LORING PARK
FOUNTAIN ENCLOSURE & SCULPTURAL DESIGNS

DUNWOODY COLLEGE OF TECHNOLOGY
Architectural Studio

2018
Berger Fountain

Crispin Vang
Berger Fountain Enclosure

Crispin Vang
Materials and Potential Sponsors

Materials

• Aluminum Structure
• Precast Concrete Foundation
• Dichroic Film Acrylic Panels

Potential Sponsors

• 3M
• Landwehr Construction
• Ryerson
• Vista Air
• Mortenson
Examples

Crispin Vang
Loring Park Cell Dome

By Oliver Huston
Inspiration

Plant cells
Special Features

Colored lighting for night. Potential for greenhouse effect to keep surface free of snow.
Structure & Materials

Option 1: Carbon fiber & acrylic panels
Option 2: Recycled aluminum & acrylic panels
Fabrication

CNC machining or equivalent precision fabrication.
Mobility
Possibility to be moved via crane to another part of the park during the summer.
Portability & Storage

Option 1: Disassembled into sections for storage.

Option 2: Disassembled into individual panels for storage.
Potential Sponsors

- **Morrissey Inc**: Minnesota precision machining, stamping & complex metal fabrication company.
- **Clearwater Composite, LLC**: Minnesota company that specializes in manufacturing carbon fiber tubes, plates and other parts.
- **Kreative Acrylics**: Minnesota company that specializes in custom acrylic fabrication.
- **3M Company**: 3M Company is known for their innovation, manufacturing, & engineering.
- **Cargill**: Cargill specializes in food, agricultural, financial and industrial products.
Berger fountain enclosure

Karla Schmitt  Oct 8, 2018  Site and Precedent
INSPIRATION

Dandelions
Hexagons
Snow flakes
Six-petaled flowers
Existing plaza geometry
materials

Fiberglass, recycled steel, custom metal
Custom Metal Finish

POSSIBLE SPONSOR

OPTIONS:
- Aged copper
- Blackened steel
- Bronze
- Copper
- Weathered steel
- Zinc

Durable in MN Weather
Snowflake Center

FIBERGLASS

- Low embodied energy
- No deformation
- Withstands extreme temps
  - (-40 F to 350 F)
- Safe to handle
Structural support

RECYCLED STEEL

World’s Most Recycled Material

Strong as new steel

Endlessly recyclable

Reusable waste
LIGHTING

Color-changing

- Pride Festival
- Fall Colors
- Halloween
- Holidazzle
- Special Events
NIGHT VIEW

Foam ball represents fountain mass

Structural supports fit inside footprint of existing fountain
LEDS

LIGHT EMITTING DIODES
EFFICIENT-40,000 HRS*
95% ENERGY CONVERSION
RECYCLABLE

*www.greentechsolutionsgroup.com
STORAGE

- Fountain cover is two separate pieces
- Can be placed one on each side at Loring Greenway entry
- Kinetic sculpture rest of the year
- Bolted down
- Assembly/disassembly can be done by unskilled labor
- Replaceable simple construction
- Low possibility of mechanical issues
- Landscaped on either side
AS SCULPTURES

Each half can be dismantled and moved to frame the entry at Loring Greenway.

Anywhere is possible

Bolted down

Taller one is about 24’ high
POSSIBLE PARTNER: DUNWOODY

DISCIPLINES CONTRIBUTING:

• METAL FABRICATION
• MECHANICAL ENGINEERING AND DESIGN
• ARCHITECTURE
• PROJECT MGMT
• DONATED TIME BY STUDENTS AND FACULTY
BERGER FOUNTAIN
LORING PARK MINNEAPOLIS, MN

PRESENTED BY MARINA FOOKS
PRECEDENTS
PROPOSED ENCLOSURE
 Plans and Elevations

Total Height 28 ft.

Plans

North and South Elevations

East and West Elevations

Plan View

Top View
AT DAWN
MATERIALS

INTERIOR:
ACRYLIC, POLYCARBONATE, PLAXIGLASS

STRUCTURE:
POLISHED STEEL OR ALUMINUM

https://perspex.com/inspire-me/
https://www.regal-plastics.com/standard-acrylic-colors/
POSSIBLE SPONSORS

TARGET  3M  WELLS FARGO  MORTENSON  ADOLSON & PETERSON
CAPITAL PLASTICS  U OF M  DUNWOODY COLLEGE OF TECHNOLOGY
XCEL ENERGY  EXPLORE MINNESOTA
Berger 'Dandelion'
Fountain Enclosure

By Mitchell Olson
Precedence
Conceptual Design

Elevation View

Plan View
Lexan
Works in a wide temperature range.
Excellent UV resistance.
High, long-term color stability.
Lightweight.
Excellent formability.

Aluminum
Recyclable
Light Weight and strong
Corrosion Resistance

Features
Lighting
Greenhouse Effect
Architectural Renderings
Architectural Renderings
Potential Manufactures and Sponsors

**Envision Plastic and Design**
Minnesota based company that specializes in custom plastic and lexan fabrication.

**Century Tool Inc.**
Minnesota company that offers custom fabrication, CNC machining and turning capabilities, welding, assemblies, and more.

**Mortenson Construction**
Minnesota builder, developer, and provider of energy & engineering services.

**3M**
Minnesota based company known for their innovation, manufacturing, and engineering.
Berger  Dandelion
Fountain Enclosure

By Mitchell Olson
BERGER FOUNTAIN ENCLOSURE

MICHAEL LENZ
MATERIALS AND POTENTIAL SPONSORS

**MATERIALS**
- ACRYLIC
- RECYCLED ALUMINUM
- STEEL

**SPONSORS**
- 3M
- AMERICAN ALUMINUM EXTRUSION
- MORTENSON
- KREATIVE ACRYLICS
FABRICATION

- CNC MACHINED ALUMINUM
- CUSTOM ACRYLIC SHAPING
  - POSSIBLY CNC MACHINED AS WELL

* STRUCTURE WOULD BE CRANED OVER THE FOUNTAIN
LED Colors

Fall: Orange with Yellow
Around Christmas: Silver and Gold
Winter Till Spring: Purple with Blue
Spring: Pink with Green
Last Day Before Opening: Gold and Red
Southgate Process Equipment
Sponser for structures moving gears
Is there precedent?
KPI’s
KPI’s

• Deter vandalism
  • Barrier
  • Lighting
  • People
KPI’s

• Deter vandalism
  • Barrier
  • Lighting
  • People

• Attract Visitors
  • Interest
  • Warmth
Design Inspiration
Loring Park: Berger Fountain Cover

Jake Beaudet
Concept:

• Lightweight
• Inexpensive
• Easy Assembly
• Durable
• Relate to the Area

• Tensile With a Twisting Motion
• Fountain Shadow
  – (slightly transparent)
• Bright
• Changeable Lights
• Remain Key Feature at Loring
Precedents:

Denver Airport  
Zenith by Massimiliano Fuksas  
Brazil World Cup

https://www.creativebloq.com/video/projection-mapping-912849
Renderings
Plans & Elevation

50'-0"

30'-0"

30'-0"

50'-0"
Materials:

- **Aluminum Piping**
- **Tension Cables**
- **Membrane**
  - **PVC Membrane**
    - Plastic well known for its *affordability* along with its *durability*, easily *recycled*.
  - **ETFE Film**
    - Durable, highly *transparent* and very *lightweight* in comparison to glass structures.
  - **PTFE High Translucency Fiberglass membrane**
    - Immune to UV degradation, incredibly *strong* using Teflon, lifespan exceeding 30 years.
Fabrication:
Potential Sponsors: