

# RIVER FOREST TENNIS CLUB

ESTABLISHED 1905

## RIVER FOREST TENNIS CLUB

Proposed Tennis Court Lighting

Village Meeting



# Proposed Tennis Court Lighting



- **Agenda**

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- Surrounding Area Plan - 500 feet page 42

# Proposed Tennis Court Lighting



- **Project Goal**

- Pursue opportunity to responsibly and collaboratively add lights to our tennis courts
  - Fiscally responsible
  - Collaborative with the neighbors, the village, and the members

- **Project Reasoning**

- Maximize the time our families can use the club with their children

# Proposed Tennis Court Lighting



## ▪ **Project Considerations**

- Maintain RFTC's positive impact on the community
  - Both in River Forest and the surrounding towns
  - For members and non-members
- Minimize, if not eliminate, light spillage outside of tennis courts
- Ensure lights are used on an individual-court basis and only when courts are being played
- Minimize visual aesthetic disruptions (shorter and few light poles)
- Maintain existing levels of traffic and noise
- Maintain existing ~6 month season from April to September

# Proposed Tennis Court Lighting



- **Project Considerations (Detail)**

- Value to the neighbors and to the larger community
  - RFTC is the community. We are the neighborhood.
    - We represent nearly 400 families across at least 4 towns (RF, Oak Park, Elmwood Park, and Forest Park)
    - We host swim lessons and tennis lessons for non-members
  - Decompress Keystone court usage
    - At night, RFTC members play at Keystone under the lights

# Proposed Tennis Court Lighting



- **Project Considerations (Detail)**

- About the RFTC

- We are a family club that stressed the importance of the family as the key element of our community and society.
    - We are open to anyone interested in joining
      - Anyone from anywhere is encouraged and welcome to apply
    - We are a working club
      - Every member volunteers their time to make the club function
      - We have very minimal staff, mostly for groundskeeping
    - We have contributed to the community consistently for many years.

# Proposed Tennis Court Lighting



- **Project Considerations (Detail)**

- Light spillage

- 2024 light technology is vastly superior to past

- LED lighting is now anti-glare, asymmetric indirect light design with full cut off

- Minimal spillage for the neighbors

- Lights now require shorter and fewer poles

- Spillage is at 0.0 on Lathrop and 0.38 on Jackson

- This does not account for existing foliage and windscreens (which would reduce spillage further)

- The windscreen was recently installed

- Courts In Use

- Courts will be lit only if in use and on an individual basis

- We will ask members to book the courts closest to the center of the property first

- Farthest from residential streets of Lathrop Ave and Jackson Ave

# Proposed Tennis Court Lighting



## ■ Project Considerations (Detail)

- Pole height
  - At 30 feet, we are in line with our existing flagpole, and allows us to minimize the number of poles
- No anticipated net changes to noise or traffic
  - Currently, RFTC is only open ~6 months per year. No anticipated changes.
  - Our pool is already open until 9pm daily. That creates more noise and traffic than tennis courts.
  - Many members walk or bike to the club; therefore, not affecting traffic.
    - We anticipate more will continue to bike, which is why we recently upgraded and expanded our bike racks.
  - Allows for adults to play later, which reduces congestion around Roosevelt Middle School during the busy after school hours
- Year Round Property Maintenance
  - Leaf clean up, Snow shoveling, Clay runoff
- No impact to adjacent neighbors' property value



# Proposed Tennis Court Lighting



- **Project Considerations (Detail)**

- Safety and Security

- Keep property secure at night and at daily closing

- A staff member will remain on site to lock the building and gates
      - Additional security cameras will be installed, including on the courts

- Ensure only members can play on courts at night

- A pin will be provided to turn on the lights, and updated monthly
      - Security cameras will also assist

- All existing RFTC policies will apply to tennis under the lights

- No liquor anywhere on the property, unless a formal club event, but never on the courts
      - Security cameras will also assist

# Proposed Tennis Court Lighting



- **Due Diligence: Vendors**
  - Outreach to 13 vendors
    - Received bids from 10 of 13
    - Only 2 vendors also install the lighting product
    - Researched solar powered lighting options; however, not powerful enough

# Proposed Tennis Court Lighting



- **Due Diligence: Pole Placement and Height**

- Fewer poles but they are very tall (50 foot)
  - **Con:** Visually/Aesthetically not in line with RFTC or neighborhood
- Shorter poles (25 foot) but more poles required
  - **Con:** More poles required
  - **Con:** Poles between the nets not ideal for safety
- Short poles (30 foot) and kept on the perimeter
  - **Pro:** Poles only on exterior perimeter
  - **Pro:** Fewer poles required
  - **Pro:** Height in line with existing flagpole

<u>Surrounding Heights</u>	
Pool lights	15 ft
Flagpole	30 ft
Power lines	50 ft
Trees	55 ft

# Proposed Tennis Court Lighting



- **Financial Considerations**

- Upfront: Installation and Product (*Largest Spend*)
  - 10 courts: \$266K or \$26K per court
- Upfront: Other
  - Permit and fees not included.
  - Does not include repairs to unmarked private utilities (i.e. wires, sprinklers, sewer, etc.).
- Recurring
  - Annual cost of maintenance is expected to be minimal
    - There is a 10-year warranty
  - Annual cost of usage (electricity) is expected to be minimal
    - Due to LED energy efficient bulbs and minimal usage per day
- Funding Source
  - Goal is to have this funded by existing budget or bank loan

