

MEMORANDUM

TO: City Council
FROM: City Manager
DATE: August 22, 2019
SUBJECT: Comments on Agenda Items, Meeting of August 27, 2019

ITEM 7.A. The Youth and Family Committee will present its Annual Report Card to the City Council.

ITEM 7.B. San Gabriel Valley Humane Society Board President Cindy Rigney will present an overview of animal control and shelter services.

ITEM 7.C. Public Safety Director Brian Villalobos will provide an update on all public safety matters.

ITEM 11.D. (Consent) A proclamation will be presented stating that September 2019 is Childhood Cancer Awareness Month in the City of Duarte. All residents will be encouraged to support organizations and programs that educate and raise awareness about childhood cancer.

ITEM 11.E. (Consent) This item asks the City Council to accept the Las Lomas Sidewalk Repair project as complete, and authorizes the City Clerk to initiate the Notice of Completion. The project consisted of the removal of asphalt and the installation of new 4" sidewalk, curb and gutter, and driveway approaches that have been damaged by tree roots. The scope of work also called for landscape improvements and new trees in the planter area.

ITEM 11.F. (Consent) This is to accept the Citywide Striping and Marking project as complete, and authorize the City Clerk to initiate the Notice of Completion. This project consisted of the replacement of faded and worn traffic control pavement markings such as lane lines, crosswalk markings, stop lines, turn arrows, and other symbols throughout the City. All pavement markings were installed with thermoplastic material which provides retro-reflectivity to meet the needs of motorists, bicyclists, and pedestrians.

ITEM 11.G. (Consent) This item approves the Professional Services Agreement with Peckham & McKenney, Inc., to undertake the recruitment for the new City Manager. It is in the amount of \$27,000, plus costs incurred for printing and advertising.

ITEM 12.A. This is a Public Hearing to consider a resolution amending the schedule of fees and charges for City services relating to permit and license requirements for parking recreational vehicles in the City's right-of-way. The Public Safety Commission, at its regularly scheduled meeting of June 18, 2019, discussed the fee for an overnight RV permit, and unanimously recommended this overnight RV permit fee structure to the City Council. The City Council, at its regularly scheduled meeting of July 9, 2019, agreed with the Public Safety Commission's recommendations, and directed staff to bring back this fee resolution for adoption by Council.

ITEM 12.B. This is a Public Hearing to consider a resolution authorizing the implementation of a City Infrastructure Modernization Program, inclusive of the associated financing agreements. The objectives of the program are to (1) modernize aging energy/building/water infrastructure; (2) complete improvements with costs being covered by utility savings; (3) reduce rising utility costs,

operating expenditures, and piecemeal maintenance costs associated with outdated and/or obsolete equipment; (4) incorporate smart, connected, sustainable technology to improve City livability and services; and (5) create a higher service level for the Duarte community through enhanced street and building lighting, facility heating and cooling, swimming pool heating, etc.

The City will not incur any additional expenditures related to implementing the Infrastructure Modernization Program. The program pays for itself, and provides a positive lifecycle savings from the General Fund over a 15-year period. Also, the Measurement and Verification Agreement with the consultant/contractor, Climatec, provides a contractual guarantee for savings performance to ensure the City is made whole on its investment. If savings are not realized, then Climatec is required to pay the City for the amount of the savings shortfall.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Darrell J. George", with a stylized flourish at the end.

Darrell J. George
City Manager



WE'RE 62 – TRIED AND TRUE!

*As Mayor of the City of Duarte, and on behalf of the
Duarte City Council and staff, I would like to invite you
to join us for an informal celebration of our City's
incorporation in August 1957 to be held on
Tuesday, August 27, 2019*

6:00 to 7:00 p.m.

*Duarte Community Center
1600 Huntington Drive
~ Light Refreshments ~*

*You are also invited to attend our
community celebration on
Saturday, September 28, 2019*

Route 66 Parade – 10:00 a.m. on Huntington Drive

Picnic – 11:00 a.m. – 3:00 p.m.

Royal Oaks Park – 2627 Royal Oaks Drive

Games, Food, Booths, and Entertainment

Mayor Tzeitel Paras-Caracci



MEMORANDUM

TO: Mayor and City Council
FROM: Youth and Family Committee
DATE: August 20, 2019
SUBJECT: Annual Youth and Family Committee Report Card

Annually, the Youth & Family Committee presents City Council, Duarte Unified School District Board of Education, and the community at large with a committee Report Card detailing the progress made during the previous year towards the implementation of the Duarte Youth and Family Master Plan. Composed of 73 Action Steps, the plan is disseminated amongst various community Initiators for implementation and the Committee continuously reviews efforts made to ensure that children and families in our city receive quality services in a safe and supportive environment.

This year's Report Card once again has been designed to be more expansive in its review of the previous year's accomplishments by key Initiators and the committee's goals. A copy of this year's Report Card will be available for public viewing on the City's website-accessduarte.com, in addition to hardcopies being available at select city buildings and community organizations.

MINUTES
CITY COUNCIL OF THE CITY OF DUARTE
SPECIAL MEETING – JULY 30, 2019

CALL TO ORDER	The City Council of the City of Duarte met in a special meeting in the Duarte City Council Chambers, 1600 Huntington Drive, Duarte, California. Mayor Paras-Caracci called the meeting to order at 10:09 a.m.
RECORDATION OF ATTENDANCE	The following were in attendance: PRESENT: Fasana, Finlay, Kang, Lewis, Reilly, Urias, Paras-Caracci ABSENT: None ADMINISTRATIVE STAFF PRESENT: City Manager Darrell George, Assistant City Attorney V. Thai Phan
ADOPTION OF AGENDA	Kang moved, Reilly seconded to adopt the Agenda, and carried unanimously.
PLEDGE TO THE FLAG	Mayor Paras-Caracci led the Pledge of Allegiance to the Flag.
ORAL COMMUNICATIONS	Lupe Valerio, representing SEIU Duarte employees, stated the membership is pleased that outside professional recruitment consultants are being considered, and hopes SEIU leadership and employees are included in the process.
INTERVIEWS WITH CITY MANAGER RECRUITMENT CONSULTANTS	Mayor Paras-Caracci outlined the process that will be followed, and stated HR Dynamics will not be participating in the interview process today. The following consultants were interviewed and presented a brief description of their firms, qualifications, recruitment process, and additional information, answered questions from City Councilmembers, and provided a closing statement. Ralph Andersen & Associates – Fred Wilson Alliance Resource Consulting LLC – Cindy Krebs William Avery & Associates – Bill Avery Peckham & McKenney – Bobbi Peckham
CONSIDERATION OF CONSULTANTS AND POTENTIAL SELECTION	Mayor Paras-Caracci asked if anyone wished to speak on the item. Lupe Valerio thanked City Council for the public setting, discussed the importance of community involvement and surveys, stated there was a concern when Ms. Peckham stated the candidate pool had shrunk, and the union would like to make sure benefits remain competitive for the incoming City Manager. David Myers inquired about skill sets and what the public is looking for, and suggested a possible public input forum could be conducted through email for a week or so. City Councilmembers deliberated on the interviews and proposals submitted for the City Manager Recruitment effort, and offered their preferences.

After further deliberation, Kang moved, Reilly seconded to select Peckham & McKenney, Inc., as the consultant for the City Manager Recruitment process, with staff to prepare a consultant services agreement for City Council approval at a subsequent meeting, and carried unanimously.

ADJOURNMENT

The meeting was adjourned at 12:47 p.m. to the Regular City Council Meeting, August 13, 2019.

Mayor Tzeitel Paras-Caracci

ATTEST:

City Clerk

MINUTES

JOINT CITY COUNCIL/CITY COUNCIL AS SUCCESSOR AGENCY TO DISSOLVED REDEVELOPMENT AGENCY/HOUSING AUTHORITY/COMMUNITY FACILITIES FINANCING AUTHORITY OF THE CITY OF DUARTE REGULAR MEETING – AUGUST 13, 2019

CALL TO ORDER	The City Council/City Council as Successor Agency to Dissolved Redevelopment Agency/Housing Authority/Community Facilities Financing Authority of the City of Duarte met in a regular meeting in the Council Chambers, 1600 Huntington Drive, Duarte, California. Mayor Paras-Caracci called the meeting to order at 7:05 p.m.
RECORDATION OF ATTENDANCE	The following were in attendance: PRESENT: Fasana, Finlay, Lewis, Reilly, Urias, Paras-Caracci ABSENT: Kang ADMINISTRATIVE STAFF PRESENT: City Manager George, City Attorney Cosgrove
ADOPTION OF AGENDA	Reilly moved, Fasana seconded to adopt the Agenda, as amended to remove Item 10.F (Consent Item), and to also adjourn in memory of Officers Andre Moya and Juan Diaz, and carried with Kang absent.
PLEDGE TO THE FLAG	Mayor Paras-Caracci led the Pledge of Allegiance to the Flag.
MOMENT OF REFLECTION	Mayor Paras-Caracci provided a moment of reflection.
FITNESS/MENTAL WARM-UP	Paras-Caracci and Finlay provided the warm-up.
SPECIAL ITEM Mayor's Youth Council update	Faith Peoples and Samantha Martinez provided an update of recent Mayor's Youth Council activities and upcoming Teen Center events.
ANNOUNCEMENTS	Joanna Gee, Duarte Library, announced upcoming programs, story times, events, and classes in August and September. Victoria Rocha announced upcoming community events, activities, meetings, and park programs in August and September.
CONSENT CALENDAR	Finlay moved, Urias seconded to approve the Consent Calendar as follows, and carried with Kang absent. Approve Items A, C, D, G. Remove Items B, E. (Item F was removed during Adoption of the Agenda). It was requested that roll call votes be taken on Items B and E.
ITEMS REMOVED Item B – Warrants	Paras-Caracci inquired about payments for graffiti removal and hotline, tree trimming, street sign maintenance, legal ads, US Bank, and legal services (staff responded). Finlay inquired about holiday decorations, digital door locks, and Climatec (staff responded). Fasana discussed stormwater litigation, and inquired about City Manager hotel charge (staff responded).

Paras-Caracci and Urias stated they would like to tour the South Yard. Paras-Caracci stated at times, some doors to the Community Center are not open when meetings are held, and suggested there be signs directing which door is to be used.

ITEM B – APPROVED

Approval of the warrants dated 8/13/19 carried by the following Roll Call vote:

AYES: Fasana, Lewis, Urias, Reilly, Paras-Caracci

NOES: Finlay

ABSENT: Kang

Item E – Letter opposing SB 592

Cosgrove described revisions made to the letter opposing SB 592.

ITEM E – APPROVED

Approval of the letter of opposition to SB 592 (Weiner) regarding the Housing Accountability Act carried by the following Roll Call vote:

AYES: Fasana, Lewis, Finlay, Urias, Reilly, Paras-Caracci

NOES: None

ABSENT: Kang

ORAL COMMUNICATIONS
(Continued)

The following spoke on items not on the Agenda.
Steve Hernandez – Walmart, Ohio, and Gilroy shootings.

REPORTS/COMMUNICATIONS
FROM COUNCIL/MANAGER/
ATTORNEY

REILLY: Requested a final accounting about the July 3rd event, including sponsorships.

FINLAY: Thanked Supervisor Barger for the meeting, and discussed homelessness.

LEWIS: Thanked Supervisor Barger and staff for addressing his concerns.

FASANA: Appreciated meeting with Supervisor Barger, stated the SGVCOG voted to fund the Metro Gold Line to Pomona, discussed L.A. Times article about balanced energy solutions, and asked for reports regarding National Recreation Area boundaries and vouchers for homeless.

GEORGE: Thanked Supervisor Barger for also attending the COG City Manager's Steering Committee meeting regarding Measure H funding.

COSGROVE: Provided an update on the stormwater litigation hearing.

PARAS-CARACCI: Discussed stormwater litigation, stated the Monrovia City Manager will be going to Huntington Beach, congratulated the Finlays on their anniversary, acknowledged celebrations in August, announced City Hall Selfie Day on 8/15, noted there are a number of projects in the City, and thanked residents trying to come up with solutions for homelessness, and agencies who work with the City.

MEETINGS ATTENDED

In addition to the meetings reported on the Agenda, the following attendance reports were provided:

Reilly – National Night Out, news conference on July 31 at the Fairplex regarding balanced energy.

Lewis – National Night Out.

Paras-Caracci – National Night Out.

ADJOURNMENT

The meeting was adjourned at 8:20 p.m. in memory of John West, Debbi Mulvihill, Officer Andre Moye, Officer Juan Diaz, and those who lost their lives in the many and unfortunate shootings in the recent weeks.

Mayor Tzeitel Paras-Caracci

ATTEST:

City Clerk



City of Duarte

Council Warrant Register Over \$5000

By Payment Number

Payment Dates 081419 - 082719

Payment Number	Payment Date Payable Number	Vendor # Description	Vendor Name	Account Number	Project Account Key	Payment Amount Item Amount
213242	8/27/2019	3889	BRIGHTVIEW LANDSCAPE SERVICES INC			22,264.41
	6430079	Lanscape Maintenance 8/2019		100-1020-7724		115.00
	6430079	Lanscape Maintenance 8/2019		100-1415-7916		1,430.00
	6430079	Lanscape Maintenance 8/2019		100-1825-7945	250016-Oper of Acq Prop-12	41.67
	6430079	Lanscape Maintenance 8/2019		100-1825-7945	990002 - Oper of Acq Prop -	41.67
	6430079	Lanscape Maintenance 8/2019		240-2410-7915		7,500.00
	6430079	Lanscape Maintenance 8/2019		240-2410-7917		4,845.00
	6430079	Lanscape Maintenance 8/2019		240-2410-7917		485.00
	6430079	Lanscape Maintenance 8/2019		240-2420-7914		345.16
	6430079	Lanscape Maintenance 8/2019		240-2421-7914		1,300.00
	6430079	Lanscape Maintenance 8/2019		240-2422-7914		480.58
	6430079	Lanscape Maintenance 8/2019		240-2423-7914		900.00
	6430079	Lanscape Maintenance 8/2019		240-2424-7914		550.00
	6430079	Lanscape Maintenance 8/2019		240-2425-7914		400.00
	6430079	Lanscape Maintenance 8/2019		240-2426-7914		180.00
	6430079	Lanscape Maintenance 8/2019		240-2427-7914		630.33
	6430079	Lanscape Maintenance 8/2019		240-2431-7914		800.00
	6430079	Lanscape Maintenance 8/2019		240-2432-7914		835.00
	6430079	Lanscape Maintenance 8/2019		240-2433-7914		530.00
	6430079	Lanscape Maintenance 8/2019		240-2434-7914		355.00
	6430079	Lanscape Maintenance 8/2019		240-2435-7914		500.00
213249	8/27/2019	5120	CHARLES ABBOTT ASSOCIATES INC			23,987.64
	59898	Building & Safety Svcs 7/2019		100-1405-7800		23,987.64
213252	8/27/2019	5801	COMMUNITY MEDIA OF THE FOOTHILLS			12,250.00
	408	Public Access 7/1/2019 - 12/31/2019		100-1020-7720		12,250.00
213261	8/27/2019	5873	ELIE FARAH INC			14,025.00
	81819	FY20 Street Rehab Design		220-2225-8100		14,025.00
213266	8/27/2019	3192	FOOTHILL TRANSIT			7,067.36
	F2802-082019	5th Installment of 3rd Bus 8/2019		440-4405-8013		7,067.36
213282	8/27/2019	6106	CITY OF IRWINDALE			6,350.00
	2019-COD-001	Measure H (Homeless Initiative)		100-1205-7760	201826-Homelss Outreach	6,350.00
213284	8/27/2019	T4019	KIRKLEY CORPORATION INC			6,000.00
	R1338	Construction/Demo Deposit Refund		100-2126		6,000.00
213291	8/27/2019	0056	LOS ANGELES COUNTY SHERIFF'S DEPARTMENT			343,787.53
	194361CY	Sheriff Contract 6/2019		100-1205-7781		307,265.48
	194361CY	Sheriff Contract 6/2019		100-1205-7781	201904-Contract Law-Tobacc	16,522.05
	194361CY	Sheriff Contract 6/2019		290-2905-7781		10,000.00
	194361CY	Sheriff Contract 6/2019		290-2905-7785		10,000.00
213300	8/27/2019	4411	MONROVIA UNIFIED SCHOOL DISTRICT			5,037.00
	8310	Summer Day Camp Transportation		100-1605-7750		5,037.00
213302	8/27/2019	5454	MOORE IACOFANO GOLTSMAN INC			52,142.87
	0060181	Duarte Station Specific Plan/EIR 7/20		100-2121	201915-Duarte Station Speci	52,142.87
213307	8/27/2019	6105	PECKHAM & MCKENNEY			9,000.00
	#1	City Manager Recruitment (Pmt 1 of		100-1810-7671		9,000.00

Council Warrant Register Over \$5000

Payment Dates: 081419 - 082719

Payment Number	Payment Date Payable Number	Vendor # Description	Vendor Name	Account Number	Project Account Key	Payment Amount Item Amount
213315	8/27/2019 TS-10963	6097 Citywide Street Name Sign Project-Ph	SAFETY NETWORK TRAFFIC SIGNS	475-4750-8100		112,262.02 112,262.02
213316	8/27/2019 6936	0288 Membership Fees 9/1/19 - 8/31/20	SAN GABRIEL VALLEY ECONOMIC PARTNERSHIP	100-1025-7700		5,250.00 5,250.00
213317	8/27/2019 8-2019D	6088 Animal Shelter Services 8/2019	SAN GABRIEL VALLEY HUMANE SOCIETY	100-1205-7780		5,166.67 5,166.67
213330	8/27/2019 81319	3661 Citation Revenue Tax 7/2019	SUPERIOR CT OF CAL CO OF LOS ANGELES	100-1205-7761		7,415.50 7,415.50
213338	8/27/2019	1521	WEST COAST ARBORISTS INC			26,450.00
	150069	Tree Trimming		100-1415-7907		4,388.00
	150069	Tree Trimming		240-2410-7906		4,902.00
	150069	Tree Trimming		240-2410-7909		6,558.00
	150638	Citywide Tree Trimming		100-1415-7907		145.00
	150638	Citywide Tree Trimming		240-2410-7906		1,013.00
	150638	Citywide Tree Trimming		240-2410-7909		9,444.00
Payment Total:						658,456.00

Report Summary**Fund Summary**

Fund	Payment Amount
100 - GENERAL FUND	462,548.55
220 - GAS TAX FUN	14,025.00
240 - LIGHTING AND LANDSCAPE DISTRICT FUND	42,553.07
290 - SUPPLEMENTAL LAW ENFORCEMENT FUND	20,000.00
440 - PROPOSITION A TRANSIT FUND	7,067.36
475 - Transit - Measure M	112,262.02
Grand Total:	658,456.00

Account Summary

Account Number	Account Name	Payment Amount
100-1020-7720	DCTV	12,250.00
100-1020-7724	Post Office Parking	115.00
100-1025-7700	SGV Econ Partnership	5,250.00
100-1205-7760	Homeless Outreach Prog	6,350.00
100-1205-7761	Parking Ticket Collect	7,415.50
100-1205-7780	Animal Control	5,166.67
100-1205-7781	Contract Law Enforceme	323,787.53
100-1405-7800	Building Department Ser	23,987.64
100-1415-7907	Tree Trim-Sports Park	4,533.00
100-1415-7916	Landscape-Sport Park	1,430.00
100-1605-7750	Bus Rentals	5,037.00
100-1810-7671	Recruiting Advertisemen	9,000.00
100-1825-7945	Operation Of Acq Prop	83.34
100-2121	Pass Through Deposits	52,142.87
100-2126	Construction and Demol	6,000.00
220-2225-8100	Other Capital Improvem	14,025.00
240-2410-7906	Tree Trim-Citywide	5,915.00
240-2410-7909	Tree Trim-Residential	16,002.00
240-2410-7915	Landscape-Citywide	7,500.00
240-2410-7917	Landscape-Medians	5,330.00
240-2420-7914	Landscape Maintenance	345.16
240-2421-7914	Landscape Maintenance	1,300.00
240-2422-7914	Landscape Maintenance	480.58
240-2423-7914	Landscape Maintenance	900.00
240-2424-7914	Landscape Maintenance	550.00
240-2425-7914	Landscape Maintenance	400.00
240-2426-7914	Landscape Maintenance	180.00
240-2427-7914	Landscape Maintenance	630.33
240-2431-7914	Landscape Maintenance	800.00
240-2432-7914	Landscape Maintenance	835.00
240-2433-7914	Landscape Maintenance	530.00
240-2434-7914	Landscape Maintenance	355.00
240-2435-7914	Landscape Maintenance	500.00
290-2905-7781	Contract Law Enforceme	10,000.00
290-2905-7785	Special Events Patrol	10,000.00
440-4405-8013	Vehicles (Capital)	7,067.36
475-4750-8100	Other Capital Improvem	112,262.02
Grand Total:		658,456.00

Project Account Summary

Project Account Key	Payment Amount
None	583,357.74
201826-Homeless Outreach	6,350.00
201904-Contract Law-Tobacco Grant	16,522.05
201915-Duarte Station Specific Plan-Expense	52,142.87
250016-Oper of Acq Prop-1229 Pops Road	41.67

Project Account Summary

Project Account Key	Payment Amount
990002 - Oper of Acq Prop - Duarte Trailer Park	41.67
Grand Total:	<u>658,456.00</u>



City of Duarte

Council Warrant Register by Account

By Fund

Payment Dates 081419 - 082719

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 100 - GENERAL FUND					
100-1005-7614	J & J SPORTS & TROPHIES	Council Polo Shirts	26613		107.31
100-1005-7980	CURO MANAGED PRINT PROD	Councilmember Lewis Portrait	3462		32.85
100-1010-7003	GOVERNMENT STAFFING SER	Part-Time Receptionist 6/10/1	129349		2,527.00
100-1010-7003	GOVERNMENT STAFFING SER	Part-Time Receptionist 7/22/1	129419		2,432.00
100-1010-7003	GOVERNMENT STAFFING SER	Part-Time Receptionist 8/5/19	129441		2,360.00
100-1010-7685	GRANICUS INC	Website Hosting 10/1/19 - 12	116163		2,861.25
100-1010-7980	SHAFFER AWARDS	Employee Plaques	5161		50.72
100-1015-7684	SILVER & WRIGHT LLP	1939 Wardell Legal 7/2019	25823		174.40
100-1015-7684	SILVER & WRIGHT LLP	Arberry Legal 7/2019	25823		276.70
100-1015-7684	SILVER & WRIGHT LLP	2026 Broadland Legal 7/2019	25823		2,855.04
100-1015-7684	SILVER & WRIGHT LLP	1001 Las Lomas Legal 7/2019	25823		1,220.10
100-1015-7686	COLANTUONO, HIGHSMITH &	Revenue Measure Legal Svcs	39673		140.00
100-1020-7720	COMMUNITY MEDIA OF THE	Public Access 7/1/2019 - 12/3	408		12,250.00
100-1020-7722	GRANICUS INC	Civica Hosting (Website) 8/19	116517		706.20
100-1020-7722	MONSIDO INC	Web & Accessibility Complian	INV-17904		2,400.00
100-1020-7724	BRIGHTVIEW LANDSCAPE SER	Landscape Maintenance 8/201	6430079		115.00
100-1025-7700	SAN GABRIEL VALLEY ECONO	Membership Fees 9/1/19 - 8/	6936		5,250.00
100-1025-7705	LOS ANGELES COUNTY AUDIT	LAFCO Fees FY20	7172019		585.56
100-1205-7610	DUARTE PUBLIC SAFETY PETT	Training Parking	080719		13.00
100-1205-7614	DUARTE PUBLIC SAFETY PETT	Office Supplies	080719		70.06
100-1205-7650	DUARTE PUBLIC SAFETY PETT	Vehicle 35 Carwash	080719		9.00
100-1205-7650	MOUNTAIN VIEW TIRE & SER	Vehicle 34 Tires	229915		789.48
100-1205-7650	ADVANTAGE FORD LINCOLN	Vehicle 27 Service	458762/1		48.93
100-1205-7655	THOMSON REUTERS-WEST PU	Emergency Software 7/1/19 -	840714517		158.93
100-1205-7760	CITY OF IRWINDALE	Measure H (Homeless Initiativ	2019-COD-001	201826-Homeless Outreach	6,350.00
100-1205-7761	SUPERIOR CT OF CAL CO OF L	Citation Revenue Tax 7/2019	81319		7,415.50
100-1205-7762	CALE AMERICA	WTP App Fees 7/2019	155432		268.25
100-1205-7779	AIDA TORRES	Nat'l Night Out Supplies	8122019		9.31
100-1205-7779	SWANK MOTION PICTURES IN	Nat'l Night Out Movie (Captai	DB 2715722		218.00
100-1205-7780	D & D SERVICES INC	Deceased Ainal Disposal 7/2	73059		316.80
100-1205-7780	SAN GABRIEL VALLEY HUMAN	Animal Shelter Services 8/201	8-2019D		5,166.67
100-1205-7781	LOS ANGELES COUNTY SHERIF	Sheriff Contract 6/2019	194361CY	201904-Contract Law-Tobacco	16,522.05
100-1205-7781	LOS ANGELES COUNTY SHERIF	Sheriff Contract 6/2019	194361CY		307,265.48
100-1205-7980	CURO MANAGED PRINT PROD	Tobacco Control Education Ev	3452	201904-Other Exp-Tobacco Gr	1,478.25
100-1205-7980	FSP DESIGNS	Youth Tobacco Program Shirts	6090	201904-Other Exp-Tobacco Gr	471.15
100-1205-7980	AIDA TORRES	NNO (Ray Quintero) 12 Tables	8122019		76.00
100-1405-7613	RICOH USA INC	Lg Format Copier Maint 8/1/1	5057260014		74.14
100-1405-7614	STAPLES ADVANTAGE	Credit for Invoice # 34195703	3420264084		-16.41
100-1405-7614	STAPLES ADVANTAGE	Office Supplies	3421055938		70.34
100-1405-7614	STAPLES ADVANTAGE	Office Supplies	3421633396		64.04
100-1405-7614	STAPLES ADVANTAGE	Office Supplies	3422143833		90.05
100-1405-7690	SARA VASQUEZ	Planning Commission Meetin	6/17/2019		50.00
100-1405-7690	PAULA WATSON-GARDNER	Planning Commission Meetin	6/17/2019		50.00
100-1405-7690	GEORGE K FARRA	Planning Commission Meetin	6/17/2019		50.00
100-1405-7690	TINA HEANY	Planning Commission Meetin	6/17/2019		50.00
100-1405-7800	CHARLES ABBOTT ASSOCIATES	Building & Safety Svcs 7/201	59898		23,987.64
100-1405-7965	BUCKNAM INFRASTRUCTURE	GIS Upgrade	352-02.07	201935-Prof Svcs-GIS Upgrad	3,672.50
100-1410-7650	LA MOBO BUS SERVICE INC	Vehicle 3 Brake Module Conn	8782		343.87
100-1410-7650	LA MOBO BUS SERVICE INC	Vehicle 3 Batteries (3)	8795		586.13
100-1410-7650	LA MOBO BUS SERVICE INC	Vehicle 15 Lift Gate Module A	8796		666.90
100-1410-7656	SUNWEST ENGINEERING	Underground Fuel Tank Inspe	190617-090		145.00
100-1410-7656	LOS ANGELES COUNTY FIRE D	FY20 Underground Fuel Tank	IN0304437		2,211.00
100-1410-7814	SUPERIOR PROPERTY SERVICE	Citywide Graffiti Removal 7/2	16012		371.30

Council Warrant Register by Account

Payment Dates: 081419 - 082719

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
100-1410-7815	GEORGE AND ELIZABETH L GO	Commencement Fee-Brush Cl	7282019		2,500.00
100-1410-7980	COUNTY SANITATION DISTRIC	City Yard Wastewater Treatme	1968650-80719		3,914.35
100-1410-8030	GARVEY EQUIPMENT COMPA	Small Equipment Replacemen	121322		2,795.92
100-1415-7907	WEST COAST ARBORISTS INC	Tree Trimming	150069		4,388.00
100-1415-7907	WEST COAST ARBORISTS INC	Citywide Tree Trimming	150638		145.00
100-1415-7916	BRIGHTVIEW LANDSCAPE SER	Landscape Maintenance 8/201	6430079		1,430.00
100-1500	MARILYN MAYS	Adv-Hip Hop Int'l Ck 212983	8/2019		-480.00
100-1605-7614	STAPLES ADVANTAGE	Office Supplies	3420860599		63.36
100-1605-7614	STAPLES ADVANTAGE	Office Supplies	3422143832		58.20
100-1605-7728	CALIFORNIA STATE DEPARTME	Fingerprint Apps 7/2019	394055	201909- Duarte's Promise - A	47.00
100-1605-7730	DUARTE UNIFIED SCHOOL DIS	Touch A Truck Event Meals	2458		210.00
100-1605-7730	DUARTE PIZZA COMPANY	Movie Night Pizza	469579		86.72
100-1605-7730	SMART & FINAL	Movie Night Supplies	58133		54.43
100-1605-7733	BOTANICA FLORIST	SC Garden Party 8/20/19	43469		65.70
100-1605-7733	SMART & FINAL	SC Vinyl Party Desserts	47231		92.97
100-1605-7733	SMART & FINAL	SC Vinyl Party Supplies	57659		30.93
100-1605-7733	SMART & FINAL	SC Vinyl Party Supplies	58068		5.78
100-1605-7733	SMART & FINAL	SC Vinyl Party Supplies	58496		6.55
100-1605-7733	SMART & FINAL	SC Vinyl Party Supplies	58539		17.98
100-1605-7733	BEN RUSHING	SC Entertainment	8/28/2019		125.00
100-1605-7733	ABRAHAM MARTINEZ	SC Lunch Lounge Entertainme	8/8/2019		105.00
100-1605-7733	DUARTE RECREATION PETTY C	SC Decorating Supplies	8152019		93.11
100-1605-7735	DUARTE PIZZA COMPANY	TC Boys Night Out	469582		41.64
100-1605-7735	FSP DESIGNS	TC Dance/Route 66/Misc Even	6048		490.32
100-1605-7735	MARILYN MAYS	Hip Hop Int'l Expense Reimb	8/2019		551.40
100-1605-7735	MIGUEL VEGA	TC Boxing Show/BBQ DJ	8152019		150.00
100-1605-7736	ALEJANDRO FUENTES	Instructor Fee-Circus Gymnas	82019		472.50
100-1605-7738	DUARTE RECREATION PETTY C	TC Event Parking	8152019		4.00
100-1605-7739	THE SAUCE CREATIVE SERVICE	Youth Sports Flyers	3629		777.25
100-1605-7740	DUARTE RECREATION PETTY C	Adventure Club Drinks	8152019		11.96
100-1605-7741	RALPHS GROCERY COMPANY	Summer Park Supplies	112562		76.26
100-1605-7741	RALPHS GROCERY COMPANY	Summer Park Supplies	114000		94.57
100-1605-7741	SMART & FINAL	Summer Playground Supplies	35803		21.89
100-1605-7741	SMART & FINAL	Summer Supplies	58434		22.10
100-1605-7741	SMART & FINAL	Summer Playground Supplies	58495		19.32
100-1605-7741	SMART & FINAL	Summer Supplies	64496		27.98
100-1605-7741	DUARTE RECREATION PETTY C	Day Camp Buckets	8152019		6.57
100-1605-7744	THE SAUCE CREATIVE SERVICE	Summer Health Camp T-Shirts	3598		695.98
100-1605-7744	SAMANTHA MARTINEZ	Teen Nutrition Council	8/2019		100.00
100-1605-7744	PEDRO RODRIGUEZ	Teen Nutrition Council	8/2019		100.00
100-1605-7744	BRYAN GARCIA	Teen Nutrition Council	8/2019		100.00
100-1605-7744	SARAH DOWIRI	Teen Nutrition Council	8/2019		100.00
100-1605-7744	DALYLAH SANDOVAL	Teen Nutrition Council	8/2019		100.00
100-1605-7744	YVETTE RODRIGUEZ	Teen Nutrition Council	8/2019		100.00
100-1605-7744	ELAYSSA AQUINO	Teen Nutrition Council	8/2019-TNC		100.00
100-1605-7744	OLGALIVIER GARCIA	Teen Nutrition Council	8/2019-TNC		100.00
100-1605-7745	SIMON EQUIPMENT RENTALS	TC Boxing Show Fans	105373		106.91
100-1605-7745	STEVE HARRIMAN	TC 2019 Boxing Show Belts/M	8172019		1,378.12
100-1605-7750	MONROVIA UNIFIED SCHOOL	Summer Day Camp Transport	8310		5,037.00
100-1605-7980	J & J SPORTS & TROPHIES	Swim Team Medals	26589		300.58
100-1605-7980	DUARTE PIZZA COMPANY	Swim Team Banquet	469581		285.05
100-1605-7980	SCMAF-SAN GABRIEL VALLEY	Swim Team Entries	SW2019DUARTE		1,294.00
100-1610-7617	FULLER ENGINEERING INC	Pool Chemicals	139105		630.17
100-1610-7618	MONROVIA LOCK SHOP	Public Safety Keys	23174		339.45
100-1610-7618	LA PLUMBING SUPPLY INC	Plumbing Supplies	232225		416.84
100-1610-7618	SMART & FINAL	SC Coffee Supplies	47232		368.69
100-1610-7618	MAINTEX INC	Janitorial Supplies	729027-02		159.21
100-1610-7618	MAINTEX INC	Janitorial Supplies	731626-00		1,184.35
100-1610-7618	MAINTEX INC	Janitorial Supplies	731631-00		326.96
100-1610-7618	MAINTEX INC	Janitorial Supplies	732233-00		31.98

Council Warrant Register by Account

Payment Dates: 081419 - 082719

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
100-1610-7618	MAINTEX INC	Janitorial Supplies	733739-00		496.74
100-1610-7618	DUARTE RECREATION PETTY C	SC Coffee Supplies	8152019		50.20
100-1610-7636	CINTAS CORPORATION #693	Facility Maintenance Uniform	4027349420		35.00
100-1610-7652	POST ALARM SYSTEMS	Yard Alarm Monitoring 9/1/19	1189238		43.26
100-1610-7652	EAGLE PORTABLES INC	July 3rd Portable Restroom/Si	14072		645.00
100-1610-7652	ACCO ENGINEERED SYSTEMS	City Hall A/C Troubleshooting	1781224		594.00
100-1610-7652	FAITH FIRE EXTINGUISHER & S	CC Semi Annual Fire Suppressi	3753		176.29
100-1610-7652	EXECUTIVE ELEVATOR INC	SC Elevator Maintenance 7/20	86068		135.00
100-1810-7660	CALIFORNIA STATE DEPARTME	Fingerprint Apps 7/2019	394055		32.00
100-1810-7671	PECKHAM & MCKENNEY	City Manager Recruitment (P	#1		9,000.00
100-1810-7673	BDA MORNEAU SHEPELL	Drug and/or Alcohol Testing 4	1018629		55.00
100-1825-7613	CANON SOLUTIONS AMERICA	Copier Paper	146504342		464.55
100-1825-7614	HOLIDAY SIGNS LLC	Holiday Signs	13744		55.00
100-1825-7614	NEOPOST USA INC	Postage Machine Ink	15817003		196.79
100-1825-7626	FEDEX	Document Delivery	6-701-57861		79.32
100-1825-7630	CANON FINANCIAL SERVICES I	PS Copier Lease 8/1/19 - 8/31	20405775		399.67
100-1825-7630	CANON FINANCIAL SERVICES I	CH (2)/SC/TC Copier Lease 8/	20432701		869.55
100-1825-7631	CANON FINANCIAL SERVICES I	PS Copier Maintenance 7/1/1	20405775		125.55
100-1825-7945	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079	990002 - Oper of Acq Prop - D	41.67
100-1825-7945	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079	250016-Oper of Acq Prop-122	41.67
100-2023	LUZ YESENIA PAEZ	City Kitty Baby Gift	8/12/2019		50.00
100-2023	TONY HADLOC	City Kitty Baby Gift	8/4/2019		50.00
100-2026	FRANCISCA SANCHEZ	Equipment Deposit Refund	081419		25.00
100-2120	MC CONSTRUCTION	Pool Construction Deposit Ref	R1762		500.00
100-2120	MARLEEN NARANJO	CC Rent Deposit Refund	R1985		500.00
100-2120	MARILYN GARCIA	Pool Rent Deposit Refund	R2276		200.00
100-2120	YOLANDA SEGURA	CC Rent Deposit Refund	R80422		500.00
100-2120	JOSE ZAMARRIPA	Sports Field Rent Deposit Ref	R80469		100.00
100-2120	JACINTO MACIAS	Pool Rent Deposit Refund	R80598		200.00
100-2120	CHRISTY BALDERRAMA	CC Rent Deposit Refund	R80723		500.00
100-2120	CHERYL GIL	Pool Rent Deposit Refund	R81016		200.00
100-2121	MOORE IACOFANO GOLTSMA	Duarte Station Specific Plan/E	0060181	201915-Duarte Station Specifi	52,142.87
100-2121	ROGER A CATHEY	RAC Retirement Party	8/17/2019	202006-Pass Through - RAC R	400.00
100-2125	REGIONAL TAP SERVICE CENT	Tap Cards Sales	6010313		188.00
100-2126	KIRKLEY CORPORATION INC	Construction/Demo Deposit R	R1338		6,000.00
100-4302	KENT LAURENCE SCHMEDES	Citation Refund	DU020006403		60.00
100-4302	AMERICA LOPEZ	Citation Refund	DU020006520		73.00
100-4402	YOLANDA SEGURA	Extra Floor Cleaning	R80422		-92.00
100-4808	LUISANA MARQUEZ	Swim Lesson Refund	2000250.004		42.30
				Fund 100 - GENERAL FUND Total:	522,511.97

Council Warrant Register by Account

Payment Dates: 081419 - 082719

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 220 - GAS TAX FUN					
220-2225-8100	ELIE FARAH INC	FY20 Street Rehab Design	81819		14,025.00
				Fund 220 - GAS TAX FUN Total:	14,025.00

Council Warrant Register by Account

Payment Dates: 081419 - 082719

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 240 - LIGHTING AND LANDSCAPE DISTRICT FUND					
240-2410-7888	LANDSCAPE WAREHOUSE INC	Citywide Irrigation Repair	4125882		414.11
240-2410-7888	LANDSCAPE WAREHOUSE INC	Royal Oaks Park/Trail Irrigatio	4126166		1,112.18
240-2410-7888	SITEONE LANDSCAPE SUPPLY	Citywide Irrigation Repairs (En	93395519-001		629.98
240-2410-7888	SITEONE LANDSCAPE SUPPLY	Hacienda Park Irrigation Repai	93556350-001		222.53
240-2410-7891	LANDSCAPE WAREHOUSE INC	Return-Huntington Dr Median	4125890		-16.20
240-2410-7906	WEST COAST ARBORISTS INC	Tree Trimming	150069		4,902.00
240-2410-7906	WEST COAST ARBORISTS INC	Citywide Tree Trimming	150638		1,013.00
240-2410-7909	WEST COAST ARBORISTS INC	Tree Trimming	150069		6,558.00
240-2410-7909	WEST COAST ARBORISTS INC	Citywide Tree Trimming	150638		9,444.00
240-2410-7915	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		7,500.00
240-2410-7917	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		4,845.00
240-2410-7917	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		485.00
240-2420-7887	SITEONE LANDSCAPE SUPPLY	Kendrick LLD Irrigation Repair	93083203-001		28.36
240-2420-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		345.16
240-2421-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		1,300.00
240-2422-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		480.58
240-2423-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		900.00
240-2424-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		550.00
240-2425-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		400.00
240-2426-7887	LANDSCAPE WAREHOUSE INC	Grocery Outlet Ctr Irrigation R	4125530		78.71
240-2426-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		180.00
240-2427-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		630.33
240-2431-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		800.00
240-2432-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		835.00
240-2433-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		530.00
240-2434-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		355.00
240-2435-7914	BRIGHTVIEW LANDSCAPE SER	Lanscape Maintenance 8/201	6430079		500.00
Fund 240 - LIGHTING AND LANDSCAPE DISTRICT FUND Total:					45,022.74

Council Warrant Register by Account

Payment Dates: 081419 - 082719

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 290 - SUPPLEMENTAL LAW ENFORCEMENT FUND					
290-2905-7781	LOS ANGELES COUNTY SHERIF	Sheriff Contract 6/2019	194361CY		10,000.00
290-2905-7785	LOS ANGELES COUNTY SHERIF	Sheriff Contract 6/2019	194361CY		10,000.00
Fund 290 - SUPPLEMENTAL LAW ENFORCEMENT FUND Total:					20,000.00

Council Warrant Register by Account

Payment Dates: 081419 - 082719

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 440 - PROPOSITION A TRANSIT FUND					
440-4405-8013	FOOTHILL TRANSIT	5th Installment of 3rd Bus 8/2	F2802-082019		7,067.36
Fund 440 - PROPOSITION A TRANSIT FUND Total:					7,067.36

Council Warrant Register by Account

Payment Dates: 081419 - 082719

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 470 - MEASURE R LR TRANSIT FUND					
470-4705-8060	ACOSTA GROWERS INC	Las Lomas Sidewalk Project	45061		427.05
470-4705-8060	CAL BLEND SOILS INC	Las Lomas Siewalk Project	68169		569.40
470-4705-8060	SITEONE LANDSCAPE SUPPLY	Las Lomas Sidewalk Project	93209969-001		914.65
Fund 470 - MEASURE R LR TRANSIT FUND Total:					1,911.10

Council Warrant Register by Account

Payment Dates: 081419 - 082719

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 475 - Transit - Measure M					
475-4750-8100	SAFETY NETWORK TRAFFIC SI	Citywide Street Name Sign Pr	TS-10963		112,262.02
Fund 475 - Transit - Measure M Total:					112,262.02
Grand Total:					722,800.19

Report Summary

Fund Summary

Fund	Payment Amount
100 - GENERAL FUND	522,511.97
220 - GAS TAX FUN	14,025.00
240 - LIGHTING AND LANDSCAPE DISTRICT FUND	45,022.74
290 - SUPPLEMENTAL LAW ENFORCEMENT FUND	20,000.00
440 - PROPOSITION A TRANSIT FUND	7,067.36
470 - MEASURE R LR TRANSIT FUND	1,911.10
475 - Transit - Measure M	112,262.02
Grand Total:	722,800.19

Account Summary

Account Number	Account Name	Payment Amount
100-1005-7614	Office Supplies	107.31
100-1005-7980	Other Expenses	32.85
100-1010-7003	Part-Time/Temp Salaries	7,319.00
100-1010-7685	Content Delivery, Netwo	2,861.25
100-1010-7980	Other Expenses	50.72
100-1015-7684	Code Enforcement Legal	4,526.24
100-1015-7686	Other Legal Services	140.00
100-1020-7720	DCTV	12,250.00
100-1020-7722	City Web Site	3,106.20
100-1020-7724	Post Office Parking	115.00
100-1025-7700	SGV Econ Partnership	5,250.00
100-1025-7705	LAFCO Membership	585.56
100-1205-7610	Travel, Mtgs & Conf	13.00
100-1205-7614	Office Supplies	70.06
100-1205-7650	Vehicle Maintenance	847.41
100-1205-7655	Emergency Services	158.93
100-1205-7760	Homeless Outreach Prog	6,350.00
100-1205-7761	Parking Ticket Collect	7,415.50
100-1205-7762	Parking Pass Kiosk Costs	268.25
100-1205-7779	Youth Programs	227.31
100-1205-7780	Animal Control	5,483.47
100-1205-7781	Contract Law Enforceme	323,787.53
100-1205-7980	Other Expenses	2,025.40
100-1405-7613	Duplications And Photos	74.14
100-1405-7614	Office Supplies	208.02
100-1405-7690	Planning Commission	200.00
100-1405-7800	Building Department Ser	23,987.64
100-1405-7965	Professional Services	3,672.50
100-1410-7650	Vehicle Maintenance	1,596.90
100-1410-7656	Emergency Generator	2,356.00
100-1410-7814	Graffiti Removal	371.30
100-1410-7815	Brush Clearance	2,500.00
100-1410-7980	Other Expenses	3,914.35
100-1410-8030	Other Equipment (Capit	2,795.92
100-1415-7907	Tree Trim-Sports Park	4,533.00
100-1415-7916	Landscape-Sport Park	1,430.00
100-1500	Advances	-480.00
100-1605-7614	Office Supplies	121.56
100-1605-7728	Americorp's VIP Progra	47.00
100-1605-7730	Special Events	351.15
100-1605-7733	Senior Center	543.02
100-1605-7735	Teen Center	1,233.36
100-1605-7736	Recreation Classes	472.50
100-1605-7738	Teen Excursions	4.00
100-1605-7739	Publicity	777.25
100-1605-7740	Youth Excursions	11.96

Account Summary

Account Number	Account Name	Payment Amount
100-1605-7741	Sports/Playground Progr	268.69
100-1605-7744	Nutrition Program Costs	1,495.98
100-1605-7745	Boxing Program	1,485.03
100-1605-7750	Bus Rentals	5,037.00
100-1605-7980	Other Expenses	1,879.63
100-1610-7617	Pool Chemicals	630.17
100-1610-7618	Building Supplies	3,374.42
100-1610-7636	Uniforms	35.00
100-1610-7652	Building Maint Services	1,593.55
100-1810-7660	Other Services	32.00
100-1810-7671	Recruiting Advertisemen	9,000.00
100-1810-7673	Physical Exams	55.00
100-1825-7613	Duplications And Photos	464.55
100-1825-7614	Office Supplies	251.79
100-1825-7626	Postage	79.32
100-1825-7630	Equipment Lease	1,269.22
100-1825-7631	Equipment Maintenance	125.55
100-1825-7945	Operation Of Acq Prop	83.34
100-2023	EE City Kitty Contributio	100.00
100-2026	EE Equipment Deposit	25.00
100-2120	Refundable Deposits	2,700.00
100-2121	Pass Through Deposits	52,542.87
100-2125	Metro Pass Through (TA	188.00
100-2126	Construction and Demol	6,000.00
100-4302	Parking Citations	133.00
100-4402	Community Center Rent	-92.00
100-4808	Swim Lesson Fees	42.30
220-2225-8100	Other Capital Improvem	14,025.00
240-2410-7888	Repairs-Citywide	2,378.80
240-2410-7891	Repairs-Medians	-16.20
240-2410-7906	Tree Trim-Citywide	5,915.00
240-2410-7909	Tree Trim-Residential	16,002.00
240-2410-7915	Landscape-Citywide	7,500.00
240-2410-7917	Landscape-Medians	5,330.00
240-2420-7887	Repairs & Replacements	28.36
240-2420-7914	Landscape Maintenance	345.16
240-2421-7914	Landscape Maintenance	1,300.00
240-2422-7914	Landscape Maintenance	480.58
240-2423-7914	Landscape Maintenance	900.00
240-2424-7914	Landscape Maintenance	550.00
240-2425-7914	Landscape Maintenance	400.00
240-2426-7887	Repairs & Replacements	78.71
240-2426-7914	Landscape Maintenance	180.00
240-2427-7914	Landscape Maintenance	630.33
240-2431-7914	Landscape Maintenance	800.00
240-2432-7914	Landscape Maintenance	835.00
240-2433-7914	Landscape Maintenance	530.00
240-2434-7914	Landscape Maintenance	355.00
240-2435-7914	Landscape Maintenance	500.00
290-2905-7781	Contract Law Enforceme	10,000.00
290-2905-7785	Special Events Patrol	10,000.00
440-4405-8013	Vehicles (Capital)	7,067.36
470-4705-8060	Sidewalk/Concrete Repa	1,911.10
475-4750-8100	Other Capital Improvem	112,262.02
Grand Total:		<u>722,800.19</u>

Project Account Summary

Project Account Key	Payment Amount
None	641,633.03
201826-Homelss Outreach	6,350.00
201904-Contract Law-Tobacco Grant	16,522.05
201904-Other Exp-Tobacco Grant	1,949.40
201909- Duarte's Promise - America's Promise Exp	47.00
201915-Duarte Station Specific Plan-Expense	52,142.87
201935-Prof Svcs-GIS Upgrade	3,672.50
202006-Pass Through - RAC Retirement	400.00
250016-Oper of Acq Prop-1229 Pops Road	41.67
990002 - Oper of Acq Prop - Duarte Trailer Park	41.67
Grand Total:	722,800.19



Proclamation

CHILDHOOD CANCER AWARENESS MONTH

WHEREAS, cancer in children is the leading cause of death by disease among youth in the United States between infancy and age 15, and is detected in more than 16,000 young people each year; and

WHEREAS, one in five of our nation's children loses his or her battle with cancer, and many youth will suffer from long-term effects of comprehensive treatment, including secondary cancers; and

WHEREAS, a major part of helping children with cancer is to make their situation known, and to enhance the quality of life for these children and their families; and

WHEREAS, philanthropic organizations, healthcare professionals, social support organizations, researchers, and parent advocacy groups throughout the United States are dedicated to raising awareness about the unique needs of children facing cancer; and

WHEREAS, the American Cancer Fund for Children, Inc., and Kids Cancer Connection are two organizations that are dedicated to helping these children and their families, and provide a variety of vital patient services to children undergoing cancer treatment at a number of participating hospitals, including the City of Hope National Medical Center in Duarte; and

WHEREAS, programs such as the American Cancer Fund for Children and Kids Cancer Connection sponsor toy distributions, educational programs, family sailing programs, the KCC Supercar Experience, pet-assisted therapy, and hospital celebrations in honor of a child's determination and bravery to fight the battle against childhood cancer;

NOW, THEREFORE, BE IT RESOLVED that the City of Duarte hereby proclaims September 2019 as CHILDHOOD CANCER AWARENESS MONTH in the City of Duarte, and encourages all residents to support the organizations and programs that educate and raise awareness about childhood cancer, and to reaffirm our commitment to fighting childhood cancer.

