



City of Rochester, New Hampshire
PUBLIC WORKS DEPARTMENT
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MEMO PUBLIC WORKS & BUILDING COMMITTEE AGENDA

TO: PUBLIC WORKS AND BUILDINGS COMMITTEE
FROM: PETER C. NOURSE, PE
DIRECTOR OF CITY SERVICES
DATE: October 13, 2022
SUBJECT: Public Works & Buildings Committee Meeting
Meeting Date *Thursday October 20, 2022 at 7PM*

There will be a Public Works and Buildings Committee Meeting held on Thursday October 20, 2022 at 7PM. This meeting will be at City Hall in City Council Chambers

AGENDA

1. Approval of the September 15, 2022 PWC Minutes
2. Public Input
3. Maple Street School-Parking
4. Drinking Water Quality Improvements
5. Hanson Pines Basketball Lighting – Affinity LED Light Donation
6. FY2023 Proposed Paving Program
7. Public Works Office Space
8. Other

Public Works and Buildings Committee
City Hall Council Chambers
Meeting Minutes
September 15, 2022

MEMBERS PRESENT

Councilor Donald Hamann, Chairman
Councilor Jim Gray, Vice Chairman
Councilor John LaRochelle
Councilor Steve Beaudoin
Councilor Alexander de Geofroy

OTHERS PRESENT

Peter C. Nourse PE, Director of City Service
Lisa Clark, Administration & Utility Billing Supervisor
Dan Camara, DPW GIS
John Dunster, Revision Energy Representative

MINUTES

Councilor Hamann called the Public Works and Building Committee to order at 7PM

1. Approval of July 21, 2022 Meeting Minutes

Councilor Beaudoin made a motion to accept the minutes as presented. Councilor de Geofroy seconded the motion. The motion passed unanimously.

2. Public Input

No Public Input

3. Municipal Solar Power Projects

Mr. Nourse stated that will be discussing the City's initiatives with solar power. Mr. Nourse stated that a few years ago the City Council had expressed interest in solar power and since that time he has been working with the Deputy Finance Director, Mark Sullivan, and a solar company, Revision Energy, represented by John Dunster. Mr. Nourse stated that the School Department has completed a few solar projects and he stated that the first solar project for the City Municipal side was the solar array on the new Department of Public Works (DPW) facility. Mr. Nourse explained that the DPW array is a 403,000 kilowatt (kw) hour system that was designed to meet the peak demand of the facility and that on sunny days sell any excess power back to grid. He stated that this project was completed using a Power Purchase Agreement (PPA). Mr. Nourse explained that a PPA is an agreement where the system is installed, funded and owned by investors. There are no investment cost to the City. He stated that the City has the option to purchase the system in years six, and he has programmed that cost into the long term Capital Improvement Plan (CIP) for 2025. Mr. Nourse specified that the DPW system his producing more than the building's draw is at this time, but states that once we have a full year at full operations he will be better able to report on the financial

efficiency of the system. Mr. Nourse noted that due to the increasing Eversource's delivery fees there will be additional savings for the City. Mr. Nourse stated that the next project under consideration is a solar array on the Community Center. He stated that the original design was to put a solar array on the entire roof of the building and may have been able to meet the building's demand. This would be a 433,000kw hour system. Mr. Nourse stated that a structural analysis has been done that shows that only a portion of the Community Center Roof could support a solar array. He stated that it is just the Gym roof and the array on the building will now be designed as a 160,000 kw hour system. He stated this is about a quarter of the facilities demand. Mr. Nourse stated that staff is considering another PPA or possibly a direct purchase of the system. He explained that there are currently several incentive programs that may make the direct purchase more advantageous. Mr. Dunster spoke to the Committee and discussed the possible incentives that could be up to 50% of the total cost of the project. Mr. Dunster stated that one of the incentives could be for 10% of the entire project cost and it would be for using American made panels. He stated with all of the incentives it may make it worth purchasing the array vs. using PPA. Councilor Larochelle noted that the life span of 40 years is assumed using the efficiency rating that decreases over time. He stated that the array would likely last much longer but may be working at a lesser efficiency. He stated the City would not need to discard the panels, they could be left in place many more years. Mr. Dunster confirmed that this is true and stated that the newer panels are even better and will last longer. He stated at 40 years they could still be running at 80%. Councilor Beaudoin asked if there are significant cost increases for using the American made panels. Mr. Dunster stated that now it is about a 40% premium as there are so few American made panels. He stated that there is a chance that this number could change over the next several years as more American made products become available. He believes that the 10% on the whole project, will outweigh the additional 40% premium cost of the American made panels in the project. Councilor Larochelle asked the quality of the American made vs. imported product. Mr. Dunster stated they would only use tier 1 quality and noted to obtain that rating it would be universal regardless of origin. Councilor de Georfroy asked the likelihood of Eversource refusing to buy back power sent to the grid. Mr. Dunster stated the DPW project has a twenty year contract that requires Eversource to purchase the power sent to the grid. Mr. Dunster explained that there have been some attempts to repeal legislation requiring the power companies to purchase the power sent to the grid. He stated that he does not see that gaining any momentum, but is worth watching to see if that changes. Mr. Dunster also noted that the Community Center will not be producing enough energy to power the building, so sending it back to the grid will not be of concern. Councilor de Georfroy asked if reconstruction of the roof structure to hold more solar would be cost prohibitive. Mr. Nourse stated he believes it would be too costly. Councilor Larochelle suggested the Police Station's south facing sloped roof for a project. Councilor Hamann asked if we were looking at any large ground solar fields. Mr. Nourse stated that he had looked at a large City owned field on Pickering Road, but there were wetlands involved and it was not feasible. Councilor Beaudoin asked if the Director would be able to provide a report in January that would detail the cost saving for the 12 months at the DPW building. Mr. Nourse stated that he would produce a report, but mentioned that the first few months the system was operating at 2/3's capacity as one of the inverters were not in operation. Mr.

Nourse stated that he would continue to look for places to implement the solar projects and that he would keep the Committee informed of this and any other solar projects as they come up. Councilor Beaudoin asked for the Community Center PPA Breakdown and the incentives flyer to be attached to the minutes. (Attached)

4. Shaw Drive & Norway Plains Road Pavement Moratorium Waivers

Mr. Nourse stated that there are two moratorium requests.

Shaw Drive: Mr. Nourse stated that the street was paved in 2020 as part of the Granite State Industrial Park Water Loop project. He states that in accordance with chapter 223 the moratorium prohibiting pavement to be cut is in effect for 5 years. Mr. Nourse stated there is a subdivision to split one lot into two for the construction of two separate duplexes. Mr. Nourse stated that the duplexes require fire sprinkler systems and will therefor require a connection to the water system to avoid having large holding tanks. He stated there will be two cuts, once for each water connection.

Councilor Beaudoin asked the Directors opinion on cutting into new pavement and granting these waivers. Mr. Nourse stated that adding additional services and allowing for the City's growth are important and financially beneficial to the rate payers. He stated given the robust restorations completed there shouldn't be any significant problems. He stated that all recent waivers have been monitored closely and the pavement patches have held up well.

4 Norway Plains Road: Mr. Nourse stated that this street was paved in 2019. He stated that this waiver is to accommodate a three lot subdivision. He stated that two of the lots will not need a waiver, but one lot will require a full cut across the road for water and a partial cut for sewer.

Councilor Beaudoin asked to recuse himself from this discussion and vote as he has an interest in the properties.

Councilor de Geofroy asked the Director for his recommendation on the waivers. Mr. Nourse stated that he is in favor of the waivers with the given the DPW restoration process is followed.

Councilor Larochelle made a motion to recommend that the full City Council approve the waiver of the pavement moratorium for both Shaw Drive and Norway Plains Road with the restoration meeting the DPW guidelines. Councilor de Geofroy seconded the motion. The motion passed unanimously.

5. Colonial Pines Update

Mr. Nourse stated that Phase Three of this sewer extension project is underway. He stated that this phase includes up to seventy-one home owner connections, seven thousand three hundred feet of sewer main, eight thousand one hundred feet of sewer laterals and five thousand feet of closed drainage. Mr. Nourse stated that construction is moving along as planned. He noted that of the seventy-one planned home connections there are currently seven homes connected, and five waivers have been granted. The other connections are scheduled to be completed prior to winter. He noted that the drainage is complete and some areas have received the top coat of pavement. Mr. Nourse reminded the Committee that this sewer extension project was planned as a four phase project, prioritizing the areas that had the most failed or aging septic systems. He stated that Phase One brought the sewer main under the Spaulding Turnpike and Phase Two

brought sewer into the neighborhood and connected over seventy homes. Mr. Nourse stated that Phase Four is the largest phase and will be to bring sewer and closed drainage to Hemlock, Balsam and Meadow Lane. He stated that there are about seventy-four homes in the project area. The project would consist of ten thousand feet of sewer and seven thousand feet of closed drainage. Mr. Nourse explained that homes in the Phase Four portion of the project are newer and have larger lot sizes. He stated that the homes on Meadow Lane are the newest and some will qualify for waivers based on age and condition and about ½ on Meadow Lane are further than one hundred feet and would not be required to tie in. Mr. Nourse stated that in 2017 a survey was sent to this area and there was little interest in tying into the sewer at that time. He stated another survey has gone out this month to determine the interest at this time. He stated those result should be in by the end of this month. Mr. Nourse stated it might be a consideration to push this the project off, or parts of it. He stated currently we have received seventeen of the seventy-four surveys back, with ten interested in new sewer. Four of them are on Meadow Lane. Mr. Nourse stated that this phase of the project is estimated at nine million dollars. He stated when originally planned it was six million nine hundred thousand dollars. Councilor Beaudoin mentioned that the lot sizes in phase four are one acre vs. the ½ acre lots in phases two and three, making the cost per connection much higher as there are less connections per footage. Mr. Nourse stated that this project was not initiated with economic factors being beneficial. There is a benefit to the environment and a benefit to include the project for credits on our MS4 reporting. Mr. Nourse stated that at the next meeting he will update the Committee on the survey results.

6. RT 202A Water Main Extension Project Update

Mr. Nourse described the project as a thirteen million five hundred thousand dollar project bringing municipal drinking water from Washington Street to the Rt 202A corridor. He stated water mains will run from the top of Highfields Common to a water tank, then cross country to Bickford Road out to 202A and running west to the Crown Point area. He stated that this will include the Winkley Farm Lane and Fiddlehead Lane subdivisions. Mr. Nourse stated that approximately 2/3's of the project will be paid for by Drinking Water Ground Water Trust Fund and MtBE Grant programs. He stated that this area has significant ground water contaminants including MtBE, manganese and iron. Mr. Nourse stated that approximately three miles of water main has been installed ending at the area of Sampson Road and Fiddlehead Lane area of 202A. He noted that the service work to tie in homes on Winkley Farm Lane and Bickford Road will be completed in October and November. Mr. Nourse stated that there have been delays on water main pipe, and when those delays are happening the contractor concentrates work on service tie-ins. He stated that Fiddlehead services are planned for March, unless there are pipe delays and the end of the line service tie-ins to the MtBE properties are scheduled for November of 2023. He stated there has been some ledge in the project area but the contracted ledge contingency has barely been tapped. Mr. Nourse stated that the fuel escalation budget has been surpassed. Mr. Nourse noted that there is still sufficient funding with approximately eight hundred and eighty-five thousand still available for contingencies. Mr. Nourse informed the Committee that NHDES is working with the City's Community Engagement Manager to hold a Public Relations (P/R) event to celebrate and memorialize the first pour of municipal water in October. He stated that this event may be at Dustin Homestead Condo Association and he mentioned all of the

Council is welcome to attend. He stated he will keep the Council informed of the date. Mr. Nourse stated that there water tank components deliveries delayed until May of 2023, but he noted even without the tank the City can provide drinking water to the project area but noted pressure for fire flows would not be sufficient. Councilor de Geofroy asked if the individual services are paid for by the abutters. Mr. Nourse stated that the services are at the expense of the homeowner. He noted that the average service cost on Winkley Farm Lane was seventeen thousand five hundred dollars. He did explain that the City does provide financing at zero percent interest.

7. Environmental Protection Agency (EPA) Revised Lead & Copper Rule for Drinking Water:

Mr. Nourse states he is bringing this to the Committees attention as there are significant revisions in place that the City will need to comply with. He stated that the first Lead and Copper Rules were established in 1991. It was established to minimize the amount of lead and copper leaching into the drinking water through services and plumbing. He stated that this rule was to accomplish removing the lead contamination by regulating corrosion control treatment to the public drinking water systems. He stated that there has been many revisions to reduce the use and quantity of lead used in fixtures and Sopper. Mr. Nourse stated that the highest risk is to pregnant women and children. Mr. Nourse stated that there is not a concern for copper in the City's water system. Our test results for copper are very far below the action level. He stated that our water does not leach copper due to our corrosion control and saturation indexes. Mr. Nourse stated that the new revisions focus on removal of lead in all service lines, including water mains and individual services. He stated that this will go into effect in October of 2024 and will require that the City has established a lead service line inventory, and a goal-based program to systematically eliminate all qualifying service lines by this date. It must prioritize populations most sensitive to the effects of lead and it must have funding strategies to accommodate customers unable to afford lead service line replacements. Qualifying services for replacement are made of lead or galvanized pipe that could ever have been downstream of a lead line. Mr. Nourse stated until we have documentation to the contrary we will need to assume every galvanized line will need to be replaced. He also stated that the inventory will need to assume that any services that are of unknown materials will be assumed to be lead unless properly determined. He stated that brass service lines are not at issue, nor are lead pigtails, but the pig tails do need to be removed when found. He stated that removal is our current practice. He stated that the City cannot just replace main to curb stop. He said in order for it to qualify as removed it must be the full service from the main to the building. He stated that the Utility will need to document at least two good faith attempt to contact the property owner to get the line replaced. Mr. Nourse stated that if the Utility replaces the main to the curb stop and the homeowner section does not get replaced, the Utility will need to supply the homeowner with point of service filters or filtered pitchers for six months. Mr. Nourse stated that the new rules will require that the City have a funding strategies for the customers with low income and he believes our current homeowner option at zero percent will meet this requirement. The City can decide to fund the service to all homes if it chooses. If Rochester's lead service line is determined as nominal then that may be option. Mr. Nourse stated at this time we have started the inventory of the City's approximately seven

thousand five hundred services. He stated that staff has reviewed about five thousand of them to date. Mr. Nourse stated that of the five thousand reviewed staff has found that we have seventy galvanized services lines that will need to be replaced and one hundred and sixty-eight unknowns that will require further investigation. He stated at this time we have no records of any lead service line in the City. Mr. Nourse stated there is approximately twenty-five hundred feet of small galvanized main that we are currently working to eliminate. He stated he believes that Rochester has a minimal amount of lead, and that elimination will be manageable. Mr. Nourse stated that we are working in the Woodman Street area on a project now and hope to identify and remove any lead lines in that area. He stated that there has been some difficulty gaining access to the all buildings, but staff will make additional efforts to get into the homes to assess the services. Mr. Nourse stated that there are several proposed State and Federal Funding sources for this work if assistance is required. Mr. Nourse stated that also included in the revision to the rules is a trigger level of 10 parts per billion on the 90 percentile. Mr. Nourse stated that we test every 3 years as we are well below the action levels. He stated we have a voluntary pool of seventy-five homes and we test thirty on a rotating basis every three years. He stated that the pool is developed with NHDES and it targets areas that were constructed before lead band in 1986. The new revisions also state that if one sample site is over the 15ppb we must find and fix. Mr. Nourse stated that there is also required public education materials to be delivered to any lead, galvanized or unknown locations annually. The Committee discussed the ways of determining the lead services lines. Mr. Nourse stated that he would update the Committee periodically but he believes the City is in a good position to manage this program. Councilor Beaudoin asked that the reference guidelines be attached to the minutes (attached).

8. Sewer Deduct Meter – Costs & Requirements

Councilor Beaudoin stated that he heard from a customer that they were told it would cost approximately \$1,000 to have a sewer deduct meter installed and he believes that the customer was told that he would need an RPZ backflow device. He questioned why someone would tell him an RPZ is necessary. Mr. Nourse stated that the cost for the City's meter, mxu, connections and labor totals \$560. Mr. Nourse stated he would check into the RPZ issue on a home without an irrigation system and if incorrect information was provided.

9. Other:

Strafford Square – Mr. Nourse stated that the notice to proceed was issued by NHDOT this week and the Notice of Award will go to contractor this week. He said the contractor should be starting work in the area soon and will proceed as much as possible through the winter. Councilor de Geofroy asked about the timeline for completion. Mr. Nourse stated the roundabout project should finish within a year.

Woodman Area Reconstruction Project – Mr. Nourse displayed a picture of turburcated pipe from the water main replacement. He described that this pipe as being over 100 years old and stated that this pipe is a good example of why we must replace the older infrastructure in the City.

Katie Lane - Councilor Haman asked if this project had started up. Mr. Nourse stated he had been out to the area and noted some work had begun. He stated that this project should be completed by winter.

Councilor LaRochelle made a motion to adjourn the meeting at 8:38 pm. Councilor Beaudoin seconded the motion. The motion passed unanimously.

Minutes respectfully submitted by Lisa J. Clark, City of Rochester Administration and Utility Billing Supervisor

DRAFT



Commercial Solar Incentives

IRA Benefits for Businesses, Nonprofits & Public Sector

The **Inflation Reduction Act of 2022 (IRA)** represents the largest-ever federal government commitment to tackling climate change by accelerating the clean energy transition. By 2030 it is expected to cut nationwide carbon emissions by 42% below 2005 levels, double the clean energy workforce to nearly 1 million, triple the amount of clean electricity on the grid to offset every home in America, and save the average American over \$1,000 in annual energy expenditures. As an employee-owned B Corporation, ReVision Energy is committed to helping our clients and partners – especially low-income communities hit first and worst by climate change – understand and apply the relevant provisions in the IRA, as summarized below.



Solar Investment Tax Credit

Since it was first introduced in 2006, the solar investment tax credit (ITC) has enabled taxpaying entities to reduce their federal income tax liability by up to 30% of the basis-eligible cost of a solar investment while also taking advantage of MACRS and/or Bonus depreciation. Unlike long-term federal incentives for non-renewable energy sources, the current ITC is time-limited and scheduled to step down to 22% in 2023 and 10% thereafter for any commercial solar project. Non-taxpaying entities like schools, towns, and nonprofits have lacked access to the ITC except by indirect means of a Power Purchase Agreement (PPA), financed by taxpaying investors who seek a financial return.

Under the new IRA, the investment tax credit is effectively restored to the prior 30% effective in 2022, with the potential for stackable “bonus” ITC adders starting in 2023 worth 10 or 20 percentage points each, for a total ITC value of 40%, 50% or more in certain cases. For taxpaying entities that do not have sufficient tax liability to monetize the ITC in the first year, the ITC may now be transferred once to another taxpayer or retroactively applied to offset up to the three prior years of taxes paid by the solar

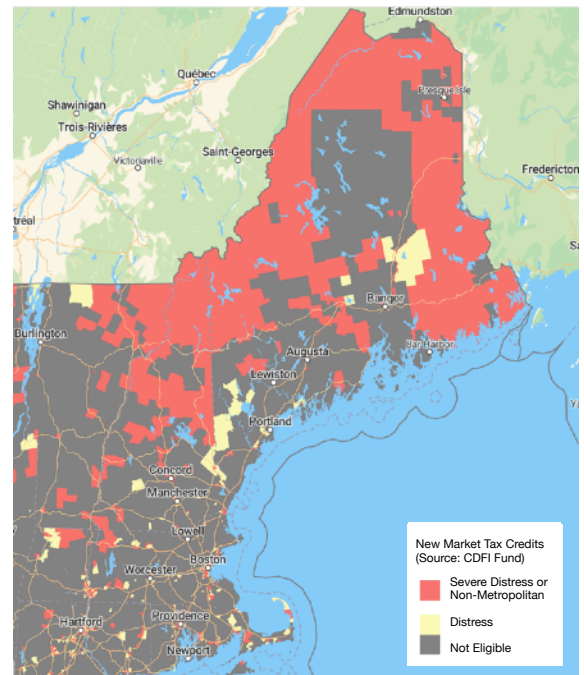
	2022	2023	2024	2025	2026	2027	2028	2029	2030
Current ITC	26%	22%	10%	10%	10%	10%	10%	10%	10%
New Standard ITC	30%	30%	30%	30%	30%	30%	30%	30%	30%
+10% Domestic Content	NA	40%	40%	40%	40%	40%	40%	40%	40%
+10% Brownfield Sites	NA	40%	40%	40%	40%	40%	40%	40%	40%
+10% Low-Income Area	NA	40%	40%	40%	40%	40%	40%	40%	40%
+20% Affordable Housing	NA	50%	50%	50%	50%	50%	50%	50%	50%
+ Additional Coverages:	<i>utility upgrade costs, direct pay for tax-exempt entities, 3-year carry-back</i>								

ReVision Energy • Commercial Solar Incentives

project owner. A 20-year carry-forward provision still applies from the previous ITC. Non-taxpaying entities like municipalities and nonprofits may now access the ITC via a new **“direct pay”** provision by receiving a 100% government rebate for the ITC value in 2023 and from 2024 onwards if domestic content requirements are met (outlined below). The IRA also expands the definition of basis-eligibility when calculating ITC value to include **utility upgrade costs** for projects up to 5 MW (AC) starting in 2022, a major source of solar project cost inflation in recent years.

