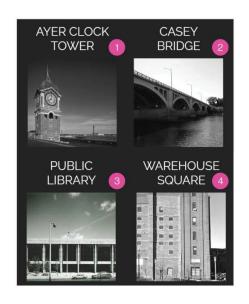
## **Iluminacion Lawrence**

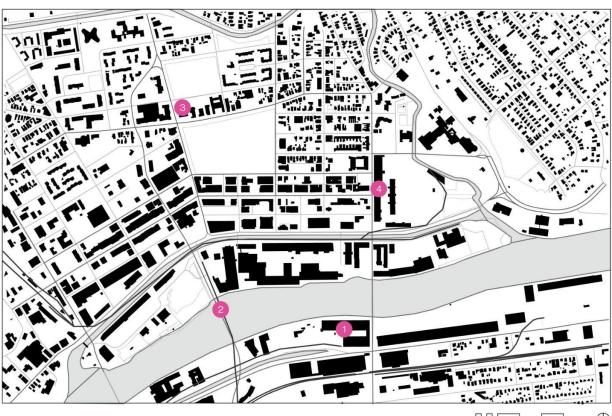
Boston Architectural College, Gateway Initiative

End of Term I Presentation, Spring 2021

27 May 2021

## **Current Iluminacion Lighting Installations**





## **Goals from Request for Proposal**

- Research and study creative placemaking initiatives/studies that have been completed downtown.
- Meet and survey IL working group stakeholders, community organizations, and residents to identify community priorities for lighting.
- Develop preliminary organizational structures to help stakeholders define roles and responsibilities.
- Visit and document existing site conditions to develop priority sites for installations.
- Develop a set of master plan lighting priorities, including short, medium, and long-term (permanent) installations.
- Produce preliminary conceptual lighting design and renderings
- Present initial findings to stakeholders.

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- Present initial findings to stakeholders.

Case Studies Booklet
(over 25 urban lighting case studies documented)

Site Analysis Document (15 sites evaluated)

### **Site Analysis Document**

(15+ sites evaluated)

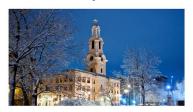


#### **Site Analysis Document**

(15+ sites evaluated)

#### Research Teams

#### History Team



- Reviewing the Lawrence History Center website material, as well as the City of Lawrence website visitation quide.
- Providing a graphic tour of significant places through graphics, drawings and photos.

#### Culture Team



- Becoming experts on the local culture, customs and traditions of lawrence.
- · Providing a calendar of cultural events
- Identifying culturally significant cultural places & spaces using the City of Lawrence website visitation guide.
- Identifying cultures represented in Lawrence, and providing examples of cultural fusion, crossover, collaboration and unity.
- Identifying cultural organizations in Lawrence that do the work of preserving culture on a regular basis.

#### Arts Team



- Researching the arts scene and arts history in Lawrence.
- Identifying all arts organizations, institutions, buildings, places, sites.
- Researching significant people (present and past) who contribute to the arts in Lawrence.
- Locating art pieces / performances / writings of note created by Lawrence residents or about Lawrence.

#### Places, Spaces and Sites Team



- Creating a catalogue on places, spaces and sites identified by the lluminacion Working Team, and last semester's gateway team for potential lighting projects and of the existing four lighting installations.
- Providing site plan / aerial image with basic measurements.
- Providing elevations / photos with correct proportions and approximate measurements.
- Researching site description, address, information, links.
- Researching initial observations pros/ cons and potential ideas for lighting, programing and development.

#### **Site Analysis Document**

(example site analysis)

- Bread and Roses strike
  Campagnone Common
- The Lawrence Textile Strike, also known as the Bread and Roses Strike, was a strike of immigrant workers in the city of Lawrence.
- There is a celebration of the ethnic diversity and labor history of Lawrence.
- This annual festival is celebrated on Labor day.
- It is celebrating the most significant event in Laerence: the 1912 Bread and Roses Strike.
- The event is memorialized through a variety of music and dance, poetry and drama, ethnic food, historical demostration, and walking and trolley tours.







Local artist exibitions at Campagnone Common that bring amount of visitors to buy art pieces

Carnival celebration with music and traditional Dominican costumes







Spaces prepared for performances in the Campagone Common

## **Goals from Request for Proposal**

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Goals for Year 2 (Starting Fall 2021)

## **Goals from Request for Proposal**

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- Meet and survey IL working group stakeholders, community organizations, and residents to identify community priorities for lighting.
- Develop preliminary organizational structures to help stakeholders define roles and responsibilities.
- Visit and document existing site conditions to develop priority sites for installations.
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- Produce preliminary conceptual lighting designs and renderings
- Present initial findings to stakeholders.

Today's Presentation (One Preliminary Master Plan & Five Lighting Proposals)

## **Master Plan Lighting Priorities**

**Enhancing Identity & Experiences** 

## Goals from 2018 Gateway Podcast

- Interconnect the Businesses
- Create a Downtown Destination for Everyone
- Placemaking & Wayfinding
- Enhance Social Community
- Enhance Connections
- Get people on foot to visit the businesses...especially new residents in new downtown rental units (1000+)

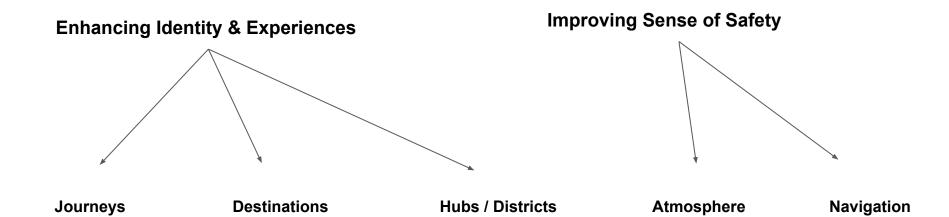
2. Improving Sense of Safety

Address Public Safety





## **Lighting Strategies**



## **Types of Lighting for Lawrence**

Architecture Driven

Identity Driven

Experience Driven

#### "LOOK UP" (Direct Light Elements)

Existing Vertical Structures such as:

Clock Towers / Faces, Smoke Stacks & Steeples

Pedestrian Light Poles

#### "LOOK DOWN" (Community Lighting)

Lighting Water Features such as the River & Canals

Landscape / Pathway Lighting

Accent / Feature Lighting

#### "CHANGES OVER TIME" (Experience Lighting)

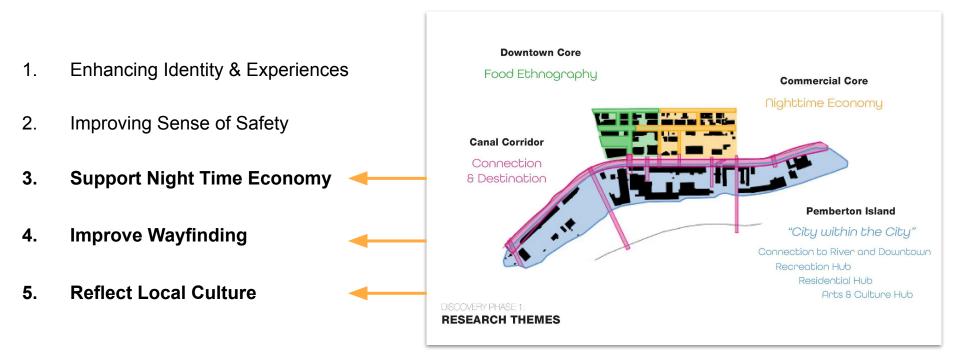
Interactive Lighting

Projection Lighting (such as for artwork)