ATTEST:

City Clerk Marla Akana
Duarte, California

August 27, 2019



Mayor Tzeitel Paras-Caracci

Dear Mayor Paras-Caracci, Mayor Pro Tem Kang, Council Members and staff,

I hope you are doing well. I am writing to request a proclamation recognizing September as Childhood Cancer Awareness Month in Duarte. Cancer is the leading cause of death by disease among children in our nation today. This tragic disease is detected in more than 16,000 of our country's young people each and every year. I am truly grateful for Duarte's many years of support...and yours.

I will continue to coordinate activities including our popular toy distributions and other hospital functions at The City of Hope National Medical Center among other facilities. I've included sample text below for your reference.

(*) May we please receive a .PDF copy to share?

(**) May we also please receive the original in the mail?

Thank you for your time and consideration.

Sincerely,
Steven Firestein, M.A.
Volunteer Director

Kids Cancer Connection, Inc.
IRS 501 (C)(3) # 56-2520924
American Cancer Fund for Children, Inc.
IRS 501 (C)(3) # 13-3780954



MEMORANDUM

To: Mayor and City Council

From: Amanda Hamilton, Public Works Manager

Date: August 27, 2019

Subject: Notice of Completion – Las Lomas Sidewalk Repair Project

RECOMMENDED ACTION

Staff recommends that City Council authorize the Notice of Completion for the Las Lomas Sidewalk Repair Project. This project is fully funded through a Metro Local Return Program for Measure R which is funded with ½-cent sales tax and Bicycle Pedestrian Safety Fund. Staff recommends that the City Council motion to approve the Notice of Completion for the Las Lomas Sidewalk Repair Project in the amount of \$172,500.49

BACKGROUND

On December 11, 2018, the City Council awarded the Las Lomas Sidewalk Repair Project to Ruiz Concrete & Paving, Inc. The project consisted of the removal of asphalt and the installation of new 4" sidewalk, curb and gutter, and driveway approaches that have been damaged by tree roots. The sidewalk prior to this project on the east side of Las Lomas Road was not ADA compliant and was a temporarily fixed when the bridle path was removed. The scope of work also called out for landscape improvements and new trees in the planter area.

The final design was assessed and determined in the field which included drainage improvements to the planter area to address any potential concerns for standing water. Utility coordination was an essential part of this project which caused some delays but ultimately produced a more comprehensive project with utility vaults and boxes moved out of the pedestrian pathway.

Field Services installed the landscape and irrigation in the planter area once Ruiz Concrete & Paving was complete with the hardscape portion of the project. The trees and plants selected for this project are all drought tolerant plants. The new and improved sidewalk brings connectivity from Huntington Drive to Royal Oaks Park and the Bike Trail. All work was required to be constructed in accordance with the requirements of the Standard Specifications for Public Works Construction.

CONCLUSION

Ruiz Concrete & Paving Inc. has completed the Las Lomas Sidewalk Repair Project. The final cost for the project is \$172,500.49. Staff recommends that the City Council motion to approve the Notice of Completion for the Las Lomas Sidewalk Repair Project in the amount of \$172,500.49

ATTACHMENTS:

- Attachment A – Before & After Pictures

Las Lomas Sidewalk Repair Project

Project Construction Pictures

Before Construction



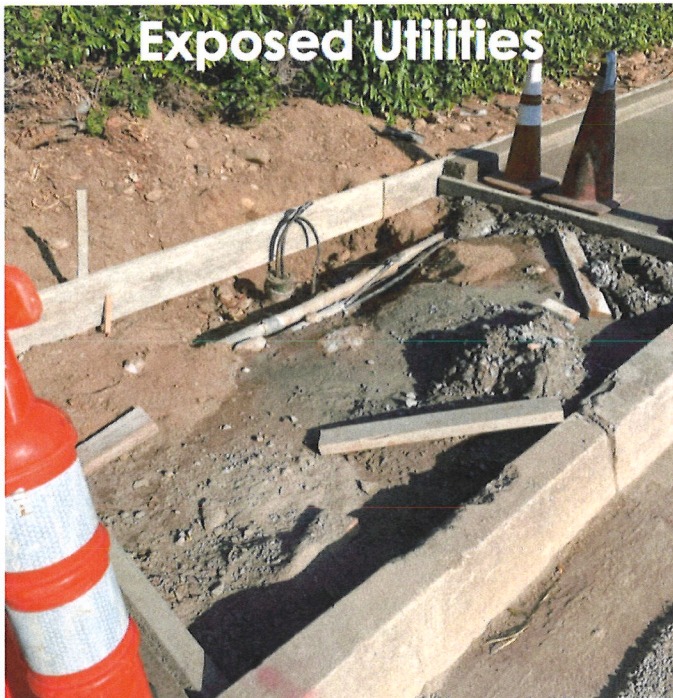
After Construction



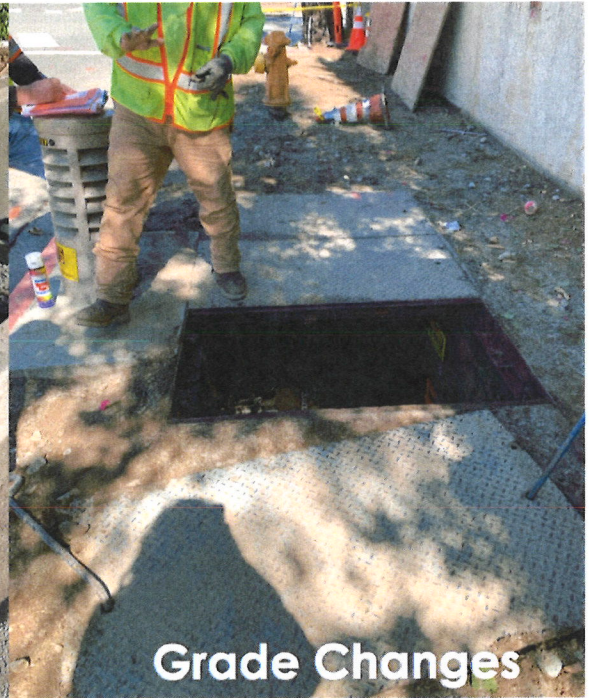




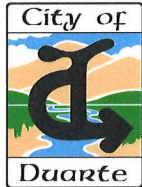
Utility Coordination



Exposed Utilities



Grade Changes



MEMORANDUM

To: City Council

From: Teresa Renteria, Assistant Civil Engineer

Date: August 27, 2019

Subject: City Council Acceptance for Citywide Striping and Marking Project FY 18/19, Project No. 19-2

RECOMMENDED ACTION

Staff recommends that the City Council accept the Citywide Striping and Marking Project FY 18/19 and authorize the City Clerk to initiate the Notice of Completion.

BACKGROUND

The purpose of this project was to maintain the pavement markings that define the path of safe travel for motorists, bicyclists, and pedestrians. This project consisted of the replacement of faded and worn traffic control pavement markings such as lane lines, crosswalk markings, stop lines, turn arrows and other symbols throughout the City of Duarte. All pavement markings were installed with thermoplastic material which provides retroreflectivity to meet the needs of motorists, bicyclists, and pedestrians. Maintaining pavement marking retroreflectivity is consistent with the requirement of the Manual of Uniform Traffic Control Devices and the Federal Highway Administration's goal of improving safety on the Nation's streets.

On April 23, 2019, the Duarte City Council awarded the contract to PCI, the lowest responsible and responsive bidder. Construction was completed on August 9, 2019.

ANALYSIS

PCI has satisfactorily completed the Citywide Striping and Marking Project FY 18/19 Project. The final construction cost, including approved change orders, is \$56,102. The funding source for this project consists of Highway Users Tax Fund.

CONCLUSION

Staff recommends that the City Council accept the Citywide Striping and Marking Project FY 18/19 Project and authorize the City Clerk to initiate the Notice of Completion.

AREAS COMPLETED AND PROJECT LIST



BEFORE AND AFTER

MT OLIVE AT HUNTINGTON DRIVE





BEFORE AND AFTER
DUARTE ROAD AT HOPE DRIVE





BEFORE AND AFTER
ROYAL OAKS DRIVE AT HIGHLAND AVENUE



STRIPING AND MARKNG				
ITEM NO	STREET	AT/FROM	TO	DIRECTION
1	MT OLIVE DR	HUNTINGTON DR	ROYAL OAKS	
2	MT OLIVE DR	SESMAS ST		
3	MT OLIVE DR	BEARDSLEE ST		
4	MT OLIVE DR	BASHOR ST		
5	MT OLIVE DR	OAKHAVEN DR		
6	MT OLIVE DR	ROYAL OAKS DR		
7	ROYAL OAKS DR	MT OLIVE DR	LAS LOMAS RD	
8	VINEYARD AVE	ROYAL OAKS DR	SUNNYDALE DR	
9	VINEYARD AVE	GARDI ST		
10	VINEYARD AVE	FREEBORN ST		
11	VINEYARD AVE	ELDA ST		
12	VINEYARD AVE	DALBO ST		
13	VINEYARD AVE	CONATA ST		
14	VINEYARD AVE	MARKWOOD ST		
15	VINEYARD AVE	BROOKDALE LN		
16	ROYAL OAKS DR	LAS LOMAS RD	ENCANTO PWY	
17	ROYAL OAKS DR	TOCINO DR		
18	ROYAL OAKS DR	GREENBANK AVE		
19	ROYAL OAKS DR	BETTYHILL AVE		
20	ROYAL OAKS DR	FISH CAYON RD		
21	ROYAL OAKS DR	LARKHALL AVE		
22	ROYAL OAKS DR	MELCANYON RD		
23	ROYAL OAKS DR	MOUNTAINCREST RD		
24	ROYAL OAKS DR	TANCANYON RD		
25	ROYAL OAKS DR	LIVERMONT LN		
26	ROYAL OAKS DR	PARK VIEW CT		
27	ROYAL OAKS DR	RANDOM LN		
28	ROYAL OAKS DR	OAKHAVEN DR		
29	ROYAL OAKS DR	OAK AVE		
30	ROYAL OAKS DR	HIGHLAND AVE		
31	ROYAL OAKS DR	JUNIPERO		
32	FIRST	HIGHLAND AVE		
33	HUNTINGTON DR	OAK AVE		
34	HUNTINGTON DR	MOUNTAIN AVE		
35	HUNTINGTON DR	SWISS TRAIL		
36	HUNTINGTON DR	ELMHURST AVE		
37	COTTER	HUNTINGTON DR	ROYAL OAKS	
38	HUNTINGTON DR	BRYCEDALE AVE		
39	BRADBURY AVE	HUNTINGTON DR	BLOOMDALE ST	
40	LAS LOMAS RD	HACIENDA		
41	ENCANTO PRWY	HUNTINGTON DR		
42	1247 HUNTINGTON			WB
43	1121 HUNTINGTON			WB
44	925 HUNTINGTON			WB
45	OPP. 2646 HUNTINGTON			WB
46	1322 HUNTINGTON			EB
47	1816 HUNTINGTON			EB
48	2330 HUNTINGTON			EB
49	2714 HUNTINGTON			EB
50	2245 HUNTINGTON			WB
51	1717 HUNTINGTON			WB
52	1714 ROYAL OAKS DR			WB
53	ROYAL OAKS DR	EAST OF LAS LOMAS		EB
54	ROYAL OAKS DR	LAS LOMAS RD		WB
55	ROYAL OAKS DR	EAST OF GREENBANK		EB & WB
56	3226 ROYAL OAKS			WB
57	ROYAL OAKS DR	ROYAL OAKS DR NORTH		
58	DUARTE RD	WEST OF HIGHLAND	GOLD LINE STATION PLATFORM	WB
59	DUARTE RD	CIRCLE		EB & WB
60	DUARTE RD	HOPE		WB
61	DUARTE RD	VILLAGE		WB
62	1352 DUARTE RD			EB
63	DUARTE RD	WEST OF BUENA VISTA		WB
64	DUARTE RD	BROADLAND		EB & WB
65	DUARTE RD	WARRINGTON		WB
66	DUARTE RD	PARK ROSE		
67	DUARTE RD	CITRUSVIEW		
68	DUARTE RD	WARDELL		
69	DUARTE RD	BRADBURY		
70	DUARTE RD	DELFORD		
71	DUARTE RD	EARLINGTON		
72	MOUNTAIN AVE	BLOOMDALE		
73	MOUNTAIN AVE	HURSTVIEW ST		
74	MOUNTAIN AVE	LEWISTON ST		
75	MOUNTAIN AVE	NEWINGTON		
76	MOUNTAIN AVE	BECKVILLE		
77	MOUNTAIN AVE	JOELLA ST		
78	MOUNTAIN AVE	MERIDIAN ST		
79	BUENA VISTA	KELLWIL WAY		
80	ENCANTO PRWY	HACIENDA		
81	CITY HALL PARKING LOT			

CITY OF DUARTE

AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT FOR PROFESSIONAL SERVICES ("Agreement") is made and effective as of August 13, 2019 ("Effective Date"), by and between the CITY OF DUARTE, a municipal corporation ("City") and Peckham & McKenney, Inc., ("Consultant"). City and Consultant may sometimes herein be referred to individually as a "party" and collectively as the "parties."

AGREEMENT:

In consideration of the mutual covenants and conditions set forth herein and for good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, the parties agree as follows:

1. TERM

This Agreement shall commence on the Effective Date and shall remain and continue in effect until December 31, 2019 unless sooner terminated pursuant to the provisions of this Agreement. The term may be extended upon execution of a written amendment between the parties.

2. SERVICES AND PERFORMANCE

A. In compliance with all terms and conditions of this Agreement, the Consultant shall provide those services set forth in the "Scope of Services" attached hereto as Exhibit "A" and incorporated herein by this reference, which services may be referred to herein as the "services" or "work" hereunder.

B. As a material inducement to the City entering into this Agreement, Consultant represents and warrants that Consultant is a provider of first class work and services and Consultant is experienced in performing the work and services contemplated herein and, in light of such status and experience, Consultant covenants that it shall follow the highest professional standards in performing the work and services required hereunder.

C. The experience, knowledge, capability and reputation of Consultant, its principals and employees were a substantial inducement for City to enter into this Agreement. Therefore, without the prior written approval of City, which may be given or withheld at City's sole and absolute discretion, and except as specifically provided for herein, Consultant shall not (i) contract with any other entity to perform in whole or in part the services required hereunder, or (ii) transfer, assign, convey, or encumber (voluntarily or by operation of law) this Agreement.

D. Consultant shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the services required by this Agreement.

E. Consultant shall provide all services rendered hereunder in accordance with all ordinances, resolutions, statutes, rules, and regulations of the City and any Federal, State or local governmental agency having jurisdiction in effect at the time service is rendered. Each and every provision required by law to be included in this Agreement shall be deemed to be included, and this Agreement shall be read and enforced as though they were included.

3. MANAGEMENT

A. The City Attorney shall represent City in all matters pursuant to the administration of this Agreement, review and approval of the services performed by Consultant. The City Attorney, subject to the limitations set forth in Section 4, shall have the authority to enlarge the Scope of Services or increase the compensation due to Consultant.

B. Consultant communications with the City shall be routed through the City Attorney.

4. COMPENSATION

A. City agrees to pay Consultant, in accordance with the payment rates and terms set forth in Exhibit "B" and incorporated herein by this reference. Subject to the City Attorney's authority set forth in subparagraph (B) below, the total compensation paid to Consultant hereunder shall not exceed twenty-seven thousand dollars and the City-approved cost of printing and advertising (\$27,000, plus cost of printing and advertising) for the services specified in Exhibit "A" hereto ("Total Compensation") for the total term of this Agreement, which shall be payable as set forth in Exhibit "B." and paragraph C below. Consultant's Total Compensation shall be based on the Scope of Work Provided in Exhibit A and shall not include out-of-pocket expenses necessary for the performance of the services.

B. Consultant shall not be compensated for any services rendered in connection with its performance of this Agreement, which are in addition to those set forth herein, unless such additional services are authorized in writing in advance by the City Attorney. Consultant shall be compensated for any additional services in the amounts and in the manner as agreed to by City Attorney and Consultant at the time City's authorization is given. The City Attorney may approve additional work up to but not exceeding twenty percent (20%) of the amount of this Agreement .

C. Consultant shall be paid one-third of the all-inclusive fee (\$27,000, plus the City-approved cost of printing and advertising) as a retainer at the execution of this Agreement. The second third of the full payment shall be invoiced by Consultant directly to the City Clerk, with a copy to the City Attorney, one month from the execution of this Agreement. The final third of the full payment shall be invoiced in the same manner at the earlier of December 31, 2019, or upon the the hiring by the City through formal action of its City Council of a full time, permanent, replacement City Manager. For purposes of this paragraph, the hiring or appointment by the City of an acting or interim City Manager, pending hiring of a permanent replacement City Manager, shall not serve to terminate this Agreement, nor Consultant's services hereunder. All payments to Consultant shall be paid on the next regular council warrant after all required paperwork is submitted and after each invoice is approved. Consultant shall be paid on the next regular council warrant after all required paperwork is submitted and after each invoice is approved.

5. SUSPENSION OR TERMINATION OF AGREEMENT

A. City may at any time, for any reason, with or without cause, suspend or terminate this Agreement, or any portion hereof, by serving written notice upon Consultant. Upon receipt of said notice, Consultant shall immediately cease all work under this Agreement, unless the

notice provides otherwise. In the event this Agreement is suspended or terminated pursuant to this subparagraph (A), Consultant shall submit a final report to the City of services Consultant has performed, and Consultant shall be entitled to the pro rata portion of the fee earned to the date of termination. Contractor's remedy in such event shall be limited to the pro rata portion of the fee earned to the date of termination, and City shall not be responsible to Consultant or any party claiming by or through Consultant for any consequential or other damages. In the City's sole and absolute discretion, prior to effecting a suspension or termination pursuant to this subparagraph (a), the City may first serve upon the Consultant a written notice of the default specifying the default and the amount of time that Consultant shall have to cure, correct, or remedy the default. In the event that the Consultant fails to cure the default within the specified period of time, the City shall have the right to immediately terminate this Agreement pursuant to this subparagraph (A). Notwithstanding any other provision of this Agreement to the contrary, City's termination of this Agreement pursuant to this subparagraph (A) shall not preclude or prejudice any other remedy to which City may be entitled in law or in equity.

B. Consultant may terminate this Agreement upon not less than sixty (60) days' prior written notice to the City. In such event, Consultant shall be entitled only to a proportionate portion of its total fees for professional services for services performed prior to the termination.

C. In the event of any termination prior to the expiration of this Agreement, the parties shall meet and confer in good faith to attempt to reach agreement on the proportion of professional fees earned by Consultant prior to the effective date of termination. In the event the parties cannot agree, the matter will be submitted to an expedited, limited binding arbitration by an arbitrator mutually selected by the parties, upon such procedures as the parties may agree. This binding arbitration clause shall be limited to the amount of fees due Consultant on termination of the Agreement.

6. RECORDS AND OWNERSHIP OF DOCUMENTS

A. Consultant shall maintain complete and accurate records with respect to costs, expenses, receipts, and other such information required by City that relate to the performance of services under this Agreement. Consultant shall maintain adequate records of services provided in sufficient detail to produce an evaluation of services. All such records shall be maintained in accordance with applicable generally accepted professional and accounting principles, and shall be clearly identified and readily accessible. Consultant shall provide free access to the representatives of City or its designees at reasonable times to examine and audit such books and records; shall permit City to make copies therefrom as necessary; and shall allow inspection of all work, data, documents, proceedings, and activities related to this Agreement. Such records, together with supporting documents, shall be maintained for a period of six (6) years after receipt of final payment.

B. Upon completion of, or in the event of termination or suspension of, this Agreement, all original documents, computer files, surveys, notes, and other documents prepared in the course of providing the services to be performed pursuant to this Agreement shall become the sole property of the City and may be used, reused, or otherwise disposed of by the City without the permission of the Consultant. Consultant shall provide such items to City promptly upon completion of the Agreement. Any use of such documents for other projects by the City shall be without liability to Consultant.

C. Any information gained by Consultant in the performance of this Agreement shall be considered confidential and such information and the reports, records, documents and other

materials prepared by Consultant in the performance of services under this Agreement shall not be released publicly or to any other client of Consultant without the prior written approval of the Deputy City Attorney, except as may be otherwise required by law.

7. INDEMNIFICATION

Consultant shall defend, indemnify, and hold harmless the City from and against all damages and liability caused by the negligent actions or willful misconduct of the Consultant or its employees, agents, or representatives. Consultant shall not be responsible for any damages or liability to the extent caused by the negligence or willful misconduct of the City or any of its employees, agents, or representatives acting in an official capacity.

8. INSURANCE

Without limiting Consultant's indemnification obligations as set forth in this Agreement, the Consultant shall procure and maintain, at its sole cost and expense, during the entire term of this Agreement including any extension thereof, the following policies of insurance:

A. Professional Liability Insurance written on a per occurrence basis in an amount not less than \$1,000,000 per occurrence.

B. Commercial General Liability Insurance written on a per occurrence basis in an amount not less than \$2,000,000 per occurrence

C. Business Auto Coverage written on a per accident basis in an amount not less than \$1,000,000 per accident. If Consultant or Consultant's employees use personal autos in connection with the performance of work under this Agreement, Consultant shall provide evidence of personal auto liability coverage for each such person.

D. Products Liability Insurance of \$4,000,000.

E. Consultant's Insurance Broker is Wells Fargo Insurance, Inc., Charlotte, NC, and coverage is provided by Sentinel Insurance Company and Hiscox Insurance Co. Limited, all of which is approved by the City. City shall be named as additionally insured on all policies applicable to the services provided by Consultant to City hereunder. Necessary insurance documentation will be provided to the City in a timely manner.

F. Consultant agrees to provide immediate notice to City of any claim or loss against Consultant arising out of the work performed under this Agreement. City assumes no obligation or liability by such notice, but has the right to monitor the handling of any such claim or claims if they are likely to involve City.

9. INDEPENDENT CONSULTANT

A. Consultant is and shall at all times remain as to the City a wholly independent Consultant. The personnel performing the services under this Agreement on behalf of Consultant shall at all times be under Consultant's exclusive direction and control. Neither City nor any of its officers, officials, employees, or agents shall have control over the conduct of Consultant or any of Consultant's officers, employees, or agents. Consultant shall not at any time or in any manner represent that it or any of its officers, employees, or agents is in any manner officers, officials, employees, or agents of the City. Consultant shall not incur or

have the power to incur any debt, obligation, or liability whatever against City, or bind City in any manner.

B. No employee benefits shall be available to Consultant in connection with the performance of this Agreement. Except for the fees paid to Consultant as provided in this Agreement, City shall not pay salaries, wages, or other compensation to Consultant for performing services hereunder for City. City shall not be liable for compensation or indemnification to Consultant for injury or sickness arising out of performing services hereunder.

10. NO UNDUE INFLUENCE

Consultant declares and warrants that no undue influence or pressure is used against or in concert with any officer or employee of the City in connection with the award, terms or implementation of this Agreement, including any method of coercion, confidential financial arrangement, or financial inducement. No officer or employee of the City shall receive compensation, directly or indirectly, from Consultant, or from any officer, employee or agent of Consultant, in connection with the award of this Agreement or any work to be conducted as a result of this Agreement.

11. NO BENEFIT TO ARISE TO LOCAL EMPLOYEES

No member, officer, or employee of City, or their designees or agents, and no public official who exercises authority over or has responsibilities with respect to the Agreement during his/her tenure or for one year thereafter, shall have any interest, direct or indirect, in any agreement or sub-agreement, or the proceeds thereof, for work to be performed in connection with the services performed under this Agreement.

12. COVENANT AGAINST DISCRIMINATION

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through it, that in the performance of this Agreement there shall be no discrimination against or segregation of, any person or group of persons on account of any impermissible classification including, but not limited to, race, color, creed, religion, sex, marital status, sexual orientation, national origin, or ancestry.

13. NONLIABILITY OF CITY OFFICERS AND EMPLOYEES

No officer, official, employee, agent, representative, or volunteer of the City shall be personally liable to the Consultant, or any successor in interest, in the event of any default or breach by the City or for any amount which may become due to the Consultant or to its successor, or for breach of any obligation of the terms of this Agreement.

14. NOTICES

Any notices which either party may desire to give or may be required to give to the other party under this Agreement must be in writing and may be given either by (a) personal service or e-mail correspondence with confirmed delivery receipt, or (b) delivery by a reputable document delivery service, such as but not limited to, Federal Express, which provides a receipt showing date and time of delivery, or (c) mailing in the United States Mail, certified mail, postage prepaid, return receipt requested, addressed to the address of the party as set forth below or at any other address as that party may later designate by notice:

If to City: David B. Cosgrove
Rutan and Tucker, LLP
611 Anton Boulevard Suite 1400
Cost Mesa, CA 92626
dcosgrove@rutan.com

If to Consultant: Bobbi Peckham, President
300 Harding Blvd.
Ste. 203-D
Roseville, California 95678
Phone: (866) 912-1919
www.peckhamandmckenney.com

15. GOVERNING LAW; ATTORNEY'S FEES; LITIGATION MATTERS

The internal laws of the State of California, without regard to principles of conflicts of laws, shall govern the interpretation of this Agreement. In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding anything in this Agreement to the contrary, in no event shall Consultant be entitled to economic or consequential damages or to punitive damages. In the event of any litigation arising from or related to this Agreement, the prevailing party shall be entitled to recover all reasonable costs incurred, including staff time, court costs, attorney fees, expert witness fees, costs for deposition or hearing transcripts, preparation, databasing, or or photocopying of exhibits or other documents, fees arising from any ADR or dispute resolution proceedings, and other similarexpenses. The Superior Court of the County of Los Angeles shall have exclusive original jurisdiction over any litigation between the parties hereto concerning this Agreement. Service of process on City shall be made in the manner required by law for service on a public entity. Service of process on Consultant shall be made in any manner permitted by law and shall be effective whether served inside or outside of California.

16. RIGHTS AND REMEDIES ARE CUMULATIVE; AND WAIVER

A. Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

B. No delay or omission in the exercise of any right or remedy by a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. A party's consent to or approval of any act by the other party requiring the party's consent or approval shall not be deemed to waive or render unnecessary the other party's consent to or approval of any subsequent act. Any waiver by either party of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

17. SEVERABILITY

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or

decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder unless the invalid provision is so material that its invalidity deprives either party of the basic benefit of their bargain or renders this Agreement meaningless.

18. INTERPRETATION; ENTIRE AGREEMENT

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either party by reason of the authorship of this Agreement. This Agreement contains the entire understanding between the parties relating to the obligations of the parties described in this Agreement. All prior or contemporaneous agreements, understandings, representations, and statements, oral or written, are merged into this Agreement and shall be of no further force or effect.

19. EXECUTION OF CONTRACT

The persons executing this Agreement on behalf of each of the parties hereto represent and warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) that entering into this Agreement does not violate any provision of any other Agreement to which said party is bound.

20. EFFECTIVE DATE

The Effective Date of this Agreement shall be the date first set out above.

[end –signature page follows]

IN WITNESS WHEREOF, the parties hereto have executed and entered into this Agreement as of the Effective Date.

CITY OF DUARTE	CONSULTANT: Peckham & McKenney, Inc.
By: _____ Tzeitel Paras-Caracci, Mayor	By: _____ Bobbi Peckham, President
Date: _____	Date: _____
ATTEST: _____ Marla Akana, City Clerk	
APPROVED AS TO FORM: RUTAN & TUCKER, LLP _____ David Cosgrove, City Attorney	

EXHIBIT "A"

SCOPE OF SERVICES

CITY MANAGER RECRUITMENT SERVICES

Consultant shall perform executive search services for a replacement City Manager for City, to replace the existing City Manager who has announced his retirement. The search process will include the following key steps:

Project Organization - Prior to beginning the recruitment, necessary documentation (contract, insurance, business license, retainer invoice, etc.) will be processed. The City Attorney will serve as Consultant's primary point of contact in this process and as liaison throughout the recruitment.

Consultant will hold a conference call with the Mayor and City Attorney, or any ad hoc committee that may be appointed by the City Council to oversee and coordinate with Consultant and Consultant's work, to discuss the process, listen to specific desires and expectations, and respond to any questions or concerns. The conference call will be to discuss and set expected parameters of the search, the search timeline, and schedule future meeting dates.

At this time, the Mayor and City Council will determine the extent of involvement of other individuals in the search process. This may include the agency's leadership team, staff members, labor representatives, appointed commission or committee members, business leaders, community stakeholders, residents, and others. In addition, Consultant will discuss specific desires and expectations of the City Council relating to the development of the candidate profile, finalist interview process, and the various components to be considered.

Consultant will provide recommendations on best practices.

Development of Candidate Profile (on-site meeting #1) - This step will develop a Candidate Profile that will serve as a guide in the identification of potential candidates, outreach and recruitment efforts, screening and selection of the replacement City Manager. The Candidate Profile includes information relating to the City of Duarte; current and future issues and opportunities; expectations, goals, and objectives leading to the success of the new City Manager; and the background and experience, leadership style, skills and abilities, and personality traits of the ideal candidate.

Consultant will develop this profile following individual discussions with members of the City Council as well as group discussions with those individuals identified in the initial conference call (see Project Organization above). Consultant will spend one day on site to develop the Candidate Profile. City will provide Consultant information relating to compensation and benefits, organization charts, and budget data. Consultant may request high-resolution photos to be used in an attractive brochure to market the opportunity.

A draft of the Candidate Profile will be provided to the City for review. Consultant's marketing and design professional will then prepare an attractive marketing brochure incorporating the Candidate Profile. This brochure will be distributed to up to 500 identified industry professionals,

and it will also be available on Consultant's web site. Copies of the brochure will also be made available to the City.

Subject to approval of costs by City, advertisements will be placed in the appropriate industry publications and websites. Consultant shall assume responsibility for presenting the opportunity in an accurate and professional manner. Social media, including LinkedIn and other venues, will be used as appropriate. Full information on the position will be posted on the Peckham & McKenney website and provided to the City for posting as well.

Recruitment -The main focus of Consultant's outreach will be direct phone contact with quality potential candidates. Consultant's recruiting efforts will focus on direct and aggressive recruiting of individuals within the search parameters established during the Candidate Profile Development.

Throughout this active search process, Consultant shall regularly update the Mayor and City Council, or its ad hoc committee, of the recruitment status and share questions, concerns, and comments received from potential candidates as they consider the opportunity.

As resumes are received, they will be promptly acknowledged by Consultant within 48 hours, and Consultant will personally respond to all inquiries. Once the resume filing deadline has passed, Consultant will update the City on the status of the recruitment, the number of resumes received, and our intent for preliminary interviews.

Preliminary Interviews - Upon Consultant's review of the resumes received, supplemental questionnaires will be sent to candidates who appear to meet the Candidate Profile. Following a thorough review of the supplemental questionnaires, Consultant will conduct preliminary interviews with those individuals most closely matching the Candidate Profile. Internet or other research will also be conducted to probe the candidate regarding any areas of concern. Candidates will be advised of the search schedule and updated regularly as to their status.

Recommendation of Candidates/Selection of Finalists (on-site meeting #2) - A bound report will be provided to the Mayor and City Council prior to this meeting for Consultant to discuss recommendation of leading candidates. This report will include a full listing of all candidates who applied for the position, as well as the cover letters, resumes, and supplemental questionnaires of the recommended group of candidates for further consideration. Consultant may include a first and second tier of candidates within its recommendation.

Consultant will meet with the City Council in a one- to two-hour meeting and will provide an overview of each recommended candidate as well as share any concerns or negative information. Once a group of finalists has been selected by the City Council, Consultant will revisit early decisions relating to the finalist interview process. A one-day finalist interview process is standard for initial finalist interviews (leading four to eight candidates), however, the City Council may opt for multiple interview panels, tours, meet-and-greet sessions, one-on-one interviews, presentations, or other selection options. Consultant will again provide recommendations on the finalist interview process.

Consultant will notify all candidates of their status. Those candidates selected as finalists will be notified and provided with all necessary information to attend finalist interviews with the City. Consultant will prepare an interview schedule and confirm with City's point of contact all necessary details. If necessary, finalists will make their own travel plans and reservations. Any City reimbursement to finalists for round-trip airfare, car rental, and lodging necessary to attend

the interviews with the City will be confirmed with the Mayor and City Council at the meeting to recommend candidates.

Finalist Interview Process (on-site meeting #3)

(First Round) - Consultant will provide on-site facilitation during the finalist interview process. An orientation session will be held at the beginning of the process, and Consultant will facilitate a review and discussion of the finalists at the end of the day. Interview materials, including suggested interview questions, evaluation and ranking sheets will be provided. Again, a standard finalist interview process of the leading four to eight candidates is typically conducted within one day. Should the process desired by the Mayor and City Council require more than one day, an additional fee may be charged by Consultant.

(Second Round - held on consecutive day as First Round) - Consultant will provide on-site facilitation during this second round of interviews with the leading two to three finalists. Typically, these interviews provide more indepth, informal conversations that will ultimately lead to the selection of a finalist candidate.

Qualification - Once the finalist candidate has been selected and a conditional offer has been made by the City, a thorough background check will be conducted that is compliant with the Fair Credit Reporting Act and Investigative Consumer Reporting Agencies Act. Consultant utilizes the services of Sterling Talent Solutions (www.sterlingtalentsolutions.ca), and notwithstanding any prohibitions on subcontracting in this Agreement. Consultant's use of this firm is approved by City. This investigation will verify professional work experience; degree verification; certifications; and criminal, civil, credit, and motor vehicle records. City may consider further vetting the candidate through a Department of Justice LiveScan (California clients) in order to ensure that all known criminal history records (beyond seven years) are investigated.

Consultant will also contact professional references, and a full report will be provided. In addition, negotiation assistance will be provided as requested by the City of Duarte.

Enhanced reference checking and background investigation, if any, beyond that described above shall be City's responsibility.

EXHIBIT B

PAYMENT RATE & TERMS

The City of Duarte shall pay Consultant as provided below for the designated contract term.

Cost of Services

The all-inclusive fee to conduct the search process hereunder is \$27,000, plus City-approved printing and advertising costs. The all-inclusive fee includes professional fees and expenses (out-of-pocket costs associated with Consultant travel, administrative support/printing/copying/postage/materials, telephone/technology, partial background checks on recommended candidates, and full background check on selected finalist only).

The fee quoted above is for a full recruitment process as described in The Search Process, including three to four days of on-site meetings. The first on-site meeting is to develop the Candidate Profile; the second on-site meeting is to provide a recommendation of candidates; and the third on-site meeting includes up to two consecutive days to facilitate finalist interviews.

Additional Service Costs

The following details fees for additional requested services. Other fees may be as negotiated.

Additional on-site meeting day \$500 - each + travel expenses

Each additional full background check \$3 00/each

Additional placement within organization* \$5,000 (if selected within one year)

*If the City of Duarte hires an additional candidate from among those recommended for another position within one year of the close of the recruitment, a fee of \$5,000 will be charged to the City.

Process of Payment

Consultant shall be paid one-third of the all-inclusive fee (\$27,000, plus the City-approved cost of printing and advertising) as a retainer at the execution of this Agreement. The second third of the full payment shall be invoiced by Consultant directly to the City Clerk, with a copy to the City Attorney, one month from the execution of this Agreement. The final third of the full payment shall be invoiced in the same manner at the earlier of December 31, 2019, or upon the the hiring by the City through formal action of its City Council of a full time, permanent, replacement City Manager. For purposes of this paragraph, the hiring or appointment by the City of an acting or interim City Manager, pending hiring of a permanent replacement City Manager, shall not serve to terminate this Agreement, nor Consultant's services hereunder. All payments to Consultant shall be paid on the next regular council warrant after all required paperwork is submitted and after each invoice is approved.

Duarte and Duarte Dispatch

Affiliated with SGV Newspaper Group
605 E. Huntington Dr., Suite 100
Monrovia, CA 91016
626-962-8811 ext. 40891

5007700

CITY OF DUARTE
1600 E. HUNTINGTON DRIVE
DUARTE, CA 91010

FILE NO. Public Hearing - RV permits

PROOF OF PUBLICATION (2015.5 C.C.P.)

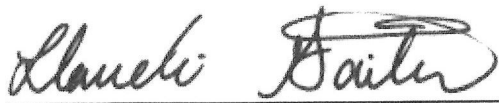
STATE OF CALIFORNIA County of Los Angeles

I am a citizen of the United States, and a resident of the county aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of DUARTEAN and DUARTEAN DISPATCH, a newspaper of general circulation printed and published weekly in the City of Duarte, County of Los Angeles, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, on the date of July 6, 1948, Case Number POMO C986. The notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

07/20/2019

I declare under the penalty of perjury that the foregoing is true and correct.

Executed at Monrovia, LA Co. California
On this 22th day of July, 2019.



Signature

(Space below for use of County Clerk Only)

Legal No. 0011293251

NOTICE OF PUBLIC HEARING TO BE HELD BY THE DUARTE CITY COUNCIL

NOTICE IS HEREBY GIVEN that, pursuant to State law, the City Council of the City of Duarte will hold a Public Hearing at 7:00 p.m., on Tuesday, August 27th, 2019, in the Council Chambers, 1600 Huntington Drive, Duarte, California, to consider a fee resolution for overnight recreational vehicle permits.

Any interested party may appear in person, or by agent, and be heard. If this matter is challenged in Court, there will be a limit to only those issues that were raised at the Public Hearing described in this Notice, or in written correspondence delivered to the City Council at, or prior to, the Public Hearing. Written correspondence may be sent to Duarte City Hall, City Clerk's Office, 1600 Huntington Drive, Duarte, CA 91010-2592.

Further information may be obtained from Brian Villalobos, Director of Public Safety Services, phone (626) 357-7938.

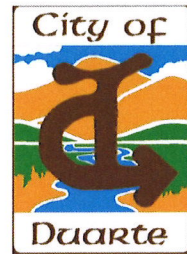
Marla Akana
City Clerk

PUBLISH:
POSTED:
Library

Duarte, Saturday, July 20, 2019
Duarte City Hall, Duarte Public Safety Office, Duarte

7/16/19

AD#11293251



AGENDA MEMO

TO: DUARTE CITY COUNCIL
FROM: Brian Villalobos, Director of Public Safety
DATE: August 27, 2019
SUBJECT: Approval of Resolution No. 19-18 Adopting an Overnight RV Permit Fee

SUMMARY: The Duarte City Council, at its meeting of May 14, 2019, adopted Ordinance No. 891 as follows: AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF DUARTE, CALIFORNIA, ADDING A NEW CHAPTER 11.15 TO THE DUARTE MUNICIPAL CODE RELATING TO PERMIT AND LICENSE REQUIREMENTS FOR OVERNIGHT PARKING OF RECREATIONAL VEHICLES ON CITY RIGHT OF WAY.

As part of the action adopting the Ordinance, City Council directed that a discussion regarding the fee for the permit be sent back to the Public Safety Commission for consideration.

The Public Safety Commission at its regularly scheduled June 18, 2019, meeting discussed the fee for an overnight RV permit and unanimously recommended the below overnight RV permit fee structure to the City Council.

The City Council at its regularly scheduled July 9, 2019, meeting agreed with the Public Safety Commission's recommendations and directed staff to bring back a fee resolution for adoption by council.

RECOMMENDATION: The below overnight RV permit fee structure follows the recommendations of the Public Safety Commission as approved by the City Council for adoption in Resolution No. 19-18.

RV Resident/Senior Citizen (60 years of age or older) – free up to 3 days a month
0% Cost Recovery

RV Resident Parking Permit - \$5 per day up to 6 days a month
38% Cost Recovery

RV Guest Parking Permit - \$10 per day up to 6 days a month
77% Cost Recovery

FISCAL IMPACT: Minimal to None. The Public Safety Department expects to issue very few permits and the fees accepted will partially off-set staff time. Additionally, RV owners in violation of Ordinance No. 891 will be issued a parking citation at \$60 for each violation.

RESOLUTION NO.**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DUARTE, CALIFORNIA, AMENDING THE SCHEDULE OF FEES AND CHARGES FOR CITY SERVICES RELATING TO PERMIT AND LICENSE REQUIREMENTS FOR PARKING RECREATIONAL VEHICLES IN THE CITY'S RIGHT OF WAY**

THE CITY COUNCIL OF THE CITY OF DUARTE DOES hereby resolve as follows:

WHEREAS, the City Council adopted Resolution No. 16-28 on October 11, 2016, establishing a schedule of fees and charges for City services; and

WHEREAS, the City has established a policy of recovering the full costs reasonably borne of providing special services of a voluntary and limited nature, such that general taxes are not diverted from general services of a broad nature and thereby utilized to subsidize unfairly and inequitably such special services; and

WHEREAS, The City Council introduced Ordinance No. 19-O-03 on April 23, 2019, to amend the Duarte Municipal Code by adding Chapter 11.15 relating to permit and license requirements for parking recreational vehicles in the City's right of way; and

WHEREAS, section 11.15.020 (A) 2 of the Recreational Vehicles (RV) ordinance states that the City may charge a fee to issue the RV permit and/or the RV guest permit, as established by resolution of the City Council;

NOW, THEREFORE, the City Council of the City of Duarte resolves as follows:

SECTION 1. FEE SCHEDULE AMENDMENT. The schedule of fees and charges is hereby amended to add the following:

Parking Permits:

RV Resident/Senior Citizen – 3 free per month

RV Resident Parking Permit – \$5.00 per day

RV Guest Parking Permit – \$10.00 per day

SECTION 2. BASIS OF CHARGES. The City Council finds and determines that the charges imposed by this resolution are necessary to cover the costs of providing the specified services, and that such charges do not exceed the reasonable costs of providing said services.

SECTION 3. The adoption of this Resolution approving overnight parking fees is statutorily exempt for the requirements of the California Environmental Quality Act (CEQA) pursuant to Section 15273 of the State CEQA Guidelines (14 C.C.R. Sec. 15273) and is additionally and independently exempt from CEQA analysis pursuant to State CEQA Guidelines Section 15061(b)(3) [14 C.C.R. Sec. 15061 15061(b)(3)] which sets forth the rule that “CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.”

PASSED, APPROVED, AND ADOPTED this 27th day of August, 2019.

Mayor Tzeitel Paras-Caracci

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF DUARTE)

I, Marla Akana, City Clerk of the City of Duarte, County of Los Angeles, State of California, hereby attest to the above signature and certify that Resolution No. 19-18 was adopted by the City Council of said City of Duarte at a regular meeting of said Council held on the 27th day of August, 2019, by the following vote:

AYES: Councilmembers:

NOES: Councilmembers:

ABSENT: Councilmembers:

City Clerk Marla Akana
City of Duarte, California

Duarte and Duarte Dispatch

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605 E. Huntington Dr., Suite 100
Monrovia, CA 91016
626-962-8811 ext. 40891

5007700

CITY OF DUARTE
1600 E. HUNTINGTON DRIVE
DUARTE, CA 91010

PROOF OF PUBLICATION (2015.5 C.C.P.)

STATE OF CALIFORNIA County of Los Angeles

I am a citizen of the United States, and a resident of the county aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of DUARTEAN and DUARTEAN DISPATCH, a newspaper of general circulation printed and published weekly in the City of Duarte, County of Los Angeles, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, on the date of July 6, 1948, Case Number POMO C986. The notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

08/17/2019

I declare under the penalty of perjury that the foregoing is true and correct.

Executed at Monrovia, LA Co. California
On this 20th day of August, 2019.



Signature

(Space below for use of County Clerk Only)

Legal No. **0011303648**

DUARTE CITY COUNCIL NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that, pursuant to State law, the City Council of the City of Duarte will hold a Public Hearing at 7:00 p.m. on Tuesday, August 27, 2019, in the Council Chambers, 1600 Huntington Dr. California, regarding adoption of findings and award of energy conservation services and associated financing under Government Code Section 4217.10-4217.18.

The Public Hearing is for the purpose of taking public comment on, and considering and adopting a resolution on, making certain findings required for approval of energy conservation services with Climatec LLC and associated financing agreements for the implementation of energy conservation services in accordance with California Government Code Section 4217.10 through 4217.18, including findings that the cost of the energy conservation services to the City will be less than the anticipated marginal cost to the City of electrical, thermal, or other energy than would have been consumed by the City in the absence of the program, that funds for the service of the related improvements are anticipated to be available from funds that otherwise would have been used by the City for purchase of electrical, thermal, or other energy required by the City in the absence of the energy conservation facilities to be developed under the proposed energy conservation services with Climatec LLC, and to consider approval of the energy conservation services and associated financing agreements in accordance with Council's findings.

Any interested party may appear in person, or by agent, and be heard. If this matter is challenged in Court, there will be a limit to only those issues that were raised at the Public Hearing described in this Notice, or in written correspondence delivered to the City Council at, or prior to, the Public Hearing. Written correspondence may be sent to Duarte City Hall, City Clerk's Office, 1600 Huntington Drive, Duarte, CA 91010-2592

Further information may be obtained from the City Manager's Office, phone (626) 357-7931

Karen Herrera
Deputy City Clerk

Published: August 17, 2019
Duarte-HighInader

Ad#11303648

Agenda Memo

City Manager's Office

To: Mayor Paras-Caracci and Members of the Duarte City Council
From: Karen A. Herrera, Deputy City Manager
Date: 8/22/19
Re: **RESOLUTION 19-R-19 AUTHORIZING THE IMPLEMENTATION OF THE CITY OF DUARTE INFRASTRUCTURE MODERNIZATION PROGRAM PURSUANT TO GOVERNMENT CODE SECTION 4217.10-18**

RECOMMENDATION: City staff is recommending that the City Council, by motion read by title only, waive further reading and adopt Resolution No. 19-R-19 titled: "A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DUARTE, CALIFORNIA, AUTHORIZING THE IMPLEMENTATION OF THE CITY OF DUARTE INFRASTRUCTURE MODERNIZATION PROGRAM PURSUANT TO GOVERNMENT CODE SECTION 4217.10-18, MAKING CERTAIN FINDINGS REQUIRED THEREFORE, AND AUTHORIZING RELATED ACTIONS" (See Attachment) including agreements with Climatec LLC and associated US Bancorp Government Leasing and Finance Inc. financing agreements for the design/build implementation of a comprehensive infrastructure modernization program throughout the City.