“Bonus” Investment Tax Credits

- **Domestic Content:** Solar projects seeking to access the 10 percentage point bonus ITC for domestic content must procure 100% of their steel/iron from the United States along with 40% of manufactured products in 2024, 45% in 2025, 50% in 2026, and 55% in 2027 and beyond. ReVision Energy currently sources most of our steel racking systems and increasing quantities of our solar modules and associated equipment domestically.
- **Brownfield Sites:** Solar arrays sited on state-designated brownfields or in newly-defined “energy communities” where coal mines or coal-fired power plants have recently been decommissioned are eligible for an additional 10 point bonus ITC. Maine has 179 contaminated brownfield sites and New Hampshire has 298; Massachusetts brownfield sites remain limited by utility interconnection constraints on larger offsite projects. Coal-related infrastructure is limited in New England.
- **Low-Income Areas:** Solar arrays located in federally-designed New Market Tax Credit (NMTC) locations with poverty rates over 20%, regardless of project type, are eligible for an additional 10 point bonus ITC. The U.S. Treasury Department will allocate such bonus credits for up to 1.8 GW of annual solar capacity starting in 2023, with unused capacity rolled forward to the next year. Projects in federally-defined “Indian land” are eligible for the same ITC adder. ReVision Energy’s New England service territory includes over 100 NMTC-designated census tracts and multiple Native American communities (marked red or yellow on the inset map).
- **Affordable Housing:** Solar projects that are located on a low-income residential rental building that is part of a HUD-approved housing program, and other qualified low-income economic benefit projects, are eligible for a 20 point bonus ITC. The projects must allocate at least 50% of the financial benefits of the electricity produced (including electricity acquired at a below-market rate) to households with income of less than 200% of the poverty line or 80% of area median gross income.



Construction Labor Requirements

Large solar projects over 1 MW (AC) wishing to receive the standard 30% ITC and adders (rather than the 1/5 base rates) are required to meet new prevailing wage and apprenticeship requirements designed to strengthen the clean energy workforce. Prevailing wages are set locally by the Department of Labor. Apprenticeship requirements are met by making a good-faith effort to employ apprentices for 12.5% (2023) or 15% (2024 and beyond) of total project construction hours. ReVision Energy established the nation’s first in-house solar apprenticeship program in 2018 and has a long history of paying our co-owners and union subcontractors prevailing wages. We will monitor the U.S. Treasury guidance closely when it is released to ensure full compliance with these requirements, which go into effect 60 days after issuance of such regulations (expected in the first half of 2023).

Energy Storage Investment Tax Credit

In addition to expanded solar incentives, the IRA adds standalone energy storage systems as qualifying projects under the new investment tax credit. Although most storage solutions today utilize lithium-ion battery technology, the IRA defines storage is as any property which receives, stores, and delivers energy for conversion to electricity (or, in the case of hydrogen, which stores energy) with 5 kWh or more in capacity. Storage projects with output of 1 MW (AC) or more must meet the prevailing wage and apprenticeship requirements outlined above. Standalone storage projects are not eligible for the direct pay provision outlined above.

	2022	2024	2025	2026	2027	2028	2029	2030
Current ITC with solar	26%	22%	10%	10%	10%	10%	10%	10%
Current ITC w/o solar	0%	0%	0%	0%	0%	0%	0%	0%
New ITC with solar	30%	30%	30%	30%	30%	30%	30%	30%
New ITC w/o solar	NA	30%	30%	30%	30%	30%	30%	30%

IRA Grant/Loan Programs and EV Charging

- Greenhouse Gas Reduction Fund (overseen by EPA): **\$29 billion**, including \$2 billion for state, local, and nonprofit programs to install zero-emission vehicle charging infrastructure
- Climate Pollution Reduction Grants to state and local governments: **\$5 billion**
- Environmental and Climate Justice Block Grants: **\$3 billion** for disadvantaged communities
- Department of Energy Loan Program Office: **\$40 billion** in additional loan commitment authority
- Rural renewable energy electrification (incl. storage): **\$1 billion** in additional loans
- Renewable Energy for America Program (REAP) grants for rural farms/business: **\$1 billion** in additional funding with grants up to 50% of total project cost (up from 25% today)
- Extension, expansion, and changes to electric vehicle tax credits, including a new credit for purchasing used EVs and increased incentives for fleet electrification



City of Rochester Solar

Preliminary PPA Proposal for the Community Center

Preliminary Proposal Date

September 13, 2022

Solar Design Summary

Project Size (DC)	391 Panels	185.7 kW
Project Size (AC)	Inverter Rating	160 kW
Year 1 Generation (kWh)		217,000

PPA Financial Summary

Upfront cost to City of Rochester	\$0.00
Operations & Maintenance (O&M) cost	\$0.00
Year 1 PPA rate (per kWh)	\$0.0825
PPA rate escalator starting year 2	2.0%
PPA term (minimum 5 years)	5-25 years
Year 6 early buyout estimate (optional)	\$332,640
Upfront cost financed by investor partner	\$528,000

PPA rate offer good for 30 days from date above

Engineer's Rendering



(Satellite Data)

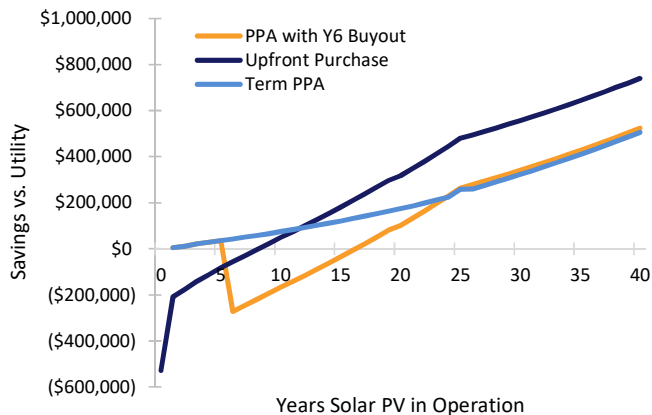
PPA Project Savings/Revenue

Estimated savings years 1-5 under PPA	\$35,000
Year 6 early buyout (optional) less savings	\$297,640
O&M cost after buyout (per year, optional)	\$1,751
Term PPA savings, no buyout	\$258,000
25-Year net savings with year 6 buyout	\$263,000
40-Year net savings with year 6 buyout	\$524,000

Environmental Benefits

Annual CO2e offset (lbs)	212,660
Equivalent to...	
Gallons of gasoline not burned	10,854
Passenger cars removed from the road	21
Pounds of coal not burned	106,281
Tons of waste recycled	33

Solar Savings vs. Utility



Not Included

Potential Saving From lower demand Charges
Income from Capacity Market Payments

Includes Potential ITC Adders

10% ITC Adder for Low Income Area

Reference Guide for Public Water Systems Lead and Copper Rule Comparison

This table compares the major differences between the current Lead and Copper Rule (LCR) and the final Lead and Copper Rule revisions (LCRR). In general, requirements that are unchanged are not listed. For existing rule requirements visit: <https://www.epa.gov/dwreginfo/lead-and-copper-rule>. For more information on the new LCR visit: <https://www.epa.gov/ground-water-and-drinking-water/final-revisions-lead-and-copper-rule>.

