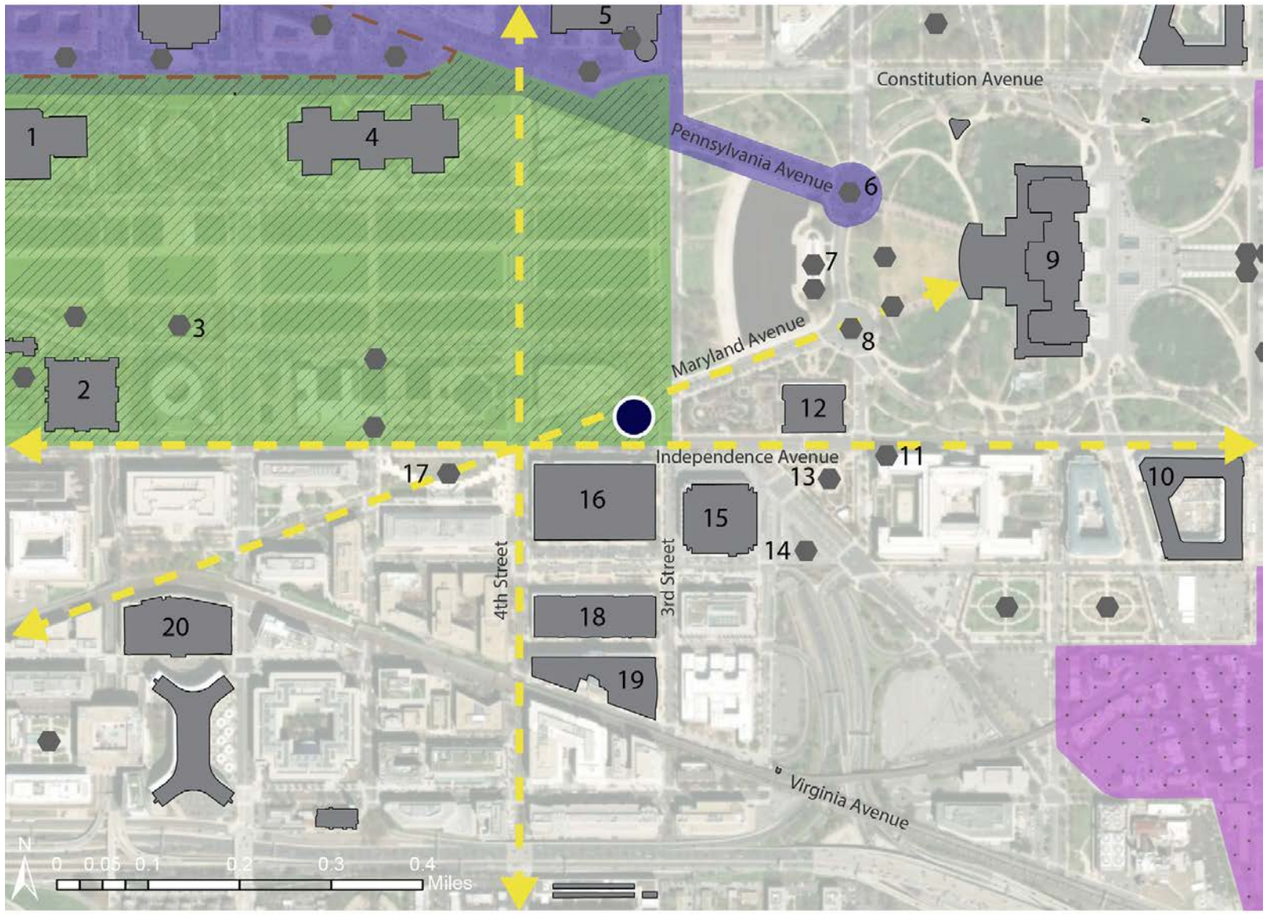
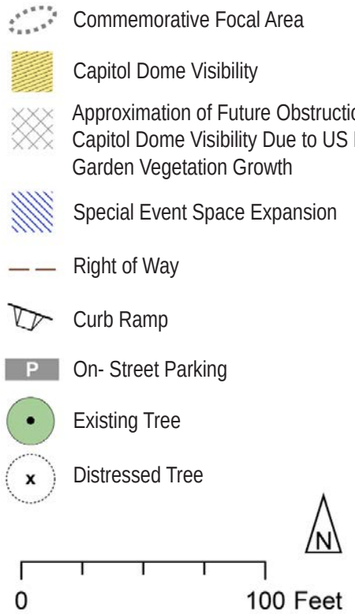


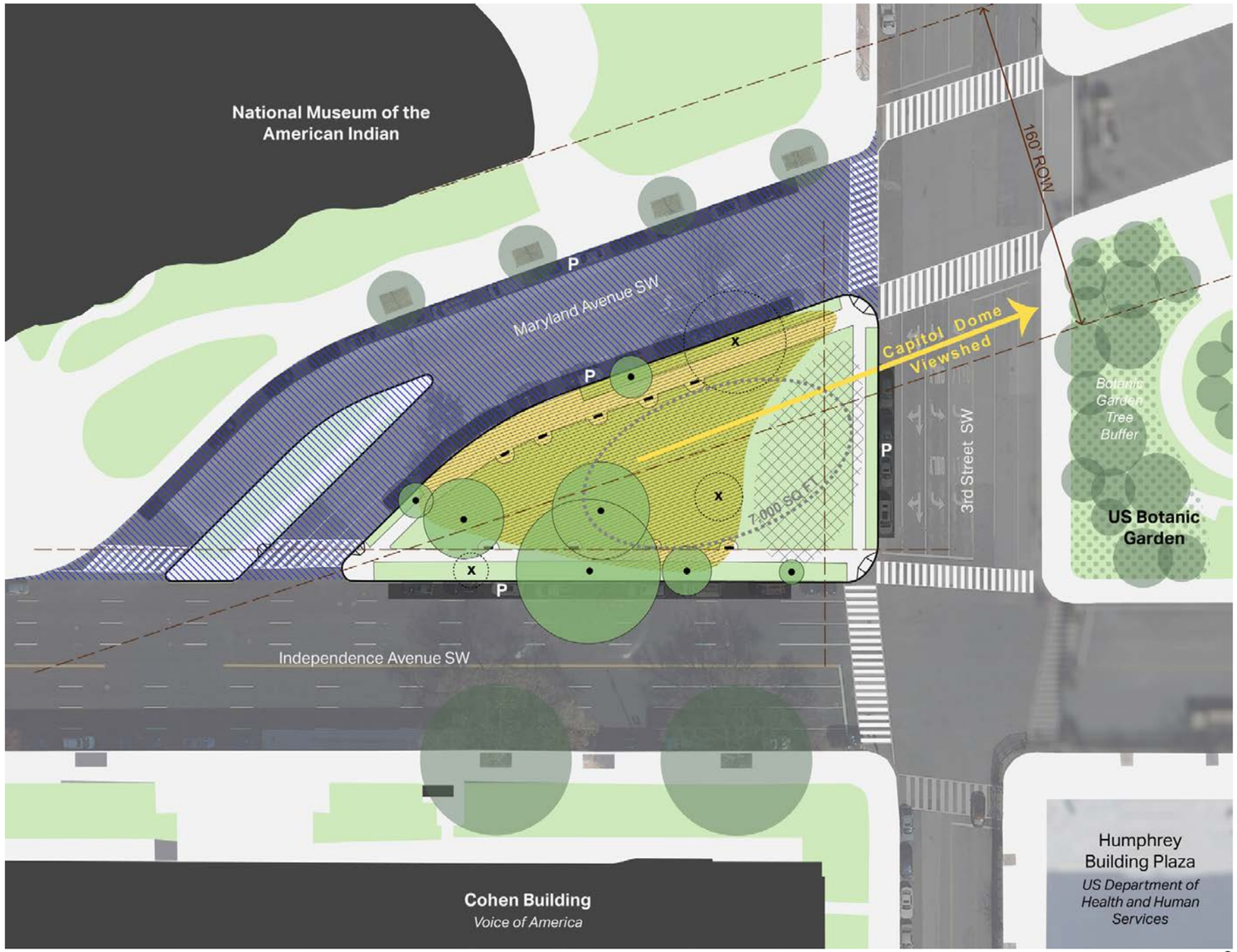
Potential Site for the Fallen Journalists Memorial
Pennsylvania Avenue National Historic Site
Federal Triangle Historic District
National Mall Historic District
Capitol Hill Historic District
L'Enfant Plan of the City of Washington Views
Memorials
Historic Resources near Potential Site

1 Natural History Building, Smithsonian Institution
2 Arts & Industries Building, Smithsonian Institution
3 Hirshorn Sculpture Garden
4 National Gallery of Art
5 US Courthouse for the District of Columbia
6 Peace Monument
7 Ulysses S. Grant Memorial
8 James Garfield Statue
9 United States Capitol
10 Cannon House Office Building
11 James Madison Statue
12 United States Botanic Garden
13 Bartholdi Fountain
14 American Veterans Disabled for Life Memorial
15 Hubert H. Humphrey Building (HHS Headquarters)
16 Social Security Administration (Wilbur J. Cohen Building)
17 Eisenhower Memorial
18 Railroad Retirement Board (Mary Switzer Building)
19 Terminal Refrigerating & Warehouse Company
20 GSA Regional Office Building

Site Study

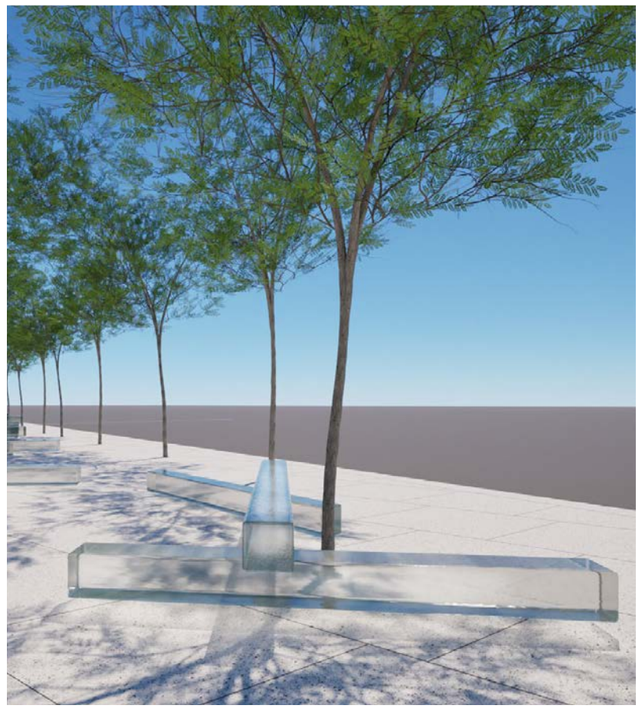
The memorial design for Site 0 would likely be oriented toward the U.S. Capitol, which would be visible from most of the site; views would likely be constrained over time due to vegetation growth at the U.S. Botanic Garden. The site could accommodate a central memorial area of approximately 7,000 square feet. The open turf of the site provides flexibility for the memorial design.





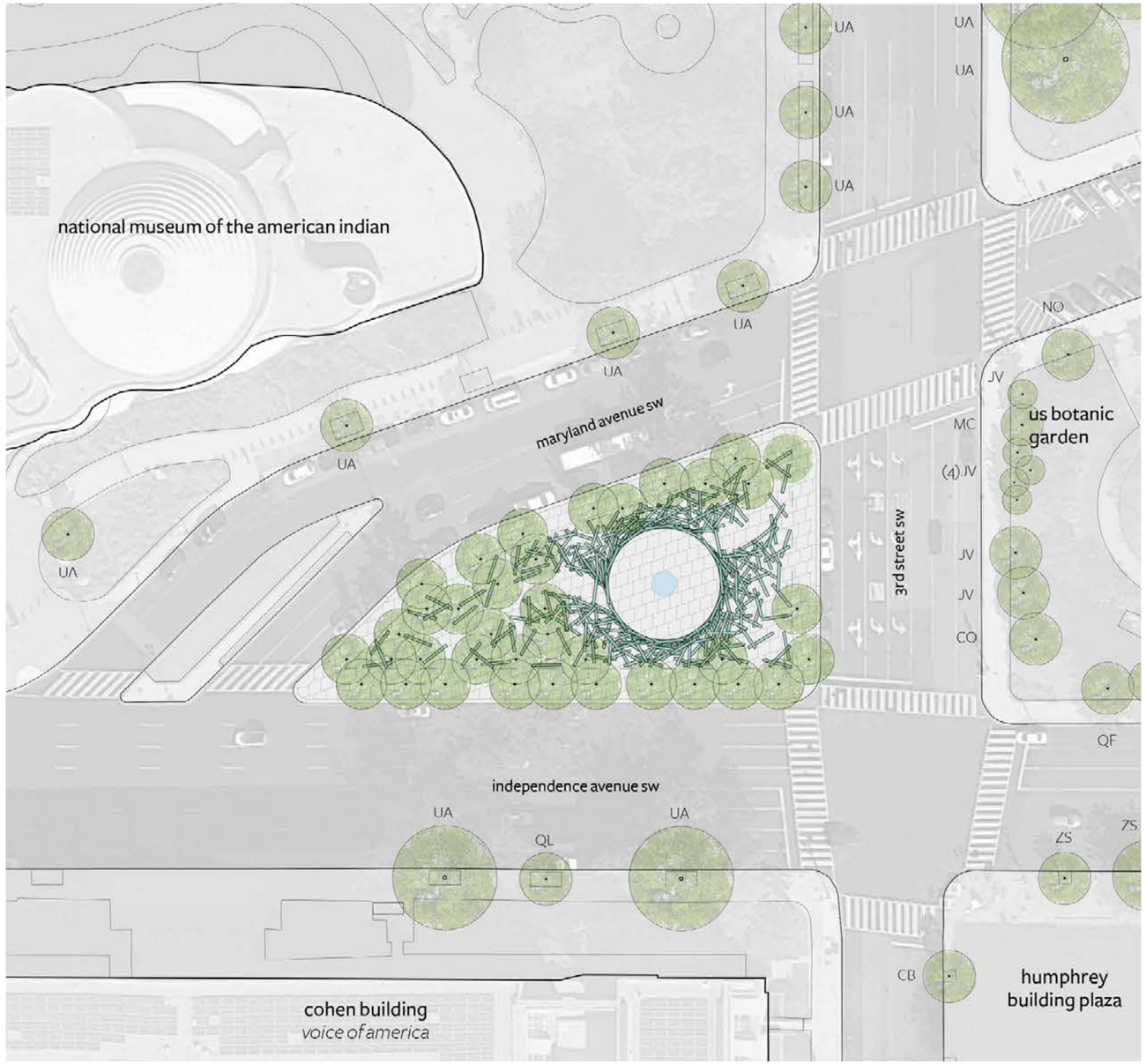
8

(above)
A monoculture grove of trees appears as a singular element to identify the memorial from afar.



(right)
Tree canopies filter light which activates the glass elements below it.

(far right)
The site is expressed as an island, symbolizing an independence press.

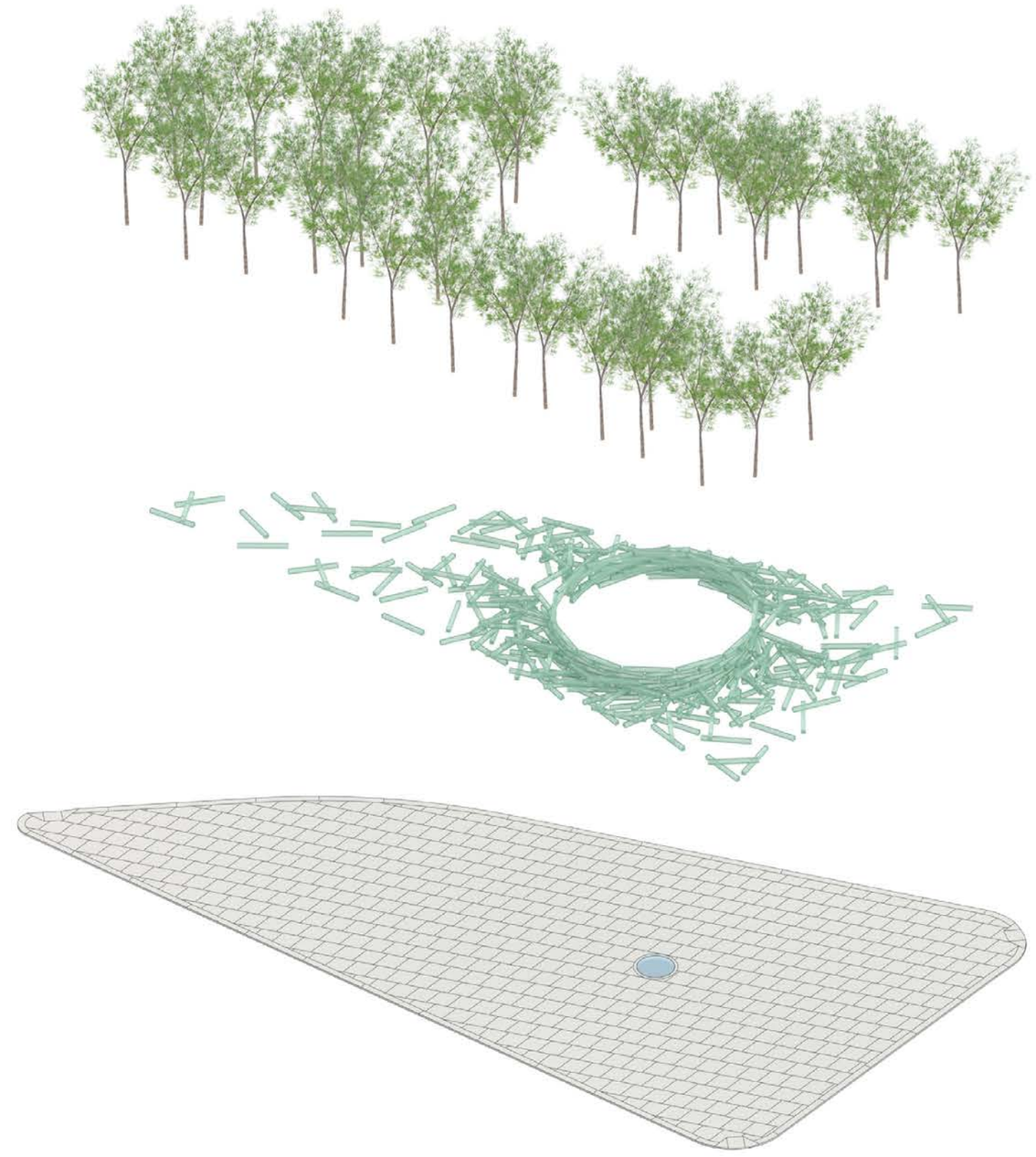


tree species key

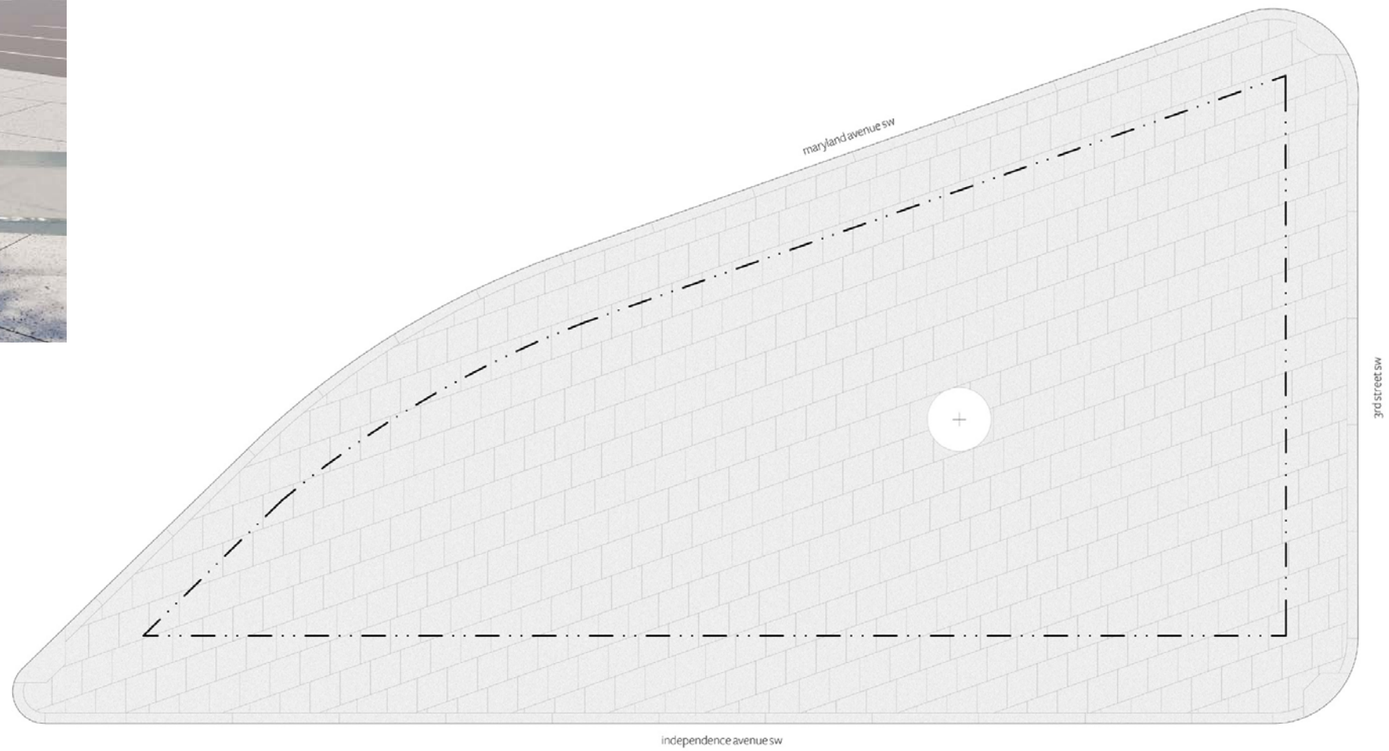
CB - carpinus betulus (european hornbeam)
MC - myrica cerifera (southern wax myrtle)
QL - quercus lyrata (overcup oak)
CO - cotinus obovatusa (american smoketree)
NO - nyssa ogeche (ogechee tupelo)
UA - ulmus americana (american elm)
JV - juniperus virginiana (virginia juniper)
QF - quercus floridianum (southern sugar maple)
ZS - zelkova serrata (japanese zelkova)

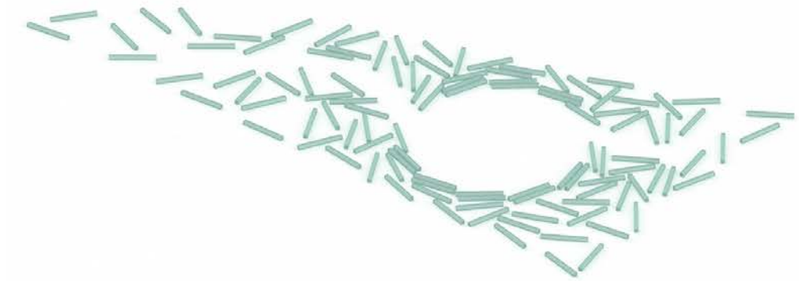
Memorial Design

The memorial design consists of the interplay of three superimposed design elements – a hardscape stone plaza overlaid with a grove of trees that sidestep the array of cast glass elements which aggregate to form the memorial's circular Remembrance Hall at the heart of the site.

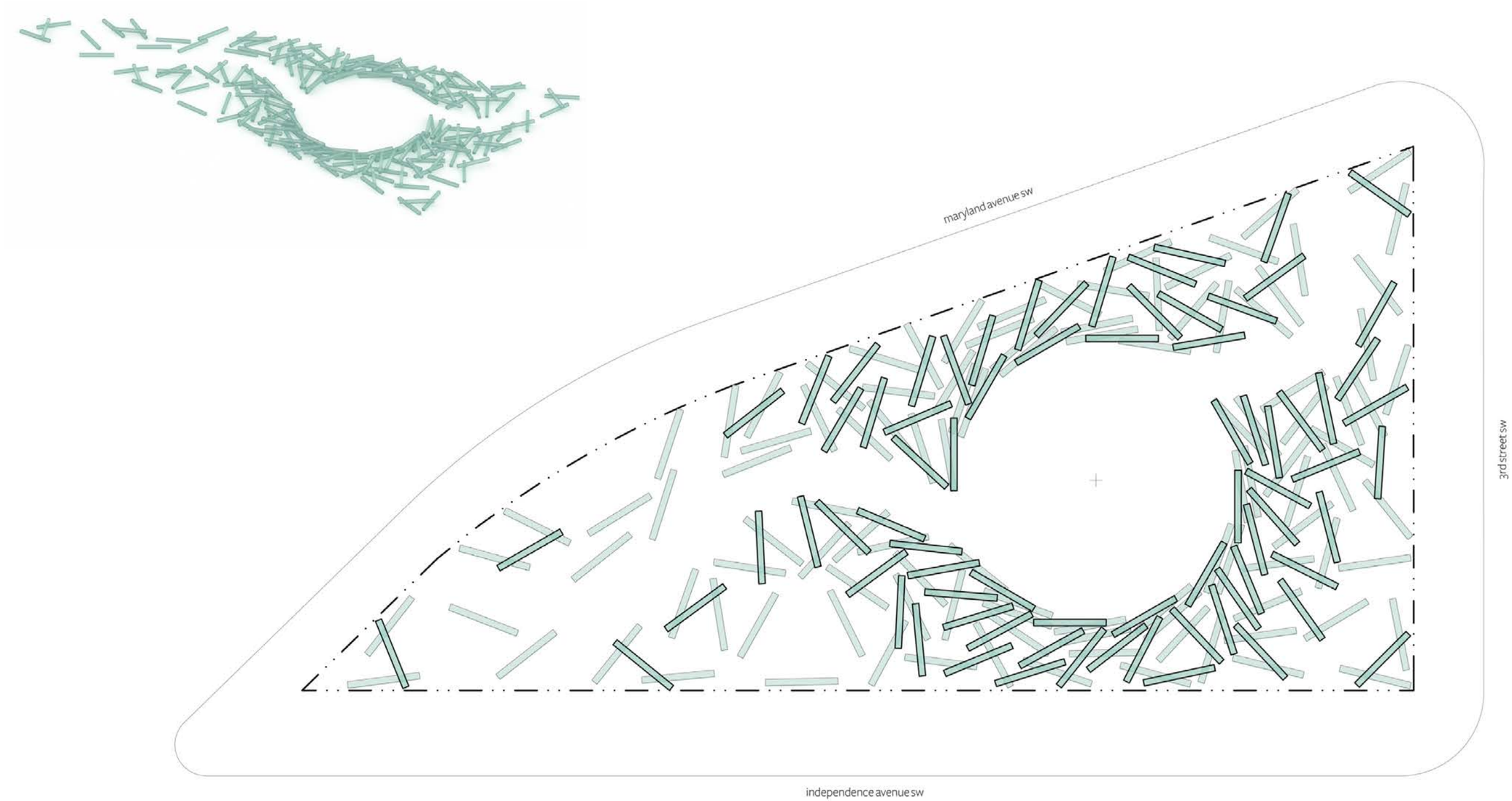


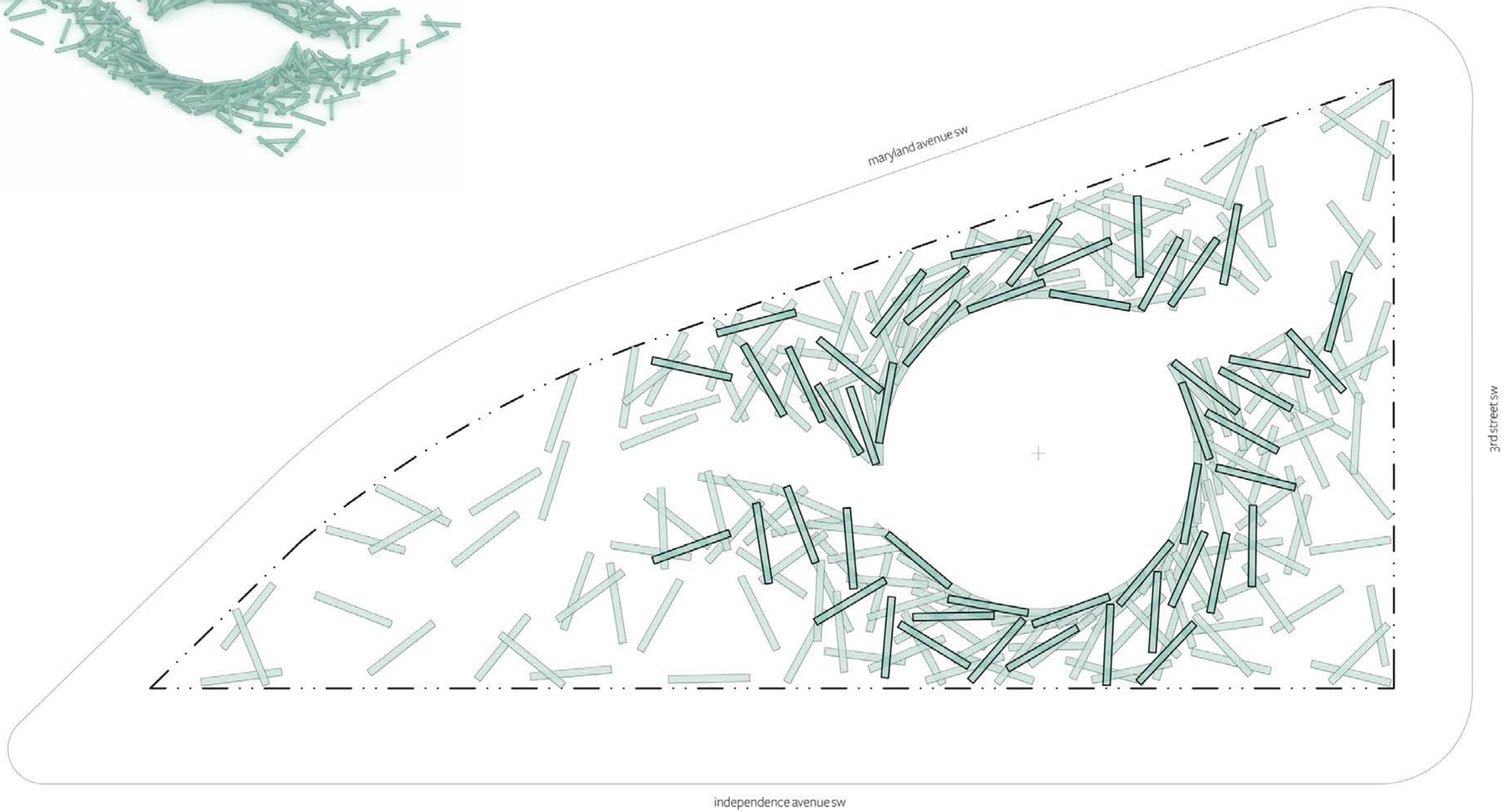
The memorial site's granite-paved hardscape is flat and accessible throughout. Glass elements are raised slightly off the ground to allow stormwater flowthrough and to facilitate routine maintenance. Sunlight activates the glass elements, casting their shadow on the light-colored stone to add another dimension to an experience that is more than the sum of its parts.





The first layer is comprised of bench-height glass elements in a seemingly random state of disorder, representing the condition that the journalist first encounters.


maryland avenue sw
3rd street sw
independence avenue sw


maryland avenue sw
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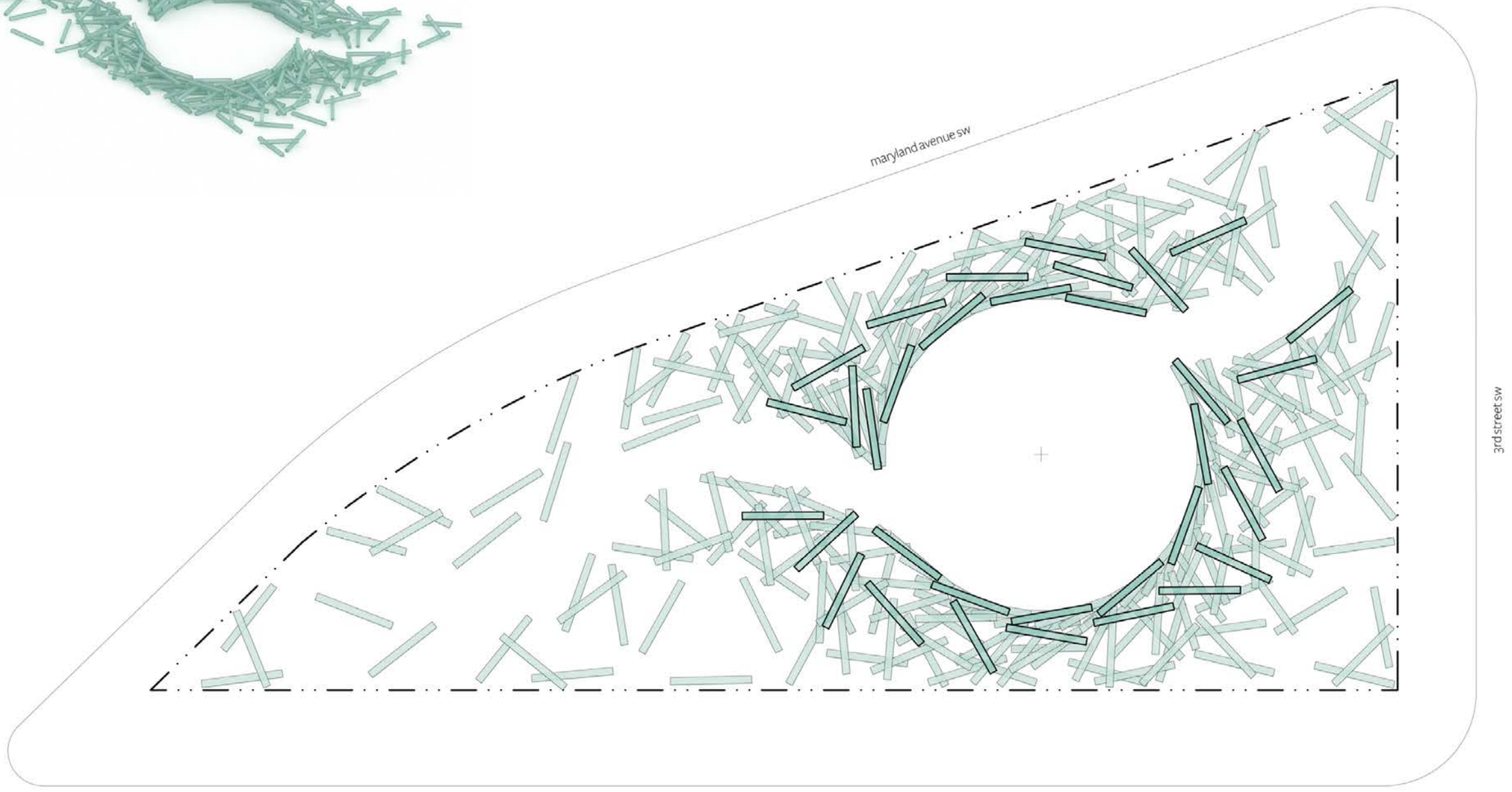
independence avenue sw


maryland avenue sw
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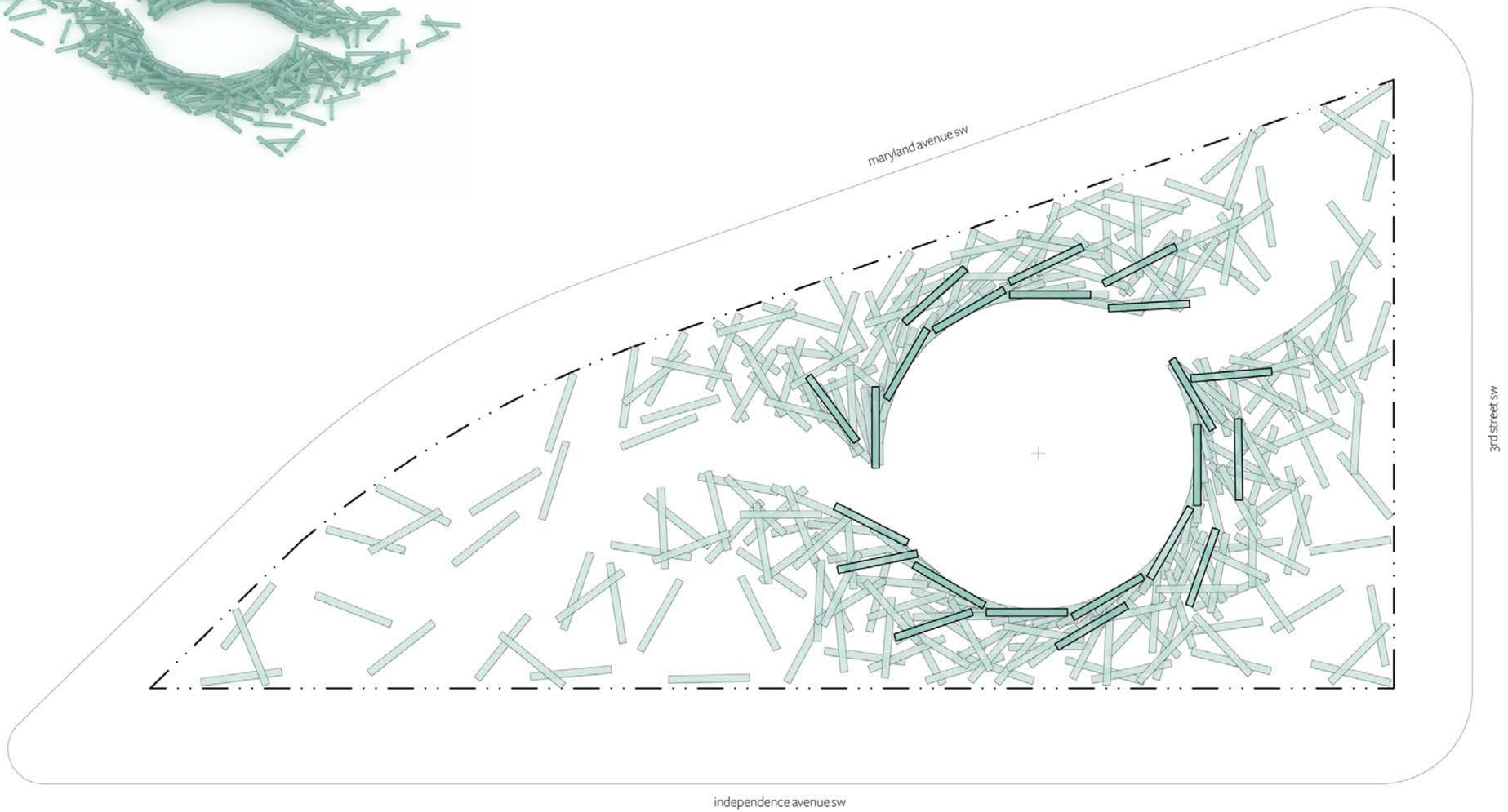
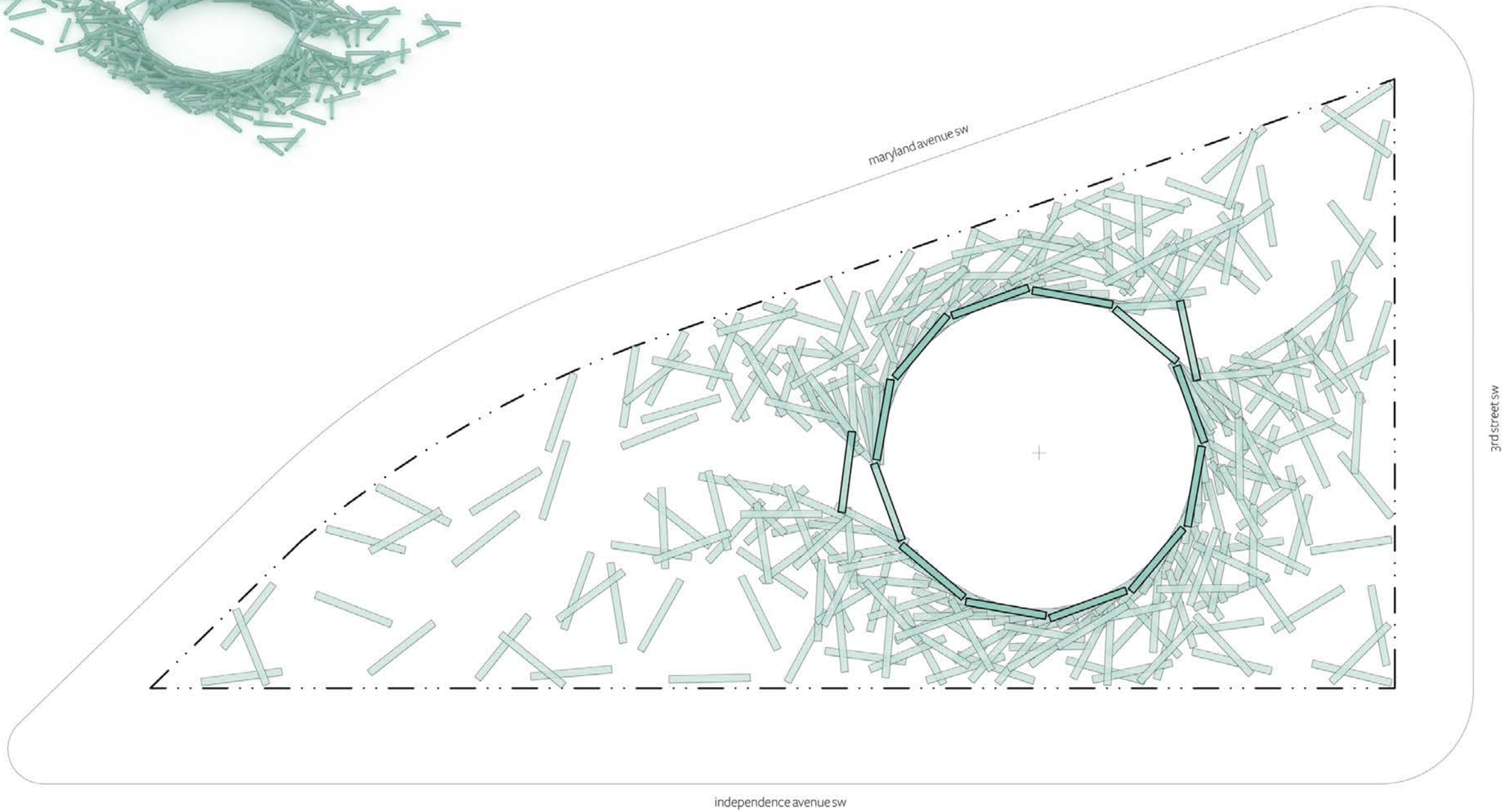
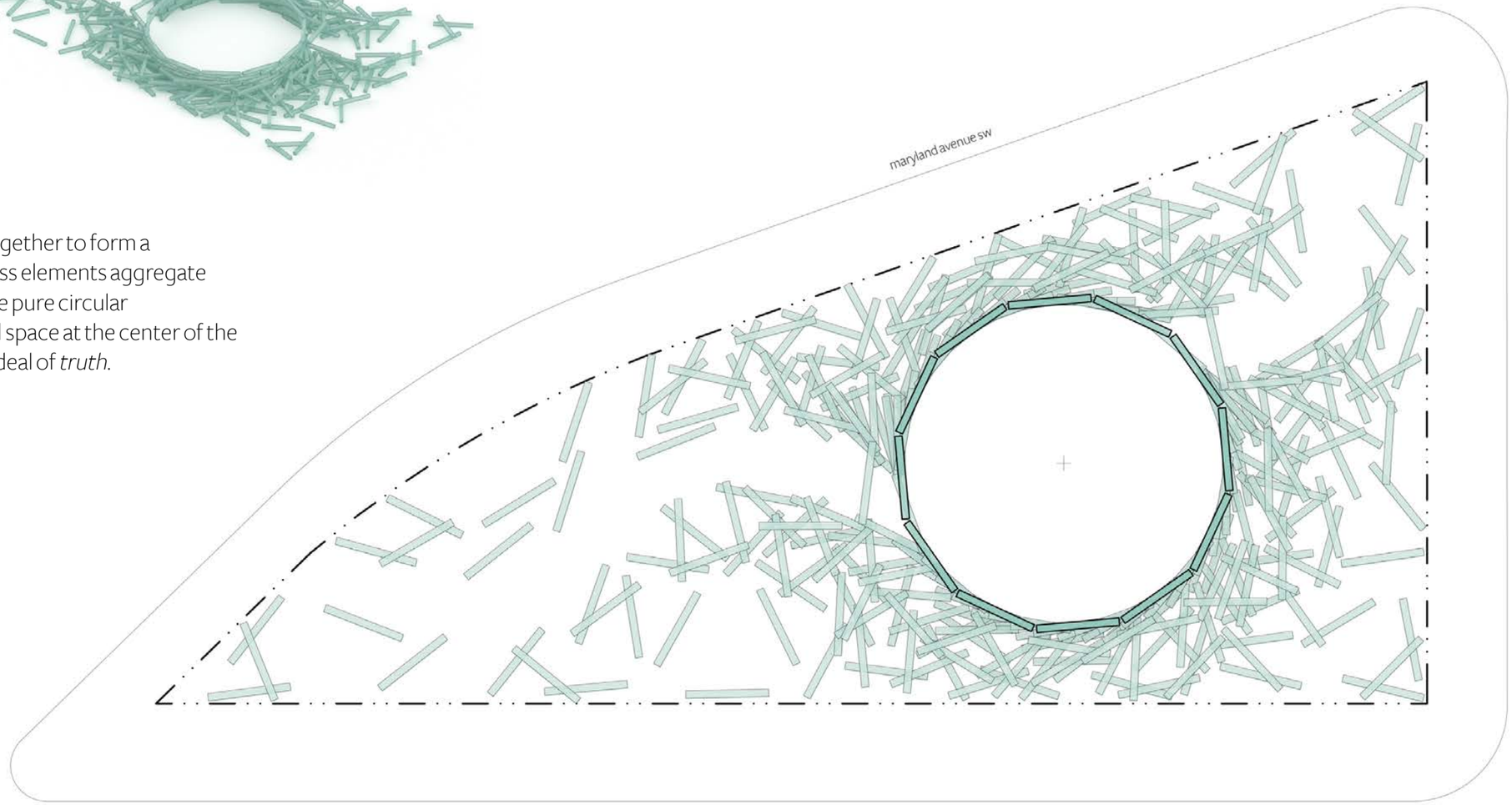
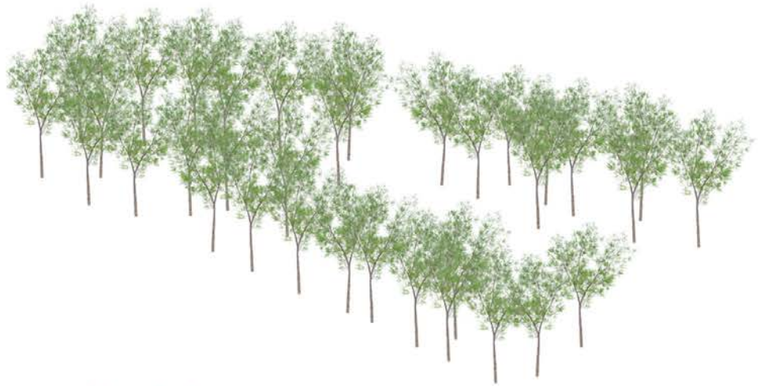
independence avenue sw