BACKGROUND: The City of Duarte initiated an effort to assess the feasibility of a comprehensive Infrastructure Modernization Program in the Summer of 2018. The objectives of the program were to:

- 1) Comprehensively modernize aging energy/building/water infrastructure;
- 2) Complete improvements with costs being covered by utility savings;
- 3) Reduce rising utility costs, operating expenditures, and piecemeal maintenance costs associated with outdated and/or obsolete equipment;
- 4) Incorporate smart, connected, sustainable technology to improve City livability and services
- 5) Create a higher service level for the Duarte community through enhanced street and building lighting, facility heating and cooling; swimming pool heating etc.

Based on a demonstrated track record of helping other California public agencies achieve similar objectives, in January 2019, Climatec completed an investment grade assessment of the City's infrastructure and developed a turnkey design/build infrastructure modernization program. Since that time, staff and City Council have worked with Climatec to finalize a scope of work and funding plan through multiple ad hoc committee meetings, Council meeting presentations, and two City Council workshops on 4/9/19 and 6/11/19. Based on the last Council workshop, staff was directed to formally agendize the program for a discussion and vote.

DISCUSSION: The purpose of this agenda item is for the Council to consider adoption of Resolution 19-R-19 making certain findings and approving agreements with Climatec LLC for design/build implementation and energy conservation services and financing agreements with U.S. Bancorp Government Leasing and Finance Inc. (See Attachment B.3) in accordance with Government Code § 4217.10 through § 4217.18.

The design/build procurement option is specific to energy conservation projects and was created by the State legislature to give maximum flexibility to cities when pursuing projects that promote energy efficiency and help meet State energy mandates. This type of contracting approach provides a number of efficiencies over the traditional approach of awarding separate contracts for design services and construction (design-bid-build approach) when pursuing a large scale comprehensive program. The benefits of a design/build approach include, but are not limited to, a greater flexibility in the contract award process; opportunity for innovation, a single point of accountability, fewer change orders and claims, and faster overall project completion. An excellent example of the type of construction is the Metro Gold Line Foothill Extension.

Prior to the Council considering adoption of the resolution, a public hearing will be held in order to meet the statute requirements of Government Code Section 4217. If approved, construction will consist of the following projects and is anticipated to cost approximately \$2.3 million dollars.

- LED Street Light Modernization
- Roof Mounted Solar PV System
- High Efficiency Heating & Cooling Equipment
- Interior & Exterior LED Lighting Modernization
- Smart Connectivity Street Light Control System
- Smart Building Automation System
- Solar Thermal Pool Heating
- Smart Irrigation Weather-Based Control System

If approved tonight, Council can expect one or more of the projects to commence in the Fall of 2019, and the entire scope is expected to take approximately 12 to 18 months to complete. (See Attachment B.1)

FISCAL IMPACT: The following two charts illustrate the cost/savings analysis of the proposed scope of work in a line item format requested by Council. The two charts differ in the savings aspect depending on the type of financing selected. The feedback from the Council workshop on 6/11 was to bring back an option for financing half of the program in order to generate greater net operating budget savings, which is displayed in Option A. Option A requires a \$1 million capital contribution from the General Fund Reserves at the start of the project. However, since the last meeting with Council on this project, interest rates have dramatically dropped to 2.42%. Thus, staff and the Climatec team are also putting forward Option B, requiring no capital contribution from the General Fund Reserves.

***Project Cost Breakdown**

\$2,286,597

- \$2,286,597 – Municipal Lease Purchase Program (2.42% interest rate)
- \$ 0 – City Contribution

****Lifecycle Savings Breakdown**

\$5,317,202

- \$3,330,605 – General Fund Operating Budget savings from reduced utility and maintenance costs over the life of the new equipment (15 years for infrastructure improvements and 30 years for solar)
\$1,986,597 – Avoided capital expenditures (an increase of \$700,000 over Option A based on capital improvement and deferred maintenance projects that must be funded in the next 1-3 years and financing the entire project). Also requires an annual payment of \$20,000 for 15 years which would be recouped after the lease.

To reiterate in closing, **the City will not incur any additional expenditures** related to implementing the Infrastructure Modernization Program. The program pays for itself and provides a positive lifecycle savings of either approximately \$4.6 million for Option A or \$5.3 million for Option B from the General Fund over the life of the new equipment (15 years for infrastructure improvements and 30 years for solar). **Per the Measurement and Verification Agreement**, (Attachment B.2) **Climatec provides a contractual guarantee** for savings performance to ensure the City is made whole on its investment. If savings are not realized, then Climatec is required to pay the City for the amount of the savings shortfall.

ATTACHMENTS:

1. Resolution 19-R-19
2. Exhibit A: Analysis
3. Exhibit B.1: Installation Agreement (and Attachments A-E)
4. Exhibit B.2: Measurement and Verification Agreement
5. Exhibit B.3: Financing Agreements

RESOLUTION NO.**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DUARTE, CALIFORNIA, AUTHORIZING THE IMPLEMENTATION OF THE CITY OF DUARTE INFRASTRUCTURE MODERNIZATION PROGRAM PURSUANT TO GOVERNMENT CODE SECTION 4217.10-18, MAKING CERTAIN FINDINGS REQUIRED THEREFORE, AND AUTHORIZING RELATED ACTIONS**

WHEREAS, the City of Duarte ("City") finds it to be in the best interest of the City to implement infrastructure improvements that will achieve long-term operating budget cost reductions while promoting energy efficiency and sustainability; and

WHEREAS, Government Code sections 4217.10 through 4217.18 authorize the City's governing board (the "City Council") to enter into one or more energy service agreements with any person or entity if the anticipated cost to the City for energy conservation services provided under the agreement is less than the anticipated marginal cost to the City of thermal, electrical, or other energy that would have been consumed by the City in the absence of the agreement ("Savings"); and

WHEREAS, Government Code sections 4217.10 through 4217.18 authorize the City Council to enter into one or more facility financing contracts if funds for the repayment thereof are projected to be available from the savings, representing funds that otherwise would have been used for purchase of electrical, thermal, or other energy required by the City in the absence of the energy conservation services and facilities financed by proceeds available through the facility financing contracts; and

WHEREAS, Government Code sections 4217.10 through 4217.18 require that a public hearing be held, and public comment be taken, at a regularly scheduled meeting of the City Council, at which meeting the City Council may consider and adopt the findings described herein and award energy services contracts and facility financing contracts based thereon; and

WHEREAS, the City gave notice of its intent to conduct a public hearing and take public comment upon the subject matter of this Resolution at a regularly scheduled public meeting of the City Council at which the City Council has held a public hearing and taken public comment and has now considered this Resolution, all as required under Government Code sections 4217.10 through 4217.18; and

WHEREAS, the City Council and City staff reviewed the qualifications presented by Climatec LLC to provide design/build services and energy conservation services for the Infrastructure Modernization Program, and found Climatec LLC's qualifications to be bona fide and adequate; and

WHEREAS, the City Council received information presented by City Staff and Climatec LLC at the April 9, 2019, and June 11, 2019, Council Workshops, and such information ("Analysis," Exhibit A) demonstrates that the cost of the Infrastructure Modernization Program is less than the anticipated marginal cost of energy the City would have consumed in the absence of the Program; and

WHEREAS, Climatec LLC has proposed design/build implementation and energy conservation services ("Agreements," Exhibit B) for the desired infrastructure moderni-

zations including the replacement of aging HVAC equipment, new Wi-Fi Based Building Automation System, LED lighting modernizations, LED street light and safety light modernizations, smart connectivity street lighting control systems, smart weather-based irrigation control systems, solar photovoltaic, and solar thermal; and

WHEREAS, U.S. Bancorp Government Leasing and Finance Inc. has proposed equipment lease-purchase financing agreements ("Agreements," Exhibit B) at a rate of 2.95% for 15 years which will be repaid by guaranteed cost savings generated by the Infrastructure Modernization Program and provide a net positive impact to the General Fund.

NOW, THEREFORE, THE CITY COUNCIL DOES HEREBY FIND, RESOLVE, DETERMINE, AND ORDER AS FOLLOWS:

Section 1. Recitals. All of the recitals herein contained are true and correct.

Section 2. Climatec LLC Agreements Findings. The City Council finds that the cost of the Climatec LLC Agreements to the City for the energy conservation services provided thereunder is less than the anticipated marginal cost to the City of thermal, electrical, or other energy that would have been consumed by the City in the absence of the energy conservation services and that it is in the best interest of the City to approve and enter into the Climatec LLC Agreements.

Section 3. Climatec LLC Agreements Approval. The forms of the Climatec LLC Agreements by and between the City and Climatec LLC, in the forms on file with the Clerk, are hereby approved, subject to final approval by the City Manager and the City Attorney. The City Manager is hereby authorized and directed, for and in the name of and on behalf of the City, to execute and deliver to Climatec LLC the Agreements and related documents as necessary to carry out the energy services contemplated therein, subject to such minor changes thereto as the City Manager may require and approve, with the approval of the City Attorney.

Section 4. Approval of the Associated Equipment Lease/Purchase Agreements with U.S. Bancorp Government Leasing and Finance Inc. The form of the Equipment Lease/Purchase Agreements by and between the City and U.S. Bancorp Government Leasing and Finance Inc., is hereby approved, subject to final approval by the City Manager, Finance Director, and City Council. The City Manager or Finance Director is hereby authorized and directed, for and in the name of and on behalf of the City, to execute and deliver to U.S. Bancorp Government Leasing and Finance Inc. the Equipment Lease/Purchase Agreements and related documents as necessary.

Section 5. Effective Date. This Resolution shall take effect upon adoption.

PASSED, APPROVED, AND ADOPTED this 27th day of August, 2019.

Mayor Tzeitel Paras-Caracci

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF DUARTE)

I, Marla Akana, City Clerk of the City of Duarte, County of Los Angeles, State of California, hereby attest to the above signature and certify that Resolution No. 19-19 was adopted by the City Council of said City of Duarte at a regular meeting of said Council held on the 27th day of August, 2019, by the following vote:

AYES: Councilmembers:

NOES: Councilmembers:

ABSENT: Councilmembers:

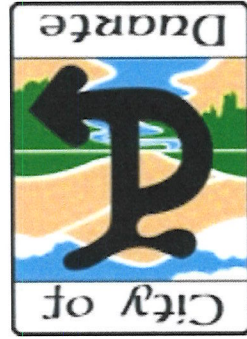
City Clerk Marla Akana
City of Duarte, California

CITY OF DUARTE



Infrastructure Modernization Program

Public Hearing
August 27th, 2019



PROGRAM BENEFITS



- * Program cost and savings are contractually guaranteed. This means no change orders and If savings are not realized, Climatec pays!
- * Creates City staff efficiencies and increased productivity through “Smart City” & “Green” technologies
- * Comprehensively modernizes aging City equipment
- * Generates Annual Utility Savings of 37% or approx. \$90,000

ADDITIONAL BENEFITS

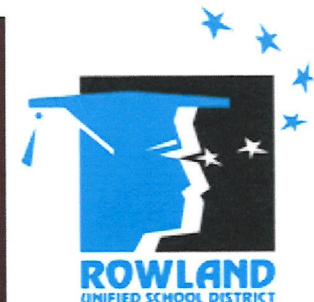
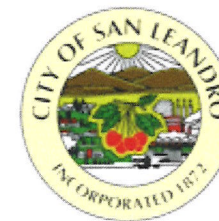


- * Improved City infrastructure = Improved service levels
- * Self-funded program facilitates infrastructure improvements & deferred maintenance now!
- * Climatec Partnership - Stable ownership (45 years)
 - o *Never changed it's name nor transferred energy savings agreements & backed by BOSCH; a \$91B technology/engineering company*
- * Program includes public relations component to help the City share its story i.e. Press Releases, Local Duarte Events, Flip the Switch Openings, Groundbreakings, etc.

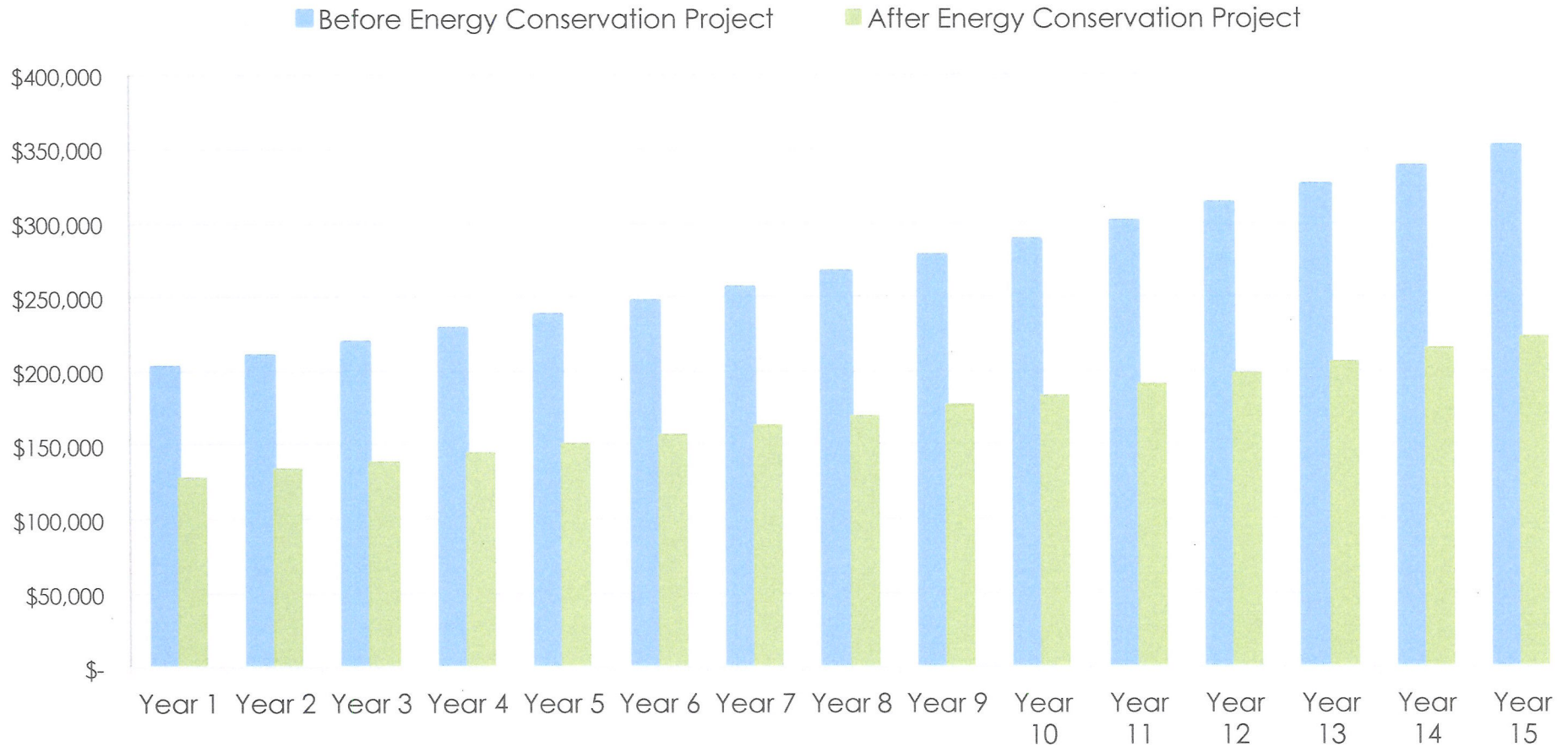
LOCAL REFERENCES



- * City of Bellflower
- * City of Fountain Valley
- * City of Beverly Hills
- * City of Blythe
- * City of Seal Beach
- * City of Twentynine Palms
- * City of San Leandro
- * City of Laguna Beach
- * City of Escondido
- * City of Indio
- * City of Bell
- * Rowland USD
- * Covina Valley USD
- * Mountain View SD



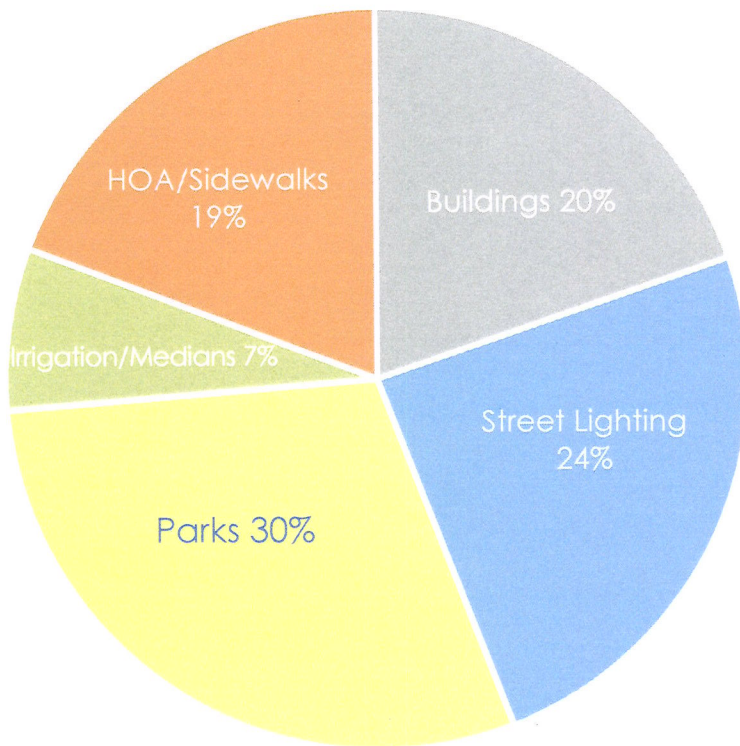
ENERGY USAGE SAVINGS



37% annual reduction in energy usage

ANNUAL UTILITY COST SAVINGS

Electric, Gas & Water Utility Totals & Usage Distribution



Category	Annual Utility Expenditure	Year 1 Utility Savings*
Buildings	\$ 151,033	\$44,996
Street Lighting	\$ 185,817	\$34,929
Parks	\$ 225,911	\$9,591
Medians	\$ 53,837	n/a
HOA/Sidewalks	\$ 147,108	n/a
	\$ 763,706	\$89,516

*does not include savings from reduced maintenance, staff efficiencies, CIP budget savings, or SCE Option-E LED street lighting retrofit

STAFF EFFICIENCIES IMPROVEMENT



- * Reduced maintenance hours
- * Centralized control of key building, irrigation and street lighting systems allowing staff to repurpose hours on priority projects
- * Automated technology to ensure equipment is off when spaces are unoccupied
- * Platform for integrating smart city technology and devices in the future

FINDINGS: LIGHTING



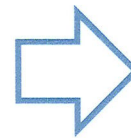
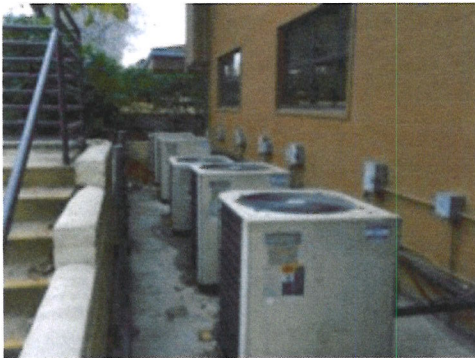
- * **Current Situation:** The City has a mixture of older generation lighting throughout the interior & exterior of buildings, parking lots, parks and streets that are inefficient, provide poor light levels and have to be replaced often. City also has limited control capabilities for lighting.
- * **Proposed Solution:** Modernize to LED throughout the City, add safety lighting and install smart control system for street lights. In addition to substantial energy savings, LED helps reduce maintenance while improving the overall look & feel of the community.



FINDINGS: HVAC



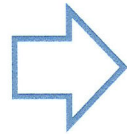
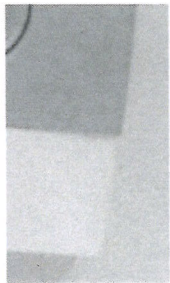
- * **Current Situation:** The City has aging HVAC systems that are past useful life and energy inefficient. Antiquated systems compromise building comfort and can be disruptive and costly as units fail.
- * **Proposed Solution:** Modernize HVAC infrastructure at the Senior Center and Teen Center with new high efficiency HVAC units to improve building comfort and reduce operating expenditures.



FINDINGS: BUILDING AUTOMATION



- * **Current Situation:** The City has antiquated building controls that do not properly control heating & cooling and lighting systems. This leads to higher utility bills, staff inefficiencies and comfort issues.
- * **Proposed Solution:** Install new Wi-Fi based smart building automation system to provide improved temperature control, ease of scheduling and prolonged life for heating & cooling equipment.



FINDINGS: IRRIGATION



- * **Current Situation:** The City has antiquated, manual irrigation controllers that are difficult to program, inefficient for staff to maintain and often lead to overwatering sometimes during rainstorm. Changing watering schedules is a strain on limited Staff resources especially during inclement weather or park events.
- * **Proposed Solution:** Install a smart weather-based irrigation control system to provide ease of scheduling, remote control capabilities, alerts and water cost savings.



FINDINGS: SOLAR



- * **Current Situation:** Energy costs are expected to increase 8% in FY 19/20. In recent years, SCE recently made billing structures more complicated with increased demand charges and peak pricing at certain times of the day.
- * **Proposed Solution:** Install roof-mounted solar PV at the City Hall, Community Center, and Fitness Center as well as solar thermal water heating at the Fitness Center pool. Solar will allow the City to reduce the rising utility costs on the General Fund.



PROJECT OVERVIEW & COST



City of Duarte Infrastructure Modernization Program – Option A

Category	Cost	Savings
LED Street Light Modernization	\$884,605	\$1,572,467
Roof Mounted Solar PV System	\$541,722	\$1,253,599
High Efficiency Heating & Cooling Equipment	\$233,280	\$265,413
Interior & Exterior LED Lighting Modernization	\$183,315	\$510,959
Smart Connectivity Street Light Control System	\$167,311	\$221,420
Smart Building Automation System	\$118,228	\$208,612
Solar Thermal Pool Heating	\$98,332	\$317,991
Smart Irrigation Weather-Based Control System	\$59,804	\$266,741
Total	\$2,286,597	\$4,617,202

PROJECT FUNDING PLAN OPTION A



Total Project Cost \$ 2,286,597

Funding Sources:

Lease Purchase (2.42%) \$ 1,286,597

City Contribution \$ 1,000,000

Lifecycle Savings \$ 4,617,202*

**Comprised of \$3,330,605 in General Fund Operating Budget savings from reduced utility and maintenance costs over life of new equipment (15 years for infrastructure improvements and 30 years for solar) and \$1,286,597 in avoided capital expenditures (based on capital improvement & deferred maintenance projects that must be funded in the next 1-3 years). Utility Grants totaling \$64,243 will also be pursued but are not included in the project cost.*

PROJECT OVERVIEW & COST



City of Duarte Infrastructure Modernization Program – Option B

Category	Cost	Savings
LED Street Light Modernization	\$884,605	\$1,948,543
Roof Mounted Solar PV System	\$541,722	\$1,253,599
High Efficiency Heating & Cooling Equipment	\$233,280	\$364,588
Interior & Exterior LED Lighting Modernization	\$183,315	\$588,892
Smart Connectivity Street Light Control System	\$167,311	\$292,549
Smart Building Automation System	\$118,228	\$258,874
Solar Thermal Pool Heating	\$98,332	\$317,991
Smart Irrigation Weather-Based Control System	\$59,804	\$292,166
Total	\$2,286,597	\$5,317,202

PROJECT FUNDING PLAN OPTION B



Total Project Cost \$ 2,286,597

Funding Sources:

Lease Purchase (2.42%) \$ 2,286,597

City Contribution \$ 0

Lifecycle Savings \$ 5,317,202*

**Comprised of \$3,330,605 in General Fund Operating Budget savings from reduced utility and maintenance costs over life of new equipment (15 years for infrastructure improvements and 30 years for solar) and \$1,986,597 in avoided capital expenditures (an increase of \$700,000 over Option A based on capital improvement & deferred maintenance projects that must be funded in the next 1-3 years and financing the entire project). Also requires an annual payment of \$20,000 for 15 years. Utility Grants totaling \$64,243 will also be pursued but are not included in the project cost.*

EXHIBIT A:
ANALYSIS

CITY OF DUARTE

INFRASTRUCTURE MODERNIZATION & SUSTAINABILITY NEEDS

DETAILED ANALYSIS

6/25/2019

	BUILDING AUTOMATION SYSTEM (BAS)	LIGHTING		STREET LIGHTING			HEATING & COOLING	WATER	SOLAR	
	Install BAS	Interior LED Lighting Modernization	Exterior LED Lighting Modernization	LED Street Light Modernization	LED Safety Light Modernization	Smart Connectivity Control System	New High Efficiency HVAC Units	Smart Irrigation Control System	Roof-Mounted Solar Photovoltaic	Solar Thermal
City-Wide				✓	✓	✓				
Chamber of Commerce	✓	✓	✓							
City Hall	✓	✓	✓					✓	✓	
Community Center	✓	✓	✓						✓	
Fitness Center	✓	✓	✓						✓	
Fitness Center Swim Pool										✓
Senior Center	✓	✓	✓				✓	✓		
Teen Center	✓	✓	✓				✓			
Public Safety	✓	✓	✓							
Duarte Metro Station										
Downtown Retail Center										
Royal Oaks Park Building	✓	✓	✓							
Duarte Park Building			✓							
Aloysia Moore Park			✓					✓		
Beardslee Park			✓					✓		
Duarte Park								✓		
Encanto Park/ Nature Walk			✓					✓		
Entrance Park								✓		
Glen Miller Park								✓		
Hacienda Park								✓		
Lena Valenzuela Park								✓		
Northview Park								✓		
Otis Gordon Sport Park								✓		
Royal Oaks Bike Trail								✓		
Royal Oaks Park								✓		
Royal Oaks Park Extension			✓					✓		
Sports Park								✓		
Thorsen Park			✓					✓		

CITY OF DUARTE

CASH FLOW PROFORMA – OPTION A

DETAILED ANALYSIS

8/21/2019

Program Information				Funding Sources				Lease Purchase Information	
Total Project		\$2,286,597		Municipal Lease Purchase		\$1,286,597		Term	15 years
Lifecycle Savings		\$4,617,202		Capital Contribution		\$1,000,000		Rate	2.42%
Year	Program Savings			Program Costs				Net Savings	
	Annual Operating Savings	Utility Incentives	Total Program Inflows	Annual Lease Purchase	Solar Maintenance	Measurement & Verification	Total Program Outflows	Annual Net Savings to General Fund	Cumulative Savings to General Fund
FY 2020	\$14,370		\$14,370	\$0		\$0	\$0	\$14,370	\$14,370
FY 2021	\$143,381	\$64,243	\$207,624	\$103,303	\$4,844	\$8,500	\$116,647	\$90,977	\$105,347
FY 2022	\$146,916		\$146,916	\$103,303	\$4,910	\$8,500	\$116,713	\$30,203	\$135,550
FY 2023	\$150,590		\$150,590	\$103,303	\$4,977	\$8,500	\$116,780	\$33,810	\$169,360
FY 2024	\$154,410		\$154,410	\$103,303	\$5,046		\$108,349	\$46,061	\$215,421
FY 2025	\$158,380		\$158,380	\$103,303	\$5,115		\$108,418	\$49,962	\$265,384
FY 2026	\$162,508		\$162,508	\$103,303	\$5,187		\$108,490	\$54,018	\$319,402
FY 2027	\$166,798		\$166,798	\$103,303	\$5,259		\$108,562	\$58,236	\$377,638
FY 2028	\$171,259		\$171,259	\$103,303	\$5,333		\$108,636	\$62,622	\$440,260
FY 2029	\$175,895		\$175,895	\$103,303	\$5,409		\$108,712	\$67,183	\$507,444
FY 2030	\$180,714		\$180,714	\$103,303	\$5,486		\$108,789	\$71,926	\$579,369
FY 2031	\$185,725		\$185,725	\$103,303	\$5,564		\$108,867	\$76,857	\$656,226
FY 2032	\$190,933		\$190,933	\$103,303	\$5,645		\$108,948	\$81,985	\$738,211
FY 2033	\$196,347		\$196,347	\$103,303	\$5,726		\$109,029	\$87,317	\$825,529
FY 2034	\$201,974		\$201,974	\$103,303	\$5,810		\$109,113	\$92,862	\$918,390
FY 2035	\$207,825		\$207,825	\$103,303	\$5,895		\$109,198	\$98,627	\$1,017,018
FY 2036	\$41,074		\$41,074		\$5,982		\$5,982	\$35,093	\$1,052,110
FY 2037	\$42,637		\$42,637		\$6,070		\$6,070	\$36,567	\$1,088,678
FY 2038	\$44,260		\$44,260		\$6,160		\$6,160	\$38,100	\$1,126,778
FY 2039	\$45,945		\$45,945		\$6,252		\$6,252	\$39,693	\$1,166,470
FY 2040	\$47,694		\$47,694		\$6,346		\$6,346	\$41,348	\$1,207,818
FY 2041	\$36,816		\$36,816		\$6,442		\$6,442	\$30,374	\$1,238,192
FY 2042	\$38,193		\$38,193		\$6,540		\$6,540	\$31,653	\$1,269,845
FY 2043	\$39,622		\$39,622		\$6,640		\$6,640	\$32,982	\$1,302,827
FY 2044	\$41,103		\$41,103		\$6,741		\$6,741	\$34,362	\$1,337,189
FY 2045	\$42,641		\$42,641		\$6,845		\$6,845	\$35,796	\$1,372,985
FY 2046	\$44,235		\$44,235		\$6,951		\$6,951	\$37,285	\$1,410,270
FY 2047	\$45,890		\$45,890		\$7,059		\$7,059	\$38,831	\$1,449,101
FY 2048	\$47,606		\$47,606		\$7,169		\$7,169	\$40,437	\$1,489,539
FY 2049	\$49,387		\$49,387		\$7,281		\$7,281	\$42,106	\$1,531,644
FY 2050	\$51,234		\$51,234		\$7,395		\$7,395	\$43,838	\$1,575,483
TOTALS			\$3,330,605				\$1,755,122	\$1,575,483	\$1,575,483

CITY OF DUARTE

CASH FLOW PROFORMA – OPTION B

DETAILED ANALYSIS

8/21/2019

Program Information				Funding Sources				Lease Purchase Information		
Total Project		\$2,286,597		Municipal Lease Purchase		\$2,286,597		Term	15 years	
Lifecycle Savings		\$5,317,202		Annual Maintenance Contribution		\$20,000 / year		Rate	2.42%	
Year	Program Savings				Program Costs				Net Savings	
	Annual Operating Savings	Annual Maintenance Contribution	Utility Incentives	Total Program Inflows	Annual Lease Purchase	Solar Maintenance	Measurement & Verification	Total Program Outflows	Annual Net Savings to General Fund	Cumulative Savings to General Fund
FY 2020	\$14,370			\$14,370	\$0		\$0	\$0	\$14,370	\$14,370
FY 2021	\$143,381	\$20,000	\$64,243	\$227,624	\$213,314	\$4,844	\$8,500	\$226,659	\$966	\$15,336
FY 2022	\$146,916	\$20,000		\$166,916	\$156,423	\$4,910	\$8,500	\$169,833	-\$2,917	\$12,419
FY 2023	\$150,590	\$20,000		\$170,590	\$159,866	\$4,977	\$8,500	\$173,343	-\$2,753	\$9,666
FY 2024	\$154,410	\$20,000		\$174,410	\$163,446	\$5,046		\$168,491	\$5,919	\$15,585
FY 2025	\$158,380	\$20,000		\$178,380	\$167,166	\$5,115		\$172,281	\$6,099	\$21,684
FY 2026	\$162,508	\$20,000		\$182,508	\$171,035	\$5,187		\$176,221	\$6,287	\$27,971
FY 2027	\$166,798	\$20,000		\$186,798	\$175,055	\$5,259		\$180,314	\$6,484	\$34,455
FY 2028	\$171,259	\$20,000		\$191,259	\$179,235	\$5,333		\$184,569	\$6,690	\$41,145
FY 2029	\$175,895	\$20,000		\$195,895	\$183,580	\$5,409		\$188,989	\$6,906	\$48,052
FY 2030	\$180,714	\$20,000		\$200,714	\$188,096	\$5,486		\$193,582	\$7,133	\$55,184
FY 2031	\$185,725	\$20,000		\$205,725	\$192,792	\$5,564		\$198,356	\$7,368	\$62,552
FY 2032	\$190,933	\$20,000		\$210,933	\$197,673	\$5,645		\$203,317	\$7,616	\$70,168
FY 2033	\$196,347	\$20,000		\$216,347	\$202,746	\$5,726		\$208,472	\$7,874	\$78,042
FY 2034	\$201,974	\$20,000		\$221,974	\$208,019	\$5,810		\$213,829	\$8,145	\$86,187
FY 2035	\$207,825	\$20,000		\$227,825	\$213,503	\$5,895		\$219,397	\$8,427	\$94,615
FY 2036	\$41,074			\$41,074		\$5,982		\$5,982	\$35,093	\$129,707
FY 2037	\$42,637			\$42,637		\$6,070		\$6,070	\$36,567	\$166,275
FY 2038	\$44,260			\$44,260		\$6,160		\$6,160	\$38,100	\$204,375
FY 2039	\$45,945			\$45,945		\$6,252		\$6,252	\$39,693	\$244,067
FY 2040	\$47,694			\$47,694		\$6,346		\$6,346	\$41,348	\$285,415
FY 2041	\$36,816			\$36,816		\$6,442		\$6,442	\$30,374	\$315,789
FY 2042	\$38,193			\$38,193		\$6,540		\$6,540	\$31,653	\$347,442
FY 2043	\$39,622			\$39,622		\$6,640		\$6,640	\$32,982	\$380,424
FY 2044	\$41,103			\$41,103		\$6,741		\$6,741	\$34,362	\$414,786
FY 2045	\$42,641			\$42,641		\$6,845		\$6,845	\$35,796	\$450,582
FY 2046	\$44,235			\$44,235		\$6,951		\$6,951	\$37,285	\$487,867
FY 2047	\$45,890			\$45,890		\$7,059		\$7,059	\$38,831	\$526,698
FY 2048	\$47,606			\$47,606		\$7,169		\$7,169	\$40,437	\$567,136
FY 2049	\$49,387			\$49,387		\$7,281		\$7,281	\$42,106	\$609,241
FY 2050	\$51,234			\$51,234		\$7,395		\$7,395	\$43,838	\$653,080
TOTALS				\$3,630,605				\$2,977,525	\$653,080	\$653,080

INSTALLATION AGREEMENT FOR *City of Duarte, CA*

TERMS AND CONDITIONS

ATTACHMENTS

Attachment "A" – Scope of Work

Attachment "B" - Lighting Summary

Attachment "C" – Mechanical Inventory

Attachment "D" - Technical Appendix

Attachment "E" – Solar PV Installation

ENERGY PERFORMANCE CONTRACT

This Contract entered into as of August 27, 2019 (“Effective Date”) is made by and between:

City of Duarte, CA
 (“Purchaser”) with its principal place of business at
 1600 Huntington Drive, Duarte, CA 91010
 and

Climatec LLC
 With its principal place of business at
 2150 Towne Centre Place, Suite 200
 Anaheim, CA 92805

Purchaser and Climatec LLC agree as follows:

1. **INSTALLATION.** Climatec LLC shall provide Purchaser with an Energy Efficiency Program, as identified in **Attachment(s) A, B, C, D and E** and incorporated herein by reference (hereinafter referred to as the “Work”) at the total fixed price of \$2,286,597.00 (Two million, two hundred eighty six thousand five hundred ninety seven and 00/100 dollars including required taxes and Performance and Payment Bonds (the “Contract Amount”). Climatec LLC is responsible for the design, engineering, permits, fees, approvals, project management, installation, startup, training, checkout, warranty, and insurance specifically associated with the Work to be performed. Climatec LLC is not responsible for any equipment, systems, controls, pre-existing climate control equipment deficiencies, balancing, duct cleaning, existing deficient conditions, etc. not specifically included in this Agreement. Climatec LLC will provide submittals and engineered drawings (if required), for Purchaser’s technical review and written approval, prior to initiating construction. All construction and associated cleanup shall be performed and scheduled so as to minimize any disruption with any ongoing Purchaser activities. The Purchaser is responsible for Ethernet drops at each location for Energy Management System communication. This proposal offer is valid until November 26, 2019.
2. **SCOPE OF WORK.** Once this contract is executed by the Purchaser and Climatec LLC, Climatec LLC may not revise the contract in any way except by mutual agreement with the Purchaser. Prior to the contract being signed by both parties, Climatec LLC reserves the right to revise any or all portions of the agreement. This agreement is based upon the use of straight time labor only unless stated otherwise in this agreement. Purchaser agrees to provide Climatec LLC with access to existing field utilities (electricity, toilets, drinking water, etc.) without charge. Climatec LLC agrees to keep the jobsite clean of debris arising out of its own operations. Purchaser shall not back charge Climatec LLC for any cost or expenses without Climatec LLC’s written consent. Unless specifically noted in the statement of the scope of the work or services undertaken by Climatec LLC under this agreement, Climatec LLC’s obligations under this agreement expressly exclude any work or service of any nature associated or connected with the identification, abatement, clean up, control, removal or disposal of environment Hazards or dangerous substances, to include but not to be limited to asbestos, PCBs, or mold discovered in applicable installation sites. Any language or provision of the agreement elsewhere contained which may authorize or empower the Purchaser to change, modify or alter the scope of work or services to be performed by Climatec LLC shall not operate to compel Climatec LLC to perform any work relating to Hazards without Climatec LLC’s express written consent.
3. **SOLAR INSTALLATION.** The scope of work excludes correction of concealed conditions that could not have been ascertained by general visual inspection. The scope excludes correction of any existing or previous violations

of laws, codes or utility requirements and errors and omissions of the customer or other contractors not communicated to Climatec LLC. Customer will provide all discretionary permits (permits requiring the discretion of the issuer) required in time to execute the work within the agreed upon schedule. Climatec LLC will provide all non-discretionary, ministerial (permits not requiring thought and discretion of the issuer) permits required for the provision of the solar installation. Customer agrees to promptly execute and return provided Preliminary Interconnection Documentation (initial or preliminary paperwork or documentation required by the Utility for interconnection of the System to be executed by the System Owner), Preliminary Rebate Documentation (documentation comprising the initial or preliminary paperwork required by the administrator of the Rebate or the Rebate to be reserved) (if applicable), and Site Owner Consent Documentation (agreement from the site owner to install system on the real property identified in the proposal) (if applicable). Scope will include commercially reasonable efforts to promptly obtain the PTO (Permission to Operate) from Customer's utility. The monitoring equipment provider will provide monitoring hosting services for the first five (5) years of operation. Customer warrants that they hold title to the installation site and agree to the solar installation on that site.

Terms applicable to the solar scope are as follows:

- a. **Interconnection Agreement** – means an agreement between the Purchaser and a particular utility involved for interconnection of the solar output to the electrical grid.
- b. **Interconnection Equipment** – all equipment (including wiring and conduit and metering for net metering) on the Purchaser side of the main service meter to enable proper interconnection of the solar system to the grid.

(3.1) Design – Climatec LLC shall prepare the Design Submittals (prepared by qualified individuals). The Submittal shall be submitted to Purchaser for approval. Purchaser shall provide approvals within thirty (30) calendar days from receipt. If not received within thirty (30) days, the submittal may be deemed approval by Climatec LLC.

(3.2) Unforeseen Site Conditions – Within 10 days of discovery, Climatec LLC will notify Purchaser in writing of (a) subsurface or latent physical conditions at the site differing materially from those described in any contract or Purchaser documentation. Climatec LLC and the Purchaser acknowledge inspecting the sites for the solar installations and attest that no generally visible deficiencies were noted.

4. **INVOICING & PAYMENTS.** Climatec LLC may invoice the Purchaser for any equipment and/or materials installed at a job site. Purchaser agrees to pay Climatec LLC amounts invoiced upon receipt of invoice. Waivers of lien will be furnished upon request, as the work progresses; to the extent payments are received. If Climatec LLC's invoice is not paid within forty five (45) days of its issuance, it is delinquent and Climatec LLC may add 1% per month interest onto delinquent amounts.
5. **INDEPENDENT CONTRACT.** It is agreed between Purchaser and Climatec LLC that Climatec LLC shall perform the Work as an independent contractor. Climatec LLC may use subcontractors to perform work hereunder, provided Climatec LLC shall fully pay said subcontractors and in all instances remain fully responsible for (a) the proper completion of this agreement and (b) supervising such subcontractor's work and for the quality of the work they produce.
6. **MATERIALS.** All materials shall be new, in compliance with all applicable laws and codes, and shall be covered by a manufacturer's warranty, if appropriate. If the materials or equipment included in this agreement become temporarily or permanently unavailable, the time for performance of the work shall be extended to the extent thereof, and in case of permanent unavailability, Climatec LLC shall (a) be excused from furnishing said materials or equipment, and (b) be reimbursed for the difference between the cost of the materials or equipment permanently unavailable and the cost of a reasonable substitute therefore.
7. **COMPLETION.** The work specified in Section 1 shall be considered completed upon approval by the Purchaser, provided that the Purchaser's approval shall not be unreasonably withheld. The nature of the work is that it consists of multiple projects and/or sites, as noted in Attachment A (Scope of Work). Once work on a project or a site is deemed by Climatec LLC to be substantially complete (that is available for beneficial use by the Purchaser with the Scope of Work for that site or project functioning as required) except for minor items (a punch list), Climatec LLC will provide a Notice of Substantial Completion for that site or project to the Purchaser. Final Completion, as previously noted, will occur once the entire Scope of Work is complete for all sites and projects.

8. **WARRANTY.** Climatec LLC warrants that the equipment and systems provided under this contract shall be free from defects in material and workmanship arising from normal usage for a period of one year from the date of beneficial use or eighteen months from delivery of said equipment or systems. Within the warranty period, if Purchaser provides written notice to Climatec LLC of any such defects within thirty (30) days after the appearance or discovery of such defect, Climatec LLC shall, at its option, repair or replace the defective equipment and return said equipment to Purchaser. All transportation charges incurred in connection with the warranty for equipment shall be borne by Purchaser, unless otherwise provided for in manufacturer warranties. These warranties do not extend to any equipment which has been repaired by others, abused, altered or misused, or which has not been properly and reasonably maintained. All transferrable manufacturer warranties associated with the equipment will be transferred to the Purchaser. These warranties are in lieu of all other warranties, expressed or implied, including but not limited to those of merchantability and fitness for a specific purpose.
9. **LIABILITY.** Climatec LLC shall not be liable for any special, indirect, or consequential damages arising in any manner from the equipment, material, or systems furnished or the work performed pursuant to this agreement.
10. **TAXES.** The price of this agreement includes duties, sale, use, excise or other similar taxes required by federal, state or local laws in effect at the time of agreement execution. 8
11. **DELAYS.** Climatec LLC shall not be liable for any delay in the performance of the work resulting from or attributed to acts of circumstance beyond Climatec LLC's control, including but not limited to acts of God, riots, labor disputes, conditions of the premises, acts or omissions of the Purchaser, or other Contractors or delays caused by suppliers or subcontractors of Climatec LLC, etc. If Purchaser delays project for greater than 60 days, Climatec LLC can recover any cost inflation on un-billed materials that were either stored or yet to be purchased.
12. **REBATES, UTILITY INCENTIVES, AND GRANTS** Unless otherwise stated in the project scope-of-work, or cash flow analysis, any and all rebates, incentives, grants that are earned through the course of this project from public or private utilities, municipalities, development districts or state funding are 100% the property of Climatec LLC or their designee. The paperwork, inspections and verification required to collect these monies are the sole responsibility of Climatec LLC. The customer agrees to assist Climatec LLC where required by the jurisdiction in the form of data required for the application and authorizing signatures. In the event the Customer incurs expenses related to the processing of the applications, Climatec LLC shall reimburse these direct costs. All rebates will be initially received by Climatec LLC and disbursed according to this contract. If, subsequent to contract execution, there is a change in the rebate amount realized by Climatec LLC, no change in the contract price will be allowed. If there are new rebates, incentives, or grants not incorporated in the price of this agreement, those will become the property of the Purchaser.
13. **TAX CREDITS, TAX DEDUCTIONS AND 179d QUALIFYING CREDITS** Unless otherwise stated in the contract, any and all eligible tax credits or incentives that can be earned through the course of this project from State, Local or Federal agencies for energy efficient design are 100% the property of Climatec LLC or their designee. The paperwork, inspections and verification required to collect these credits are the sole responsibility of Climatec LLC. The customer agrees to assist Climatec LLC where required by the jurisdiction in the form of data required for the application and authorizing signatures and/or transfers. In the event the Customer incurs expenses related to the processing of the applications, Climatec LLC shall reimburse these direct costs. If there is a change in tax credits, deductions or 179-D credits that are a part of this project, such change will not result in a change to the price of the project.
14. **COMPLIANCE WITH LAWS.** Climatec LLC shall comply with all applicable federal, state, and local laws and regulations. All licenses and permits required for the prosecution of the work shall be obtained and paid for by Climatec LLC.
15. **CLIMATEC LLC'S LICENSE AND DIR REGISTRATION.** In order to perform the work required by this Agreement, Climatec LLC shall possess a valid, active license in the classification(s) required issued by the State of California, which shall remain valid and active throughout the Project. In addition, Climatec LLC must be registered with DIR as a public works contractor.

16. **WAGE RATES.** Pursuant to the provisions of Article 2, commencing with Section 1770 of the Labor Code, OWNER has ascertained the general prevailing rate of per diem wages in the locality in which this public work is to be performed for each craft, classification, or type of worker needed to execute this Agreement. The general rates of per diem wages are available at OWNER's office. In the event that the listed or posted rates are in error, CLIMATEC LLC is responsible to pay those rates determined by the Director of Industrial Relations to be applicable, and OWNER shall not be responsible for any damages arising from the error.
17. **PAYROLL RECORDS.** It is the responsibility of CLIMATEC LLC to comply with the provisions of Labor Code Section 1776 dealing with the maintenance and inspection of employee payroll records.
18. **PREVAILING WAGE.** The project is subject to prevailing wage monitoring and enforcement by the Department of Industrial Relations (DIR). Climatec LLC and all subcontractors will be subject to the requirements of Subchapter 4.5 of Chapter 8 of Title 8 of the California Code of Regulations. Climatec LLC and all subcontractors will be required to furnish electronic certified payroll records to the DIR on a frequency not less than monthly using the DIR's eCPR system at http://www.dir.ca.gov/Public-Works/eCPR_System-iForm.html. Climatec LLC shall comply with all requirements of the Labor Code and attendant regulations pertaining to prevailing wage monitoring and compliance as required by the DIR, including, but not limited to, posting job site notices prescribed by Title 8 CCR § 16451(d). Climatec LLC shall permit OWNER, the DIR or their designee to interview Climatec LLC's employees concerning compliance with prevailing wage, apprenticeship, and related matters, whether or not during work hours, and shall require each subcontractor to provide OWNER, the DIR or their designee with such access to its employees.
19. **APPRENTICES.** If applicable, CLIMATEC LLC shall comply with the requirements of Labor Code Section 1777.5 dealing with the employment of apprentices.
20. **DISPUTES.** Written notice of any Dispute must be provided to the other party, describing specific details of the dispute relating to changes in Work or claim for additional compensation, within fourteen (14) days of the occurrence of the condition. This notice must be provided via certified mail. For a reasonable period commencing on the day written notice of Dispute was provided, but not to exceed thirty (30) days, the parties shall in good faith attempt to resolve the Dispute. If the parties are unable to resolve the Dispute during this period, the parties shall proceed to binding arbitration. The arbitrator shall be neutral and mutually acceptable. The arbitrator shall determine all rights and obligations under this Agreement and the award of the arbitrator shall be final, binding, and enforceable. Any award issued pursuant to this provision may be enforced in a court of competent jurisdiction, and each party hereby consents to that jurisdiction. All venues for arbitration shall be in the locality in which the project is located. The prevailing party in arbitration shall recover reasonable legal fees and costs as determined by the arbitrator. .
21. **CHANGE ORDER (Mid-Performance Amendments).** Climatec LLC and the Purchaser recognize that:
- Purchaser may desire a mid-job change in the specifications or scope that would add time and cost to the specified work or inconvenience Climatec LLC.
 - Other provisions of the Agreement may be difficult to carry out because of unforeseen events, such as material shortage or labor strikes. If these or other events beyond the control of the parties reasonably require adjustments to this agreement, the parties shall make a good faith attempt to agree on all necessary particulars. Such agreements shall be put in writing, signed by the parties and added to this agreement. Failure to reach agreement shall be deemed a dispute to be resolved as agreed in section 14 of this agreement.
22. **INSURANCE.** Climatec LLC will maintain comprehensive liability and other insurance in amounts not less than those set forth below. Such insurance shall protect Climatec LLC and the Purchaser against any claims, losses, liabilities and expenses arising from the Work, whether performed by Climatec LLC or any subcontractor of Climatec LLC. The coverage shall include:
- Workmen's Compensation and Employers Liability Insurance - \$1,000,000 each accident; \$1,000,000 each employee/disease; and \$1,000,000 policy limit.