CURRENT LCR	FINAL REVISED LCRR
<i>Action Level (AL) and Trigger Level (TL)</i>	
<ul style="list-style-type: none"> 90th percentile (P90) level above lead AL of 15 µg/L or copper AL of 1.3 mg/L requires additional actions. 	<ul style="list-style-type: none"> 90th percentile (P90) level above lead AL of 15 µg/L or copper AL of 1.3 mg/L requires more actions than the previous rule. Defines lead trigger level (TL) of $10 < P90 \leq 15$ µg/L that triggers additional planning, monitoring, and treatment requirements.
<i>Lead and Copper Tap Monitoring</i>	
<p>Sample Site Selection</p> <ul style="list-style-type: none"> Prioritizes collection of samples from sites with sources of lead in contact with drinking water. Highest priority given to sites served by copper pipes with lead solder installed after 1982 but before the state ban on lead pipes and/or LSLs. Systems must collect 50% of samples from LSLs, if available. 	<p>Sample Site Selection</p> <ul style="list-style-type: none"> Changes priorities for collection of samples with a greater focus on LSLs. Prioritizes collecting samples from sites served by LSLs –all samples must be collected from sites served by LSLs, if available. No distinction in prioritization of copper pipes with lead solder by installation date. Improved tap sample site selection tiering criteria.
<p>Collection Procedure</p> <ul style="list-style-type: none"> Requires collection of the first liter sample after water has sat stagnant for a minimum of 6 hours. 	<p>Collection Procedure</p> <ul style="list-style-type: none"> Requires collection of the fifth-liter sample in homes with LSLs after water has sat stagnant for a minimum of 6 hours and maintains first-liter sampling protocol in homes without LSLs. Adds requirement that samples must be collected in wide-mouth bottles.

CURRENT LCR	FINAL REVISED LCRR
	<ul style="list-style-type: none"> Prohibits sampling instructions that include recommendations for aerator cleaning/removal and pre-stagnation flushing prior to sample collection.
<p>Monitoring Frequency</p> <ul style="list-style-type: none"> Samples are analyzed for both lead and copper. Systems must collect standard number of samples, based on population; semi-annually unless they qualify for reduced monitoring. Systems can qualify for annual or triennial monitoring at reduced number of sites. Schedule based on number of consecutive years meeting the following criteria: <ul style="list-style-type: none"> Serves $\leq 50,000$ people and \leq lead & copper ALs. Serves any population size, meets state-specified optimal water quality parameters (OWQPs), and \leq lead AL. Triennial monitoring also applies to any system with lead and copper 90th percentile levels ≤ 0.005 mg/L and ≤ 0.65 mg/L, respectively, for 2 consecutive 6-month monitoring periods. 9-year monitoring waiver available to systems serving $\leq 3,300$. 	<p>Monitoring Frequency</p> <ul style="list-style-type: none"> Some samples may be analyzed for only lead when lead monitoring is conducted more frequently than copper. Copper follows the same criteria as the current rule. Lead monitoring schedule is based on P90 level for all systems as follows: <ul style="list-style-type: none"> P90 > 15 $\mu\text{g/L}$: Semi-annually at the standard number of sites. P90 > 10 to 15 $\mu\text{g/L}$: Annually at the standard number of sites. P90 ≤ 10 $\mu\text{g/L}$: <ul style="list-style-type: none"> Annually at the standard number of sites and triennially at reduced number of sites using same criteria as previous rule except copper 90th percentile level is not considered. Every 9 years based on current rule requirements for a 9-year monitoring waiver.



September 30, 2022

City of Rochester

Attn: Blaine Cox, City Manager

31 Wakefield St.

Rochester, NH 03867

RE: Affinity LED Donation of Sports Lighting for the Hanson Pines Basketball Court

Dear City Manager Cox,

Over the past five years, Affinity LED Lighting has had the honor and privilege of serving the City of Rochester in the completion of several lighting upgrade projects. Completed LED upgrade projects include the City's streetlighting and decorative fixtures, and building retrofits in the Fire Departments, Police Department, City Hall, City Library, Revenue Building, James Foley Community Center, Wastewater Treatment Plant, and all of the schools within the Rochester School District. The City of Rochester has been a strong supporter of Affinity LED and our locally built, Veteran assembled products and we appreciate the cooperative efforts of so many City and School District employees as these projects were completed.

It has come to our attention that the City is interested in upgrading the outdoor lighting at the Hanson Pines Basketball Court. As a gesture of our gratitude to the City of Rochester, Affinity LED would like to donate a complete system of sports lighting and controls required for this upcoming project. The value of the donation is currently estimated to be \$13,319 for the 8 LED fixtures and lighting control system to adjust lighting levels for various types of current and future recreational activities. Please see the attached pdf for further information on the LED fixture specifications and lighting design.

We are proud to be a Partner of Choice with the City of Rochester throughout the completed LED lighting improvements and resultant energy reduction and operational cost savings. We look forward to supporting the City and its selected installation contractor on the Hanson Pines Basketball Court project.

Sincerely Yours,

Steven R. Lieber

President/Founder

510W Area & Sports Lighting

SL-510W-50KD

Product Specifications

Affinity LED Lighting's Sports Light Luminaire delivers reliable, weather-rated maintenance-free high-lumen output lighting. The functional design is made from die-cast aluminum, with a corrosion resistant waterproof powder-coat finish and IP65 rating.

Type	Sports Lighting	Model number	SL-510W-50KD
Equivalent to	1,000W MH	Operating Temp	-40°C ~ +55°C
Wattage	510W	L70 Lifetime	>100,000 hrs
Lumen	68000lm	CRI	Ra ≥71
Voltage	120-277V/347-480V	L x Diameter	450x 480 x 568mm
CCT	5000K	Weight	13.43 lbs
Power factor	>90%	Current	0.49A
Beam angle	4H*4V		

Features & Applications

- Sealed die-casting profile for outdoor applications
- Low profile, 3G vibration rated compact design minimizes wind load requirements.
- Environmental friendly, IP65 waterproof rating.
- Light engines are available in standard 4000 K and 5000 K (70/80/90 CRI) configurations.
- Optics is precisely designed to shape the distribution, maximizing efficiency and application spacing.
- Universal 120-277 VAC or 277-480 VAC input voltage
- Standard with 0-10V dimming driver(s)
- Ambient operating temperature -40° C to 55° C (-40°F to 131°F).