Seasonal Lighting

## **Master Plan Lighting Priorities**

### Ideas from Last Semester

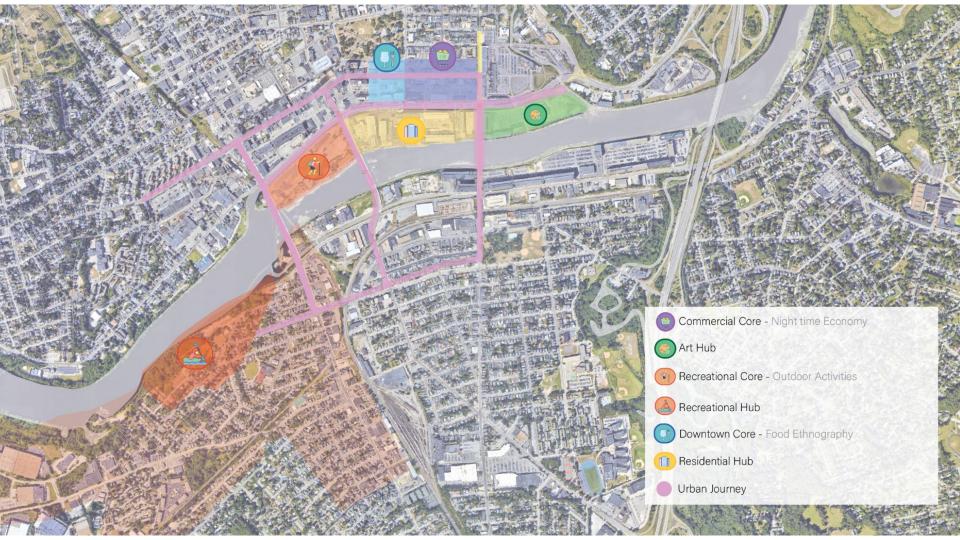


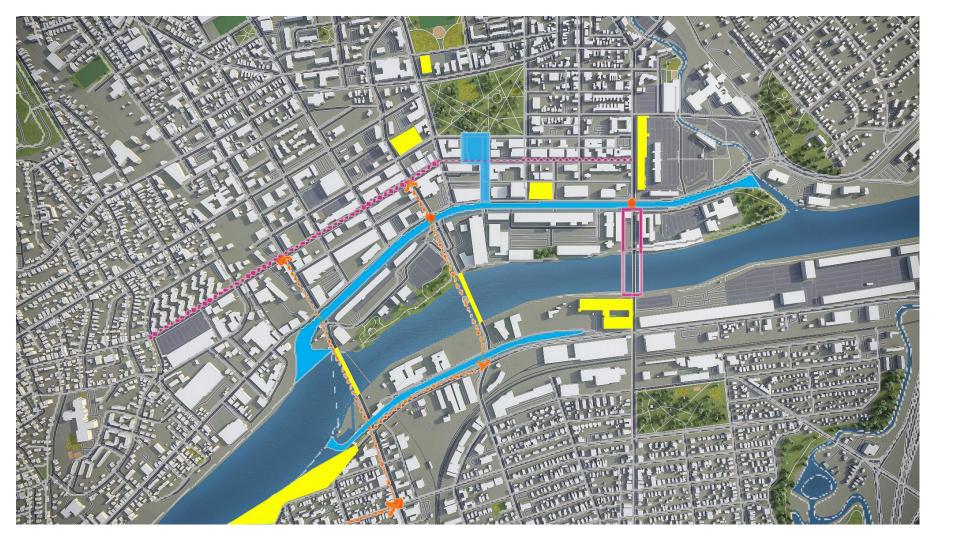
## **Informing the Master Plan**

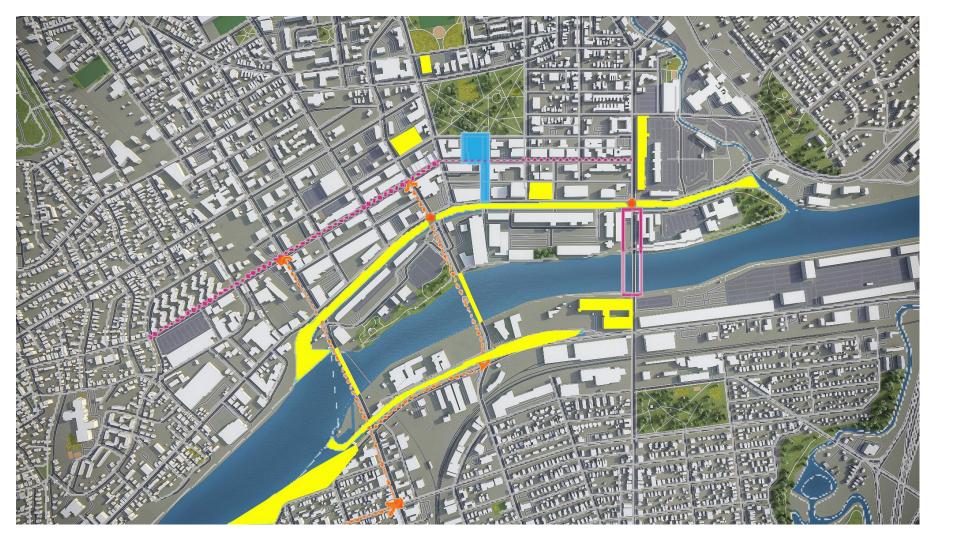


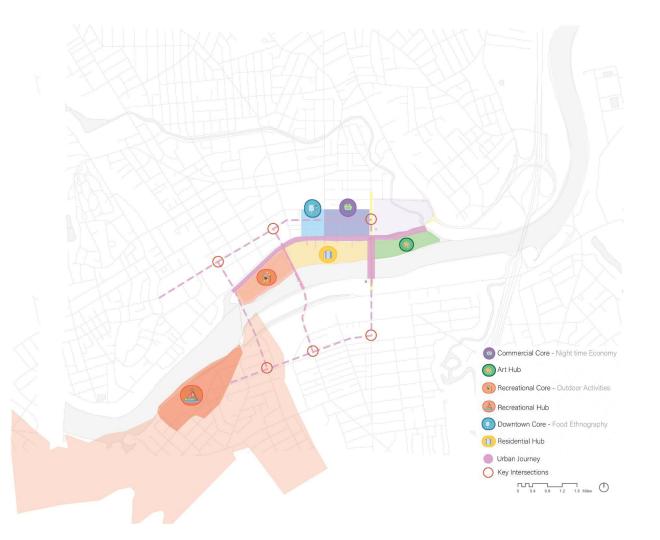
**Hub/District Ideas**Form Last Semester

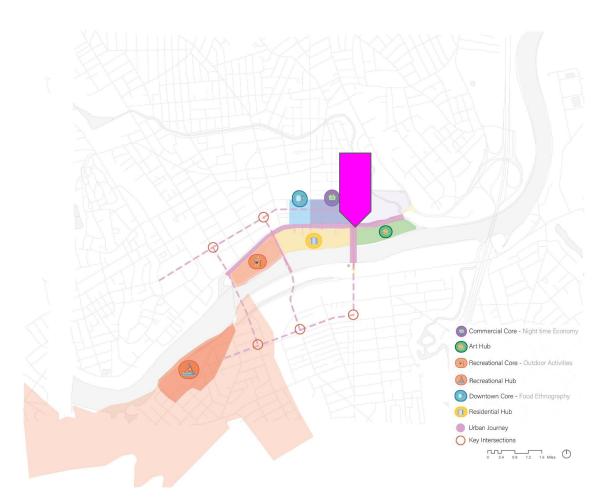
**Districts Ideas** from North Canal Master Plan