maryland avenue sw
3rd street sw
independence avenue sw

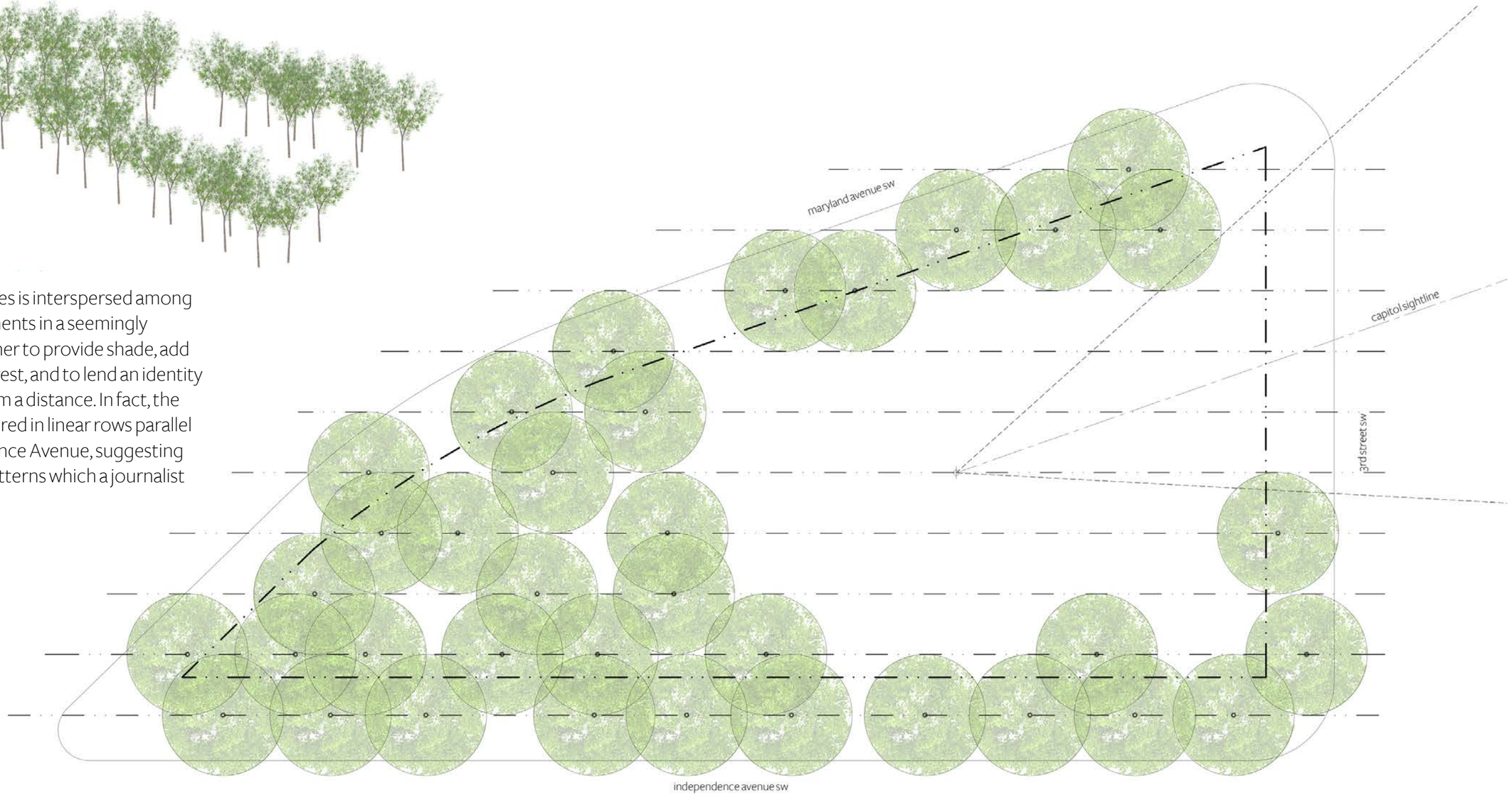

maryland avenue sw
3rd street sw
independence avenue sw

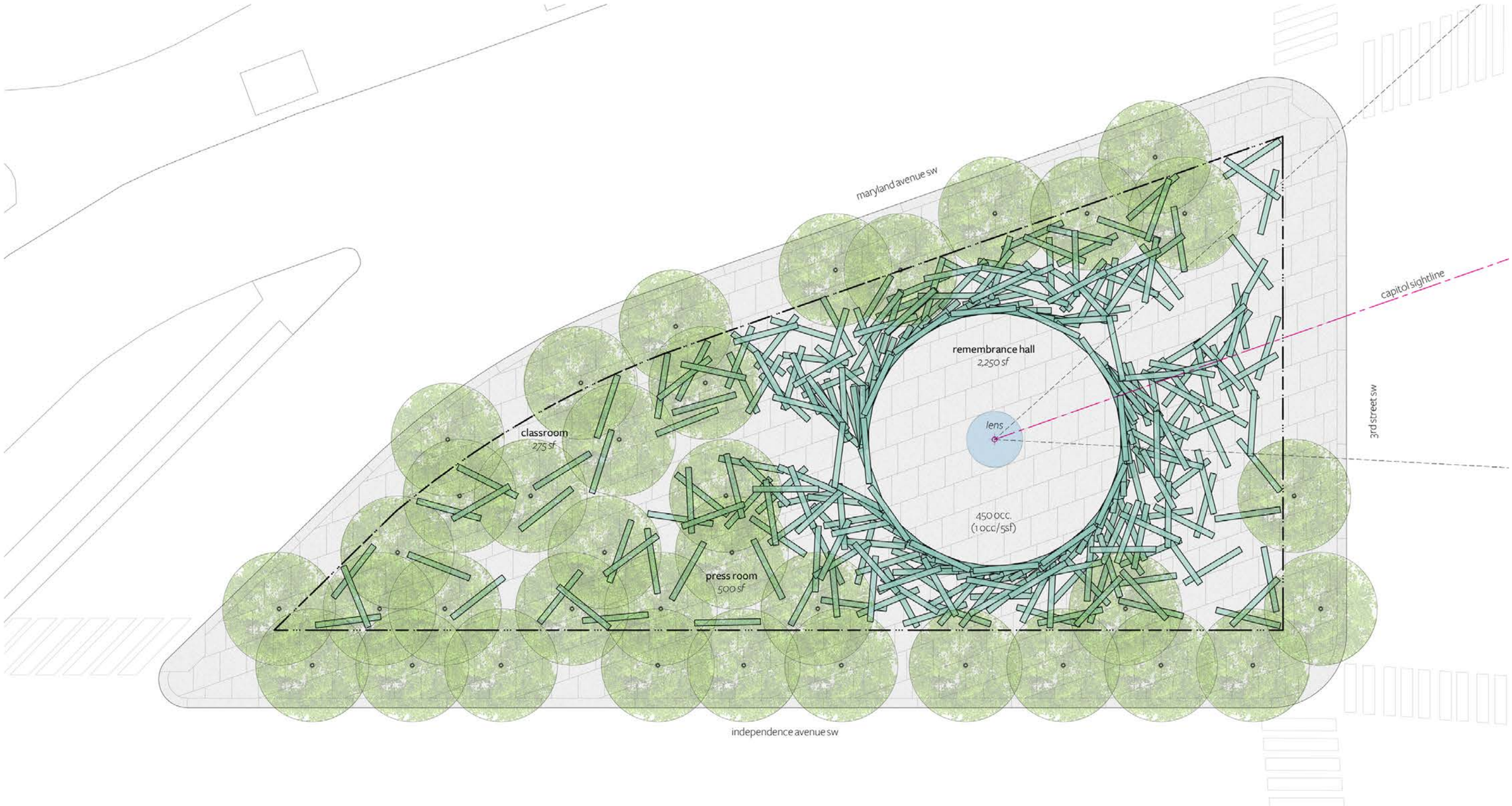
Like facts coming together to form a journalist's story, glass elements aggregate gradually to form the pure circular **Remembrance Hall** space at the center of the site, symboling the ideal of *truth*.





A grove of trees is interspersed among the glass elements in a seemingly random manner to provide shade, add seasonal interest, and to lend an identity to the site from a distance. In fact, the trees are ordered in linear rows parallel to Independence Avenue, suggesting the hidden patterns which a journalist uncovers.

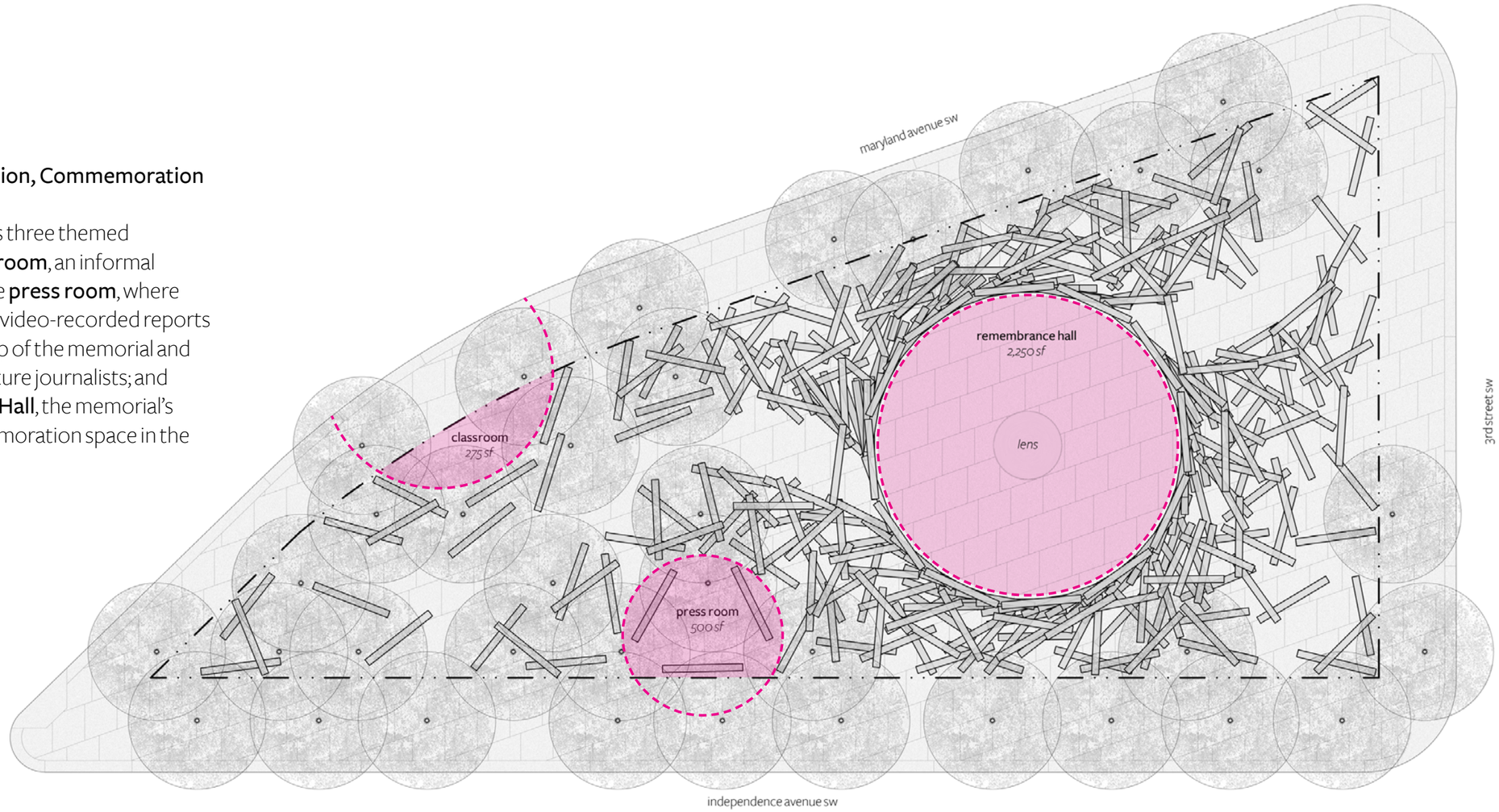


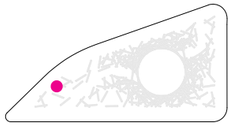


A clearing in the trees at the east end of the site re-introduces views of the Capitol dome from inside the Remembrance Hall. To establish the reciprocal relationship between power and a free press.

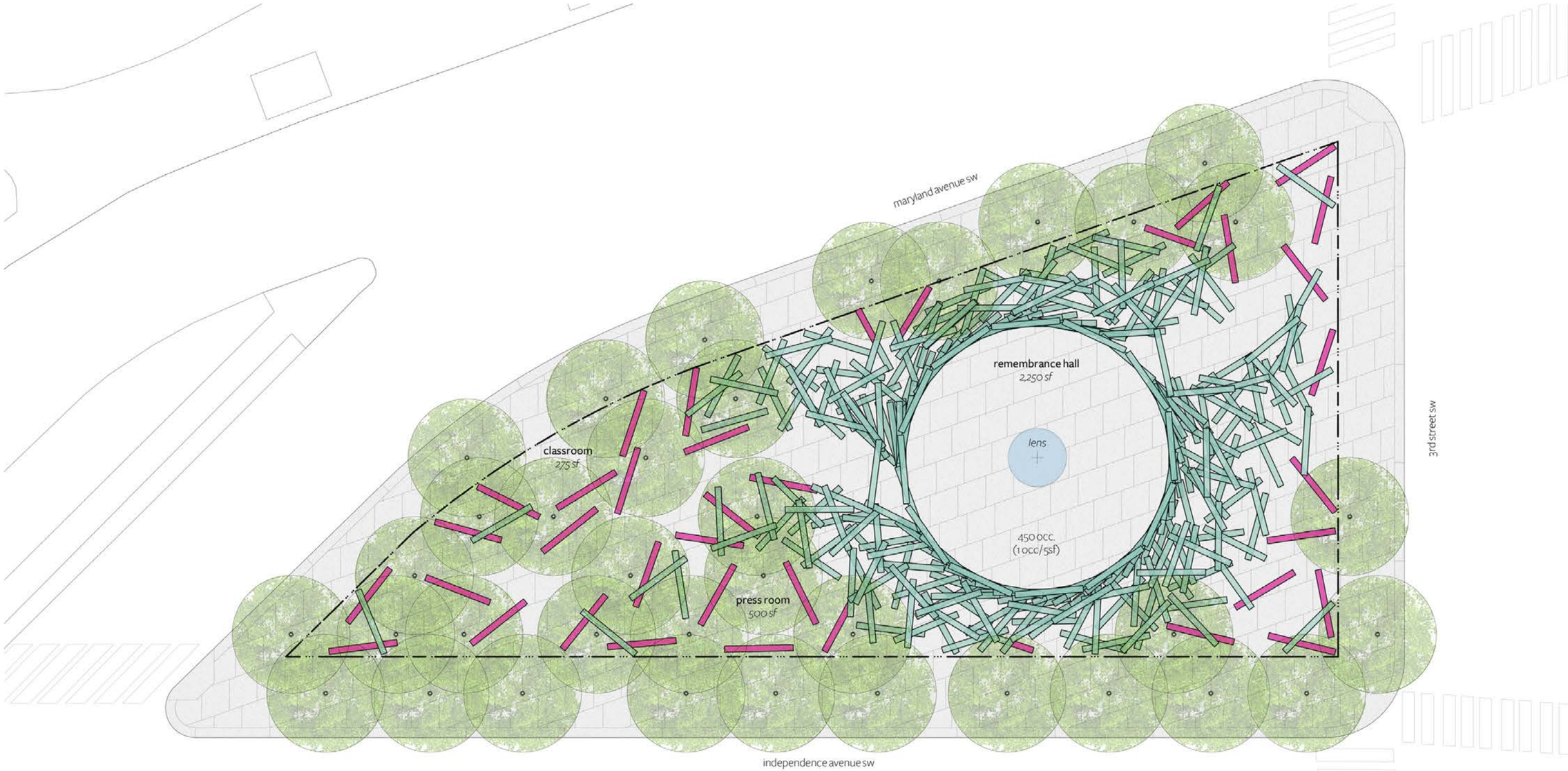
Education, Inspiration, Commemoration

The project includes three themed "rooms" -- the **classroom**, an informal education space; the **press room**, where journalists conduct video-recorded reports against the backdrop of the memorial and Capitol to inspire future journalists; and the **Remembrance Hall**, the memorial's destination commemoration space in the center of the site.

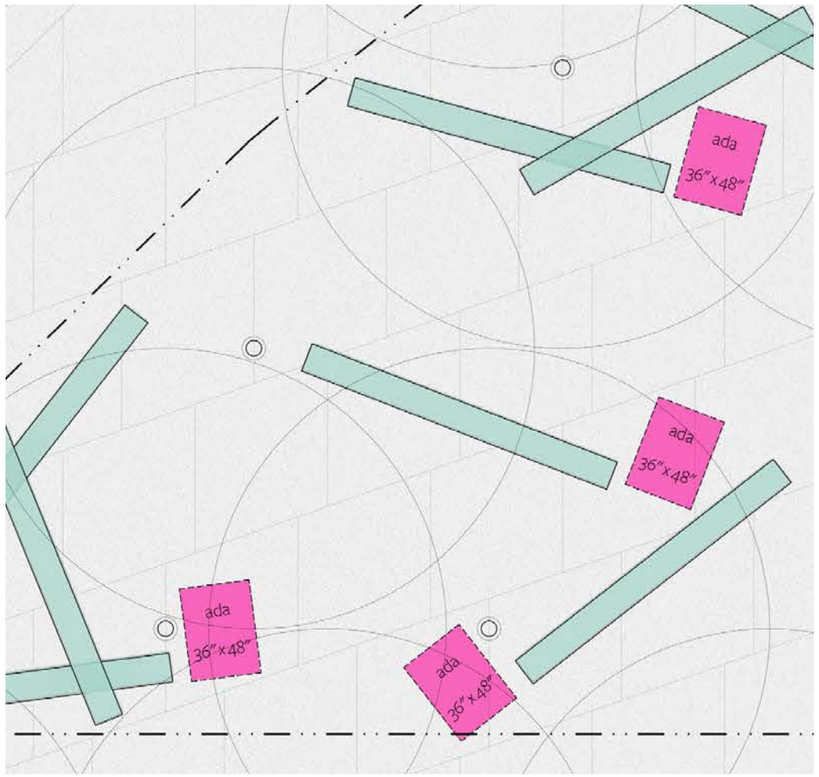




Bench-height glass elements are arranged to create an informal **classroom** (page left) where teachers can introduce the memorial to inspire the next generation of journalists. On the south side of the site is a clearing known as the **press room** (page right) which provides an area for journalists to conduct live reports with the memorial and Capitol building as backdrop.

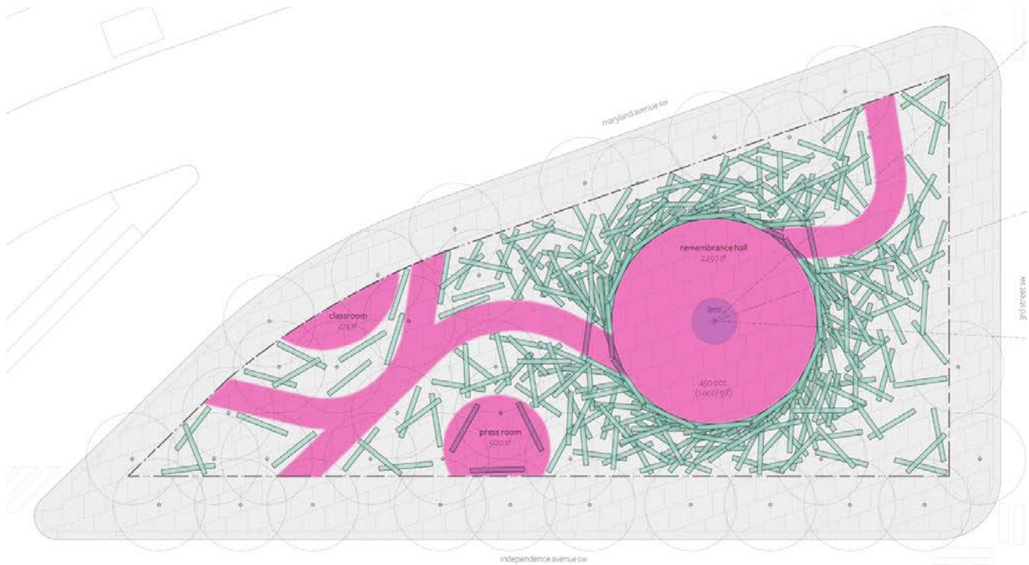


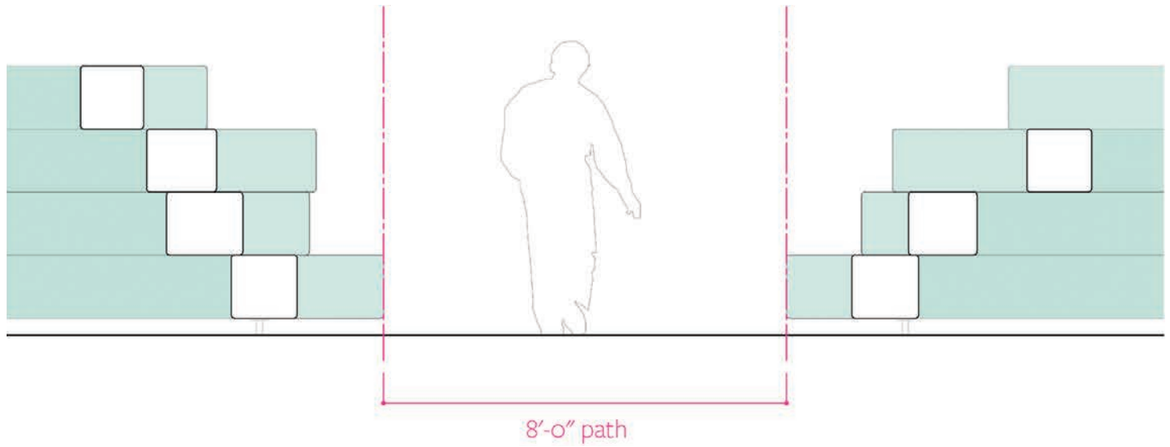
Seating is located throughout the tree-shaded areas of the site, where visitors can pause and reflect

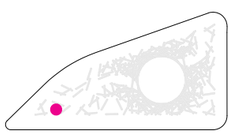


(above)
Per ABA and ADA requirements, ADA clear space is provided throughout the site alongside seat-height elements for wheelchair users.

(right)
The visitor path maintains an **8'** clear width throughout (3' clear width is required per the ADA and ABA). The walls of the visitor path are stacked such that no elements project into the clear width of the path.

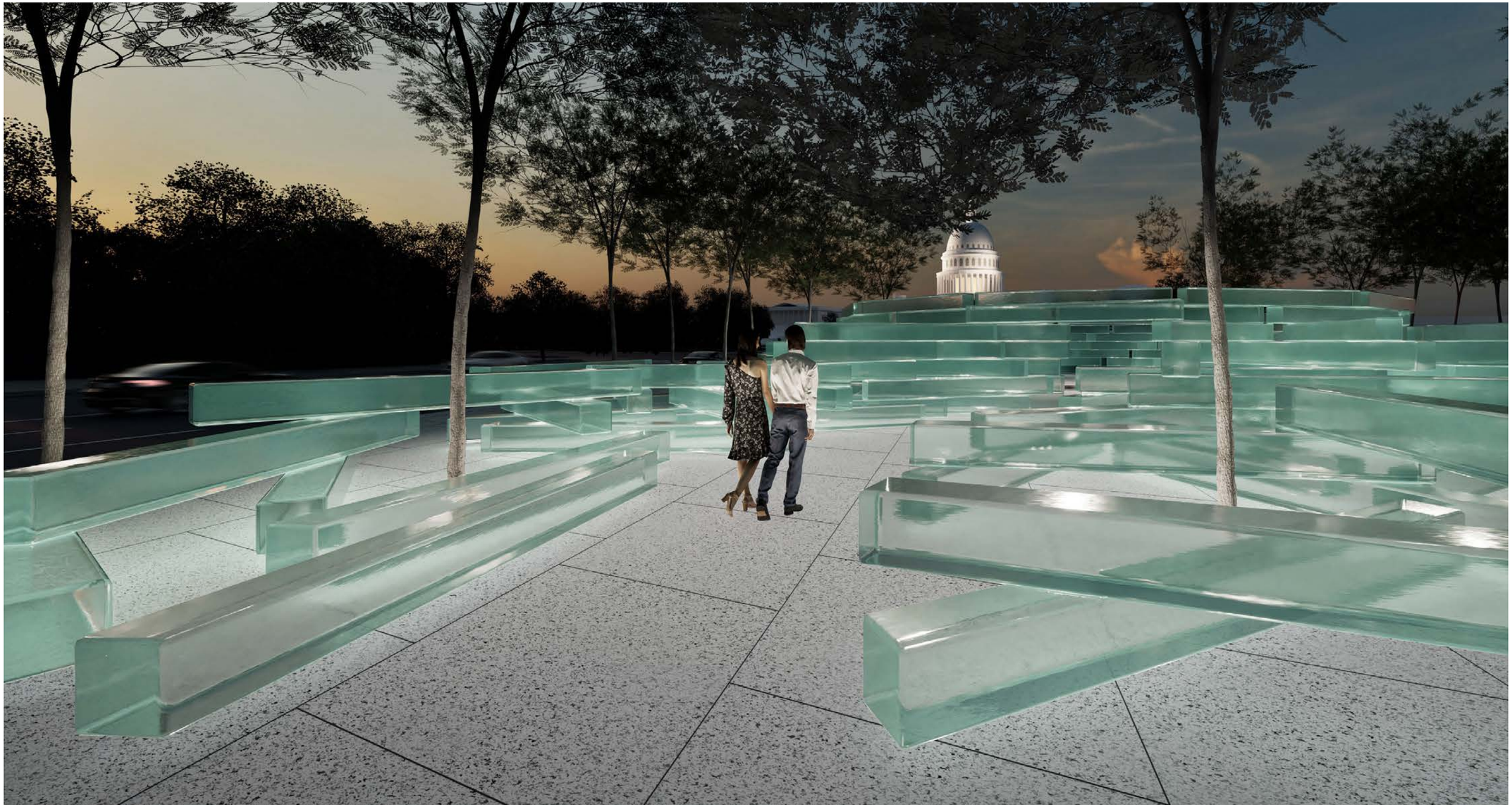


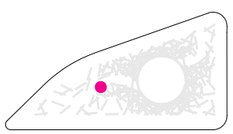




The shaded areas of the memorial provide a comfortable and inspiring public place for people to eat lunch, relax or meet with friends.

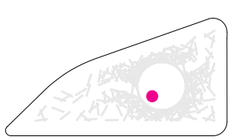
19 september 2024 **view looking east**





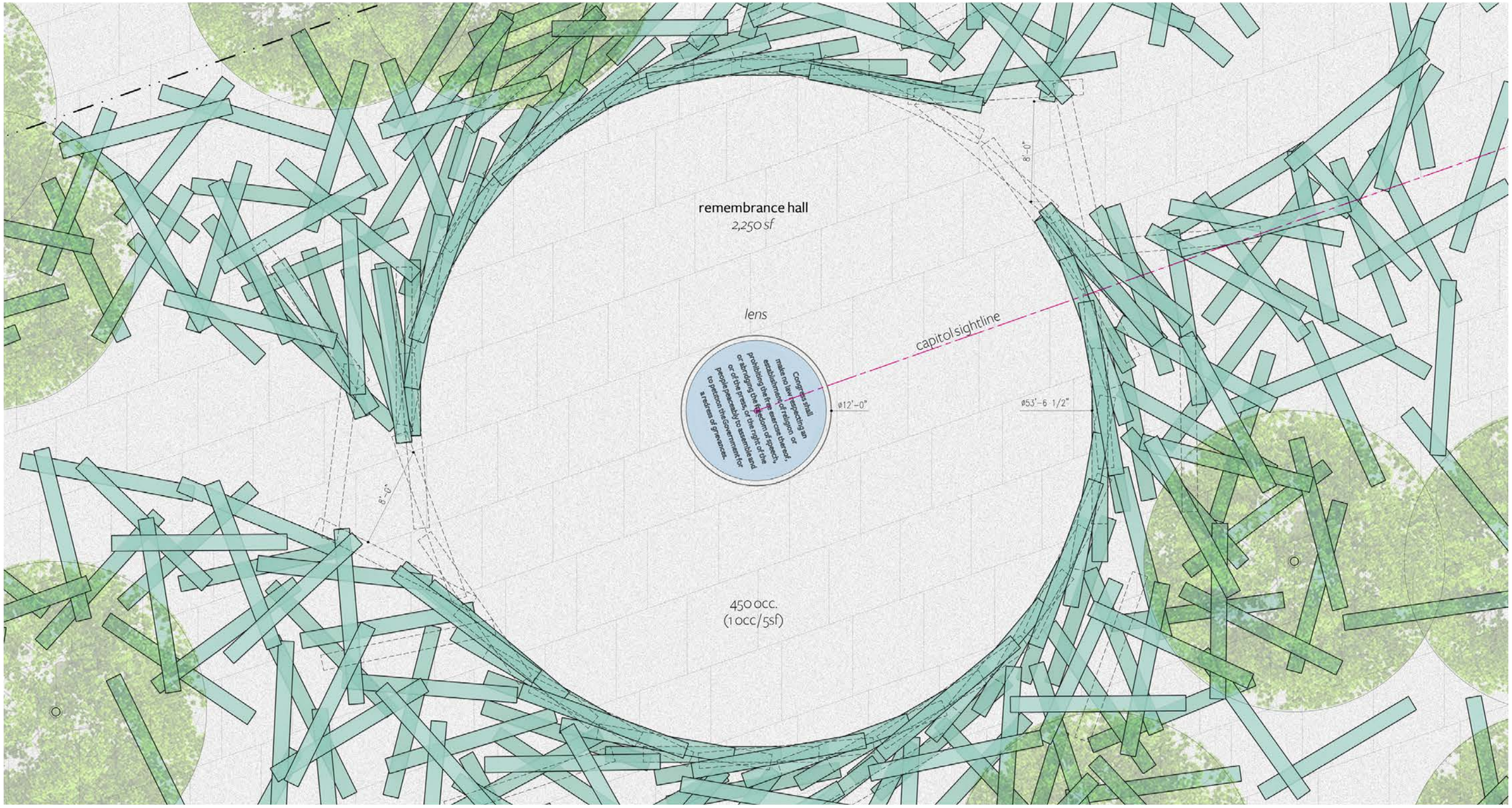
At night, uplit glass elements light the pathway leading to the circular Remembrance Hall.

The memorial experience unfolds slowly, space by space like a story, and casts the visitor into the role of investigative journalist, following the facts, wherever they lead, in the pursuit of truth.

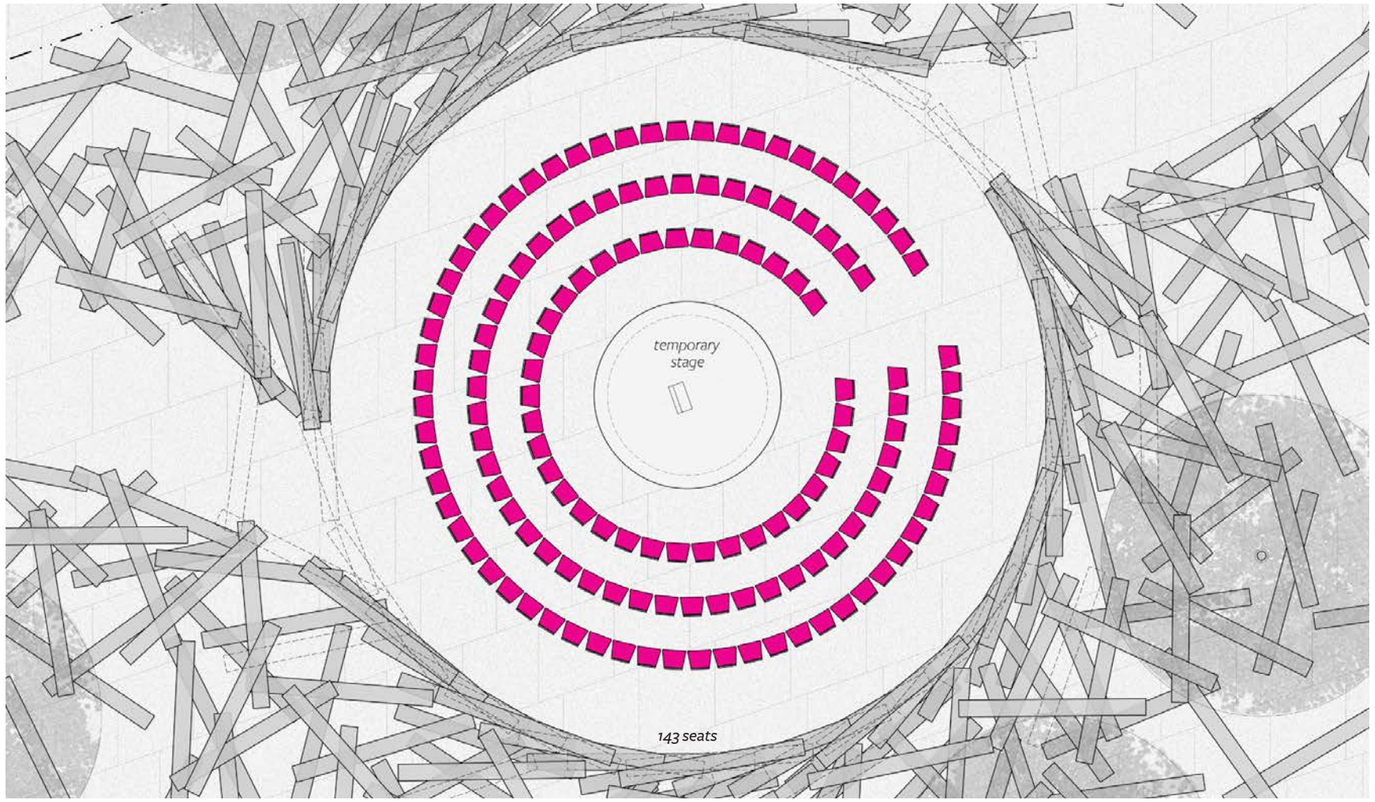


The circular Remembrance Hall is the memorials "home for truth." Upon entering it, disorder yields to order, and things fall into place. The Capitol dome comes into view, signifying the watchdog role that journalists play in a democracy, and visitors are drawn to a circular glass "lens" in the center of the space bearing an important message: the text of the First Amendment to the U.S. Constitution.

Looking downward into the lens to read its message, the visitor's own reflection gazes back, implying that each one of us has a role to play in protecting First Amendment freedoms, to properly honor the sacrifice of those remembered here.



Symbolizing the ideal of objective truth, the pure and polished glass lens is protected by the horizontally stacked glass elements which personify the fallen.



event test fit

The Fallen Journalists Memorial Foundation plans to support and supplement the physical memorial by:

- hosting ceremonies and events commemorating fallen journalists and annual days of awareness (i.e., World Press Freedom Day, International Day to End Impunity for Crimes against Journalists)
- developing long-term programming and digital content
- developing curricula for high school students
- organizing volunteers to provide on-site docents during peak visitor times
- providing a space for reporting news
- arranging professional cleaning and general upkeep of the memorial

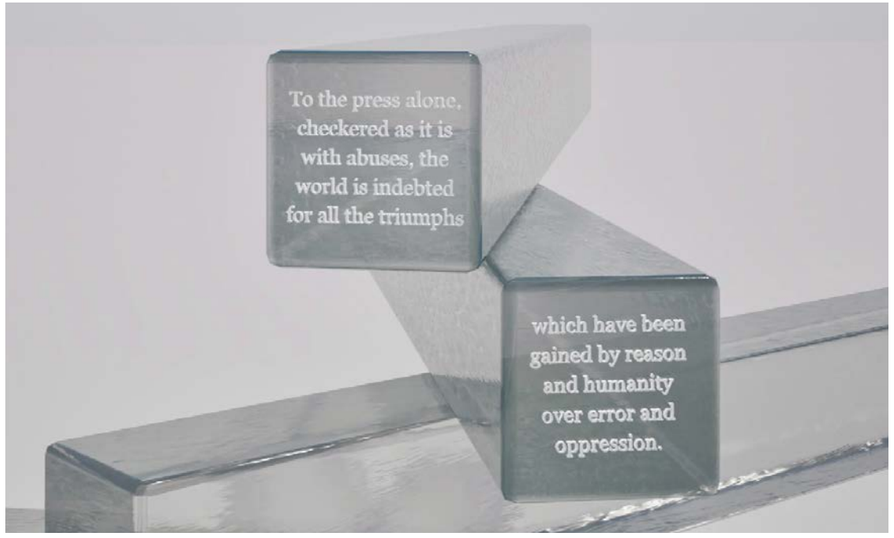
classroom

press room

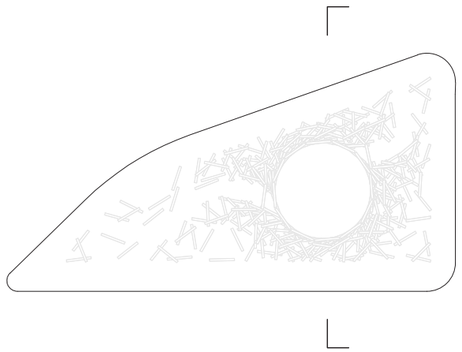
quotes engraved in horizontal bench elements

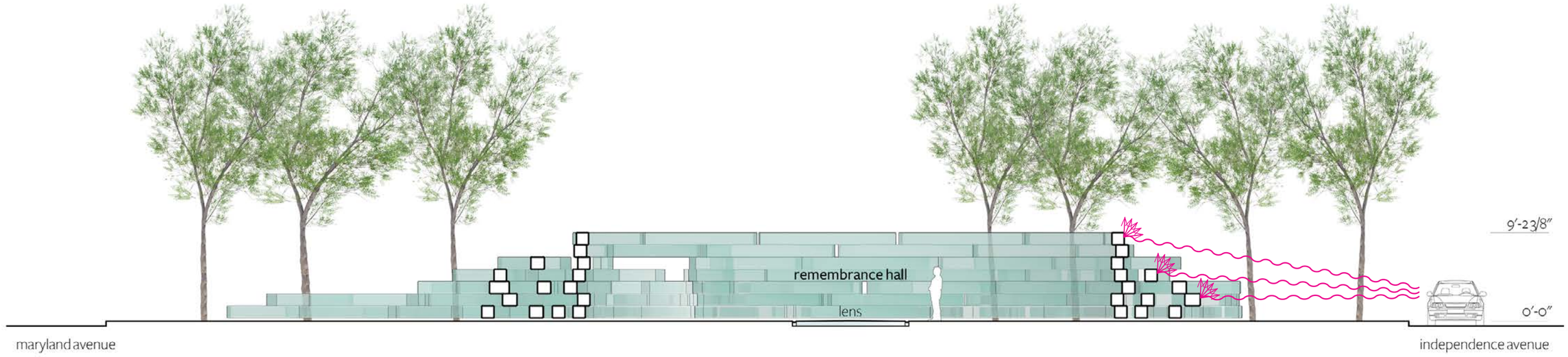
metal discs trigger digital audio content within memorial app

three dimensional engraved images related to journalism (printing press, camera, etc.)