510W Area & Sports Lighting

SL-510W-50KD

Product Advantages

High-Output 68,000lm

Corrosion-resistant powder-coat finish

Instant-On Full Brightness

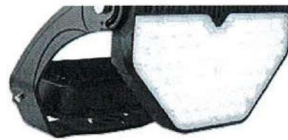


Shatter and UV Resistant Type II lens

IP65 Rating

Installation

Trunnion Mount



DLC Listed Item

DLC ID

Watt

Lumen

CCT

PGY2IIQI

510W

68,000lm

5000K

Certifications



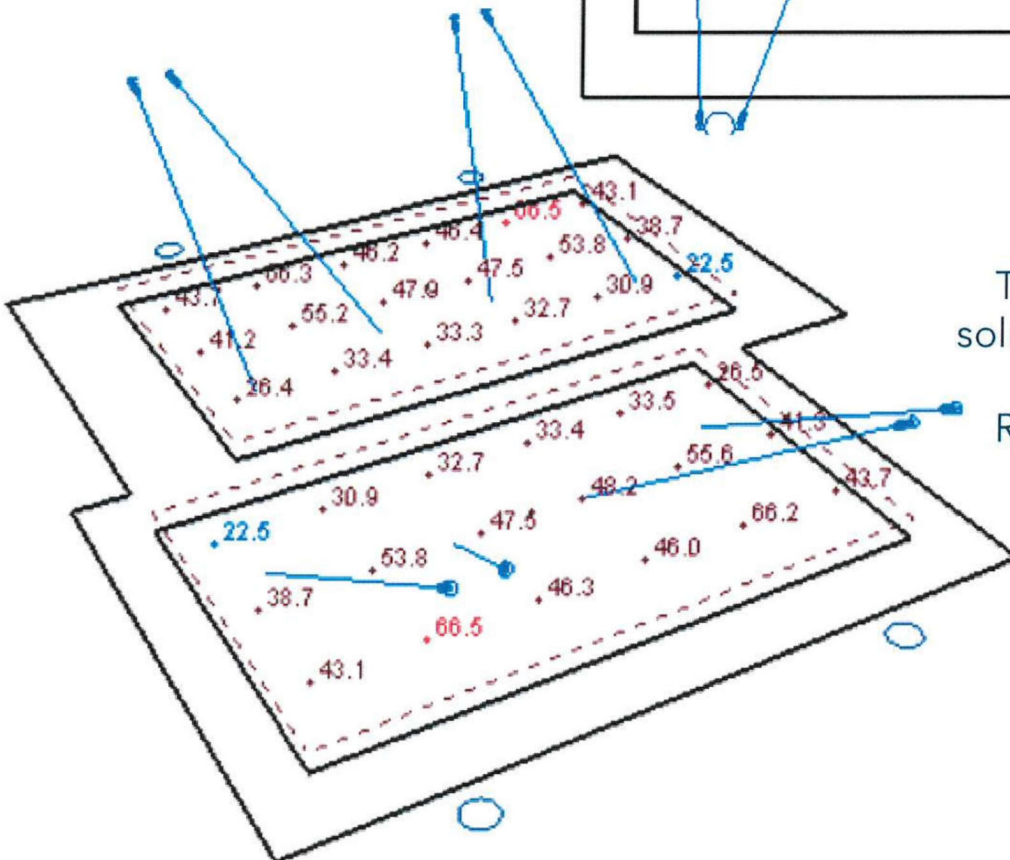
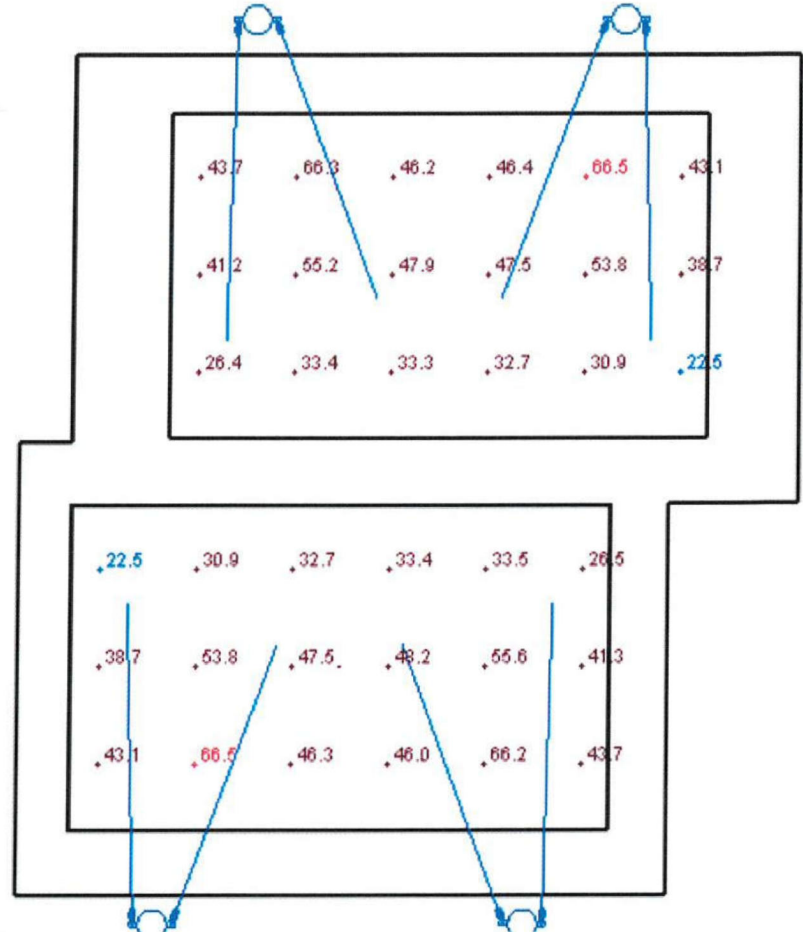
Visual Wireframe of Courts (510W)

Court 1

Average	40.0	fc
Maximum	58.7	fc
Minimum	24.9	fc
Max/Min	2.4:1	
Average/Min	1.6:1	



Court 2

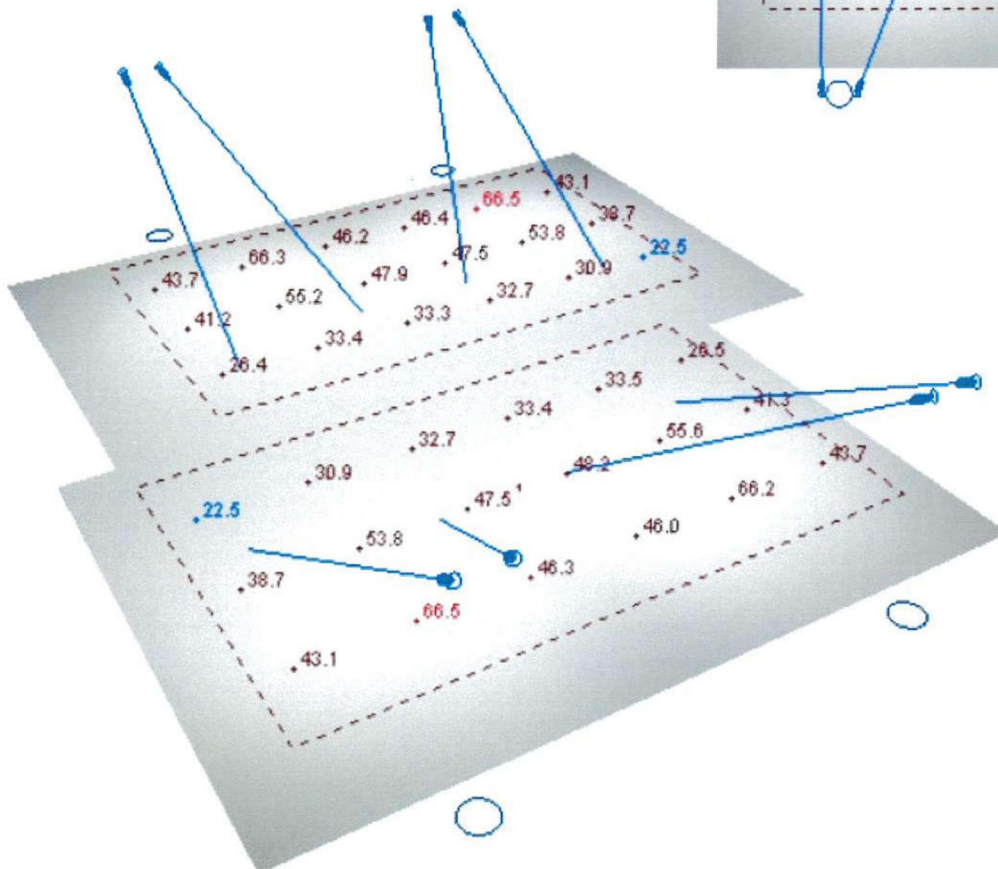
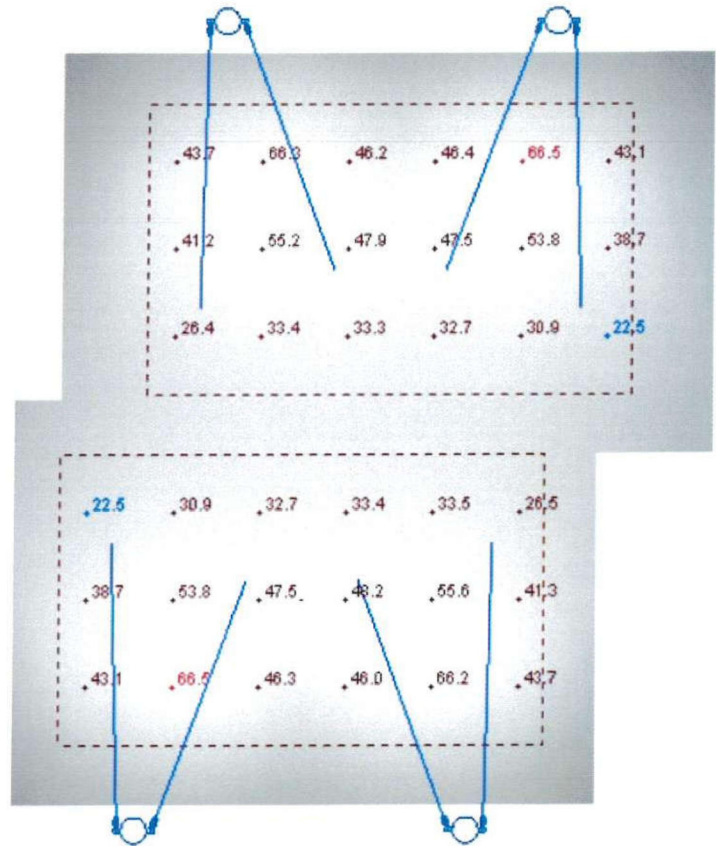
Average	40.0	fc
Maximum	58.8	fc
Minimum	24.9	fc
Max/Min	2.4:1	
Average/Min	1.6:1	