- b. Comprehensive or Commercial General Liability - Bodily injury liability of \$1,000,000 per occurrence and general aggregate liability of \$2,000,000 per occurrence.
- c. Comprehensive Automobile Insurance – Combined single limit of \$1,000,000 per occurrence.

If the Purchaser requires that Climatec LLC maintain any special insurance coverage, policy, amendment, or rider, the Purchaser shall pay the additional cost.

- 23. **INDEMNITY.** The Parties hereto agree to defend, indemnify, and hold harmless each other from any and all liabilities, claims, expenses, losses or damages, including attorney's fees which may arise in connection with the execution of the work herein specified and which are caused, in whole or in part by the negligent act or omission of the indemnifying Party. Nothing herein constitutes any waiver of any of the Purchaser's statutory immunities.
- 24. **OCCUPATIONAL SAFETY AND HEALTH.** The Parties hereto agree to notify each other immediately upon becoming aware of any alleged violation of, the Occupational Safety and Health Act (OSHA) relating in any way to the project or project site.
- 25. **ENTIRE AGREEMENT.** This agreement, upon acceptance, shall constitute the entire agreement between the parties and supersedes any prior representations or understandings.
- 26. **CHANGES.** No change or modification of any of the terms and conditions stated herein shall be binding upon Climatec LLC unless accepted by Climatec LLC in writing.
- 27. **SEVERABILITY.** If one or more of the provisions of this agreement are held to be unenforceable under laws, such provision(s) shall be excluded from these terms and conditions and the remaining terms and conditions shall be interpreted as if such provision were so excluded and shall be enforced in accordance to their terms and conditions.
- 28. **COUNTERPARTS.** This agreement may be executed in multiple counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument. A signature on a copy of this agreement received by either party by facsimile or portable document format (PDF) is binding upon the other party as an original. The parties shall treat a photocopy of such facsimile as a duplicate original.
- 29. **ASSIGNMENT.** Climatec LLC retains the right to assign its rights and obligations of this agreement with written consent of Purchaser.
- 30. **ACKNOWLEDGMENT.** Both Climatec LLC and the Purchaser acknowledge having read this agreement and all contract documents incorporated herein and have executed this agreement on the date written above.

31. APPROVAL. Each party represents that the person that has executed this agreement on its' behalf is authorized to do so.

IN WITNESS WHEREOF, the parties have caused their duly authorized officers to execute this Agreement effective as of the date first above written.

City of Duarte, CA

Signature

Print Name

Title

Date

Climatec LLC

Signature

Print Name

Title

Date

Attachment “A”

Scope of Work

City Wide Measures

Street Lighting

- * Retrofit (23) existing HID Cobra heads on LS-2, LS-3, and TC-1 energy tariffs to new, high efficiency LED lighting systems.
- * Refurbish and Retrofit (687) existing HID lamps in existing decorative bell shaped street light fixtures on LS-2, LS-3, and TC-1 energy tariffs to new, high efficiency LED lighting systems.

Scope includes:

- Remove the existing Bell fixtures from the City's poles and ship fixture to the facility.
- Temporarily install Cobra Head fixtures to provide lighting during refurbishing process.
- Disassemble fixture, remove old lamp and all appurtenances.
- Sandblast, clean, chemically etch, prime, and paint Bell housing.
- Retrofit the fixture with an LED kit.
 - This kit includes a dimmable driver
- Add a new 7-pin control receptacle to the Bell fixture
- Ship the refurbished Bell fixture to the City and re-install it on the pole
- Install the Climatec supplied Smart Control Node on the fixture

Scope excludes:

- Any electrical upgrades to undisclosed poles, or additional lighting.
- * A photometric analysis of the current and the final lighting performance will be performed. Lighting will comply with IES (Illuminating Engineering Society of North America) mandated requirements for street lighting. Be aware that the lumen output is different between HPS and LED due to the color difference. You should be aware that the standards reflect that difference and therefore a reduced lumen output will not be indicative of any reduced lighting in an area.

Street Lighting Controls

- * Provide and install an open protocol street lighting control and monitoring system to control (674) applicable street lighting fixtures. The system will be capable of automatically dimming the fixture by a set amount during dusk and dawn hours to maximize energy savings, as well as notifying city personnel when a light is not functioning properly. In addition, the system can act as a platform for future additions (at an additional cost per feature) including parking sensors, security monitoring, and public Wi-Fi.

Chamber of Commerce – 1735 Huntington Dr.

Lighting

- * Retrofit identified interior T8 fluorescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace (1) existing thermostat controlling (1) Rooftop Packaged Unit at the Chamber of Commerce with a Wi-Fi based HVAC thermostat that allows network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control.

The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods

The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

City Hall – 1850 Highland Ave.

Lighting

- * Retrofit identified interior T8 and CFL lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- * Retrofit identified exterior building mounted and pole mounted CFL and HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace the existing Building Automation System (BAS) and (12) existing zone thermostats controlling the buildings (12) Variable Volume & Temperature (VVT) zones at City Hall with Wi-Fi based controls that allow network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control.

The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the zone thermostats, damper controls, and system controller. Occupancy sensors allow for temperature set back during unoccupied periods

The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Solar PV Electric Generation

- * Install a 109.6kW (DC) solar power generating system. Scope includes engineering, site testing, construction, commissioning, and monitoring of the solar power system, as well as support to execute the utility interconnection agreement. Climatec shall install a data acquisition system to provide system performance monitoring for the City. PV arrays to be installed on the roof of the City Hall and Community Center Buildings.

Irrigation

Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Community Center – 1600 Huntington Drive.

Lighting

- * Retrofit identified interior T8, CFL, and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace the existing Building Automation System (BAS) and (3) existing zone thermostats controlling the buildings (3) Variable Volume & Temperature (VVT) zones at City Hall with Wi-Fi based controls that allows network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control.
The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the zone thermostats, damper controls, and system controller. Occupancy sensors allow for temperature set back during unoccupied periods
The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Fitness Center – 1600 Huntington Drive.

Lighting

- * Retrofit identified interior T8 and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- * Retrofit identified exterior building mounted and pole mounted CFL and HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace the existing Building Automation System (BAS) and (4) existing zone thermostats controlling the buildings (4) Variable Volume & Temperature (VVT) zones at City Hall with Wi-Fi based controls that allows network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control.

The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the zone thermostats, damper controls, and system controller. Occupancy sensors allow for temperature set back during unoccupied periods

The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Renewables

- * Install a solar thermal water heating system for the outdoor swimming pool. The system will be an active direct drain-back type with unglazed solar collectors located on the rooftop of the fitness center. Current natural gas heating system will remain unchanged to provide backup pool heating.

Scope Includes:

- Installation of solar collectors and interconnecting piping.
- Start-up/testing of the new system.
- Support to the City to maintain roof warranty (if any) but can't guarantee the manufacturer's acquiescence.

Scope Excludes:

- Repair of undisclosed structural deficiencies and associated upgrades/modifications to existing roof.

Senior Center – 1610 E. Huntington Dr.

Lighting

- * Retrofit identified interior T8, CFL, and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- * Retrofit identified exterior building mounted CFL systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace (11) existing thermostats controlling (11) Split System Units at the Senior Center with Wi-Fi based HVAC thermostats that allow network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control.

The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods

The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas

with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Mechanical

- * Replace seven (7) split system heat pump units with new high efficiency units of similar size and capacity. Please refer to the Mechanical Replacement Inventory in Attachment C for equipment size and location.

Scope of Work Includes:

- Removal of existing split system units (fan coil and condensing unit).
- Proper disposal or containment of refrigerant.
- Provide and install new equipment as required.
- Disconnection/reconnection of the existing electrical, installation of new electrical disconnects.
- Condensate connections.
- Start-up/testing of the new units, and connection to the existing HVAC control system. All equipment removed shall be disposed of per EPA guidelines.
- Integration of occupancy sensors to reset room temperature during unoccupied periods.

Scope Excludes:

- Undisclosed electrical and structural upgrades/modifications.
- Roofing repairs not directly related to the scope of mechanical work.

Irrigation

- * Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Teen Center – 1400 Buena Vista Street

Lighting

- * Retrofit identified interior T8, CFL, and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- * Retrofit identified exterior building mounted and pole mounted CFL and HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace (5) existing thermostats controlling (5) Split System Units at the Senior Center with Wi-Fi based HVAC thermostats that allow network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control.
- The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods. The

City of Duarte

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new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Mechanical

- * Replace five (5) split system gas/electric units with new high efficiency units of similar size and capacity. Please refer to the Mechanical Replacement Inventory in Attachment C for equipment size and location.

Scope of Work Includes:

- Removal of existing split system units (furnace, evaporating coil, and condensing unit).
- Proper disposal or containment of refrigerant.
- Provide and install new equipment as required.
- Disconnection/reconnection of the existing electrical and gas lines, installation of new electrical disconnects.
- Condensate connections.
- Start-up/testing of the new units, and connection to the existing HVAC control system. All equipment removed shall be disposed of per EPA guidelines.
- Integration of occupancy sensors to reset room temperature during unoccupied periods.

Scope Excludes:

- Undisclosed electrical and structural upgrades/modifications.
- Roofing repairs not directly related to the scope of mechanical work.

Public Safety Station – 1042 E. Huntington Dr.

Lighting

- * Retrofit identified interior T8 fluorescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace (1) existing thermostat controlling (1) Rooftop Packaged Unit at the Public Safety Station with a Wi-Fi based HVAC thermostat that allows network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control.
The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods
The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Public Works Yard - 1850 Highland Ave.

Irrigation

- * Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic

requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Royal Oaks Park Building – 2627 Royal Oaks Drive

Lighting

- * Retrofit identified interior T8 fluorescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- * Retrofit identified exterior building mounted and pole mounted CFL and HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace (3) existing thermostats controlling (3) Rooftop Packaged Units at the Royal Oaks Park Building with Wi-Fi based HVAC thermostats that allow network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control.
The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods
The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Duarte Park Building – 1344 Bloomdale Street

Lighting

- * Retrofit identified interior T8, CFL, and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- * Retrofit identified exterior building mounted and pole mounted CFL and HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Duarte Park & Skate Park – 1344 Bloomdale Street and 1401 Central Ave.

Irrigation

- * Install (3) WiFi ready weather based smart irrigation control systems. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. Each system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Aloysia Moore Park – 1100 Duarte Road

Lighting

- * Retrofit identified exterior pole mounted HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Irrigation

- * Install (2) WiFi ready weather based smart irrigation control systems. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. Each system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Beardslee Park – 2000 Buena Vista Street

Lighting

- * Retrofit identified exterior building mounted and pole mounted HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Irrigation

- * Install (2) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. Each system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Encanto Park & Nature Walk – 751 Encanto Parkway

Lighting

- * Retrofit identified exterior pole mounted HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Irrigation

- * Install (4) WiFi ready weather based smart irrigation control systems. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. Each system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Encanto Park – 751 Encanto Parkway

Irrigation

- * Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Glenn Miller Park – 205 Melcanyon Road

Irrigation

- * Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Hacienda Park – 2695 Hacienda Drive

Irrigation

- * Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Lena Valenzuela Park – 2120 Mountain Avenue

Irrigation

- * Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Northview Park – 1433 Highland Avenue

Irrigation

- * Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Otis Gordon Sports Park – 2351 Central Avenue

Irrigation

- * Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Rancho Verde LSD – near 2664 Hacienda Dr.

Irrigation

- * Install (2) WiFi ready weather based smart irrigation control systems. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. Each system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Royal Oaks Park and Extension – 2627 Royal Oaks Drive / 2701 Royal Oaks Drive

Lighting

- * Retrofit identified exterior pole mounted HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Irrigation

- * Install (2) WiFi ready weather based smart irrigation control systems. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. Each system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Royal Oaks Bike Trail – near 1398 Royal Oaks Dr.

Irrigation

- * Install (4) WiFi ready weather based smart irrigation control systems. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. Each system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Sports Park – 1401 Central Avenue

Irrigation

- * Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic

requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Thorsen Park – 2801 Huntington Drive

Lighting

- * Retrofit identified exterior pole mounted HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Veteran's Memorial Park – aka: Thorson Park – 2801 E. Huntington Dr.

Irrigation

- * Install (1) WiFi ready weather based smart irrigation control system. The controller's WiFi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 500Mb of data per month free without subscription. This plan does not expire. Any data use above 500Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.

Project Wide Note: All work in the scope of this project will be performed in compliance with California's Title 24 Building and Energy codes.

Attachment “B”
Lighting Summary

Aloysia Moore Park -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Flag Pole(s)

1st Floor

Rf#-2 Rm - Ext - Pole Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	1	300	0.3	4,380	1,314	1	NL026/fld	- New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.026	4,380	114	0.274	1,200
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Building/Area: Park

1st Floor

Rf#-1 Rm - Ext - Pole Mount	HPS 1L post top lantern, HPS 70w, HID ballast	6	95	0.57	4,380	2,497	6	RL027/s/gcs	- (1) LED 27w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	27	0.162	4,380	710	0.408	1,787
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Qty and kW for Aloysia Moore Park :	7	0.9	7	0.2	0.7
kWh for Aloysia Moore Park :	3,811			824	2,987

Beardslee Park -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Park

1st Floor

Rf#-1 Rm - Ext - Pole Mount	HPS 1L post top lantern, HPS 70w, HID ballast	1	95	0.095	4,380	416	1	RL027/s/gcs	- (1) LED 27w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	27	0.027	4,380	118	0.068	298
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Building/Area: RR Bldg

1st Floor

Rf#-2 Rm - Ext - Wall Mount	MH 1L wm wall pack, MH 50w, HID ballast	1	68	0.068	4,380	298	1	NL030/wp/ft	- New LED wall pack (FT), 50,000-Hr L70 rated life, 30w	30	0.03	4,380	131	0.038	166
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Qty and kW for Beardslee Park :

2

0.2

2

0.1

0.1

kWh for Beardslee Park :

714

249

464

Chamber of Commerce -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-1 Rm - Open Office	2x4x 2L rec trf, F32T8 32w, electronic ballast	12	59	0.708	1,700	1,204	12	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ec	26	0.312	1,700	530	0.396	673
Rf#-2 Rm - Office	2x4x 2L rec trf, F32T8 32w, electronic ballast	2	59	0.118	1,700	201	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.052	1,700	88	0.066	112
Rf#-3 Rm - Office	LED 1L rec can, LED ?w, n/a	2	0	0	1,700	0	2	DND - DND: (do not do, fixtures left as is)		0	0	1,700	0	0	0
Rf#-4 Rm - Kitchen	LED 1L rec can, LED ?w, n/a	2	0	0	1,700	0	2	DND - DND: (do not do, fixtures left as is)		0	0	1,700	0	0	0
Rf#-5 Rm - RR	LED 1L rec can, LED ?w, n/a	2	0	0	1,700	0	2	DND - DND: (do not do, fixtures left as is)		0	0	1,700	0	0	0
Rf#-6 Rm - Storage	1x4x 2L sm wp, F32T8 32w, electronic ballast	2	59	0.118	500	59	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.052	500	26	0.066	33
Rf#-7 Rm - All Exterior Space (DNE)	DND (do not do, left as is), n/a, n/a		0	0	1,092	0	0	DND - DND: (do not do, fixtures left as is)		0	0	1,092	0	0	0
Qty and kW for Chamber of Commerce :		22		0.9			22				0.4			0.5	
kWh for Chamber of Commerce :						1,463							644	818	

City Hall -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: CH Main Bldg															
1st Floor															
Rf#-1 Rm - Reception	1x4x 2L sm box, F32T8 28w, electronic ballast	1	50	0.05	3,640	182	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.026	3,640	95	0.024	87
Rf#-2 Rm - Reception	1x3x 1L under cabinet, F25T8 25w, electronic ballast	2	26	0.052	3,640	189	2	RLT831 - (1) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast		12	0.024	3,640	87	0.028	102
Rf#-3 Rm - Lobby	LED 1L can, LED ?w, n/a	1	0	0	3,640	0	1	DND - DND: (do not do, fixtures left as is)		0	0	3,640	0	0	0
Rf#-4 Rm - Office - to left of entry	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	2,800	560	4	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.104	2,800	291	0.096	269
Rf#-5 Rm - Counter	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	3,640	728	4	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.104	3,640	379	0.096	349
Rf#-6 Rm - Parks & Rec	2x4x 2L rec trf, F32T8 28w, electronic ballast	9	50	0.45	3,640	1,638	9	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.234	3,640	852	0.216	786
Rf#-7 Rm - Parks & Rec	1x3x 1L under cabinet, F25T8 25w, electronic ballast	4	26	0.104	3,640	379	4	RLT831 - (1) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast		12	0.048	3,640	175	0.056	204
Rf#-8 Rm - Office 1	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	2,800	280	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.052	2,800	146	0.048	134
Rf#-9 Rm - Office 2	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	2,800	280	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.052	2,800	146	0.048	134
Rf#-10 Rm - Main Hallway	1x4x 2L pm box, F32T8 28w, electronic ballast	22	50	1.1	3,640	4,004	22	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.572	3,640	2,082	0.528	1,922
Rf#-11 Rm - Main Hallway	LED 1L track spot light, LED ?w, n/a	3	0	0	3,640	0	3	DND - DND: (do not do, fixtures left as is)		0	0	3,640	0	0	0
Rf#-12 Rm - WRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	3,000	450	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.078	3,000	234	0.072	216
Rf#-13 Rm - WRR	CF 1L rec square 12", CFS-15w, CFL ballast	1	15	0.015	3,000	45	1	RL091/s - (1) LED 8.5w A19 screw in lamp, 4000K		8	0.0085	3,000	26	0.0065	19
Rf#-14 Rm - MRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	3,000	450	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.078	3,000	234	0.072	216
Rf#-15 Rm - MRR	CF 1L rec square 12", CFS-15w, CFL ballast	1	15	0.015	3,000	45	1	RL091/s - (1) LED 8.5w A19 screw in lamp, 4000K		8	0.0085	3,000	26	0.0065	19
Rf#-16 Rm - Finance	2x4x 2L rec trf, F32T8 28w, electronic ballast	8	50	0.4	3,640	1,456	8	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.208	3,640	757	0.192	699
Rf#-17 Rm - Finance	1x3x 1L under cabinet, F25T8 25w, electronic ballast	4	26	0.104	3,640	379	4	RLT831 - (1) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast		12	0.048	3,640	175	0.056	204
Rf#-18 Rm - Asst City Mgr	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	2,800	560	4	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.104	2,800	291	0.096	269
Rf#-19 Rm - Admin	2x4x 2L rec trf, F32T8 28w, electronic ballast	8	50	0.4	3,640	1,456	8	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.208	3,640	757	0.192	699
Rf#-20 Rm - Admin	1x3x 1L under cabinet, F25T8 25w, electronic ballast	6	26	0.156	3,640	568	6	RLT831 - (1) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast		12	0.072	3,640	262	0.084	306
Rf#-21 Rm - City Mgr	2x2x 2L rec trf, F17T8 17w, electronic ballast	9	33	0.297	2,800	832	9	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	20	0.18	2,800	504	0.117	328

City Hall -

PRE-RETROFIT								POST RETROFIT							
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh		Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Rf#-22 Rm - City Mgr	CF 1L rec can, CFP-26w, CFL ballast	1	30	0.03	2,800	84		1	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.0085	2,800	24	0.0215	60
Rf#-23 Rm - RR	CF 2L sconce, CFS-15w, CFL ballast	1	30	0.03	2,800	84		1	RL091/s - (1) LED 8.5w A19 screw in lamp, 4000K	8	0.0085	2,800	24	0.0215	60
Rf#-24 Rm - Conference	2x2x 2L rec trf, F17T8 17w, electronic ballast	4	33	0.132	3,640	480		4	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.08	3,640	291	0.052	189
Rf#-25 Rm - Office	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	2,800	280		2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	2,800	146	0.048	134
Rf#-26 Rm - Office	1x3x 1L under cabinet, F25T8 25w, electronic ballast	5	26	0.13	2,800	364		5	RLT831 - (1) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast	12	0.06	2,800	168	0.07	196
Rf#-27 Rm - Back Hall	2x2x 2L rec trf, F17T8 17w, electronic ballast	3	33	0.099	3,640	360		3	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.06	3,640	218	0.039	142
Rf#-28 Rm - Back Hall	LED 1L can, LED ?w, n/a	2	0	0	3,640	0		2	DND - DND: (do not do, fixtures left as is)	0	0	3,640	0	0	0
Rf#-29 Rm - Kitchen	LED 1L can, LED ?w, n/a	7	0	0	2,500	0		7	DND - DND: (do not do, fixtures left as is)	0	0	2,500	0	0	0
Rf#-30 Rm - Files	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	500	100		4	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.104	500	52	0.096	48
Rf#-31 Rm - Copy	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	3,640	728		4	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.104	3,640	379	0.096	349
Rf#-32 Rm - Comm Develop	2x4x 2L rec trf, F32T8 28w, electronic ballast	16	50	0.8	3,640	2,912		16	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.416	3,640	1,514	0.384	1,398
Rf#-33 Rm - Office	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	2,800	560		4	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.104	2,800	291	0.096	269
Rf#-34 Rm - Ext - Eave Mount	LED 1L rec can, LED ?w, n/a		0	0	1,092	0		0	DND - DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0
Rf#-35 Rm - Ext - Pole Mount	LED 1L post globe, LED ?w, n/a		0	0	1,092	0		0	DND - DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0

Building/Area: CY Flag Pole(s)

1st Floor

Rf#-48 Rm - Ext - Pole Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	1	300	0.3	4,380	1,314		1	NL026/fld - New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.026	4,380	114	0.274	1,200
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Building/Area: CY Garage

1st Floor

Rf#-44 Rm - Ext - Wall Mount	HPS 1L flood, knuckle, HPS 70w, HID ballast	6	95	0.57	4,380	2,497		6	NL026/fld - New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.156	4,380	683	0.414	1,813
Rf#-45 Rm - Ext - Wall Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	1	300	0.3	4,380	1,314		1	NL026/fld - New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.026	4,380	114	0.274	1,200

Building/Area: CY Parking

1st Floor

Rf#-49 Rm - Ext - Pole Mount	HPS 1L Brnz Sq Pole, Rect Arm 23', HPS 250w, HID ballast	4	295	1.18	4,380	5,168		4	NL072/p/s - New LED area light, tenon mount, 100,000-Hr L70 rated life, 72w, onboard dimming	72	0.288	1,095	315	0.892	4,853
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City Hall -

PRE-RETROFIT								POST RETROFIT							
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh		Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Rf#-50 Rm - Ext - Pole Mount	MH 1L flood, knuckle, MH 100w, HID ballast	5	128	0.64	4,380	2,803		5	NL026/fld - New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.13	4,380	569	0.51	2,234
Rf#-51 Rm - Ext - Pole Mount	HPS 1L flood, adj yoke, HPS 150w, HID ballast	2	195	0.39	4,380	1,708		2	NL054/p/s - New LED area light, pole or bldg mount, 100,000-Hr L70 rated life, 54w, onboard dimming 0.00b	54	0.108	1,095	118	0.282	1,590

Building/Area: CY Portable Off

1st Floor

Rf#-36 Rm - Open Office	2x4x 2L rec trf, F32T8 28w, electronic ballast	5	50	0.25	3,640	910		5	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.13	3,640	473	0.12	437
Rf#-37 Rm - Locker	2x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	3,640	182		1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ews	26	0.026	3,640	95	0.024	87
Rf#-38 Rm - WRR	2x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	950	48		1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ews	26	0.026	950	25	0.024	23
Rf#-39 Rm - MRR	2x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	950	48		1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ews	26	0.026	950	25	0.024	23
Rf#-40 Rm - Storage	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	500	50		2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	500	26	0.048	24
Rf#-41 Rm - Office	2x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	2,800	420		3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ews	26	0.078	2,800	218	0.072	202
Rf#-42 Rm - Ext - Wall Mount	LED 2L flood EMS, LED ?w, n/a	1	0	0	4,380	0		1	DND - DND: (do not do, fixtures left as is) EMS	0	0	4,380	0	0	0
Rf#-43 Rm - Ext - Wall Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	1	300	0.3	4,380	1,314		1	NL026/fld - New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w EMS	26	0.026	4,380	114	0.274	1,200

Building/Area: CY Trailer

1st Floor

Rf#-46 Rm - All Interior Space (no lights)	DND (do not do, left as is), n/a, n/a		0	0		0	0	DND - DND: (do not do, fixtures left as is)	0	0	0	0	0	0	0
Rf#-47 Rm - Ext - Wall Mount	HPS 1L flood, knuckle, HPS 70w, HID ballast	2	95	0.19	4,380	832		2	NL026/fld - New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.052	4,380	228	0.138	604

Qty and kW for City Hall :

190

10.7

190

4.4

6.3

kWh for City Hall :

39,040

13,743

25,297

Community Center -

PRE-RETROFIT								POST RETROFIT							
Location		Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-1	Rm - Lobby	1x4x 2L rec trf, F32T8 32w, electronic ballast	11	59	0.649	2,500	1,623	11	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.286	2,500	715	0.363	907
Rf#-2	Rm - MRR	1x4x 2L rec trf, F32T8 32w, electronic ballast	3	59	0.177	3,000	531	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	3,000	234	0.099	297
Rf#-3	Rm - WRR	1x4x 2L rec trf, F32T8 32w, electronic ballast	3	59	0.177	3,000	531	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	3,000	234	0.099	297
Rf#-4	Rm - Laundry	CF 2L sm drum, CFP-26w, CFL ballast	1	60	0.06	1,800	108	1	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	19	0.019	1,800	34	0.041	74
Rf#-5	Rm - Office	2x4x 2L rec trf, F32T8 32w, electronic ballast	4	59	0.236	1,800	425	4	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.104	1,800	187	0.132	238
Rf#-6	Rm - Conference	2x4x 2L rec trf, F32T8 32w, electronic ballast	8	59	0.472	2,500	1,180	8	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.208	2,500	520	0.264	660
Rf#-7	Rm - Art Room	2x4x 2L rec trf, F32T8 32w, electronic ballast	6	59	0.354	1,800	637	6	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.156	1,800	281	0.198	356
Rf#-8	Rm - Kitchen	2x4x 2L rec trf, F32T8 32w, electronic ballast	3	59	0.177	1,800	319	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	1,800	140	0.099	178
Rf#-9	Rm - Main Room	Inc. 1L rec can Dimming, Inc. 250w T4, n/a	30	250	7.5	2,000	15,000	30	RL0281/s - (1) LED 28w screw in lamp, 120/277, 50,000-Hr rated life, 3000K, E11 mini base	28	0.84	2,000	1,680	6.66	13,320
Rf#-10	Rm - Main Room	CF 1L rec can, CFS-30w P24, CFL ballast	2	30	0.06	2,000	120	2	RL091/s/r20 - (1) LED 8w R20 screw in lamp, 4000K	8	0.017	2,000	34	0.043	86
Rf#-11	Rm - Stage	Inc. 1L rec can Dimming, Inc. 250w T4, n/a	4	250	1	2,000	2,000	4	RL0281/s - (1) LED 28w screw in lamp, 120/277, 50,000-Hr rated life, 3000K, E11 mini base	28	0.112	2,000	224	0.888	1,776
Rf#-12	Rm - Stage	CF 2L sm drum, CFP-26w, CFL ballast	1	60	0.06	2,000	120	1	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	19	0.019	2,000	38	0.041	82
Rf#-13	Rm - Back Stage	CF 2L sm drum, CFP-26w, CFL ballast	2	60	0.12	1,200	144	2	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	19	0.038	1,200	46	0.082	98
Rf#-14	Rm - Video	CF 2L sm drum, CFP-26w, CFL ballast	1	60	0.06	500	30	1	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	19	0.019	500	10	0.041	20
Rf#-15	Rm - Video	1x4x 2L sm wp, F32T8 32w, electronic ballast	2	59	0.118	500	59	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	500	26	0.066	33
Rf#-16	Rm - Ext - Eave Mount	LED 1L rec can, LED ?w, n/a		0	0	1,092	0	0	DND - DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0
Qty and kW for Community Center :			81	11.2		81			2.1			9.1			
kWh for Community Center :			22,826						4,403			18,422			

Duarte Park Building -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-5 Rm - Ext - Eave Mount	CF 1L rec can, CFS-20w, CFL ballast	7	20	0.14	4,380	613	7	RL091/s -	(1) LED 8.5w A19 screw in lamp, 4000K	8	0.0595	4,380	261	0.0805	353
Rf#-6 Rm - Ext - Wall Mount	LED 1L wm wall pack, LED ?w, n/a	4	0	0	4,380	0	4	DND -	DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0
Rf#-6 Rm - Ext - Wall Mount	LED 1L wm wall pack, LED ?w, n/a	4	0	0	4,380	0	4	DND -	DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0

Building/Area: Playground

1st Floor															
Rf#-10 Rm - Ext - Pole Mount	MH 1L flood, tenon, MH 400w, HID ballast	2	458	0.916	4,380	4,012	2	NL106/p/s -	New LED area light, pole or bldg mount, 100,000-Hr L70 rated life, 106w, onboard dimming	106	0.212	1,095	232	0.704	3,780

Building/Area: RR Bldg

1st Floor															
Rf#-4 Rm - Ext - Wall Mount	HPS 1L wm sq on arm, HPS 70w, HID ballast	4	95	0.38	4,380	1,664	4	NL030/wp/ft -	New LED wall pack (FT), 50,000-Hr L70 rated life, 30w	30	0.12	4,380	526	0.26	1,139
Rf#-5 Rm - Ext - Wall Mount	LED 1L wm vandal, LED ?w, n/a	1	0	0	4,380	0	1	DND -	DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0
Rf#-6 Rm - Ext - Wall Mount	CF 2L wm wall pack, CFP-32w, CFL ballast	1	70	0.07	4,380	307	1	RL0132/h -	(2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	19	0.019	4,380	83	0.051	223

Qty and kW for Duarte Park Building :	23	1.5	23	0.4	1.1
kWh for Duarte Park Building :		6,596		1,102	5,495

Encanto Park / Nature Walk -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Park

1st Floor

Rf#-1 Rm - Ext - Pole Mount	HPS 1L deco bell, HPS 100w, HID ballast	7	138	0.966	4,380	4,231		7	RL027/s/gcs -	(1) LED 27w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	27	0.189	4,380	828	0.777	3,403
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Building/Area: RR Bldg

1st Floor

Rf#-2 Rm - Ext - Wall Mount	LED 1L fxt, n/a, n/a		0	0	1,092	0	0		DND -	DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0
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Qty and kW for Encanto Park / Nature Walk : 7 1.0 7 0.2 0.8

kWh for Encanto Park / Nature Walk : 4,231 828 3,403

Fitness Center -

PRE-RETROFIT								POST RETROFIT							
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh		Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-1 Rm - Lobby	CF 1L rec can, CFS-30w P24, CFL ballast	14	30	0.42	4,732	1,987		14	RL091/s/r20 - (1) LED 8w R20 screw in lamp, 4000K	8	0.119	4,732	563	0.301	1,424
Rf#-2 Rm - Lifeguard Office	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150		2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,500	78	0.048	72
Rf#-3 Rm - Men's Locker	1x4x 2L rec trf, F32T8 28w, electronic ballast	11	50	0.55	4,732	2,603		11	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.286	4,732	1,353	0.264	1,249
Rf#-4 Rm - Men's Locker	CF 1L rec square 12", CFS-15w, CFL ballast	2	15	0.03	4,732	142		2	RL091/s - (1) LED 8.5w A19 screw in lamp, 4000K	8	0.017	4,732	80	0.013	62
Rf#-5 Rm - Women's Locker	1x4x 2L rec trf, F32T8 28w, electronic ballast	11	50	0.55	4,732	2,603		11	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.286	4,732	1,353	0.264	1,249
Rf#-6 Rm - Women's Locker	CF 1L rec square 12", CFS-15w, CFL ballast	2	15	0.03	4,732	142		2	RL091/s - (1) LED 8.5w A19 screw in lamp, 4000K	8	0.017	4,732	80	0.013	62
Rf#-7 Rm - Stair	1x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	4,732	710		3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	4,732	369	0.072	341
Rf#-10 Rm - Storage	1x4x 2L sm wp, F32T8 28w, electronic ballast	1	50	0.05	500	25		1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	500	13	0.024	12
Rf#-11 Rm - Office	1x4x 2L sm wp, F32T8 28w, electronic ballast	1	50	0.05	3,500	175		1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	3,500	91	0.024	84
Rf#-12 Rm - Exercise	2x4x 2L rec trf, F32T8 28w, electronic ballast	18	50	0.9	4,732	4,259		18	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.468	4,732	2,215	0.432	2,044
Rf#-13 Rm - MRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150		2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,500	78	0.048	72
Rf#-14 Rm - WRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150		2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,500	78	0.048	72
Rf#-15 Rm - Ext - Eave Mount	LED 1L rec can, LED ?w, n/a		0	0	4,380	0		0	DND - DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0
Rf#-16 Rm - Pool	LED 1L pool lights, LED ?w, n/a		0	0	1,092	0		0	DND - DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0

Basement

Rf#-8 Rm - Court 1	1x4x 2L rec trf, F32T8 28w, electronic ballast	16	50	0.8	4,732	3,786		16	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.416	4,732	1,969	0.384	1,817
Rf#-9 Rm - Court 2	1x4x 2L rec trf, F32T8 28w, electronic ballast	16	50	0.8	4,732	3,786		16	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.416	4,732	1,969	0.384	1,817

Building/Area: Pool Equipment

1st Floor

Rf#-17 Rm - Pool Pump Room	1x4x 2L sm vapor tight, F32T8 28w, electronic ballast	3	50	0.15	50	8		3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	50	4	0.072	4
Rf#-18 Rm - Pool Generator Room	1x4x 2L sm vapor tight, F32T8 28w, electronic ballast	3	50	0.15	50	8		3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	50	4	0.072	4
Rf#-19 Rm - Ext - Roof Mount	MH 1L flood, adj yoke, MH 250w, HID ballast	1	295	0.295	4,380	1,292		1	NL072/p/s - New LED area light, tenon mount, 100,000-Hr L70 rated life, 72w, onboard dimming 0-10V	72	0.072	1,095	79	0.223	1,213

(sorted by building, floor, area)

Fitness Center -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Qty and kW for Fitness Center :		108		5.2			108				2.5			2.7	
		kWh for Fitness Center :				21,973							10,376		11,598

Public Safety -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd	
Building/Area: Main Bldg															
1st Floor															
Rf#-1 Rm - Lobby	2x4x 4L rec trf, F32T8 28w, electronic ballast	7	99	0.693	8,760	6,071	7	RLT844 - (4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.364	8,760	3,189	0.329	2,882	
Rf#-2 Rm - Director	2x2x 2L rec trf, FB31T8 32w, electronic ballast	2	59	0.118	2,900	342	2	RLT822u - (2) 2' LED "U" T8 lamp 17w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	2,900	151	0.066	191	
Rf#-3 Rm - Director	2x4x 4L rec trf, F32T8 28w, electronic ballast	2	99	0.198	2,900	574	2	RLT844 - (4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.104	2,900	302	0.094	273	
Rf#-4 Rm - Director Closet	1x4x 2L sm wp, F32T8 28w, electronic ballast	2	50	0.1	500	50	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	500	26	0.048	24	
Rf#-5 Rm - Open Office / Hall	2x4x 4L rec trf, F32T8 28w, electronic ballast	8	99	0.792	8,760	6,938	8	RLT844 - (4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.416	8,760	3,644	0.376	3,294	
Rf#-6 Rm - Open Office / Hall	1x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	8,760	438	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	8,760	228	0.024	210	
Rf#-7 Rm - Files	2x4x 3L rec trf, F32T8 28w, electronic ballast	4	50	0.2	500	100	4	RLT843 - (3) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	39	0.156	500	78	0.044	22	
Rf#-8 Rm - Crime Prevention	2x4x 3L rec trf, F32T8 28w, electronic ballast	2	50	0.1	2,900	290	2	RLT843 - (3) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	39	0.078	2,900	226	0.022	64	
Rf#-9 Rm - Special Assignment	2x4x 3L rec trf, F32T8 28w, electronic ballast	2	50	0.1	2,900	290	2	RLT843 - (3) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	39	0.078	2,900	226	0.022	64	
Rf#-10 Rm - Storage	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	500	50	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	500	26	0.048	24	
Rf#-11 Rm - Sergeant	2x4x 4L rec trf, F32T8 28w, electronic ballast	2	99	0.198	2,900	574	2	RLT844 - (4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.104	2,900	302	0.094	273	
Rf#-12 Rm - Probation	2x4x 4L rec trf, F32T8 28w, electronic ballast	2	99	0.198	2,900	574	2	RLT844 - (4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.104	2,900	302	0.094	273	
Rf#-13 Rm - Data	2x4x 4L rec trf, F32T8 28w, electronic ballast	4	99	0.396	2,900	1,148	4	RLT844 - (4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.208	2,900	603	0.188	545	
Rf#-14 Rm - Public Safety	2x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	2,900	145	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	2,900	75	0.024	70	
Rf#-15 Rm - MRR	2x4x 4L rec trf, F32T8 28w, electronic ballast	6	99	0.594	3,500	2,079	6	RLT844 - (4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.312	3,500	1,092	0.282	987	
Rf#-16 Rm - MRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	3,500	350	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	3,500	182	0.048	168	
Rf#-17 Rm - WRR	2x4x 4L rec trf, F32T8 28w, electronic ballast	6	99	0.594	3,500	2,079	6	RLT844 - (4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.312	3,500	1,092	0.282	987	
Rf#-18 Rm - WRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	3,500	350	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	3,500	182	0.048	168	
Rf#-19 Rm - All Exterior Space (DNE)	DND (do not do, left as is), n/a, n/a		0	0	1,092	0	0	DND - DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0	
Qty and kW for Public Safety :		57		4.7			57			2.5			2.1		
kWh for Public Safety :						22,443						11,926		10,519	

Royal Oaks Park Building -

PRE-RETROFIT								POST RETROFIT							
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-1 Rm - Lobby	4x4x 6L sm box, F32T8 28w, electronic ballast	3	149	0.447	1,000	447	3	RLT846 - (6) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		78	0.234	1,000	234	0.213	213
Rf#-2 Rm - Main Room	4x4x 6L sm box, F32T8 28w, electronic ballast	9	149	1.341	1,000	1,341	9	RLT846 - (6) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		78	0.702	1,000	702	0.639	639
Rf#-3 Rm - RR	CF 2L rec can, CFP-26w, CFL ballast	2	60	0.12	1,000	120	2	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life		8	0.017	1,000	17	0.103	103
Rf#-4 Rm - Custodian	CF 2L rec can, CFP-26w, CFL ballast	1	60	0.06	350	21	1	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life		8	0.0085	350	3	0.0515	18
Rf#-5 Rm - Storage 1	1x4x 2L sm strip, F32T8 28w, electronic ballast	2	50	0.1	350	35	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.052	350	18	0.048	17
Rf#-6 Rm - Storage 2	1x4x 2L sm strip, F32T8 28w, electronic ballast	2	50	0.1	350	35	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.052	350	18	0.048	17
Rf#-7 Rm - Electrical	1x4x 2L sm strip, F32T8 28w, electronic ballast	1	50	0.05	350	18	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.026	350	9	0.024	8
Rf#-8 Rm - Storage 3	1x4x 2L sm strip, F32T8 28w, electronic ballast	3	50	0.15	350	53	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.078	350	27	0.072	25
Rf#-9 Rm - Storage 4	1x4x 2L sm strip, F32T8 28w, electronic ballast	3	50	0.15	350	53	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.078	350	27	0.072	25
Rf#-10 Rm - Storage 5	CF 2L rec can, CFP-26w, CFL ballast	1	60	0.06	350	21	1	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life		8	0.0085	350	3	0.0515	18
Rf#-11 Rm - Storage 6	CF 2L rec can, CFP-26w, CFL ballast	1	60	0.06	350	21	1	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life		8	0.0085	350	3	0.0515	18
Rf#-12 Rm - Ext - MRR	CF 2L rec can, CFP-26w, CFL ballast	4	60	0.24	4,380	1,051	4	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life		8	0.034	4,380	149	0.206	902
Rf#-13 Rm - Ext - WRR	CF 2L rec can, CFP-26w, CFL ballast	4	60	0.24	4,380	1,051	4	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life		8	0.034	4,380	149	0.206	902
Rf#-14 Rm - Ext - Eave Mount	LED 1L sm square, LED ?w, n/a		0	0	4,380	0	0	DND - DND: (do not do, fixtures left as is)		0	0	4,380	0	0	0

Building/Area: Park

1st Floor

Rf#-15 Rm - Ext - Pole Mount	HPS 1L post top lantern, HPS 70w, HID ballast	11	95	1.045	4,380	4,577	11	RL027/s/gc - (1) LED 27w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	27	0.297	4,380	1,301	0.748	3,276
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Qty and kW for Royal Oaks Park Building : 47 4.2 47

1.6 2.5

kWh for Royal Oaks Park Building : 8,843

2,660 6,181

Royal Oaks Park Extension -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Park Extension

1st Floor

Rf#-1 Mount	Rm - Ext - Pole	HPS 1L post top lantern, HPS 70w, HID ballast	7	95	0.665	4,380	2,913	7	RL027/s/gcs - (1) LED 27w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	27	0.189	4,380	828	0.476	2,085
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Qty and kW for Royal Oaks Park Extension : 7 0.7 7 0.2 0.5

kWh for Royal Oaks Park Extension : 2,913 828 2,085

Senior Center -

PRE-RETROFIT							POST RETROFIT							
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg														
1st Floor														
Rf#-1 Rm - Lobby / Hall	CF 3L rec can - some emr, CFP-26w, CFL ballast	13	90	1.17	1,820	2,129	13	RL0133/h - (3) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	28	0.3705	1,820	674	0.7995	1,455
Rf#-2 Rm - Lobby / Hall	CF 2L rec can, CFP-26w, CFL ballast	6	60	0.36	1,820	655	6	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.051	1,820	93	0.309	562
Rf#-3 Rm - Lobby / Hall	1x3x 2L pm fxt, F25T8 25w, electronic ballast	3	46	0.138	1,820	251	3	RLT832 - (2) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast	24	0.072	1,820	131	0.066	120
Rf#-4 Rm - Lobby / Hall	1x4x 2L pm fxt, F32T8 28w, electronic ballast	9	50	0.45	1,820	819	9	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.234	1,820	426	0.216	393
Rf#-5 Rm - Closet	2x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	500	25	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	500	13	0.024	12
Rf#-6 Rm - Office 1	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,820	182	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,820	95	0.048	87
Rf#-7 Rm - Office 2	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,820	182	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,820	95	0.048	87
Rf#-8 Rm - Office 3	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,820	182	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,820	95	0.048	87
Rf#-9 Rm - Office 4	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,820	182	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,820	95	0.048	87
Rf#-10 Rm - Custodian	1x4x 2L sm wp, F32T8 28w, electronic ballast	1	50	0.05	500	25	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	500	13	0.024	12
Rf#-11 Rm - Custodian	Inc. 1L bare bulb, Inc. 40w A19, n/a	1	40	0.04	500	20	1	RL091/s - (1) LED 8.5w A19 screw in lamp, 4000K	8	0.0085	500	4	0.0315	16
Rf#-12 Rm - Dining	CF 3L rec can - some emr, CFP-26w, CFL ballast	2	90	0.18	1,820	328	2	RL0133/h - (3) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	28	0.057	1,820	104	0.123	224
Rf#-13 Rm - Dining	CF 2L rec can, CFP-26w, CFL ballast	7	60	0.42	1,820	764	7	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.0595	1,820	108	0.3605	656
Rf#-14 Rm - Dining	LED 1L pm fxt, LED ?w, n/a	20	0	0	1,820	0	20	DND - DND: (do not do, fixtures left as is)	0	0	1,820	0	0	0
Rf#-15 Rm - Dining	2' 2L pm deco, not used, F17T8 17w, electronic ballast	20	33	0.66	1,820	1,201	20	DND - DND: (do not do, fixtures left as is)	33	0.66	1,820	1,201	0	0
Rf#-16 Rm - Dining	2x2x 2L rec trf, F17T8 17w, electronic ballast	2	33	0.066	1,820	120	2	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.04	1,820	73	0.026	47
Rf#-17 Rm - Dining Storage 1	1x4x 2L sm wp, F32T8 28w, electronic ballast	1	50	0.05	500	25	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	500	13	0.024	12
Rf#-18 Rm - Dining Storage 2	1x4x 2L sm wp, F32T8 28w, electronic ballast	1	50	0.05	500	25	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	500	13	0.024	12
Rf#-19 Rm - Dining Storage 3	1x4x 2L sm wp, F32T8 28w, electronic ballast	2	50	0.1	500	50	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	500	26	0.048	24
Rf#-20 Rm - Dining Storage 4	1x4x 2L sm wp, F32T8 28w, electronic ballast	2	50	0.1	500	50	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	500	26	0.048	24
Rf#-21 Rm - Stage	2x2x 2L rec trf, F17T8 17w, electronic ballast	6	33	0.198	500	99	6	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.12	500	60	0.078	39

Senior Center -

PRE-RETROFIT								POST RETROFIT							
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh		Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Rf#-22 Rm - Kitchen	1x4x 2L sm wp, F32T8 28w, electronic ballast	7	50	0.35	1,820	637		7	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.182	1,820	331	0.168	306
Rf#-23 Rm - MRR	1x4x 2L sm wp, F32T8 28w, electronic ballast	3	50	0.15	1,820	273		3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	26	0.078	1,820	142	0.072	131
Rf#-24 Rm - WRR	1x4x 2L sm wp, F32T8 28w, electronic ballast	3	50	0.15	1,820	273		3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	26	0.078	1,820	142	0.072	131
Rf#-25 Rm - Games	2x2x 2L rec trf, F17T8 17w, electronic ballast	1	33	0.033	1,820	60		1	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.02	1,820	36	0.013	24
Rf#-26 Rm - Games	4' 4L sm circle, F32T8 28w, electronic ballast	6	50	0.3	1,820	546		6	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.156	1,820	284	0.144	262
Rf#-27 Rm - Lounge	2x2x 2L rec trf, F17T8 17w, electronic ballast	1	33	0.033	1,820	60		1	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.02	1,820	36	0.013	24
Rf#-28 Rm - Lounge	4' 4L sm circle, F32T8 28w, electronic ballast	6	50	0.3	1,820	546		6	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.156	1,820	284	0.144	262
Rf#-29 Rm - Lounge	CF 1L table lamp, CFS-15w, CFL ballast	2	15	0.03	1,820	55		2	RL091/s - (1) LED 8.5w A19 screw in lamp, 4000K	8	0.017	1,820	31	0.013	24
Rf#-41 Rm - Ext - Eave Mount	LED 1L rec can, LED ?w, n/a		0	0	4,380	0		0	DND - DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0
Rf#-42 Rm - Ext - Wall Mount	CF 2L wm dome, CFP-26w, CFL ballast	5	60	0.3	4,380	1,314		5	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	19	0.095	4,380	416	0.205	898