# Proposed Tennis Court Lighting



- **Logistics**

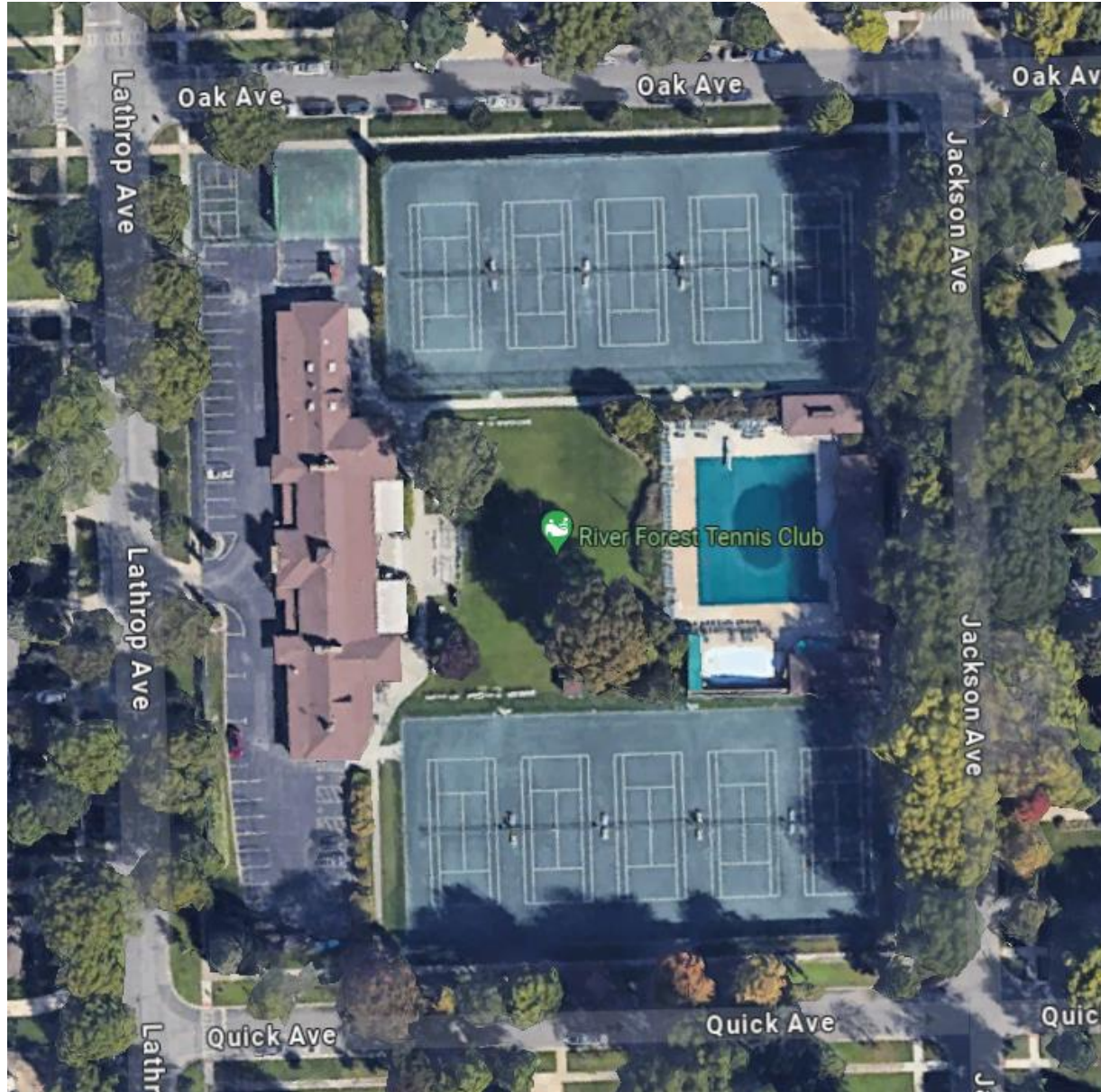
- Installation

- One phase
    - 3 weeks to install
    - Before/After season

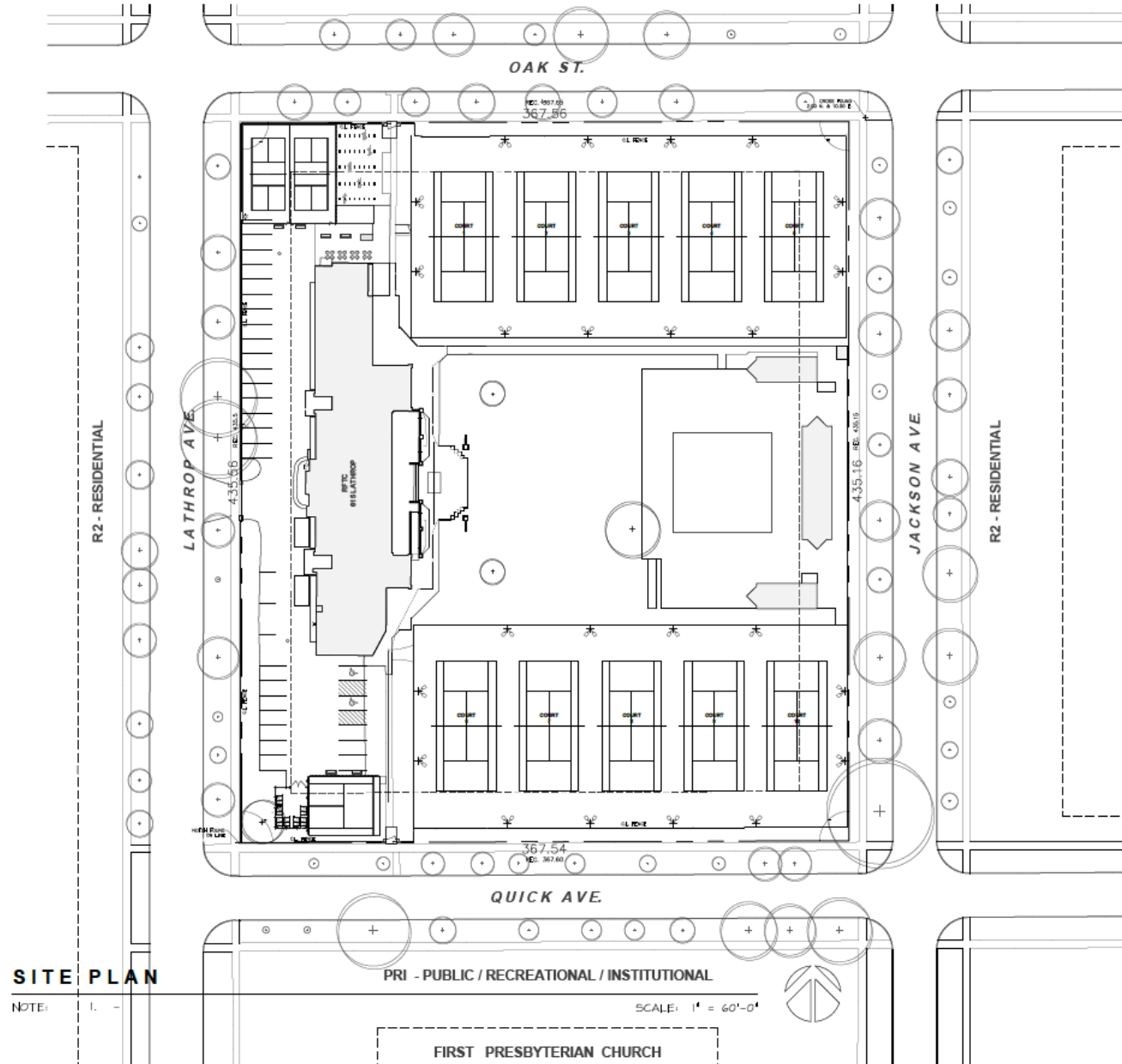
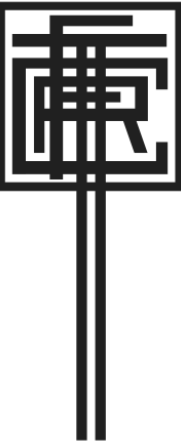
- Hours

- 6am to 10pm
      - Anticipated highest use:
        - Early and late season (not mid Summer)
        - Starting at 8pm
    - Local Lighting Comparables
      - RFTC Pool 9pm
      - Keystone Tennis 10pm
      - Keystone Paddle 11pm
    - Automatic and remote shut off options (master schedule and by individual court)