These fixtures offer a solution that meets the IESNA category 3-4 Recreational lighting guidelines.



Visual Rendering of Courts (510W)

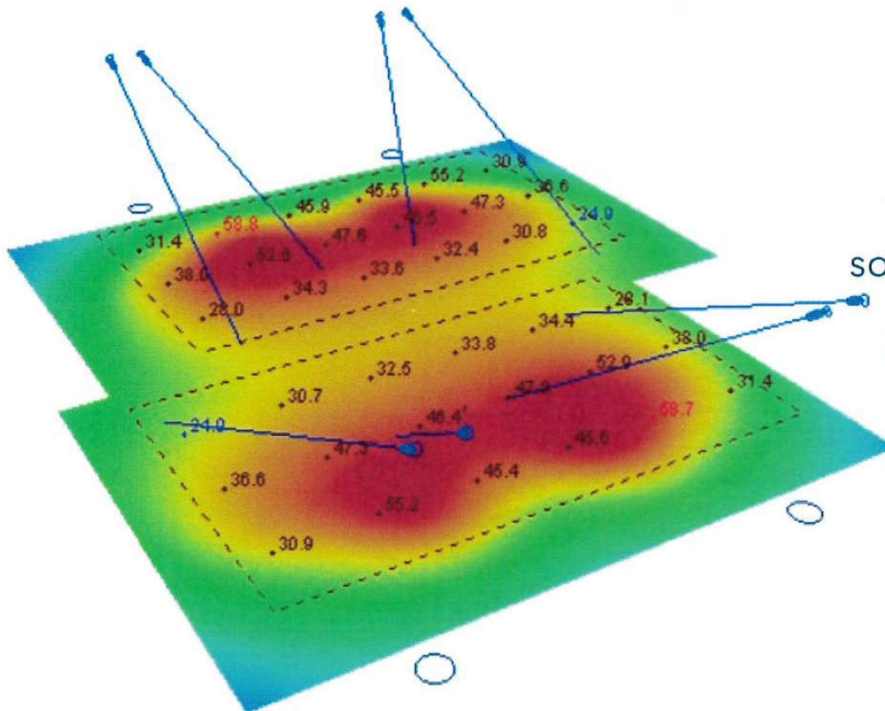
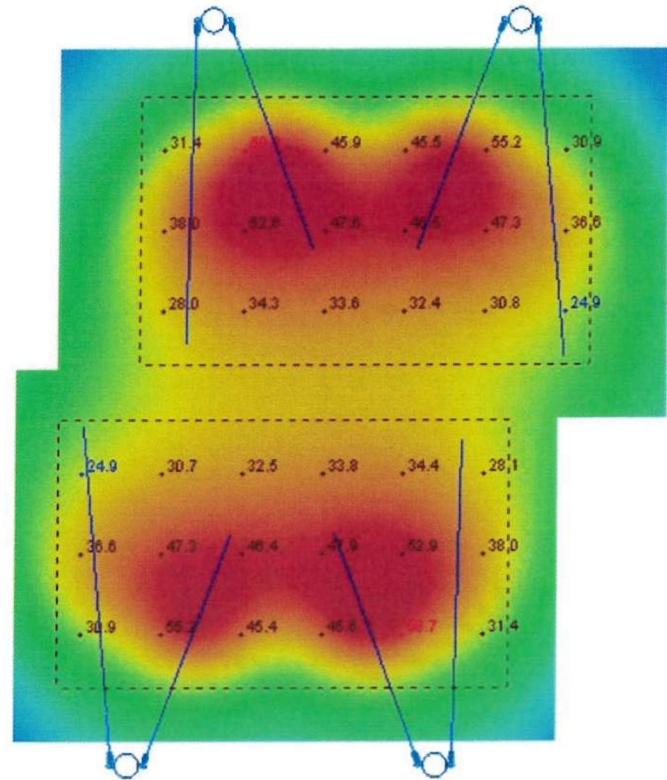
 Court 1		
Average	40.0	fc
Maximum	58.7	fc
Minimum	24.9	fc
Max/Min	2.4:1	
Average/Min	1.6:1	
 Court 2		
Average	40.0	fc
Maximum	58.8	fc
Minimum	24.9	fc
Max/Min	2.4:1	
Average/Min	1.6:1	



These fixtures offer a solution that meets the IESNA category 3-4 Recreational lighting guidelines.