2nd Floor

Rf#-30 Rm - Hall	1x3x 2L pm fxt, F25T8 25w, electronic ballast	2	46	0.092	1,820	167		2	RLT832 - (2) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast	24	0.048	1,820	87	0.044	80
Rf#-31 Rm - Hall	CF 3L rec can - some emr, CFP-26w, CFL ballast	8	90	0.72	1,820	1,310		8	RL0133/h - (3) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	28	0.228	1,820	415	0.492	895
Rf#-32 Rm - Classroom	CF 3L rec can - some emr, CFP-26w, CFL ballast	4	90	0.36	1,820	655		4	RL0133/h - (3) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	28	0.114	1,820	207	0.246	448
Rf#-33 Rm - Classroom	CF 2L rec can, CFP-26w, CFL ballast	3	60	0.18	1,820	328		3	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.0255	1,820	46	0.1545	281
Rf#-34 Rm - Classroom	1x4x 2L pm fxt, F32T8 28w, electronic ballast	7	50	0.35	1,820	637		7	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.182	1,820	331	0.168	306
Rf#-35 Rm - Music	4' 4L sm circle, F32T8 28w, electronic ballast	12	50	0.6	1,820	1,092		12	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.312	1,820	568	0.288	524
Rf#-36 Rm - Music	2x2x 2L rec trf, F17T8 17w, electronic ballast	2	33	0.066	1,820	120		2	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.04	1,820	73	0.026	47
Rf#-37 Rm - Storage	1x4x 2L sm wp, F32T8 28w, electronic ballast	2	50	0.1	500	50		2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ec}	26	0.052	500	26	0.048	24
Rf#-38 Rm - MRR	1x4x 2L sm wp, F32T8 28w, electronic ballast	3	50	0.15	1,820	273		3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	1,820	142	0.072	131
Rf#-39 Rm - WRR	1x4x 2L sm wp, F32T8 28w, electronic ballast	3	50	0.15	1,820	273		3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	1,820	142	0.072	131
Rf#-40 Rm - Elevator	1x4x 2L sm strip, F32T8 28w, electronic ballast	1	50	0.05	500	25		1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	500	13	0.024	12

(sorted by building, floor, area)

Senior Center -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Qty and kW for Senior Center :		186		8.9			186				4.1			4.9	
kWh for Senior Center :						16,010							7,110		8,897

Teen Center -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-1 Rm - Lobby	LED 1L rec can, LED ?w, n/a		0	0	1,770	0	0	DND - DND: (do not do, fixtures left as is)		0	0	1,770	0	0	0
Rf#-2 Rm - Lobby	CF 1L rec can, CFS-18w P38, CFL ballast	5	18	0.09	1,770	159	5	RL091/s/r30 - (1) LED 8w R30 screw in lamp, 4000K		8	0.0425	1,770	75	0.0475	84
Rf#-3 Rm - Lobby	CF 1L track light, CFS-18w P38, CFL ballast	5	18	0.09	1,770	159	5	RL091/s/r30 - (1) LED 8w R30 screw in lamp, 4000K		8	0.0425	1,770	75	0.0475	84
Rf#-4 Rm - Lobby	LED 1L cove light, LED ?w, n/a		0	0	1,770	0	0	DND - DND: (do not do, fixtures left as is)		0	0	1,770	0	0	0
Rf#-5 Rm - Office	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.052	1,500	78	0.048	72
Rf#-6 Rm - Closet	CF 1L rec can, CFS-18w P38, CFL ballast	2	18	0.036	200	7	2	RL091/s/r30 - (1) LED 8w R30 screw in lamp, 4000K		8	0.017	200	3	0.019	4
Rf#-7 Rm - Games	CF 1L rec can, CFS-18w P38, CFL ballast	2	18	0.036	1,500	54	2	RL091/s/r30 - (1) LED 8w R30 screw in lamp, 4000K		8	0.017	1,500	26	0.019	29
Rf#-8 Rm - Games	2x2x 2L rec trf, F17T8 17w, electronic ballast	16	33	0.528	1,500	792	16	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast		20	0.32	1,500	480	0.208	312
Rf#-9 Rm - Kitchen	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.052	1,500	78	0.048	72
Rf#-10 Rm - MPR	2x2x 2L rec trf, F17T8 17w, electronic ballast	12	33	0.396	1,770	701	12	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	20	0.24	1,770	425	0.156	276
Rf#-11 Rm - Hall	CF 1L rec can, CFS-18w P38, CFL ballast	5	18	0.09	1,770	159	5	RL091/s/r30 - (1) LED 8w R30 screw in lamp, 4000K		8	0.0425	1,770	75	0.0475	84
Rf#-12 Rm - Computers	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	1,770	354	4	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.104	1,770	184	0.096	170
Rf#-13 Rm - Boxing	2x2x 2L rec trf, F17T8 17w, electronic ballast	24	33	0.792	1,770	1,402	24	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast		20	0.48	1,770	850	0.312	552
Rf#-14 Rm - Storage	1x4x 1L sm strip, F32T8 28w, electronic ballast	1	24	0.024	200	5	1	RLT841 - (1) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	13	0.013	200	3	0.011	2
Rf#-15 Rm - Office 1	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.052	1,500	78	0.048	72
Rf#-16 Rm - Office 2	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.052	1,500	78	0.048	72
Rf#-17 Rm - Custodian	1x4x 1L sm strip, F32T8 28w, electronic ballast	2	24	0.048	200	10	2	RLT841 - (1) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		13	0.026	200	5	0.022	4
Rf#-18 Rm - MRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	1,770	266	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.078	1,770	138	0.072	127
Rf#-19 Rm - MRR	CF 1L rec can, CFS-18w P38, CFL ballast	1	18	0.018	1,770	32	1	RL091/s/r30 - (1) LED 8w R30 screw in lamp, 4000K		8	0.0085	1,770	15	0.0095	17
Rf#-20 Rm - WRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	1,770	266	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.078	1,770	138	0.072	127
Rf#-21 Rm - WRR	CF 1L rec can, CFS-18w P38, CFL ballast	1	18	0.018	1,770	32	1	RL091/s/r30 - (1) LED 8w R30 screw in lamp, 4000K		8	0.0085	1,770	15	0.0095	17

Teen Center -

PRE-RETROFIT								POST RETROFIT							
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh		Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Rf#-22 Rm - Various	Inc. 2L exit sign, Inc. 20w, n/a	7	40	0.28	8,760	2,453		7	NLX - New LED exit sign with battery backup	2	0.0175	8,760	153	0.2625	2,300
Rf#-23 Rm - Ext - Eave Mount	CF 1L rec can, CFS-18w P38, CFL ballast	34	18	0.612	4,380	2,681		34	RL091/s/r30 - (1) LED 8w R30 screw in lamp, 4000K	8	0.289	4,380	1,266	0.323	1,415
Rf#-24 Rm - Ext - Wall Mount	CF 2L wm dome, CFP-26w, CFL ballast	14	60	0.84	4,380	3,679		14	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	19	0.266	4,380	1,165	0.574	2,514
Rf#-25 Rm - Ext - Wall Mount	LED 1L wm wall pack, LED ?w, n/a	2	0	0	4,380	0		2	DND - DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0
Rf#-26 Rm - Ext - Pole Mount	HPS 1L deco bell, HPS 200w, HID ballast	5	250	1.25	4,380	5,475		5	RL045/s/gc - (1) LED 45w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	45	0.225	4,380	986	1.025	4,490
Qty and kW for Teen Center :		156		6.0			156				2.5			3.5	
kWh for Teen Center :						19,285							6,389		12,896

Thorsen Park -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Flag Pole(s)

1st Floor

Rf#-1 Rm - Ext - Pole Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	2	300	0.6	4,380	2,628	2	NL026/fld	- New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	35	0.07	4,380	307	0.53	2,321
Rf#-2 Rm - Ext - Pole Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	1	300	0.3	4,380	1,314	1	NL026/fld	- New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	35	0.035	4,380	153	0.265	1,161

Qty and kW for Thorsen Park :

3

0.9

3

0.1

0.8

kWh for Thorsen Park :

3,942

460

3,482

Attachment “C”
Mechanical Inventory

Mechanical Replacement Summary

City of Duarte - Existing Equipment Selected for Replacment										Proposed Equipment	
Site Name	Area Served	Equipment	Manuf.	Model No.	Serial No.	Capacity	Unit of Measure	Year	Electrical	Manufacturer	Model
Senior Center	2nd Floor Classroom	Split Sys Heat Pump	Lennox	HP21-513-3Y	5192M07325	4	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center		Split Sys Heat Pump	Lennox	HP21-513-3Y	5192M07326	4	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center		Split Sys Heat Pump	Lennox	HP21-413-3Y	5192M07340	3	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center		Split Sys Heat Pump	Lennox	HP21-513-3Y	5192M07312	4	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center	2nd Floor Dining Room	Split Sys Heat Pump	Lennox	HP21-513-3Y	519M07322	4	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center	Library TV Room	Split Sys Heat Pump	Lennox	HP21-413-3Y	5192M07352	3	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center	Pool Hall	Split Sys Heat Pump	Lennox	HP21-413-3Y	5193B25940	3	Ton	1993	208/230-3-60	Lennox	In Kind_High Efficiency
Teen Center		Split Sys Furnace	Carrier	38CKB060500	4096E13116	5	Ton	1996	208/230-3-60	Lennox	In Kind_High Efficiency
Teen Center		Split Sys Furnace	Carrier	38CKB060500	0997E21773	5	Ton	1997	208/230-3-60	Lennox	In Kind_High Efficiency
Teen Center		Split Sys Furnace	Carrier	38CKB060500	4596E15365	5	Ton	1996	208/230-3-60	Lennox	In Kind_High Efficiency
Teen Center		Split Sys Furnace	Carrier	38CKB060500	4596E15363	5	Ton	1996	208/230-3-60	Lennox	In Kind_High Efficiency
Teen Center		Split Sys Furnace	Carrier	38CKB060500	4596E15381	5	Ton	1996	208/230-3-60	Lennox	In Kind_High Efficiency

City of Duarte - Existing Irrigation Equipment Information					Proposed Equipment Information		
Active Stations	Total Stations	Building/Site Name	Location Notes	Additional Notes	Indoor / Outdoor	Wifi / Cellular	Proposed Model
6	12	Aloysia Moore Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
7	9	Aloysia Moore Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
6	16	Beardslee Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
10	12	Beardslee Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
24	24	City Hall	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>Wifi</i>	PHC-2400 Hydrawise/WiFi
40	40	Historical Museum & Encanto Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-4800 Hydrawise/Hot Spot
12	16	Duarte Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-2400 Hydrawise/Hot Spot
15	16	Duarte Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-2400 Hydrawise/Hot Spot
10	12	Duarte Skate Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
28	32	Encanto Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-3600 Hydrawise/Hot Spot
23	24	Encanto Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-2400 Hydrawise/Hot Spot
4	18	Entrance Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
6	6	Glenn Miller Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
12	16	Hacienda Park	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
14	16	Lena Valenzuela Park	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
11	12	Northview Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
32	32	Ortis Gordon Sports Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-3600 Hydrawise/Hot Spot
3	4	Public Works Yard	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
31	32	Rancho Verde LSD	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-3600 Hydrawise/Hot Spot
4	8	Rancho Verde LSD	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
5	8	Royal Oaks Bike Trail - Buena Vista	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
20	24	Royal Oaks Bike Trail - Oak St	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-2400 Hydrawise/Hot Spot
5	8	Royal Oaks Bike Trail - Random Lane	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
11	15	Royal Oaks Bike Trail - RO School	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
16	16	Royal Oaks Park	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
12	12	Royal Oaks Park Extension	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
12	12	Senior Center	<i>Interior Wall Mount</i>	<i>Replace</i>	<i>Indoor</i>	<i>Wifi</i>	PHC-1200 Hydrawise/WiFi
11	12	Sports Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-1200 Hydrawise/Hot Spot
9	13	Veteran's Memorial Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
399	477		Total of 29 Controllers				

Attachment “D” Technical Appendix

S-CLASS®

High efficiency and dependability

Commercial Air Conditioners and Heat Pumps SSB/SPB Models

UP TO 16.5 SEER
AND 9.5 HSPF



LENNOX
Innovation never felt so good.®

Superior efficiency for more of what you want, less of what you don't

Now you can create a better indoor environment while reducing energy bills. With efficiency ratings up to 16.5 SEER and 9.5 HSPF, the S-Class® SSB/SPB split-system units offer superior efficiency you can rely on.

S-CLASS® SPLIT SYSTEMS AT A GLANCE:

*Energy-efficient split systems
reduce utility bills while
maintaining comfort*

*Temperature and humidity
controls create a more comfortable
indoor environment*

*SmartHinge™ louvered panels on
all sides, refrigerant service valves,
and easy-to-clean coils reduce costs
of installation and maintenance*

*Quiet design reduces sound levels
to 74 dB, eliminating much of the
noise of commercial split systems*

ENERGY STAR® certified

The S-Class split systems are available with a wide range of factory options, including a variety of voltages for increased flexibility. Field-installed accessories include low-ambient kit options and heat-pump-specific kits, like outdoor thermostats and monitoring kits. The versatility of the S-Class unit makes it the right choice for countless commercial applications.

Like all Lennox® equipment that features durable materials and advanced construction, S-Class units are high-quality systems designed to provide years of superior service.



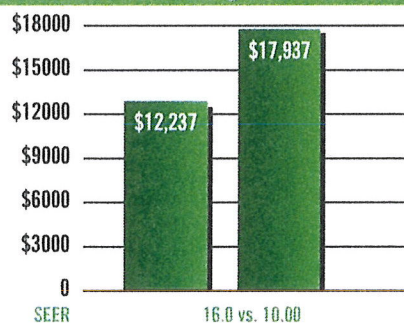
S-Class air conditioners and heat pumps are ENERGY STAR® certified products, helping to reduce energy spending and conserve natural resources. In addition to S-Class units, Lennox has developed a wide range of products that meet ENERGY STAR guidelines for energy efficiency.

High-efficiency units save year after year

The S-Class split systems feature efficiencies up to 16.5 SEER and are ENERGY STAR certified, which can significantly reduce utility bills.

The chart illustrates the 3-year cooling costs you can expect from 20 3-ton S-Class air conditioners versus 20 units with lower efficiency ratings. Actual savings may vary depending on system settings, equipment maintenance, local weather, actual construction, installation of equipment, duct system, hours of operation, local fuel rates and other factors.

Estimated 3-Year Cooling Cost for 20 Units



Utility rate source: U.S. Department of Energy national average energy rates

Building type: School (year-round)

City: Dallas

Software: Lennox Lifecycle Cost Calculator, version 3.0.9

EFFICIENCY RATING

*Up to 16.5 Seasonal Energy
Efficiency Ratio (SEER) and 9.5
Heating Seasonal Performance
Factor (HSPF)*

WARRANTIES

***5-Year Limited Warranty**
on compressor*

***1-Year Limited Warranty**
on covered components and units*

See warranty certificate for actual details.

Moisture Control

Removing
moisture
improves
IAQ



Improve humidity control

Humidity is harder to control on mild-temperature days, when less cooling is needed. S-Class units were designed to remove more moisture than many other systems by shifting to a lower-capacity stage on mild days to match the heat load, then running long enough to reduce both temperature and humidity.



*Humiditrol®
Dehumidification
System*

To enhance humidity control even further, choose the optional Humiditrol[®] dehumidification system.* The patented dehumidification system controls temperature and humidity independently, reducing moisture and helping curb the spread of mold and other airborne contaminants.

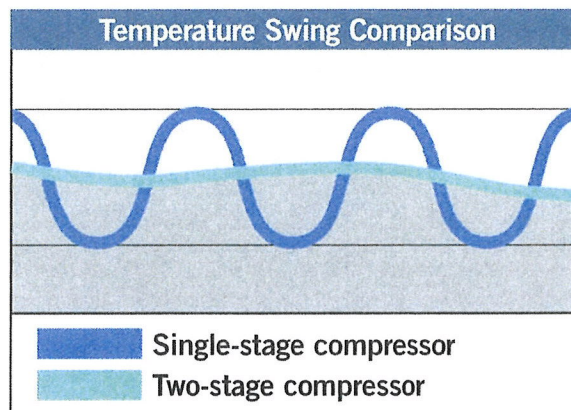
Minimum system requirements include:

- Humiditrol dehumidification system
- iComfort Wi-Fi[®] touchscreen thermostat**
- Lennox variable-speed furnace or air handler
- Lennox air conditioner or heat pump

Reduce installation and service hours

S-Class units feature contractor-friendly designs to reduce service time and help businesses control costs. Arriving fully charged with refrigerant and ready for installation, S-Class units have factory-wired control boxes and factory-tested coils.

The SmartHinge louvered-panel design allows quick and easy access to interior components from all sides, so the unit can be serviced in minimal time. For easy access to the refrigerant system, the units include central refrigerant line connections and fully serviceable brass valves. The suction valve can be completely shut off during service, while the liquid valve may be front-seated to manage refrigerant charge.



One compressor provides two-compressor benefits

Each model has two operating stages, so a single-compressor unit performs like a two-compressor system, using only the amount of energy necessary to keep occupants comfortable.

Using a two-stage scroll compressor, the S-Class units eliminate temperature swings and provide just the right amount of cooling, dehumidification or heating.

*Not for use with zoning applications.

**Select units will also require the Electronic Interface Module.

S-Class® air conditioner and heat pump performance specifications

	NOM TON.	MODEL	SOUND RATING dB ¹	COOLING DATA ^{2, 3}			HEATING DATA ⁴			PHYSICAL DATA	
				ARI RATED CAP. [BTUH]	EFFICIENCY [SEER] ⁵	EFFICIENCY [EER]	EFFICIENCY [HSPF] ⁶	CAPACITY [BTUH]	COP	DIMENSIONS H X W X L [INCHES]	SHIP. WT. [LBS.]
AIR CONDITIONERS	3	SSB036H4	74	37,600	16.0	12.5	—	—	—	31.0 x 30.5 x 35.0	243
	4	SSB048H4	74	47,500	16.5	12.5	—	—	—	39.0 x 30.5 x 35.0	268
	5	SSB060H4	74	57,500	16.0	12.2	—	—	—	45.0 x 35.5 x 39.5	332
HEAT PUMPS	3	SPB036H4	76	38,000	16.5	13.5	9.5	36,800	3.44	35.0 x 35.5 x 39.5	273
	4	SPB048H4	76	48,500	16.0	12.5	9.5	45,500	3.62	35.0 x 35.5 x 39.5	294
	5	SPB060H4	78	58,500	15.7	12.2	8.5	61,500	3.62	45.0 x 35.5 x 39.5	353

¹Sound rating number in accordance with test conditions included in ARI Standard 270.

²5-ton-and-under equipment certified in accordance with ULE certification program, which is based on ARI Standard 210/240.

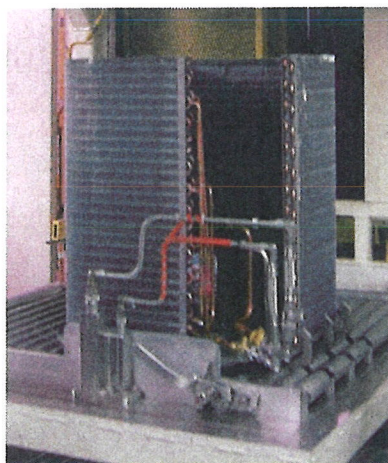
³Cooling ratings, 95 °F (35 °C) outdoor air temperature and 80 °F (27 °C) db/67 °F (19 °C) wb entering indoor coil air.

⁴High-temperature heating ratings, 47 °F (8 °C) db/43 °F (6 °C) wb outdoor air temperature and 70 °F (21 °C) entering indoor coil air.

⁵Up to 16.0 SEER when the S-Class SSB048H4 split system is matched with the CX34-62C coil and SL280UH090V60C furnace.

⁶Up to 9.5 HSPF when the S-Class SPB048H4 split system is matched with the EL180DF110E60C furnace.

Note: Due to Lennox' ongoing commitment to quality, all specifications, ratings and dimensions are subject to change.



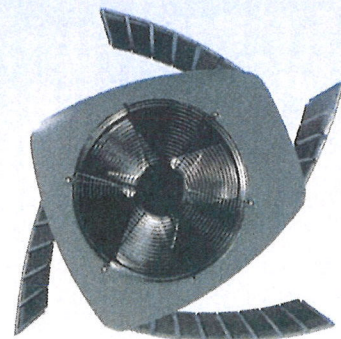
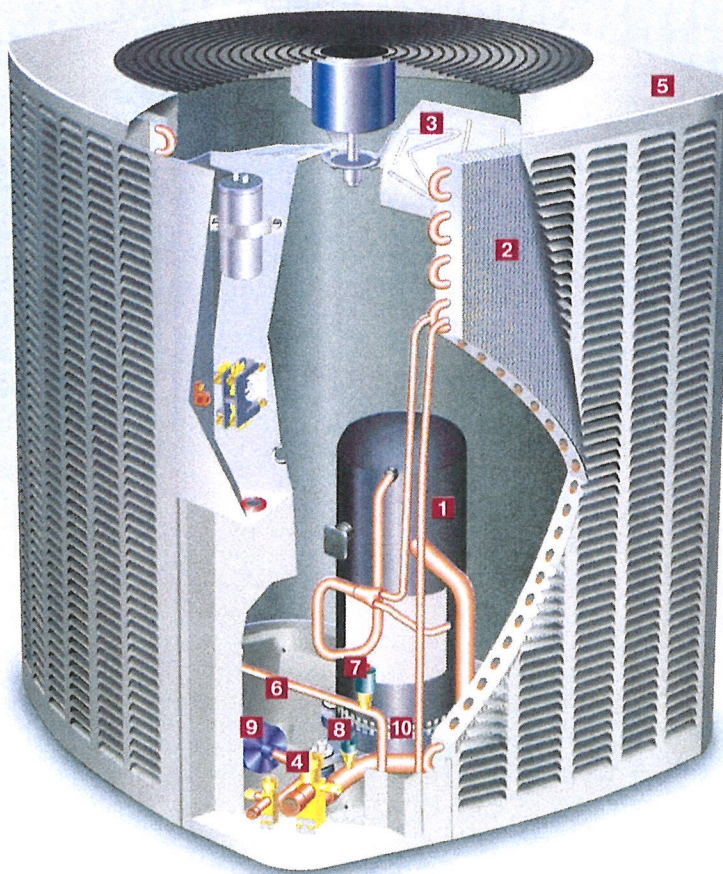
Lennox® products are built to last

Superior engineering, durable components and complete testing are combined to create split systems that operate dependably at start-up and for many years to come. Lennox® products are built with a wide range of durable components and safety features, including corrosion-resistant cabinets, drainage holes and enhanced fan guards. The SmartHinge™ louvered panels provide superior coil protection, eliminating the need for coil or hail guards.

Each unit features a two-stage scroll compressor with internal overload protection, a three-pole contactor and an enhanced coil and manifold design for excellent performance and reliability.

Low-ambient control kits allow cooling at temperatures as low as 30 °F to meet most commercial applications. ISO 9001-2000 building standards and rigorous testing practices assure quality and reliability.

High efficiency with excellent temperature and humidity control



SmartHinge™ Louvered Coil Protection: Allows quick, easy access to interior components from all sides, so the unit can be serviced in minimal time.

Quiet and efficient operation

- 1 Two-Stage Scroll Compressor:** Operates primarily on low stage, for more quiet and consistent comfort and humidity control.
- 2 High-Efficiency Outdoor Coil:** Provides exceptional heat transfer and low air resistance for high-efficiency operation.
- 3 Quiet, Direct-Drive Fan:** Precision balanced and designed to run slower for an enhanced level of quiet operation.

Easy installation and maintenance

- 4 Brass Service Valves:** Isolate the refrigeration system in outdoor units and allow for simple access.

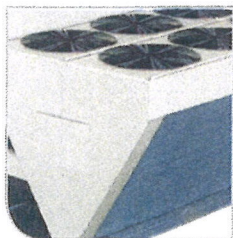
Reliable performance

- 5 Corrosion-Resistant Cabinet:** Galvanized steel under a two-layer painted surface protects against rust and corrosion.
- 6 Drainage Holes:** Prevent damaging moisture from collecting inside the basepan.
- 7 High-Pressure Switch:** Extends the life of the unit by providing a safeguard against excessive pressure.
- 8 Low-Pressure Switch:** Extends the life of the compressor by safeguarding against loss of charge.
- 9 High-Capacity Liquid Line Filter/Drier:** Extends the life of the unit by trapping moisture and dirt that could contaminate the system.
- 10 Crankcase Heater:** Protects the compressor against refrigerant migration that can occur during low-ambient operations.

Solutions for customized comfort

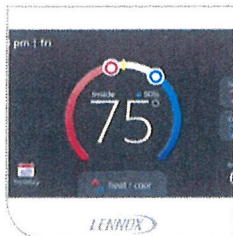
Don't just choose a Lennox product—choose a Lennox® Commercial Comfort System.

These complete packages of HVAC solutions provide tools to create a healthy and comfortable environment.



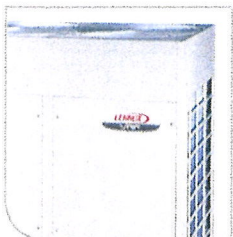
Packaged Units

- Emergence® Rooftop Units
- Strategos® Rooftop Units
- Landmark® Rooftop Units
- Raider® Rooftop Units



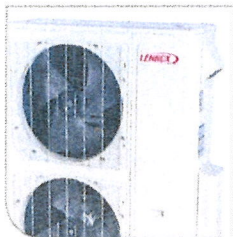
Commercial Controls

- Systems Integration Solutions
- Commercial Thermostats
- L Connection® Network Zoning



VRF

- Outdoor Units
- Indoor Units
- Controls



Mini-Split Systems

- Heat Pump Mini-Splits
- Low Ambient Heat Pump Mini-Splits
- Indoor Units
- Controls



Split Systems

- S-Class® Air Conditioners/Heat Pumps
- T-Class™ Air Conditioners/Heat Pumps
- Air Handlers
- Indoor Coils



Solar Ready

- SunSource® Commercial Energy System



Heating

- Unit Heaters
- Duct Furnaces
- Furnaces



Indoor Air Quality

- Humiditol® Dehumidification System
- Demand Control Ventilation
- Air Filters
- UVC Lamps



Visit us at www.lennoxcommercial.com, or contact us at 1-877-726-0024.

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Litho U.S.A.

23W49 12/16 PC86481

T-CLASS™

Performance and rugged durability

**Commercial Air Conditioners and Heat Pumps
TSA/TPA Models**

UP TO 16.0 SEER
AND 9.7 HSPF



LENNOX
Innovation never felt so good.®

Control operational costs with reliable, energy-efficient split systems

The T-Class™ TSA/TPA line of air conditioners and heat pumps from Lennox is designed to help achieve comfort as well as energy savings. Featuring high-quality components, these units offer excellent performance and reliability.

T-CLASS™ SPLIT SYSTEMS AT A GLANCE:

*High-efficiency units for
reduced energy usage*

Easy installation and maintenance

*A variety of sizes for increased
application flexibility*

*Excellent construction,
reliability and warranties*

ENERGY STAR® qualified

EFFICIENCY RATING

*Up to 16.0 Seasonal Energy
Efficiency Ratio (SEER) and 9.7
Heating Seasonal Performance
Factor (HSPF)*

WARRANTIES

*5-Year Limited Warranty
on compressor*

*1-Year Limited Warranty
on covered components*

See warranty certificate for actual details.

Energy efficiency

Lennox' energy-efficient design features high-efficiency scroll compressors and outdoor coils that provide exceptional heat transfer, low air resistance and efficient operation. These units are rated up to 16.0 SEER and 9.7 HSPF to save hundreds of dollars in heating and cooling costs compared to lower-efficiency models.

Easy installation and maintenance

Lennox® air conditioning and heat pump units are designed to install quickly. They arrive fully charged with factory-wired control boxes and factory-tested coils.

To ensure years of simple, low-cost service and maintenance, these units feature brass service valves, to provide easy access to the refrigerant system. The suction valve can be fully shut off, while the liquid valve may be front-seated to manage refrigerant charge.

Application solutions

Lennox offers a large selection of options to meet a wide range of commercial HVAC needs. For increased flexibility, customers may choose from a variety of voltages, including 208-230/3/60, 460/3/60, and 575/3/60. Field-installed accessories, such as low-ambient kit options, allow unit operation down to 30°F.

Excellent reliability

Lennox split systems feature durable components and safety features. Corrosion-resistant cabinets, drainage holes, and enhanced fan and coil guards protect against unexpected service costs. In addition, high-pressure switches are standard on all models. Other field-installed accessories, such as loss-of-charge and freestat kits, provide additional protection when needed. All Lennox products are built according to demanding ISO-9001 standards and feature excellent warranties to provide peace of mind.

Humidity control

T-Class air conditioners and heat pumps are available with enhanced humidity control with the optional Humiditrol® dehumidification system.* Its patented design reduces moisture and helps to control the spread of mold and other airborne contaminants.

*Not for use with zoning applications.



T-Class™ air conditioners and heat pumps are ENERGY STAR® qualified products, helping to reduce energy spending and conserve natural resources. In addition to T-Class units, Lennox has developed a wide range of products that meet ENERGY STAR guidelines for energy efficiency.

Field-installed accessories

Improved reliability

- **Compressor Low-Ambient Cutoff:** Prevents compressor operation when outdoor temperature is below 35°F.
- **Compressor Time-Off Control:** Improves compressor reliability by preventing short-cycling. Allows the compressor to start in an unloaded condition.
- **Loss-of-Charge Kit:** Protects compressor from damage due to low-refrigerant-charge conditions.
- **Hail Guards:** Constructed of louvered, heavy-gauge steel. Surround unit on all four sides. Prevent damage to the coil.
- **Freezestat:** Prevents system failure in cold conditions by cycling the compressor off when the suction line temperature falls below the setpoint.

Easy installation and maintenance

- **Mounting Base:** Extremely durable, lightweight, and sturdy high-density polyethylene provides a permanent foundation for outdoor units.
- **Unit Stand-Off Kit:** Raises unit off the mounting surface and away from potentially damaging moisture.
- **Refrigerant Line Kits:** Refrigerant lines are shipped cleaned, dried, pressurized and sealed at the factory for easy installation.

Application solutions

- **Low-Ambient Control to 30°F:** Allows unit operation down to 30°F.
- **Low-Ambient Control to 0°F:** Allows unit operation down to 0°F. Requires speed control and weatherproof kit (sold separately). Available for 208/230V models only.
- **Mild-Weather Kit:** Allows heating operation above 75°F (heat pump units only).

Quiet and efficient operation

- **Compressor Sound Cover:** Reinforced vinyl cover with fiberglass insulation helps lower operating sound levels.
- **Time-Delay Relay Kit:** Improves comfort by delaying the blower-off time during the cooling cycle.



*Humiditrol®
Dehumidification
System*

Enhanced humidity control

The Humiditrol® dehumidification system reduces moisture and controls the spread of airborne contaminants.

Minimum system requirements include:

- Humiditrol® dehumidification system
- iComfort Wi-Fi® touchscreen thermostat*
- Lennox® variable speed furnace or air handler
- Lennox air conditioner or heat pump

*Select units will also require the Electronic Interface Module.

T-Class™ standard-efficiency AC performance specifications

	NOM TON.	MODEL	SOUND RATING dB ¹	COOLING DATA ^{2, 3}			HEATING DATA ⁴			PHYSICAL DATA	
				ARI RATED CAP. [BTUH]	EFFICIENCY [SEER] ⁵	EFFICIENCY [EER]	EFFICIENCY [HSPF] ⁶	CAPACITY [BTUH]	COP	DIMENSIONS H X W X L [INCHES]	SHIP. WT. [LBS.]
AIR CONDITIONERS	3	TSA036S4	76	36,000	14.5	12.0	—	—	—	29.25 x 24.25 x 24.25	135
	3.5	TSA042S4	80	42,000	14.0	12.0	—	—	—	29.25 x 28.25 x 28.25	178
	4	TSA048S4	80	51,000	14.5	12.5	—	—	—	37.25 x 28.25 x 28.25	194
	5	TSA060S4	80	60,500	13.5	11.5	—	—	—	33.25 x 28.25 x 28.25	218

T-Class™ high-efficiency AC/HP performance specifications

	NOM TON.	MODEL	SOUND RATING dB ¹	COOLING DATA ^{2, 3}			HEATING DATA ⁴			PHYSICAL DATA	
				ARI RATED CAP. [BTUH]	EFFICIENCY [SEER] ⁷	EFFICIENCY [EER]	EFFICIENCY [HSPF] ⁸	CAPACITY [BTUH]	COP	DIMENSIONS H X W X L [INCHES]	SHIP. WT. [LBS.]
AIR CONDITIONERS	3	TSA036H4	76	35,800	16.0	13.5	—	—	—	37.25 x 28.25 x 28.25	164
	3.5	TSA042H4	78	43,000	15.5	13.0	—	—	—	29.25 x 28.25 x 28.25	198
	4	TSA048H4	78	49,500	15.2	12.5	—	—	—	37.25 x 28.25 x 28.25	221
	5	TSA060H4	80	58,000	15.0	12.5	—	—	—	33.25 x 32.25 x 32.25	238
HEAT PUMPS	3	TPA036H4	79	36,600	15.7	13.5	9.0	35,600	3.94	31.25 x 32.25 x 32.25	212
	3.5	TPA042H4	79	44,500	15.5	13.0	9.7	45,500	4.08	39.00 x 32.25 x 32.25	257
	4	TPA048H4	80	50,500	15.2	13.0	9.2	49,000	3.90	39.00 x 32.25 x 32.25	262
	5	TPA060H4	80	60,500	15.0	12.5	9.0	58,000	3.64	45.25 x 32.25 x 32.25	307

¹Sound rating number in accordance with test conditions included in ARI Standard 270.

²5-ton-and-under equipment certified in accordance with ULE certification program, which is based on ARI Standard 210/240.

³Cooling ratings, 95°F (35°C) outdoor air temperature and 80°F (27°C) db/67°F (19°C) wb entering indoor coil air.

⁴High-temperature heating ratings, 47°F (8°C) db/43°F (6°C) wb outdoor air temperature and 70°F (21°C) entering indoor coil air.

⁵Up 14.5 SEER when the T-Class TSA048S4 split system is matched with the CX34-62C coil and the SL280UH110XV60C furnace.

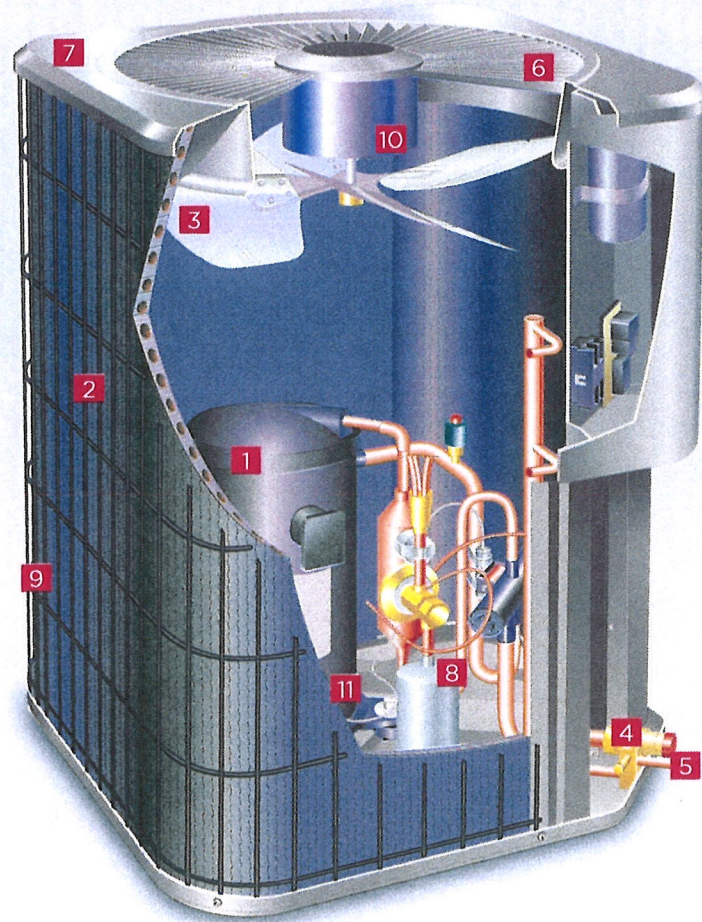
⁶Up to 8.7 HSPF when the T-Class TPA042S4 split system is matched with the CR33-50/60 and EL180DF110E60C furnace.

⁷Up to 16.0 SEER when the T-Class TSA036H4 split system is matched with the CX34-49 indoor coil and SLP98UH090XV48C furnace.

⁸Up to 9.7 HSPF when the T-Class TPA042H4 split system is matched with the CH23-68 indoor coil and EL180UH135E60D furnace.

Note: Due to Lennox' ongoing commitment to quality, all specifications, ratings and dimensions are subject to change.

High efficiency with intelligent design and high-quality components



Quiet and efficient operation

- 1 Scroll Compressor:** Provides smooth, efficient and quiet operation.
- 2 High-Efficiency Outdoor Coil:** Provides exceptional heat transfer and low air resistance for high-efficiency operation.
- 3 Quiet, Direct-Drive Fan:** Precision-balanced, direct-drive fan is designed to run slower for an enhanced level of quiet operation.

Easy installation and maintenance

- 4 Brass Service Valves:** Isolate the refrigeration system in outdoor units and allow for simple access.
- 5 Refrigerant Line Connections and Electrical Inlets:** Located in one central area of cabinet for easy access.

Reliable performance

- 6 Fan Guard:** Heavy-duty guard increases safety.
- 7 Corrosion-Resistant Cabinet:** Galvanized steel under a two-layer painted surface protects against rust and corrosion.
- 8 Drainage Holes:** Prevent damaging moisture from collecting inside the basepan.
- 9 Enhanced Coil Guard:** Protects the outdoor coil, maintaining the efficiency of the unit. Heavy-gauge steel construction and non-corrosive PVC coating assure long-lasting protection.
- 10 Fan Motor:** Features a fully enclosed design with a rain shield to provide maximum protection from weather, dust, corrosion and moisture.
- 11 Crankcase Heaters:** Protect the compressor against refrigerant migration that can occur during low-ambient operations.

Solid-State Defrost Control: Monitors the condition of the coil. Quickly and efficiently clears the buildup of frost on the coil (heat pump unit only, not shown).

Solutions for customized comfort

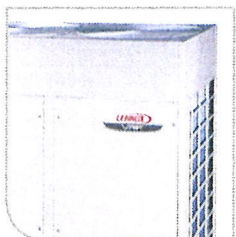
Don't just choose a Lennox® product—choose a Lennox Commercial Comfort System.

These complete packages of HVAC solutions provide tools to create a healthy and comfortable environment.



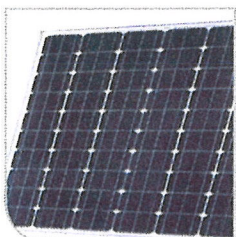
Packaged Units

- Emergence® Rooftop Units
- Strategos® Rooftop Units
- Landmark® Rooftop Units
- Raider® Rooftop Units



VRF

- Outdoor Units
- Indoor Units
- Controls



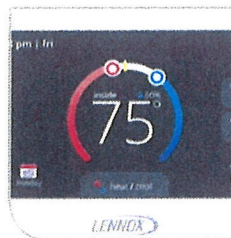
Solar Ready

- SunSource® Commercial Energy System



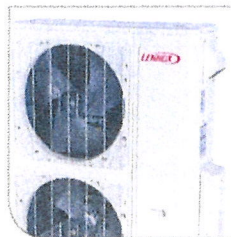
Split Systems

- Elite® Series Large Split Systems
- S-Class® Air Conditioners/Heat Pumps
- T-Class® Air Conditioners/Heat Pumps
- Air Handlers
- Indoor Coils



Commercial Controls

- Systems Integration Solutions
- Commercial Thermostats
- L Connection® Network



Mini-Split Systems

- Wall-Mounted Non-Ducted
- Ceiling Cassette Non-Ducted
- Medium-Static Ducted
- Ceiling/Floor Non-Ducted



Heating

- Unit Heaters
- Duct Furnaces
- Furnaces



Indoor Air Quality

- Dedicated Outdoor Air System
- Humiditrol® Dehumidification System
- Demand Control Ventilation
- Air Filters
- UVC Lamps



Visit us at www.lennox.com, or contact us at 1-877-726-0024.

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13W06 01/18 PC83724

SunSaver ST™

Solar Pool Heating Collector Specifications

DESCRIPTION:

The SunSaver ST™ Solar Collector is manufactured in Chico, California. The collector is a specially developed, highly stabilized polyolefin and is of parallel, circular channel design. It is unglazed, un-insulated, and designed for low temperature applications such as swimming pool heating, heat pumps, aquaculture, hydroponics, and pre-heating.

DIMENSIONS:

	Collector Model Number		
	4 x 8, 2 x 8	4 x 10, 2 x 10	4 x 12, 2 x 12
Header Width	50-7/8", 26-7/8" (±1/8")	50-7/8", 26-7/8" (±1/8")	50-7/8", 26-7/8" (±1/8")
	1.29m, 0.68m (±3.2mm)	1.29m, 0.68m (±3.23mm)	1.29m, 0.68m (±3.23mm)
Panel Body Width	48", 24" (+1/4" - 0")	48", 24" (+1/4" - 0")	48", 24" (+1/4" - 0")
	1.22m, 0.61m (±6.4mm)	1.22m, 0.61m (±6.4mm)	1.22m, 0.61m (±6.4mm)
Overall Length	96" (±1/8")	120" (±1/8")	144" (±1/8")
	2.44m (±3.2mm)	3.05m (±3.2mm)	2.66m (±3.2mm)
Effective Area	32ft ² , 16ft ²	40ft ² , 20ft ²	48ft ² , 24ft ²
	2.97m ² , 1.47m ²	3.72m ² , 1.86m ²	4.46m ² , 2.23m ²
Weight (w/o fluid)	12.2lbs, 6.1lbs	14.3lbs, 7.2lbs	16.5lbs, 8.3lbs
	5.53kg, 2.77kg	6.49kg, 3.26kg	7.48kg, 3.76kg
Fluid Capacity	4.0gal, 2.0gal	4.7gal, 2.4gal	5.4gal, 2.7gal
	15.1L, 7.6L	17.8L, 9.1L	20.4L, 10.2L
Weight (w/ water)	46.0lbs, 23.0lbs	53.8lbs, 26.9lbs	61.7lbs, 30.8lbs
	20.8kg, 10.4kg	24.4kg, 12.2kg	28.0kg, 14.0kg

ROOF MOUNTING SPACE: Width = [Number of panels X 50-7/8" (1.29m)] + 24" (0.61m)
Length = Panel length + 24" (0.61m)

RACK SPACE: Width = [Number of panels X 50-7/8" (1.29m)] + 2" (0.05m)
Length = Panel length + 6" (0.15m)

FLOW: Maximum recommended flow = 0.20 gpm per ft² panel area (488 L/hr per m²)
3.47 psi head loss (23.9 kPa)
Minimum recommended flow = 0.05 gpm per ft² panel area (122 L/hr per m²)
0.23 psi head loss (1.6 kPa)
Recommended flow = 0.10 gpm per ft² panel area (244 L/hr per m²)
0.87 psi head loss (6.0 kPa)

PRESSURE:

NORMAL OPERATING PRESSURE

MAXIMUM INTERMITTENT PRESSURE

80°F (27°C)

0 to 30 psi
(0 - 207 kPa)

45 psi
(310 kPa)

212°F (100°C)

0 to 5 psi
(0 - 34 kPa)

5 psi
(34 kPa)

70°F (21°C)

Measured burst pressure of panel body = Over 300 psi (2069 kPa)

TEMPERATURE:

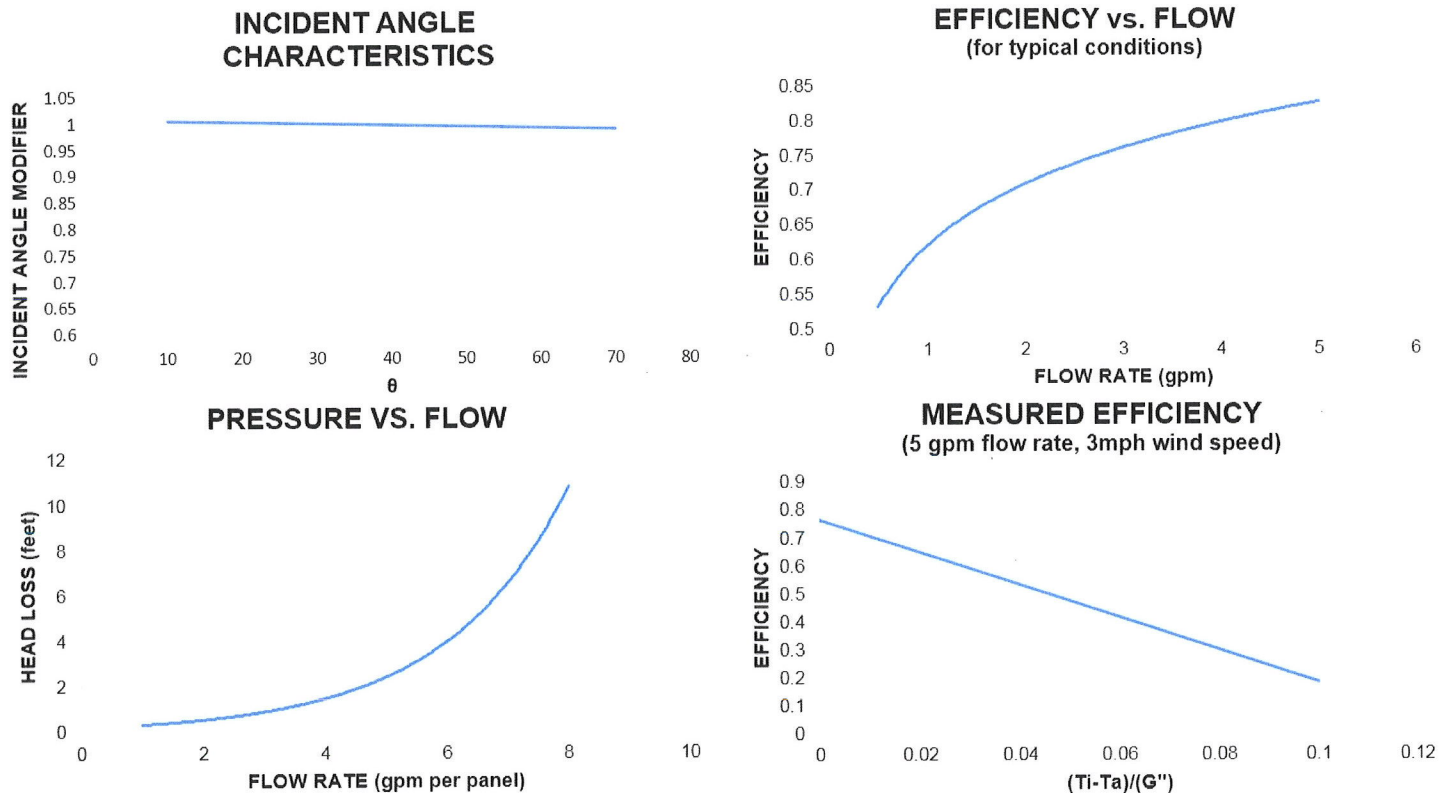
Normal operating temperature = 60°F to 90°F (16°C to 32°C)
Maximum continuous operating temperature = 212°F (100°C)
Maximum intermittent temperature (un-pressurized) = 250°F (121°C)
Melt temperature = 338°F (170°C)

SunSaverST™

Solar Pool Heating Collector Specifications

CHEMICAL RESISTANCE:	Compatible with common collector fluids such as chlorinated or saline pool water.
CORROSION:	Non-corrosive
FREEZING:	The system should be drained before freezing conditions occur.
WEATHERABILITY:	Weatherometer, accelerated outdoor exposure, and other extensive laboratory testing demonstrates long-term weatherability of SunSaverST™ collectors (see warranty). Additionally, FAFCO's experience of 40+ years and over 2,000,000 collectors installed confirms that the proprietary stabilization and high mechanical strength results in negligible issues over the warranty period.
ABSORPTIVITY:	0.96
EMISSION:	0.90
TIME CONSTANT:	105 seconds
TESTED OUTPUT:	1,900 Btu/ft ² -day (5.9 kWh/m ² -day) (Per SRCC OG100 Certification # 10001773)

PERFORMANCE GRAPHS:

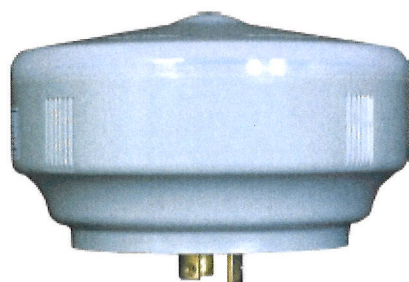


All specifications and dimensions set forth above are as estimated by FAFCO Inc., but are not intended to be precise and should not be relied upon as precise without independent verification. These estimated specifications and dimensions are subject to change without notice. Nothing contained herein is intended or should be construed to expand or extend FAFCO Inc.'s warranty, or establish any express or implied warranties of any nature, other than as contained in the Twelve Year Warranty Agreement. (FAFCO Inc. disclaims any other warranties and assumes no duty to provide notice if it becomes aware of any deficiencies in these estimates.) The reader accepts full responsibility for any use or application of these estimates and specifically understands and acknowledges the limited reliability of these estimates.

iSLC-3100-7P



CIMCON's Plug & Play Wireless Lighting Controller (iSLC) with Remote Monitoring, Dimming, GPS, Metering and Sensor Input Capabilities



4.53 in. W x 2.68 in. H
115 mm W x 67.99 mm H

CIMCON's iSLC-3100-7P is an intelligent wireless lighting controller with exceptional fault tolerance and a multitude of features. Each iSLC-3100-7P provides intelligent ON/OFF switching, dimming control, GPS, highly accurate power metering, analog and digital sensor inputs and constant status and health monitoring of your lighting fixtures.