# RFTC Property



# Site Plan



**PROPOSED COURT LIGHTING**  
**RIVER FOREST TENNIS CLUB**  
 615 LATHROP AVENUE  
 RIVER FOREST, IL

IN PROGRESS  
 SCALE AS SHOWN

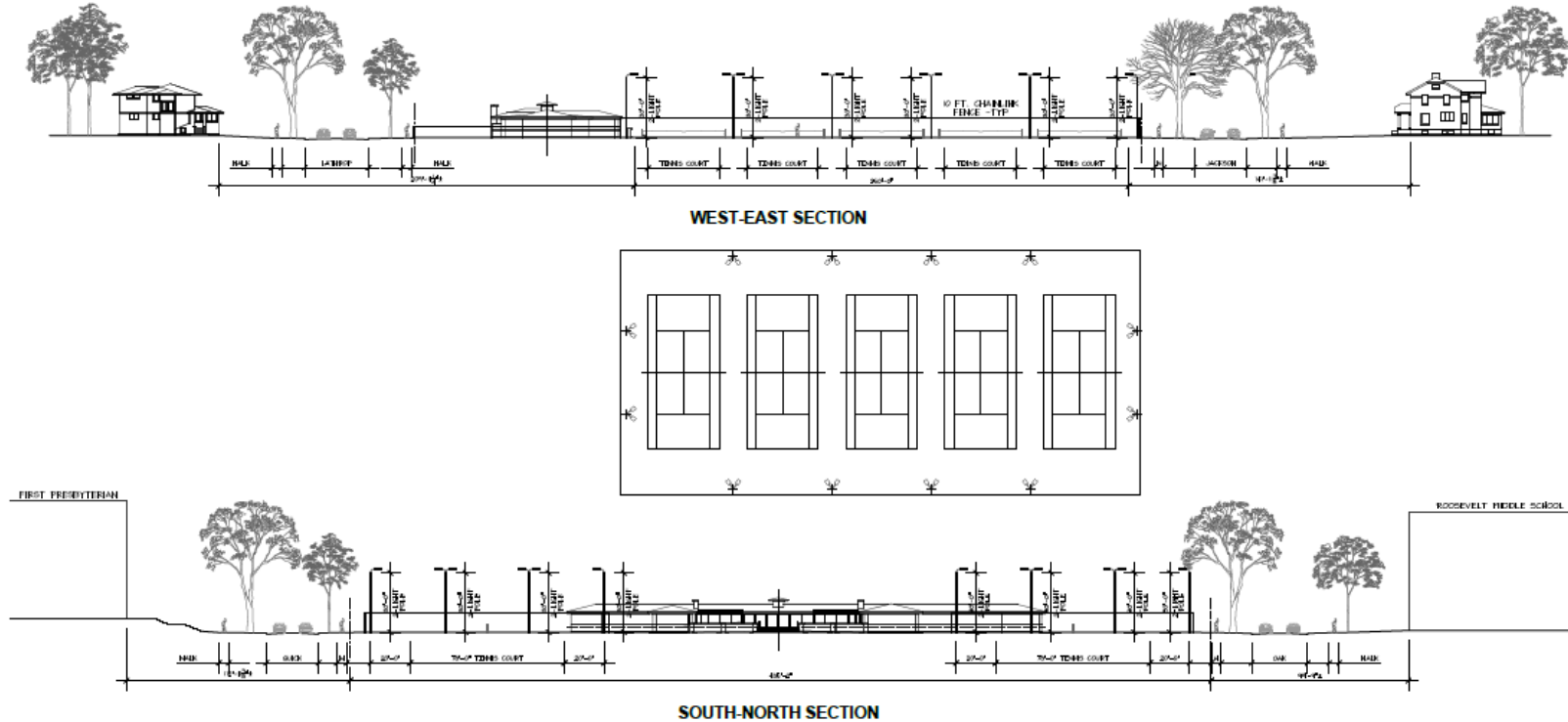
MZA 9-16-2024

**SITE PLAN**

NOTE: 1. -

SCALE: 1" = 60'-0"

# Elevation: 12 of the 30' Poles with 2 Light Fixtures Each



## SECTIONS

NOTE: 1. -

SCALE: 1" = 60'-0"

**PROPOSED COURT LIGHTING**  
**RIVER FOREST TENNIS CLUB**  
 615 LATHROP AVENUE  
 RIVER FOREST, IL

IN PROGRESS  
 SCALE AS SHOWN

MZA 9-16-2024



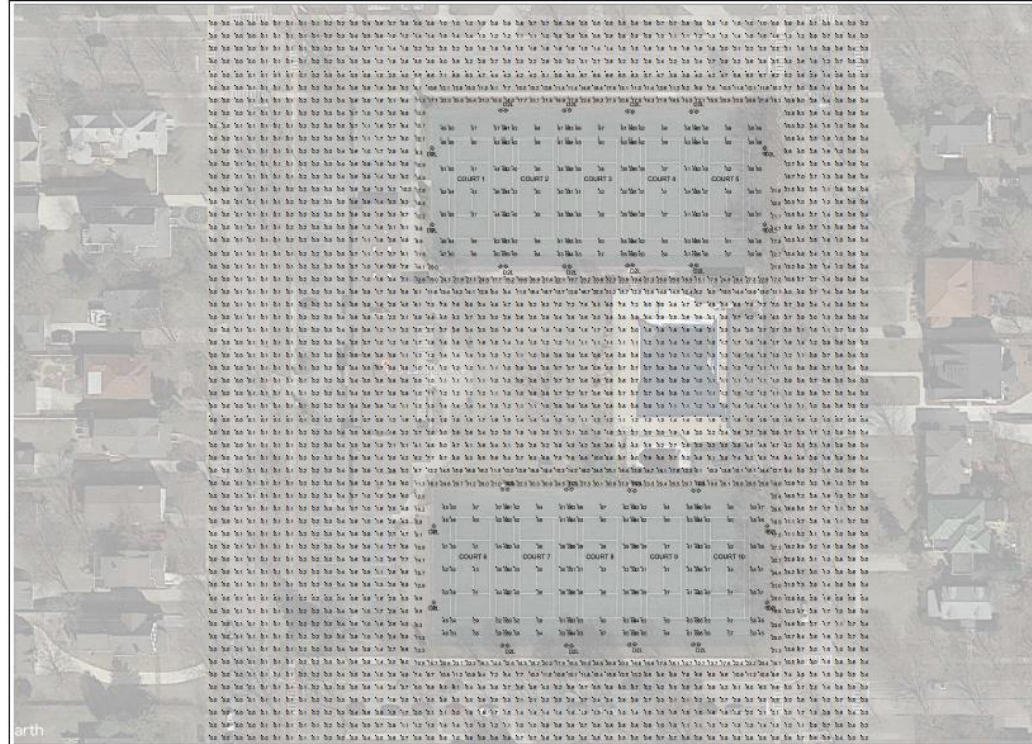
# Light Pole Placement



- **10 Court, 30 Foot Pole Height Option**
  - 24 total poles (12 on each bank)
  - 48 total LED fixtures (2 on each pole)
  - Exterior Perimeter Only Poles



# Lighting Study Overview



3D RENDERINGS

Scale: 1 inch= 40 Ft.