Visual Luminance of Courts (510w)

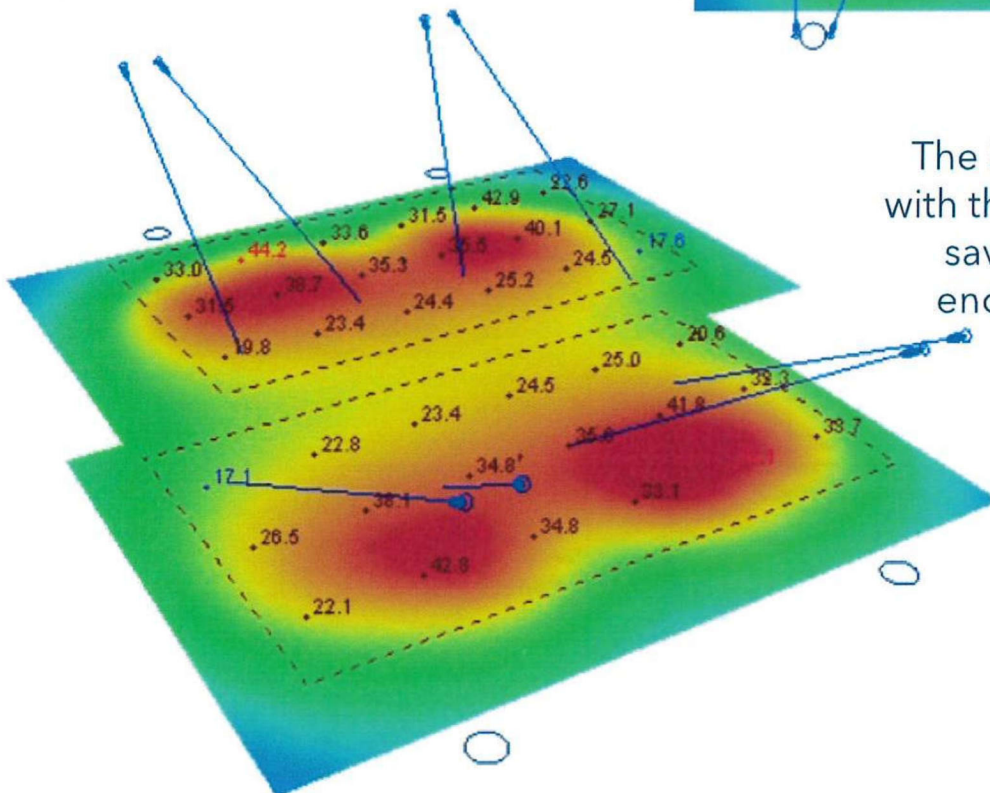
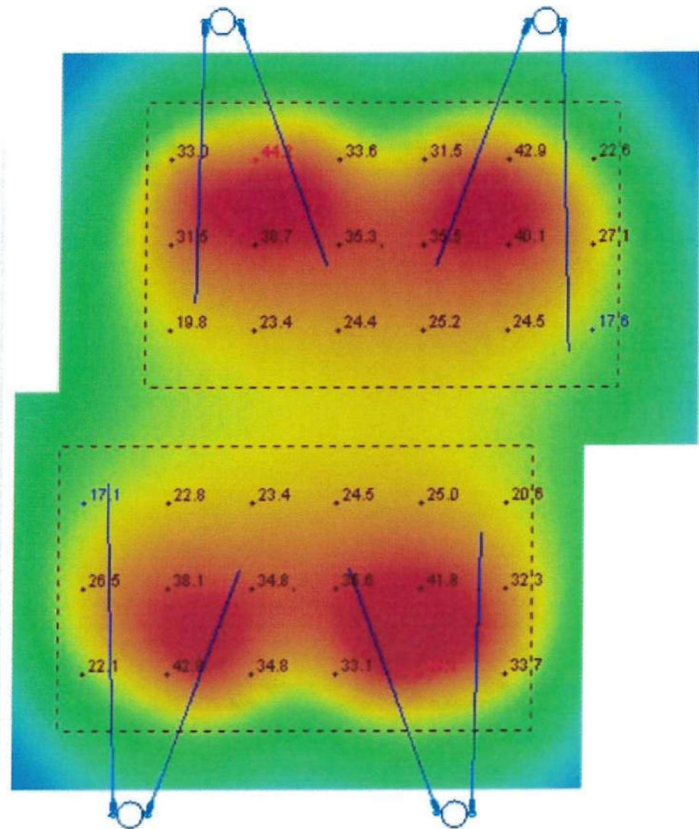
 Court 1		
Average	40.0	fc
Maximum	58.7	fc
Minimum	24.9	fc
Max/Min	2.4:1	
Average/Min	1.6:1	
 Court 2		
Average	40.0	fc
Maximum	58.8	fc
Minimum	24.9	fc
Max/Min	2.4:1	
Average/Min	1.6:1	



These fixtures offer a solution that meets the IESNA category 3-4 Recreational lighting guidelines.

Visual Luminance of Courts (360w)

 Court 1		
Average	31.0	fc
Maximum	49.1	fc
Minimum	17.1	fc
Max/Min	2.9:1	
Average/Min	1.8:1	
 Court 2		
Average	30.6	fc
Maximum	44.2	fc
Minimum	17.6	fc
Max/Min	2.5:1	
Average/Min	1.7:1	



The 510W can be dimmed with the controls to 360W to save energy, while being enough lighting for more casual applications.



Warranty Statement Affinity LED Light LLC

LED Lighting -5 Year Limited Warranty Policy

This limited warranty is provided by Affinity LED Light LLC ("Seller") to the City of Rochester ("Purchaser"), as the original purchaser of the LED lighting products as identified on Seller's invoice reflecting its original purchase (the "Product"). Seller warrants that the Product, when delivered in new condition and in its original packaging, will be free of defects in material and workmanship for a period of FIVE (5) YEARS from the date of original purchase. The determination of whether the Product is defective shall be made by the Seller, in its sole discretion, with consideration given to the overall performance of the Product. This limited warranty is void if the product is not used for the purpose for which it was designed.

A Product shall not be considered defective solely as a result of the failure of individual LED components to emit light if the number of inoperable components is 10% or less of the total number of LED components in the Product. If Seller determines the Product is defective, Seller will elect, in its sole discretion, to refund the purchase price of the Product, repair the Product, or replace the Product with a comparable product utilizing current technology at the time of replacement.

This limited warranty will not apply to loss or damage to the Product caused by: negligence; abuse; misuse; mishandling; improper installation, storage or maintenance; damage due to acts of God or nature; vandalism; civil disturbances; power surges; improper power supply; electrical current fluctuations; corrosive environment installations; unauthorized alteration/repair; accidents; failure to follow installation, operating, maintenance or environmental instructions prescribed by Seller or applicable electrical codes; or improper service of the Product performed by someone other than Seller or its authorized service provider.

This limited warranty includes field labor and service charges exclusively related to the repair or replacement of the Product determined defective, for a period of ONE (1) YEAR from the date of original purchase.

Seller will provide new products or parts in the warranty repair or replacement process, which will be warranted for the remainder of the original warranty period. In order to make a warranty claim, Purchaser must notify Seller in writing within sixty (60) days after discovery of the defect and comply with Seller's other warranty requirements. Upon receiving that notice, Seller may require Purchaser to promptly return the Product to Seller, or its authorized service provider, freight prepaid. Before returning any product, a Returned Material Authorization should be obtained from the Seller, and the RMA # clearly marked on the return packaging. Failure to exercise the above RMA policy and procedures will void all warranty responsibilities on behalf of Affinity LED Light LLC.

The foregoing warranty provisions are exclusive and are given and accepted in lieu of any and all other warranties, whether expressed or implied, including without limitation any warranty against infringement and any implied warranties of merchantability or fitness for a particular purpose. In no event shall Seller be liable or incidental, compensatory, consequential, indirect, special, or other damages. Seller's aggregate liability with respect to a defective product shall in any event be limited to the monies paid to Seller for that defective product. This warranty is effective for purchases of Products on or after the effective date set forth below. Seller reserves the right to modify this warranty from time to time. Any modification of this warranty shall be effective for all orders placed with Seller on or after the effective date of such revised warranty.

Effective Date: Upon Contract / Invoice Date