Key Features of the iSLC-3100-7P

A Photocell in Every Controller

CIMCON's iSLCs operate immediately upon installation without dependency on the network.

A GPS in Every Controller

CIMCON's GPS capabilities reduce install times and eliminate future mapping issues. GPS coordinates for each iSLC are sent automatically to CIMCON's cloud-based Central Management System for overlay on a Google Maps interface. Without GPS, installers must manually record the pole ID, iSLC ID and its latitude/longitude location to map them correctly.

Extended Surge Protection

CATB surge protection is standard, while CATC surge protection is available as an option.

Full ANSI C136.41 7-pin Dimming Receptacle Support

CIMCON's iSLCs work with any lamp type or manufacturer with full support for all 7 pins on the ANSI C136.41 dimming receptacle for true "plug and play" installation. CIMCON's controllers support the addition of digital or analog sensors, such as motion, vehicle counts or environmental sensors through pins 6 and 7.

Revenue Grade Energy Metering

CIMCON's iSLCs monitor Current, Voltage, Frequency, Power Factor, kW and kWh, and offer metering accuracy as high as 0.5% for accurate consumption data and billing.

Fault Tolerance

Each CIMCON iSLC is a highly intelligent stand-alone device that utilizes the latest developments in self-organizing, self-healing, wireless technologies. Proper operation and execution of a light's schedule is not dependent on network communications.

Remote Control and Scheduling

CIMCON's iSLCs support multiple lamp control modes such as user configurable ON/OFF/DIM schedules programmed on a daily / monthly / special events basis, local ad-hoc control, photocell and astro-clock scheduling, and mixed mode scheduling incorporating sensor inputs.

Flexible Dimming Control

CIMCON's iSLCs support dimming through 0-10 VDC, PWM or DALI interfaces.

Fault Monitoring

CIMCON's iSLCs provide extensive fault monitoring to report on day burners, burnouts, lamp cycling, ballast failures, over/under voltage, abnormal power consumption, low power factors, communication failures and more. All faults are sent to CIMCON's cloud-based Central Management System for alarm routing, visualization and fault correction. Alerts can be sent directly to relevant users via emails or text messages (SMS) immediately when they occur. Alerts are time stamped and contain key parameters associated with the fault/alert.

To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

iSLC-3100-7P

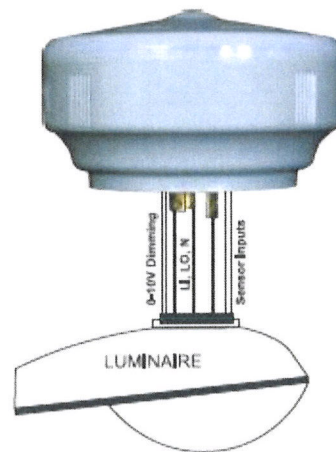
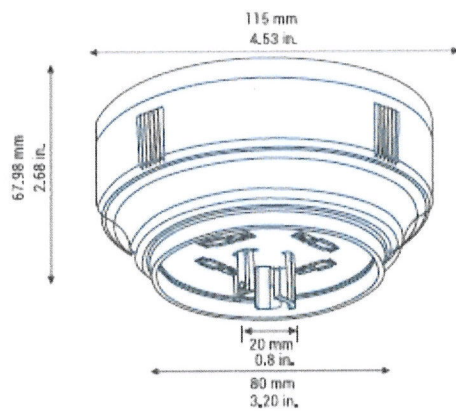
Technical Specifications

Controller	Powerful 32-bit Microcontroller	
Real Time Clock	Battery-backed RTC	
Storage Memory	192 kB Flash and 12 kB RAM	
Power Metering	Parameters measured: Voltage, Current, Power Factor, Frequency, kW and kWh	
Rated Load	1560VA 960 W	
Power Supply	Universal AC input 85 V-264 V, 50/60 Hz (305 V optional)	
Radio Communication	2.4 GHz, IEEE 802.15.4	
	RF Data Rate: 250 kbps	Transmit Power: +20 dBm
	Receiver Sensitivity: -104 dBm	Network Type: Self-forming mesh network
	Network Fault Tolerance: Self-healing mesh	Open Field Range: 5000 ft/1.5 km
	Data Protection: 256-bit AES encrypt	
	Hardware: IEEE 802.15.4-2003 CSMA-CA algorithm	
	Receiver Type: 22 Tracking/66 Acquisition Channel GPS Receiver GPS L1, C/A Code	
	Max. Update rate: 10 Hz	
GPS Module Specification (Optional)	Sensitivity:	
	Tracking:	-165 dBm
	Reacquisition:	-160 dBm
	Cold starts	-147 dBm
	Time-To-First-Fix	
	Cold starts	31s (typical)
	Warm starts:	30s
	Hot starts:	<1s
	EPO Assist:	13s (CTTFF)
	Accuracy:	
	Automatic Positioning	2.5 m CEP
	Speed	0.1 m/s
Dimming Interface	Analog Dimming (0-10 VDC)	
	Protection: Output Short Circuit protection	Maximum Current: 10 mA
	or	
Optional Sensor Inputs	PWM Dimming (10 V p-p, 400 Hz)	
	Maximum Current: 10 mA (Sink)	
	Provision of one Digital input and one Analog input that can be used for motion-based lighting controls, adaptive lighting or advanced lighting controls	
Surge Protection	Standard: 445 Joule CATB (6 kV/3 kA), Optional: 700 Joule CATC (20 kV/10 kA)	
Operating Conditions	-40°C to +70°C / -40°F to +158°F, 20% to 90% Rh non-condensing, IP67	
RoHS	Yes	
Central Management System	Web-based software allows remote configuration, monitoring, control, and reporting	
Certifications	UL, CE, RCM (AUS/NZ), VCCI (Japan)	

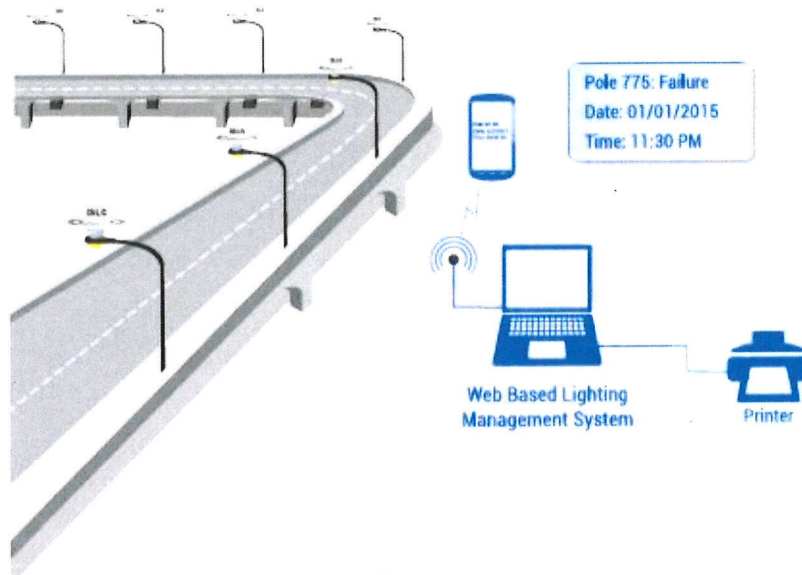
To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

iSLC-3100-7P

Mechanical Specifications



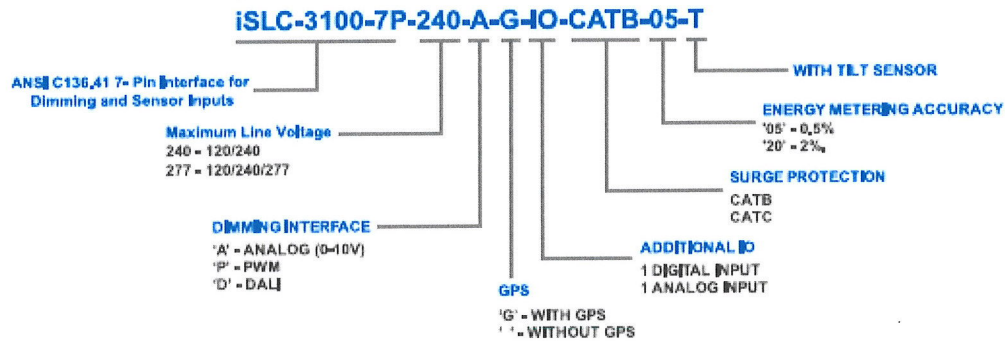
How It Works



To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

iSLC-3100-7P

Ordering Code



Ordering Guide

iSLC-3100-7P

PRODUCT ID	Maximum Line Voltage	DIMMING INTERFACE	GPS	ADDITIONAL IO	SURGE PROTECTION	ENERGY METERING ACCURACY	TILT
NEMA-7-pin SERIES	240 = 120/240 277 = 120/240/277	'A' - ANALOG 'P' - PWM 'D' - DALI	'G' = WITH GPS '-' = WITHOUT GPS	'IO' - 1 Digital & 1 Analog '-' - No Inputs	'CATB' - (6kW/3kA) 'CATC' - (20kW/10kA)	'05' = 0.5% '20' = 2%	'T' = WITH TILT SENSOR

Project Information

Project Name

Date

Comments

Prepared By

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Specifications subject to change without notice.
iSLC 3100 TP 017
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Wireless Gateway

CIMCON's Ethernet and Cellular Gateway



10.78 in. L x 6.81 in. W x 3.15 in. H
274 mm L x 173 mm W x 80 mm H

CIMCON's Wireless Gateway serves as a "switchboard" for a group of intelligent wireless lighting controllers (ISLCs) to communicate with the CIMCON cloud-based Central Management System. Gateways use backhaul communications networks such as GPRS, Ethernet and also include a ZigBee® radio module for self-organizing, self-healing local wireless mesh networking.

Key Features of the Wireless Gateway

Robust and Reliable

Communicates with up to 1,000 CIMCON intelligent wireless lighting controllers (ISLCs) spread across significant distances with high scalability and fault tolerance, using self-forming and self-healing mesh networking.

Wireless Technologies

CIMCON's Wireless Gateway utilizes the latest developments in wireless technologies to configure and collect data from CIMCON's intelligent wireless lighting controllers (ISLCs) and transmits data to and from the CIMCON cloud-based central server.

Local Intelligence

CIMCON's Wireless Gateway uses an extremely powerful 32-bit microcontroller that enables local complex logic and intelligence for faster response times and better performance.

Local Data Storage

CIMCON's Wireless Gateway can store large amounts of data in the event of a communication link failure. This data is transferred to the cloud and CIMCON's cloud-based Central Management System once the link is available, thus ensuring data integrity.

Multiple Connectivity Options

CIMCON's Wireless Gateway offers several wired and wireless options to connect to the cloud, including Ethernet, Serial/USB interface and GPRS (Cellular) support.

Simple Remote Configuration

CIMCON's Wireless Gateway can be remotely configured from an easy-to-use web interface. Configurations include: input and output mapping, polling rates and GPS coordinates.

Multiple Protocol Support

CIMCON's Gateway provides support for several industry standard protocols that enable easy integration with other systems and networks.

Network Fault Tolerance

Multiple Wireless Gateways can be configured in fault tolerant mode to provide the highest levels of network availability.

Simple Installation

CIMCON's Wireless Gateway can be pole or rooftop mounted for easy installation.

To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

Wireless Gateway

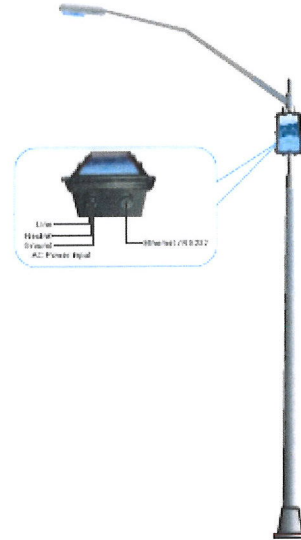
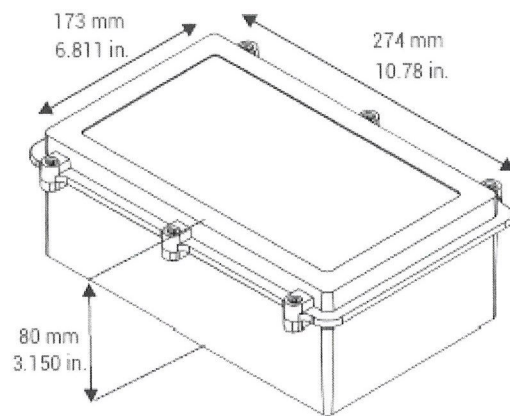
Technical Specifications

Processor	32 bit ARM A7 running at 696 MHz	
Real Time Clock	Battery-backed RTC	
Radio Communication	2.4 GHz, IEEE 802.15.4	
	Data Rate: 250 kbps	Transmit Power: +18 dBm
	Receiver Sensitivity: -102 dBm	Network Type: Self-forming mesh network
	Network Fault Tolerance: Self-healing mesh	Hardware: CSMA/CA Mechanism
	Open Field Range: 5000 ft/1.2 km	Data Protection: 128-bit/256-bit AES encryption
GSM Characteristics	RF Transceiver Certifications: United States (FCC), Canada (IC) and Europe (ETSI)	
	Multi-band	
	(US/Canada) 4G: 700(B17)/850(B5)/AWS1 700(B4),1900(B2)	
	3G: 850(B5)/1900(B2)	
	2G: 850/1900	
	(US-Verizon) 4G: 700(B13)/AWS1 700(B4)	
	(Europe) 4G: 800(B20)/1800(B3)/2600(B7)	
	3G: 850(B5)/900(B8),2100(B1)	
	2G: 900/1800	
	Mobile Originate, Mobile Terminated and Cell Broadcast PDU or Text Mode	
GPS	Performance	
	LTE 3GPP Release 9 (Category 3, 100 Mbps peak downlink/50 Mbps peak uplink) with HSPA+ 42/GPRS fallback	
	Yes	
Wi-fi Communication	IEEE 802.11 b/g/n RF/PHY/MAC SOC	
	Single spatial stream in 2.4GHz ISM band	
	Advanced Equalization and Channel Estimation	
	Supports IEEE 802.11 WEP, WPA, and WPA2 Security	
	Advanced Equalization and Channel Estimation	
	Advanced Carrier and Timing Synchronization	
	Data Rate: 65Mbps	
Bluetooth	Power Output: 19dbm	
	Sensitivity: -98dbm	
	Bluetooth 4.0 (Basic Rate, Enhanced Rate and BLE)	
	Class 1 and 2 transmission	
	Adaptive Frequency Hopping	
Storage Memory	Superior sensitivity and range	
	eMMC Flash Storage (2 GB SLC or 4 GB MLC)	
Power	Universal AC input 90-305 VAC, 50/60 Hz	
Power Back up	20-60 Sec	
Ports	Ethernet: 10/100 Base-T IPv4 and IPv6 compatible, RS-232, USB 2.480 M/bits Host (2) / Device (1)	
Installation	Pole Mount or Wall Mount	
Enclosure	Dimension: 274 mm x 173 mm x 80 mm	Material: Aluminum Die cast
Operating Conditions	-40°C to 70°C / -40°F to 158°F, 20% to 90% Rh non-condensing	
IP Rating	IP65	
Surge Protection	Standard: 445 Joule CATB (6kV/3kA), Optional: 700 Joule CATC (20kV/10kA)	

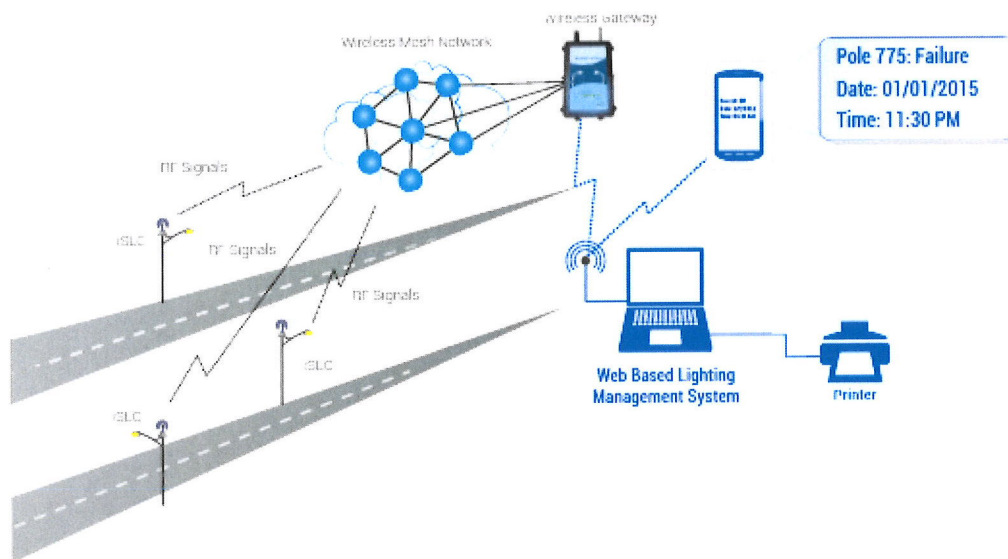
To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

Wireless Gateway

Mechanical Specifications



How It Works



To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

iSLC-3300

CIMCON's Plug & Play Wireless Lighting Controller with Remote Monitoring, Dimming, Metering and Sensor Input



7.32 in. L x 1.69 in. W x 1.25 in. H
185 mm L x 43 mm W x 32 mm H

CIMCON's iSLC-3300 is an intelligent wireless lighting controller that uses a highly robust and reliable self-forming and self-healing RF mesh network in a form factor that can be easily mounted inside or outside of any light fixture.

Each iSLC-3300 provides intelligent ON/OFF switching, dimming control, scheduling, highly accurate power metering and health monitoring of each light fixture. The iSLC-3300 also includes support for sensor inputs such as occupancy or ambient light sensors for control of each light or groups of lighting fixtures.

Key Features of the iSLC-3300

Robust and Reliable

Reliably operates over long distances in a self-healing, self-organizing network utilizing the latest developments in wireless RF technology.

Remote Control and Scheduling

The controller supports five lamp control modes. Control can be based on user configurable ON/OFF/DIM schedules programmed on a daily / monthly / yearly / special events basis such as holidays, warehouse inventory and stocking events.

Power Metering

The iSLC-3300 intelligent wireless lighting controller (iSLC) can monitor electrical parameters such as Current, Voltage, Frequency, Power Factor, kW and kWh.

Controller Groups

Lights can be grouped by Zone, Floor or Area, based on different light level requirements.

Post Top Retrofit

The iSLC-3300 controller is perfect for retrofitting existing decorative post tops.

Dimming Controls

The iSLC-3300 controller supports dimming via 0-10 VDC, DALI or PWM with up to 10 dimming schedules. It also includes additional sensor interfaces for motion/occupancy sensors to enable motion-based dimming and ambient light sensors for daylight harvesting.

Fault Monitoring

Extensive fault monitoring is provided to report on lamp burnouts, ballast/driver failure, abnormal power consumption, low power factor, communication failure and more. All faults are sent to CIMCON's cloud-based Central Management System for visual alarms, trouble tickets and fault correction.

Alert Routing

Alarms can be sent directly to the appropriate users via emails or text (SMS) messages as soon as they occur. Messages are time stamped and contain key parameters associated with the fault/alarm.

To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

iSLC-3300

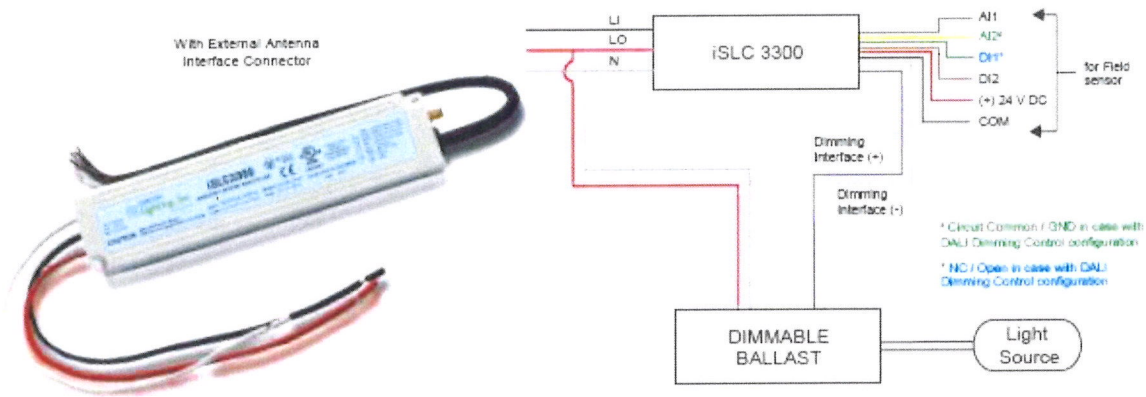
Technical Specifications

Controller	Powerful 32-bit Microcontroller	
Real Time Clock	Battery-backed RTC.	
Storage Memory	192 kB Flash and 12 kB RAM	
Power Metering	Parameters measured: Voltage, Current, Power Factor, Frequency, kW and kWh	
Rated Load	6A 120 VAC / 4A 277 VAC	
Power Supply	Universal AC input 90 VAC-305 VAC, 50/60 Hz	
Supply Input for the Motion Sensor	+24 VDC, 30 mA	
Radio Communication	2.4 GHz, IEEE 802.15.4	
	RF Data Rate: 250 kbps	Transmit Power: +8 dBm / +20 dBm (optional)
	Receiver Sensitivity: -104 dBm, 1% PER	Network Type: Self-forming mesh network
	Network Fault Tolerance: Self-healing mesh	Open Field Range: 1600 ft/0.5 km
	Data Protection: 128-bit AES encryption	
Antenna	Built-in Wire Whip antenna, Option for an External antenna	
Dimming Interface	Analog Dimming (0-10 VDC)	
	Maximum Current: 10 mA	
	Protection: Output Short Circuit protection	
	or	
	PWM Dimming (10 V p-p, 400 Hz)	Maximum Current: 10 mA (Sink)
Optional Sensor Inputs	or	
	DALI (Model not compliance to UL)	
	Provision of two Digital inputs and two Analog inputs that can be used for motion-based lighting controls, adaptive lighting or advanced lighting controls	
Surge Protection	200 Joule CATB (6 kV/3 kA)	
Enclosure	Indoor; Installation: Surface/Ceiling Mounted Material: Polycarbonate	
	Dimensions: 185 mm x 43 mm x 32 mm	
Operating Conditions	-25°C to +65°C / -13°F to +149°F, 20% to 90% Rh non-condensing	
RoHS	Yes	
Central Management System	Web-based software that allows remote configuration, monitoring, control and reporting	
Certifications	UL, CE, RCM (AUS/NZ), VCCI (Japan)	

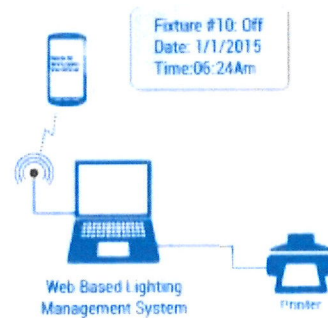
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iSLC-3300

Wiring Diagram



How It Works



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iSLC-3300

Ordering Guide

iSLC-3300

PRODUCT ID	Maximum Line Voltage	Dimming Interface	Additional IO	Energy Metering	Antenna
iSLC 3300	240 – 120/240 277 – 120/240/277	'A' – ANALOG (0 – 10V) 'P' – PWM 'D' – DALI	'IO' – 2 Digital & 2 Analog '-' – No inputs	'E' – 0.5% 'Z' – 2%	'I' – Internal 'E' – External

Project Information

Project Name

Date

Comments

Prepared By

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Specifications subject to change without notice.
SLC 3300 I/O
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NearSky™ 360



CIMCON's "Plug & Play" Co-Located Sensor Platform for Connected Cities



5.51 in W x 3.46 in H
140 mm W x 88 mm H

CIMCON's NearSky™ 360 edge and analytics hub is a configurable device to capture, analyze, aggregate and communicate sensor data within a Connected City. This device is designed to help quickly deploy various Smart City applications such as Environmental, Noise, Parking, Traffic and Security Monitoring. An ANSI compatible C135.41 7-pin connector at its base and ANSI compatible 7-pin receptacle at its top ensures quick "plug and play" installation and easy repositioning.

Key Features

Multi-Sensor Interface

CIMCON's NearSky™ 360 hub provides power, processing and communications for a multi-sensor platform device. It includes a variety of communications interfaces (Ethernet, RS-485, USB) to 3rd party sensors (Environmental, Motion, Chemical/Gas, Vision, Sound, etc.).

Standard Modbus Support

Any 3rd party sensor with standard Modbus protocol for data read can be interfaced with NearSky™ 360.

Ability to Power Sensors

CIMCON's NearSky™ 360 hub can provide AC and DC power to various sensors connected to it; this speeds installation and reduces the cost of city-wide deployment.

Computing at the Edge

CIMCON's NearSky™ 360 hub has ample processing power for edge processing to analyze incoming data and create real-time alerts and notifications.

Easy to Install

CIMCON's NearSky™ 360 hub offers full support for all 7-pins on the ANSI C135.41 dimming receptacle for true "plug and play" installation on any luminaire.

Configurable Design

CIMCON's NearSky™ 360 hub can host multiple sensor applications and communications capabilities (Wi-Fi, Ethernet, or over the existing lighting network) for true multi-vendor support

and backhaul options.

Co-exist with Lighting Controllers

CIMCON's NearSky™ 360 hub includes a 7-pin ANSI C135.41 pass-through receptacle at its top for installing intelligent lighting controllers.

Easy to Move

CIMCON's NearSky™ hub is "plug and play" and can be easily relocated as a city's requirements change.

Edge Analytics and Intuitive Central Management System (CMS)

CIMCON's NearSky™ 360 hub processes collected data at the edge and sends real-time alerts back to the CIMCON CMS along with aggregated results at the appropriate times. Traffic Density and motion-based Dimming applications are some of the built-in Video Analytics based applications.

Power Metering

CIMCON's NearSky™ 360 hub can monitor electrical parameters such as Current, Voltage, Frequency, Power Factor, kW and kWh of all the connected loads.

Power over Ethernet (POE+)

CIMCON's NearSky™ 360 hub provides one POE+ port to power and connect an IP Camera or other peripheral.

GPS and Tilt sensor

On-board GPS to provides the location of the device. A Tilt sensor has also been added to provide "knock down" alerts.

To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

NearSky™ 360

Technical Specifications

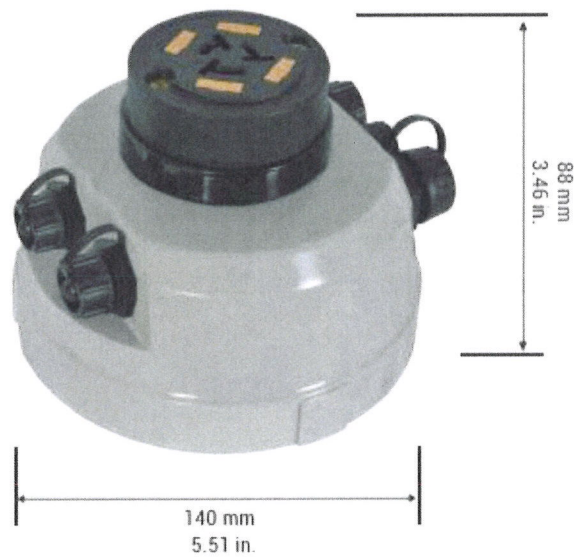
Controller	iMX6 series based Solo processor 1GB internal RAM 2GB SLC eMMC flash
Power Supply	AC input 85-264V, 50/60 Hz (metered)
Metering Accuracy	0.5%
Wireless Communications	Wi-Fi (802.11b/g/n) (backhaul) Bluetooth (4.0+EDR) (local)
Wired Communications	1x 10/100 base-T POE+ 1x 10/100/1000 base-T ethernet 1x USB-2.0 OTG interface 1x RS485
Supply for External Sensors	85-264V AC, 10A 24V DC, 100mA
GPS	Receiver Type: 22 Tracking/66 Acquisition Channel GPS Receiver GPS L1, C/A Code Max. Update rate: 10 Hz Sensitivity: Tracking: -165 dBm Reacquisition: -160 dBm Cold starts: -147 dBm Time-To-First-Fix: Cold starts: 31s (typical) Warm starts: 30s Hot starts: <1s EPO Assist: 13s (CTTFF) Accuracy: Automatic Position: 2.5 m CEP Speed: 0.1 m/s
Tilt	Bi-directional 45° and -45°, Non-sensitive to vibration
ANSI C136.41 Compatible NEMA 7-Pin Receptacle	Located on top of NearSky™ 360 hub (for pass-through interface of NEMA controller) Communication with SLC via internal RS485 interface. Order the SLC having RS485 interface to communicate with NearSky™ 360.
Surge Protection	700 Joule CATC (20kV/10kA)
Operating Conditions	-40°C to +50°C / -40°F to +122°F, 20% to 90% Rh non-condensing
RoHS	Yes
Central Management System	Web-based software allows remote configuration, monitoring, alerts, control, and reporting

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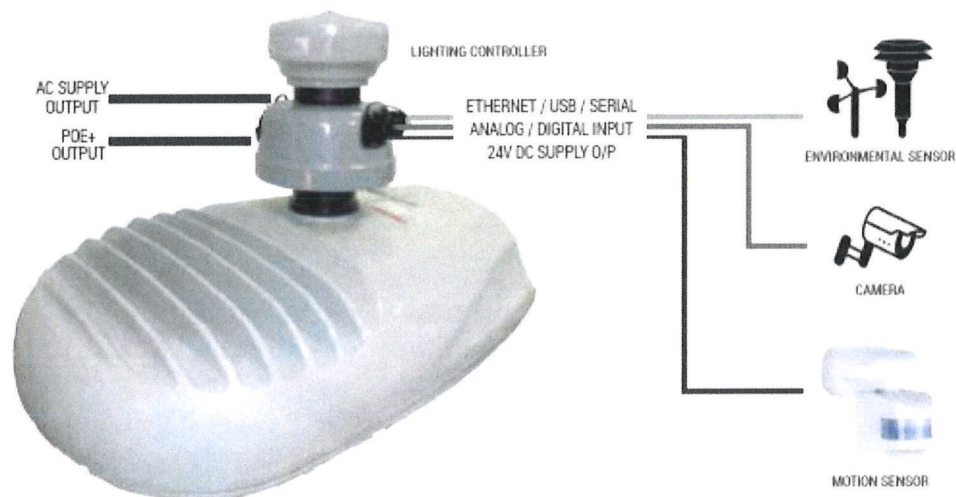
NearSky™ 360



Mechanical Specifications



Wiring Diagram

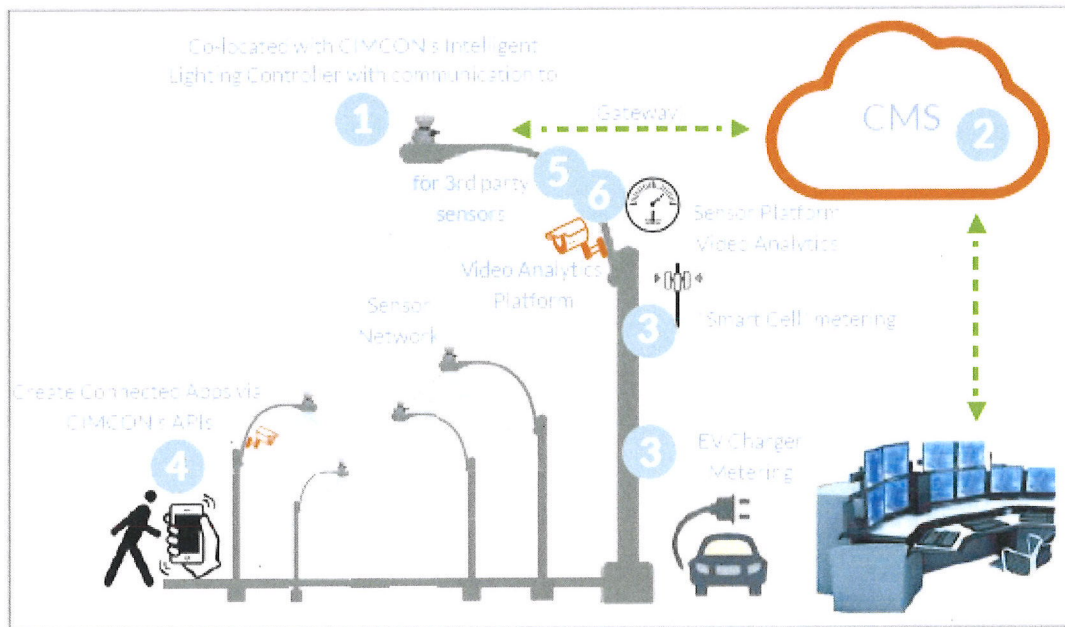


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NearSky™ 360



How It works

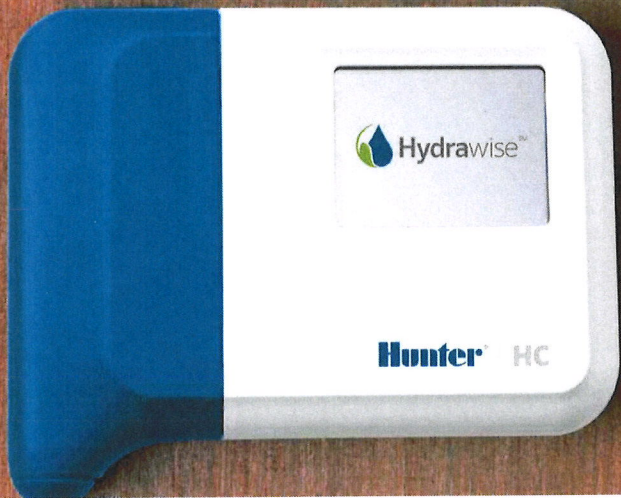


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NearSky™360 R1
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RESIDENTIAL & COMMERCIAL IRRIGATION
Built on Innovation®



- 01 **Save time:** Manage from anywhere around the world
- 02 **Save water:** With Hydrowise Predictive Watering™
- 03 **Easy to use:** Dashboard control and touchscreen interface



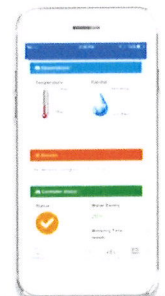
HC RESIDENTIAL WI-FI CONTROLLER WITH HYDRAWISE READY SOFTWARE

Manage your irrigation controller from anywhere worldwide using your smart device or web browser with Hydrowise cloud software. Predictive watering adjusts schedules based on temperature forecast, rainfall probability and wind and humidity to provide maximum water savings while keeping your landscape healthy and beautiful. Add a simple-to-install flow meter and set up automatic notifications to alert you of broken pipes or sprinklers.

Hydrowise cloud software is a user-friendly water management software. Each homeowner can use predictive watering adjustments to achieve water savings. Hydrowise software is also a powerful tool for professional contractors to do in-depth water management for their client's landscape, and monitor piping system and valves' electrical system. It is a professional cloud-based irrigation software that works for everyone.

The HC Controller is WaterSense-approved when connected to the Hydrowise web-based software.

Learn more. Visit hunterindustries.com, or contact your local sales manager.



Try Hydrowise now.
Visit hydrowise.com

HC CONTROLLER FEATURES & SPECIFICATIONS

Features

- New style fully functioning controller with touchscreen
- Wi-Fi-enabled for simple connection to the internet
- 6 and 12 station standard controllers
- 12 station expansion module allows for expansion to 36 stations
- Two customizable sensor ports
- Start times per program: 6
- Independent programs: 36
- Max station run time: 24 hours
- Hydrowise™ Ready
- Schedule adjustment based on local weather
- Watering overflow detection and alerts
- Wiring fault detection and alerts (12 station module)
- Flow meter measures water usage and leak detection
- Enclosure: Indoor plastic
- Warranty: 2 years

Electrical Specifications

- CE, C-tick, FCC

Models

Plastic Indoor

Height: 6.0"

Width: 7.0"

Depth: 1.3"

HC can be easily expanded up to 36 stations by adding two 12 station expansion modules.

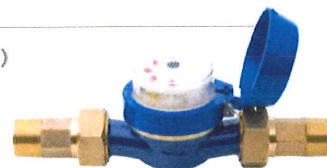


Flow Meter (¾" coupling)

Length: 5.1"

Width: 3.1"

Height: 3.1"



Flow Meter (1" coupling)

Length: 6.3"

Width: 3.1"

Depth: 3.1"

HC - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Models	2 Transformer	3 Indoor/Outdoor	4 Options
HC-6 = 6 station controller with Wi-Fi connection HC-12 = 12 station indoor controller with Wi-Fi connection	00 = 120 VAC 01 = 230 VAC	i = Indoor model	(Blank) = No option E = 230 VAC with European connections A = 230 VAC with Australian connections

Examples:

HC-600i = 6-station 120 VAC indoor plastic controller with Wi-Fi connection

HC-1200i = 12-Station 120 VAC indoor plastic controller with Wi-Fi connection

HC-1200i-E = 12-Station 120 VAC indoor plastic controller, and with European cord

HC - OPTIONS

Models	Description
HC-1200M	12 station expansion module used to increase station count to 24 or 36
HC-075-FLOW	Flow meter with ¾" NPT thread
HC-100-FLOW	Flow meter with 1" NPT thread

Website hunterindustries.com | **Customer Support** 1-800-383-4747 | **Technical Service** 1-800-733-2823

Helping our customers succeed is what drives us. While our passion for innovation and engineering is built into everything we do, it is our commitment to exceptional support that we hope will keep you in the Hunter family of customers for years to come.

G. R. Hunter
Gregory R. Hunter, President of Hunter Industries



FSL LED DECORATIVE FLOOD	Cat.#		
	Job	Type	
			Approvals

SPECIFICATIONS

Intended Use:

Ultra compact LED flood with a variety of NEMA distributions for lighting applications such as safety/security, accent, flag pole, columns, or signs

Construction:

- Corrosion resistant, rugged die-cast aluminum housing with powder coat paint finish
- High impact UV stabilized acrylic outer lens protects LEDs and allows for cleaning and debris removal
- Vented housing isolates LED module from driver, maximizing product life and performance
- Visor and vandal lens available

LED:

- 7 high powered LED's (Stock)
- 10 high powered LED's (MTO)
- Ambient operating temperature -35°C to 40°C
- Stock Versions: 4000K and 5000K CCT
- MTO Versions: 3000K CCT nominal with 80 CRI, 4000K and 5000K CCT nominal with 70 CRI

Optical/Electrical

- Variety of NEMA distributions: - N (3x3), M (4x4), RM (5x4) and W (6x6) - for wide range of lighting applications; Stock version Wide (6x6) only
- 120-277V operation, 50/60Hz
- Driver IP66 and RoHS compliant

Optical/Electrical (Cont.)

- Comes standard with 10KV surge protection device
- 0-10V dimming driver standard, continuous dimming option to have leads pulled out for easy connection

Installation:

- Traditional 1/2" x 14 NPS threaded adjustable knuckle mounting
- Easy maintenance access to electrical components with removal of 4 screws from back of fixture housing.

Listings:

- IP66
- Listed to UL1598 for use in wet locations
- DLC Qualified (4000K and 5000K models only); Consult DLC website for more details: <http://www.designlights.org/QPL>

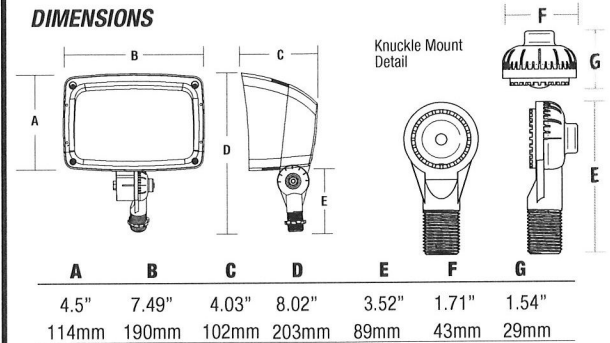
Warranty:

5 year limited warranty, for more information visit: <http://www.hubbelllighting.com/resources/warranty/>

PRODUCT IMAGE(S)



DIMENSIONS



SHIPPING INFORMATION

Catalog Number	G.W(kg)/CTN	Carton Dimensions		
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)
FSL-25 (Single carton 1pc.)	2.66 lbs (1.2)	9.45" (24)	7.87" (20)	6.69" (17)
FSL-25 (Master carton 2 pcs.)	5.31 lbs (2.4)	16.54" (42)	10.04" (25.5)	7.68" (19.5)
FSL-25 (Single carton 1 pc.)	3.18 lbs (1.4)	11.81" (30)	9.45" (24)	7.48" (19)

Carton dimensions for shipping purposes only

CERTIFICATIONS/LISTINGS



ORDERING INFORMATION - STOCK VERSION

Catalog Number	Mount	Max Candle Power	Beam Pattern	Wattage	Drive Current	Voltage	Color Temperature	Lumens	LPW	Weight lbs. (kg)	Finish
FSL-25	1/2" thread	1814	Wide	25	700mA	120-277V	5000K	2664	106.5	6 (2.7)	Bronze
FSL-25-PCU	1/2" thread	1814	Wide	25	700mA	120-277V	5000K	2664	106.5	6 (2.7)	
FSL-25-4K	1/2" thread	1794	Wide	26	1050mA	120-277V	4000K	2406	92.5	6 (2.7)	
FSL-25-4K-PCU	1/2" thread	1668	Wide	26	700mA	120-277V	4000K	2463	98.5	6 (2.7)	

ORDERING INFORMATION - MADE TO ORDER

FSL - 10L - 25 - - - - K - - - F

FAMILY	# LEDS	WATTS	CCT	DISTRIBUTION	VOLTAGE	MOUNTING	FINISH	CONTROL OPTION	OPTIONS
FSL FACTOR Flood Small	10L 10 LED	25 25W	3K 3000K	N 3x3	U 120V-277V	K Knuckle	DB Bronze	PC ¹ Photocontrol (voltage specified and determined by voltage field)	F ¹ Fusing 120 or 277V only (determined by voltage field)
			4K 4000K	M 4x4	1 120V		BL Black		
			5K 5000K	RM 5x4	2 208V		WH White		
				W 6x6	3 240V		GR Gray		
					4 277V		PS Platinum silver	CD Continuous dimming	
							CC Custom Color		

1 - PC - photocell and F - Fusing options cannot be combined, only available as separate options



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Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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ACCESSORIES/REPLACEMENT PARTS - Order Separately

Catalog Number	Description
FSL-SPC	Vandal resistant polycarbonate lens (Replaces existing acrylic fixture lens)
FSL-VISOR-XX ¹	Top/Bottom visor (Tap holes in lens frame for field installation)
93047942AC	Acrylic lens w/ gasket
93047957	FSL7, 25w, 120-277V Dimming driver, 1050mA
93043808	FSL10, 25w, 120-277V Dimming driver, 700mA
20750110264	Knuckle mount Dark Bronze finish. Contact factory for additional finishes
S-302	Slipfits 1 1/2" or 2" pipe (1.9" OD or 2 3/8" OD) with 1/2" N.P.S.M. hub; Gray
S-302-M51	Slipfits 1 1/2" or 2" pipe (1.9" OD or 2 3/8" OD) with 1/2" N.P.S.M. hub; Bronze
S-302-M52	Slipfits 1 1/2" or 2" pipe (1.9" OD or 2 3/8" OD) with 1/2" N.P.S.M. hub; White
TRN-XX ¹	Trunnion adaptor for 1/2" threaded knuckle mount

¹ Specify finish color to match fixture, e.g. DB - Bronze.