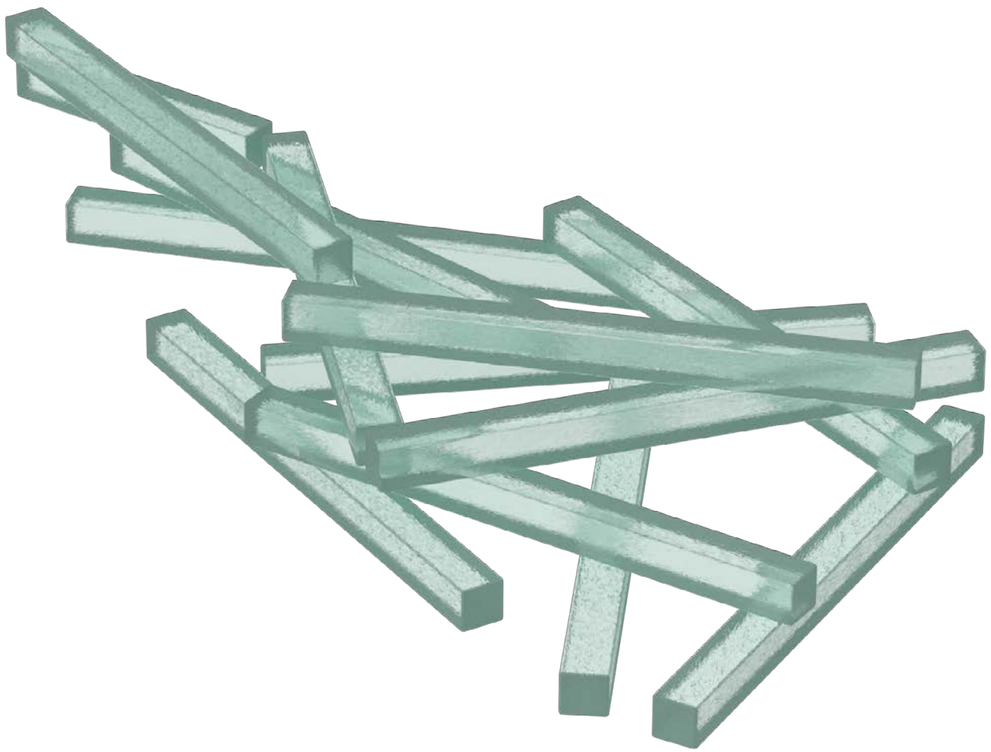


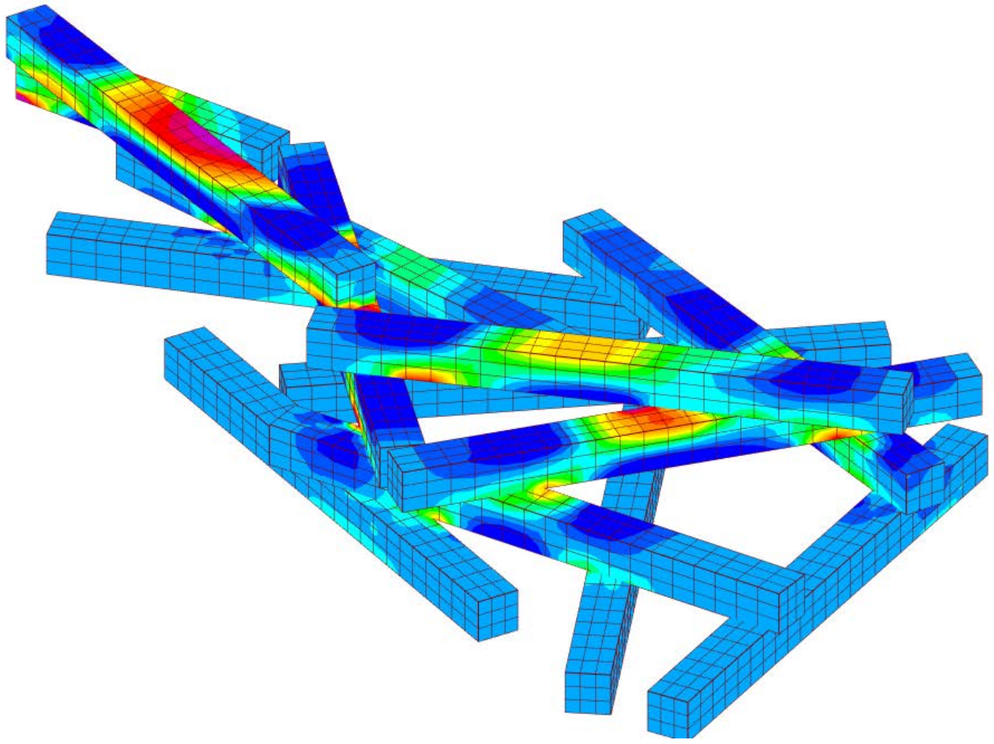
quotes engraved in ends of elements





Like a journalist works to filter out the distracting noise of false information, the glass walls of the Remembrance Hall block the visual and auditory noise of the urban environment to create a place of quiet contemplation.



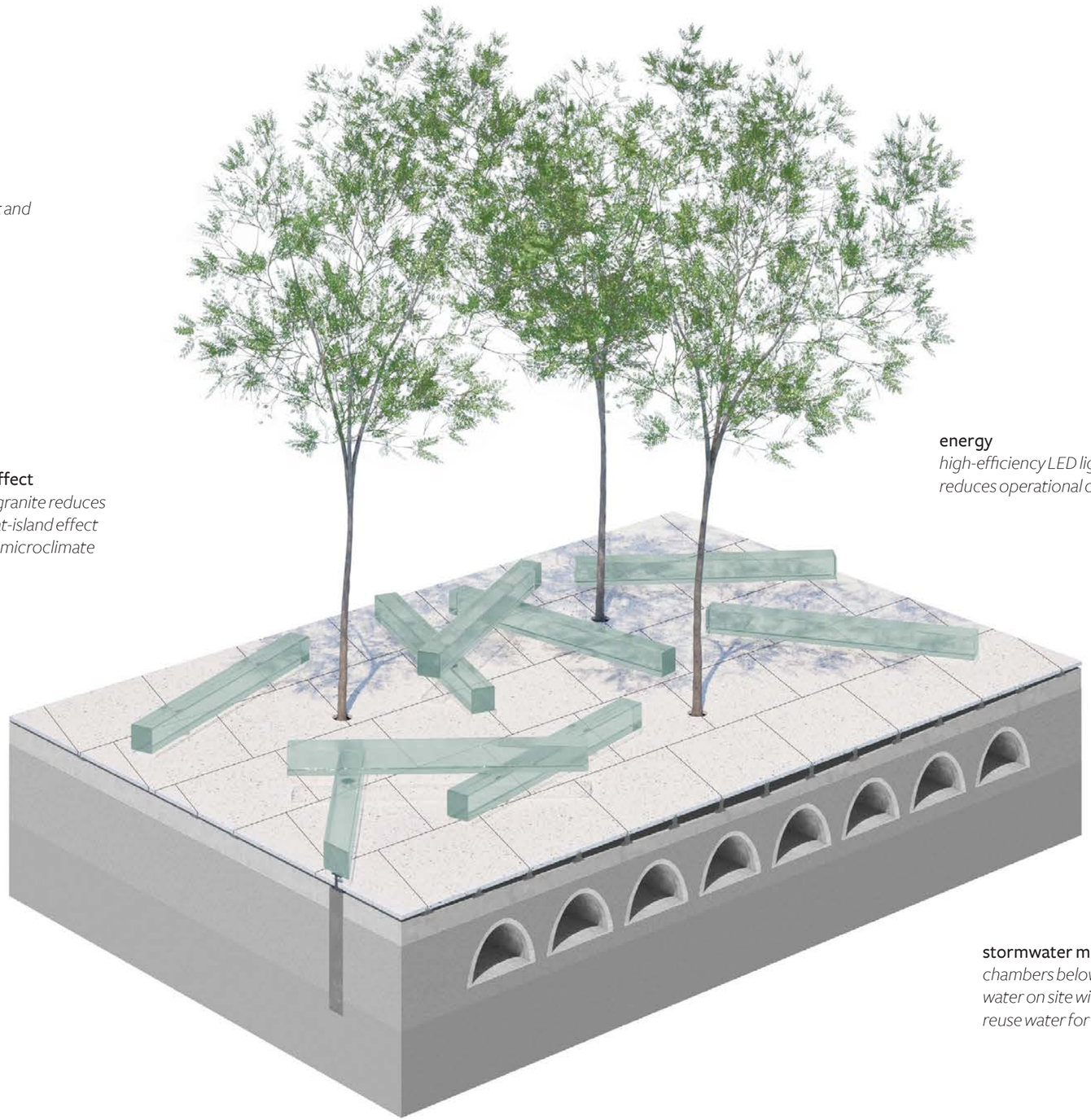


stress diagram

Glass elements are simply stacked and self-supporting. A structural analysis model was developed to assess stresses occurring within glass sections at representative areas of the memorial. The image above demonstrates flexural stresses, positive values indicating regions of tension in the glass and negative values indicating regions of compression. The resulting stresses were all found to be within standard limits for glass materials compared to accepted standards particularly with regards to the critical tension stresses.

trees
deciduous trees provide shade for human comfort and support wildlife habitat

heat-island effect
light colored granite reduces the urban heat-island effect and improves microclimate

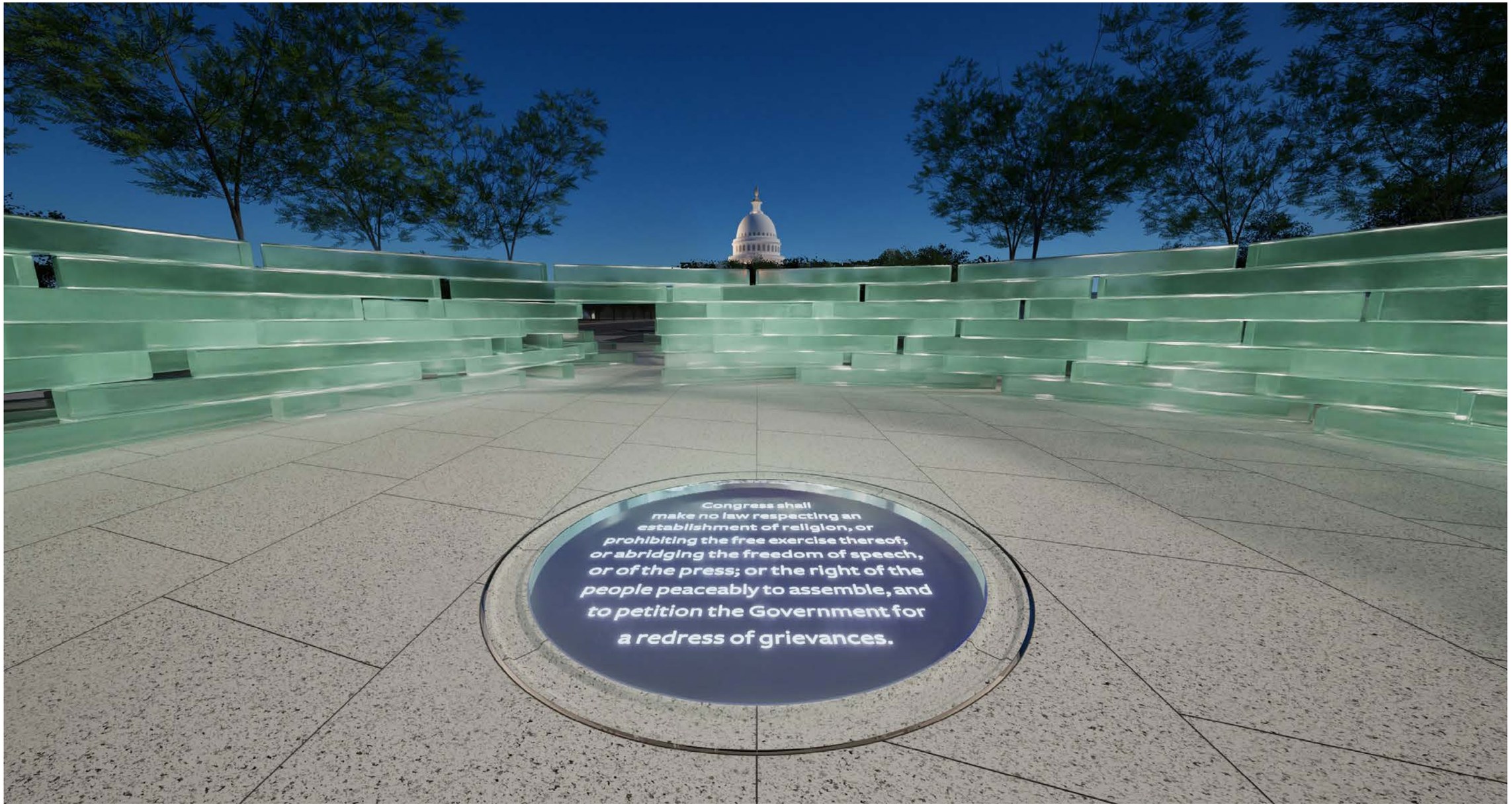


energy
high-efficiency LED lighting reduces operational cost

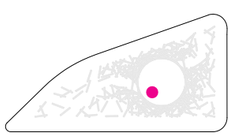
recycled material
glass elements include recycled material

embodied energy
concrete pier foundations use recycled aggregate and fly-ash to reduce embodied energy

stormwater management
chambers below paving detain water on site with potential to reuse water for site irrigation



The First Amendment text is oriented on axis with the Capitol Dome, signifying the watchdog role that journalists play in a democracy.



At night, a soft glow emanates from the up-lit glass elements, creating an atmosphere of quiet reflection where those who have sacrificed their life in pursuit of the truth are honored, and First Amendment rights are celebrated.

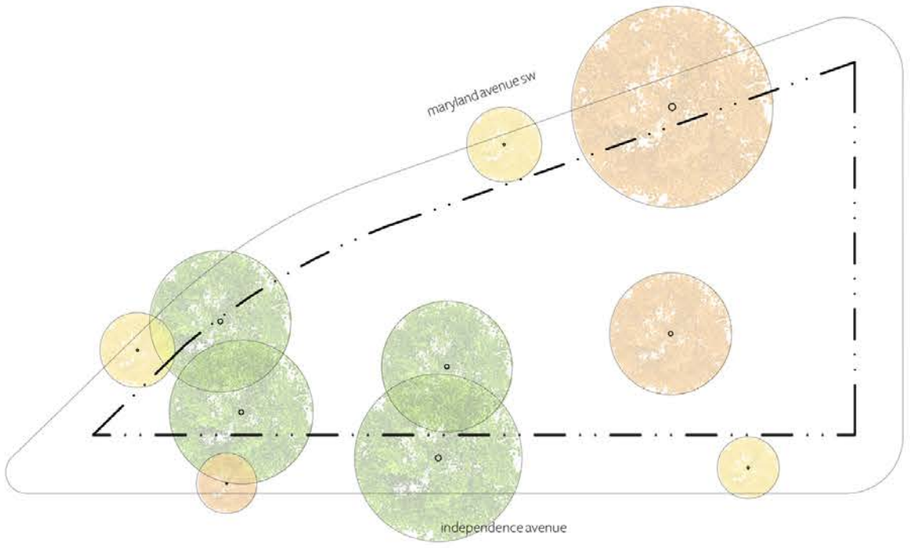
Appendix

19 september 2024 **view looking east** summer

19 september 2024 **view looking east** winter


view looking east

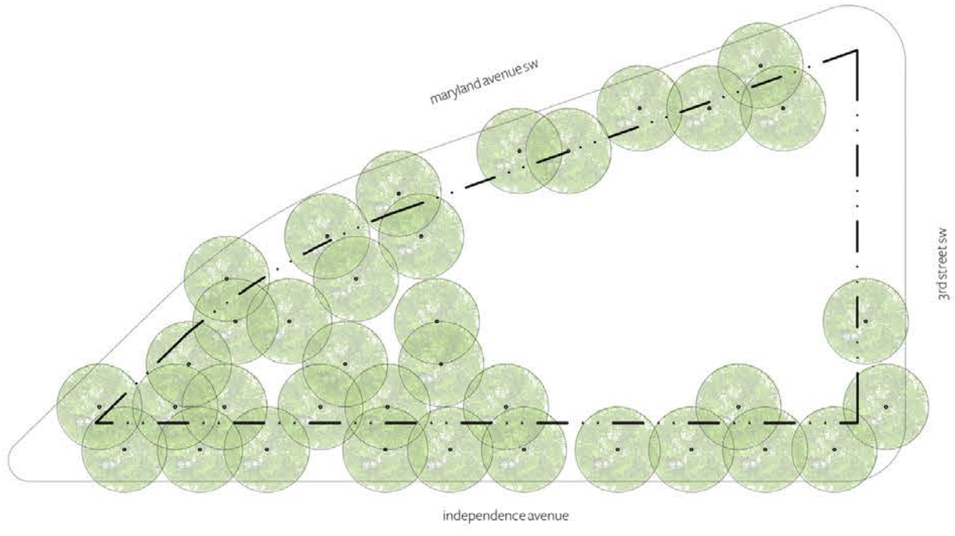

view looking west
Independence Ave



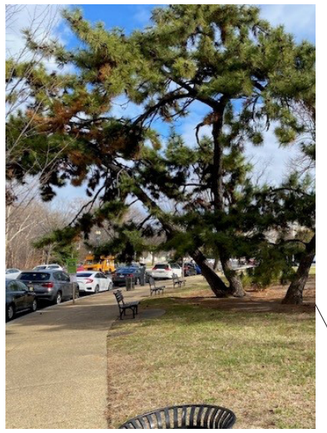
existing *10 trees*

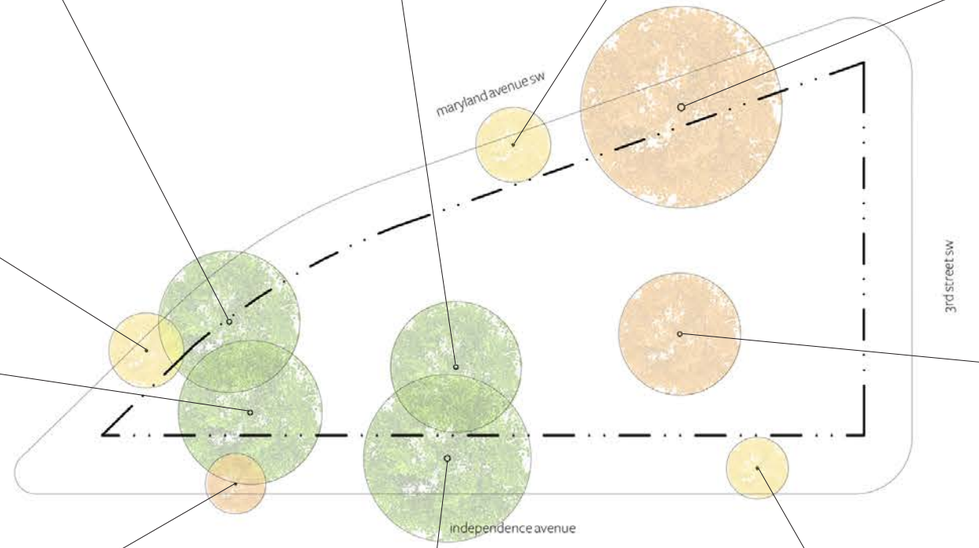
orange *dying*

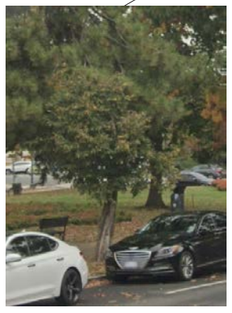
yellow *transplant candidate*

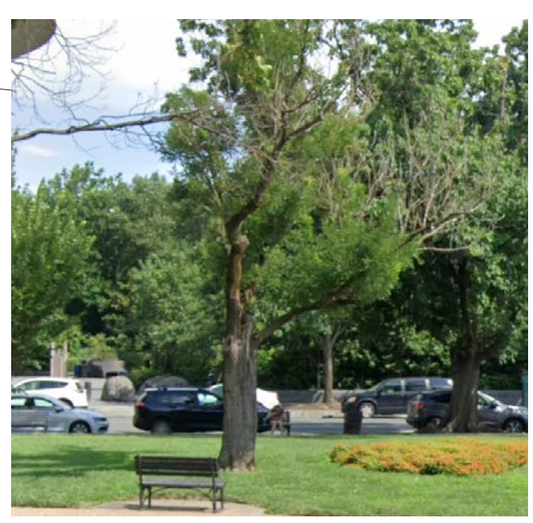


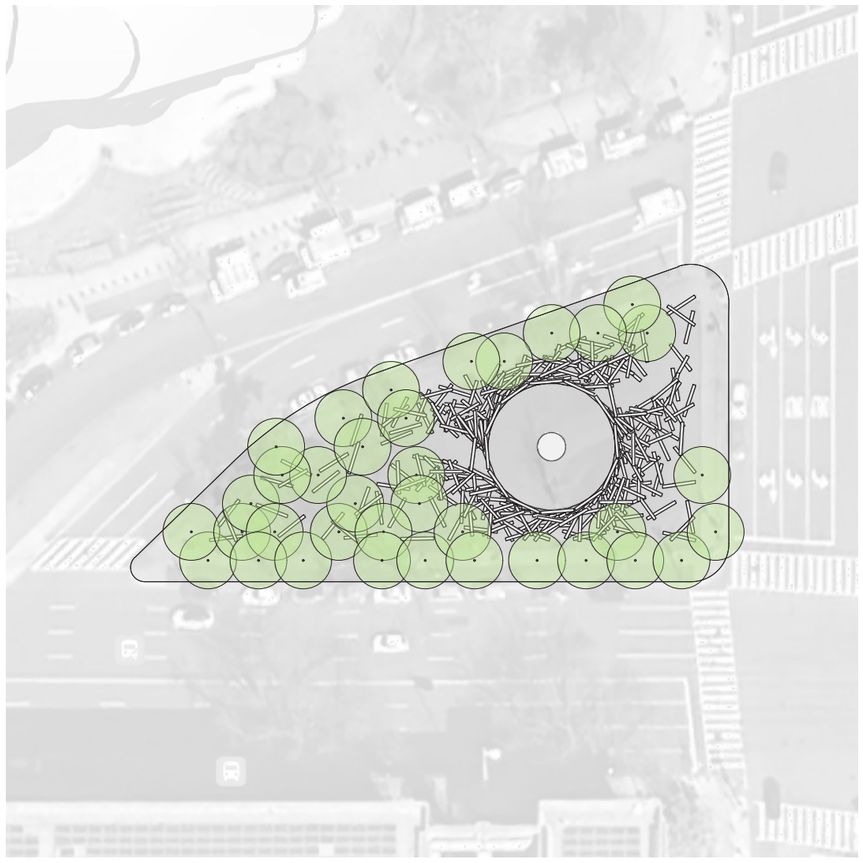
proposed *36 trees*




maryland avenue sw
3rd street sw
independence avenue

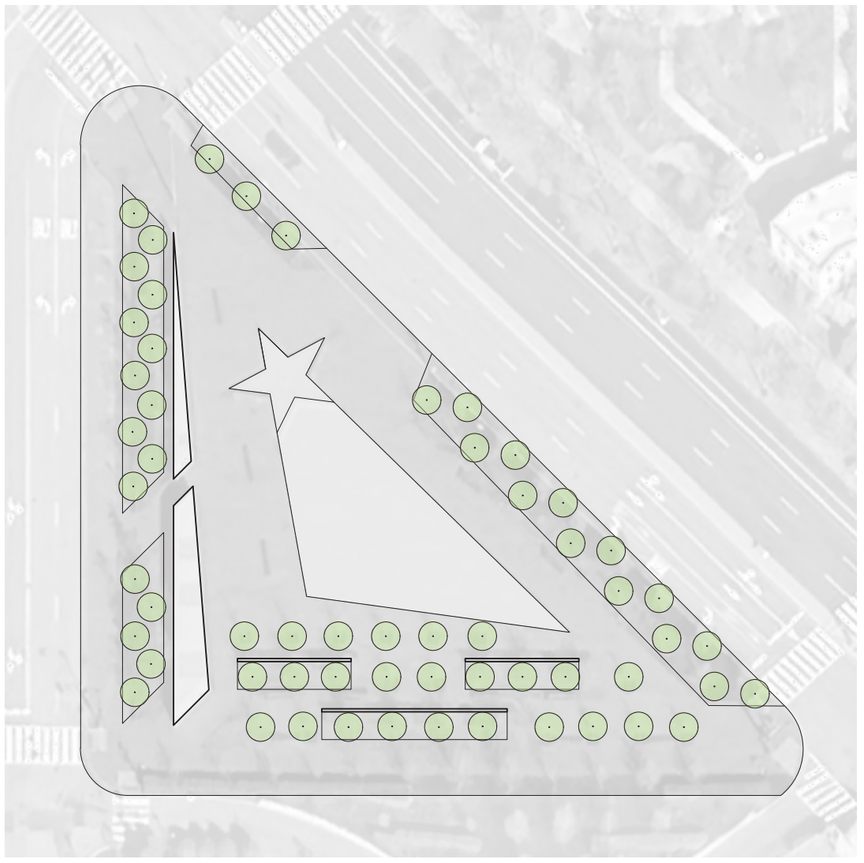






fallen journalists memorial

22,500 sf



american veterans disabled for life memorial

54,750 sf

0 32′ 64′ 128′

1/64″ = 1′-0″ scale

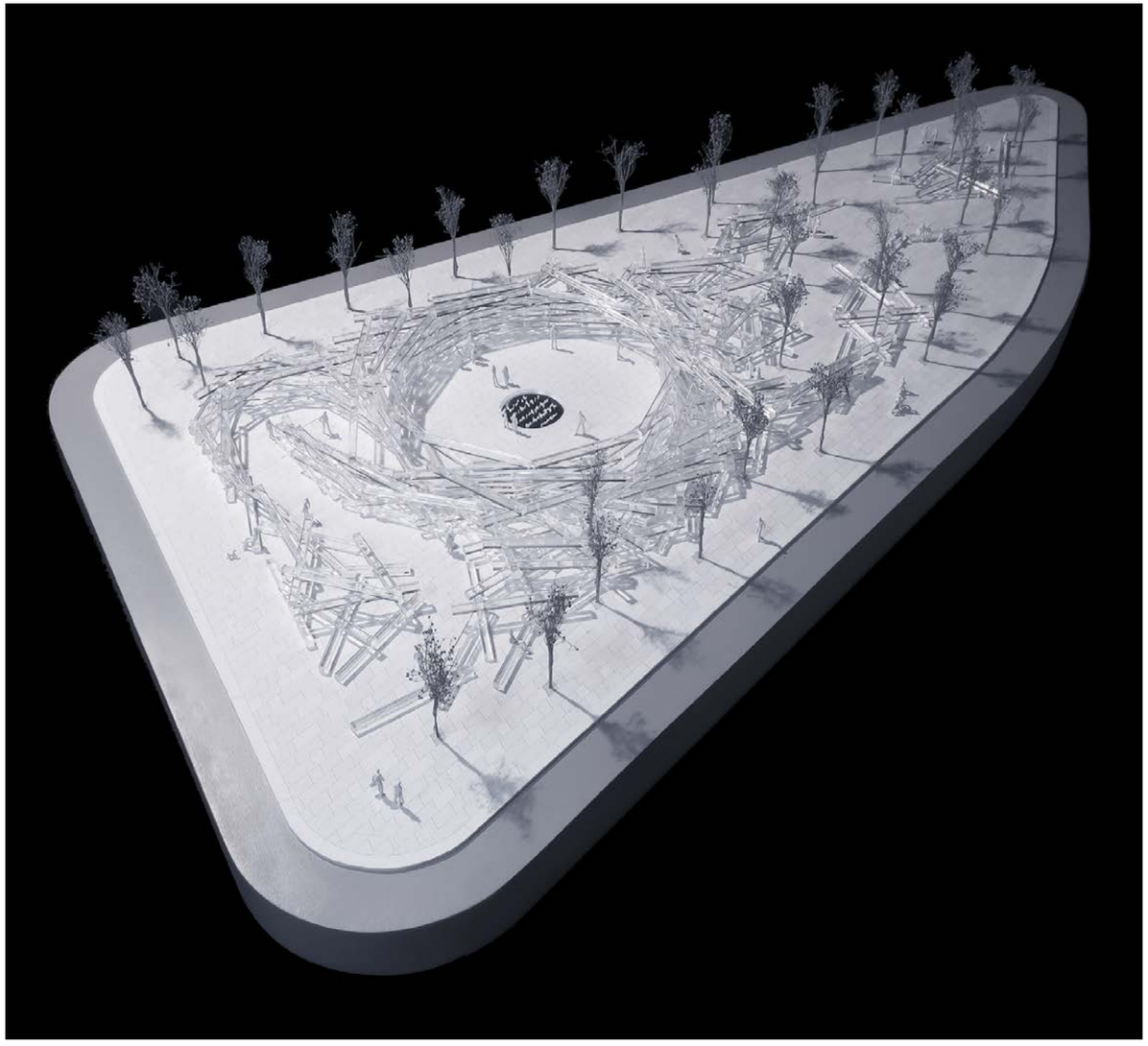
site photo

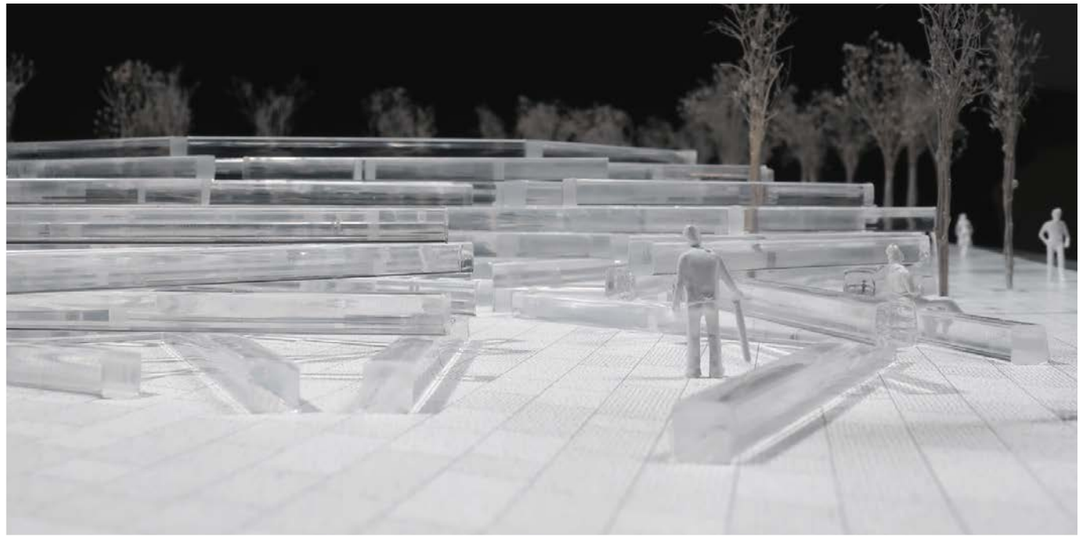
remembrance hall with complete top layer

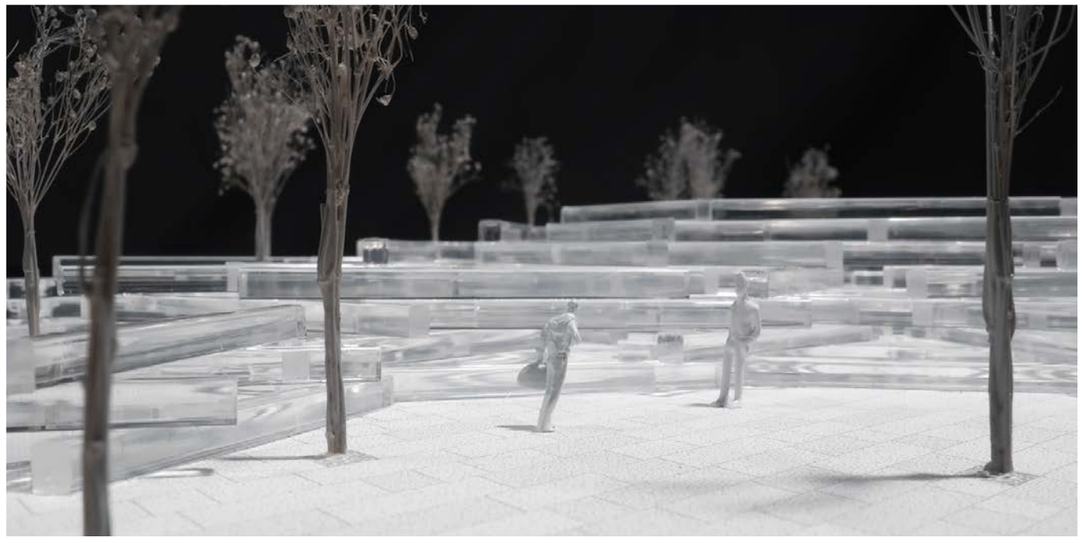
remembrance hall with gap in top layer

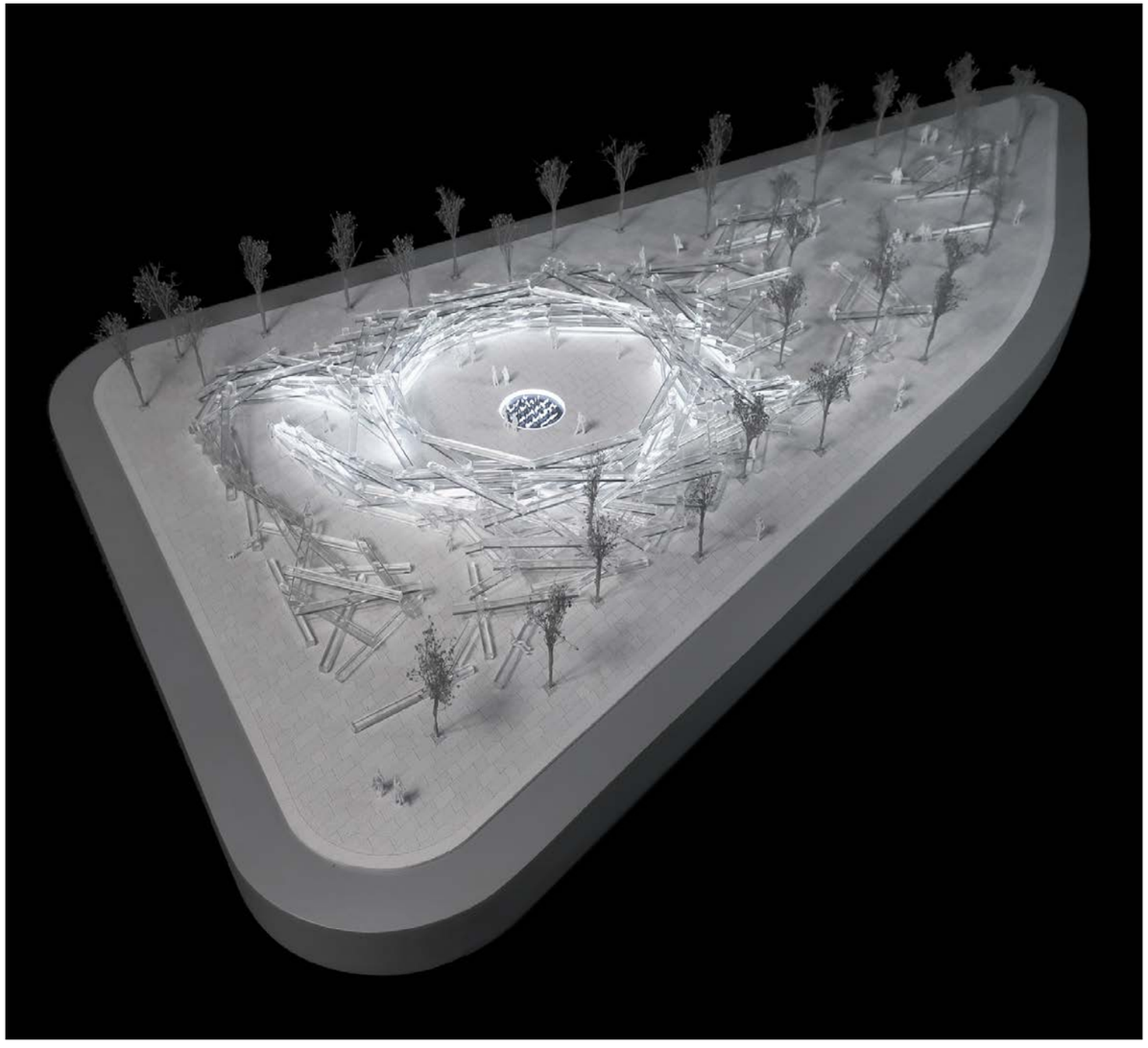
Design Development

The following sections of the document show development of the design since the competition presentation in late January 2024

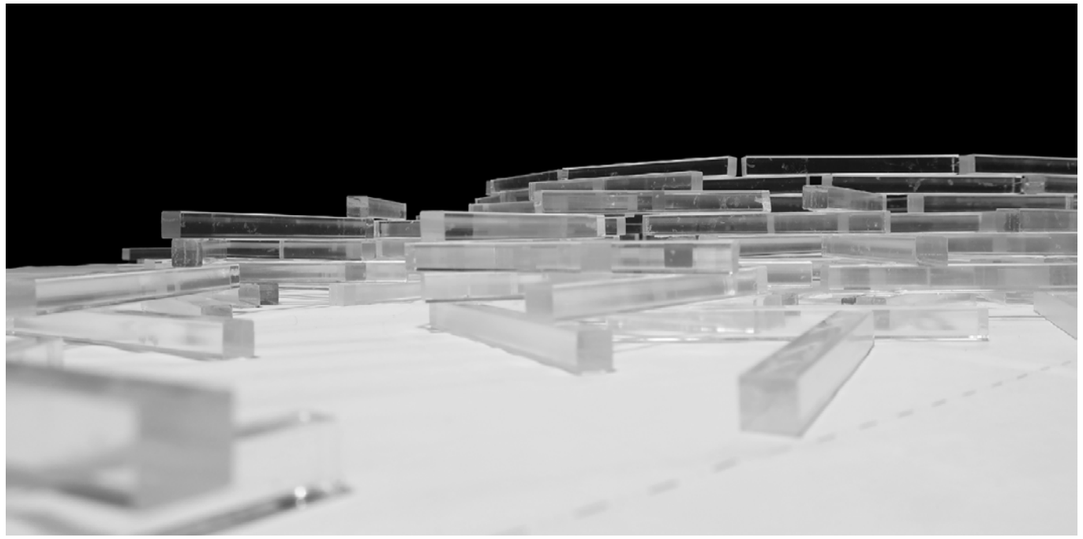


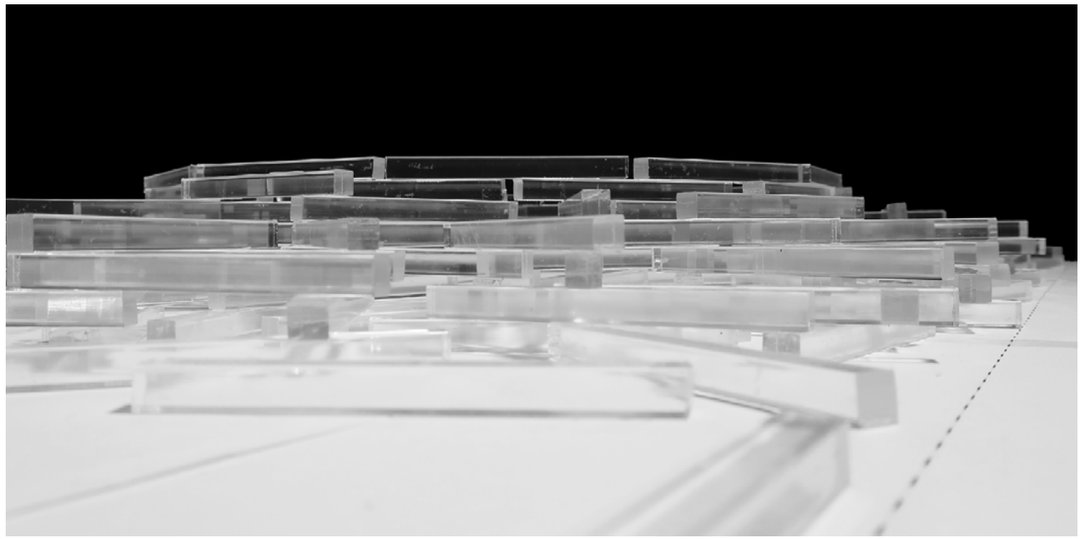


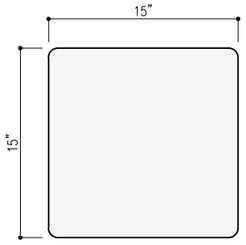




in-progress glass element layout



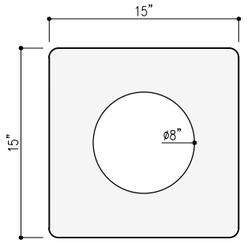




● CG-1

cast glass, solid

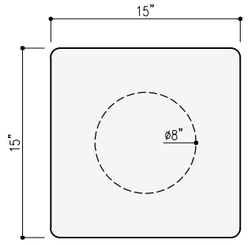
1.56 *sq ft* (69%)
217 *lb/linear ft* (69%)



CG-2

cast glass, hollow interior

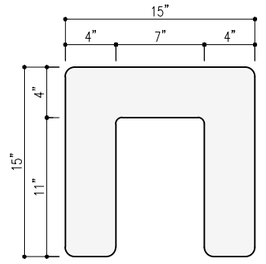
1.21 *sq ft* (53%)
168 *lb/linear ft* (53%)



CG-2

cast glass, captured void

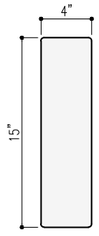
1.21 *sq ft* (53%)
168 *lb/linear ft* (53%)



CG-4

cast glass, "U" shape

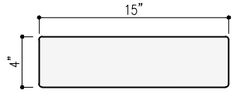
1.00 *sq ft* (44%)
139 *lb/linear ft* (44%)



CG-5

cast glass, vertical slab

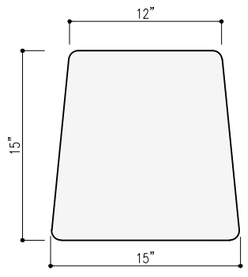
0.41 *sq ft* (18%)
57 *lb/linear ft* (18%)