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Description	LLF	Lum Watts
§	24	D2L	2 @ 90 degrees	ST-LHM800N-WIDE-NICHIA	0.970	797,129

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Court 01	illumiance	Fc	52.00	64	35	1.49	1.83
Court 02	illumiance	Fc	50.80	64	30	1.69	2.13
Court 03	illumiance	Fc	51.74	67	31	1.67	2.16
Court 04	illumiance	Fc	51.31	65	31	1.66	2.10
Court 05	illumiance	Fc	52.23	65	35	1.49	1.86
Court 06	illumiance	Fc	51.94	64	35	1.45	1.83
Court 07	illumiance	Fc	50.80	64	30	1.69	2.13
Court 08	illumiance	Fc	51.80	67	31	1.67	2.16
Court 09	illumiance	Fc	51.31	65	31	1.66	2.10
Court 10	illumiance	Fc	52.26	65	35	1.49	1.86
Spill Light	illumiance	Fc	4.44	36.8	0.2	22.20	184.00

Luminaire Location Summary						
LumNo	Label	X	Y	Z	Orient	Tilt
1	D2L	49	-34	30	90	15
2	D2L	43	102	30	270	15
3	D2L	193	101	30	270	15
4	D2L	190	-23	30	90	15
5	D2L	91	-24	30	90	15
6	D2L	143	-23	30	90	15
7	D2L	93	102	30	270	15
8	D2L	143	101	30	270	15
9	D2L	44.6	-320.3	30	90	15
10	D2L	44.6	-194.3	30	270	15
11	D2L	194.6	-195.3	30	270	15
12	D2L	194.6	-319.3	30	90	15
13	D2L	94.6	-320.3	30	90	15
14	D2L	144.6	-319.3	30	90	15
15	D2L	94.6	-194.3	30	270	15
16	D2L	144.6	-195.3	30	270	15
17	D2L	-13.4	-287.3	30	0	15
18	D2L	292.6	-287.3	30	180	15
19	D2L	-13.4	-227.3	30	0	15
20	D2L	292.6	-227.3	30	180	15
21	D2L	15	69	30	0	15
22	D2L	261	69	30	180	15
23	D2L	-15	9	30	0	15
24	D2L	251	9	30	180	15

THE ANALYSIS IS BASED ON COMPUTER DATA. DIMENSIONS FOR LUMINAIRES TESTED BY AN INDEPENDENT TESTING LABORATORY. APPROVED METHODS AND A USER CONTROLLED OPERATIONS. NIGHT DISTURBANCE AND TRUCK VIBRATIONS ARE NOT INCLUDED IN THE CALCULATIONS. ACTUAL MEASUREMENTS IN THE FIELD MAY VARY.

**shinetoo®**  
**Shinetoo Lighting USA LLC**  
 7057 10 Armstrong Dr. Buffalo Grove, IL 60089  
 www.shine2sportslighting.com  
 sales@shine2sportslighting.com

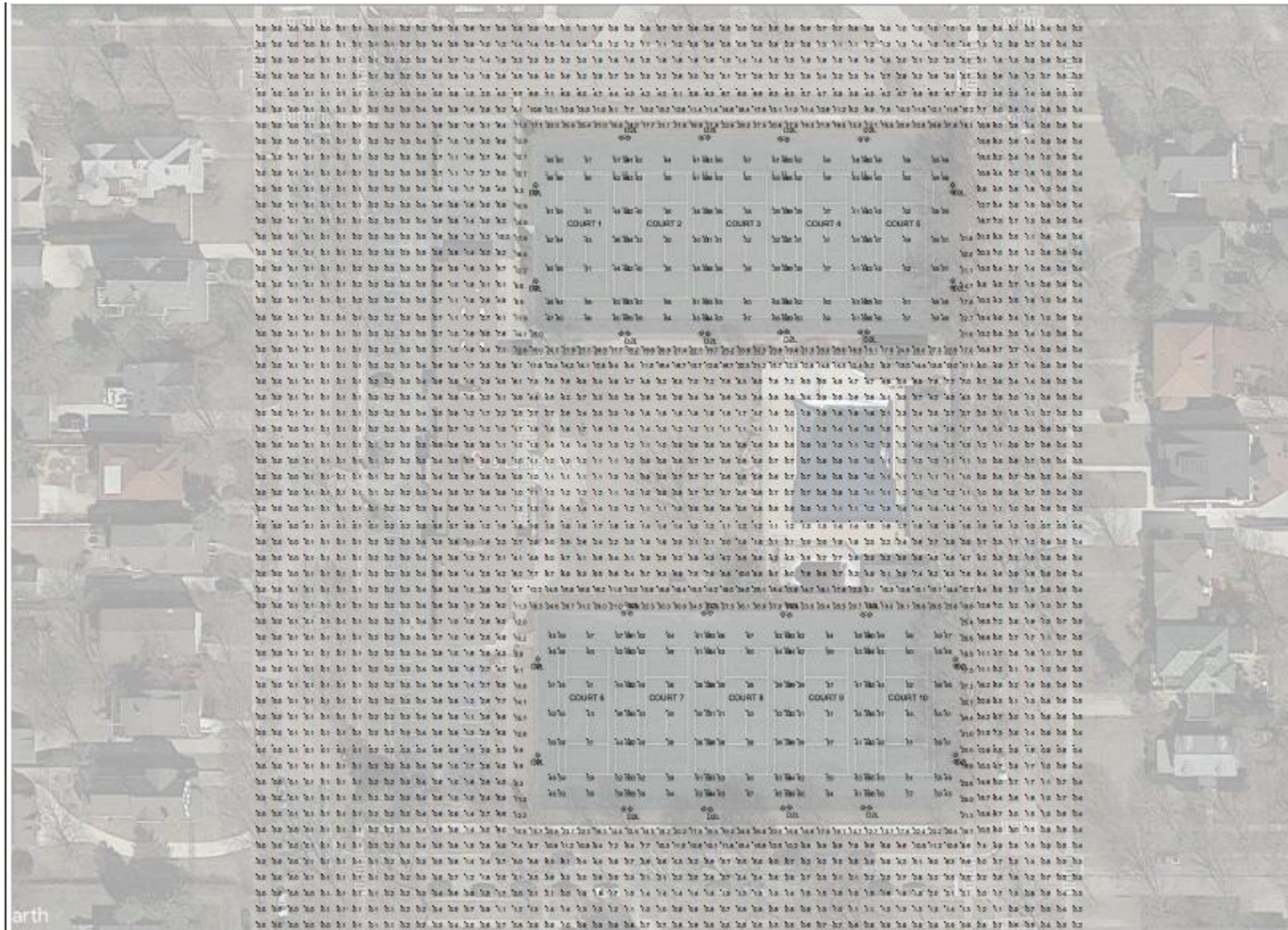
#	Date	Comments

Revisions	

Drawn By: BW  
 Checked By:  
 Date: 6/25/2024  
 Scale: 1"=15' (at 24"x36" Print Size)