PERFORMANCE DATA - MTO

# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	NEMA	FIELD ANGLE H° X V°	5K (5100K nominal, 70 CRI)			4K (4200K nominal, 70 CRI)			3K (3000K nominal, 80 CRI)		
						LUMENS	LPW ¹	MAX BEAM CANDLEPOWER	LUMENS	LPW ¹	MAX BEAM CANDLEPOWER	LUMENS	LPW ¹	MAX BEAM CANDLEPOWER
7	1050mA	26W	W	6 X 6	W	-	-	-	2406	92.5	1794	-	-	-
10	700mA	25w	N	3 x 3	32 x 32	2735	110	22259	2583	108	20172	2007	84	17546
			M	4 x 4	54 x 54	2742	109	8210	2511	105	7162	2008	84	5761
			RM	5 x 4	85 x 68	2250	88	3822	2124	89	3468	1714	71	2977
			W	6 x 6	107 x 107	2664	106.5	1814	2463	98.5	1668	1984	83	1494

¹ - Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

PROJECTED LUMEN MAINTENANCE - Stock

AMBIENT TEMP.	OPERATING HOURS - FSL-7					Calculated L70 (HOURS)
	0	25,000	50,000	1 TM -21-11 60,000	100,000	
40°C / 104°F	0.99	0.91	0.85	0.84	0.76	>137,000

PROJECTED LUMEN MAINTENANCE - MTO

AMBIENT TEMP.	OPERATING HOURS - FSL-10					Calculated L70 (HOURS)
	0	25,000	50,000	1 TM -21-11 60,000	100,000	
25°C / 77°F	1.00	0.98	0.96	0.96	0.94	>696,000
40°C / 104°F	0.99	0.96	0.95	0.94	0.92	>565,000

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

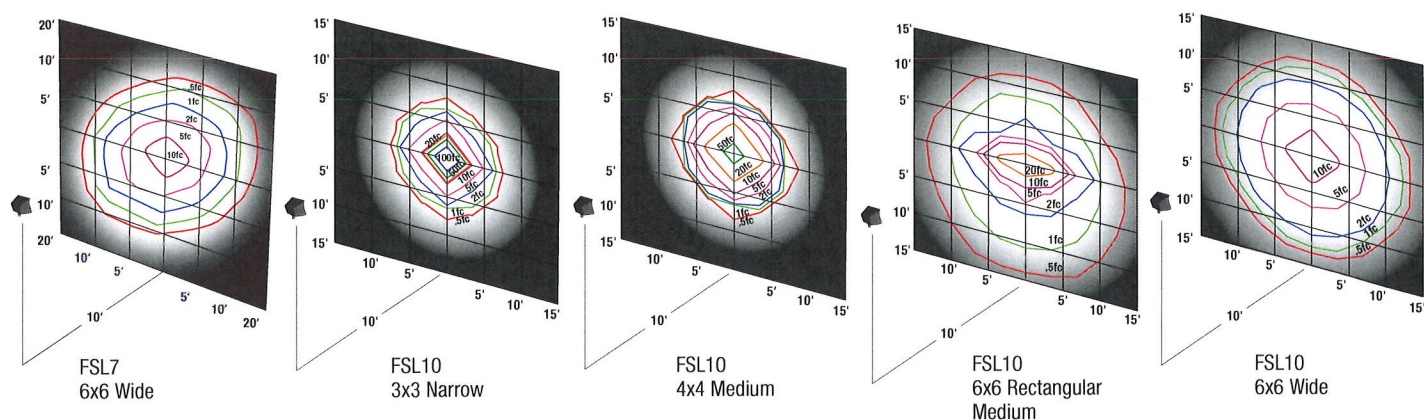
AMBIENT TEMPERATURE	LUMEN MULTIPLIER
0°C	1.02
10°C	1.01
20°C	1.00
25°C	1.00
30°C	1.00
40°C	0.99
50°C	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (W)
7	1	1050mA	120	0.23	26
			277	0.11	26
10	1	700mA	120	0.204	25
			277	0.09	25

PHOTOMETRICS For additional photometric information and IES downloads, visit our web site at www.hubbelloutdoor.com

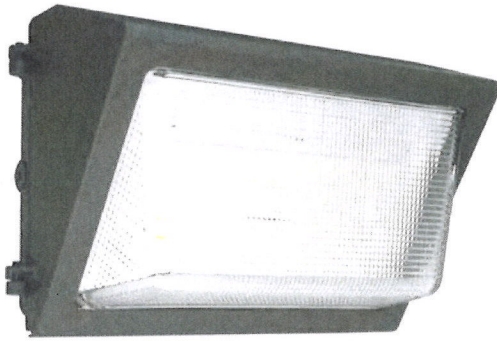


Hubbell Outdoor Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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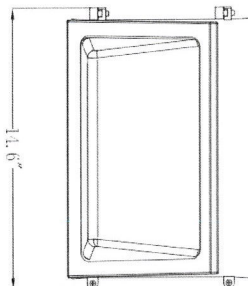
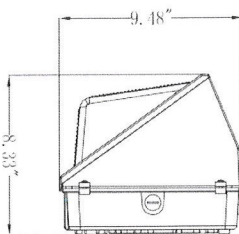
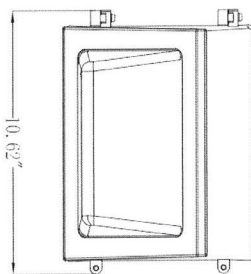
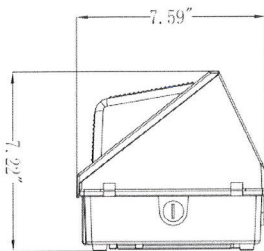
WALLMAX™ OPEN FACE WP-OP Series



DIMENSIONS:

SIZE 1 - 28W & 40W

SIZE 2 - 28W, 40W, 50W,
80W & 120W



PRODUCT DESCRIPTION:

WallMax™ Open Face Wall Packs are ideal for brightly-lit outdoor environments in parking garages, entrances, public areas, schools, hospitals, hotels and outdoor walkways nationwide. The 28-, 40-, 50-, 80-, and 120-watt LED fixtures are energy-efficient replacements for up to 750-watt metal halide fixtures. The fixtures are rebatable, save energy, generate lower maintenance costs, and prevent light pollution.

FEATURES:

- Heavy-duty cast aluminum housing is polyester powder coated to be rust and corrosion proof
- High-quality shatter-resistant glass
- Sealed fixture is dirt and bug free
- 0-10V dimming driver standard
- 6kV integral surge suppression standard
- Six ½ NPS knockouts available for mounting convenience
- 10 Year Limited Warranty

CONTROLS:

120-277VAC Photocontrol:

- Power the fixture when light levels reach 20 lux or below
- Turn off the fixture at 30 lux or higher
- Operating temperature: 30°F-120°F

PIR Outdoor Daylight/Motion Sensor:

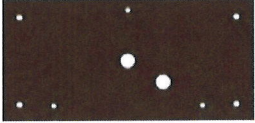
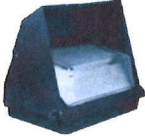
- Sensor provides multi-level control based on motion and/or daylight contribution for 0-10V DC Drivers
- All control parameters are adjustable remotely
- At least one FSIR-100 remote control must be ordered per project to be able to adjust factory settings for daylight / motion sensor
- For more information, please see supplementary datasheet for sensor model [MSWSFSP221B>>>](#)

MODEL SELECTION			Typical order example: WP-OP28U-50B			
WP-OP			-		B	
FAMILY	WATTAGE	VOLTAGE	-	LED MODULE	FINISH	OPTION
WP-OP= Open Face Wall Pack	28= 28W, 150W MH replacement	U= 120-277V	-	40= 4000K, CRI 80+	B= Bronze	(BLANK)= None
	40= 40W, 175W MH replacement	H= 347-480V	-	50= 5000K, CRI 80+	Contact Maxlite for additional finishes	PC= 120-277V Photocontrol
	50= 50W, 250W MH replacement					MS= PIR Daylight/Motion Sensor
	80= 80W, 400W MH replacement					L= Size 2 housing
	120= 120W, 750W MH replacement					LEM2= Size 2 housing, Battery Backup, -20° C
						LEM0= Size 2 housing, Battery Backup, 0° C

1. Not DLC listed. Not available with LEM2 or LEM0 options.

2. Motion Sensor performs at 20' up to 48' diameter. External model MSWSFSP221B-D will be provided on models with 120W; 347-480V; or -20 C Battery back up.

3. Use with 28W and 40W fixtures only. Not DLC listed.

ACCESSORIES			
ORDER CODE	MODEL NUMBER	DESCRIPTION	ACCESSORIES IMAGE
100679	WP-OP-S1PLATE-B	Beauty Plate, 14.50" X 9.50" X 0.08", Size 1, Bronze, 28W and 40W Models	
100461	WP-OP-S2PLATE-B	Beauty Plate, 18.1" * 8.7" * 0.08", Size 2, Bronze, 50W, 80W, and 120W Models	
102184	FSIR-100	Remote Control for daylight / motion sensor	
100821	WP-OP-S1VISOR-B	Cutoff Visor, Size 1, Bronze, 28W and 40W models	
100822	WP-OP-S2VISOR-B	Cutoff Visor, Size 2, Bronze, 50W, 80W and 120W models	
14099860	WP-OPSWG	Wire Guard, Size 1, Bronze, 28W and 40W models	
101499	WP-OPLWG	Wire Guard, Size 2, Bronze, 50W, 80W and 120W models	

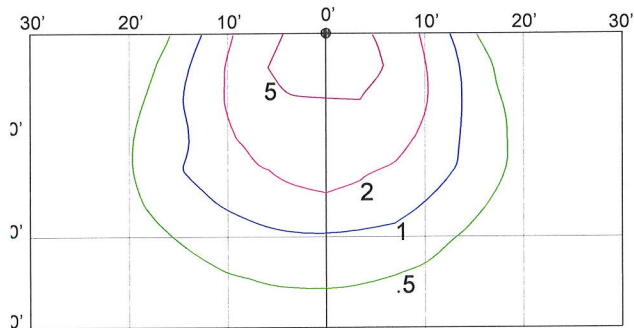
SPECIFICATIONS:

		28W	40W	50W	80W	120W
ITEM	SPECIFICATION	DETAILS				
GENERAL PERFORMANCE	Input Power (W)	28	40	50	80	120
	Lumens Delivered (lm/W)	3,770	5,645	7,065	11,375	16,945
	Efficacy (in lm/W)	136	138	138	140	140
	CRI	≥80				
	Lumen Maintenance (L85, TM-21 @ 25°C)	>100,000 hours				
	Color Temperature	4000K, 5000K				
	Spacing Criteria	Available upon request				
ELECTRICAL	Input Voltage	120-277V standard; 347-480V available				
	Power Factor	>90%				
	THD	<15%				
PHYSICAL	Housing	Die-Cast Polyester Aluminum				
	Mounting	Fits electrical box or mount directly				
QUALIFICATION	Qualification	DLC Premium, ETL, IP65				
	Environment	Outdoor, wet location				
	Warranty	10 Years				
	Operating Temperature	-40°F ~104°F (-40°C ~ 40°C)				
	Humidity	10%-90% RH, non-condensing				

Lighting layouts and spacing criteria available upon request.

LAYOUTS:

WP-OP 28W:

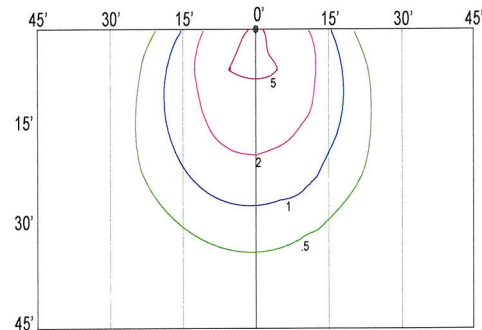


28W
3,640 LUMENS (SIZE 1 HOUSING)
10' MOUNTING HEIGHT

FOOT-CANDLE CORRECTION FACTOR:

NEW HEIGHT:	10'	15'	20'	25'
MULTIPLY BY:	1	0.67	0.50	0.40

WP-OP 40W:

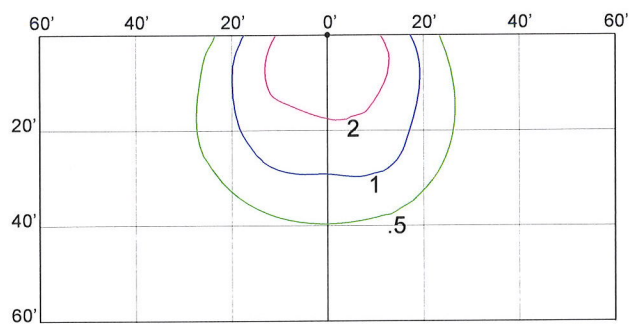


40W
5,540 LUMENS (SIZE 1 HOUSING)
15' MOUNTING HEIGHT

FOOT-CANDLE CORRECTION FACTOR:

NEW HEIGHT:	10'	15'	20'	25'
MULTIPLY BY:	1.50	1	0.75	0.60

WP-OP 50W:

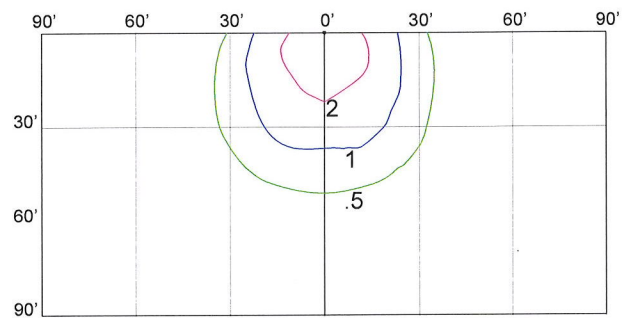


50W
7,065 LUMENS
20' MOUNTING HEIGHT

FOOT-CANDLE CORRECTION FACTOR:

NEW HEIGHT:	10'	15'	20'	25'
MULTIPLY BY:	2	1.33	1	0.80

WP-OP 80W:

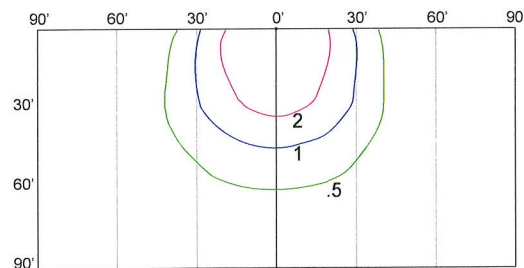


80W
11,375 LUMENS
30' MOUNTING HEIGHT

FOOT-CANDLE CORRECTION FACTOR:

NEW HEIGHT:	10'	15'	20'	25'	30'
MULTIPLY BY:	3	2	1.50	1.2	1

WP-OP 120W:



120W
16,945 LUMENS
30' MOUNTING HEIGHT

FOOT-CANDLE CORRECTION FACTOR:

NEW HEIGHT:	10'	15'	20'	25'	30'
MULTIPLY BY:	3	2	1.50	1.2	1

PGS-1 LED Specifications



Project Name:

Catalog Number:

Type:

The new PGS LED luminaire from Visionaire combines contemporary design with new LED technology, while maintaining a traditional architectural fixture image. The LEDs Performance and Life are maximized by the unique integral aluminum heat sink. It is an ideal replacement for the high-maintenance HID fixtures of yesterday.

The LED housing is spun aluminum; with either 16, 32 or 48 LEDs. Mounting options include Yoke Mount, Arm Mount, Knuckle Mount or Wall Mount and a Universal Bolt-On Arm Mount. The Arm Mount is available with either a Quick Mount Pole Adaptor; or a Universal Quick Mount Pole Adaptor for retrofitting existing poles.

Seven optical distribution patterns are available. Choose between 3000, 4000 or 5000 Kelvin temperature of the LEDs.

A durable polyester powder coat finish is guaranteed for five years; and is available in standard or custom colors.

The PGS LED series is an exceptional choice for universities, shopping centers, parks and recreational areas; and general site lighting.

Ordering Information

MODEL	OPTICS	LEDs	CURRENT	KELVIN	VOLTAGE	MOUNTING	FINISH	OPTIONS	OPTIONS
PGS-1	T1	16LC	3	3K	UNV 120-277V	AM Arm Mount	BZ Bronze	PCR-120 Photocell & Receptacle	RPP Round Pole Plate Adaptor
	T2	32LC	350mA	3000K		WM Wall Mount	BK Black	PCR-208 Photocell & Receptacle	ROT-R Rotated Optics Right Side
	T3	48LC	5	4K	8 347V	YM Yoke Mount	SBK Smooth Black	PCR-240 Photocell & Receptacle	ROT-L Rotated Optics Left Side
	T4		530mA	4000K	5 480V	KM Knuckle Mount	WH White	PCR-277 Photocell & Receptacle	CLS Back Side Cutoff Lower Shield
	T4A		700mA	5000K		UBOA Universal Bolt-On Arm Mount	SWH Smooth White	PCR-480 Photocell & Receptacle	
	T5					Round Pole Plate Adaptors (RPP) are to be ordered separately.	GP Graphite	PER 5 Pin Photo Receptacle w/shorting cap	
	T5W						GY Grey	5PINPER 5 Pin Photo Receptacle w/shorting cap Requires Dimming Driver	
	T5WR						SL Silver Metallic	7PINPER 7 Pin Photo Receptacle w/shorting cap Requires Dimming Driver	
							CC Custom Color	WSC-8 Motion Sensor 8' Mounting Height	
								WSC-20 Motion Sensor 20' Mounting Height	
								WSC-40 Motion Sensor 21-40' Mounting Height	
								DIM 0-10V Dimming Driver	
								EBPL Emergency Battery Pack	
								VWC Voice Control Wireless Controls Consult Factory	

Housing

Heavy duty formed aluminum housing with internal heat sink for maximum heat dissipation. Silicone gasket is used for weather tight operation.

Mounting

For post top mounting, an adaptor fits over a 2 3/8" tenon secured with stainless steel hardware.

A Pre-Attached Aluminum Arm (AM) is supplied along with a Quick Mount pole adaptor, for fast and easy attachment to the pole.

An adjustable knuckle slip fits over a 2 3/8" Tenon, and allows for up to 90° degrees of vertical adjustment in 10° degree increments from horizontal, as well as full side to side adjustment with the knuckle mount. For retro-fit applications, a Pre-Attached Aluminum Arm (UBOA) is supplied along with a Universal Quick Mount pole adaptor for fast and easy attachment to the pole.

Thermal Management

The PGS series provides excellent thermal management by mounting the LEDs to the substantial heat sink within the housing. This enables the Luminaire to withstand higher ambient temperatures and driver currents without degrading LED life.

Optical System

The highest lumen output LEDs are utilized. High-performance acrylic optics feature industry leading Type I, II, III, IV, IVA, and V optical distributions. Acrylic optics are impact-resistant and rated to 94 percent translucence.

L70 life of our LEDs is rated over 100,000 hours (for 350 mA). The optical system qualifies as IES full cutoff to restrict light trespass, glare and light pollution for neighborhood-friendly lighting.

CRI values are 70.

Quali-Guard® Finish

The finish is a Quali-Guard® textured, chemically pretreated through a multiple-stage washer, electrostatically applied, thermoset polyester powder coat finish, with a minimum of 3-5 millimeter thickness. Finish is oven-baked at 400° F to promote maximum adherence and finish hardness. All finishes are available in standard and custom colors.

Finish is guaranteed for five (5) years.

Electrical Assembly

The PGS LED series is supplied with a choice of 350, 530 or 700 mA high-performance LED drivers that accept 120v thru 480v, 50 Hz to 60 Hz, input. Power factor of 90%. Rated for -40°C operations.

10kV Surge Protector supplied as standard.

Warranty

• Five (5) year Limited Warranty on electrical components, Five (5) year on finish. For full warranty information, please visit visionairelighting.com.

Options

- Photocell & Receptacle
- Photo & Receptacle
- 0-10 Volt Dimming Driver
- Motion Sensor/Control Watt Stopper FSP-211
- Wireless Controls
- 10 kV surge protector
- Emergency Battery Pack
- Round Pole Plate Adapter
- Cutoff Louver Shield

Listings

- PGS is cUL listed, suitable for wet locations.
- IP65 Rated
- Powder Coated Tough
- DLC Listed
- IDA Certification



DesignLights Consortium (DLC) qualified Product. Some configurations of this product family may not be DesignLights Consortium (DLC) listed, please refer to the DLC qualified products list to confirm listed configurations. <http://www.designlights.org/>
3000K must be selected for IDA certification.

PGS-1 LED Specifications

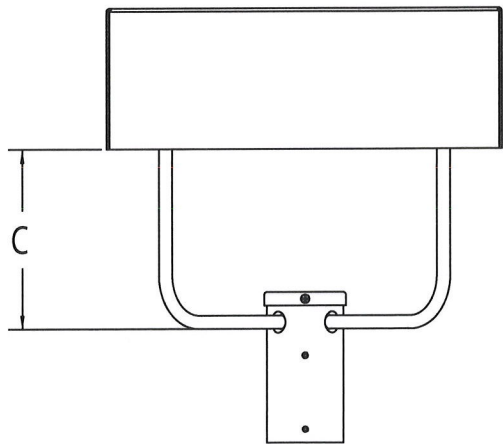
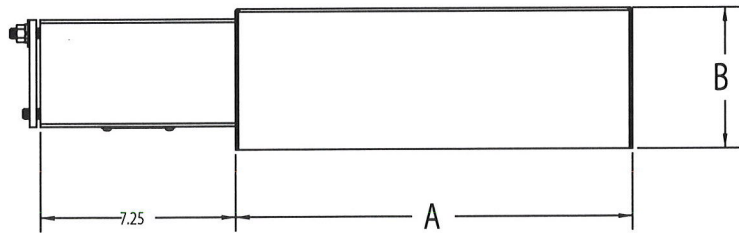
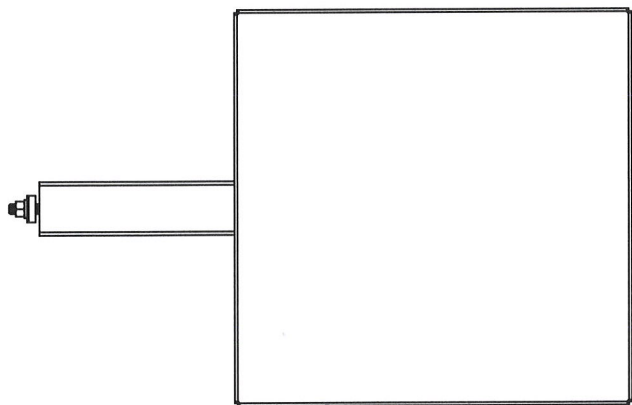
Photometric Optical Summary

Not all optics are available on all fixtures. Check ordering chart for availability

Type I (T1)	Type II (T2)	Type III (T3)	Type IV (T4)	Type IVA (T4A)	Type V (T5)	Type VW (T5W)	Type VWR (T5WR)
							
EPA Data		 0.70	 1.08	 1.4	 1.56	 1.78	 1.56

Dimensions

Width:	PGS 16"
Height:	PGS 5.0"
Weight:	20 LBS



PGS 3K Lumen Data									
LEDS	mA	T1	T2	T3	T4	T5	T5W	T5WR	Watts
16	350	2250	2081	2073	2032	2277	2056	2073	18
	530	3239	2997	2986	2926	3279	2961	2986	26
	700	4273	3954	4180	3860	4169	3906	3939	37
32	350	4761	4405	4388	4300	4819	4352	4388	35
	530	6817	6308	6283	6158	6900	6231	6284	52
	700	8619	7975	7944	7785	8723	7878	7944	71
48	350	7136	6603	6577	6446	7223	6523	6577	53
	530	9566	8851	8817	8641	9682	8744	8817	78
	700	12850	11890	11843	11607	13006	11745	11844	107
PGS 4K Lumen Data									
16	350	2368	2191	2183	2126	2397	2164	2183	18
	530	3410	3155	3143	3080	3451	3117	3143	26
	700	4498	4162	4400	4063	4388	4112	4146	37
32	350	5011	4637	4619	4527	5072	4581	4619	35
	530	7176	6640	6614	6482	7263	6559	6614	52
	700	9072	8394	8362	8195	9182	8292	8362	71
48	350	7512	6950	6923	6785	7603	6866	6924	53
	530	10070	9317	9281	9096	10192	9204	9281	78
	700	13526	12515	12467	12218	13690	12364	12467	107
PGS 5K Lumen Data									
16	350	2272	2102	2094	2053	2300	2077	2079	18
	530	3272	3028	3016	2956	3312	2991	2993	26
	700	4316	3994	4222	3899	4211	3945	3949	37
32	350	4809	4450	4432	4649	4867	4396	4399	35
	530	6886	6372	6347	6220	6970	6294	6299	52
	700	8706	8055	8024	7864	8811	7957	7964	71
48	350	7208	6670	6644	6452	7296	6589	6594	53
	530	9663	8941	8906	8728	9780	8832	8839	78
	700	12980	12010	11963	11724	13137	11864	11873	107

PGS-1 LED Specifications

PGS 3K LPW Data									
LEDS	mA	T1	T2	T3	T4	T5	T5W	T5WR	Watts
16	350	127	117	117	115	128	116	117	18
	530	124	115	115	112	126	114	115	26
	700	116	108	114	105	114	106	107	37
32	350	135	125	125	122	137	124	125	35
	530	131	121	121	118	133	120	121	52
	700	121	112	112	110	123	111	112	71
48	350	135	125	124	122	136	123	124	53
	530	123	113	113	111	124	112	113	78
	700	120	111	111	108	122	110	111	107
PGS 4K LPW Data									
16	350	133	124	123	120	135	122	123	18
	530	131	121	121	118	132	120	121	26
	700	123	113	120	111	120	112	113	37
32	350	142	132	131	128	144	130	131	35
	530	138	128	127	125	140	126	127	52
	700	128	118	118	115	129	117	118	71
48	350	142	131	131	128	143	130	131	53
	530	129	119	119	117	131	118	119	78
	700	126	117	117	114	128	116	117	107
PGS 5K LPW Data									
16	350	128	119	118	116	130	117	117	18
	530	126	116	116	113	127	115	115	26
	700	118	109	115	106	115	108	108	37
32	350	137	126	126	132	138	125	125	35
	530	132	123	122	120	134	121	121	52
	700	123	113	113	111	124	112	112	71
48	350	136	126	125	122	138	124	124	53
	530	124	115	114	112	125	113	113	78
	700	121	112	112	110	123	111	111	107

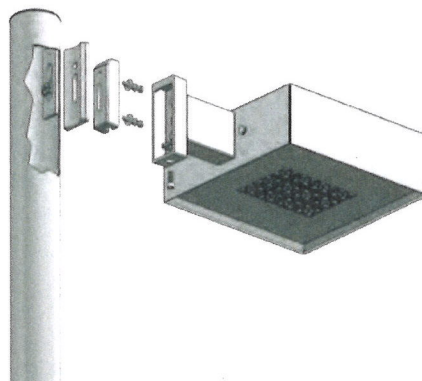
PGS 3K BUG Data																							
		T1			T2			T3			T4			T5			T5W			T5WR			
LEDS	mA	B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	Watts
16	350	1	0	1	1	0	1	0	0	1	1	0	1	1	0	0	2	0	1				18
	530	2	0	2	1	0	1	1	0	1	1	0	1	2	0	0	2	0	1				26
	700	2	0	2	1	0	2	1	0	1	1	0	1	2	0	1	2	0	1				37
32	350	3	0	3	2	0	2	1	0	2	1	0	2	3	0	1	3	0	1				35
	530	3	0	3	2	0	2	1	0	2	1	0	2	3	0	1	3	0	1				52
	700	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	2				71
48	350	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	1				53
	530	3	0	3	2	0	3	1	0	2	2	0	2	3	0	1	3	0	2				78
	700	3	0	3	3	0	3	2	0	2	2	0	2	3	0	2	4	0	2				107
PGS 4K BUG Data																							
16	350	1	0	1	1	0	1	0	0	1	1	0	1	1	0	0	2	0	1				18
	530	2	0	2	1	0	1	1	0	1	1	0	1	2	0	0	2	0	1				26
	700	2	0	2	1	0	2	1	0	1	1	0	1	2	0	1	3	0	1				37
32	350	3	0	3	2	0	2	1	0	2	1	0	2	3	0	1	3	0	1				35
	530	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	1				52
	700	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	2				71
48	350	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	1				53
	530	3	0	3	2	0	3	1	0	2	2	0	2	3	0	1	3	0	2				78
	700	3	0	3	3	0	3	2	0	2	2	0	2	3	0	2	4	0	2				107
PGS 5K BUG Data																							
16	350	1	0	1	1	0	1	0	0	1	1	0	1	1	0	0	2	0	1				18
	530	2	0	2	1	0	1	1	0	1	1	0	1	2	0	0	2	0	1				26
	700	2	0	2	1	0	2	1	0	1	1	0	1	2	0	1	2	0	1				37
32	350	2	0	2	1	0	2	1	0	1	1	0	1	2	0	1	3	0	1				35
	530	3	0	3	2	0	2	1	0	2	1	0	2	3	0	1	3	0	1				52
	700	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	2				71
48	350	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	1				53
	530	3	0	3	2	0	3	1	0	2	2	0	2	3	0	1	3	0	2				78
	700	3	0	3	3	0	3	2	0	2	2	0	2	3	0	2	4	0	2				107

PGS-1 LED Specifications

Spider Mount Detail

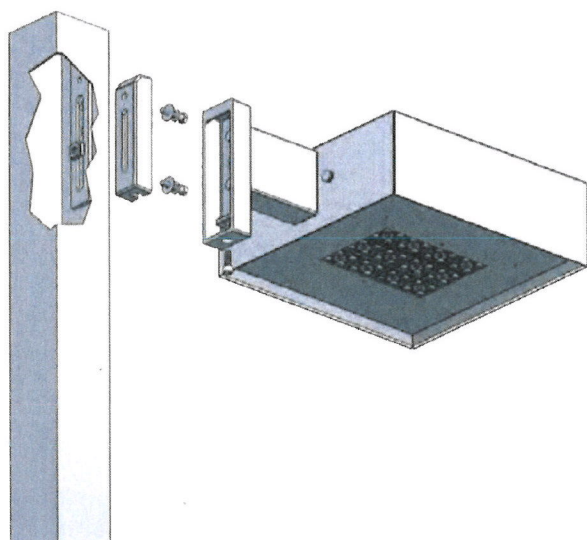


Arm Mount Assembly Drawing



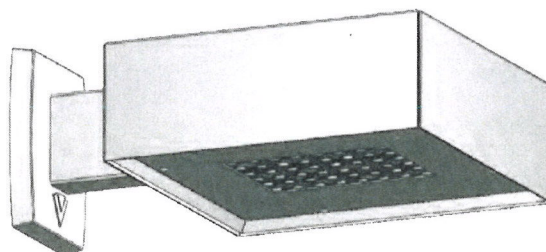
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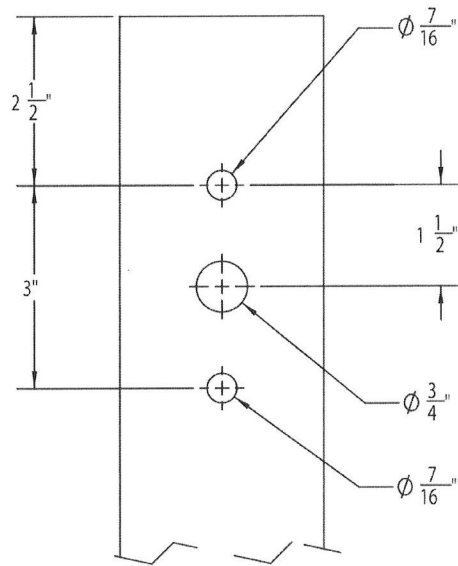
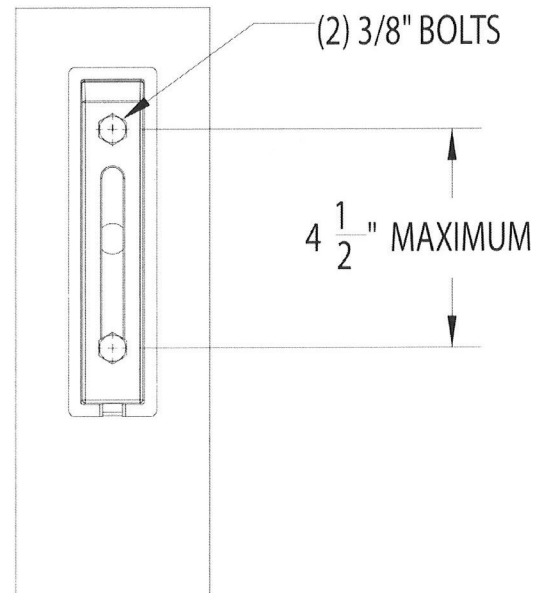
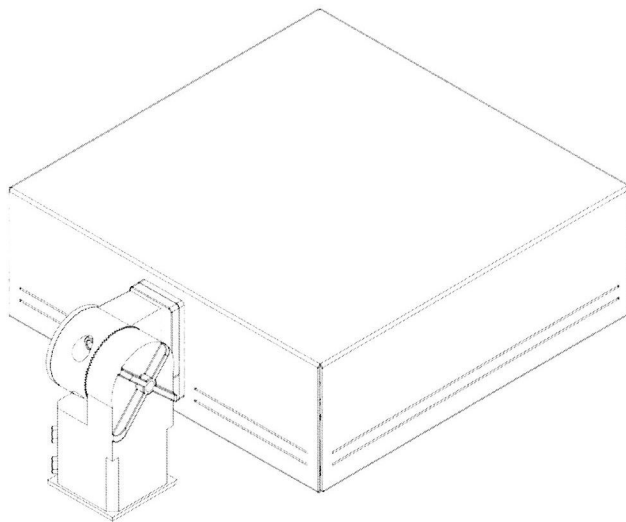
PGS UBOA Assembly Drawing



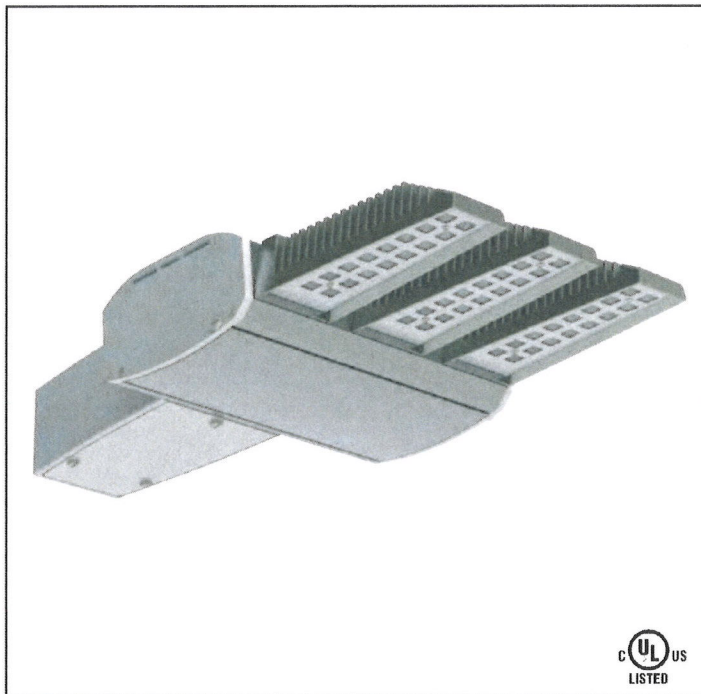
*Round Pole Plate Adapter
ordered separately.

PGS Wall Mount Drawing



Arm Mount Drill Diagram**UBOA Drill Diagram****PGS Knuckle Mount Drawing**

BSX-II LED Specifications



Project Name:

Catalog Number:

Type:

The new BOW SX LED Series continues the unique contemporary design inspired by the sleek styling of the BOW family. Separating the extruded aluminum driver housing and the individual die-cast aluminum linear LED engines: optimize the life of the LEDs and the Driver(s); and maximizes the lumen output of the fixture.

Each of the individual LED light engines come with 16 LEDs; for a max total of 64 LEDs. Nine optical distribution patterns are available.

Available in 3000, 4000 or 5000 Kelvin temperature.

A durable polyester powder coat finish is guaranteed for five years; and is available in standard or custom colors.

The BOW SX LED series is an exceptional choice for shopping centers, schools, office buildings, and general area lighting.

Ordering Information

MODEL	OPTICS	SOURCE	CURRENT	KELVIN	VOLTAGE	MOUNTING	FINISH	OPTIONS	OPTIONS
BSX-II-2	T1	32LC	3	3K	UNV	PT	GY	PCR-120	RPP
BSX-II-3	T2	48LC	350mA	3000K	120/277V	MA	SL	PCR-208	Round Pole Plate Adaptor For 2 1/2" 5/8" Pole
BSX-II-4	T3	64LC	5	4K	8	Mast Arm Fitter	Silver Metallic	PCR-240	UPMA
	T4		530mA	4000K	347V	Knuckle Mount	Black	PCR-277	Universal Pole Mount Adaptor
	T4A		7	5K	5	TM	Smooth Black	PCR-480	UPMA-R
	T5		700mA	5000K	480V	BOA	White	PER	Universal Round Pole Mount Adaptor
	T5W		10			Bolt-On Arm	Smooth White	5PINPER	DS
	FN		1050mA			Adjustable Wall Mount	Bronze	7PINPER	Decorative Shroud
	FM						Graphite	DIM	ROT-R
							Custom Color	WSC-8	Right Side Right Side Right Side
								WSC-20	Left Side
								WSC-40	Black-Side Gullf Lower Side
								VWC	RCLS
									LCLS
									UP
									Upgrd: Configuration *Indoor Applications Only

Housing

- The LED light engines are constructed of heavy-duty, die-cast aluminum, with external heat radiating fins.

Driver Compartment

- The separate driver housing is constructed of extruded aluminum, with vented cast aluminum end covers and stainless steel fasteners; for easy access to the LED driver(s); allowing for cooler operation and longer driver life. One-piece gasketing is utilized throughout the fixture for weather tight operation.

Thermal Management

- The BOW SX Series provides excellent overall thermal management by maximizing the fixture's heat sink capabilities. This enables the BOW SX Series to withstand higher ambient temperatures and drive currents without degrading LED life.
- The L70 test determines the point in an LEDs life when it reaches 70 percent of its initial output. The BOW SX Series LEDs have been determined to last a minimum of 100,000 hours in 25°C environments when driven at 350 mA.

Optical System

- The highest lumen output, LEDs are utilized in the BOW SX Series. IES distribution Types I, II, III, IV, IV-A, V, V-W, FN & FM are available. LED light engines come in multiples of 16 LEDs.
- CRI values are 70.

Quali-Guard® Finish

- The finish is a Quali-Guard® textured, chemically pretreated through a multiple-stage washer, electrostatically applied, thermoset polyester powder coat finish, with a minimum of 3-5 millimeter thickness. Finish is oven-baked at 400 °F to promote maximum adherence and finish hardness. All finishes are available in standard and custom colors. Finish is guaranteed for five (5) years.

Mounting

- An adjustable knuckle slip fits over a 2 3/8" Tenon, and allows for up to 90° degrees of vertical adjustment in 10° degree increments from horizontal, as well as full side to side adjustment with the knuckle mount.
- A round extruded 6" aluminum, Bolt-On Arm (BOA) with an in-pole nut plate. A Round Pole Plate Adapter (RPP) is required for mounting to round poles.
- A cast wall mount plate is available for wall mount applications.

Electrical Assembly

- The BOW SX Series is supplied with a choice of 350, 530, 700, or 1000 mA high-performance LED drivers, that accept 120v thru 480v, 50 Hz to 60 Hz, input. Power factor of 95%. Rated for -40 °C to +55 °C operations.
- Power factor of 90%.
- THD less than or equal to 20%
- 10 kV surge protector supplied as standard.
- 0-10v Dimming Driver supplied as standard.

Warranty

- Five (5) year Limited Warranty on entire system, including finish. For full warranty information, please visit VisionaireLighting.com.

Options

- Photocell & Receptacle
- Photo Receptacle
- Round Pole Plate Adapter
- Motion Sensor
- Universal Pole Mount Adapter
- Decorative Shroud
- Dimming Driver
- Wireless Controls
- Rotated Optics
- Cut-off Louver Shield

Listings

- BOW SX Series is UL Listed, suitable for wet locations.
- IP-65
- Powder Coated Tough™
- DLC Listed
- IDA Certification

DesignLights Consortium (DLC) qualified Product. Some configurations of this product family may not be DesignLights Consortium (DLC) listed, please refer to the DLC qualified products list to confirm listed configurations. <http://www.designlights.org/>
3000K must be selected for IDA certification.



BSX-II LED Specifications

Photometric Optical Summary

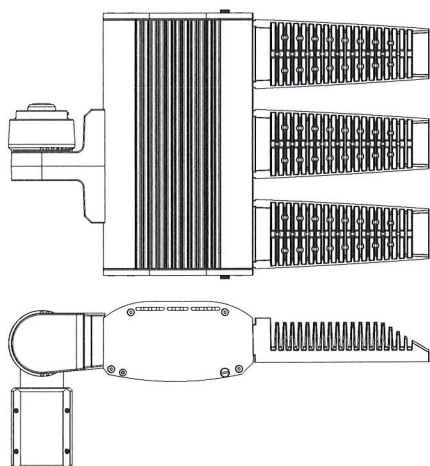
Not all optics are available on all fixtures. Check ordering chart for availability

Type I (T1)	Type II (T2)	Type III (T3)	Type IV (T4)	Type V (T5)	Type V-W (T5W)	Flood Narrow (FN)	Flood Medium (FM)
							

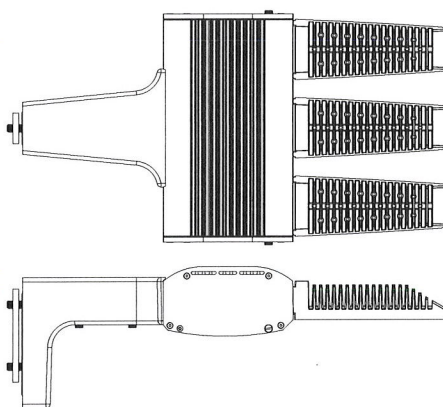
Dimensions

Knuckle Mount		Bolt-On Arm		Mast Arm		Post Top		Trunnion Mount		Trunnion Mount	
Width:	BSX-II-2 15" BSX-II-3 15" BSX-II-4 17"	Width:	BSX-II-2 15" BSX-II-3 15" BSX-II-4 17"	Width:	BSX-II-2 15" BSX-II-3 15" BSX-II-4 17"	Width:	BSX-II-2 15" BSX-II-3 15" BSX-II-4 17"	Width:	BSX-II-2 15" BSX-II-3 15" BSX-II-4 17"	Width:	BSX-II-2 15" BSX-II-3 15" BSX-II-4 17"
Depth:	BSX-II-2 29" BSX-II-3 29" BSX-II-4 29"	Depth:	BSX-II-2 27" BSX-II-3 27" BSX-II-4 27"	Depth:	BSX-II-2 28" BSX-II-3 28" BSX-II-4 28"	Depth:	BSX-II-2 27" BSX-II-3 27" BSX-II-4 27"	Depth:	BSX-II-2 25" BSX-II-3 25" BSX-II-4 25"	Depth:	BSX-II-2 25" BSX-II-3 25" BSX-II-4 25"
Height:	BSX-II-2 5" BSX-II-3 5" BSX-II-4 5"	Height:	BSX-II-2 9" BSX-II-3 9" BSX-II-4 9"	Height:	BSX-II-2 5" BSX-II-3 5" BSX-II-4 5"	Height:	BSX-II-2 5" BSX-II-3 5" BSX-II-4 5"	Height:	BSX-II-2 5" BSX-II-3 5" BSX-II-4 5"	Height:	BSX-II-2 8" BSX-II-3 8" BSX-II-4 8"

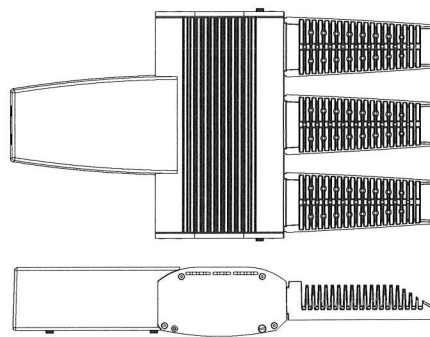
Knuckle Mount



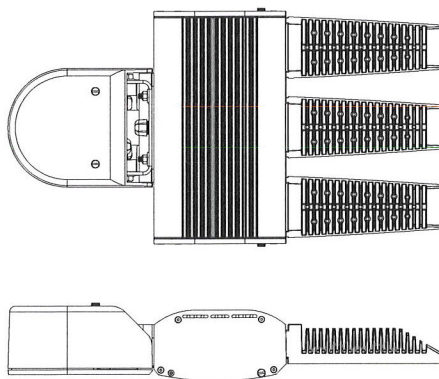
Bolt-On Arm



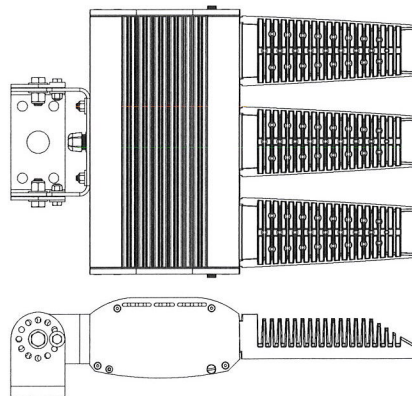
Mast Arm



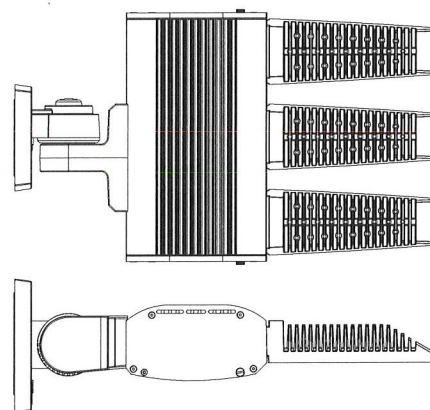
Post Top Mount



Trunnion Mount



Adjustable Wall Mount



BSX-II 3K Lumen Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type FN	Type FM	Watts
32	350	5285	4841	4850	4867	5497	4913	4649	5591	5728	36
	530	7438	6813	6826	6850	7736	6914	6543	7868	8061	53
	700	9737	8919	8936	8967	10127	9051	8565	10300	10553	72
	1050	12857	11778	11799	11841	13373	11952	11310	13601	13935	109
48	350	7669	7025	7038	7063	7976	7129	6746	8113	8311	54
	530	11044	10116	10135	10171	11486	10266	9715	11683	11969	81
	700	13981	12807	12831	12876	14541	12996	12298	14790	15153	106
	1050	19401	17772	17805	17868	20179	18035	17066	20524	21027	162
64	350	10704	9805	9823	9858	11133	9950	9416	11323	11601	73
	530	15462	14164	14190	14240	16082	14374	13602	16357	16758	107
	700	19459	17825	17858	17921	20239	18089	17117	20585	21090	139
	1050	25714	23556	23599	23682	26745	23904	22620	27203	27870	221

BSX-II 4K Lumen Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type FN	Type FM	Watts
32	350	5563	5096	5105	5123	5786	5171	4894	5885	6029	36
	530	7829	7172	7185	7210	8143	7278	6887	8282	8485	53
	700	10249	9389	9406	9439	10660	9527	9016	10842	11108	72
	1050	13534	12398	12420	12464	14076	12581	11905	14317	14668	109
48	350	8072	7395	7408	7434	8396	7504	7101	8540	8749	54
	530	11625	10649	10668	10706	12091	10806	10226	12298	12599	81
	700	14717	13481	13506	13554	15307	13680	12946	15568	15950	106
	1050	20422	18708	18742	18808	21241	18984	17965	21604	22134	162
64	350	11267	10321	10340	10377	11719	10474	9911	11919	12212	73
	530	16276	14910	14937	14990	16929	15130	14318	17218	17640	107
	700	20483	18763	18798	18864	21304	19041	18018	21668	22200	139
	1050	27068	24795	24841	24928	28153	25162	23811	28634	29336	221

BSX-II 5K Lumen Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type FN	Type FM	Watts
32	350	5338	4890	4899	4916	5552	4962	4696	5647	5786	36
	530	7513	6882	6895	6919	7814	6984	6609	7948	8143	53
	700	9835	9009	9026	9058	10229	9143	8652	10404	10659	72
	1050	12987	11897	11919	11961	13508	12073	11424	13739	14076	109
48	350	7746	7096	7109	7134	8057	7201	6814	8195	8395	54
	530	11155	10219	10237	10274	11602	10370	9813	11801	12090	81
	700	14122	12936	12960	13006	14688	13128	12423	14939	15306	106
	1050	19597	17952	17985	18048	20383	18217	17239	20731	21239	162
64	350	10812	9904	9922	9957	11245	10051	9511	11438	11718	73
	530	15618	14307	14334	14384	16245	14519	13739	16522	16928	107
	700	19655	18005	18038	18102	20443	18272	17290	20793	21303	139
	1050	25974	23794	23837	23921	27015	24145	22848	27477	28151	221

BSX-II EPA Data				BSX-II Weight		
Tilt Deg.	BSX-2	BSX-3	BSX-4	BSX-2	BSX-3	BSX-4
0	.58	.58	.59	16 LBS	21 LBS	26 LBS
10	.58	.62	.77			
20	.62	.82	1.02			
30	.76	1.02	1.28			
40	.9	1.2	1.53			
50	1.01	1.36	1.75			
60	1.11	1.5	1.93			
70	1.14	1.6	2.06			
80	1.19	1.66	2.13			
90	1.21	1.68	2.14			