CG-6

cast glass, horizontal slab

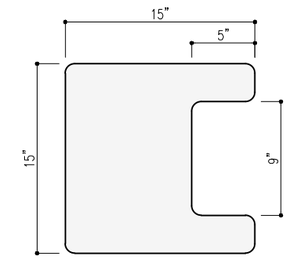
0.41 *sq ft* (18%)
57 *lb/linear ft* (18%)



CG-7

cast glass, trapezoid

1.40 *sq ft* (62%)
195 *lb/linear ft* (62%)



CG-8

cast glass, "C" shape

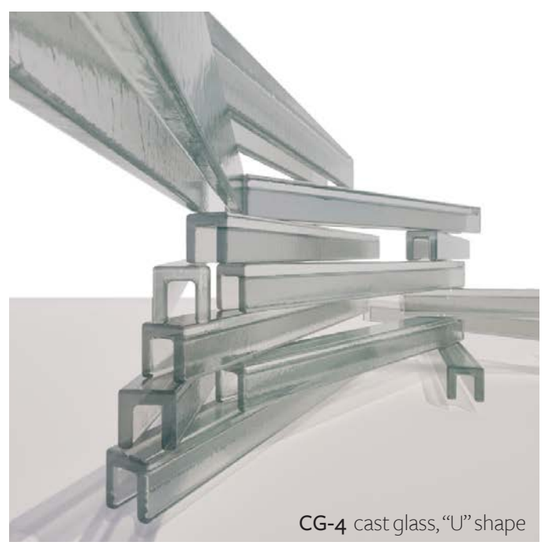
1.25 *sq ft* (55%)
174 *lb/linear ft* (55%)

(% indicates comparision to competition scheme)

● **CG-1** cast glass, solid

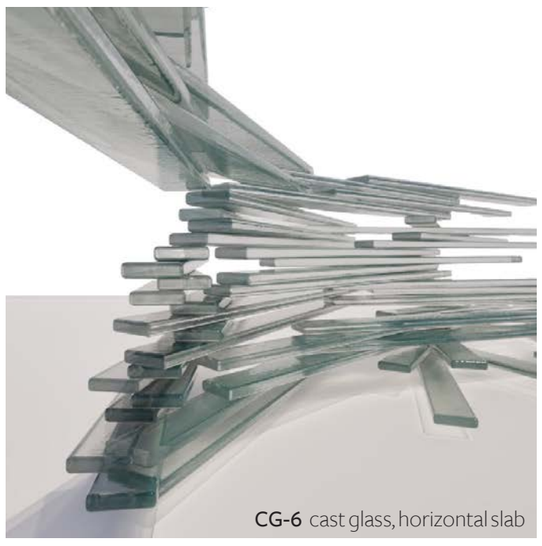
CG-2 cast glass, hollow interior

CG-3 cast glass, captured void



CG-4 cast glass, "U" shape

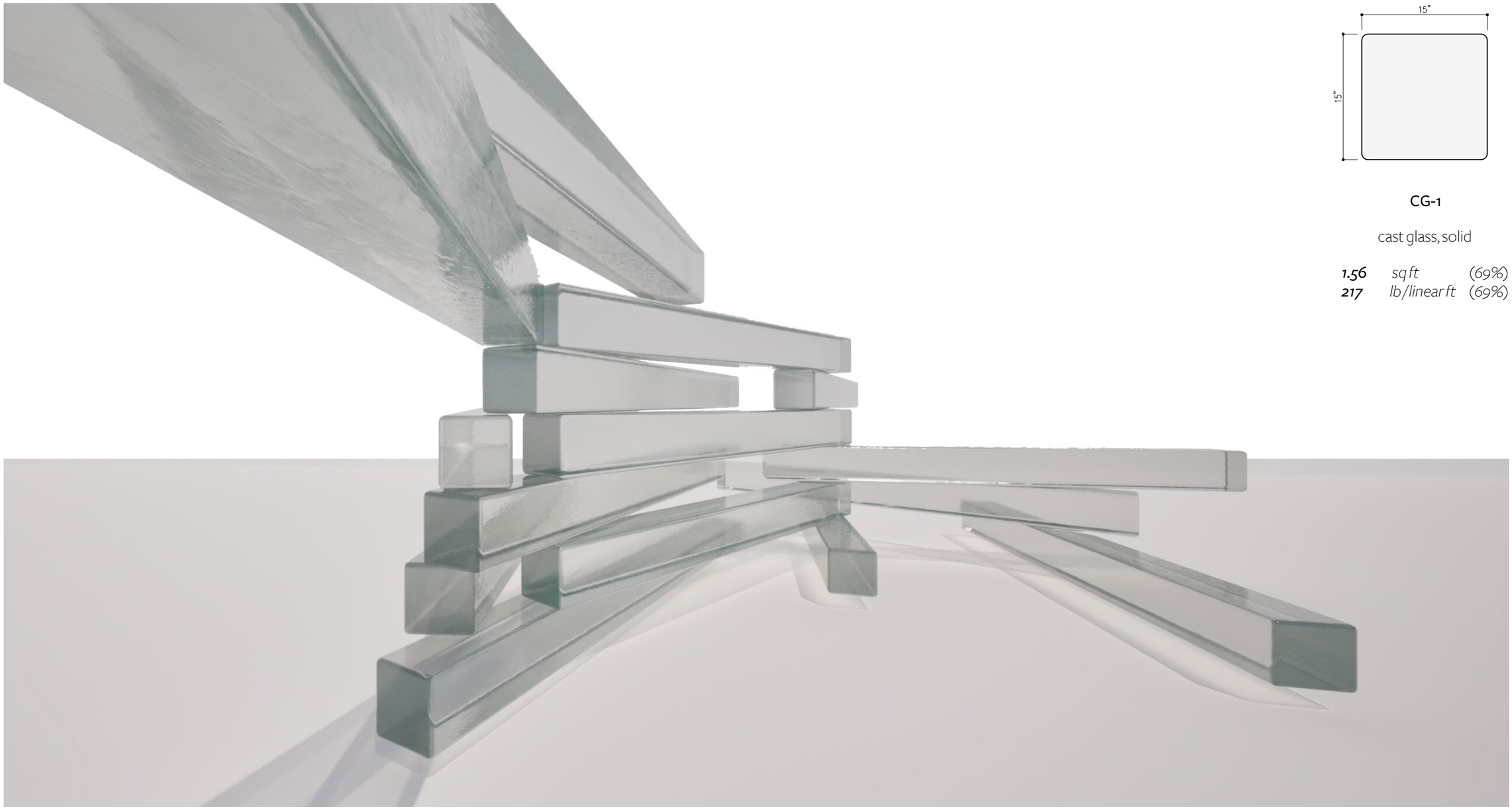
CG-5 cast glass, vertical slab



CG-6 cast glass, horizontal slab

CG-7 cast glass, trapezoid

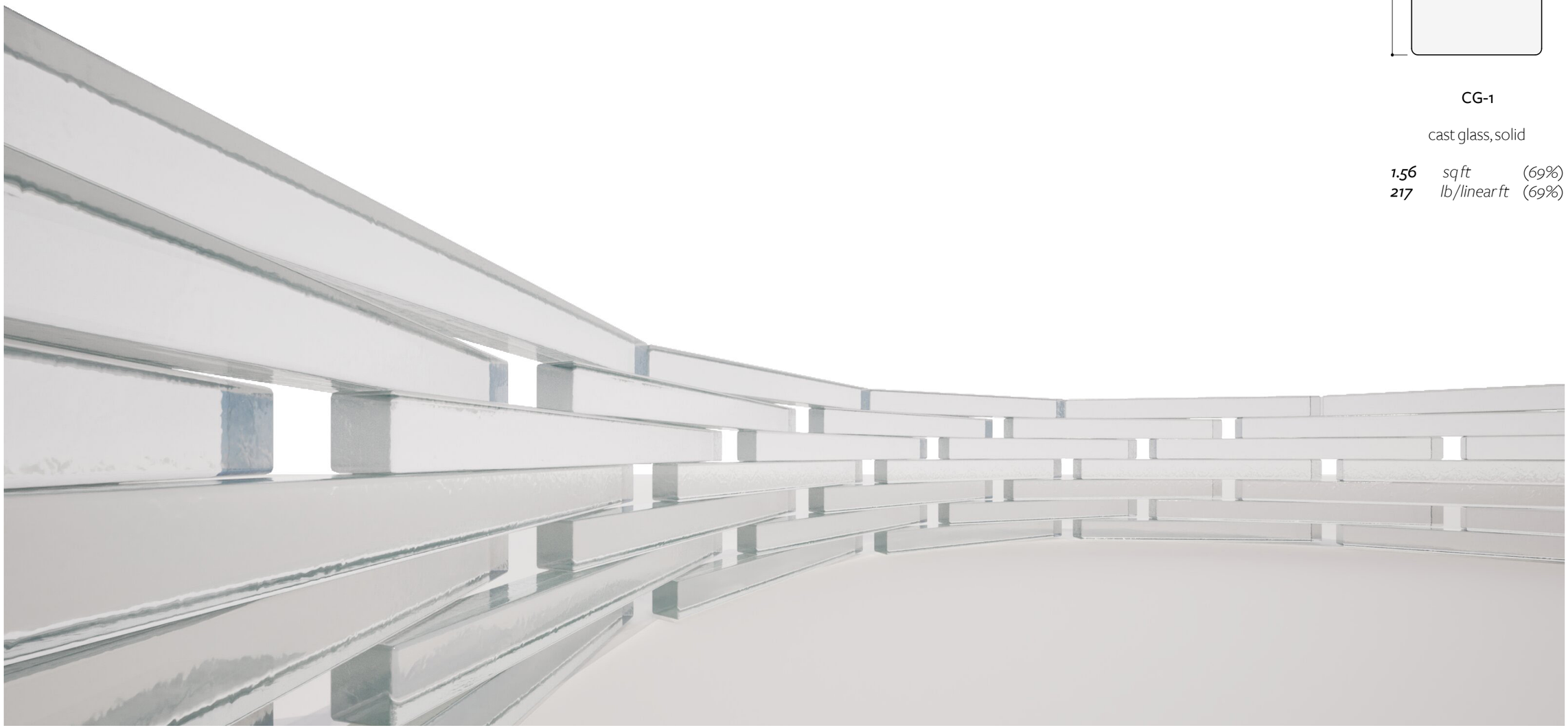
CG-8 cast glass, "C" shape

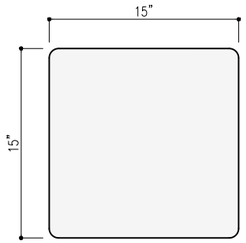


CG-1

cast glass, solid

1.56	*sq ft*	*(69%)*
217	*lb/linear ft*	*(69%)*

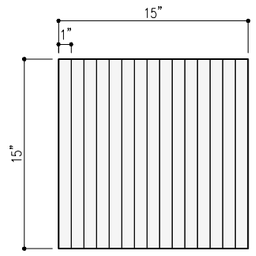




CG-1

cast glass, solid

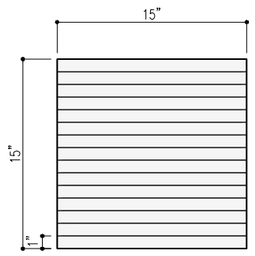
1.56	*sq ft*	*(69%)*
217	*lb/linear ft*	*(69%)*



LG-1

laminated glass, vertical

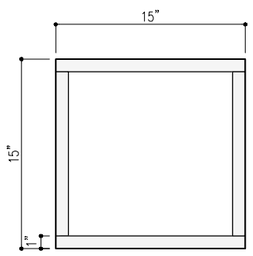
1.55	*sq ft*	*(69%)*
216	*lb/linear ft*	*(69%)*



LG-2

laminated glass, horizontal

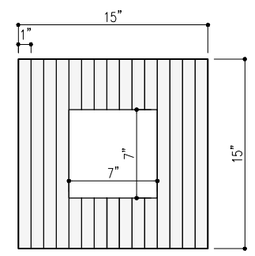
1.55	*sq ft*	*(69%)*
216	*lb/linear ft*	*(69%)*



LG-3

laminated glass, box

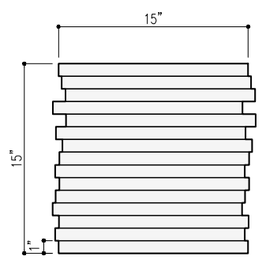
0.39	*sq ft*	*(17%)*
54	*lb/linear ft*	*(17%)*



LG-4

laminated glass, hollow

1.22	*sq ft*	*(54%)*
170	*lb/linear ft*	*(54%)*



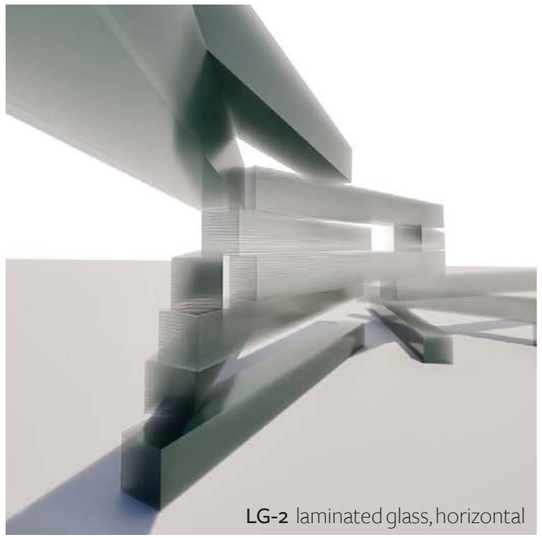
LG-5

laminated glass, deckled edge

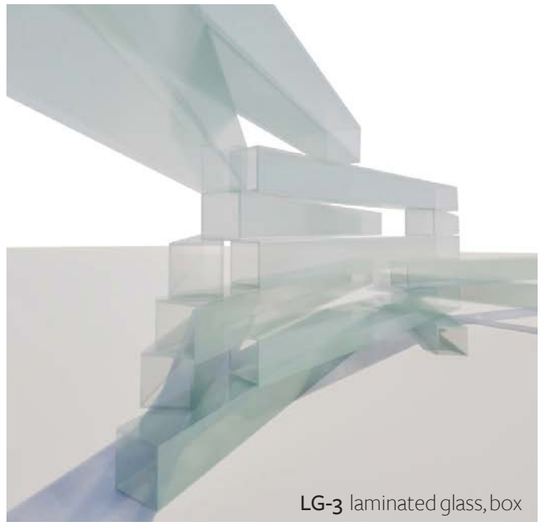
1.55	*sq ft*	*(69%)*
216	*lb/linear ft*	*(69%)*

(% indicates comparision to competition scheme)

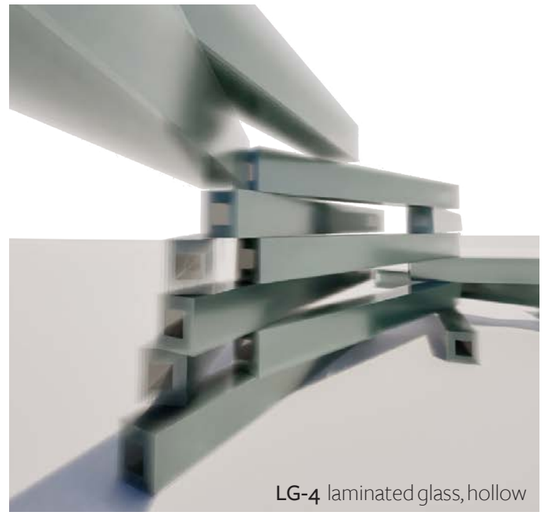
LG-1 laminated glass, vertical



LG-2 laminated glass, horizontal



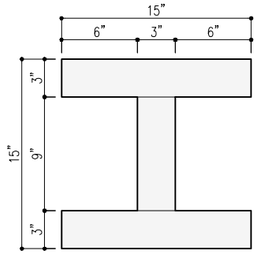
LG-3 laminated glass, box



LG-4 laminated glass, hollow

LG-5 laminated glass, deckled edge

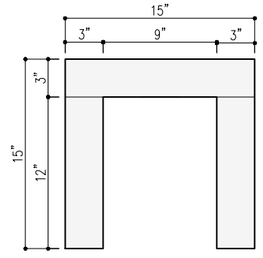
laminated glass used at the disabled veterans memorial



AC-1

acrylic, "I" shape

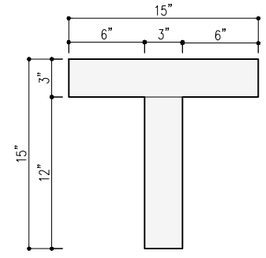
0.81	*sq ft*	*(36%)*
59	*lb/linear ft*	*(18%)*



AC-2

acrylic, "U" shape

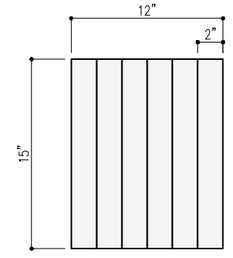
0.81	*sq ft*	*(36%)*
59	*lb/linear ft*	*(18%)*



AC-3

acrylic, "T" shape

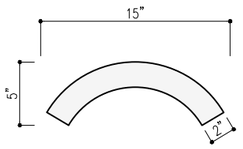
0.56	*sq ft*	*(25%)*
41	*lb/linear ft*	*(13%)*



AC-4

acrylic, laminated/curved

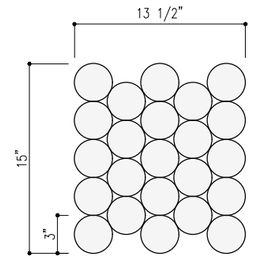
1.25	*sq ft*	*(55%)*
90	*lb/linear ft*	*(28%)*



AC-5

acrylic, curved

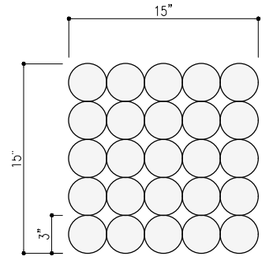
0.20	*sq ft*	*(8%)*
14.4	*lb/linear ft*	*(5%)*



AC-6

acrylic, rods

1.19	*sq ft*	*(52%)*
86	*lb/linear ft*	*(27%)*

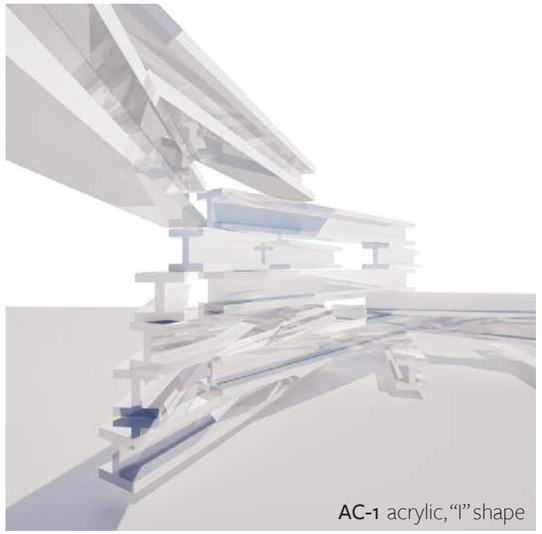


AC-7

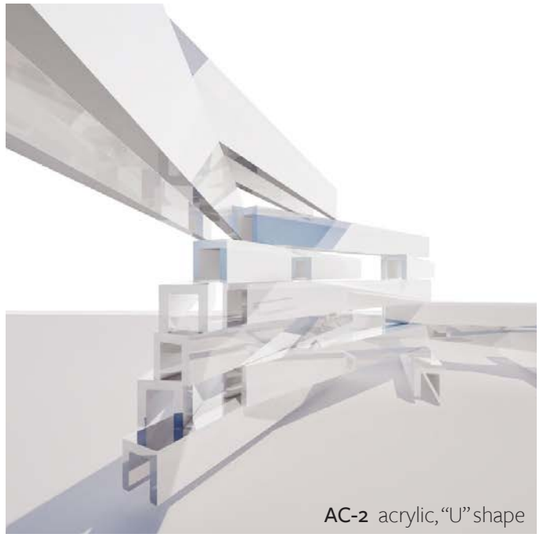
acrylic, rods

1.22	*sq ft*	*(54%)*
88	*lb/linear ft*	*(28%)*

(% indicates comparision to competition scheme)

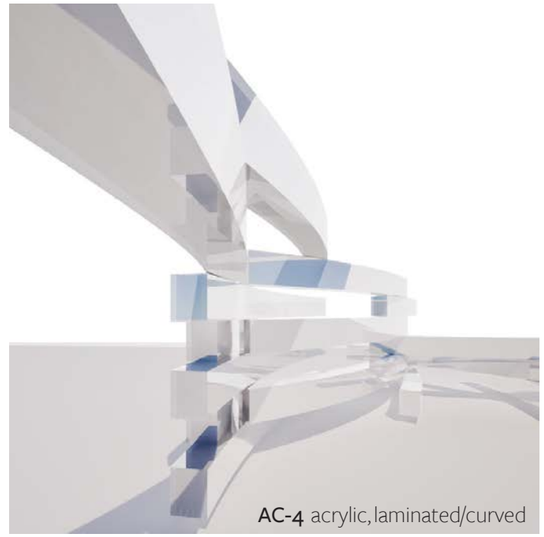


AC-1 acrylic, "I" shape

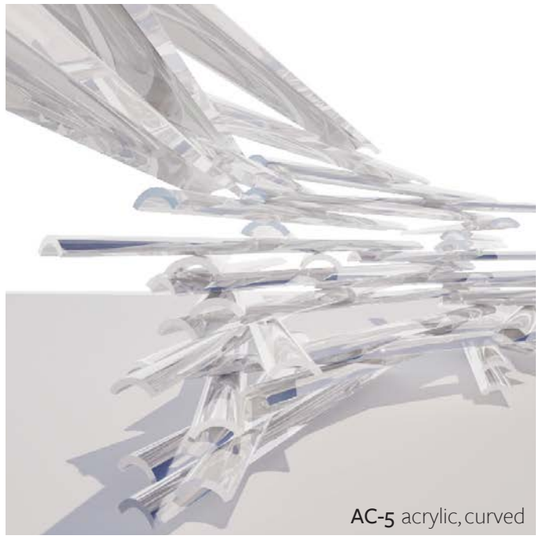


AC-2 acrylic, "U" shape

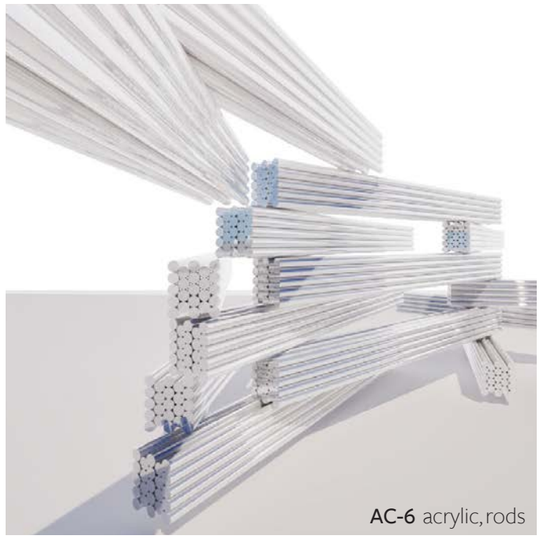
AC-3 acrylic, "T" shape



AC-4 acrylic, laminated/curved



AC-5 acrylic, curved



AC-6 acrylic, rods

Design Development Element Size

2017 District of Columbia Building Code chapter 10 means of egress

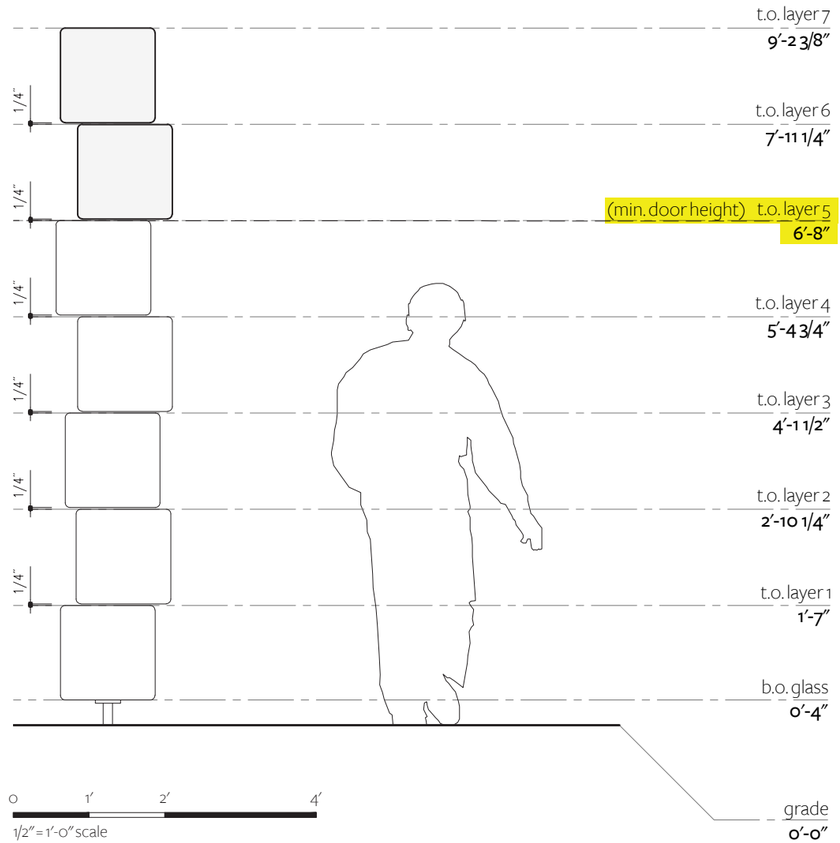
https://codes.iccsafe.org/content/DCBC2017P1/chapter-10-means-of-egress

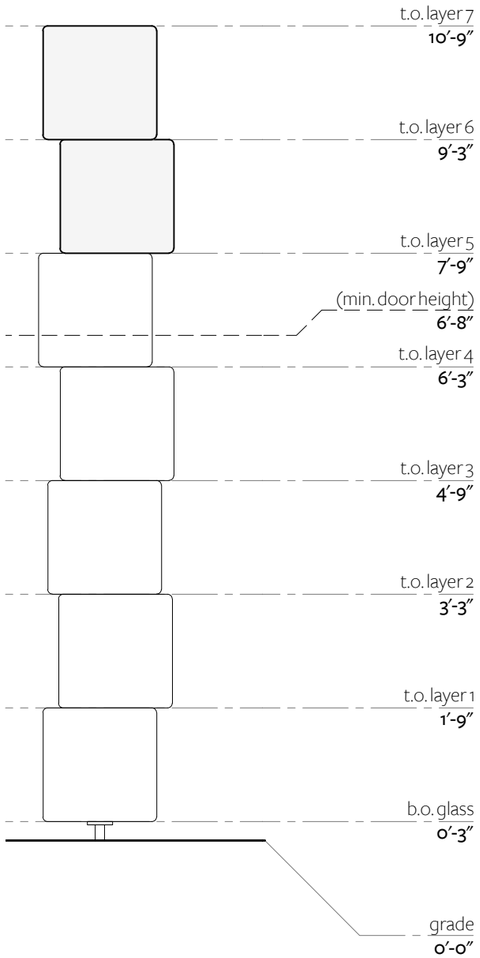
1010.1.1 Size of doors.

The required capacity of each door opening shall be sufficient for the *occupant load* thereof and shall provide a minimum clear width of 32 inches (813 mm). Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 32 inches (813 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. *Means of egress* doors in a Group I-2 occupancy used for the movement of beds shall provide a clear width not less than 41½ inches (1054 mm). The height of door openings shall be not less than 80 inches (2032 mm).

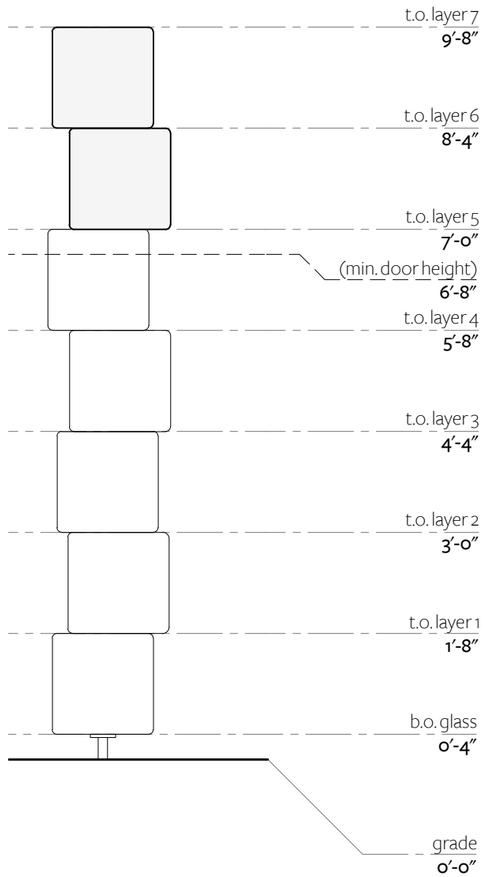
Exceptions:

1. The minimum and maximum width shall not apply to door openings that are not part of the required *means of egress* in Group R-2 and R-3 occupancies.
2. Door openings to resident *sleeping units* in Group I-3 occupancies shall have a clear width of not less than 28 inches (711 mm).
3. Door openings to storage closets less than 10 square feet (0.93 m^2) in area shall not be limited by the minimum width.
4. Width of door leaves in revolving doors that comply with Section 1010.1.4.1 shall not be limited.
5. Door openings within a *dwelling unit* or *sleeping unit* shall be not less than 78 inches (1981 mm) in height.
6. Exterior door openings in *dwelling units* and *sleeping units*, other than the required *exit* door, shall be not less than 76 inches (1930 mm) in height.
7. In other than Group R-1 occupancies, the minimum widths shall not apply to interior egress doors within a *dwelling unit* or *sleeping unit* that is not required to be an *Accessible unit, Type A unit* or *Type B unit*.
8. Door openings required to be *accessible* within *Type B units* shall have a minimum clear width of 31.75 inches (806 mm).
9. Doors to walk-in freezers and coolers less than 1,000 square feet (93 m^2) in area shall have a maximum width of 60 inches (1524 mm).
10. In Group R-1 *dwelling units* or *sleeping units* not required to be *Accessible units*, the minimum width shall not apply to doors for showers or saunas.



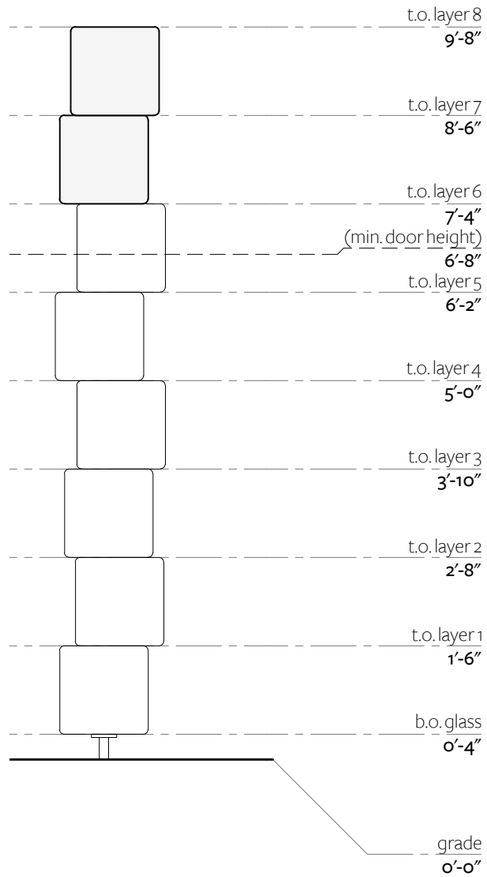


18" height element



16" height element

15" height element



14" height element

2010 ADA Accessibility Standards

https://www.ada.gov/law-and-regs/design-standards/2010-stds/

Where are accessible benches required?

Compliance with ADA Section 903 (Benches) shall be required only when specifically referenced in the 2010 ADA Standards for Accessible Design. This also applies to Texas 2012 Texas Accessibility Standards. There is no specific scoping for benches, except when they are required in the the different sections of the ADA Standards. Because the ADA Standards only deals with fixed or built in elements, benches must be fixed or built in as well.

Benches complying with section 903 are only required at the following spaces:

- Saunas (per section 612)
- Locker Rooms (per section 803)
- Dressing Rooms (per section 803)
- Fitting Rooms (per section 803)
- Holding Cells (807)

And all those benches must follow the requirements in section 903:

903.2 A Clear Floor or Ground Space next to the short axis.

accessible benches not required in assembly areas

221 Assembly Areas

221.1 General. Assembly areas shall provide wheelchair spaces, companion seats, and designated aisle seats complying with 221 and 802. In addition, lawn seating shall comply with 221.5. **See additional requirements at 28 CFR 35.151(g) and 28 CFR 36.406(f).**

221.2 Wheelchair Spaces. Wheelchair spaces complying with 221.2 shall be provided in assembly areas with fixed seating.

221.2.1 Number and Location. Wheelchair spaces shall be provided complying with 221.2.1.

221.2.1.1 General Seating. Wheelchair spaces complying with 802.1 shall be provided in accordance with Table 221.2.1.1.

Table 221.2.1. Number of Wheelchair Spaces in Assembly Areas

Number of Seats	Minimum Number of Required Wheelchair Spaces
4 to 25	1
26 to 50	2
51 to 150	4
151 to 300	5
301 to 500	6
501 to 5000	6, plus 1 for each 150, or fraction thereof, between 501 through 5000
5001 and over	36, plus 1 for each 200, or fraction thereof, over 5000

assembly areas require wheelchair spaces and companion seats where number of seats exceeds 4

802 Wheelchair Spaces, Companion Seats, and Designated Aisle Seats

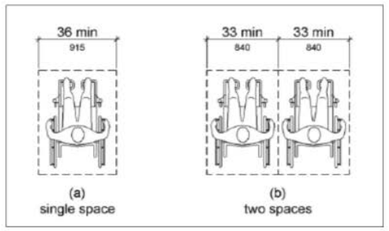
802.1 Wheelchair Spaces. Wheelchair spaces shall comply with 802.1.

802.1.1 Floor or Ground Surface. The floor or ground surface of wheelchair spaces shall comply with 302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

802.1.2 Width. A single wheelchair space shall be 36 inches (915 mm) wide minimum Where two adjacent wheelchair spaces are provided, each wheelchair space shall be 33 inches (840 mm) wide minimum.

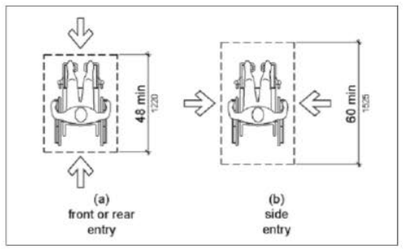
Figure 802.1.2



Width of Wheelchair Spaces in Assembly Areas

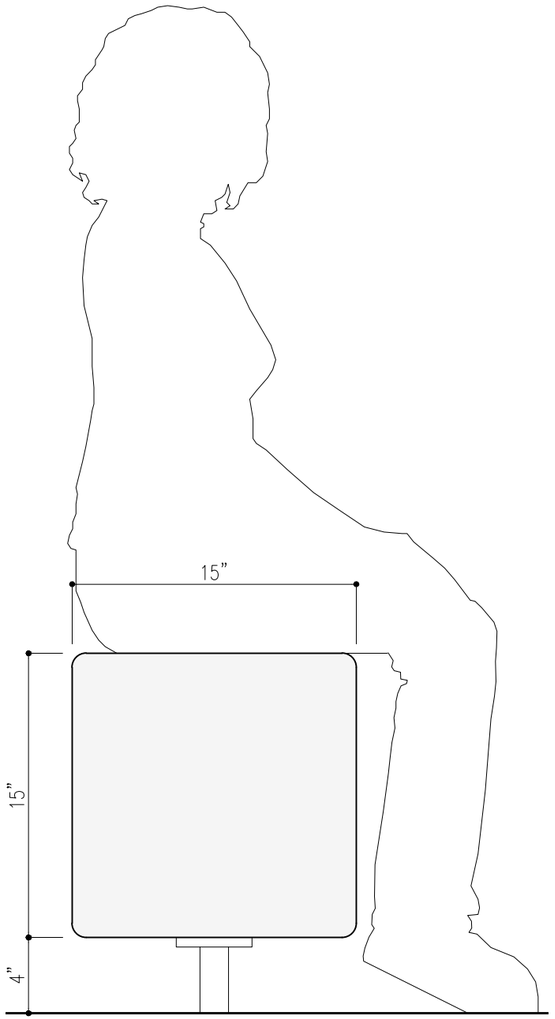
802.1.3 Depth. Where a wheelchair space can be entered from the front or rear, the wheelchair space shall be 48 inches (1220 mm) deep minimum. Where a wheelchair space can be entered only from the side, the wheelchair space shall be 60 inches (1525 mm) deep minimum.

Figure 802.1.3

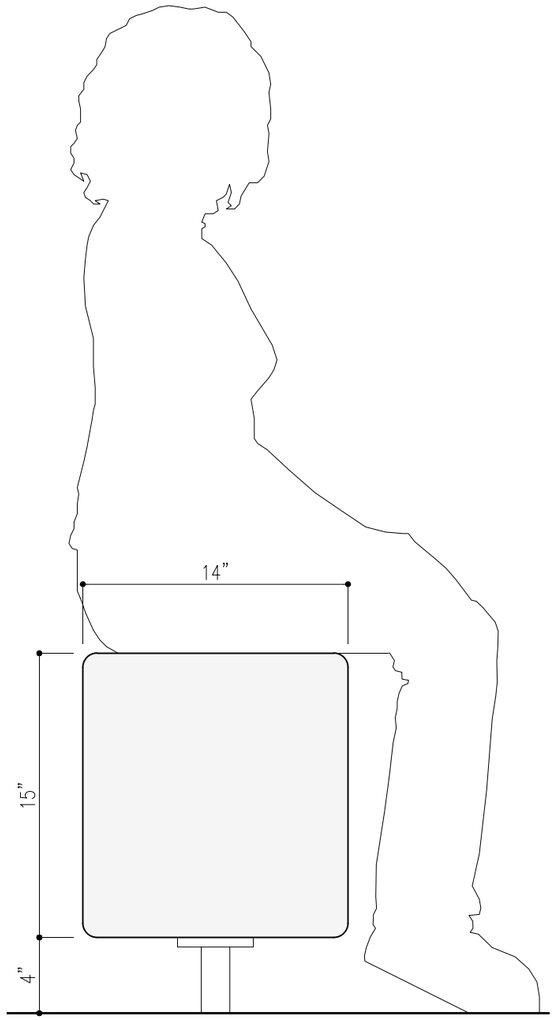


802.3 Companion Seats. Companion seats shall comply with 802.3.

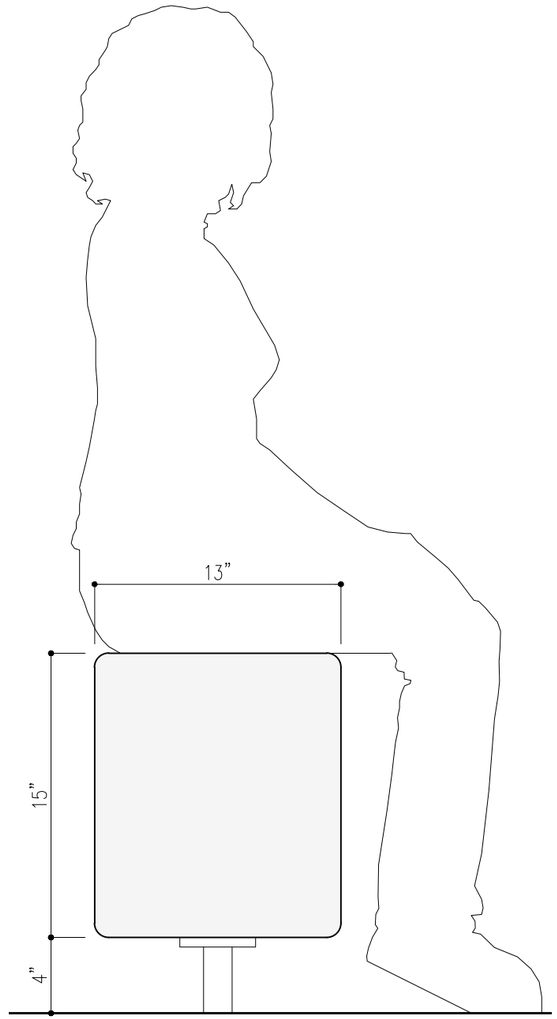
802.3.1 Alignment. In row seating, companion seats shall be located to provide shoulder alignment with adjacent wheelchair spaces. The shoulder alignment point of the wheelchair space shall be measured 36 inches (915 mm) from the front of the wheelchair space. The floor surface of the companion seat shall be at the same elevation as the floor surface of the wheelchair space.