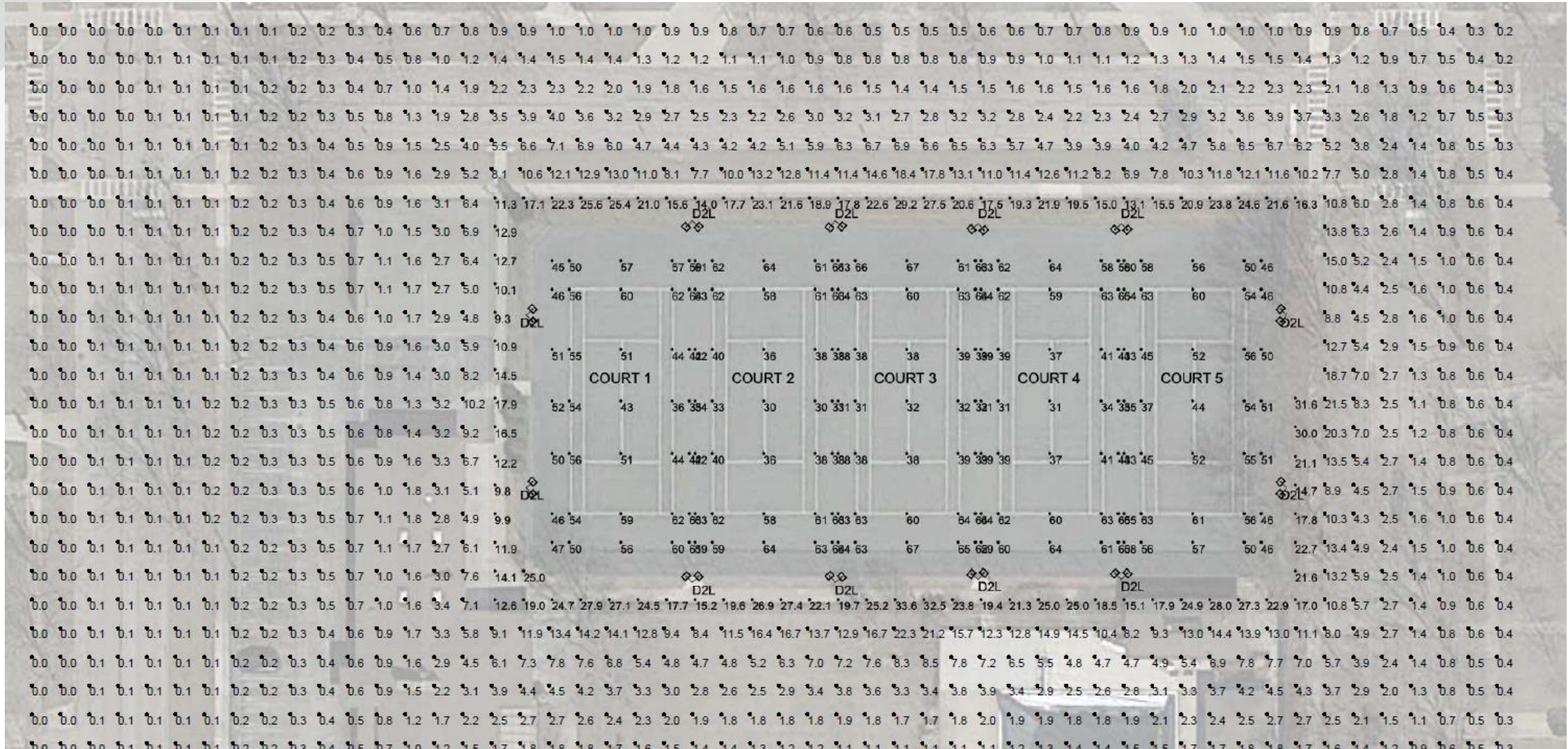
**RIVER FOREST TENNIS CLUB 10-COURTS**  
 ST-LHM800N-WIDE-NICHIA

# Photometrics and Illumination

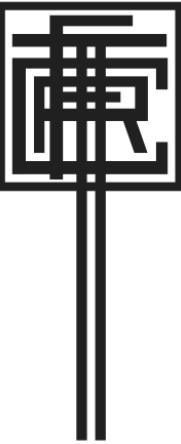




# Photometrics and Illumination *(Court Illumination and Light Spillage)*



# Proposed Tennis Court Lighting



## ■ Photometrics Summary (Light Spillage in footcandles)

### ■ Residential Sides

#### ■ Lathrop Ave (West)

- Min: 0.0
- Max: 0.0
- Avg: 0.0

#### ■ Jackson Ave (East)

- Min: 0.2
- Max: 0.5
- Avg: 0.38\*

### ■ Non-Residential Sides

#### ■ Oak Ave – School (North)

- Min: 0.0
- Max: 1.0
- Avg: 0.59\*

#### ■ Quick Ave – Church (South)

- Min: 0.0
- Max: 1.0
- Avg: 0.55\*

\* Minimal true light affect

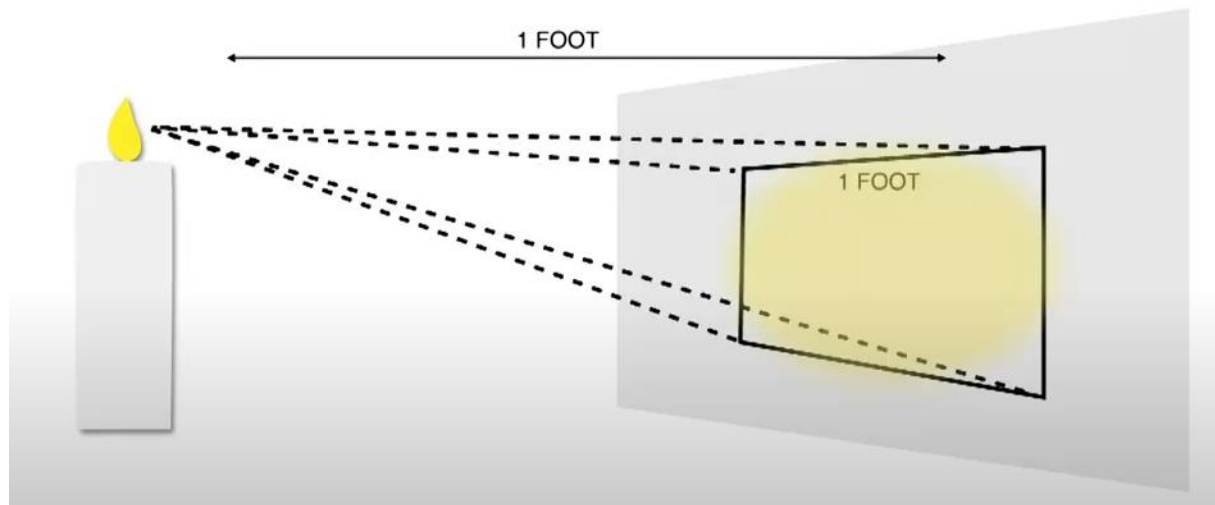
\* Doesn't take into consideration foliage and windscreen

# Proposed Tennis Court Lighting



- **Footcandles**

- Measurement of light intensity or amount of visible light given off by a source
- 1 footcandle = 1 Lumen
  - Set a candle 1 foot away from a wall. The amount of light filling up the square equals 1 Lumen.