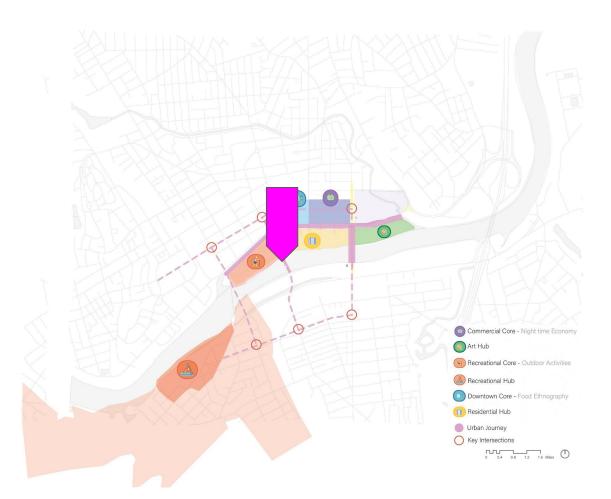








Looking south toward the Duck Bridge







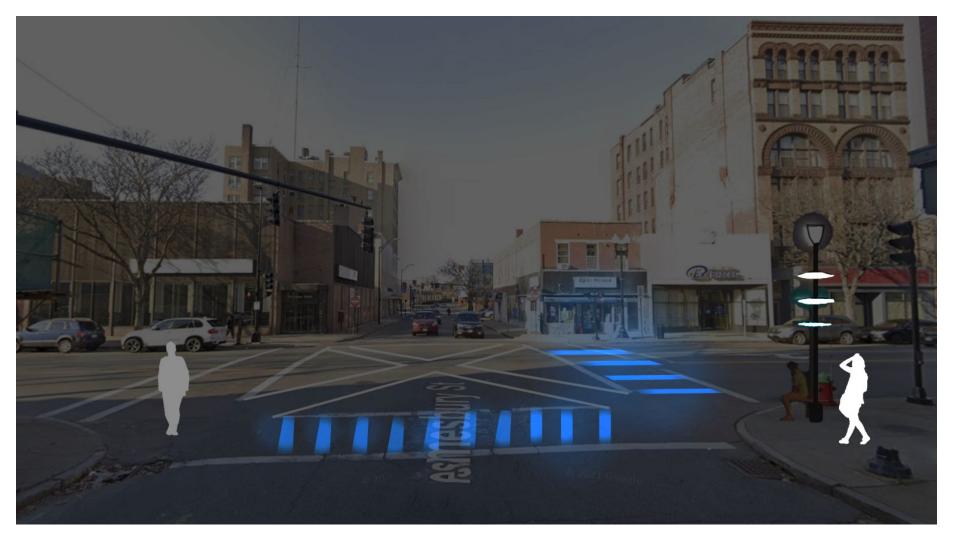
Looking south toward Amesbury Street

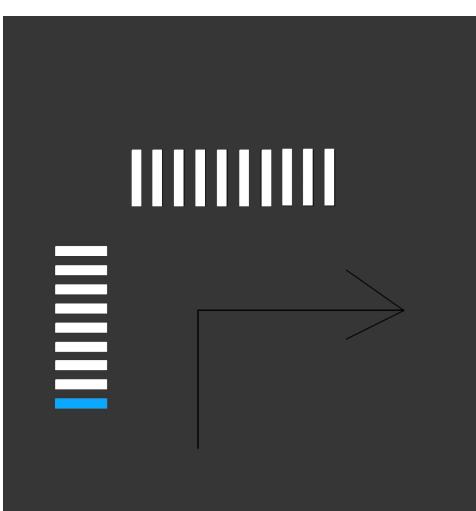




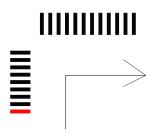


Looking north west toward Salem Street

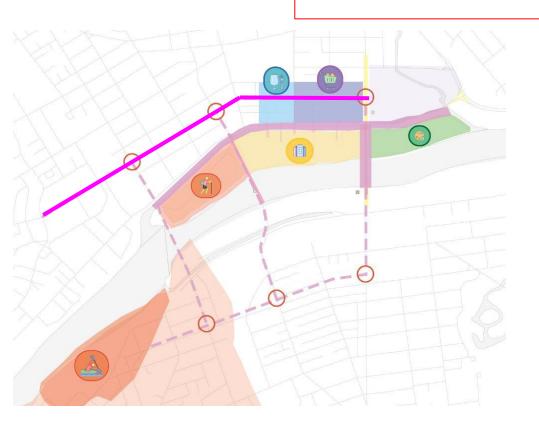








## **ESSEX STREET ILLUMINATION**



**ZHUOYANG WU** 

## **Essex Street + Mural Lighting Proposal**

#### Aspirations:

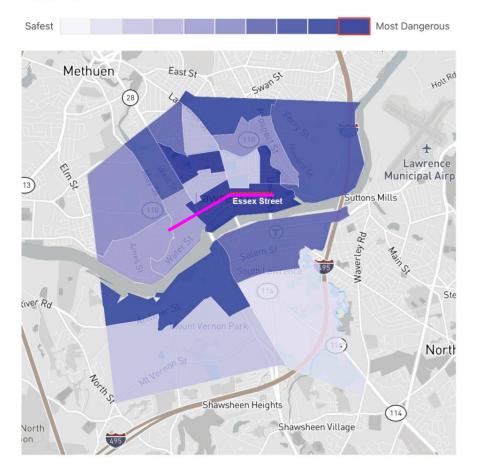
- Enhance Night Time Atmosphere
- Enhance Journey along Essex Street
- Highlight street identity by illuminating existing mural art
- Celebrate Local Public Art & Culture

#### **Issues to Address:**

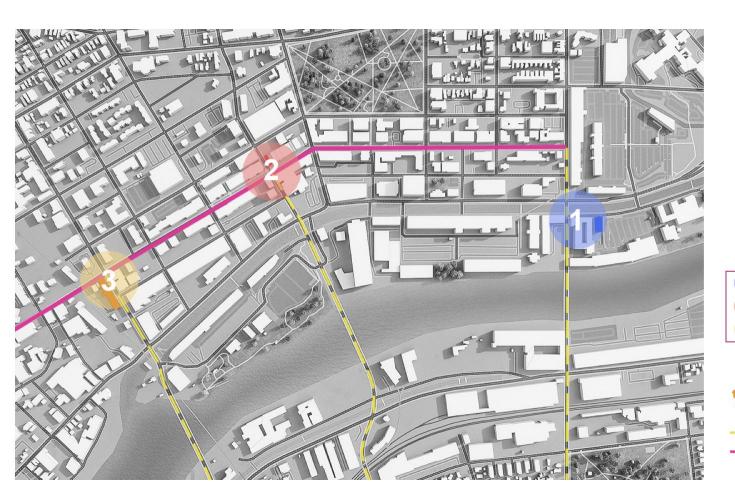
- Address nighttime safety on main commercial corridor
- Sense of Safety & Crime

Safety + Wayfinding + Identity Mural
Lighting
Proposal

#### **Crime Rates**



## Three Proposals "Connecting Essex Street Through Nodes"

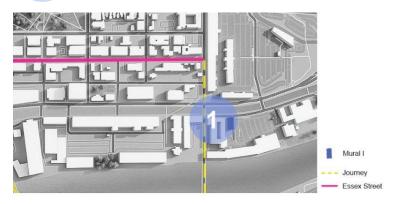




Essex Street

## 1

## Essex Street x Union Street



Types of Lighting:	Purpose:	Performance Requirement:	
- Ring Lights	- Illuminating the Crossway	Lighting Quality: Beam Angle / Optic: Listing: Mounting:	RGB flood light Radiate Light UL Wet Listed Pole
- LED StripLights	- Highlighting local Art Institution	Lighting Quality: Beam Angle / Optic: Listing: Mounting:	LED strip light Radiate Light UL Wet Listed Surface
- RGB Flood Lights	- Serve as the base light for LED illumination	Lighting Quality: Beam Angle / Optic: Listing:	RGB flood light Radiate Light UL Wet Listed

Mounting:

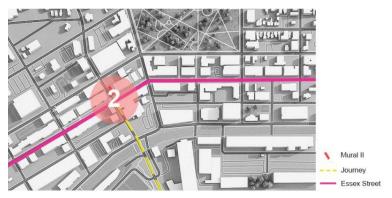
Pole, surface





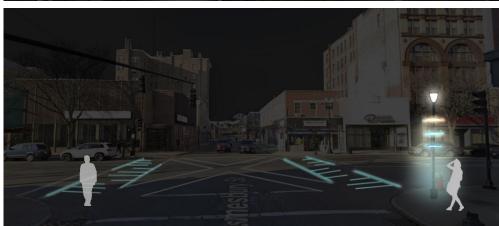


## Essex Street x **Amesbury Street**



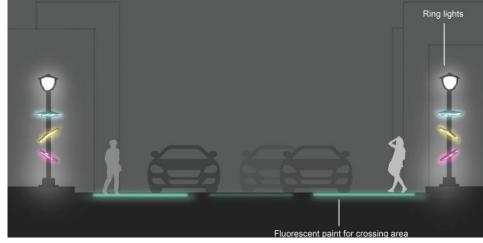
Types of Lighting:	Purpose:	Performance Requirem	ent:
- Ring Lights	- Illuminating the cross- way	Lighting Quality: Beam Angle / Optic: Listing: Mounting:	RGB flood light Radiate Light UL Wet Listed Pole
- Fluorescent paint	<ul> <li>Highlighting pedestrian crossing pathway</li> <li>Directing</li> </ul>	Lighting Quality: Beam Angle / Optic: Listing: Mounting:	Fluorescent powder Radiate Light, fluorescence UL Wet Listed Surface
- RGB Floor Lights	- Illuminating the mural	Lighting Quality: Beam Angle / Optic: Listing: Mounting:	RGB spot light Radiate Light UL Wet Listed Surface





## **Essex Street x Amesbury Street**





## 3

## Essex Street x **Broadway Street**

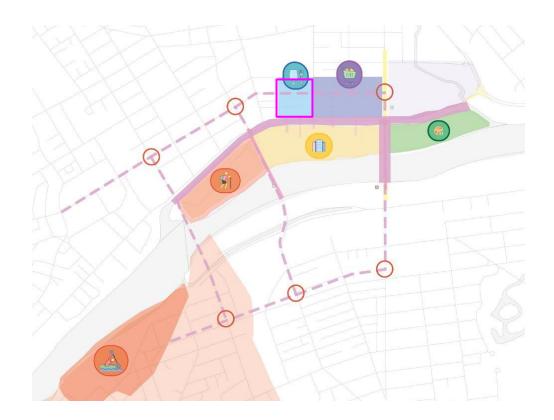


Types of Lighting:	Purpose:	Performance Requirement:	
- Ring Lights	<ul> <li>Illuminating the cross- way</li> <li>Wayfinding 'guidepost'</li> </ul>	Lighting Quality: Beam Angle / Optic: Listing: Mounting:	RGB flood light Radiate Light UL Wet Listed Pole
- RGB Flood Lights	- Serve as the base light for LED illumination	Lighting Quality: Beam Angle / Optic: Listing: Mounting:	RGB flood light Radiate Light UL Wet Listed Pole, surface
- LED Strip Lights	- Illuminating the mural	Lighting Quality: Beam Angle / Optic: Listing: Mounting:	RGB flood light Radiate Light UL Wet Listed Surface





# RING LIGHTING PROPOSAL In Downtown Core



Hanen Abbas & Laura Isabel Medina

## **Ring Lighting Proposal**

#### Aspirations:

- Contribute to wayfinding at intersections in the **Downtown Core**, along **Appleton Street** and/or other major thoroughfares
- Enhance security at night time
- Bringing representation to the community.