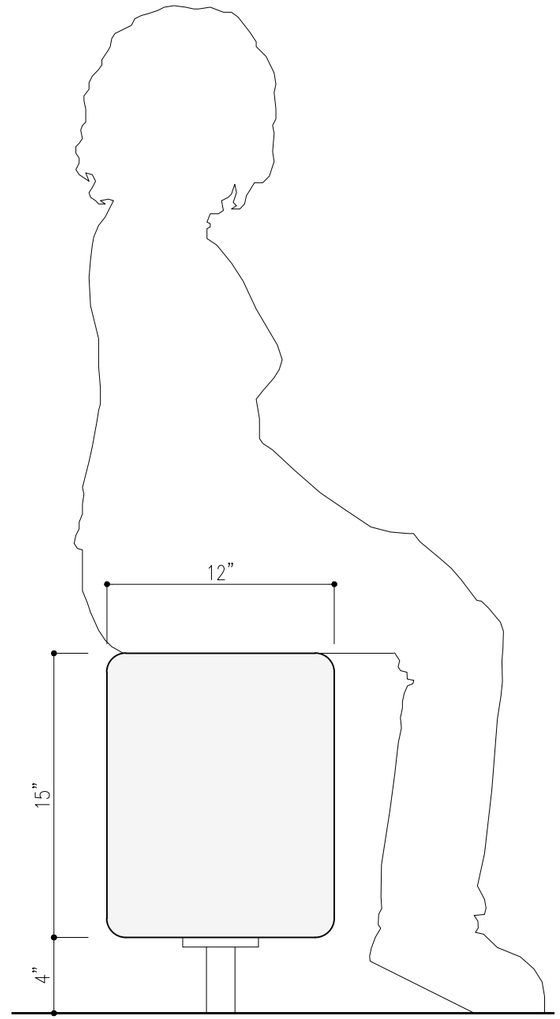
● 15” width element



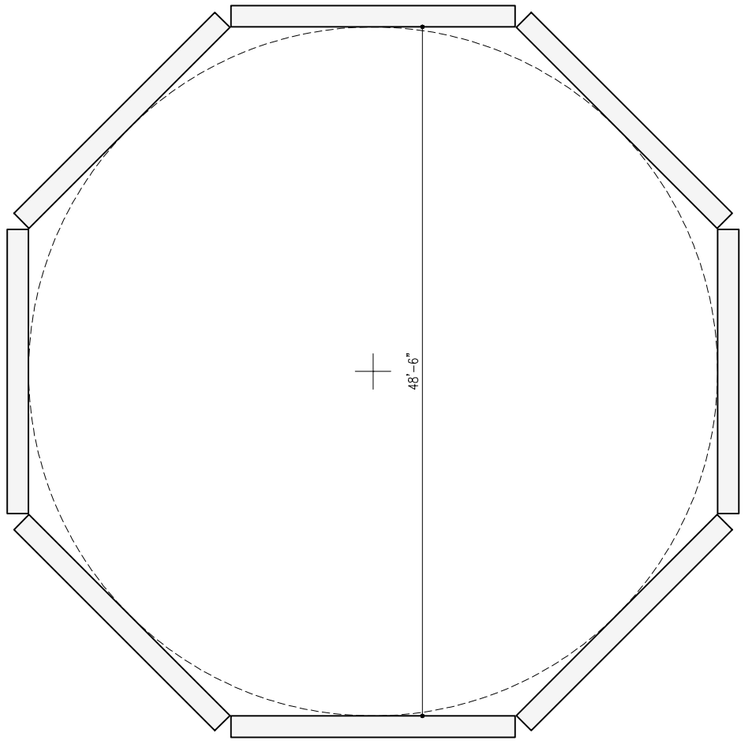
14” width element



13” width element



12” width element



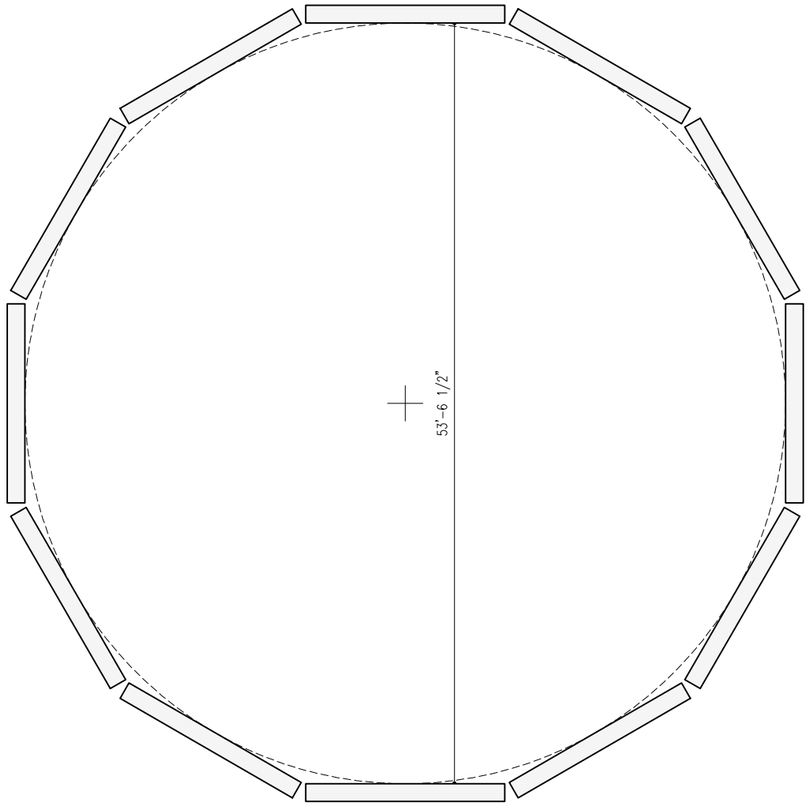
competition scheme

8 elements

20' length

1" tolerance

48'-6" circle diameter



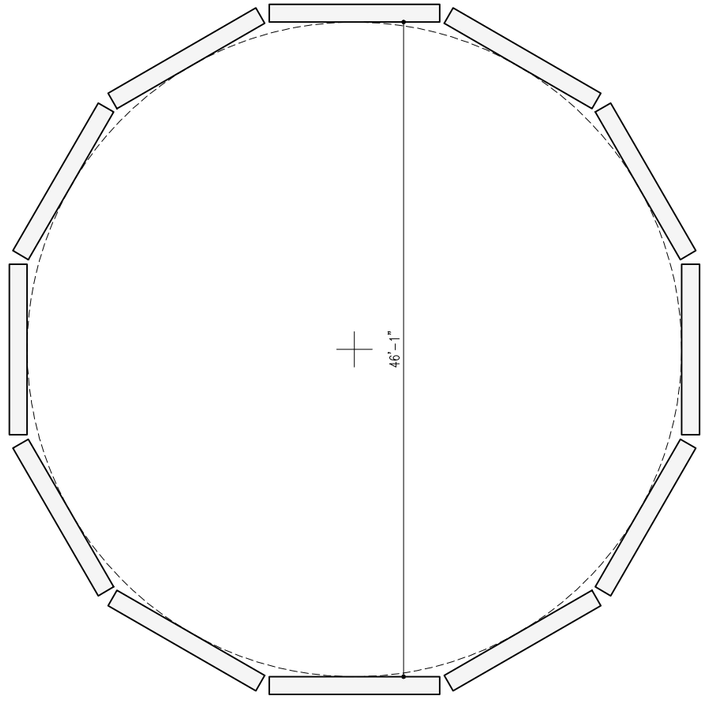
study 1

12 elements

14' length

4" tolerance

53'-6 1/2" circle diameter



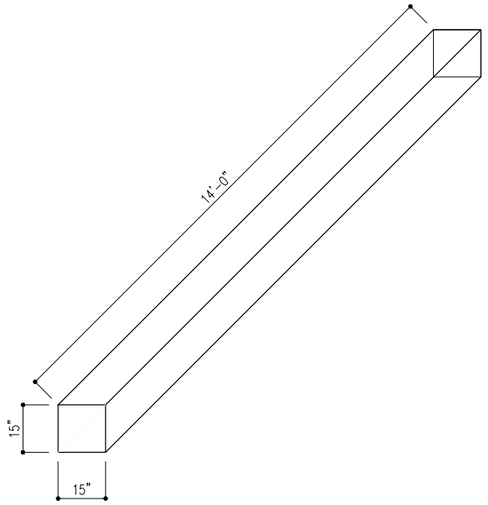
study 2

12 elements

12' length

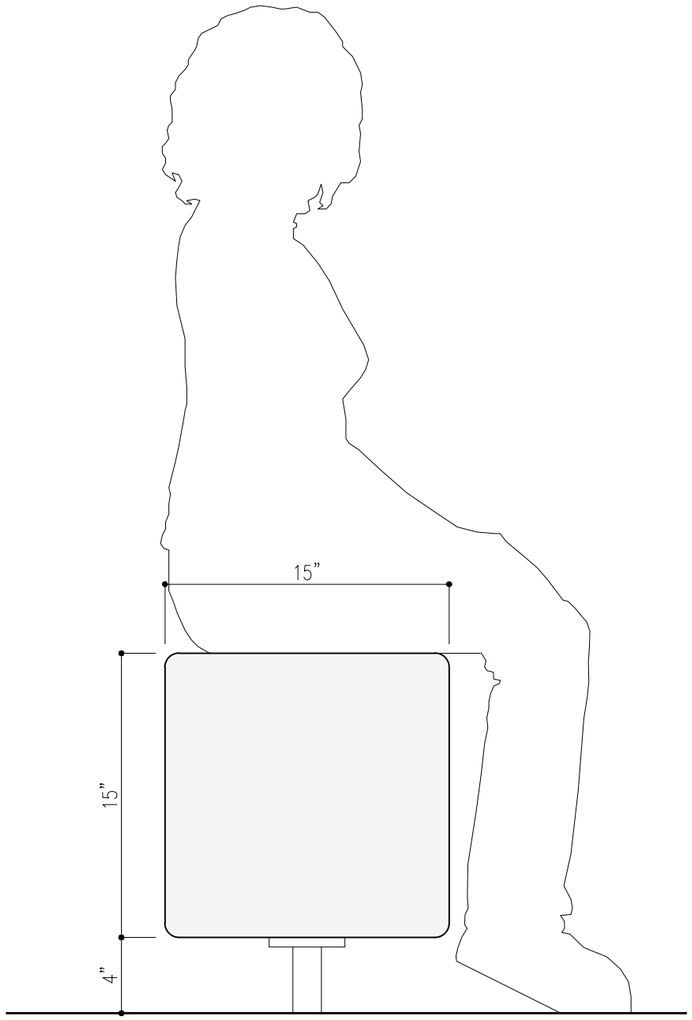
4" tolerance

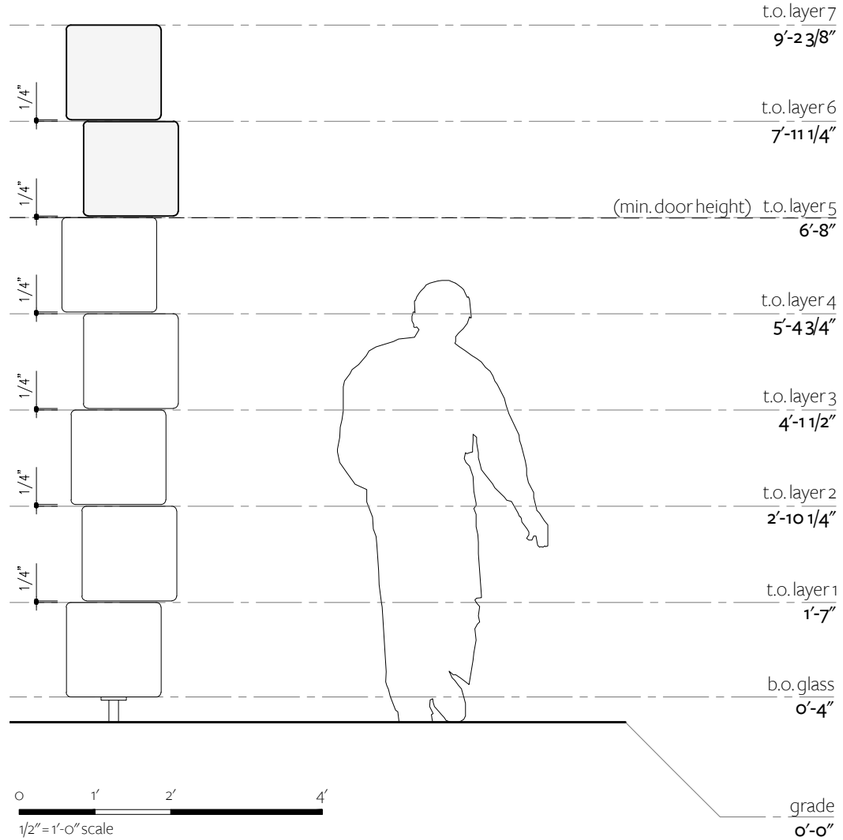
46'-1" circle diameter



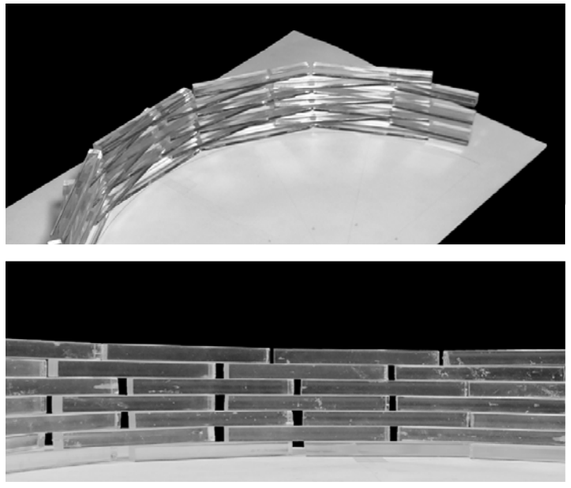
study 1	**15"** x **15"**		
	1.56	sq ft	(69%)
	217	lb/linear ft	(69%)

(% indicates comparision to competition scheme)

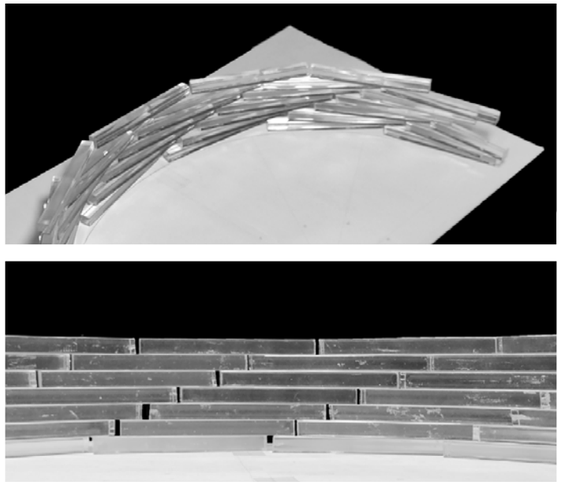




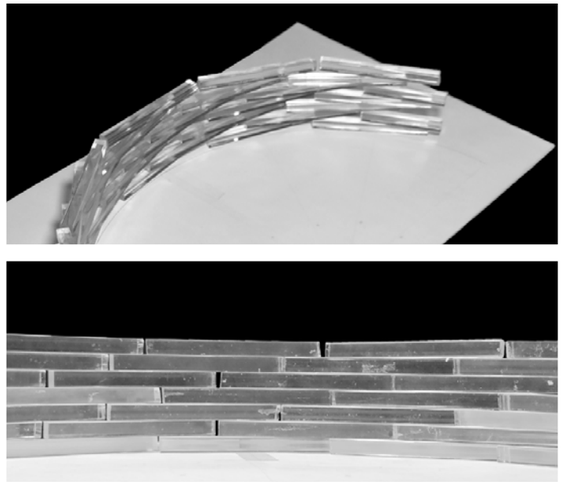
Design Development Circle Stacking



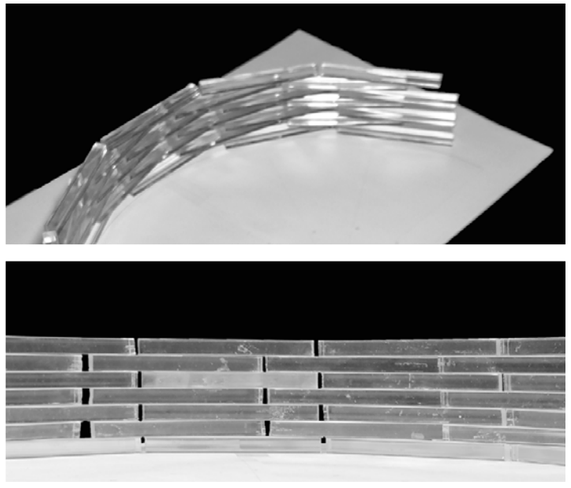
1 - alternating layers competition scheme



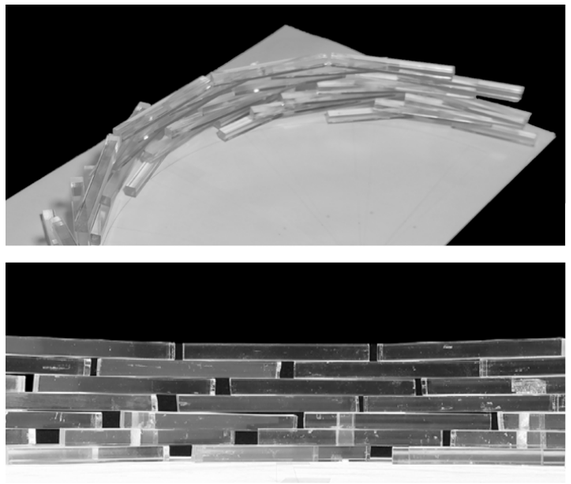
2 - rotating layers, 5 degrees



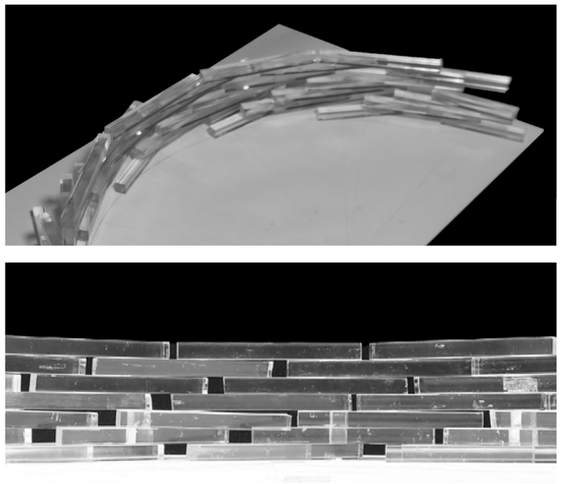
3 - rotating layers, 10 degrees



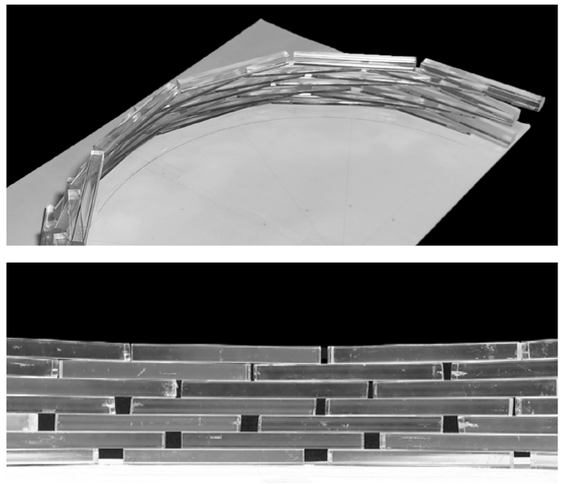
4 - rotating layers, 15 degrees



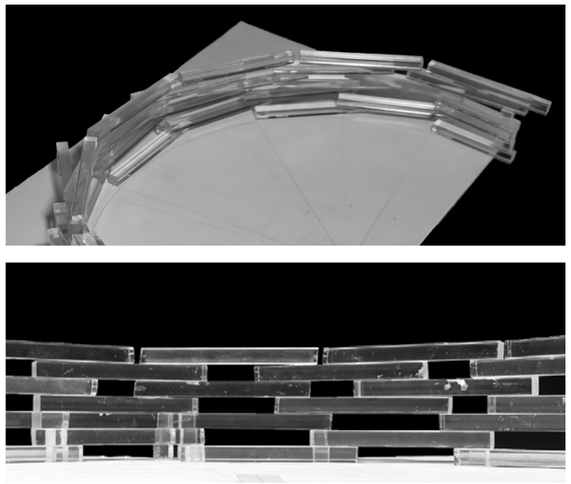
3a - rotated layers (10 degrees), increment linear offset



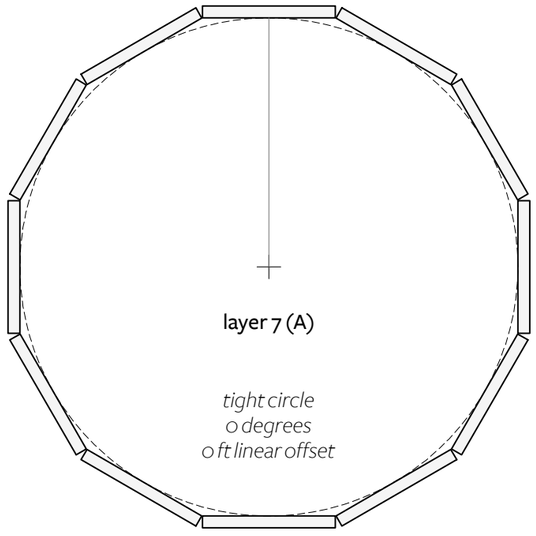
3b - rotated layers (10 degrees), increment element rotation



3c - rotated layers (10 degrees), increment circle diameter

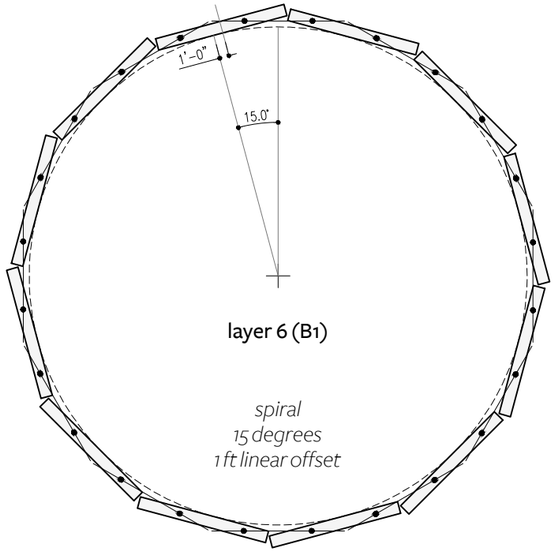


3d - rotated layers (10 degrees), increment element count



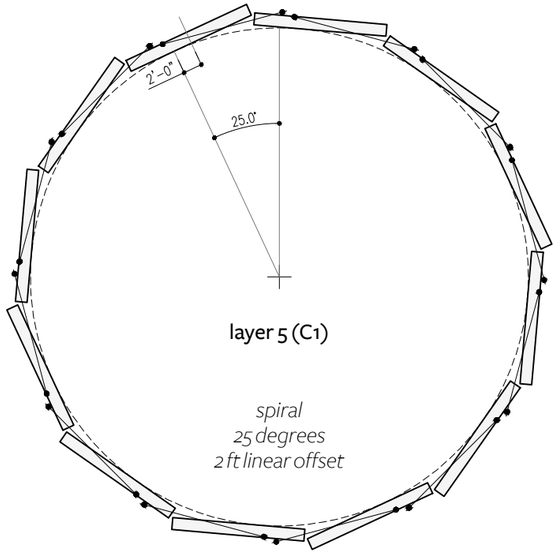
layer 7 (A)

tight circle
0 degrees
0 ft linear offset



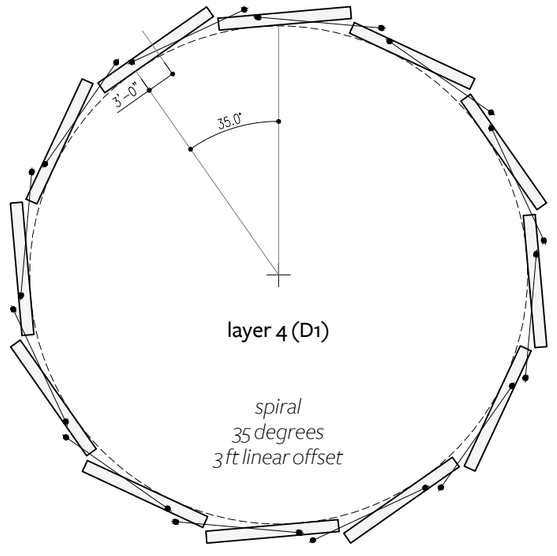
layer 6 (B1)

spiral
15 degrees
1 ft linear offset



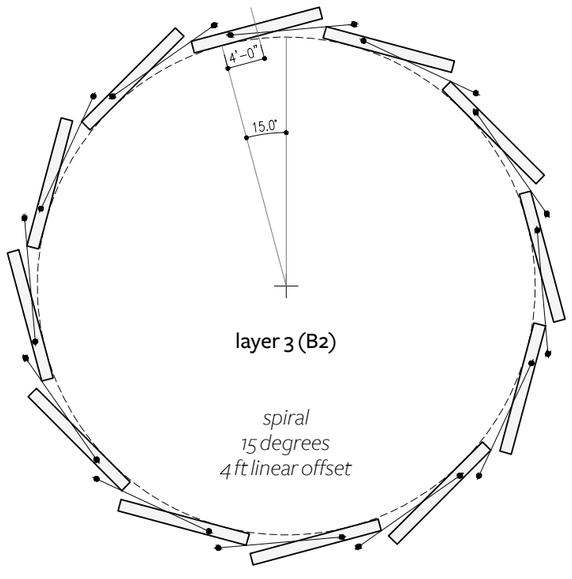
layer 5 (C1)

spiral
25 degrees
2 ft linear offset



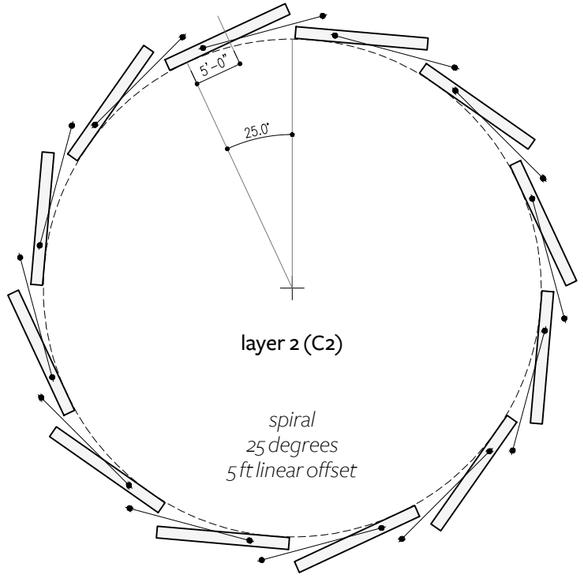
layer 4 (D1)

spiral
35 degrees
3 ft linear offset



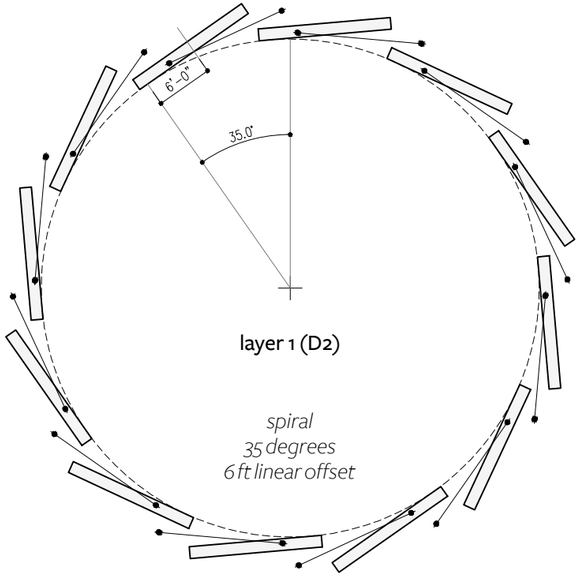
layer 3 (B2)

spiral
15 degrees
4 ft linear offset



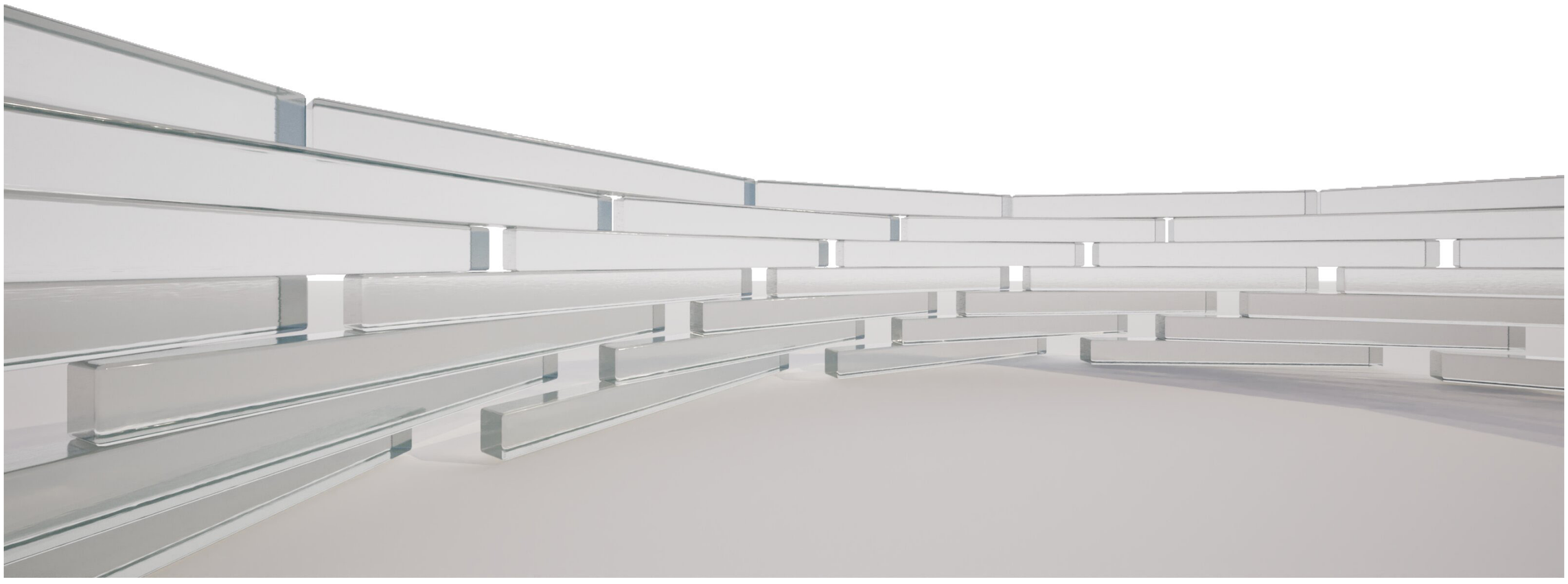
layer 2 (C2)

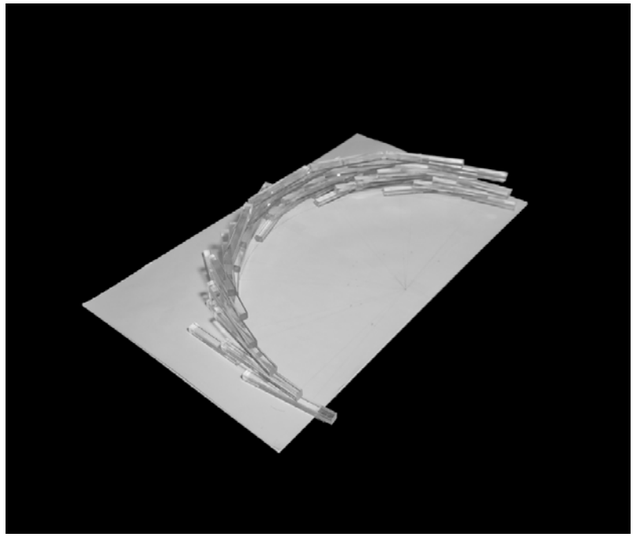
spiral
25 degrees
5 ft linear offset

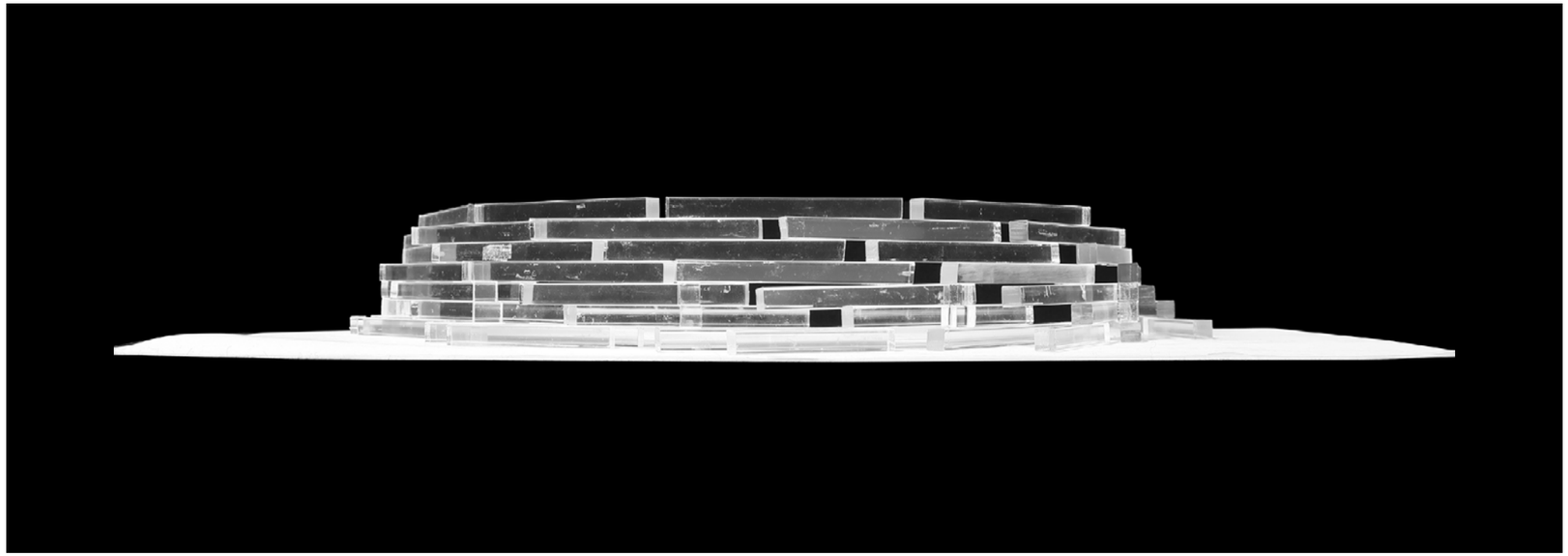


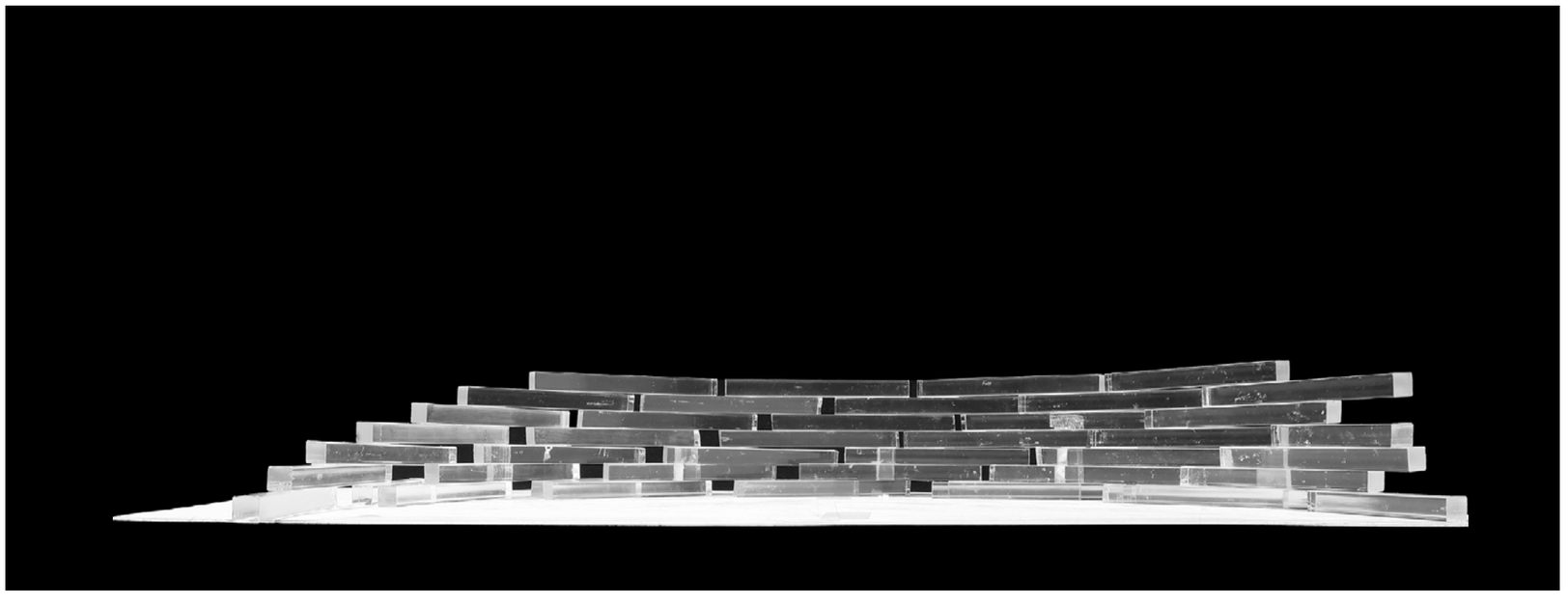
layer 1 (D2)

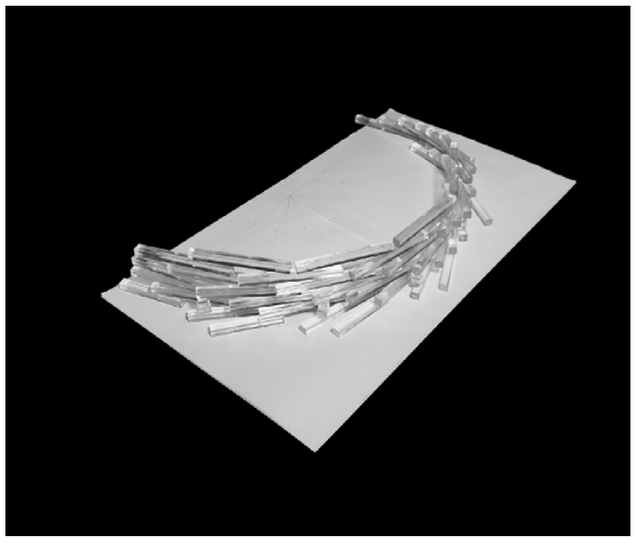
spiral
35 degrees
6 ft linear offset











07 may 2024 ● **circle stacking study** - 3a, rotated spiral (10 degrees) + increment linear offset per layer

Fallen Journalists Memorial **John Ronan Architects**

TABLE 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

Assembly without fixed seats	
Concentrated (chairs only—not fixed)	7 net
Standing space	5 net
Unconcentrated (tables and chairs)	15 net

occupancy = area of circle / occupant load factor

= 2,250 sf / 5 net

occupancy = 450 occupants

1005.3.2 Other egress components.

The capacity, in inches, of *means of egress* components other than *stairways* shall be calculated by multiplying the *occupant load* served by such component by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant.

required egress capacity = occupant load x 0.2”

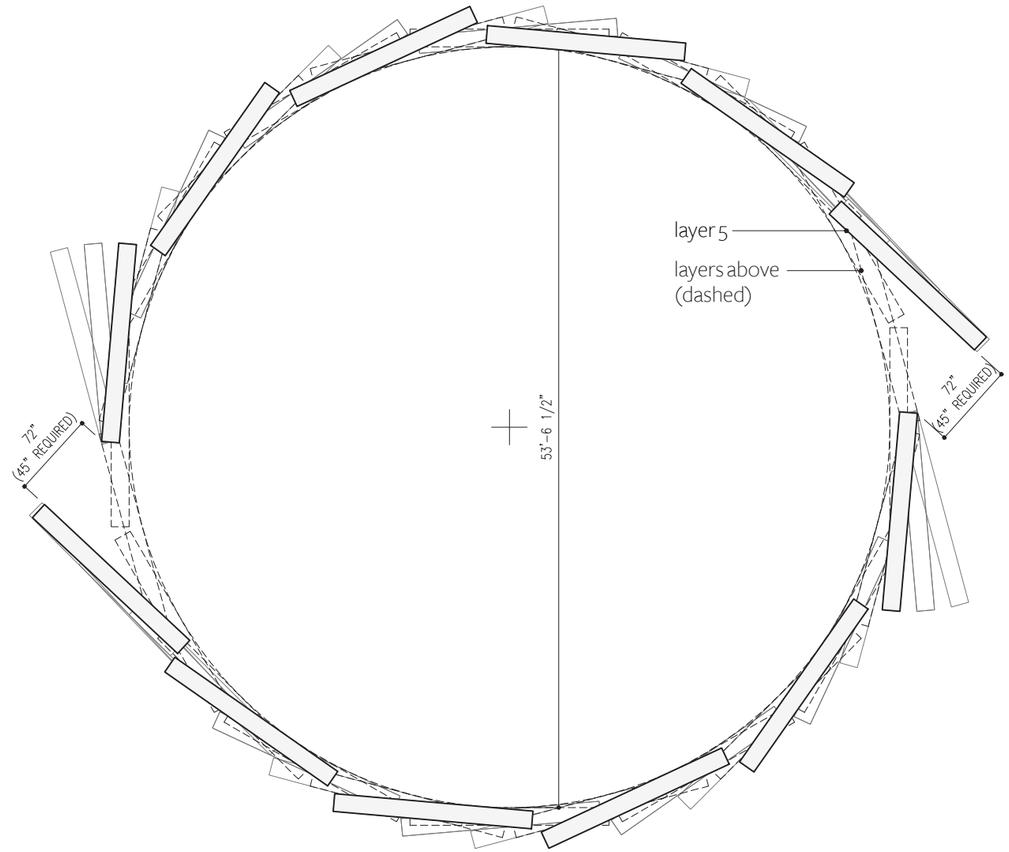
= 450 x 0.2”

required egress capacity = 90” required (144” provided)

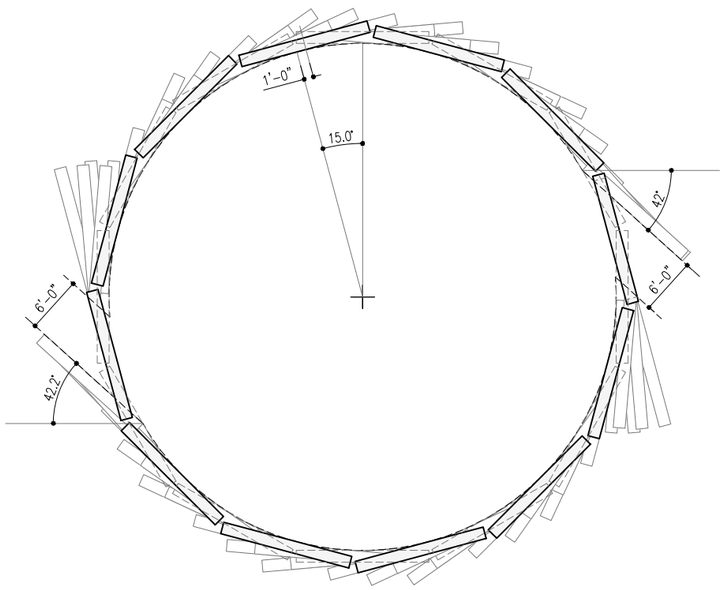
TABLE 1006.3.1 MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS PER STORY

OCCUPANT LOAD PER STORY	MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS FROM STORY
1-500	2
501-1,000	3
More than 1,000	4