<u>Perspective</u>	
Gym	100 fc
Office	50 fc
Auto Showroom	50 fc
Factory Floor	30 fc
Hallway	10 fc
Parking Garage	10 fc

# Proposed Tennis Court Lighting



## ■ Photometrics Summary (Court Illumination)



- 10 Courts (30 ft poles)
  - Min: 30 fc
  - Max: 67 fc
  - Average: 51 fc

# Proposed Tennis Court Lighting



- Photometrics Summary (Illumination)

Luminaire Schedule							
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5	D2L	93	-24	30	85	15
6	D2L	143	-23	30	95	15
7	D2L	93	102	30	275	15
8	D2L	143	101	30	265	15
9	D2L	44.6	-320.3	30	90	15
10	D2L	44.6	-194.3	30	270	15
11	D2L	194.6	-195.3	30	270	15
12	D2L	194.6	-319.3	30	90	15
13	D2L	94.6	-320.3	30	85	15
14	D2L	144.6	-319.3	30	95	15
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22	D2L	251	69	30	180	15
23	D2L	-15	9	30	0	15
24	D2L	251	9	30	180	15



# Photometrics Visualizations



# Photometrics Visualizations





## Perimeter Foliage & Shade – Non-Residential (Quick Ave)

- South Side: Quick Ave
- Adjacent to: First Presbyterian Church
- Note: Tree coverage on both sides and windscreen



## Perimeter Foliage & Shade – Non-Residential (Quick Ave)



- South Side: Quick Ave
- Adjacent to: First Presbyterian Church

# Perimeter Foliage & Shade – Non-Residential (Oak Ave)



- North Side: Oak Ave
- Adjacent to: Roosevelt Middle School
- Note: Tree coverage on both sides and windscreen



# Perimeter Foliage & Shade – Residential (Lathrop Ave)

- West Side: Lathrop Ave
- Note: Tree coverage on both sides, windscreen, and parking lot buffer

North Facing



South Facing



Parking Lot



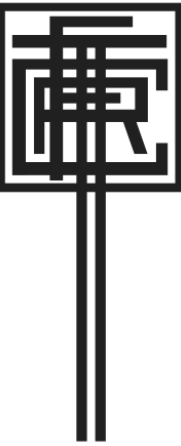
## Perimeter Foliage & Shade – Residential (Jackson Ave)

- East Side: Jackson Ave
- Note: Tree coverage on both sides, windscreen, and large bushes



## Perimeter Foliage & Shade – Residential (Jackson Ave)

- East Side: Jackson Ave (South East side)
- Note: Shade on the court provided by the trees, bushes, and windscreen





## Perimeter Foliage & Shade – Residential (Jackson Ave)

- East Side: Jackson Ave (South East side)
- Note: Shade on the court provided by the trees, bushes, and windscreen



## Perimeter Foliage & Shade – Residential (Jackson Ave)

- East Side: Jackson Ave (North East side)
- Note: Shade on the court provided by the trees, bushes, and windscreen



## Perimeter Foliage & Shade – Residential (Jackson Ave)

- East Side: Jackson Ave (North East side)
- Note: Shade on the court provided by the trees, bushes, and windscreen



## Pole Height – Existing Flag Pole

- Lighting pole heights will be in line with existing flag pole, which is ~30 feet.
- Flag pole is dwarfed by large trees currently on property



# Lighting Product

- Light Type: G1-S3 LED Tennis Lights
- Vendor: Shinetoo Tennis and Pickleball Court Lighting



## G1-S3 LED

High Mast Lights

500W 600W 800W



IP65



CB

SAA



NICHIA

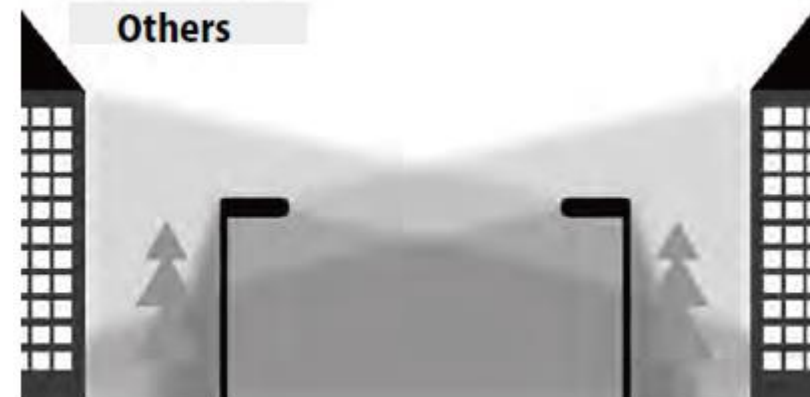
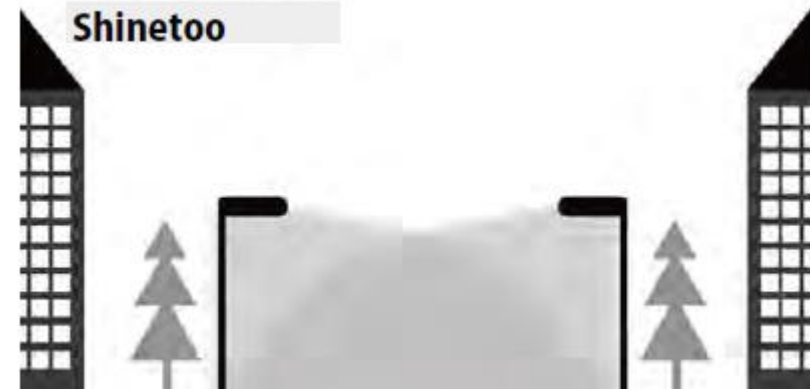
- Anti-Glare
- Asymmetric Indirect Light Design
- Full Cut-off