#### Issues to Address:

- Underwhelmed appearance on daylight
- Lack of connectivity and interest between streets

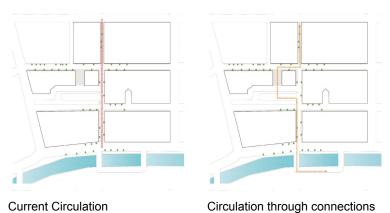


## **Ring Lighting Proposal: Connectivity**



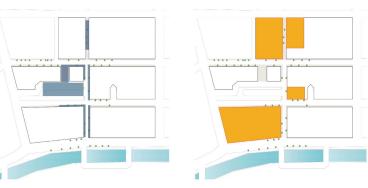
## **Appleton Street**

#### Site Conditions:



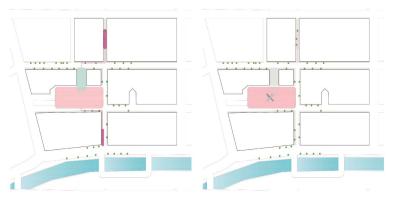
**Current Circulation** 

**Projected Shadows** 

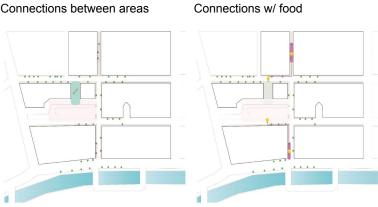


**Government Buildings** 

#### Opportunities:



Connections between areas



Connections w/ art

Create guides and interaction w/ light

## **Appleton Street**

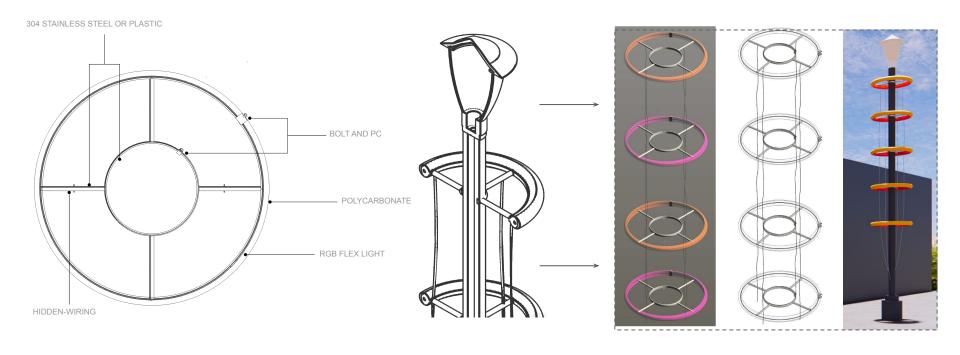




Proposal

Existing Conditions

## Ring Light Proposal: Light Pole Retrofit



Type	es of	Lig	hting

#### Purpose:

#### Ring Lights

To illuminate current street lights to **contribute** to **wayfinding**, **enhance security** at night time, **bring representation** and promote **engagement** with neighborhood and its community.

#### Performance Requirement:

Lighting Quality:
Beam Angle/Optic:
Listing:
Mounting:

RGB Flood Light Radiate Light UL Wet Listed Custom mounting

## **Ring Light Proposal: Color Sequencing**

#### NATIVE COUNTRIES COLOR SEQUENCES



#### **CULTURAL REPRESENTATION**

	2000		1990 a	5029151 50A	Growth	V-20 CA
	Number	Percent	Number	Percent	Number	Percent
Hispanic or Latino	43,019		29,339		13,680	46.6
Mexican	316	0.7	84	0.3	232	276.2
Puerto Rican	15,816	36.8	14,928	50.9	888	5.9
Cuban	408	0.9	452	1.5	-44	-9.7
Dominican Republic	16,186	37.6	10,870	37.0	5,316	48.9
Guatemalan	794	1.8	270	0.9	524	194.1
Other Central American	207	0.5	163	0.6	44	27.0
Ecuadorian	372	0.9	581	2.0	-209	-36.0
Other South American	353	0.8	256	0.9	97	37.9
Other Hispanic or Latino	8,567	19.9	1.735	5.9	6.832	393.8

º 1990 figures for nationality are from sample data only and differ from population counts.1

# **Ring Light Proposal**

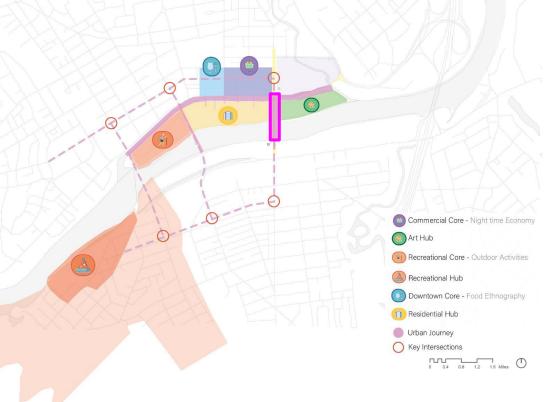






# THE DUCK BRIDGE

Tobiloba Ogunnoiki



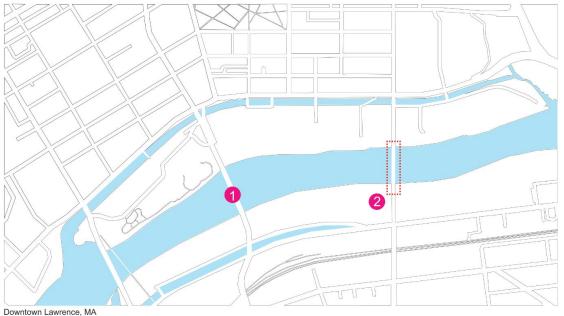
#### Aspirations

- Improve Wayfinding and city identity
- Bolster nighttime economy and activity
- Act as a portal to and from the downtown

#### **Problems**

- Wayfinding to the bridge
- -Improving night time safety





#### Adjacent Ilumincion Projects









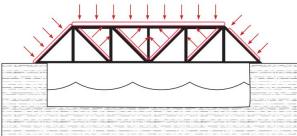


1.....

The Duck Bridge (Existing Condition)

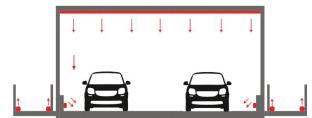


Duck Bridge lighting Ideas



Focus light to the interior of bridge pollution

goal: reduce light

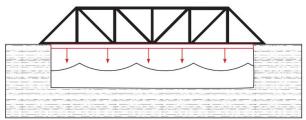


Section lighting diagram

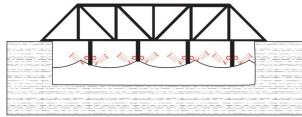


Duck Bridge lighting Ideas

Lighting Strategy #1: Underside Lighting to Reflect on Water



Option 1



Option 2

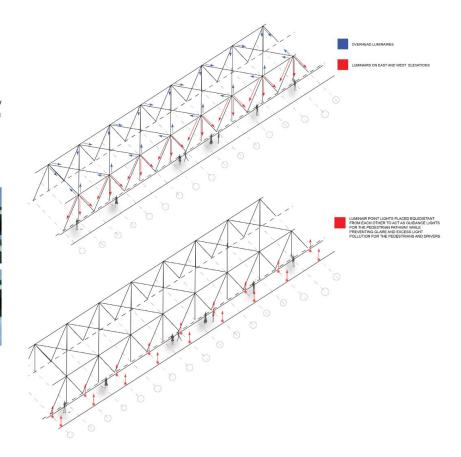
#### Concerns Addressed

- Think about ways to use fewer light fixtures and achieve the same visual impact and excitement.
- Think about locating lights that are easily maintained, but at the same time not easily reached by pedestrians on the bridge. Generally, keeping power/conduits out of reach from the public makes installations safer, and less likely to be damaged.
- The rendering of the uplighting for the walkways seems like it could cause glare for pedestrians with low-vision and be challenging to maintain. Consider pathway lighting solutions that support all users, and support good/safe visibility at the ground.

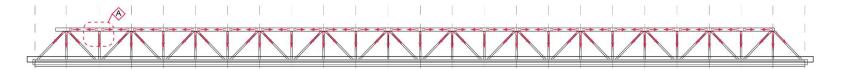


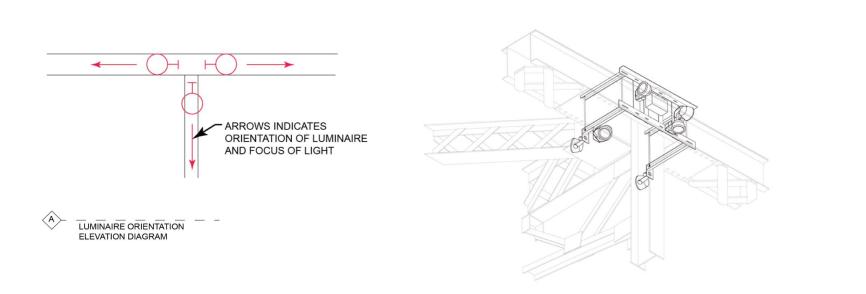
Truss bridge Lighting. (n.d.). Retrieved April 30, 2021, from http://www.landing-studio.com/ cox-bridge-lighting

Duck Bridge Joints

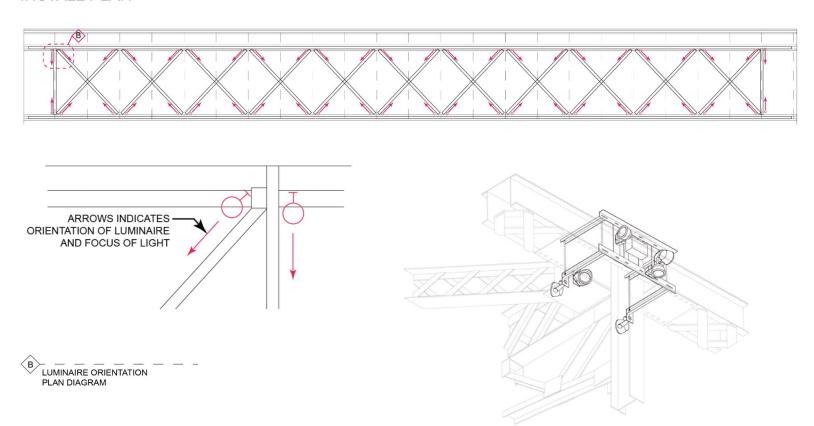


#### **INSTALL ELEVATION**





#### **INSTALL PLAN**





Types of Lighting:

Purpose:

- Graze lights

- Illuminating the bottom

of the bridge

- Reflecting light against

the river

#### Performance Requirement:

- Lighting Quality: LED Graze light
- Beam Angle / Optic: 9° x 9°, 10° x 60°, 15° x

30°, 30° x 60°, 60°x30°

- Environment: DryDamp/ Wet Location

- Mounting: Wall



https://drive.google.com/file/d/1SPVqVbdXyKLLS3oiiE6b MRsIrSqu1dnI/view?usp=sharing



Types of Lighting: Purpose:

- LED Spot Lights - Highlighting the trusses and

beams of the bridge

- Creating patterns to represent messaging and select groups

#### Performance Requirement:

- Lighting Quality: LED spot light
- Beam Angle / Optic: 9° x 9°, 10° x 60°
- Environment: Dry Damp/Wet Location
- Mounting: Brackets on beams



https://drive.google.com/file/d/1RxQM4t7VE2rpysSvPxnoxJ5ANE-gSTiu/view?usp=sharing



Types of Lighting: Purpose:

- RGB point Lights - Lighting the pedestrian pathway on the bridge.