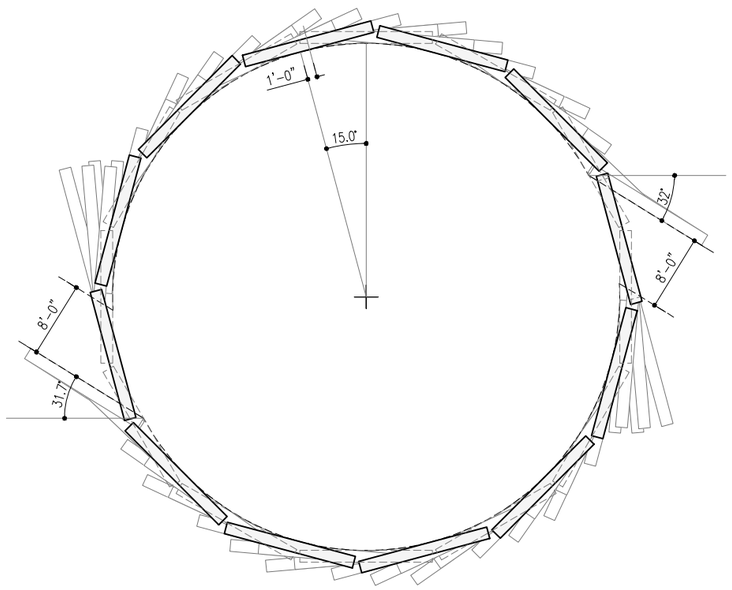
minimum number of exits = 2 exits



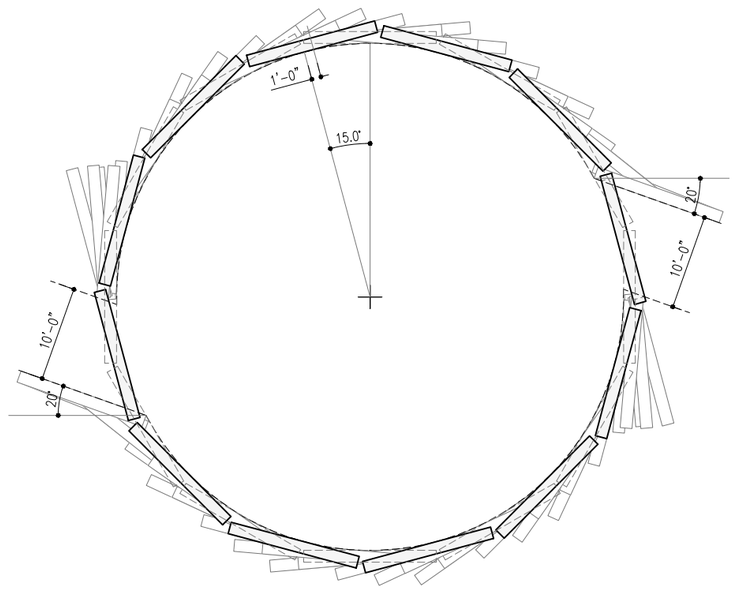
remembrance hall
15”x 15”x 14’ elements (4” tolerance)
circle diameter: 53’ 6”
circle area: 2,250 sf
occupancy: 450 occs



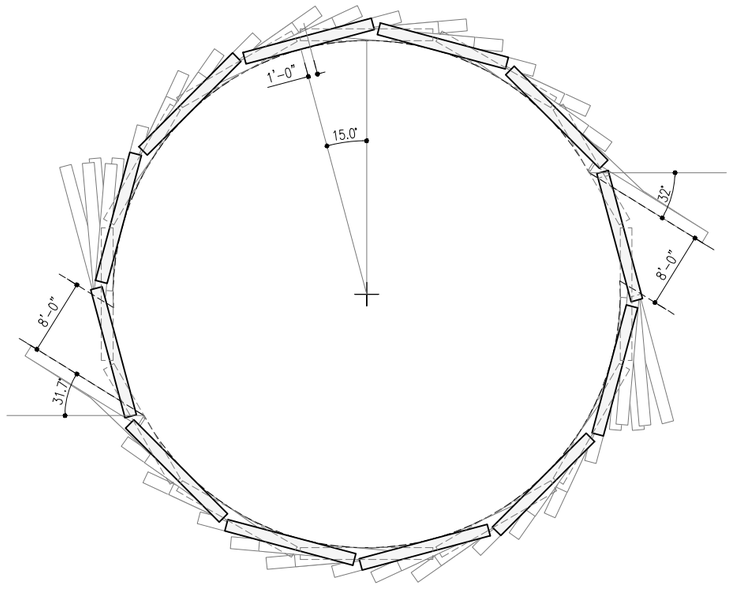
6' opening
42 degrees



8' opening
32 degrees

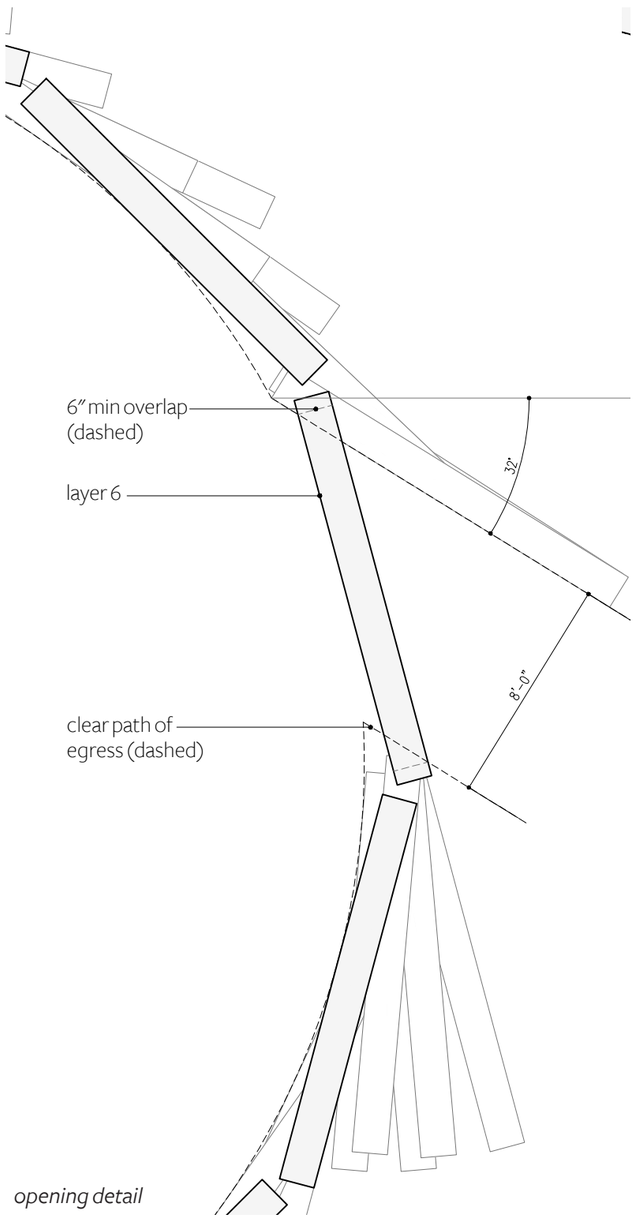


10' opening
20 degrees

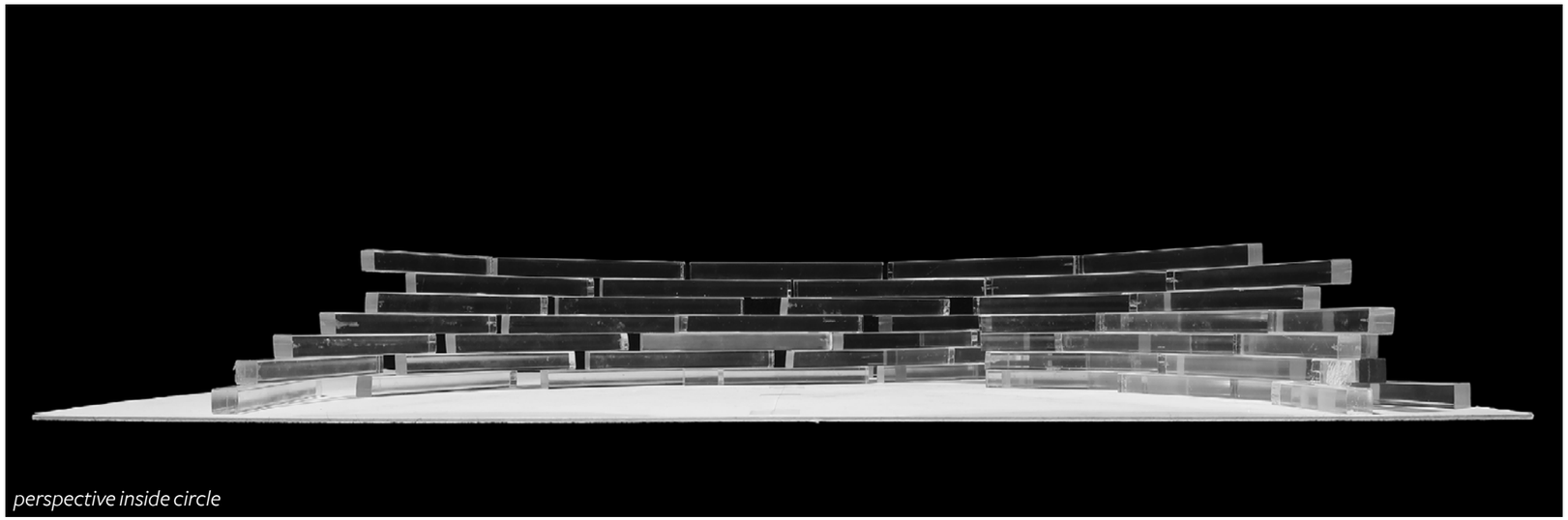


layer 6 plan

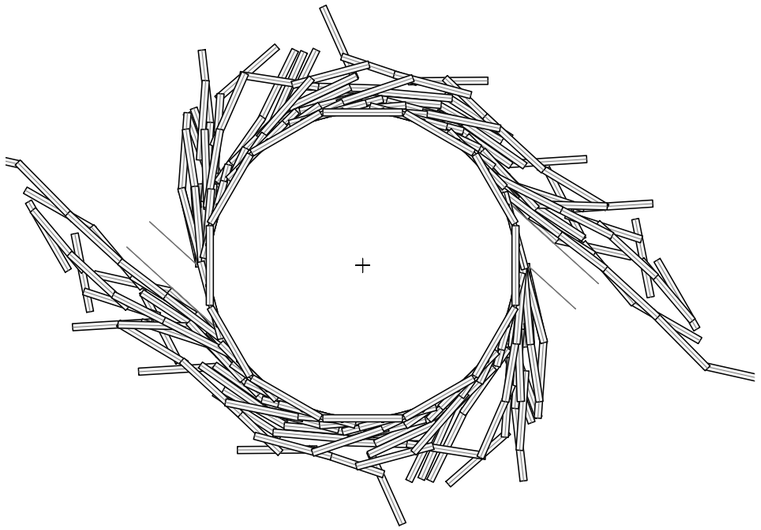
aerial view



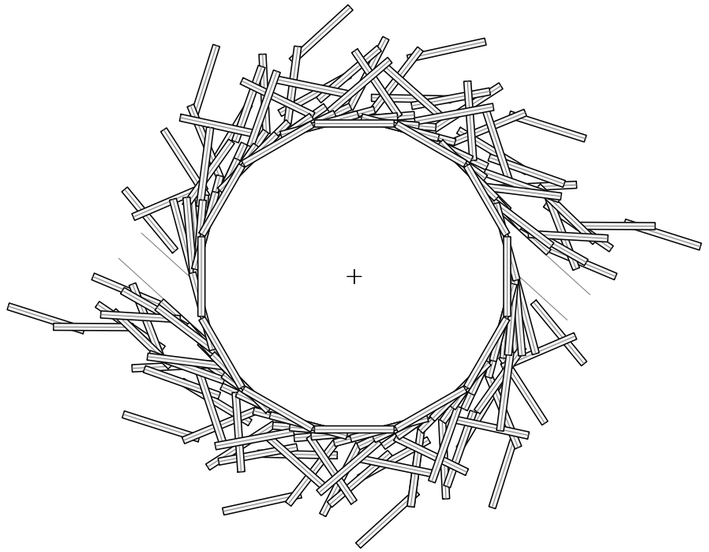
opening detail



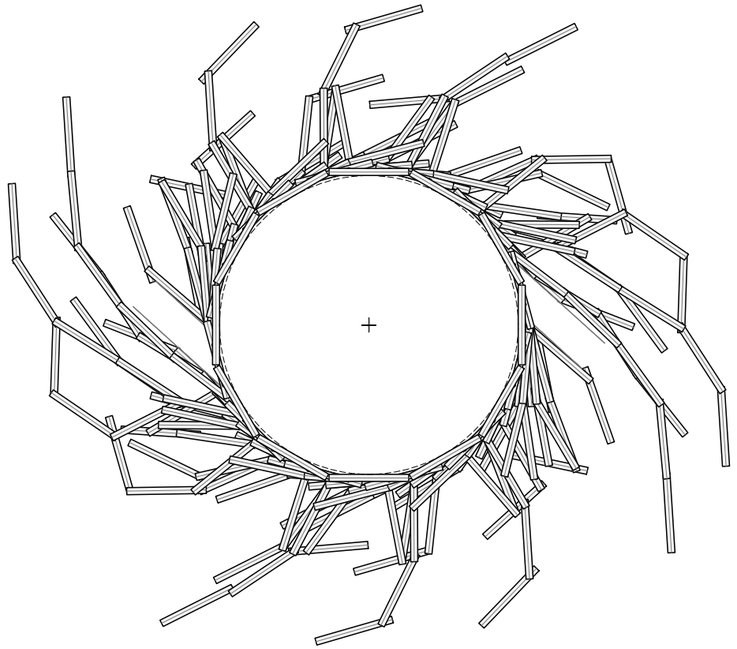
perspective inside circle



compact spread (220 elements)

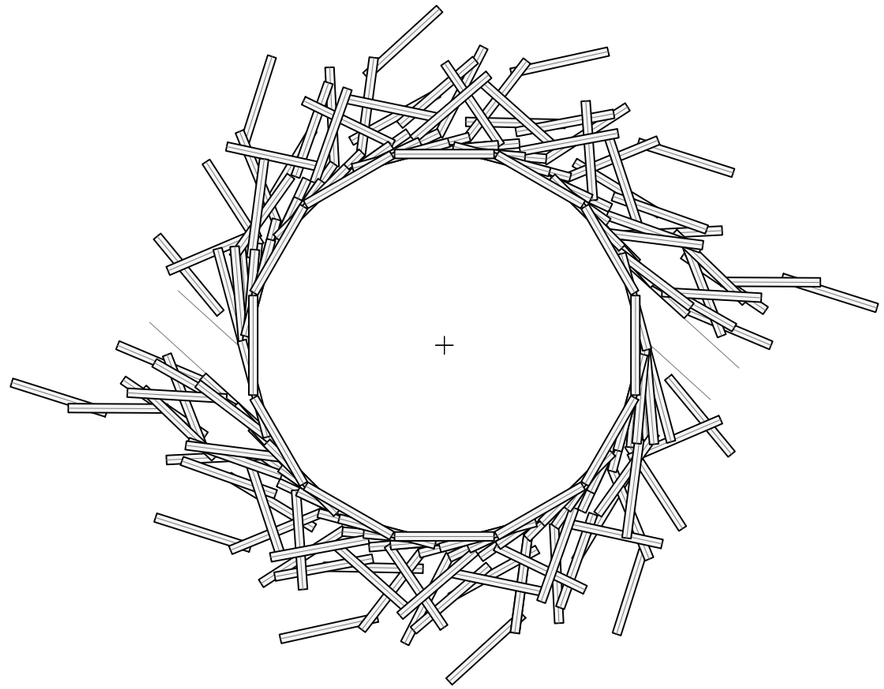


● medium spread (174 elements)



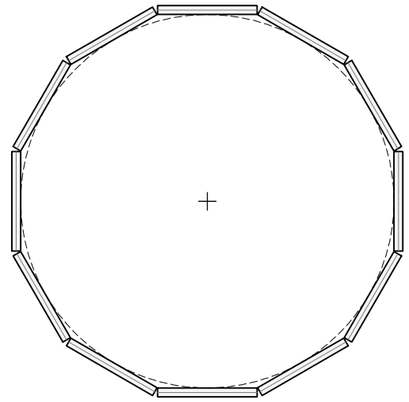
wide spread (222 elements)

total elements	174 elements	(151%)
	x 19.11 cubic ft per element	
total volume	3,325 cubic ft	(64%)



(% indicates comparision to competition scheme)

layer 7	**12 elements**	**(150%)**
layer 6	12 elements	(150%)
layer 5	14 elements	(175%)
layer 4	24 elements	(171%)
layer 3	32 elements	(139%)
layer 2	34 elements	(117%)
layer 1	46 elements	(143%)
total	174 elements	(151%)



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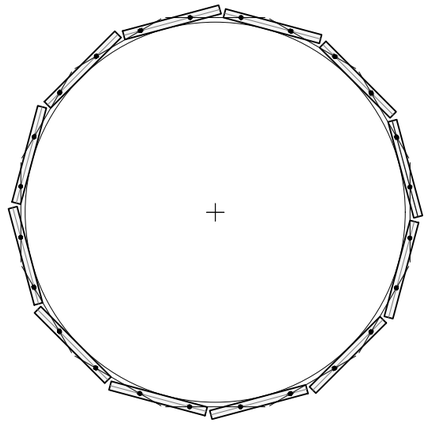

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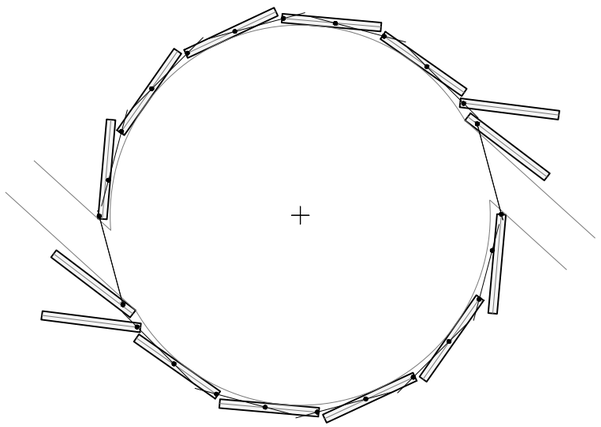

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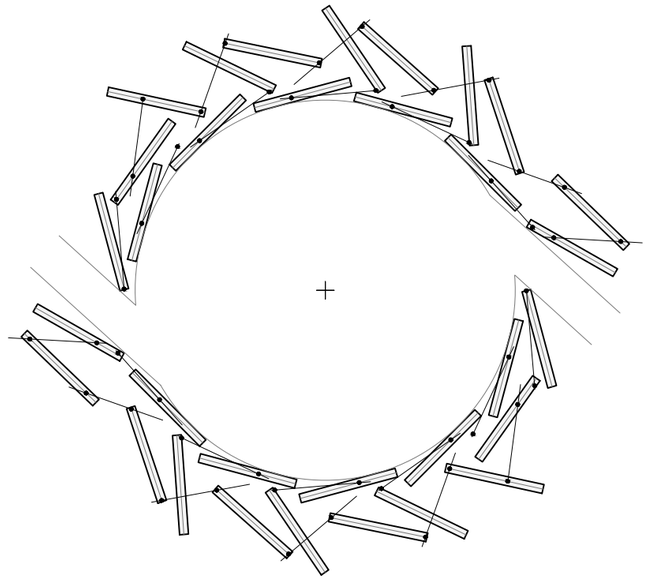

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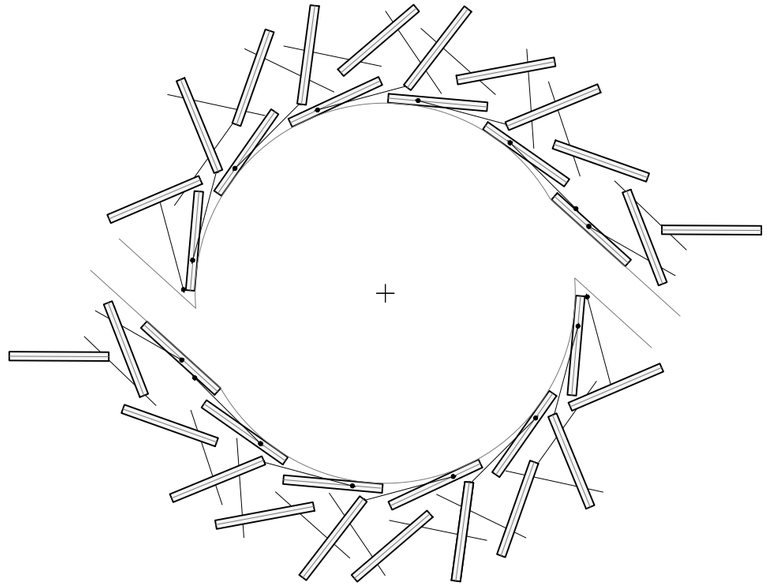

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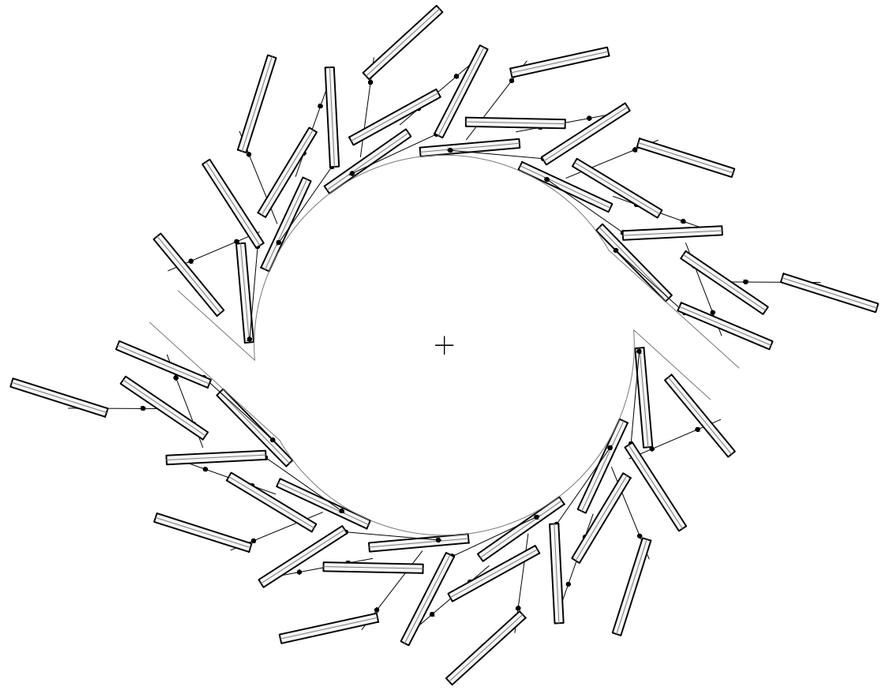
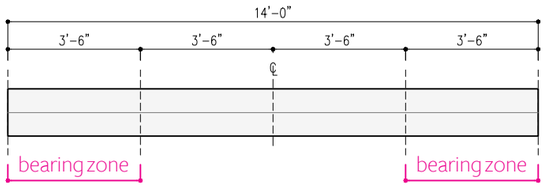
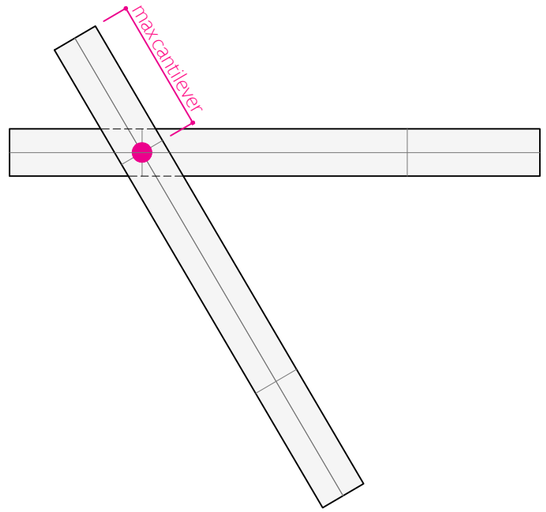


Design Development Field Stacking

bearing zone - no element bears on the middle of another element



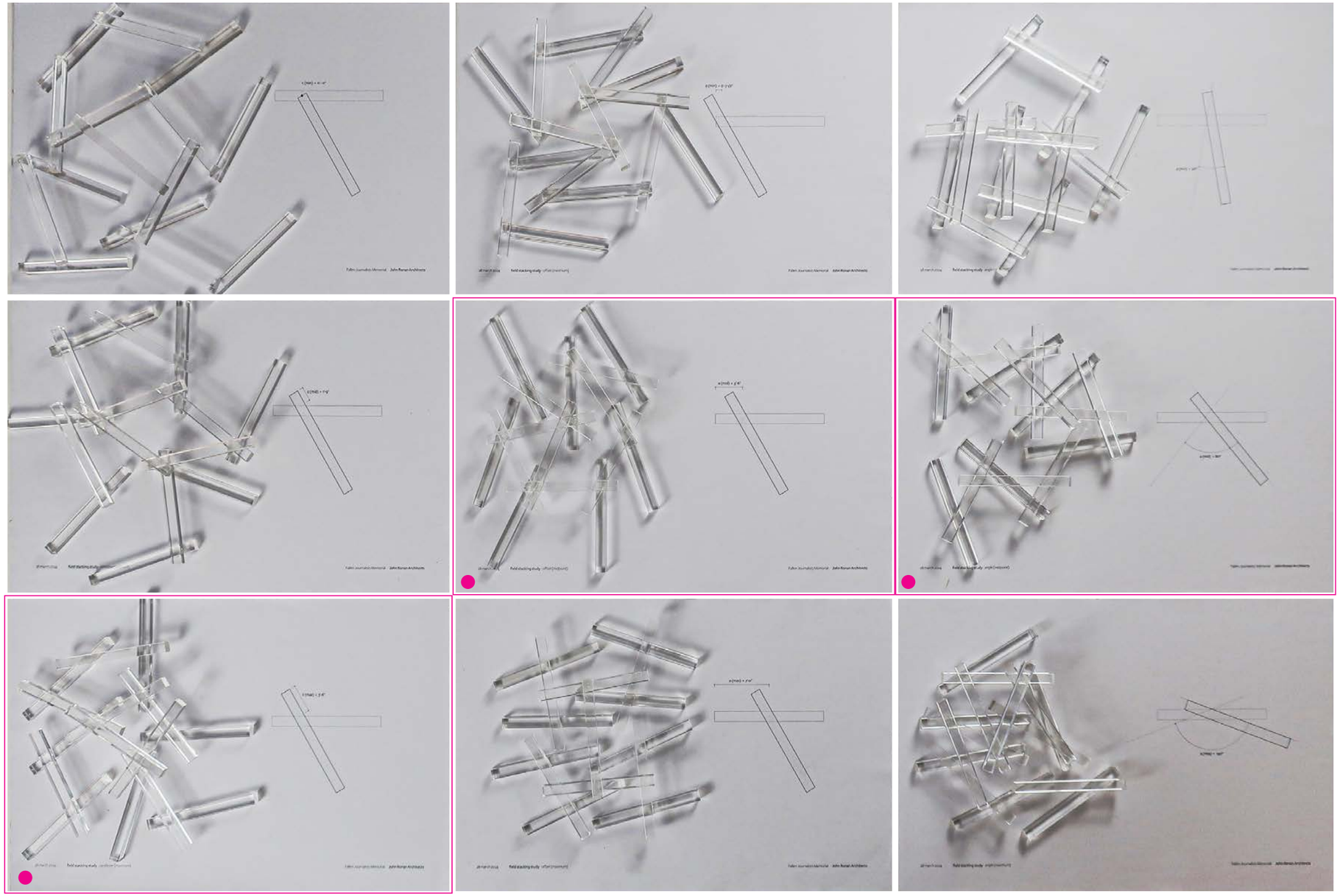
maximum cantilever - no element cantilevers more than 1/3 its length



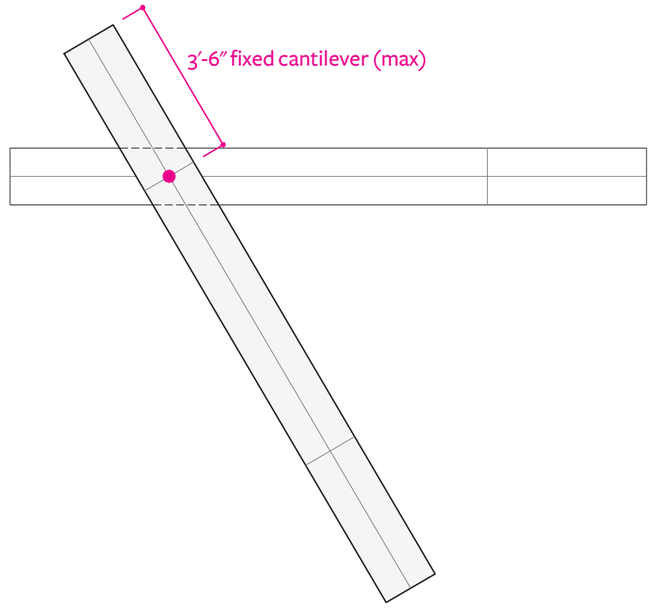
min.

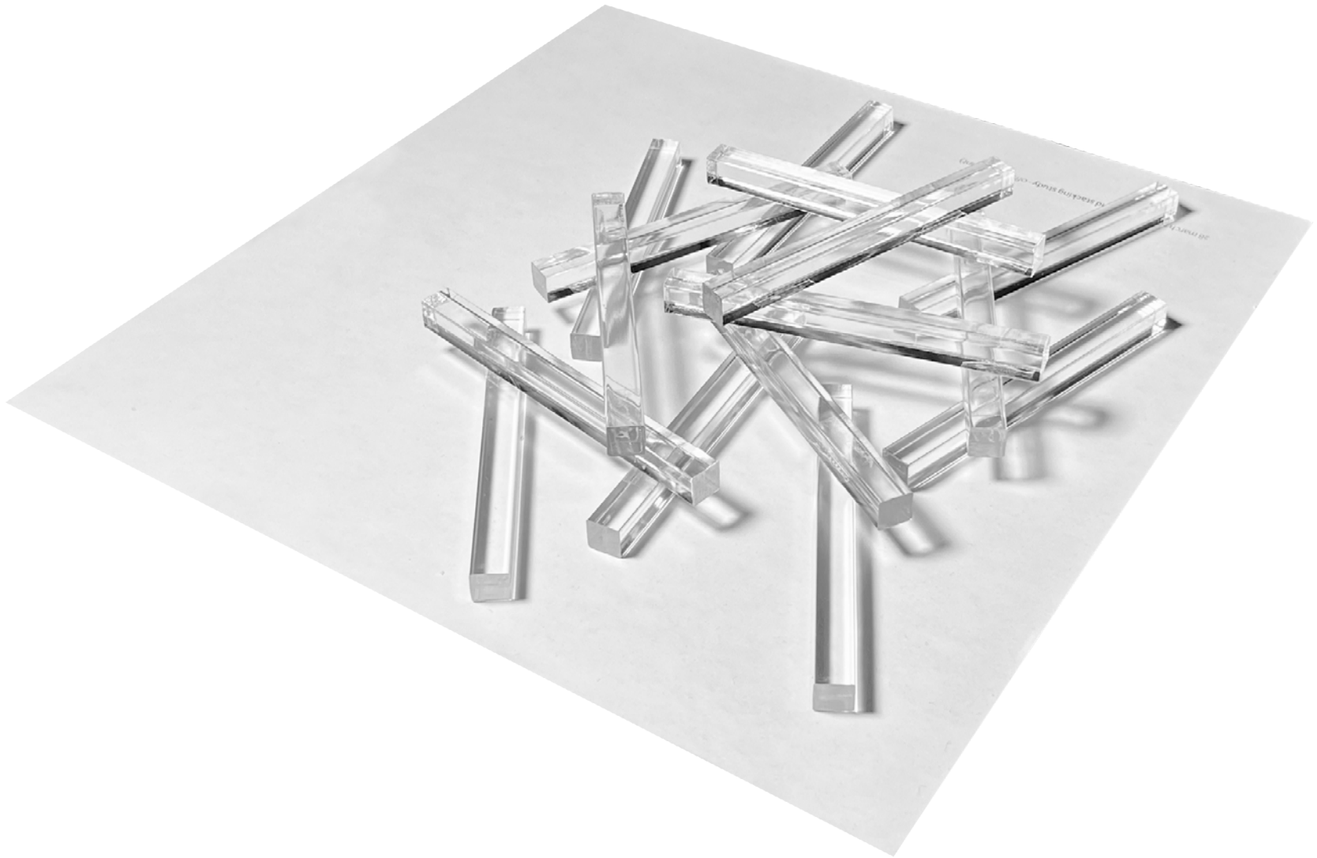
mid.

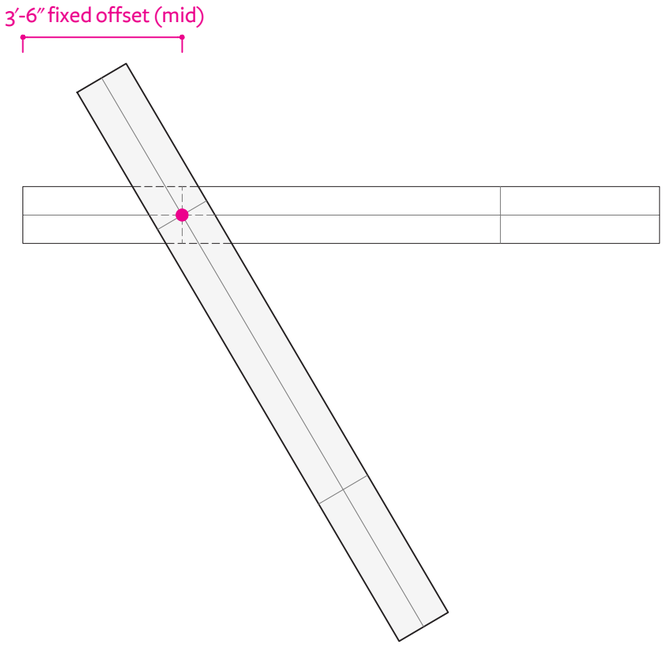
max.

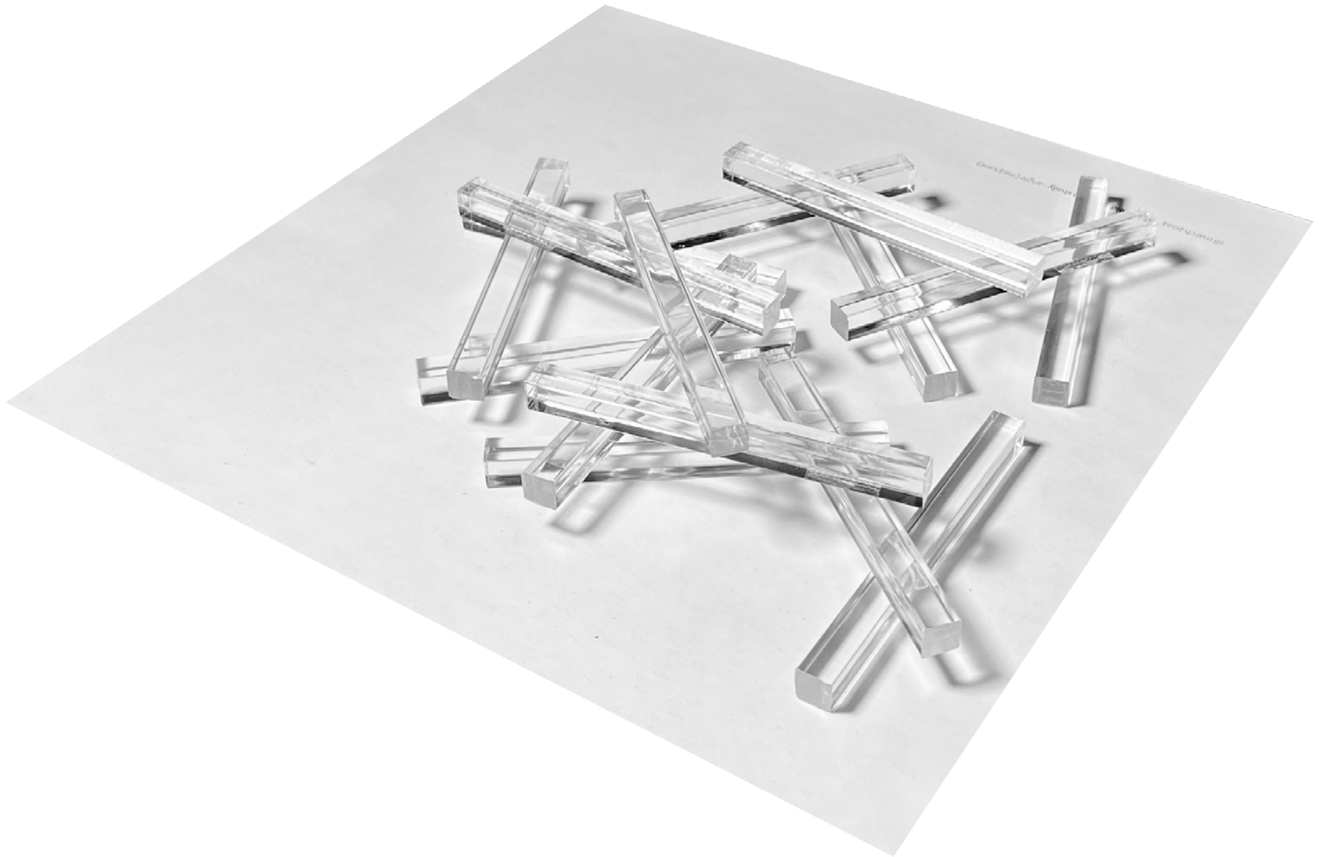


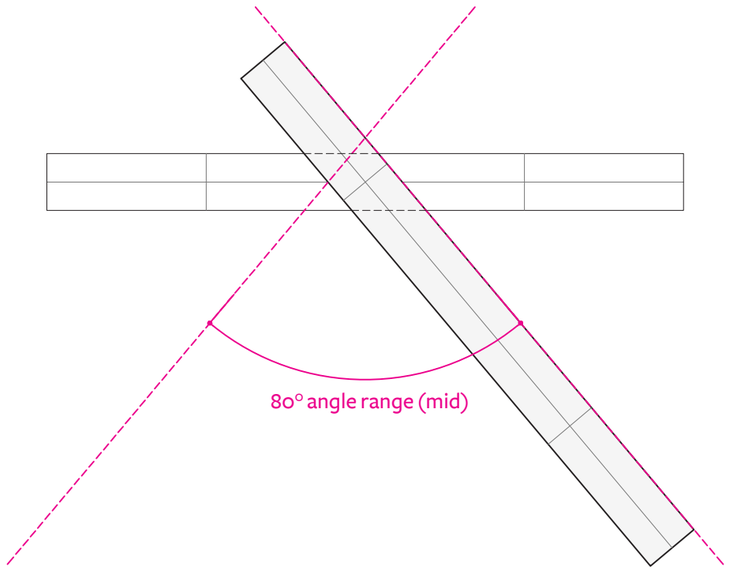
cantilever *offset* *angle*


3′-6″ fixed cantilever (max)

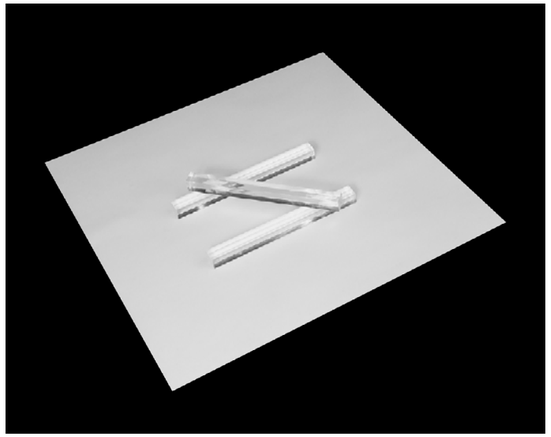



3′-6″ fixed offset (mid)

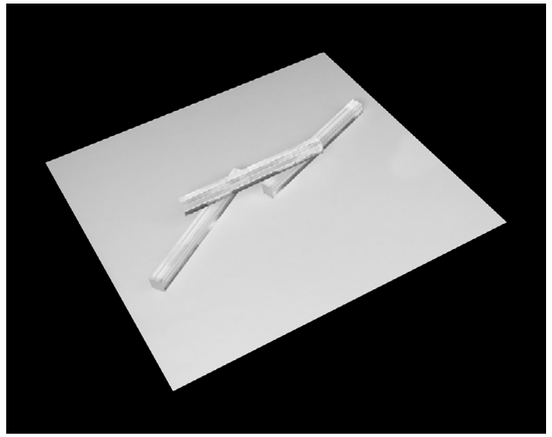



80° angle range (mid)