# Spill Light Control

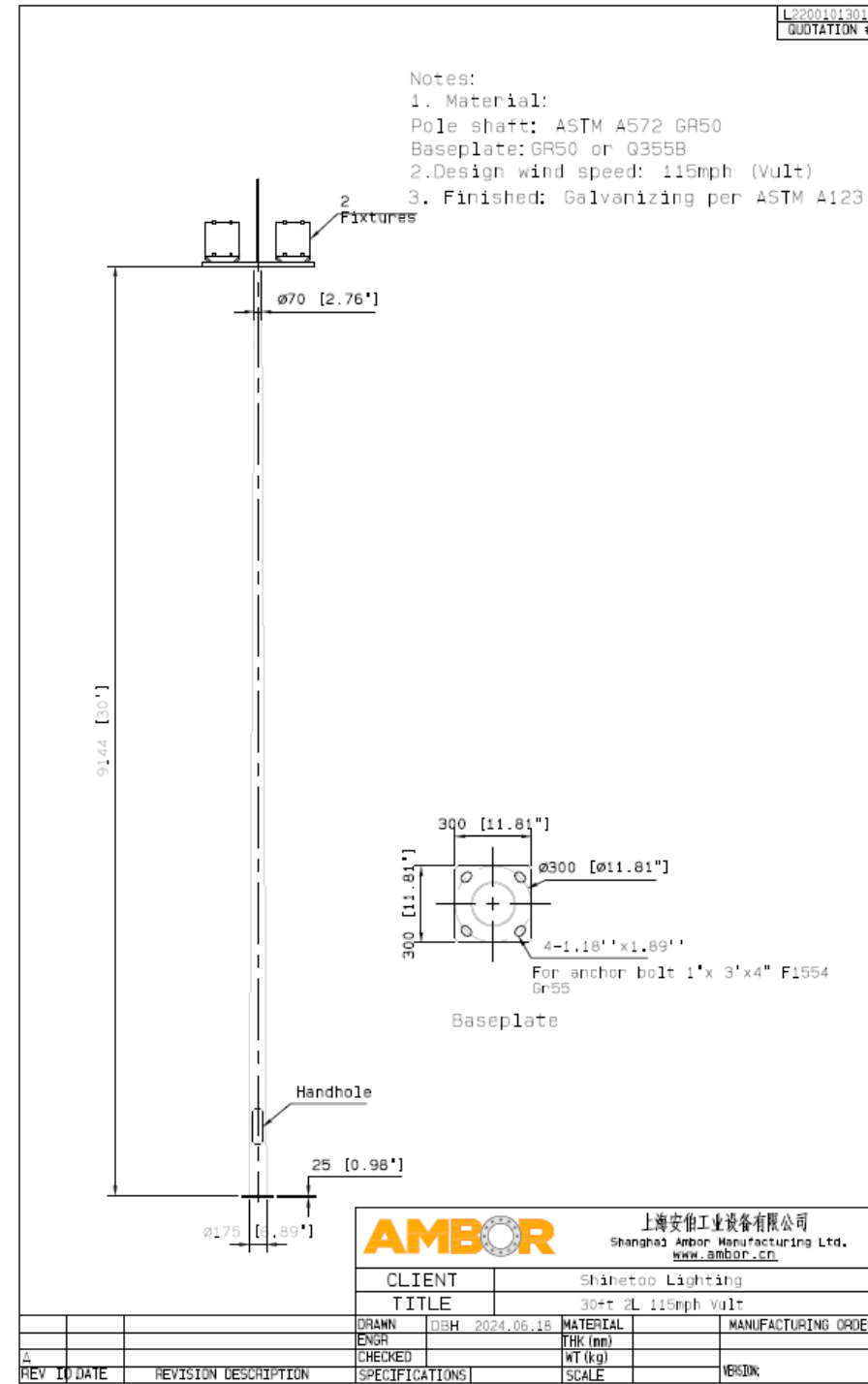
Spill light refers to the light falling outside the object to be illuminated, it is a kind of light pollution.

When using outdoor tennis court lighting, the court area needs to be bright enough, not pilling back off of the court. Shinetoo's tennis court lights have a spill-proof light control nction, which helps to illuminate the playing surfaces correctly.

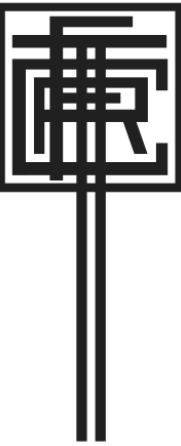


# Lighting Product – Pole Detail

- Pole width: 2.76"
- Pole base width: 6.89"



# Lighting Product





# Plat of Survey



**McTIGUE & SPIEWAK, INC.**  
Professional Design Firm  
Land Surveying Corporation  
License No. 184-002273  
LICENSE EXPIRES 09-30-2008  
5005 W. Higgins Ave.  
Chicago, Illinois 60630  
(773) 736-1344  
Fax: (773) 736-4616  
www.surveynland.com

BLOCK 15 IN COUNTY CLERK'S DIVISION OF BLOCK 15 IN QUAD'S SUBDIVISION OF PART OF THE NORTHWEST 1/4 OF SECTION 12, TOWNSHIP 39 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.  
TOTAL LAND AREA: 8160.017 sq ft (3.673 acres)  
P.L.N. 15-12-206-001  
COMMONLY KNOWN AS: 615 LATHROP AVE., RIVER FOREST, IL.

**THE RIVER FOREST TENNIS CLUB**

**615 LATHROP AVE., RIVER FOREST, IL.**

NO.	DATE	DESCRIPTION	BY
1	11/18/2006	ISSUED TO CLIENT	

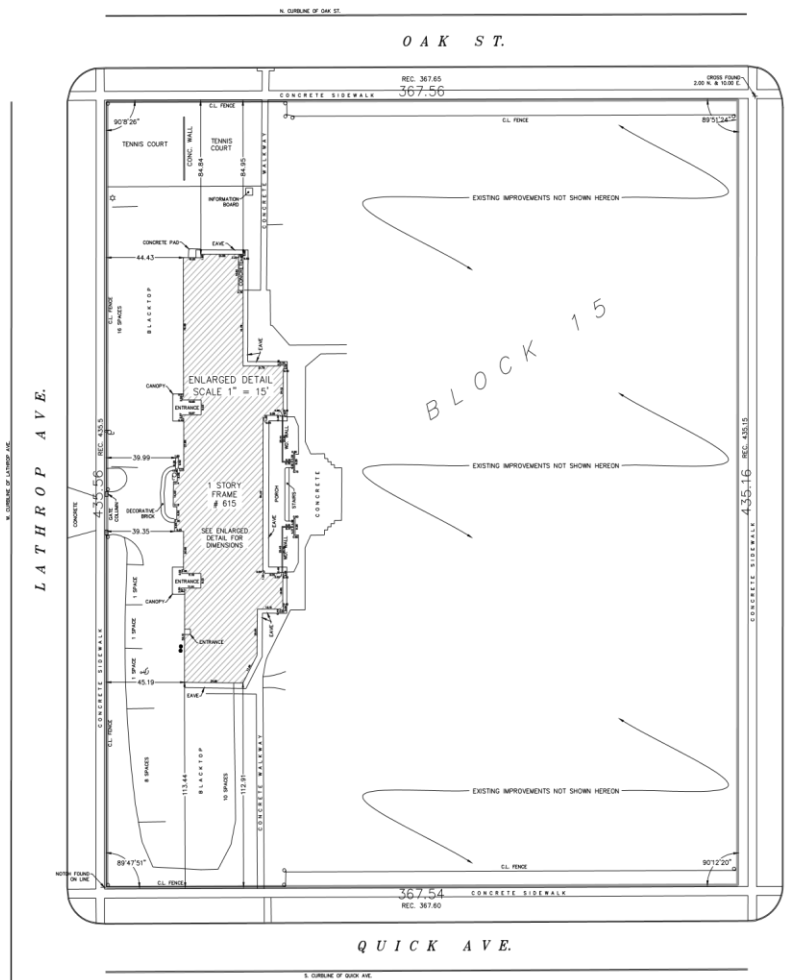
OWNER BY:  
THE RIVER FOREST TENNIS CLUB