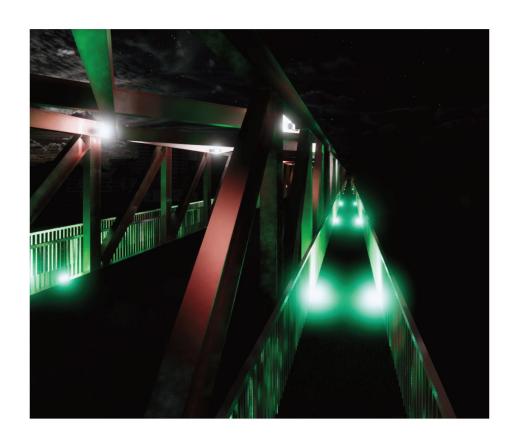
#### Performance Requirement:

- Lighting Quality: RGB spot light- Beam Angle / Optic: Radiates

- Environment: Dry Damp/Wet Location

- Mounting: Surface

https://drive.google.com/file/d/1iTKTetfB\_jUQhN\_2Yw53cckcXd-FBP3a/view?usp=sharing



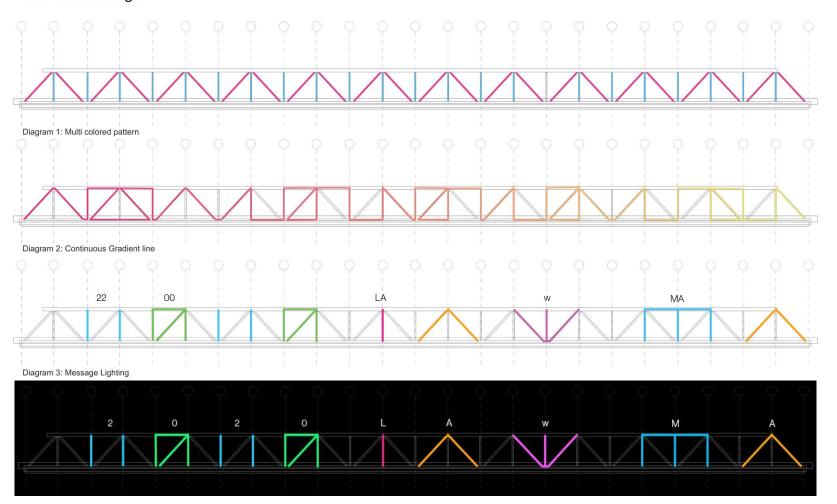




Diagram 1: Diamond colored pattern



Diagram 2: Continuous gradient line



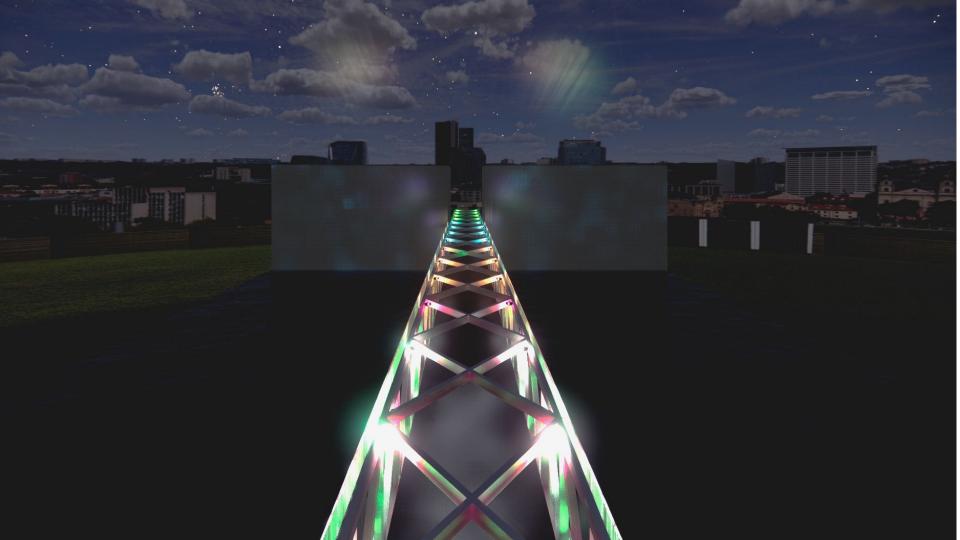
Diagram 3: Message Lighting Strategy

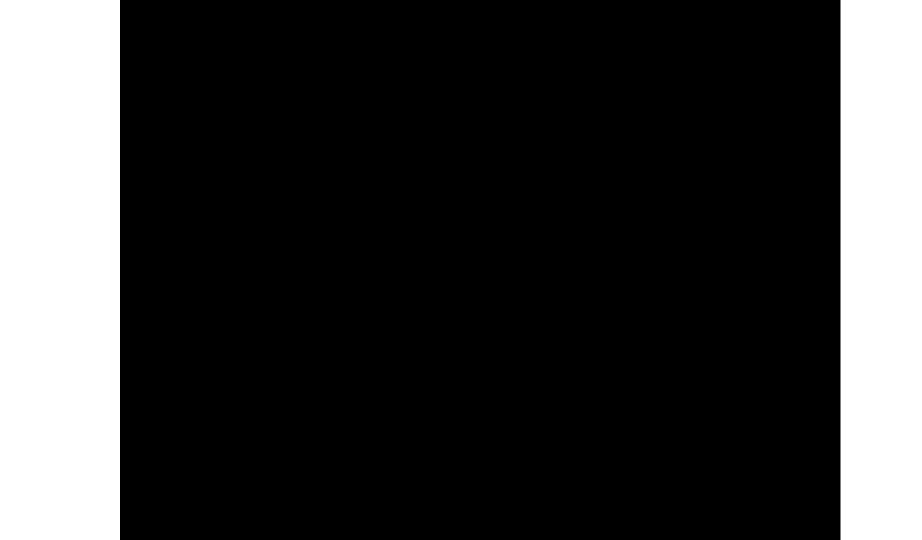


Diagram 4: Lighting in support of Lawrence LGBTQ+ community









# THE NORTH CANAL ILLUMINATION



**BEGIMAI BAIBACHAEVA** 

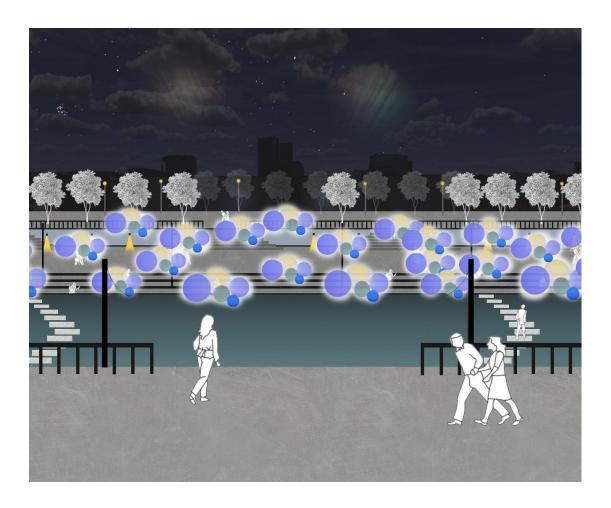
### The North Canal

#### Aspirations:

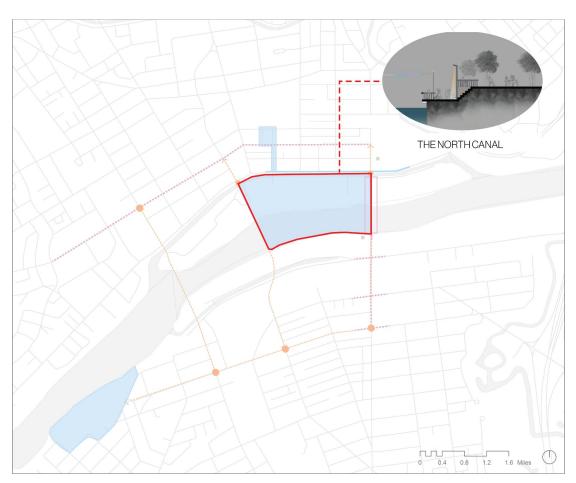
- Enhance security at night time
- Bring representation of the community
- Provide a sociable place for people to visit