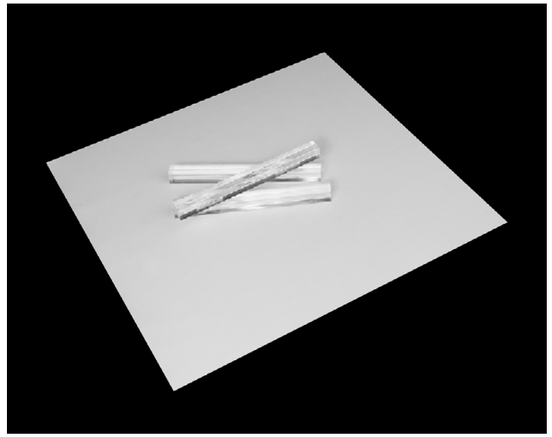
"Z" shape



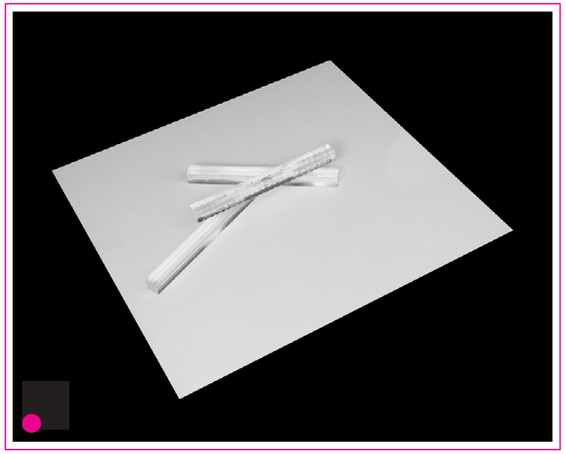
Z-1



Z-2

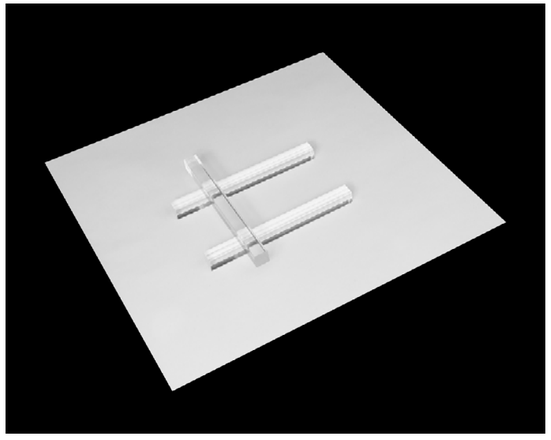


Z-3

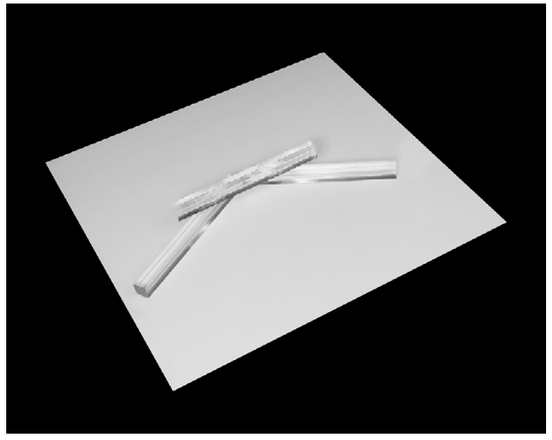


Z-4

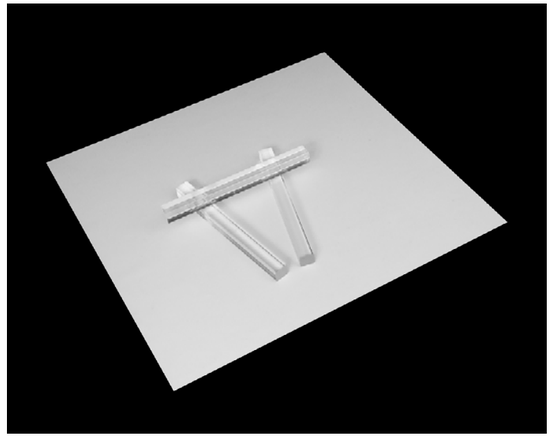
"U" shape



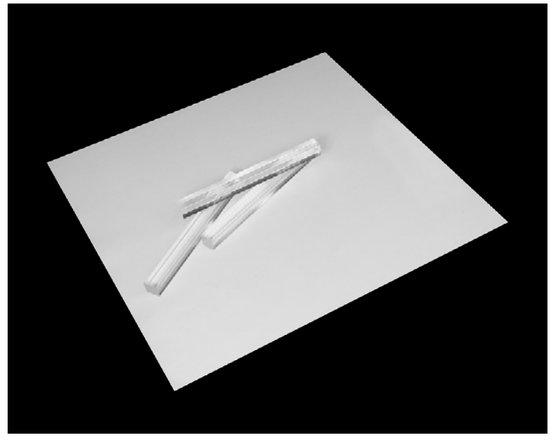
U-1



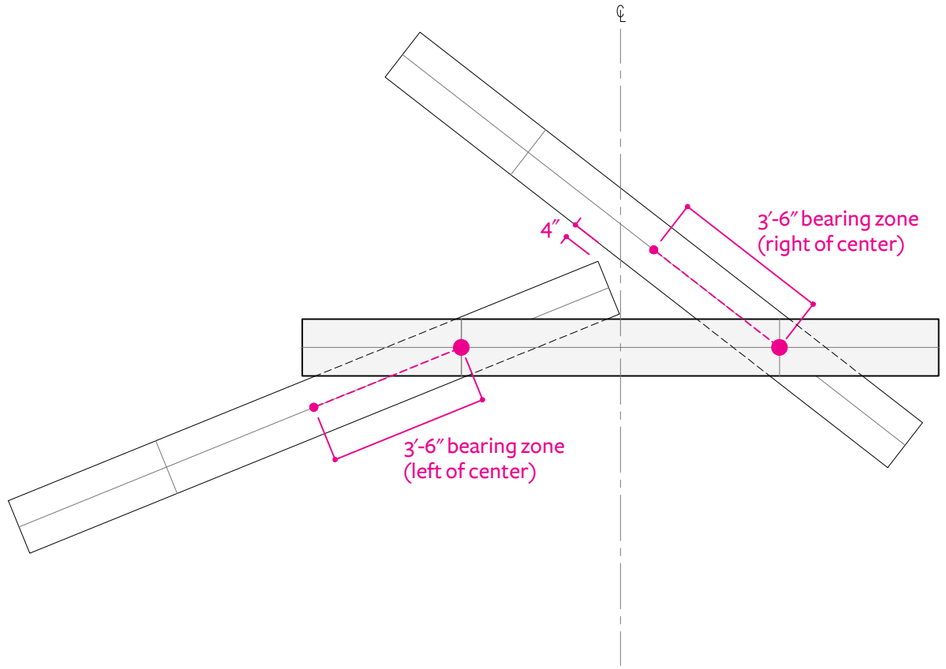
U-2



U-3



U-4


℄
4″
3′-6″ bearing zone
(right of center)
3′-6″ bearing zone
(left of center)

closed ► open


1


5


9


13


17


21


25


29


2


6


10


14


18


22


26


30

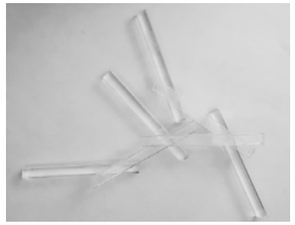

3


7


11


15


19


23


27


31


4


8


12


16


20


24


28

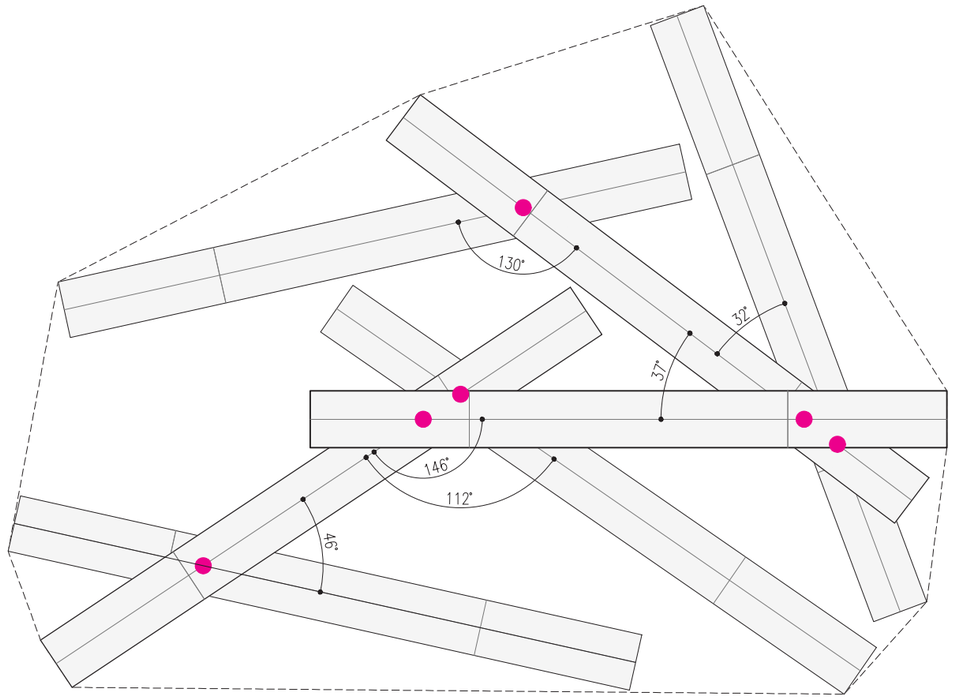

32

19 september 2024 **3 layer field stacking study** - comparison

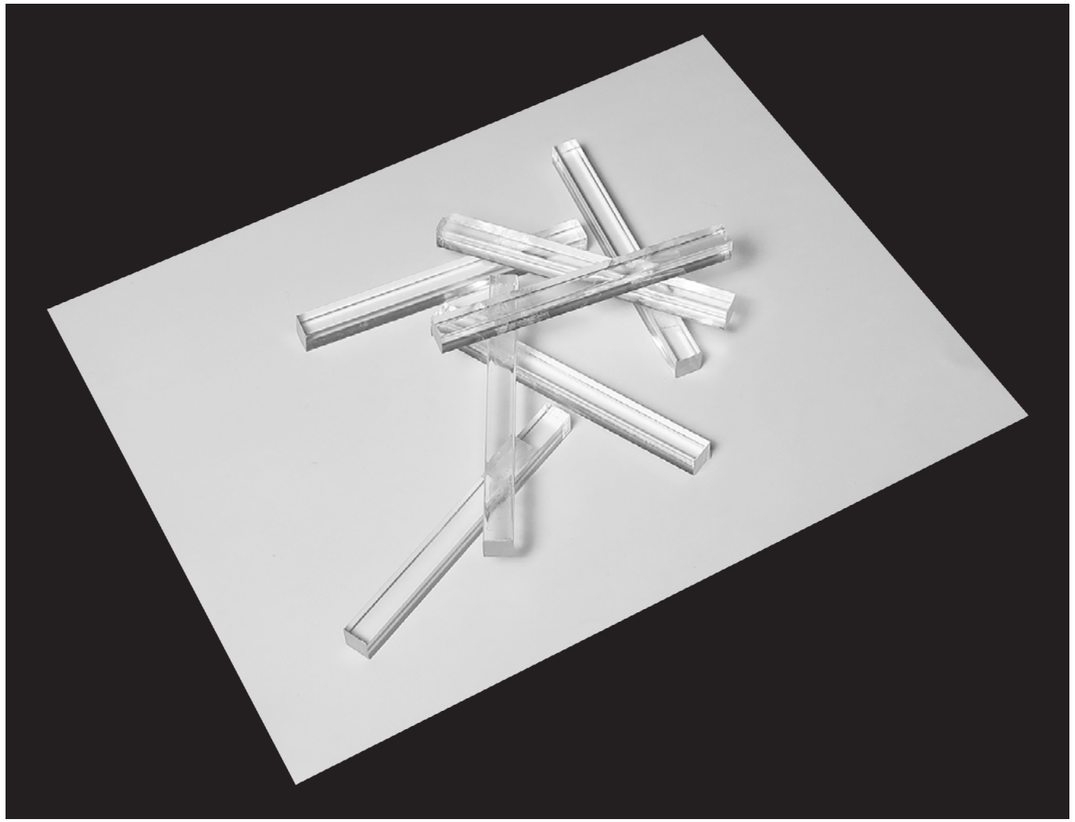
preferred stacking study

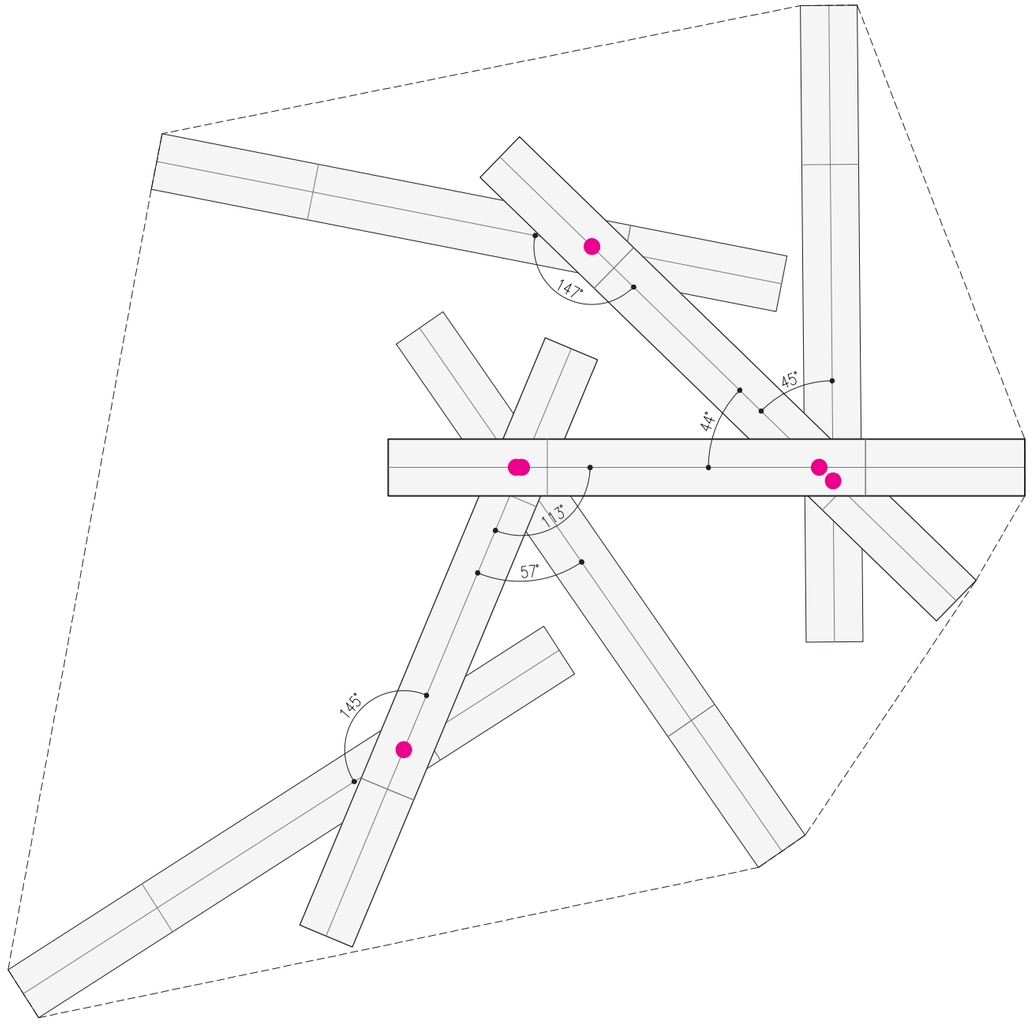
unpreferred stacking study

Fallen Journalists Memorial **John Ronan Architects**

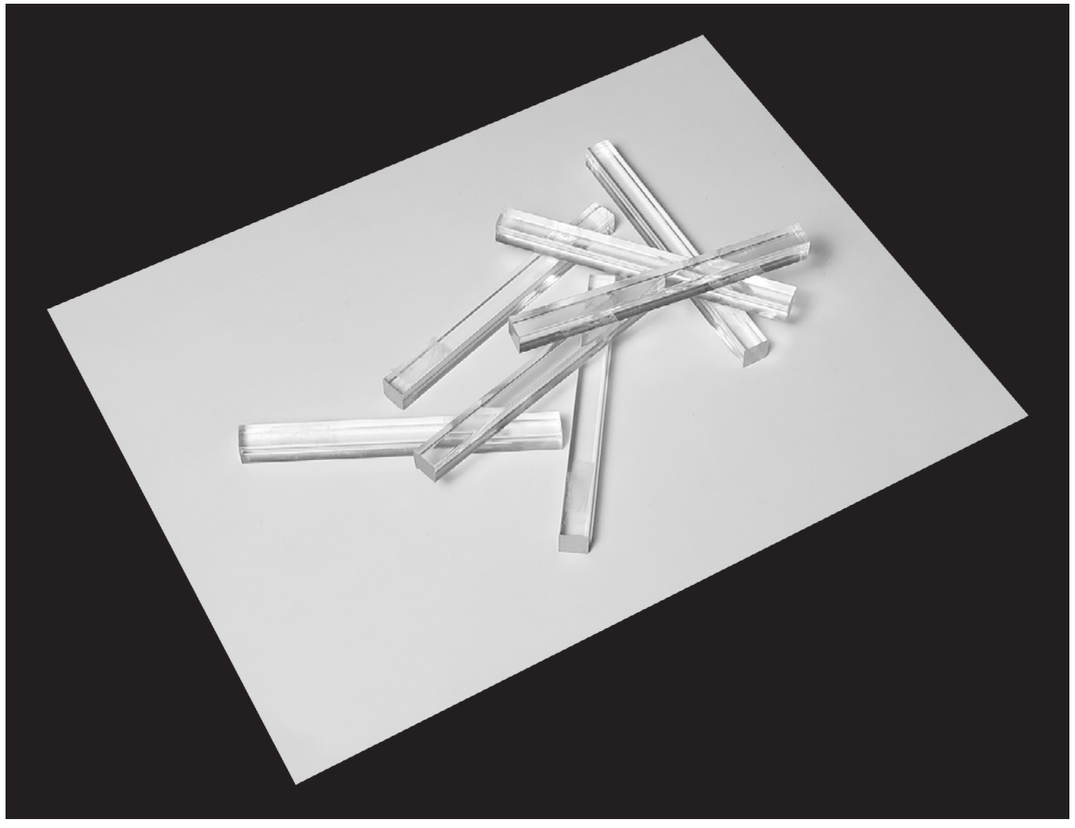


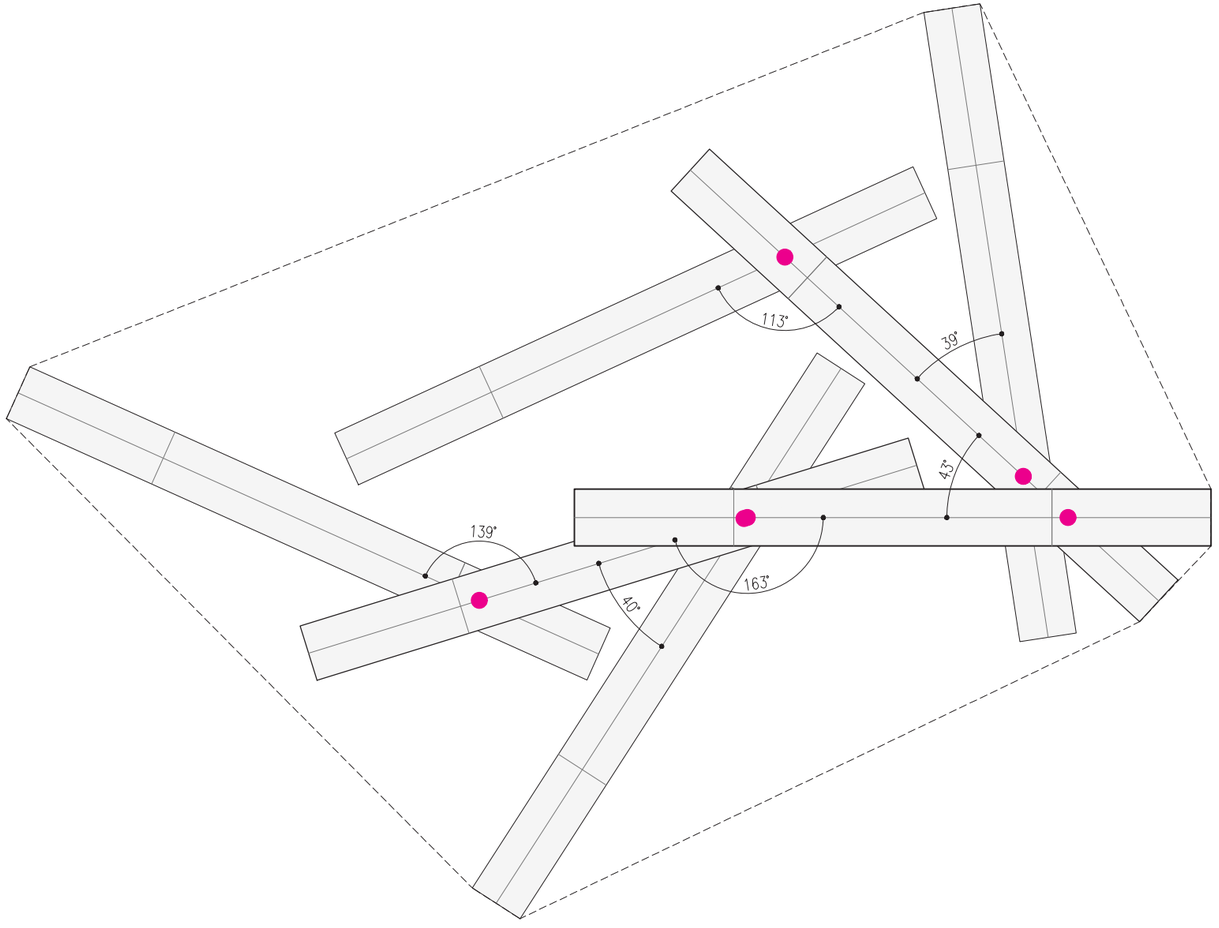
perimeter area (dashed): 235 sf
angle range: 32° - 146° (114° difference)
average angle: 84°



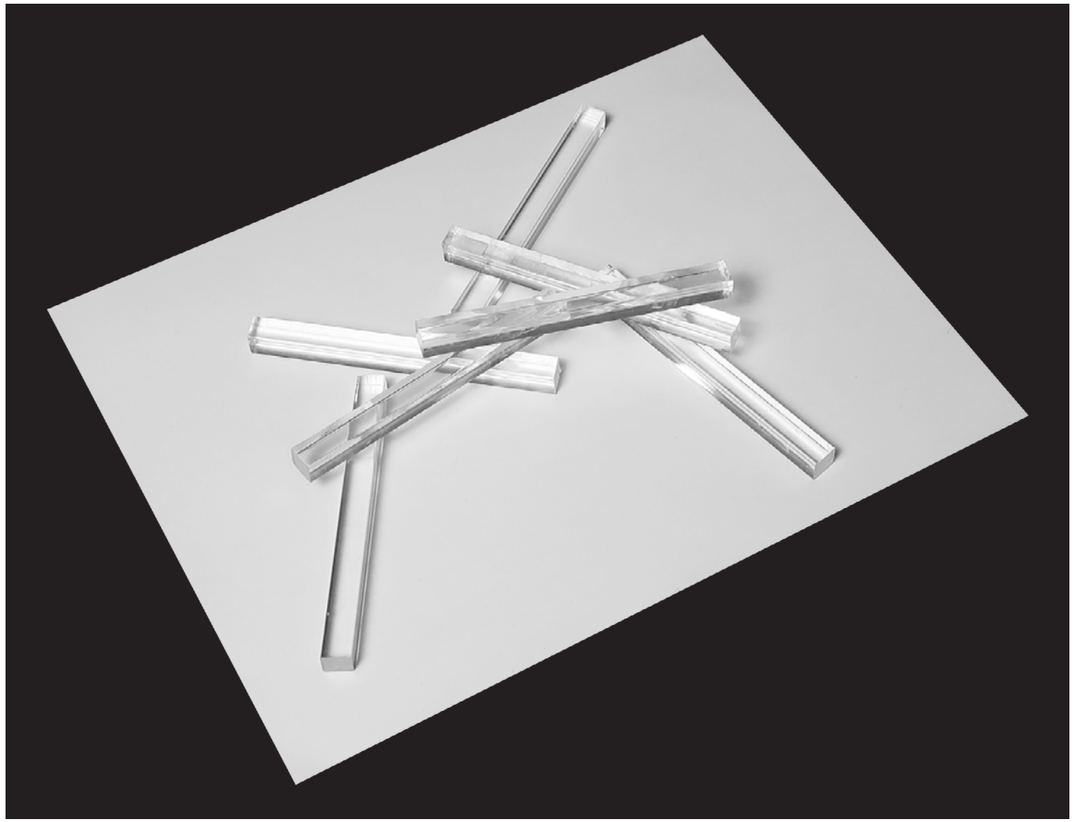


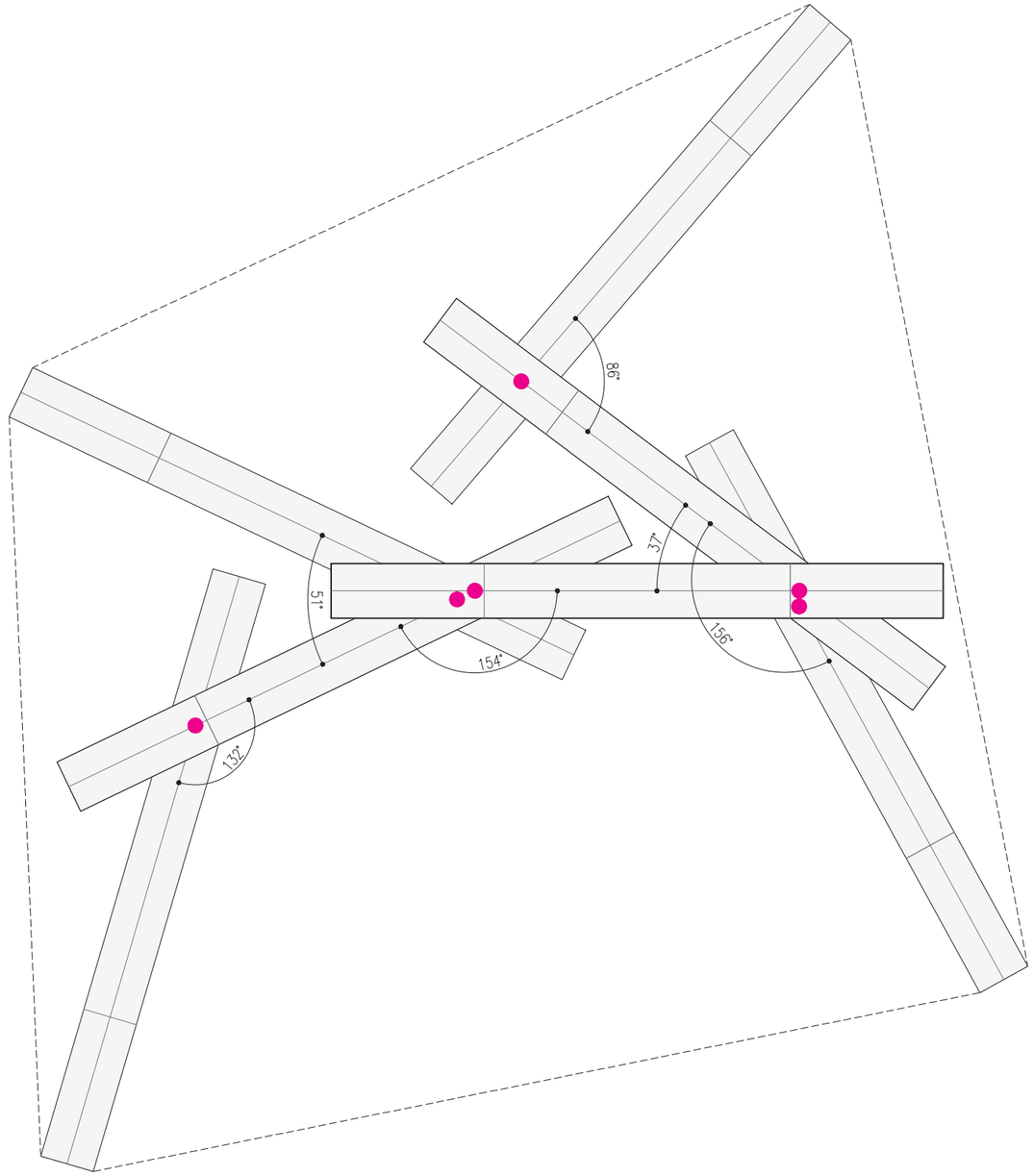
perimeter area (dashed): 353 sf
angle range: 44° - 147° (103° difference)
average angle: 92°





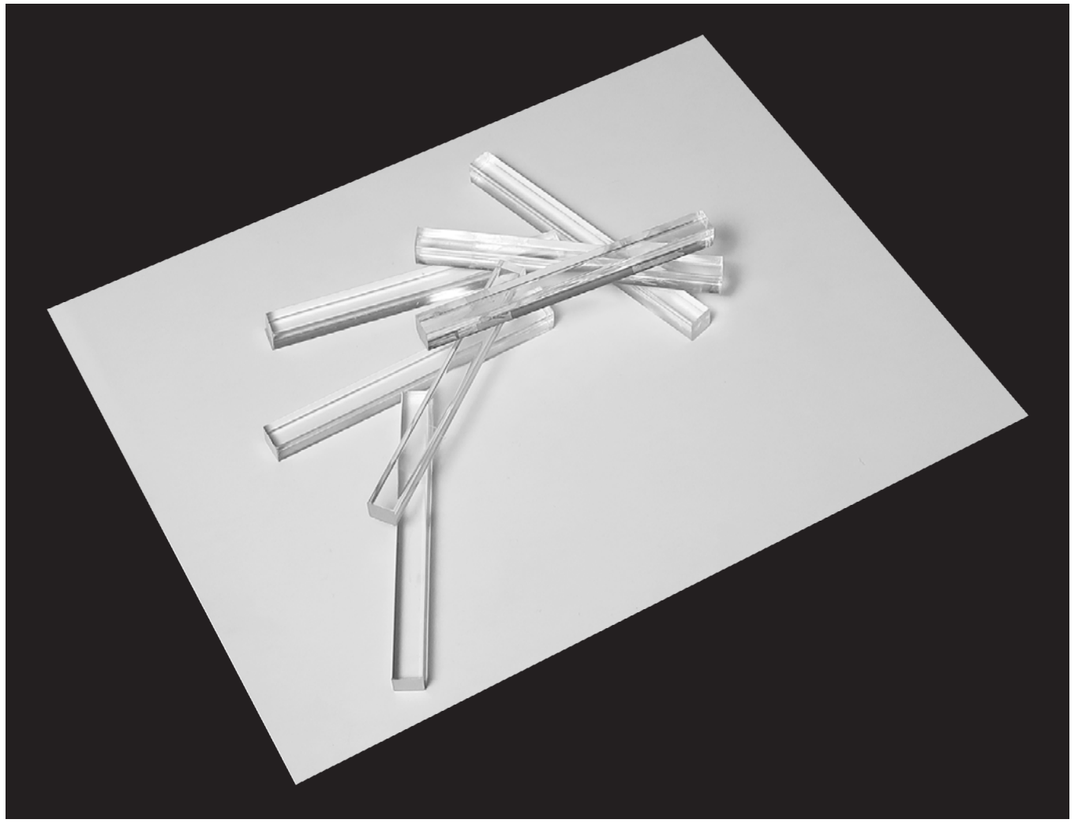
perimeter area (dashed): 305 sf
angle range: 39° - 163° (124° difference)
average angle: 90°

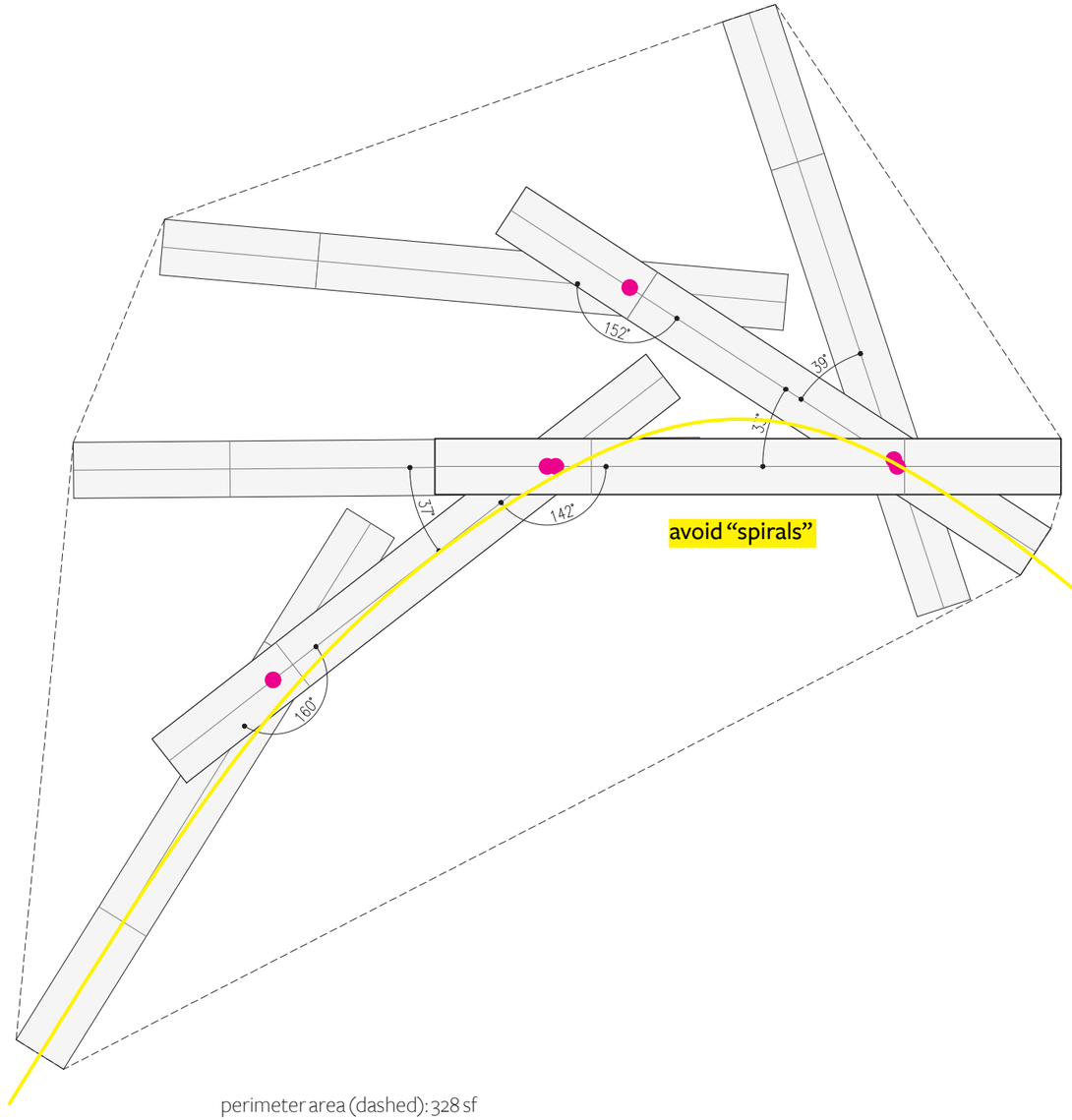




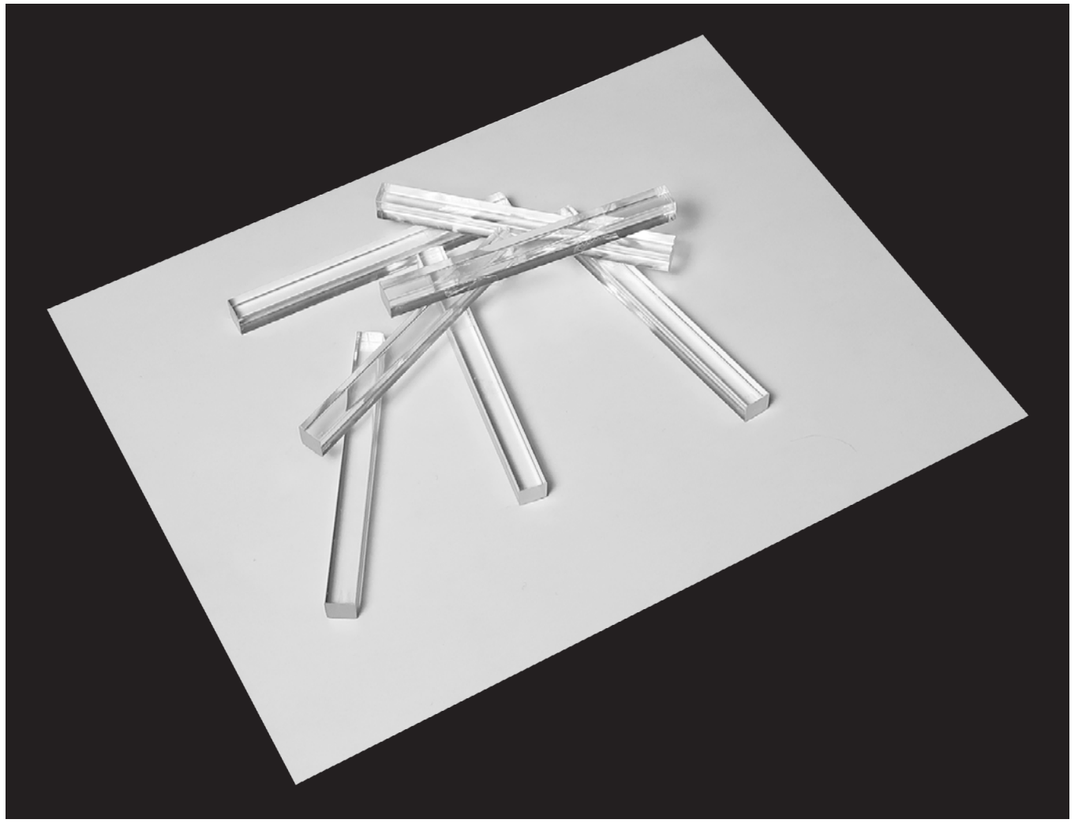
perimeter area (dashed): 444 sf
angle range: 37° - 156° (119° difference)
average angle: 103°

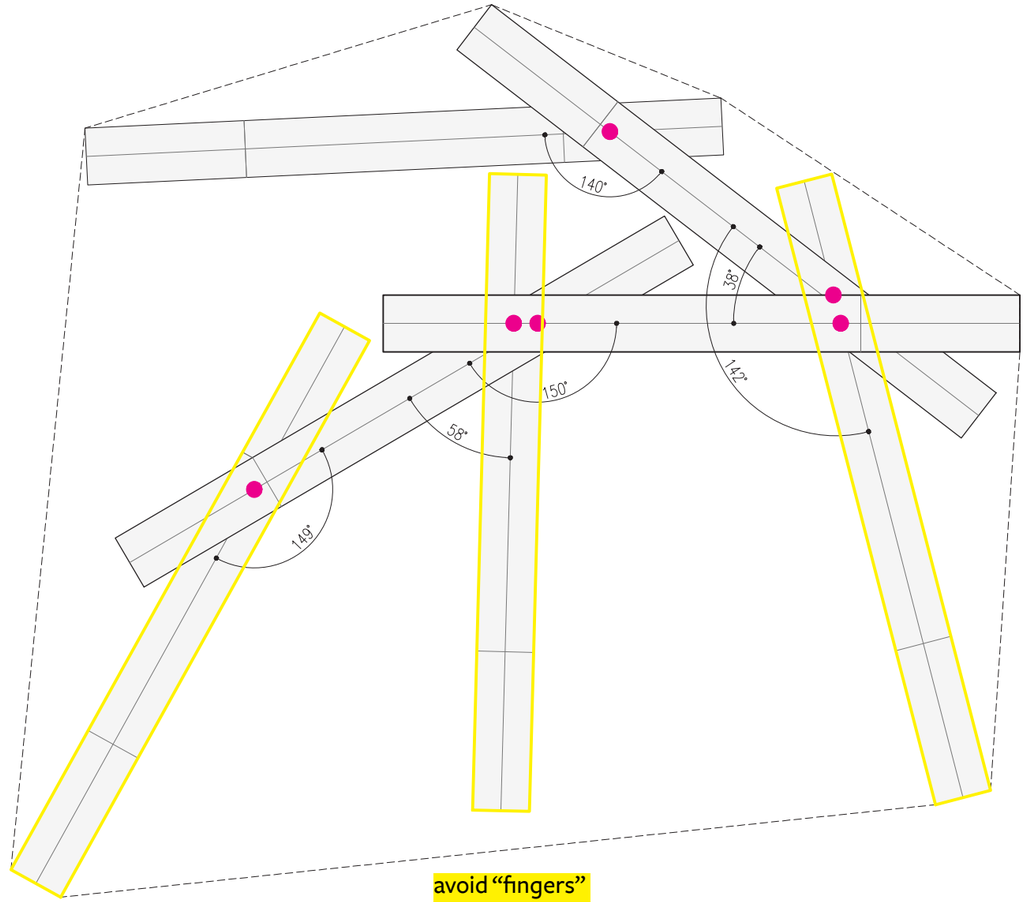
07 may 2024 ● **3 layer field stacking study** - 32, most open



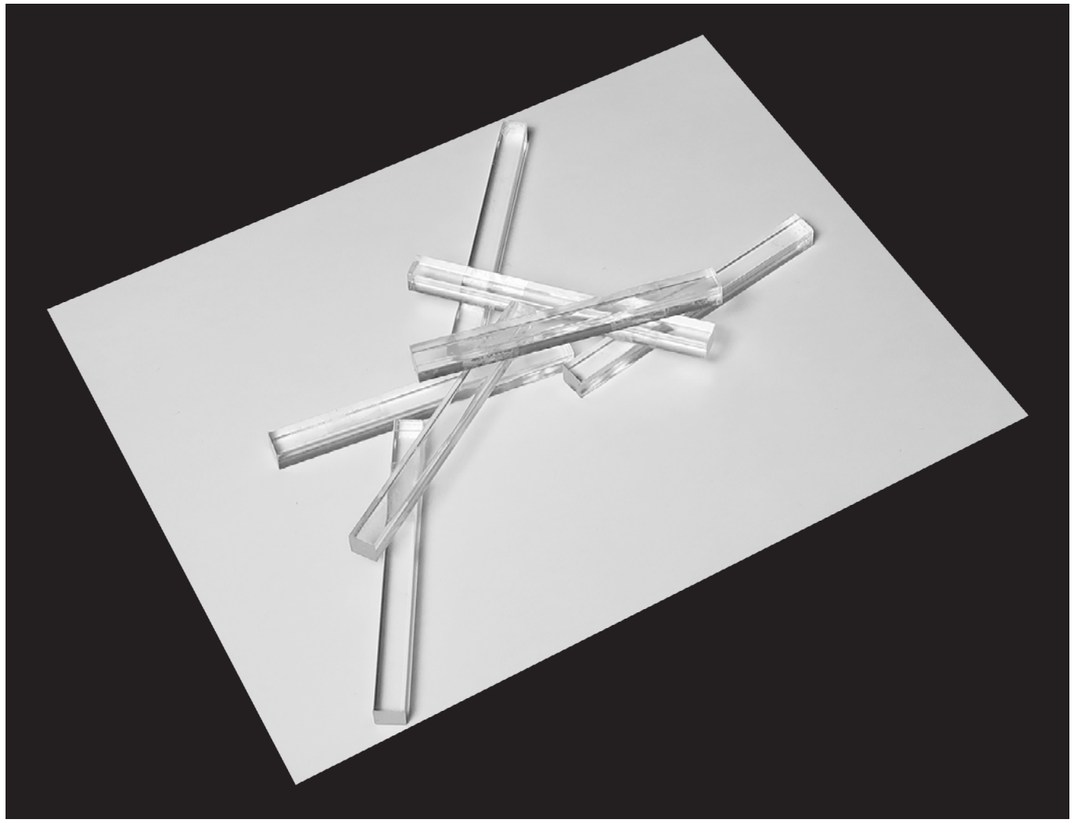


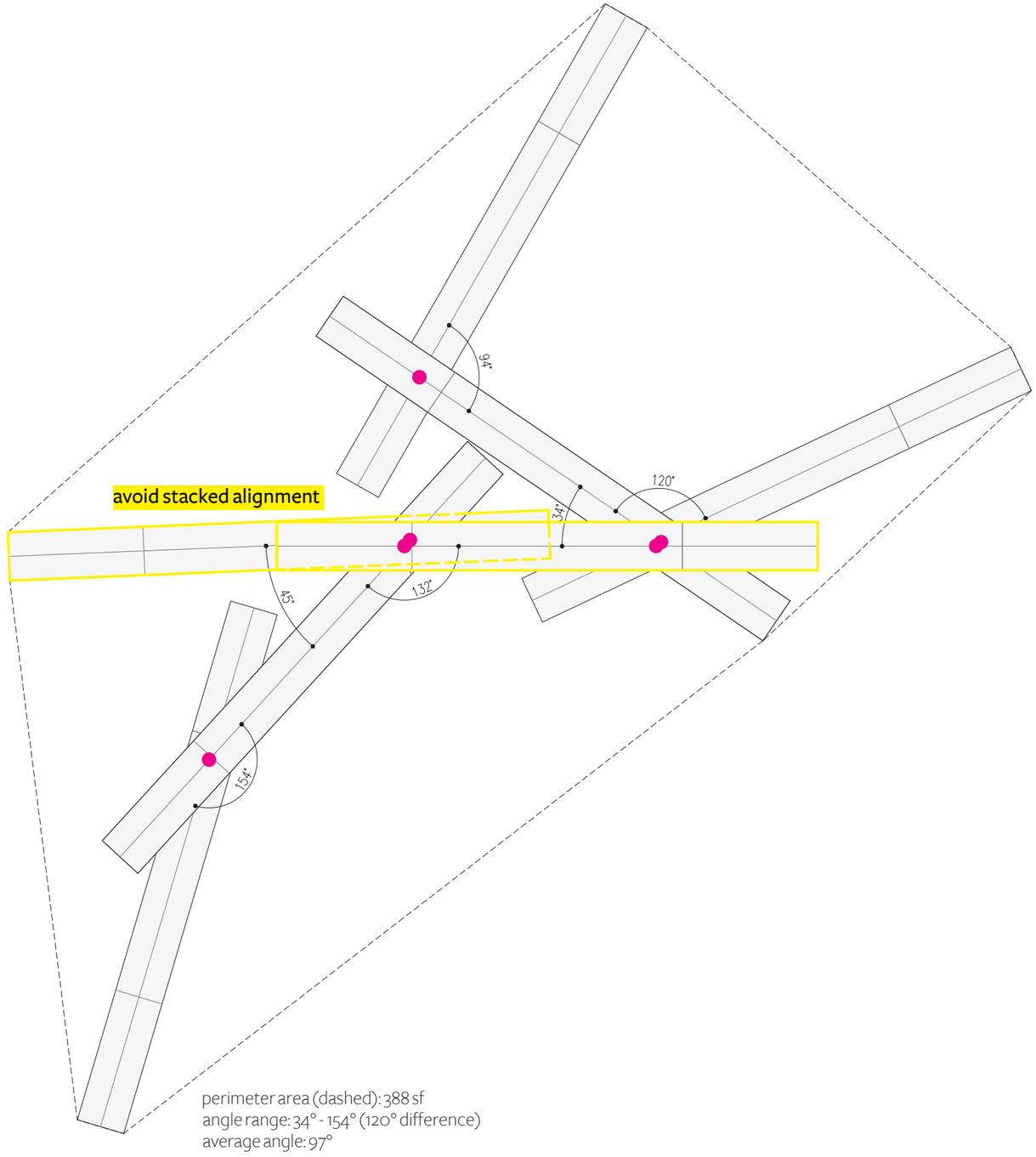
perimeter area (dashed): 328 sf
angle range: 33° - 160° (127° difference)
average angle: 94°





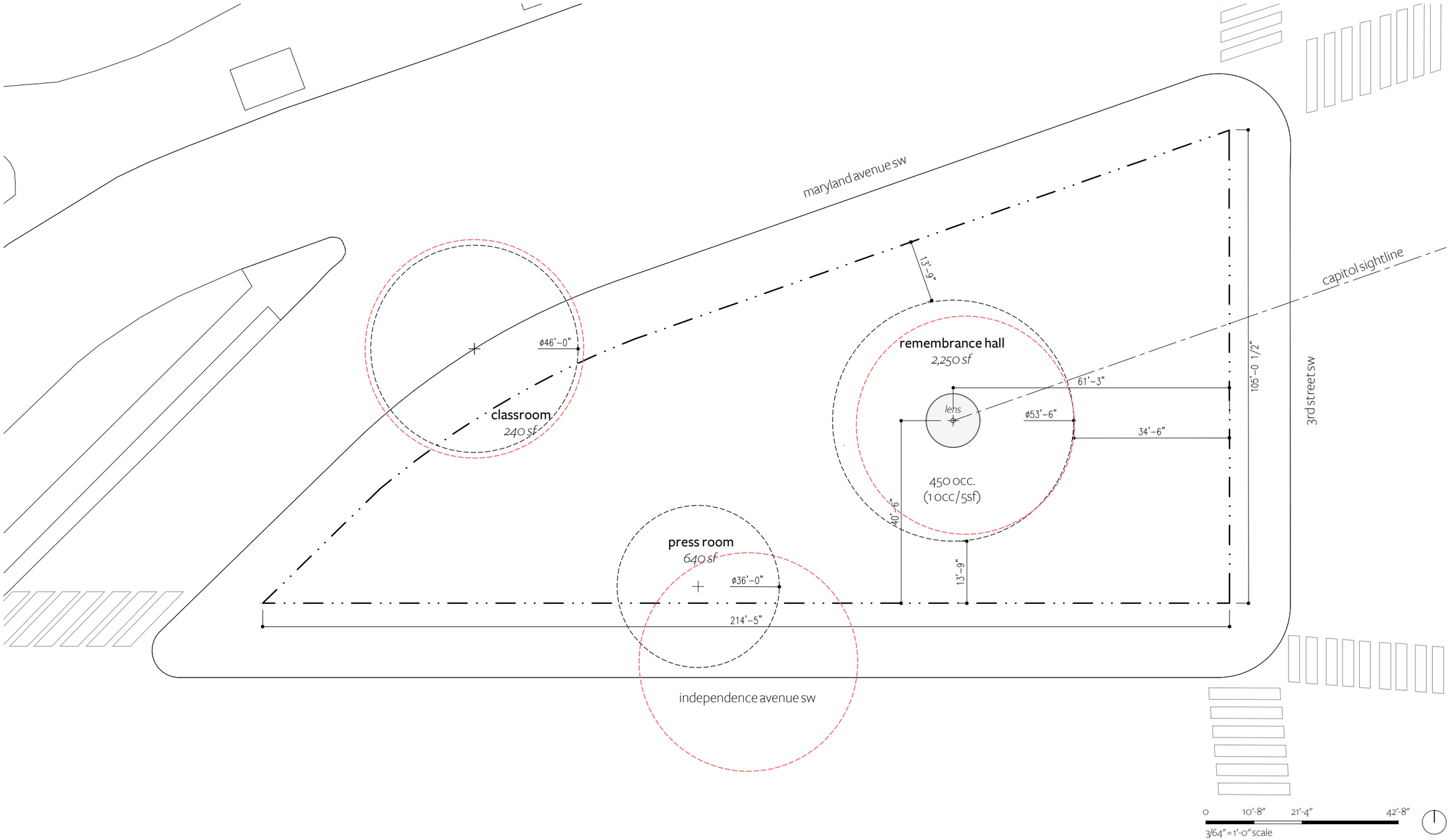
perimeter area (dashed): 346 sf
angle range: 38° - 150° (112° difference)
average angle: 113°





perimeter area (dashed): 388 sf
angle range: 34° - 154° (120° difference)
average angle: 97°

Design Development Site Layout

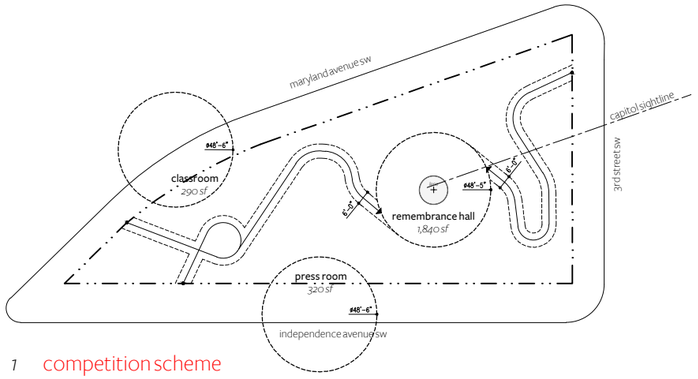


19 september 2024 **circle location study**

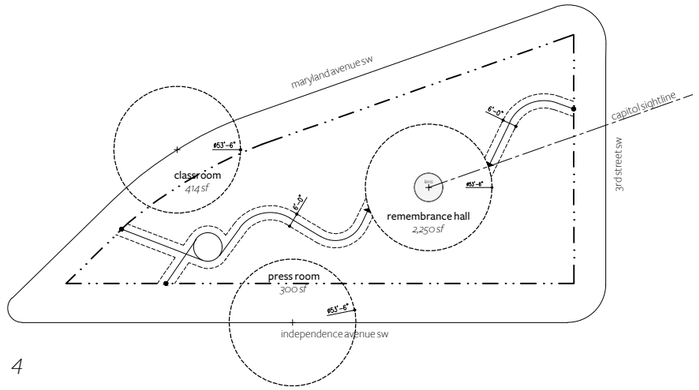
competition scheme location

new location

Fallen Journalists Memorial **John Ronan Architects**



1 competition scheme



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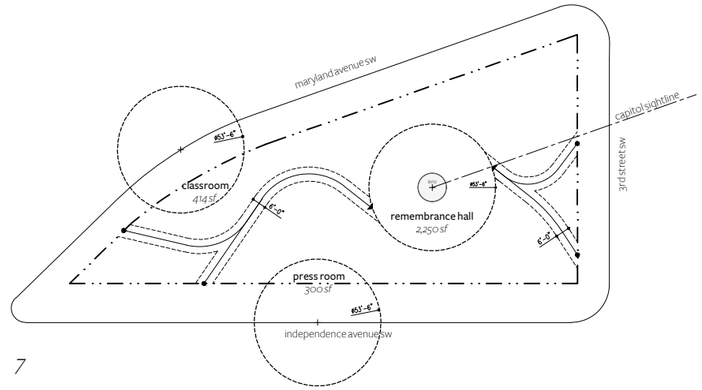

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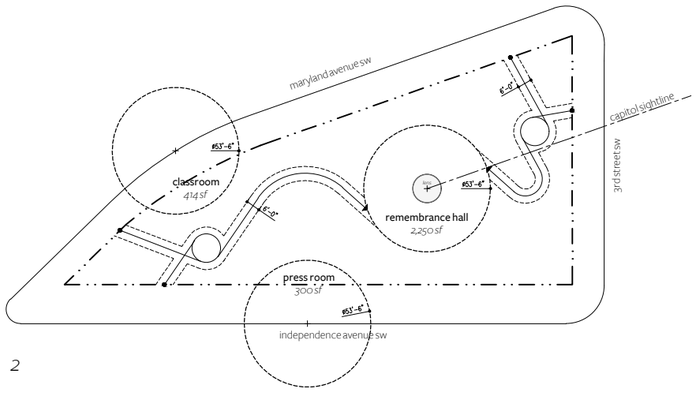

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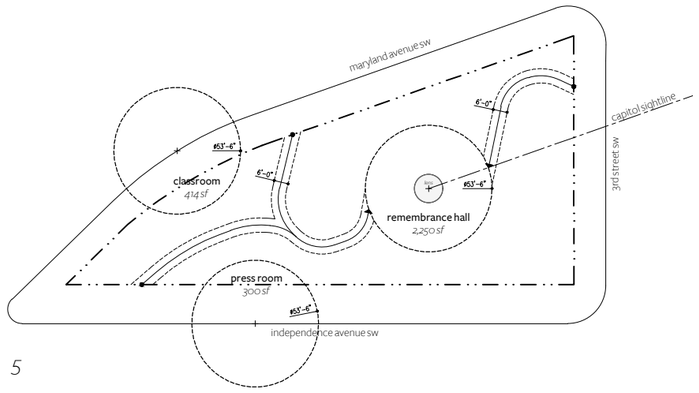

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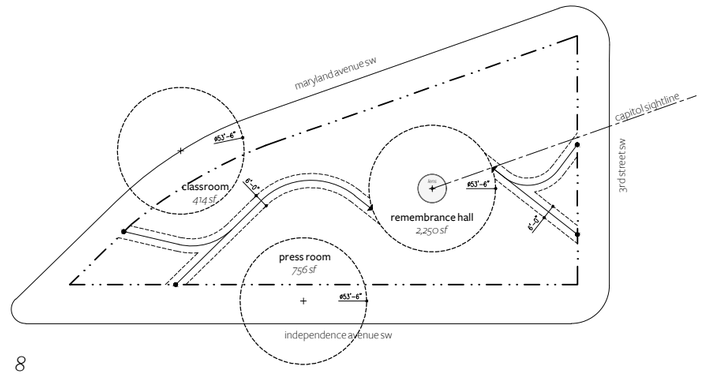

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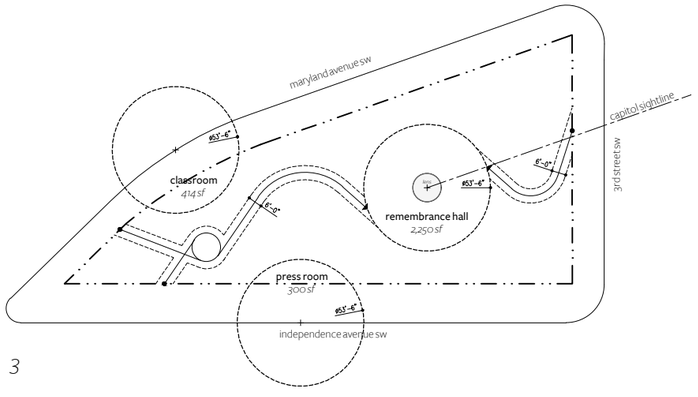

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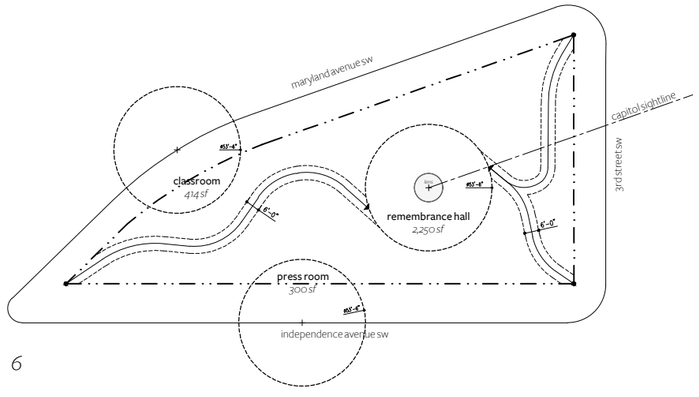

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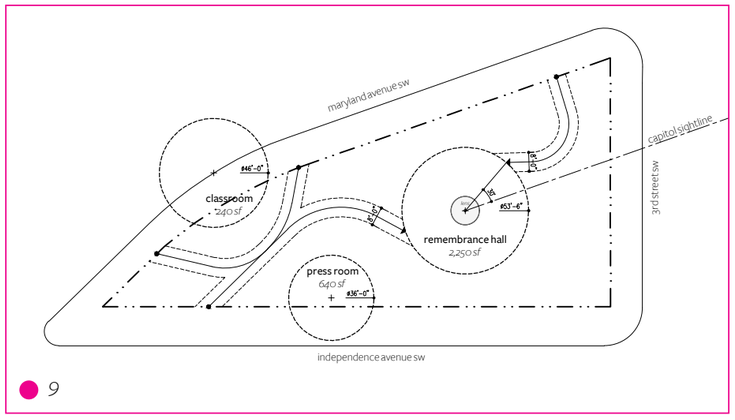
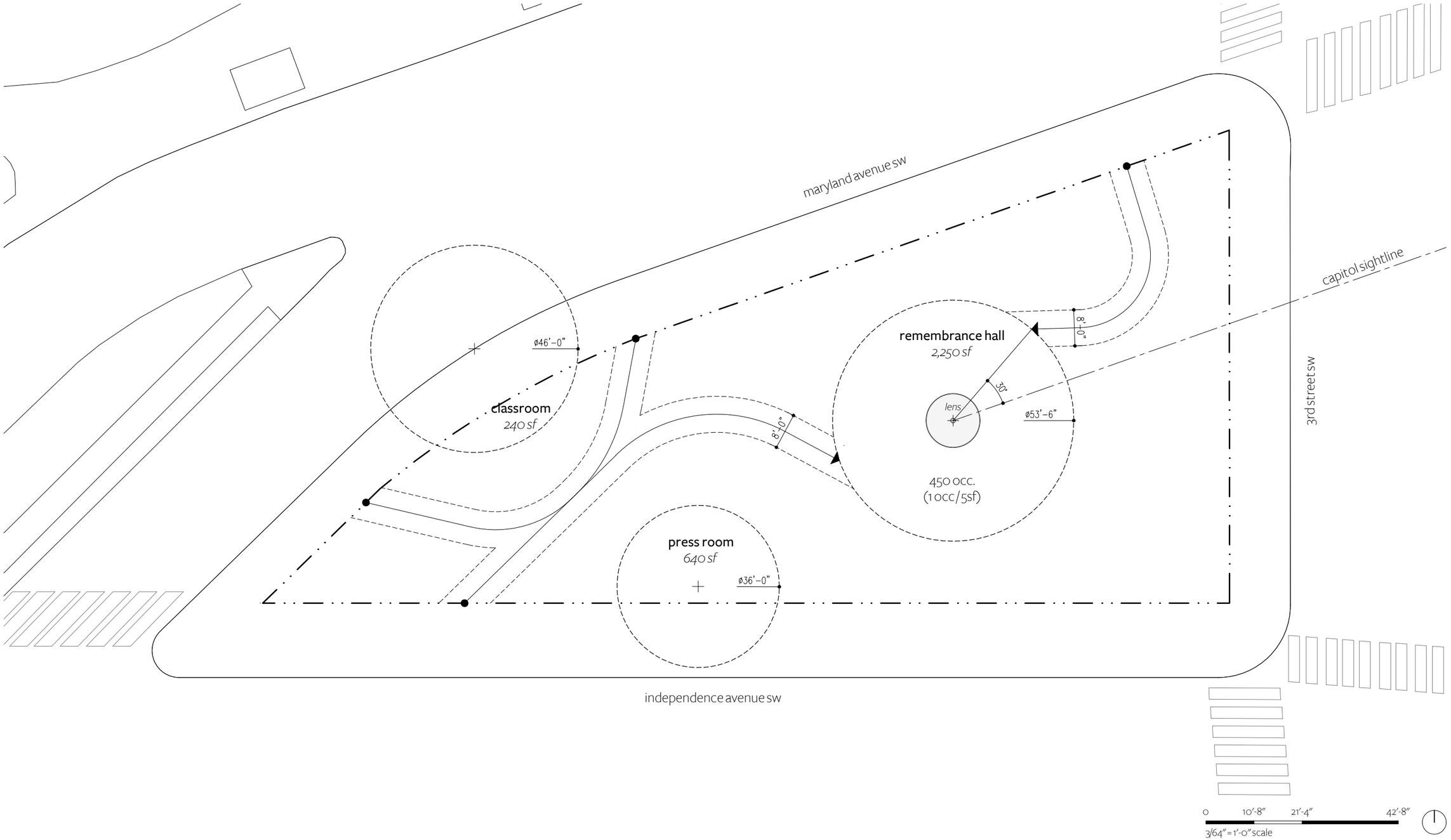
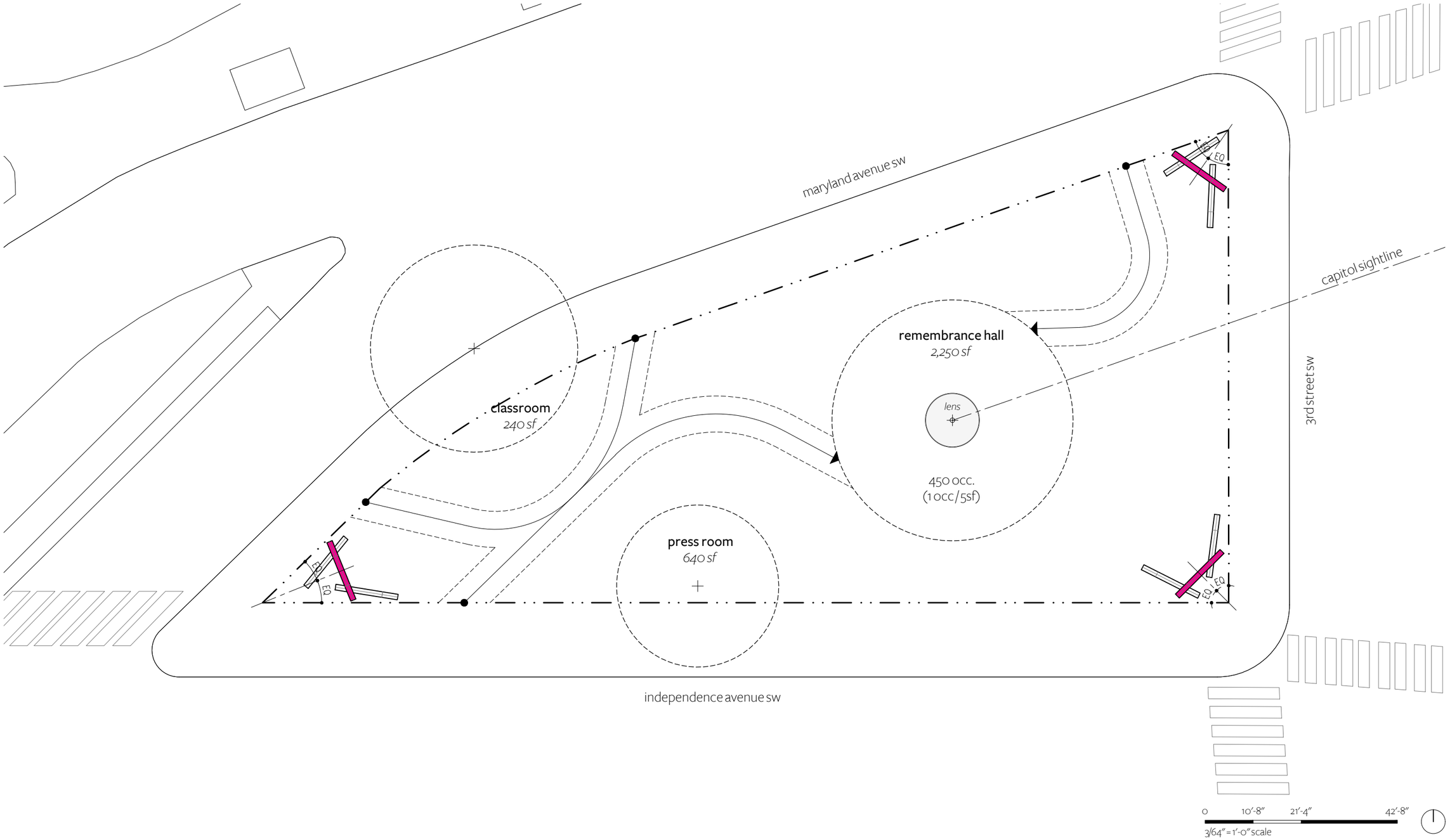


9

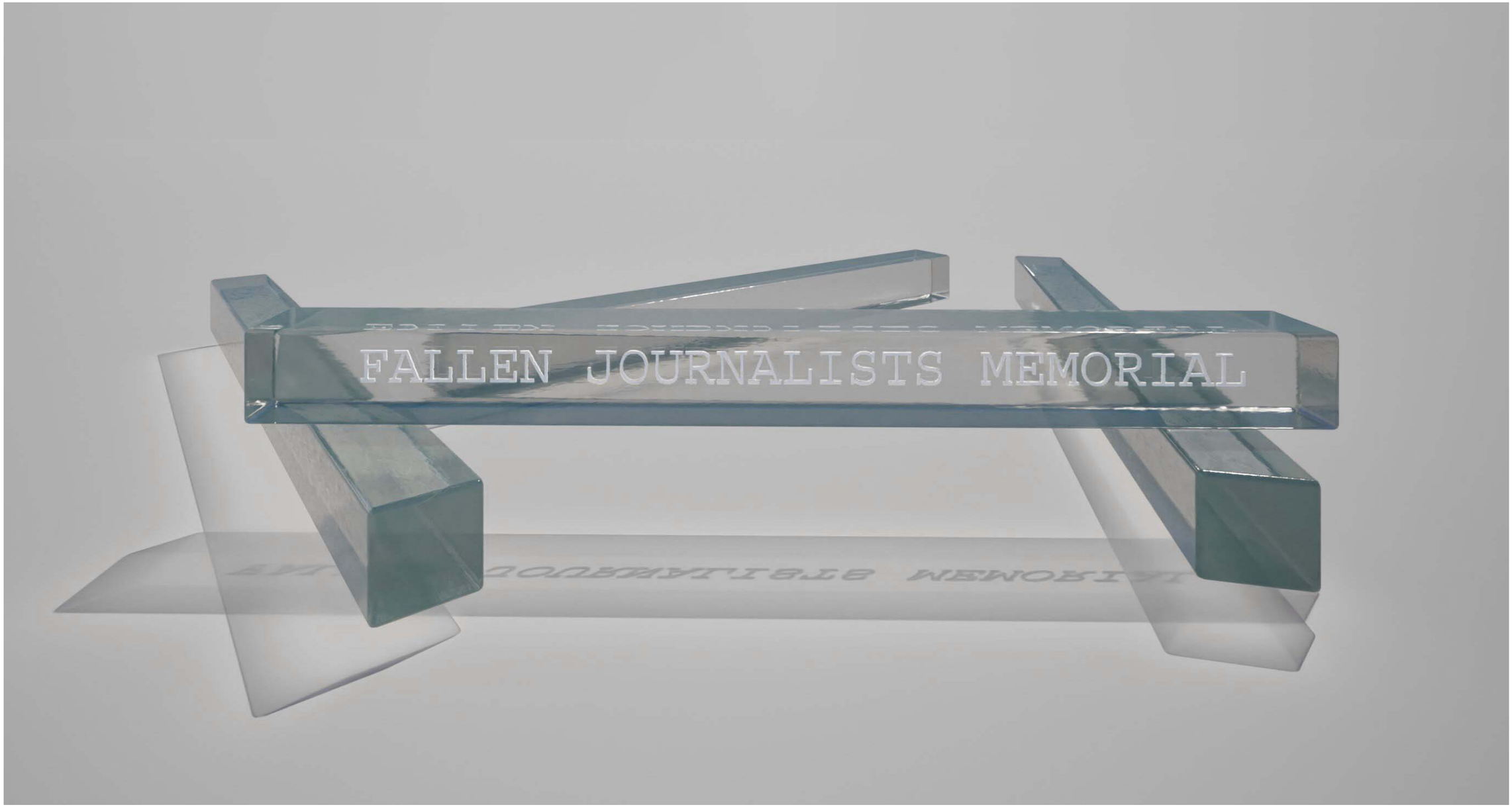
0 32′ 64′ 128′

1/64″ = 1′-0″ scale


maryland avenue sw
3rd street sw
capitol sightline
classroom
240 sf
ø46'-0"
remembrance hall
2,250 sf
8'-0"
30°
lens
ø53'-6"
450 occ.
(1 occ/5sf)
8'-0"
press room
640 sf
ø36'-0"
independence avenue sw
0
10'-8"
21'-4"
42'-8"
3/64" = 1'-0" scale


maryland avenue sw
3rd street sw
capitol sightline
classroom
240 sf
remembrance hall
2,250 sf
lens
450 occ.
(1 occ/5sf)
press room
640 sf
EQ
EQ
EQ
EQ
EQ
independence avenue sw
0
10′-8″
21′-4″
42′-8″
3/64″ = 1′-0″ scale

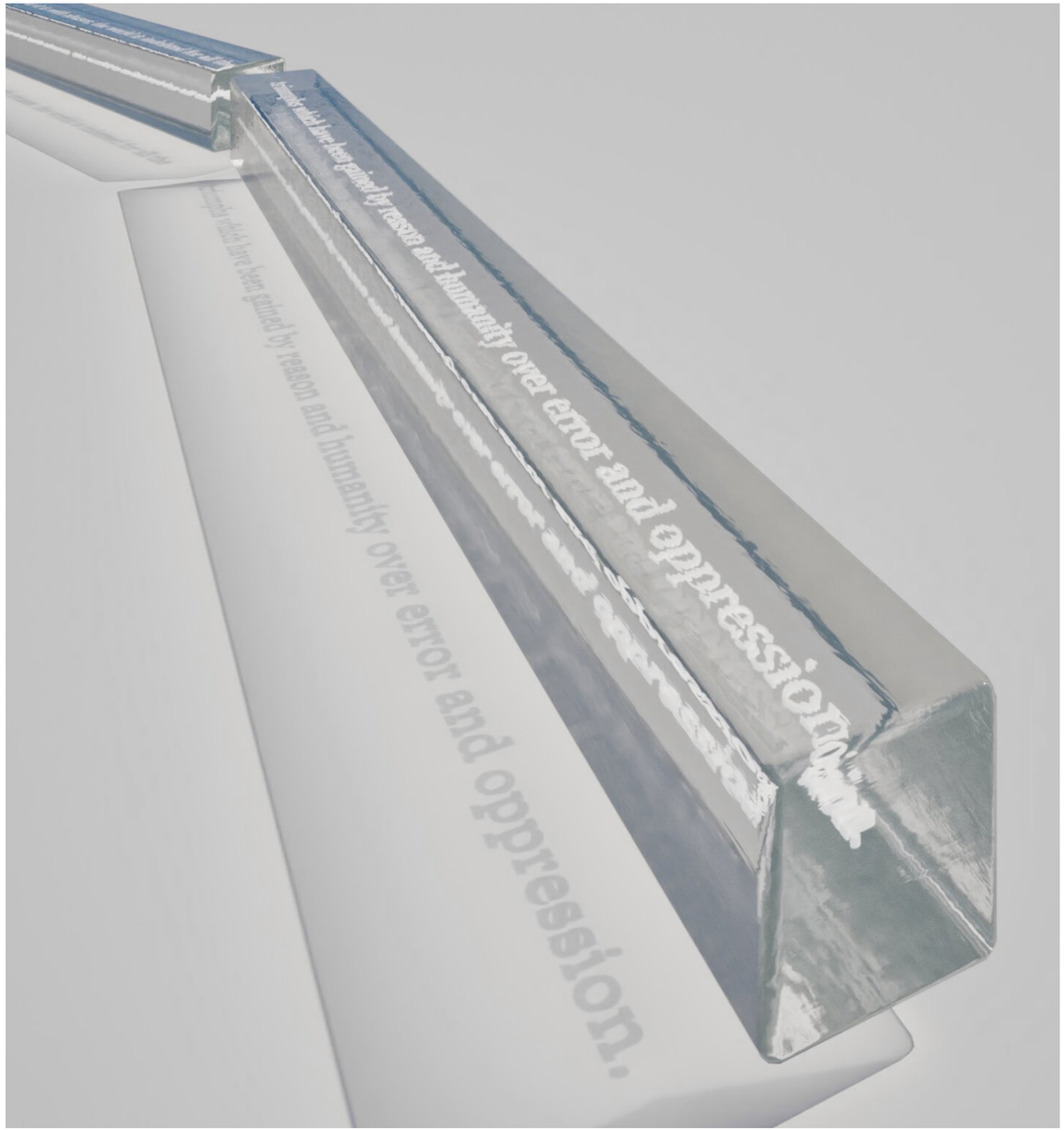
Design Development Graphics

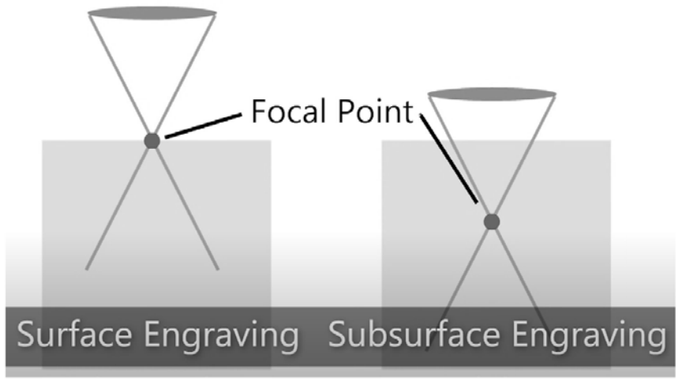

FALLEN JOURNALISTS MEMORIAL

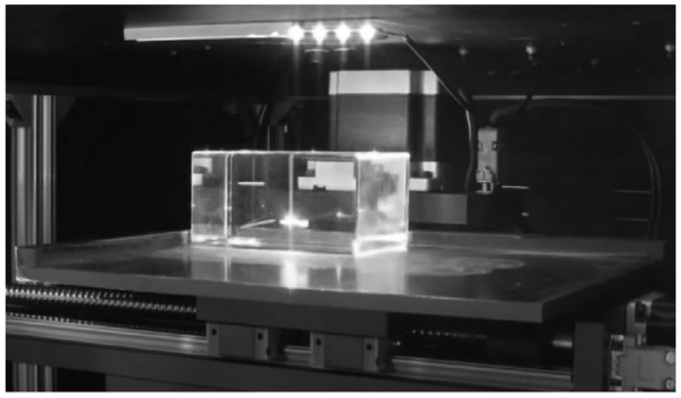
"You can kill a journalist, but you cannot kill the story"

"To the press alone, checkered as it is with abuses, the world is indebted for all the triumphs which have been gained by reason and humanity over error and oppression."

- James Madison





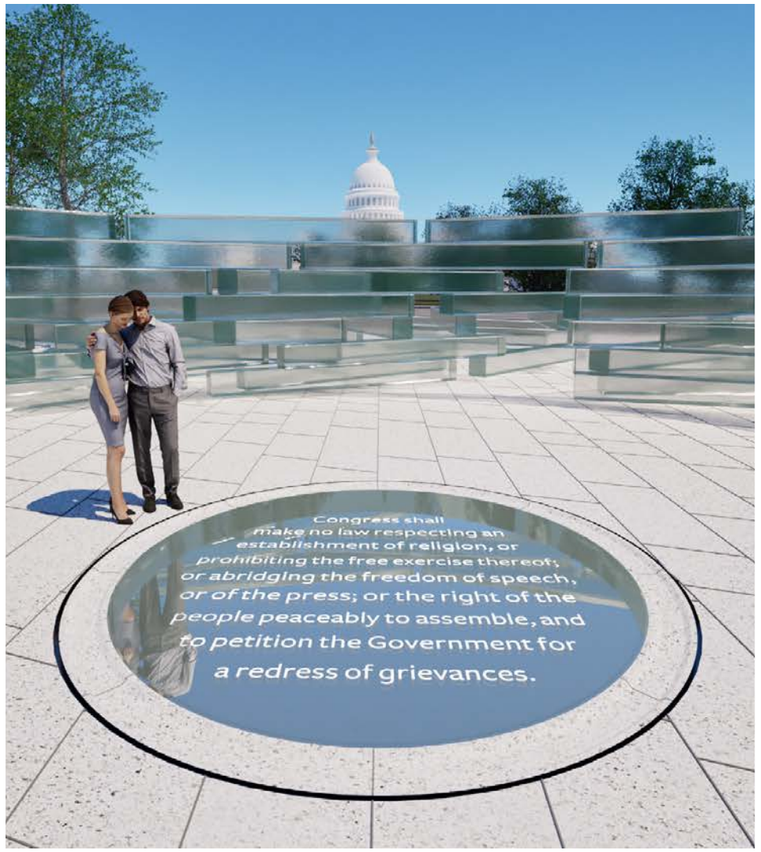


k9 borosillicate glass is often used for laser engraving

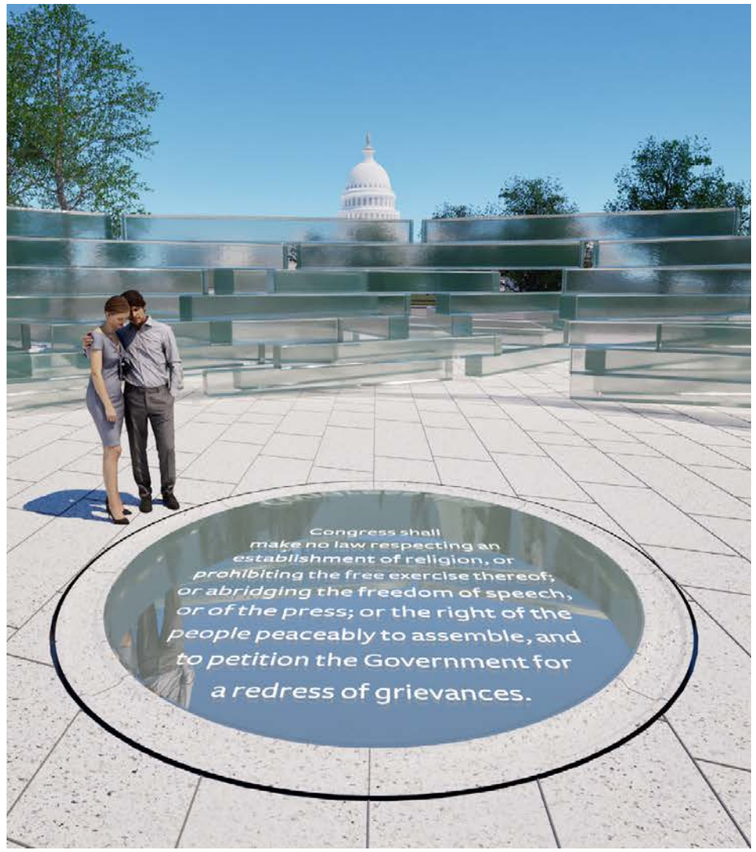
nova 63 maximum engraving range = 63.0" x 39.4" x 9.1"

laser engraved truth symbol

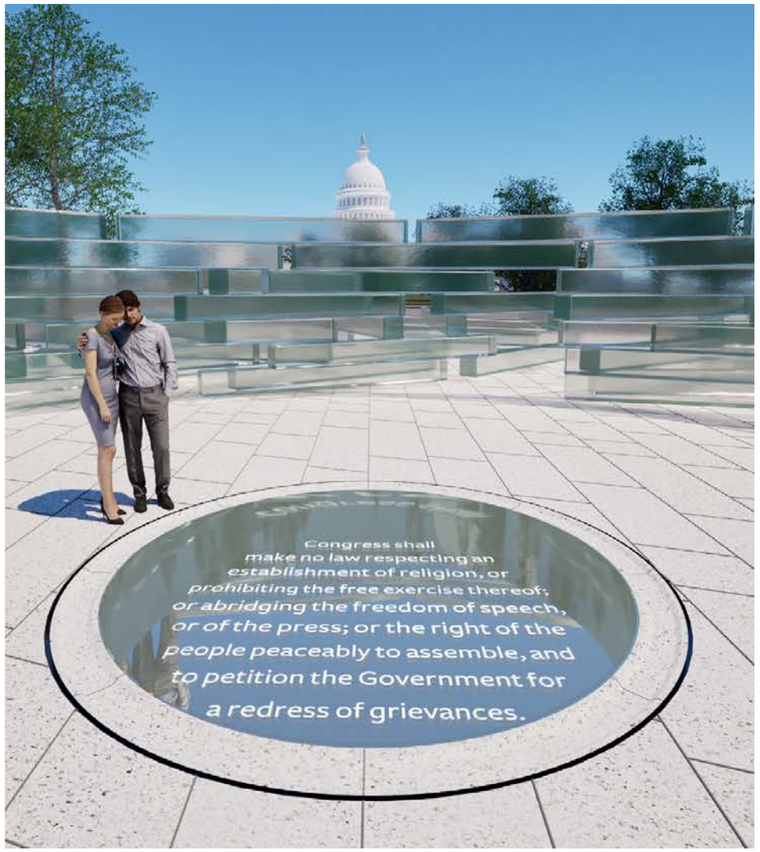
Design Development Lens



4" depth



8" depth



12" depth

remembrance hall
2,250 sf

capitol sightline

lens

Congress shall make no law respecting an establishment of religion or prohibiting the free exercise thereof, or abridging the freedom of speech, or of the press, or the right of the people peaceably to assemble and to petition the Government for a redress of grievances.

0 4′ 8′ 16′
1/8″ = 1′-0″ scale

19 september 2024 **lens location study**

Fallen Journalists Memorial **John Ronan Architects**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or abridging the freedom of speech,
or of the press; or the right of the
people peaceably to assemble, and
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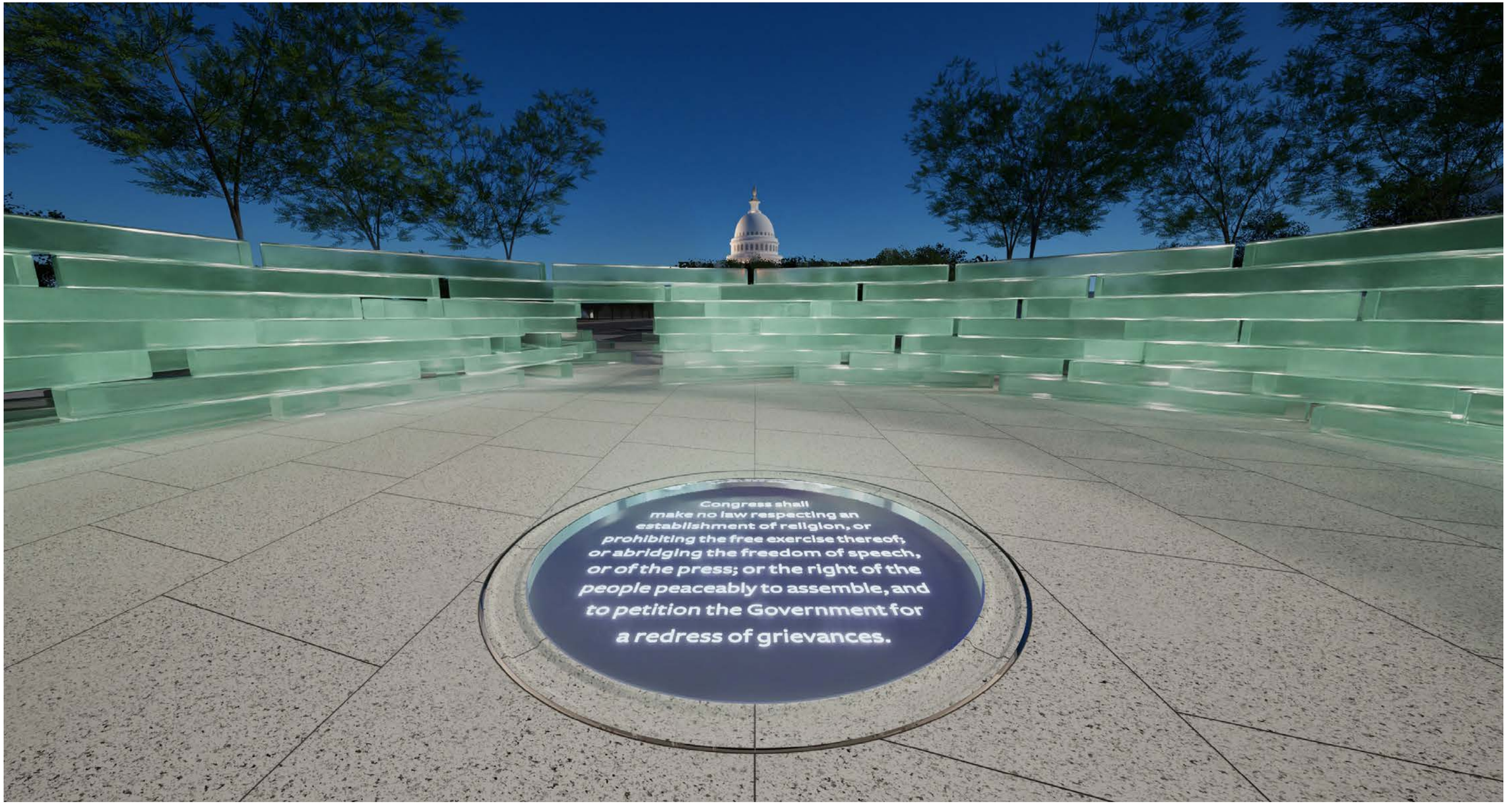
a redress of grievances.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