DATE: 05-31-10 / Update

DATE: 11-18-2006

**PLAT OF SURVEY**

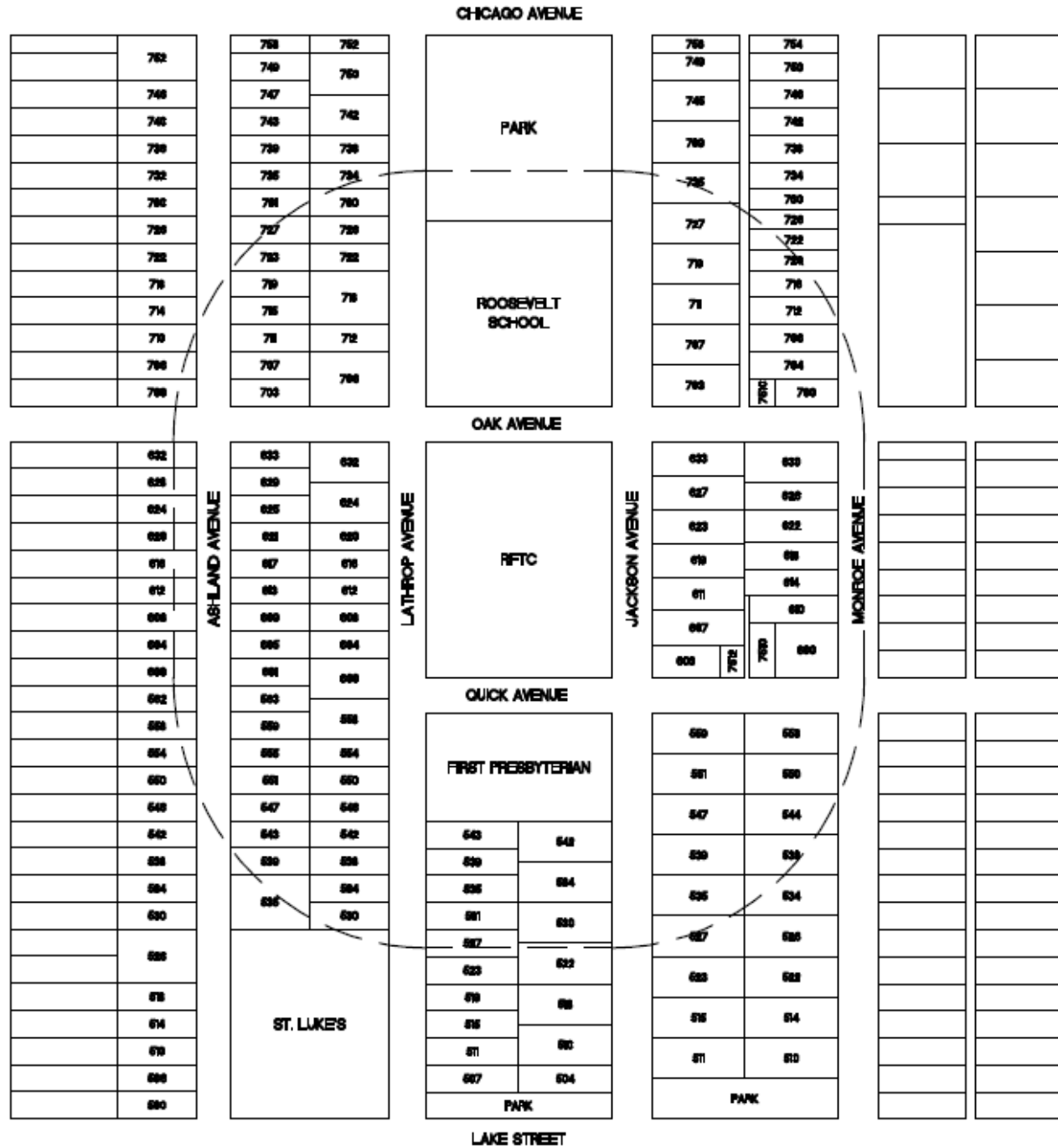
STATE OF ILLINOIS  
COUNTY OF COOK  
McTIGUE & SPIEWAK, INC. A PROFESSIONAL DESIGN FIRM,  
LAND SURVEYING CORPORATION, LICENSE NO. 184-002273,  
HEREBY CERTIFIES THAT A SURVEY HAS BEEN MADE UNDER THE  
DIRECTION AND SUPERVISION OF AN ILLINOIS PROFESSIONAL LAND  
SURVEYOR OF THE ABOVE DESCRIBED PROPERTY AND THAT THE PLAT  
HEREON SHOWN IS A CORRECT REPRESENTATION OF SAID SURVEY.  
THIS PROFESSIONAL SERVICE COMPANY IS THE CURRENT ILLINOIS  
MINIMUM STANDARDS FOR A BOUNDARY SURVEY.  
CHICAGO, ILLINOIS, DATED THIS 20TH DAY OF JUNE, A.D. 2007.  
BY: ILLINOIS PROFESSIONAL LAND SURVEYOR  
LICENSE EXPIRES 11/30/2008



NOTE:  
THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON IS BASED ON FIELD SURVEY EVIDENCE ONLY. THIS SURVEYOR HAS CONDUCTED OPERATIVE TAPPING AND LOCATED UTILITIES TO THE DEPTH OF 4 FEET UNLESS OTHERWISE NOTED. THE LOCATION OF UTILITIES DEEPER THAN 4 FEET SHALL BE DETERMINED BY OTHER MEANS.

SYMBOL LEGEND		SYMBOL LEGEND		SYMBOL LEGEND	
LINE TO CITY	---	ONE IN CONTROL BOX	☐	ONE HALF HALL	○
EXISTING LINE	---	OFF EXISTING SERVICE	⊕	HALL	○
CONCRETE WALL	—	CONCRETE IN FRONT SERVICE	⊕	COURT-YARD	○
AS BUILT	---	ELECTRIC CONTROL BOX	⊕	WATER SERVICE	○
PROPERTY BOUNDARY	---	UTILITY POLE	⊕	WATER SERVICE BOX	○
STORM SEWER	---	UTILITY CONTROL BOX	⊕	COMBINED SEWER MANHOLE	○
CONCRETE SEWER	---	UTILITY POLE	⊕	WATER - NO. 12	○
STORM LINE	---	ONE HALF BOX	⊕	TRAPED CONTROL BOX	○
SEWERING LINE	---				
WATERLINE	---				

# Surrounding Area Plan 500 feet





# RIVER FOREST TENNIS CLUB

ESTABLISHED 1905



## CONTACT INFORMATION

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847.909.1030

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