#### <u>Issues to Address:</u>

- Underwhelmed appearance on daylight
- Low water level
- Lack of identity

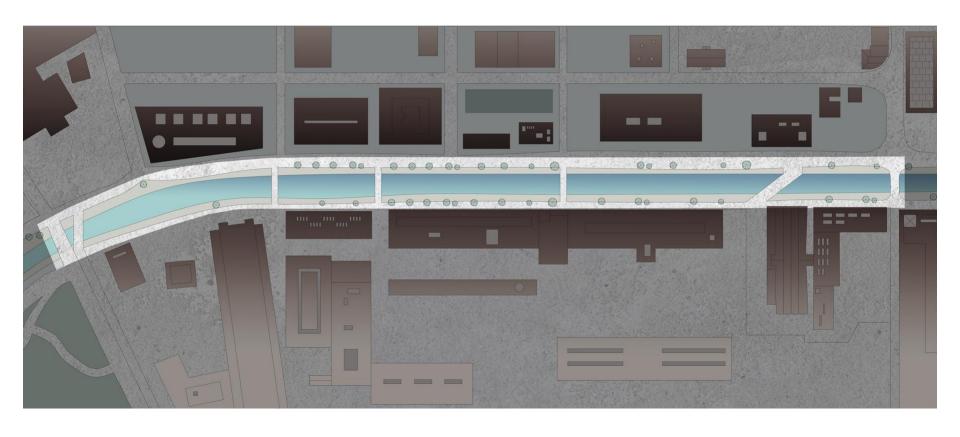


### **The North Canal Historic District**



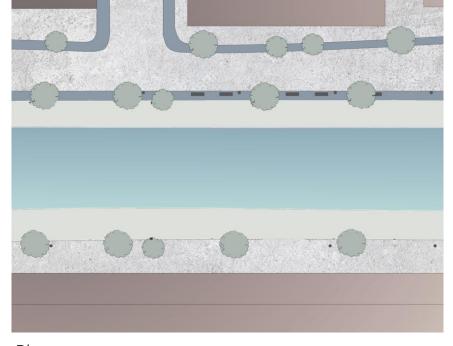
- This highly visible site is located at the intersection of Canal and Union Streets. The site lacks an identity and a well defined public space to provide a sociable place for people to visit and increase outdoor safety.
- The major issue facing the site, and perhaps a needed long term improvement, is the low water level in the canal. Opportunities to increase the water level depend on Enel Green Power, an energy company that owns the canal and operates the Great Stone Dam on the Merrimack River.

### **Context Plan**



## **Existing Conditions**

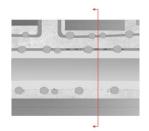


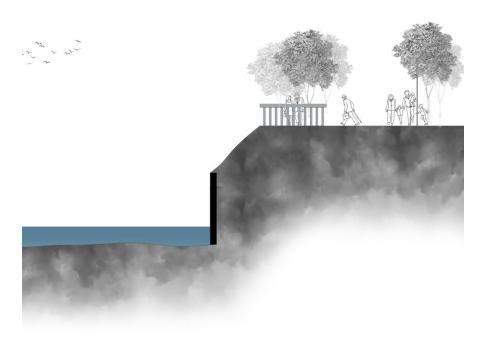


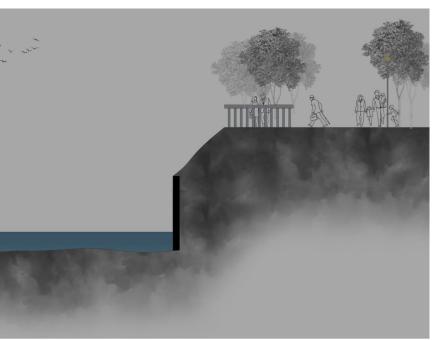
Aerial Image

Plan

# **Existing Conditions**



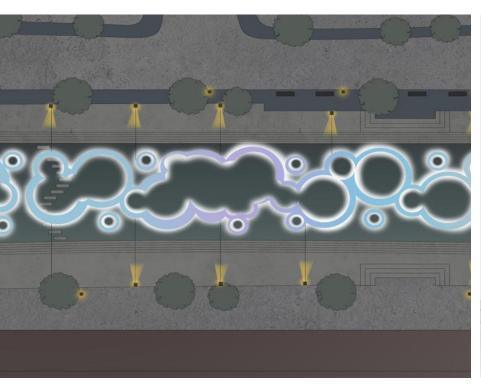




Section (Day) Section (Night)

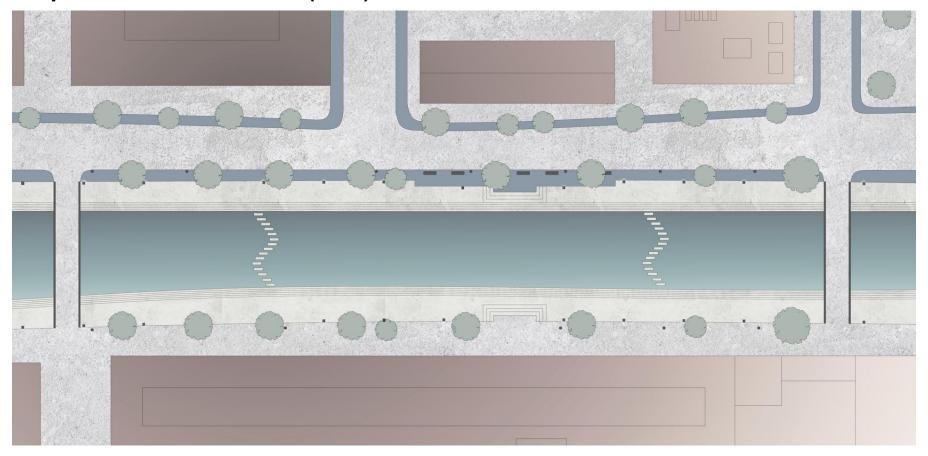
## **Proposal A - "Meeting Low Water Level"**

- Short term improvement
- Low water level
- Three types of lighting fixtures

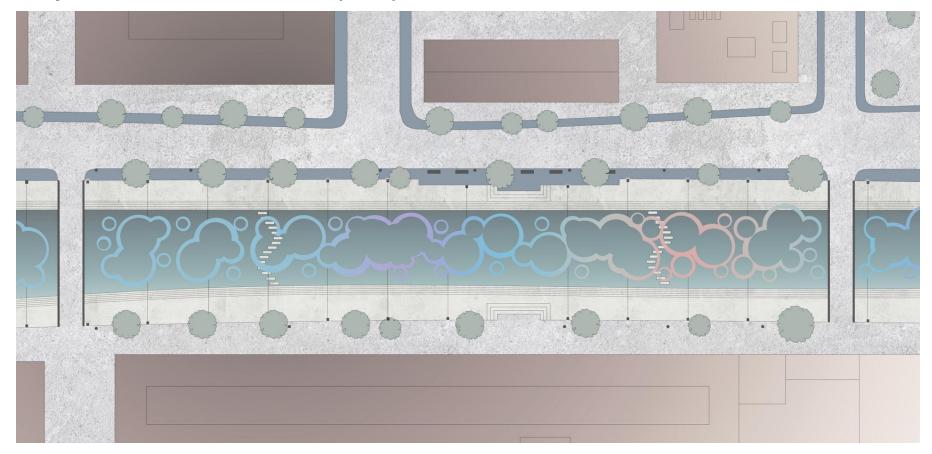




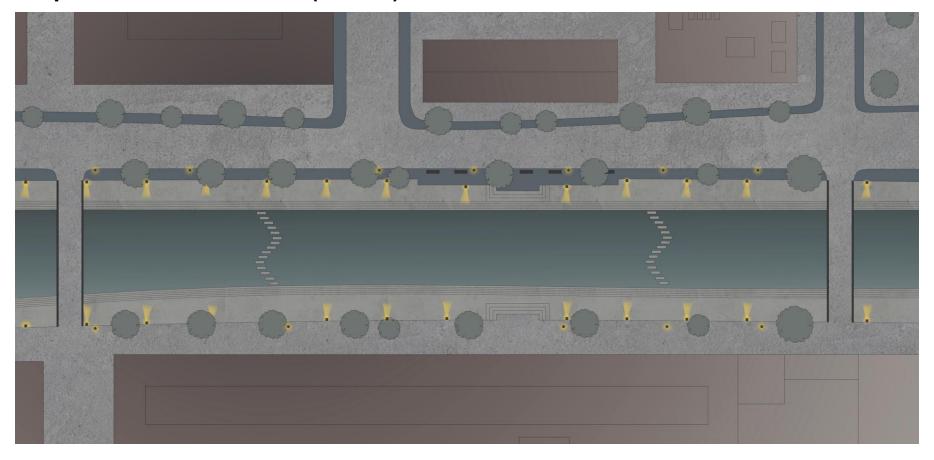
## **Proposal A - Ground Plan (DAY)**



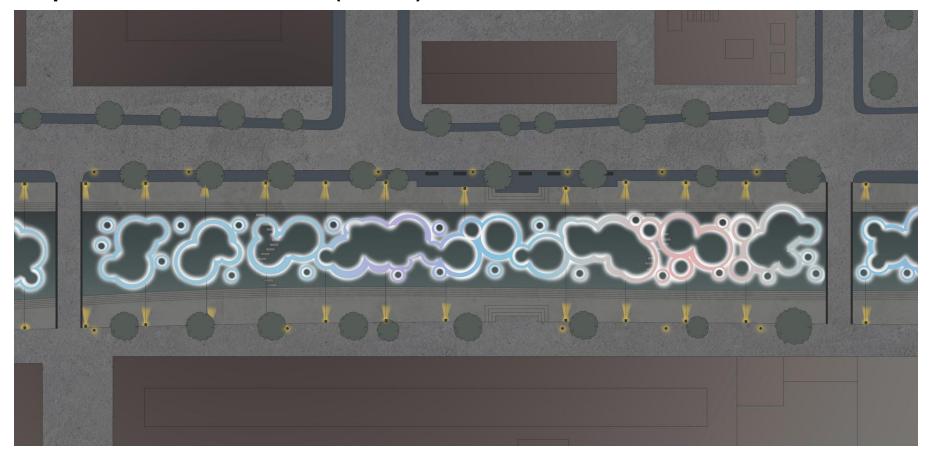
## **Proposal A - Overhead Plan (DAY)**



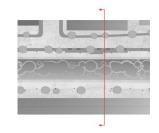
## **Proposal A - Ground Plan (NIGHT)**

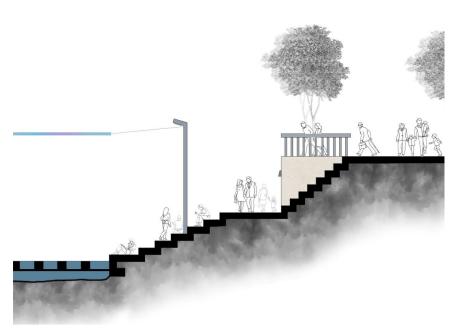


## **Proposal A - Overhead Plan (NIGHT)**



## **Proposal A**





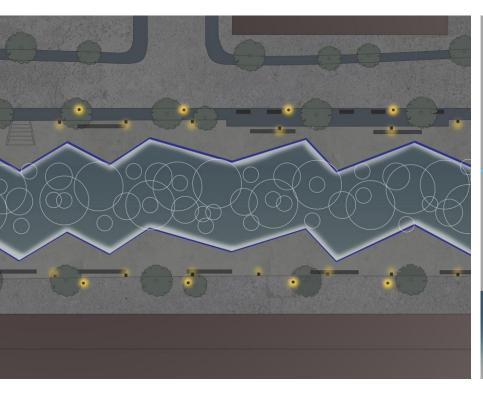


Section (Night)

Section (Day)

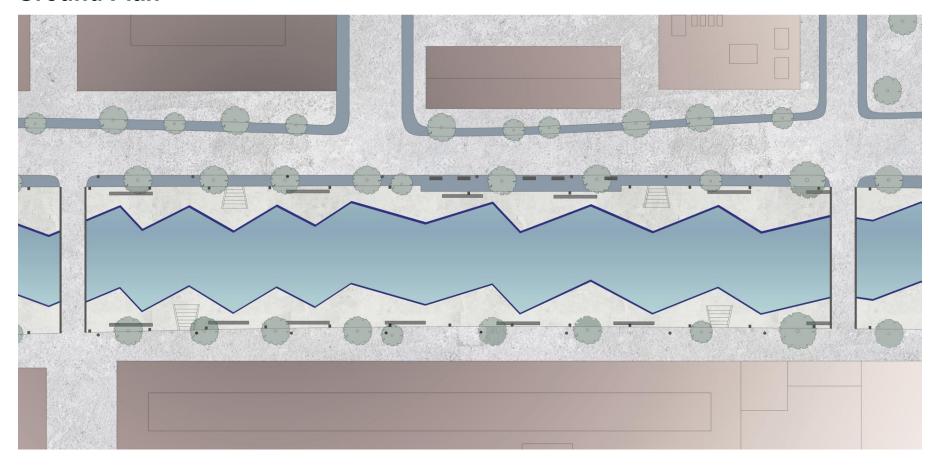
## **Proposal B - "Higher Water Level"**

- Long term improvement
- Increased water level
- Three types of lighting fixtures

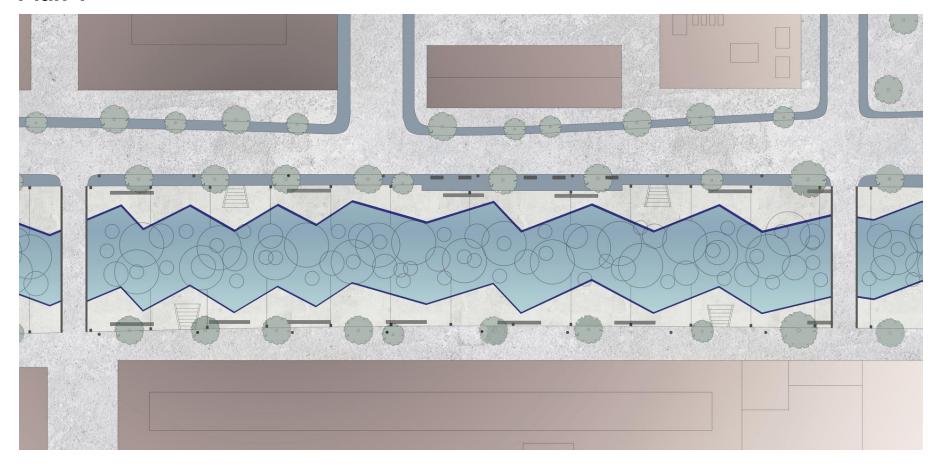




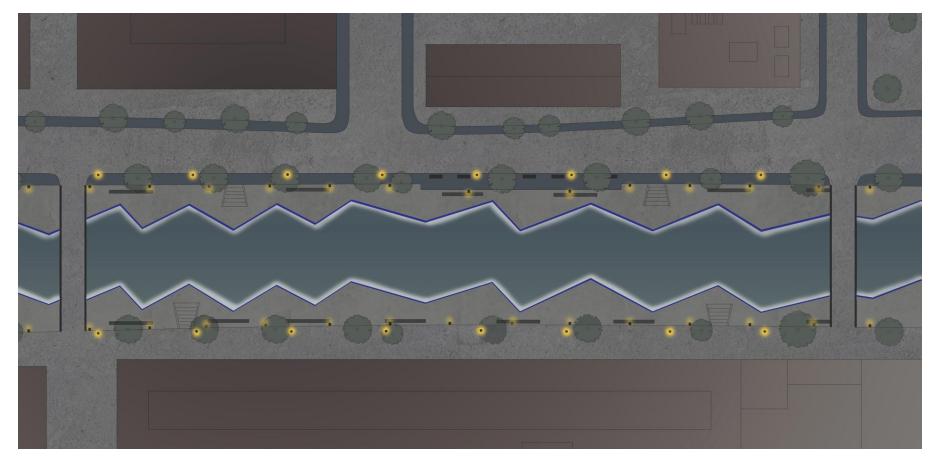
## **Ground Plan**



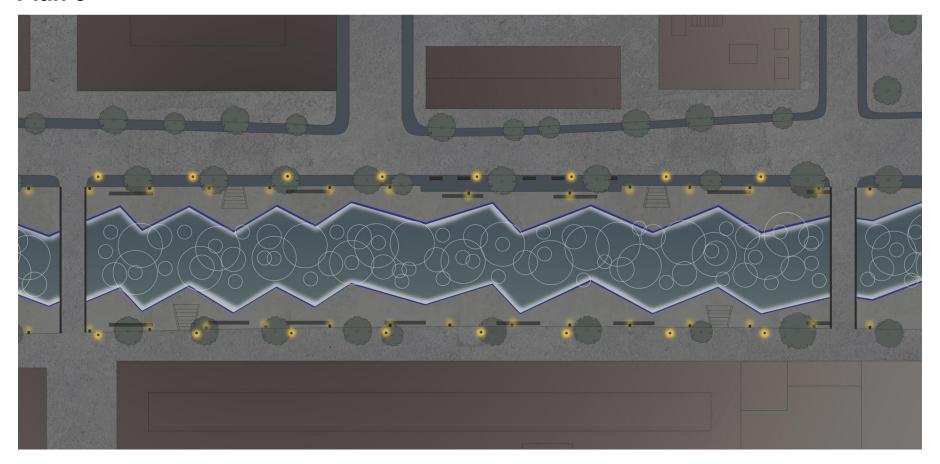
## Plan 1



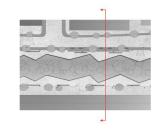
Plan 2



Plan 3



# **Proposal B**

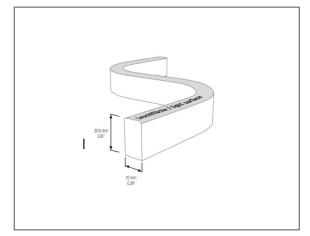






Section (Day)

# **Types of Lighting**







Α

#### Types of Lighting:

A - Venus Family TV IP 67

B - Venus Side View RGB

C - Stainless Steel Wall Light

В

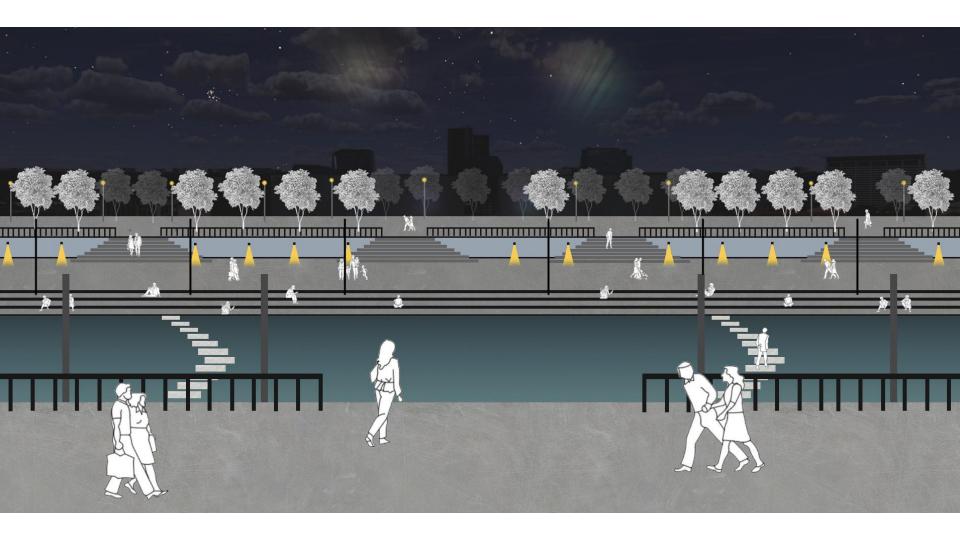
#### Purpose:

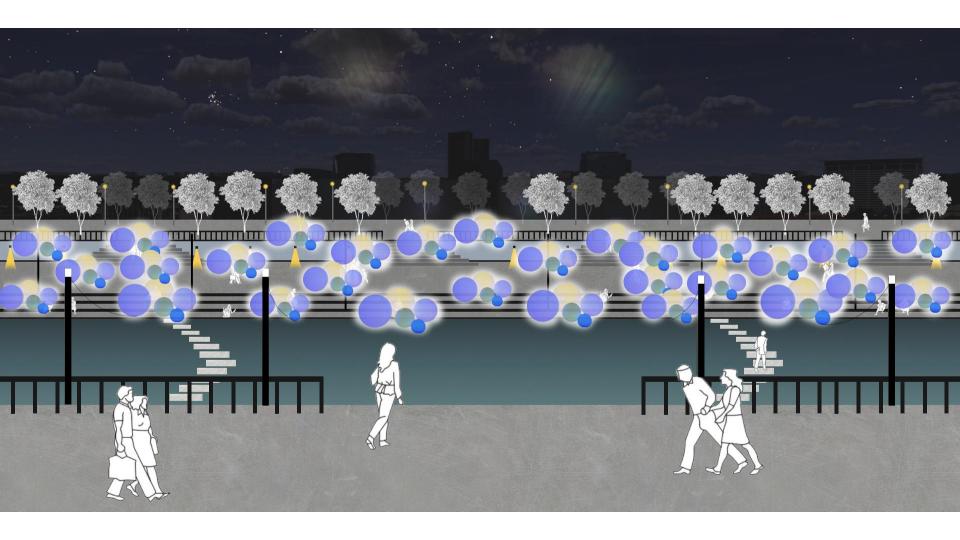
- illuminate under bridge area to enhance safety
- install art installation above the water to bring representation of the community
- install wall lights directed vertically to provide safety

C

#### <u>Characteristics</u>

- flexible, dot-free design linear LED fixtures with opal lenses for appealing lighting accents
- -IP67 flexible dot free linear LED light line with a horizontal bending flexible sightline 0.39" x 0.81" (W x H) cross Section
- -IP65, symmetrical optimized lighting distribution. PMMA glass, suitable for LED systems or LED Bulbs





# RIVERFRONT STATE PARK in the Recreation District



Nallely Salazar

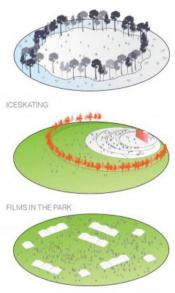
#### **Aspirations:**

- Activate the public park
- Contribute to wayfinding intersections along the street
- Enhance security at night time
- Bring together the community and adjacent districts.
- -Bring existing public programs to the site.

#### Issues to Address:

- Underwhelmed appearance on daylight
- Lack of programming





# Recreational District S Broadway/ Andover St



22.8% of this neighborhood's households are run by single mothers.

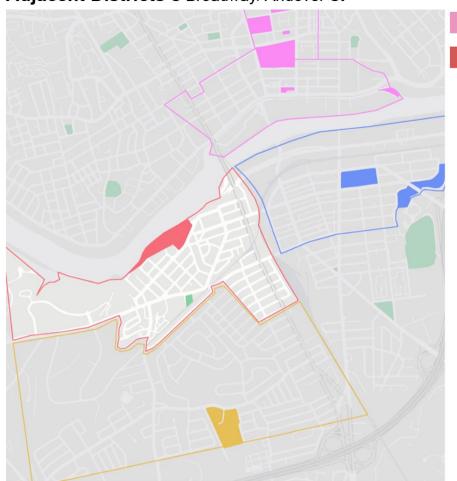
site

Further NeighborhoodScout research showed, high rates of neighborhood crime, neighborhood poverty.

The most common language spoken is Spanish English and Urdu (the national language of Pakistan).

37.2% of this neighborhood's residents have Dominican ancestry and 31.9% have Puerto Rican ancestry (31.9%).

# Adjacent Districts S Broadway/ Andover St



S Broadway / Andover St has a **12.7% vacancy rate**. There is a weak demand for real estate in the neighborhood or that large amount of new housing has been built and not yet occupied.

South Lawrence

Mount Vernon Park

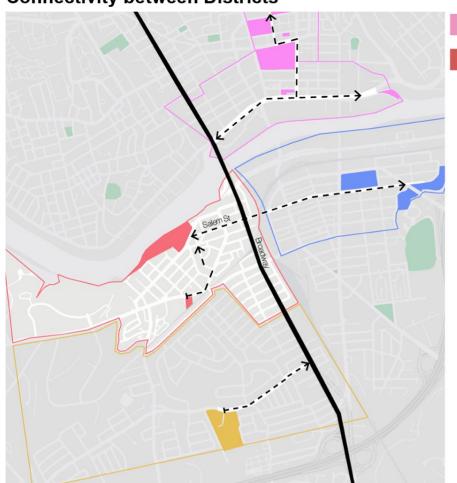
Downtown

S Broadway / Andover St

The neighbors are **lower-middle income**, making it a below average income neighborhood. This neighborhood has a **higher rate of childhood poverty** than 53.0% of U.S. neighborhoods.

Most residents (73.1%) drive alone in a private automobile to get to work. In addition, quite a number also hop out the door and walk to work to get to work (6.4%).

# **Connectivity between Districts**



One of the goals is also to create connectivity with the other projects and districts through Broadway as the primary connection and Salem st as the secondary connection.

South Lawrence

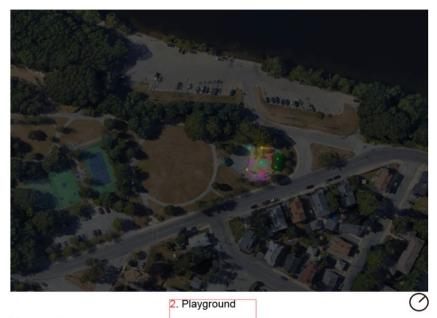
Mount Vernon Park

Downtown

S Broadway / Andover St



**Existing Conditions** 



Proposal

# **Infinity Dodecahedron**







# Types of Lighting:

Infinity mirror of light

#### Purpose:

To illuminate current playground for children while enhancing the dynamic and interaction. And promote engagement with neighborhood and its community.

#### **Performance Requirement:**

Lighting Quality:
Beam Angle/Optic:
Listing:
Mounting:

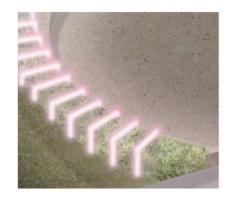
WGB Light Radiate Light UL Dry Base support



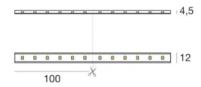
**Existing Conditions** 



# Silicone\_C by linea light Group







#### Types of Lighting:

Emission led strip

#### Purpose:

To illuminate current empty space in the center of the park and contribute to wayfinding, enhance security at night time, and promote engagement with neighborhood and its community.

#### **Performance Requirement:**

Lighting Quality: warm WGB Light
Beam Angle/Optic: Diffuse Light
Listing: UL Wet Listed
Mounting: Volumetric Bushes





**Existing Conditions** 

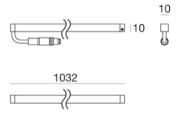


Proposal

### **Ice-Cut** by linea light Group







# Types of Lighting:

Linear Lighting

#### Purpose:

lighting and landscape design are linked to create a welcoming, evocative atmosphere, made of contrasts and visual sensations. And that blends perfectly with the green surroundings.

#### **Performance Requirement:**

Lighting Quality: Static White
Beam Angle/Optic: Diffuse Light
Listing: UL Wet Listed
Mounting: Stone paths





1. Parking Lot 2. Playground 3. Meeting Point 4. Basketball & Tennis Court

#### **Existing Conditions**

- Empty Spaces that can be activated with existing events
- Lack of Lighting
- Improve Safety



Proposal







1. Parking Lot 2. Playground 3. Meeting Point 4. Basketball & Tennis Court

#### **Existing Conditions**

- Empty Spaces that can be activated with new programs
- Lack of Lighting
- Improve Safety



#### Proposal

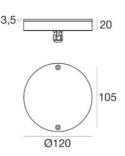




# Footpad Flat by linea light Group







#### Types of Lighting:

Emission uplights

#### Purpose:

Lighting that blends perfectly with the fire pits looking into the waterfront, with unobtrusive solutions that guarantee high performance as well as visual comfort.

#### **Performance Requirement:**

Lighting Quality: warm white LED light

Beam Angle/Optic: Narrow Beam Listing: UL Wet Listed

Mounting: Floor

# Thank you