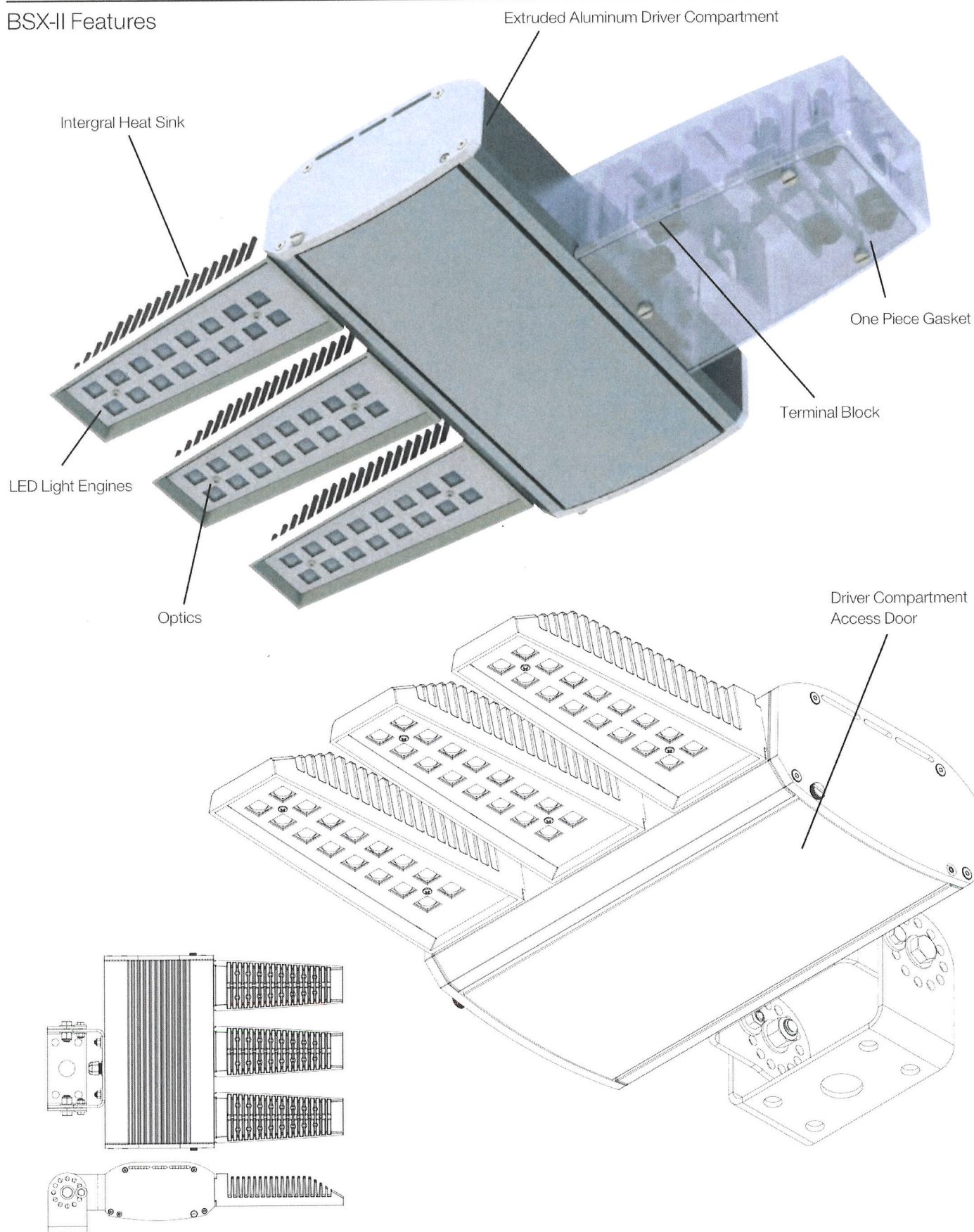
BSX-II LED Specifications

BSX-II 3K LPW Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type 5WR	Type FN	Type FM
32	350	147	134	135	135	153	136	129		155	159
	530	140	129	129	129	146	130	123		148	152
	700	135	124	124	125	141	126	119		143	147
	1050	118	108	108	109	123	110	104		125	128
48	350	142	130	130	131	148	132	125		150	154
	530	136	125	125	126	142	127	120		144	148
	700	132	121	121	121	137	123	116		140	143
	1050	120	110	110	110	125	111	105		127	130
64	350	147	134	135	135	153	136	129		155	159
	530	145	132	133	133	150	134	127		153	157
	700	140	128	128	129	146	130	123		148	152
	1050	116	107	107	107	121	108	102		123	126
BSX-II 4K LPW Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type 5WR	Type FN	Type FM
32	350	155	142	142	142	161	144	136		163	167
	530	148	135	136	136	154	137	130		156	160
	700	142	130	131	131	148	132	125		151	154
	1050	124	114	114	114	129	115	109		131	135
48	350	149	137	137	138	155	139	131		158	162
	530	144	131	132	132	149	133	126		152	156
	700	139	127	127	128	144	129	122		147	150
	1050	126	115	116	116	131	117	111		133	137
64	350	154	141	142	142	161	143	136		163	167
	530	152	139	140	140	158	141	134		161	165
	700	147	135	135	136	153	137	130		156	160
	1050	122	112	112	113	127	114	108		130	133
BSX-II 5K LPW Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type 5WR	Type FN	Type FM
32	350	148	136	136	137	154	138	130		157	161
	530	142	130	130	131	147	132	125		150	154
	700	137	125	125	126	142	127	120		145	148
	1050	119	109	109	110	124	111	105		126	129
48	350	143	131	132	132	149	133	126		152	155
	530	138	126	126	127	143	128	121		146	149
	700	133	122	122	123	139	124	117		141	144
	1050	121	111	111	111	126	112	106		128	131
64	350	148	136	136	136	154	138	130		157	161
	530	146	134	134	134	152	136	128		154	158
	700	141	130	130	130	147	131	124		150	153
	1050	118	108	108	108	122	109	103		124	127

BSX-II 3K BUG Data																															
LED's	mA	Type 1			Type 2			Type 3			Type 4			Type 4A			Type 5			Type 5W			Type T5WR			Type FN			Type FM		
32	350	2	0	2	1	0	2	1	0	1	1	0	1	1	0	1	2	0	1	3	0	1				3	0	1	3	0	1
	530	3	0	3	2	0	2	1	0	2	1	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	700	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	1	3	0	2				4	0	1	4	0	1
	1050	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
48	350	3	0	3	2	0	2	1	0	2	2	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	530	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	700	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
64	350	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	530	4	0	4	3	0	3	2	0	2	3	0	3	2	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	700	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	4	3	0	4	3	0	4	3	0	3	4	0	2	5	0	3				5	0	1	5	0	1
BSX-II 4K BUG Data																															
LED's	mA	Type 1			Type 2			Type 3			Type 4			Type 4A			Type 5			Type 5W			Type T5WR			Type FN			Type FM		
32	350	2	0	2	1	0	2	1	0	1	1	0	2	1	0	1	2	0	1	3	0	1				3	0	1	3	0	1
	530	3	0	3	2	0	2	1	0	2	2	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	700	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	1	3	0	2				4	0	1	4	0	1
	1050	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
48	350	3	0	3	2	0	2	1	0	2	2	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	530	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	700	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
64	350	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	530	4	0	4	3	0	3	2	0	2	3	0	3	2	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	700	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	4	3	0	4	3	0	4	3	0	3	4	0	2	5	0	3				5	0	1	5	0	1
BSX-II 5K BUG Data																															
LED's	mA	Type 1			Type 2			Type 3			Type 4			Type 4A			Type 5			Type 5W			Type T5WR			Type FN			Type FM		
32	350	2	0	2	1	0	2	1	0	1	1	0	1	1	0	1	2	0	1	3	0	1				3	0	1	3	0	1
	530	3	0	3	2	0	2	1	0	2	1	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	700	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	1	3	0	2				4	0	1	4	0	1
	1050	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
48	350	3	0	3	2	0	2	1	0	2	2	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	530	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	700	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
64	350	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	530	4	0	4	3	0	3	2	0	2	3	0	3	2	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	700	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	4	3	0	4	3	0	4	3	0	3	4	0	2	5	0	3				5	0	1	5	0	1

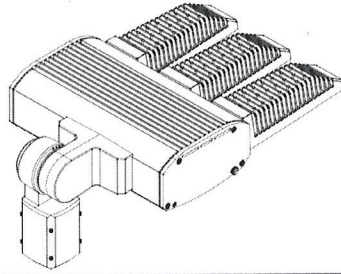
BSX-II LED Specifications

BSX-II Features



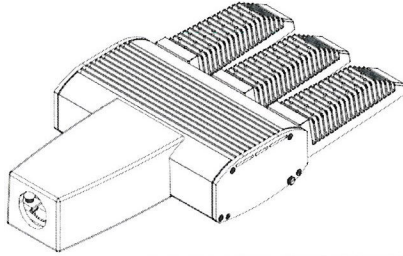
BSX-II Mounting Options

Knuckle Mount



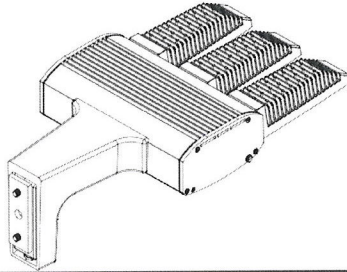
An adjustable knuckle slip fits over a 2 3/8" Tenon, and allows for up to 90° degrees of vertical adjustment in 10° degree increments from horizontal, as well as full side to side adjustment with the knuckle mount.

Mast Arm Mount



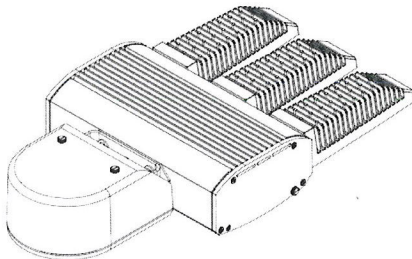
Mast Arm Fitter fits over a 2 3/8" tenon.

Arm Mount



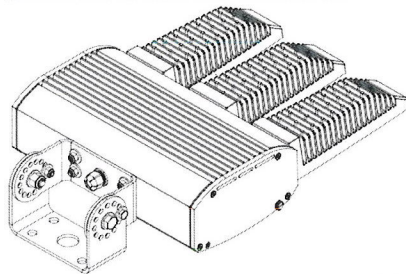
The Bolt-On Arm (BOA) utilizes a 2 piece cleat system for easy installation. A Round Pole Plate Adaptor (RPP) is required for mounting to round poles.

Post Top Mount



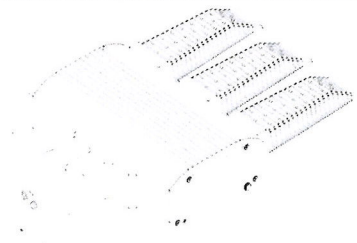
Post Top fits over a 2 3/8" tenon and is adjustable up to 45°.

Trunnion Mount



Trunnion Mount is adjustable up to 180°.

Wall Mount



Wall Mount is adjustable up to 90°.



CEX

APPLICATION:

- Ideal for commercial where economy, appearance and the ultimate ease of installation and maintenance are desired. Solid-state electronics offer both reliability and low-cost performance.

FEATURES:

- Thermoplastic LED Exit Sign Compact size low-profile design LED exit sign.
- Innovative snap-together design allows for fast and easy installation.
- Letters 6" height with 3/4" stroke.
- Easily removable snap-out knockouts and chevron directional arrows.
- Single or double face configuration.
- 90+ minute emergency operation.
- Available in white or black housing.

MOUNTING:

- Universal (wall or ceiling) mounting.
- Universal knockouts on back plate allow for wall mounting directly to standard J-Box. Canopy and mounting hardware provided.

ELECTRICAL:

- 120/277V dual voltage operation standard.
- Charge rate and power AC mode green LED indicator light, battery disconnected mode red LED indicator light.
- Manual push-to-test switch provides for on-demand visual inspection of 30-second testing.

LAMPS:

- Energy consumption of 3.2W for red letters and 3.8W for green letters.
- LED lamps are operating in normal (AC input) and emergency (DC input) modes.

BATTERY:

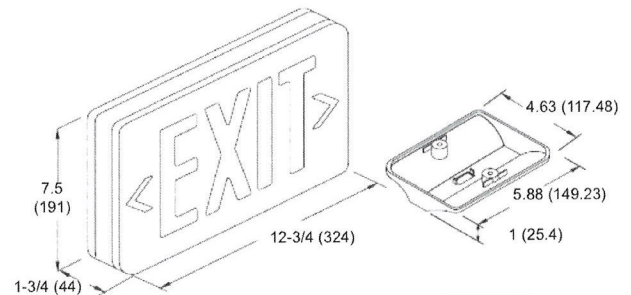
- 4.8V long-life, maintenance-free, rechargeable nickel-cadmium battery (self-powered) on emergency (EM) units.
- Fully automatic solid-state, two-rate charger initiates battery charging to recharge a discharged battery in 24 hours.
- Internal solid-state transfer switch automatically connects the internal battery to LEDs for minimum 90 minute emergency illumination.
- LVD (Low voltage disconnection) prevents battery from deep discharge.

OPTION:

- SDT: Self-diagnostic testing, continually diagnoses unit's performance and test system (Self-diagnostic testing for 30-second discharge once every 30-days and 30-minutes every six months) to ensure reliable operation and to meet electrical and life safety code.
- Dual circuit option on the AC-only unit enables it to be connected to two different (primary and secondary, one acting as a back-up for the other) supplies at the same time.

LISTING:

- 5 years limited warranty on materials and all electronics. Battery prorated for five years.
- LED lamps are 25 years limited warranty.
- UL listed for damp locations. (0°C -50°C) & meets UL924, NFPA 101 Life Safety Code, NEC, OSHA, Local and State Codes..
- ARRA compliant (optional).



All dimensions are in inches (millimeters).

CANOPY

ELECTRICAL INFORMATION

	Input Watts (W)	Input Amps (A)
Red Emergency Models	120V: 3.2 W 277V: 3.6 W	120V: 0.031 A 277V: 0.010 A
Green Emergency Models	120V: 3.8 W 277V: 4.4 W	120V: 0.033 A 277V: 0.017 A

ORDERING INFORMATION:

EXAMPLE: CEX-R-1-WH

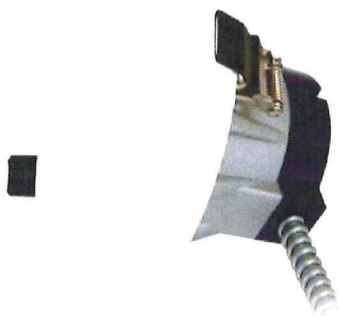
MODEL	# OF FACE	LETTER COLOR	OPERATION	HOUSING COLOR
CEX	(Blank) Universal Single/Double Face	R Red G Green	(Blank) AC-only 1 Battery Back up 2 2-Circuit Operation	WH White Face/ White Housing BK Black Face/ Black Housing

OPTION

- WG-1** Steel Wire Guard (13.5" x 15" x 6")
- PCS-1** Polycarbonate Guard (3.25" x 9" x 2.75")
- BG-1** Vandal Shield Guard, Polycarbonate (15" x 22" x 8")
- SDT** Self Diagnostics
- SALIDA** SALIDA face plates
- SW** Special Wording Sign
- ARRA** Assembled in USA for Buy American Act

ULTRA LED™ RT5/6 HO

Recessed Downlight Kit



SYLVANIA ULTRA RT5/6 HO is a universal input voltage 5" and 6" compatible LED recessed downlight kit that creates high performing white light and is optimized for new construction and retrofit applications utilizing pin based compact fluorescent lamps. Installation is done quickly and easily in most standard six-inch frames.

The RT5/6 HO downlight is offered in 700 lumen, 900 lumen and 1500 lumen options and achieves up to 88 lumens per watt.

The RT5/6 HO is designed to deliver light output comparable to traditional 1x13W, 1x18W, 1x26W and 2x26W pin based compact fluorescent luminaires.

Application Information

Application Notes

1. Operating temperature range between -4°F and +104°F (-20°C and +40°C).
2. Suitable for dry, damp or wet indoor or outdoor locations.
3. Compatible with Philips Bodine ELI-S-20 Emergency Lighting Micro Inverter.
4. Designed to install in standard 6" CFL mounting frame. For a list of compatible housings, please refer to www.sylvania.com/RT6.
5. For detailed warranty information, please see www.sylvania.com/RT6.
6. The RT5/6HO 700 lumen is compatible with 120V Phase cut dimmers and 277V Leviton Dimmer model IPX06-70Z .
7. The RT5/6 HO 900 and 1500 lumen are compatible with Leviton 0-10V dimmer model IP710-DL.
8. For installation in non-insulated ceilings: If insulation is present, it may be placed around the retrofit kit as long as a three-inch space is maintained around the kit.
9. Installation performed as a stand-alone kit (without frame) is recommended for hard ceiling. Installation of a recessed incandescent frame (such as Lightolier model 1102P1) is recommended for tiled ceiling application for proper support of the retrofit kit.

Key Features & Benefits

- 120-277 universal input voltage
- Lumen package:
 - 700 lumens @ 8 watts (line voltage dimmable)
 - 900 lumens @ 13 watts (0-10V Dimmable)
 - 1500 lumens @ 17 watts (0-10V Dimmable)
- Replacement for 13W, 18W, 26W and 32W CFL pin based lamps
- Fits in standard 5" and 6" CFL mounting frame
- CCT: 2700K, 3000K, 3500K & 4000K
- CRI of >80
- 50,000 hour life (L₇₀)
- Suitable for dry, damp and wet indoor or outdoor locations
- UL1598 Listed and Classified for stand-alone and retrofit applications
- Reduces energy consumption up to 34%
- Lasts up to 4 times longer than compact fluorescent lamps
- No warm-up time, instant-on with full light output and stable lamp to lamp color
- Integrated white trim and metal conduit adaptor (included) for direct replacement
- Suitable for use in 8" applications using optional trim extender accessory

Product Offering

Ordering Abbreviation	Wattage	CCT
LED/RT5/6/HO/700	8	2700K, 3000K, 3500K, 4000K
LED/RT5/6/HO/900	13	2700K, 3000K, 3500K, 4000K
LED/RT5/6/HO/1500	17	3000K, 3500K, 4000K

Specifications and Certifications



Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	

Specifications

Energy Data

Minimum Starting Temp: -20°C (-4°F)

EMI/RFI: RT6/HO 1500 lumen: FCC Title 47 CFR, Part 15, Class B
RT6/HO 900 lumen: FCC Title 47 CFR, Part 15, Class A

Sound Rating: <24dBA

Input Voltage: 120-277V

Power Factor: >0.90

Input Frequency: 60Hz

THD: <20%

Maximum Ambient Operating Temperature (Non-Insulated Ceiling): 40°C (104°F)

Lighting Data

Lumen Output: 700, 900 and 1500

Color

Color Rendering Index (CRI): >80

Ordering Information

Item Number	Ordering Abbreviation	Recessed Housing	Replaced CFL Wattage	Nominal Wattage (W)	Delivered Light Output (lm)	LPW	Avg. Color Temperature	Rated Life (hrs)*	Packaging Configuration	Dimmable
75228	LED/RT/5/6/HO/700/827	5" and 6"	13W	8	700	87	2700K	50,000	4/case	YES (Phase Cut)
75229	LED/RT/5/6/HO/700/830	5" and 6"	13W	8	700	87	3000K	50,000	4/case	YES (Phase Cut)
75230	LED/RT/5/6/HO/700/835	5" and 6"	13W	8	700	87	3500K	50,000	4/case	YES (Phase Cut)
75231	LED/RT/5/6/HO/700/840	5" and 6"	13W	8	700	87	4000K	50,000	4/case	YES (Phase Cut)
75137	LED/RT/5/6/HO/900/827	5" and 6"	18W	13	900	69	2700K	50,000	4/case	YES (0-10V Low Voltage)
75138	LED/RT/5/6/HO/900/830	5" and 6"	18W	13	900	69	3000K	50,000	4/case	YES (0-10V Low Voltage)
75140	LED/RT/5/6/HO/900/835	5" and 6"	18W	13	900	69	3500K	50,000	4/case	YES (0-10V Low Voltage)
75139	LED/RT/5/6/HO/900/840	5" and 6"	18W	13	900	69	4000K	50,000	4/case	YES (0-10V Low Voltage)
72528	LED/RT/5/6/1500/HO/830	5" and 6"	26W & 32W	17	1500	88	3000K	50,000	4/case	YES (0-10V Low Voltage)
72529	LED/RT/5/6/1500/HO/835	5" and 6"	26W & 32W	17	1500	88	3500K	50,000	4/case	YES (0-10V Low Voltage)
72530	LED/RT/5/6/1500/HO/840	5" and 6"	26W & 32W	17	1500	88	4000K	50,000	4/case	YES (0-10V Low Voltage)

* LED lamp life is defined as the number of hours when 50% of an average group of identical lamps reached 70% of its initial lumens.

Ordering Guide

LED	/	RT5/6	/	1500	/	HO	/	8	30
LED		Product Name RT5/6 5/6 = fits 5" and 6" frames		Light Output 1500lm 900lm		High Output		CRI >80	Color Temperature 2700K, 3000K, 3500K, 4000K

Energy Savings

Basic Product Description	LED Lumens	LED Life	Traditional Lamp Types	Lumens	Life	Watts Saved With RT6	RT6 Energy Savings*	RT6 Life Benefit
RT5/6 HO 8W	700	50,000	13W CFL DD, DT	800	16,000	5	\$27	3X
RT5/6 HO 13W	900	50,000	18W CFL DD, DT	1200	16,000	5	\$27	3X
RT5/6 HO 17W	1500	50,000	26W CFL DD, DT	1800	16,000	9	\$49	3X
RT5/6 HO 17W	1500	50,000	32W CFL DD, DT	2400	16,000	15	\$82	3X

* Based on \$0.11/kWh over 50,000 hours life.

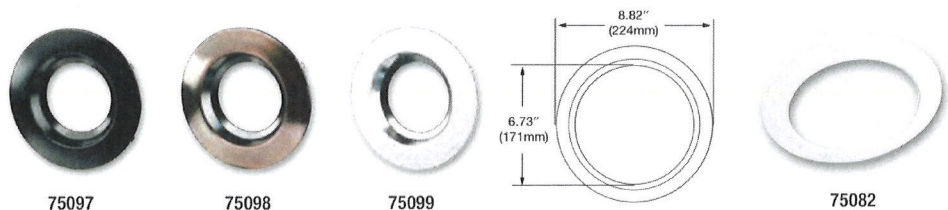
Accessories

RT5/6 Retrofit Trim

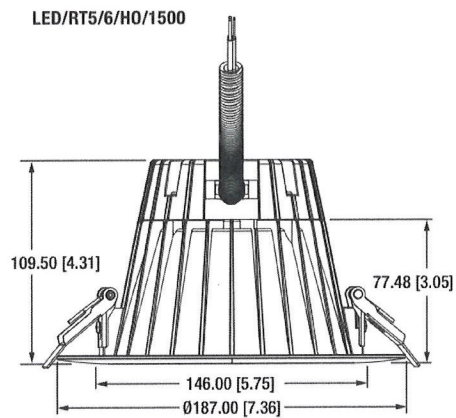
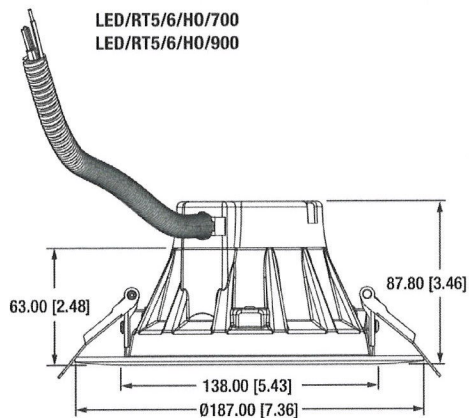
75095	RT/5/6/TRIM/DKBZ
75097	RT/5/6/TRIM/BLK
75098	RT/5/6/TRIM/ORBZ
75099	RT/5/9/TRIM/SN

Trim Ring Extender

75082	RT6/8/TRIMEXT
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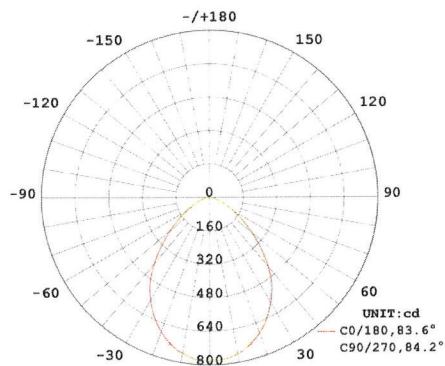
Assembly Diagram



Dimensions are in mm [in]

Photometric Information

Luminous Intensity Distribution Diagram



Illuminance at Distance

Illuminance		
Edge	Center	Beam Diameter
2 ft	48.2 fc	214.5 fc
4 ft	12.1 fc	53.6 fc
6 ft	5.4 fc	23.8 fc
8 ft	3.0 fc	13.4 fc
10 ft	1.9 fc	8.6 fc
12 ft	1.3 fc	6.0 fc

RT5/6 HO 1500 lumen

Illuminance at Distance

Illuminance		
Edge	Center	Beam Diameter
2 ft	27.4 fc	143.5 fc
4 ft	6.8 fc	35.9 fc
6 ft	3.0 fc	15.9 fc
8 ft	1.7 fc	9.0 fc
10 ft	1.1 fc	5.7 fc
12 ft	0.8 fc	4.0 fc

RT5/6 900 lumen

Illuminance at Distance

Illuminance		
Edge	Center	Beam Diameter
2 ft	21.6 fc	96.0 fc
4 ft	5.4 fc	24.0 fc
6 ft	2.4 fc	10.7 fc
8 ft	1.3 fc	6.0 fc
10 ft	0.9 fc	3.8 fc
12 ft	0.6 fc	2.7 fc

RT5/6 700 lumen

LEDVANCE LLC
200 Ballardvale Street
Wilmington, MA 01887 USA
Phone 1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

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All other trademarks are those of their respective owners.
Product Licensee of Trademark SYLVANIA in General Lighting.
Specifications subject to change without notice.



PL H 9.5W BYP TITANIUM LED SERIES



PL:EDGE
SERIES

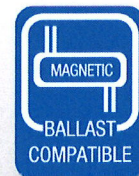
9.5W REPLACES

26W
CFL

60% Energy Savings

PRO

- HYBRid installation - DIRect or BYPass
- Compatible with magnetic ballasts - DIRect installation
- Built-in universal voltage driver - BYpass installation
- Compatible with G24d, GX24d, G24q & GX24q bases
- Exceptional efficacy 100 LPW
- Lasts 4 times longer than CFL



LM 79

LM 80

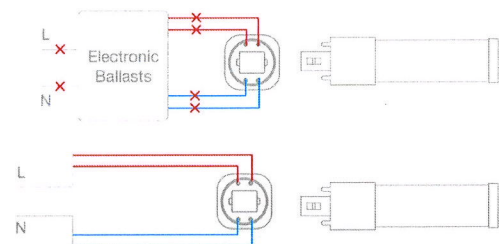
TM 21



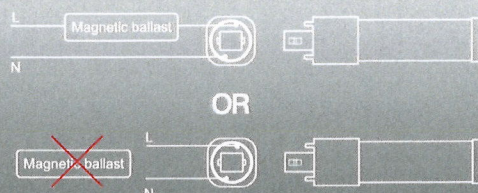
PL PRODUCT FEATURES

BYPass Installation - Electronic Ballasts

This PL H lamp is not compatible with electronic ballasts and requires bypassing the ballast during installation. The lamp runs directly off line voltage to eliminate compatibility problems, incidental power loss, lifetime issues, and maintenance costs associated with ballasts.



HYBRid Installation - DIRect or BYPass - Magnetic Ballasts



When used with a magnetic ballast, the PL H can function as a plug & play lamp and operate with the existing ballast. If the ballast is not compatible, it can be bypassed and the lamp can run directly off line voltage.

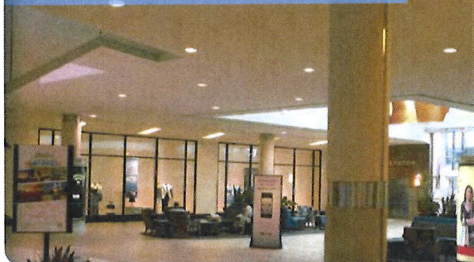
PL H 9.5W BYP

TITANIUM LED SERIES



APPLICATIONS

Retail



Hospitality



Office



Base: G24d, GX24d, G24q & GX24q (2/4-pin CFL)
Voltage: Magnetic ballast compatible
120-277V
Dimmable: No
PF: 0.9
Lifetime (L70): 50,000 hrs
Weight: 0.18lb / 82g



SPECIFICATIONS

Model	Product	Power (W)	CCT	CRI (typ.)	Lumens	LPW	Beam Angle
9.5PLH/827/BYP	28354	9.5	Soft White 2700K	82	870	92	110°
9.5PLH/830/BYP	28355	9.5	Warm White 3000K	82	920	97	110°
9.5PLH/835/BYP	28356	9.5	Neutral White 3500K	82	920	97	110°
9.5PLH/840/BYP	28357	9.5	Cool White 4000K	82	950	100	110°

* Suitable for damp locations. Not for use where directly exposed to weather or water.

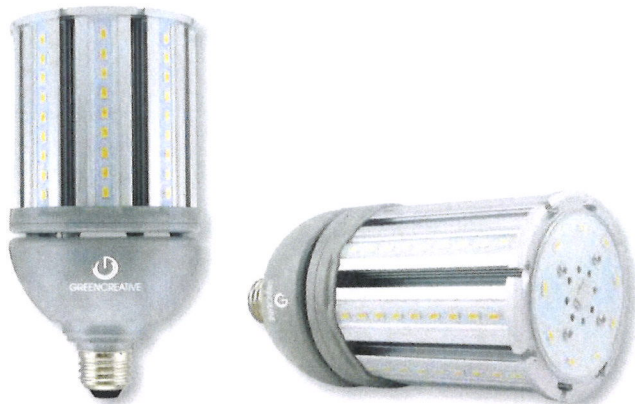
** Not intended for use in enclosed fixtures

*** Full installation guide and more details available on website

HID LED 27W E26 TITANIUM LED SERIES



PRO



27W REPLACES



**70-100W
HID**

70% Energy Savings

\$182 Savings
per lamp*

- ⌚ Direct line voltage 120-277V - Not compatible with ballasts
- ⌚ Designed for use in post top applications
- ⌚ Compatible with E26 sockets
- ⌚ Fully omnidirectional 320° beam angle
- ⌚ Available in 4000K & 5000K CCT
- ⌚ Suitable for use in totally enclosed fixtures



LM 79

LM 80

TM 21



HID LED PRODUCT FEATURES

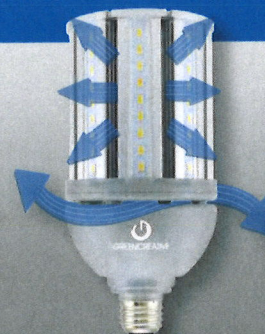
Suitable for Enclosed Fixtures



This HID LED lamp replaces a 70-100W HID and is suitable for use in totally enclosed fixtures. Its high lumen output and exceptional efficacy make it an ideal choice for outdoor post top applications.

CoolSink Technology

The CoolSink passive cooling system allows air to flow freely through the lamp. This unique design uses an increased cooling surface area to reduce the operating temperature of the LED and power supply, thus resulting in longer lamp life and lumen maintenance.



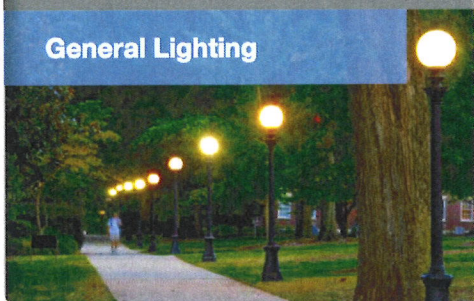
HID LED 27W E26

TITANIUM LED SERIES



APPLICATIONS

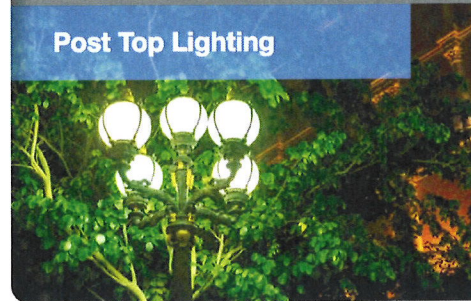
General Lighting



Teardrop Lighting



Post Top Lighting



SPECIFICATIONS

Product Model	58006 27HID/640/27TV/E26	57993 27HID/660/27TV/E26
Type	HID LED	HID LED
Base	E26	E26
Power (W)	27	27
Voltage - Frequency	100-277VAC 50-60Hz	100-277VAC 50-60Hz
Color Temp. (ANSI)	Cool White 4000K	Daylight 5000K
CRI (Ra) (typ.)	80	80
Lamp lumens (lm)	3150	3200
Lamp efficacy (LPW)	117	119
Beam Angle	320°	320°
Dimmable	No	No
Power Factor	0.9	0.9
Rated Lifetime - L70 (hrs.)	50,000	50,000
Temperature Rating	-4°F/-20°C - 95°F/35°C	-4°F/-20°C - 95°F/35°C
Dia. x MOL	3.66"x7.99" (93x203mm)	3.66"x7.99" (93x203mm)
Weight (lb. / g)	1.8lbs / 797g	1.8lbs / 797g

HID EQUIVALENCE

GREEN CREATIVE HID LED		Metal Halide		Mercury Vapor		High Pressure Sodium	
Power	Lumens	Power	Mean Lumens	Power	Mean Lumens	Power	Mean Lumens
27W	3150	70W	3400	100W	3300	50W	3600

* Savings per fixture based on \$0.11 / kw energy cost, 12 hrs / \$12 HID with 10,000-hr lifetime, \$70 ballast, \$90 LED HID with 50,000 hr lifetime

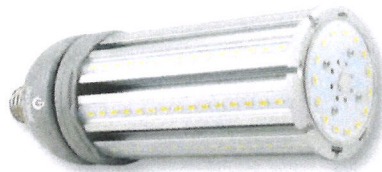
** Suitable for use in totally enclosed fixtures

*** Suitable for damp locations. Not for use where directly exposed to weather or water
**** Suitable for use in horizontal applications

HID LED 45W E26 TITANIUM LED SERIES



PRO



45W REPLACES



100-175W
HID

70% Energy Savings

\$289 Savings
per lamp*

- ⌚ Direct line voltage 120-277V - Not compatible with ballasts
- ⌚ Designed for use in post top applications
- ⌚ Compatible with E26 sockets
- ⌚ Fully omnidirectional 320° beam angle
- ⌚ Available in 4000K & 5000K CCT
- ⌚ Suitable for use in totally enclosed fixtures



lighting
facts
LED Product Partner

LM 79

LM 80

TM 21



50,000 H



UNIVERSAL



OMNI
DIRECTIONAL



WARRANTY



CRI (Ra)



ENCLOSED**

HID LED PRODUCT FEATURES

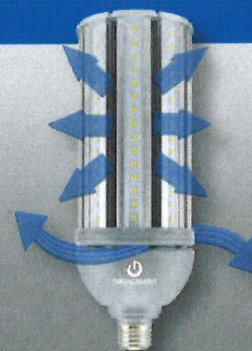
Suitable for Enclosed Fixtures



This HID LED lamp replaces a 100-175W HID and is suitable for use in totally enclosed fixtures. Its high lumen output and exceptional efficacy make it an ideal choice for outdoor post top applications.

CoolSink Technology

The CoolSink passive cooling system allows air to flow freely through the lamp. This unique design uses an increased cooling surface area to reduce the operating temperature of the LED and power supply, thus resulting in longer lamp life and lumen maintenance.

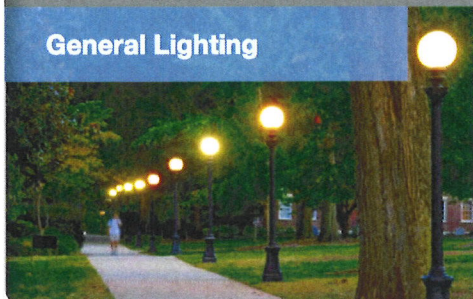


HID LED 45W E26 TITANIUM LED SERIES



APPLICATIONS

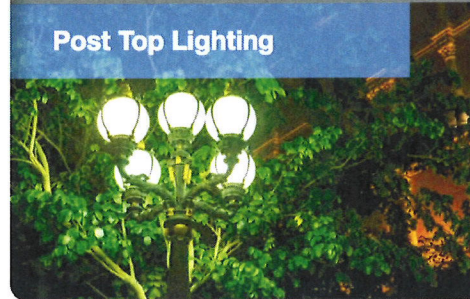
General Lighting



Teardrop Lighting



Post Top Lighting



SPECIFICATIONS

Product Model	58008 45HID/840/277V/E26	57094 45HID/850/277V/E26
Type	HID LED	HID LED
Base	E26	E26
Power (W)	45	45
Voltage - Frequency	100-277V	100-277V
Color Temp. (ANSI)	Cool White 4000K	Daylight 5000K
CRI (Ra) (typ.)	80	80
Lamp lumens (lm)	5350	5400
Lamp efficacy (LPW)	119	120
Beam Angle	320°	320°
Dimmable	No	No
Power Factor	0.9	0.9
Rated Lifetime - L70 (hrs.)	50,000	50,000
Dia. x MOL	3.66"x10.35" (93x263mm)	3.66"x10.35" (93x263mm)
Weight (lb. / g)	2.2lbs / 1033g	2.2lbs / 1033g

HID EQUIVALENCE

GREEN CREATIVE HID LED		Metal Halide		Mercury Vapor		High Pressure Sodium	
Power	Lumens	Power	Mean Lumens	Power	Mean Lumens	Power	Mean Lumens
45W	5350	100W	5800	175W	6250	70W	5350

* Savings per fixture based on \$0.11 / kw energy cost, 12 hrs / \$12 HID with 10,000-hr lifetime, \$70 ballast, \$90 LED HID with 50,000 hr lifetime
 ** Suitable for use in totally enclosed fixtures

*** Suitable for damp locations. Not for use where directly exposed to weather or water
 **** Suitable for use in horizontal applications

**LED ENCLOSED RATED OMNIDIRECTIONAL A-LAMP
A19 GEN 6 SERIES**



6W, 9W & 11W



15W



GU24 Base



PRODUCT DESCRIPTION:

MaxLite's LED enclosed rated Omnidirectional A-Line lamp replicate true A19 incandescents. They are suited to a wide variety of residential and commercial applications, including pendants, wall sconces and table and floor lamps.

FEATURES:

- 6W, 480lm, 40W Inc. replacement
- 9W, 800lm, 60W Inc. replacement
- 11W, 1100lm, 75W Inc. replacement
- 15W, 1600lm, 100W Inc. replacement
- Dimmable down to 10%
- Power factor: ≥ 0.70
- 25,000 hour life (L70 standards)
- CRI: ≥ 80
- Volts: 120V
- ENERGY STAR certified
- Available in E26 and GU24 base
- Suitable for dry and damp locations
- Suitable for use in fully enclosed luminaires
- Five year limited warranty

APPLICATIONS

- Pendants
- Table and floor lamps
- Sconces

ORDERING:

MODEL SELECTION (Full list of order codes on pg. 2)		Typical order example: E9A19DLED27/G6		
		DLED		/G6
FAMILY	BASE	DIMMABILITY	CCT	GENERATION
E6A19 = 6 watts, A19 E9A19 = 9 watts, A19 E11A19 = 11 watts, A19 E15A19 = 15 watts, A19	(OMIT) = E26 GU = GU24	DLED = Dimmable	27 = 2700K 30 = 3000K 40 = 4000K 50 = 5000K*	/G6 = Generation 6

NOTES:

1. E6A19DLED27/G6 is available in bulk pack (50pcs)
 2. E9A19DLED27/G6 is available in 4-Packs and bulk pack (50pcs)
- * 5000K CCT is only available as E9A19GUDLED50/G6

SPECIFICATIONS:

		E6A19DLEDxx/G6	E9A19DLEDxx/G6	E11A19DLEDxx/G6	E15A19DLEDxx/G6
ITEM	SPECIFICATION	DETAILS			
GENERAL PERFORMANCE	Power Consumption	6W	9W	11W	15W
	Lumens Delivered	480	800	1100	1600
	Efficacy (lm/w)	80	88	100	106
	CRI	≥80			
	Color Temperature (CCT)	2700K, 3000K, 4000K, 5000K*			
	Lumen Maintenance (L70)	25,000 Hours			
ELECTRICAL	Power Factor	≥0.70			
	Input Voltage	120V			
PHYSICAL	Base Type	E26			
	Operating Temperature	-4°F - 104°F			
CERTIFICATION	Certification	ENERGY STAR, UL Listed, FCC, RoHS Compliant			
	Environment	Dry, Damp			
	Warranty	5 Year Limited			

Lighting layouts and spacing criteria available upon request

* 5000K CCT is only available as E9A19GUDLED50/G6

ORDERING:

ORDER CODE	MODEL	ENERGY STAR	WATTS	EQUIVALENCY	DELIVER LUMENS	EFFICACY (lm/W)	CRI	CCT	DIMENSIONS (W" x MOL")
E26 Base									
14099390	E6A19DLED27/G6	★	6	40W Inc.	480	80	80	2700K	2.36" x 4.25"
14099391	E6A19DLED27/G6/BP	★	6	40W Inc.	480	80	80	2700K	
14099392	E6A19DLED30/G6	★	6	40W Inc.	480	80	80	3000K	
14099393	E6A19DLED40/G6	★	6	40W Inc.	480	80	80	4000K	
14099394	E9A19DLED27/G6	★	9	60W Inc.	800	88	80	2700K	
14099395	E9A19DLED27/G6/4P	★	9	60W Inc.	800	88	80	2700K	
14099396	E9A19DLED27/G6/BP	★	9	60W Inc.	800	88	80	2700K	
14099397	E9A19DLED30/G6	★	9	60W Inc.	800	88	80	3000K	
14099398	E9A19DLED40/G6	★	9	60W Inc.	800	88	80	4000K	
14099399	E11A19DLED27/G6	★	11	75W Inc.	1100	100	80	2700K	
14099400	E11A19DLED30/G6	★	11	75W Inc.	1100	100	80	3000K	2.36" x 4.61"
14099401	E11A19DLED40/G6	★	11	75W Inc.	1100	100	80	4000K	
14099402	E15A19DLED27/G6	★	15	100W Inc.	1600	106	80	2700K	
14099403	E15A19DLED30/G6	★	15	100W Inc.	1600	106	80	3000K	
14099404	E15A19DLED40/G6	★	15	100W Inc.	1600	106	80	4000K	

★ ENERGY STAR certified

ORDER CODE	MODEL	ENERGY STAR	WATTS	EQUIVALENCY	DELIVER LUMENS	EFFICACY (lm/W)	CRI	CCT	DIMENSIONS (W" x MOL")
GU24 Base									
14099405	E6A19GUDLED27/G6	★	6	40W Inc.	480	80	80	2700K	2.36" x 4.21"
14099406	E6A19GUDLED30/G6	★	6	40W Inc.	480	80	80	3000K	
14099407	E6A19GUDLED40/G6	★	6	40W Inc.	480	80	80	4000K	
14099408	E9A19GUDLED27/G6	★	9	60W Inc.	800	89	80	2700K	
14099409	E9A19GUDLED30/G6	★	9	60W Inc.	800	89	80	3000K	
14099410	E9A19GUDLED40/G6	★	9	60W Inc.	800	89	80	4000K	
100759	E9A19GUDLED50/G6	★	9	60W Inc.	800	89	80	5000K	
14099411	E11A19GUDLED27/G6	★	11	75W Inc.	1100	100	80	2700K	
14099412	E11A19GUDLED30/G6	★	11	75W Inc.	1100	100	80	3000K	
14099413	E11A19GUDLED40/G6	★	11	75W Inc.	1100	100	80	4000K	2.36" x 4.61"
14099414	E15A19GUDLED27/G6	★	15	100W Inc.	1600	106	83	2700K	
14099415	E15A19GUDLED30/G6	★	15	100W Inc.	1600	106	83	3000K	
14099416	E15A19GUDLED40/G6	★	15	100W Inc.	1600	106	83	4000K	

★ ENERGY STAR certified

LED BR LAMPS G2 BR20, BR30, BR40 SERIES



PRODUCT DESCRIPTION:

With a full array of BR lamps, MaxLite products offer an immediate payback with 7-, 8-, 11-, 12-, 14-, 17-watt LED replacements for 50-, 65-, 75-, and 100-watt incandescent lamps. A 12-watt BR30 is offered in 90+ CRI as well. Available in a standard medium base, the LED BR lamp is an ideal lighting solution for track lights, display lights and recessed lights. They provide efficient, general lighting suited for architectural, residential, retail, office space and hospitality applications.

FEATURES:

- 120v/60 Hz
- 25,000 hour life (at L70 standards)
- CRI: >80; >90+ CRI BR30 available
- ENERGY STAR certified (except 90+ CRI BR30)
- BR lens conceals LEDs from sight and evenly distributes the light
- Smooth aluminum housing with ANSI standard form factor
- Dimmable down to ten percent
- Operating temperature: -4°F to 104°F
- Suitable for use in damp locations
- Not for use in enclosed luminaires
- Five year warranty

MODEL SELECTION (Full list of order codes on pg. 2)

Typical order example: 17BR40DLED27/G2

	DLED	
FAMILY	DIMMABILITY	COLOR TEMPERATURE (CCT)
7BR20= 7 watts, BR20 8BR30= 8 watts, BR30 11BR30= 11 watts, BR30 17BR40= 17 watts, BR40	DLED= Dimmable	27/G2= 2700K 30/G2= 3000K 40/G2= 4000K

	DLED	
FAMILY	DIMMABILITY	COLOR TEMPERATURE (CCT)
12BR30= 12 watts, BR30, 90+ CRI 14BR40= 14 watts, BR40, 90+ CRI	DLED= Dimmable	927/G2= 2700K, 90+ CRI 930/G2= 3000K, 90+ CRI

COMPATIBLE DIMMERS:

MAKE	DIMMER MODEL	MAKE	DIMMER MODEL
Lutron	CTCL-153P	Leviton	IPLO6
Lutron	DVCL-153P	Leviton	IP110
Lutron	LGCL-153P	Leviton	6631-LW
Lutron	S-600	Leviton	6683-IW

NOTES:

1. 14W BR40 model only comes in 3000K.
2. 8W BR30 2700K model are available in a 4-pack and bulk pack
3. Bulk pack is available in 11W BR30 2700K GEN 2 (11BR30DLED27/G2BP)

SPECIFICATIONS:

		BR20	BR30			BR40	
ITEM	SPECIFICATION	7 WATTS	8 WATTS	11 WATTS	12 WATTS (90 CRI)	14 WATTS (90 CRI)	17 WATTS
GENERAL PERFORMANCE	Color Temperature	2700K, 3000K, 4000K	2700K, 3000K, 4000K	2700K, 3000K, 4000K	2700K, 3000K	2700K, 3000K	2700K, 3000K, 4000K
	Lumens Delivered (lm)	550	650	850	800	1000	1400
	Efficacy (lm/W)	79	81	77	67	71	82
	Equivalency	50W	65W	65W	65W	75W	100W
	Lumen Maintenance (L70)	25,000 hours					
ELECTRICAL	Power Factor	≥.90					
	Input Voltage	120V					
PHYSICAL	Operating Temperature	-4°F to 104°F					
APPLICATION	Environment	Dry, Damp					
	Warranty	5 Year					

ORDERING:

ORDER CODE	MODEL	ENERGY STAR	WATTAGE	INCANDESCENT EQUIVALENCY	CRI	OUTPUT (LUMENS)	DIMENSIONS H" X W"	CCT
BR20								
77056	7BR20DLED27/G2	★	7W	50W	82	550	3.8" x 2.5"	2700K
77057	7BR20DLED30/G2	★	7W	50W	82	550	3.8" x 2.5"	3000K
77058	7BR20DLED40/G2	★	7W	50W	84	550	3.8" x 2.5"	4000K
BR30								
76557	8BR30DLED27/G2	★	8W	65W	82	650	5.10" x 3.75"	2700K
97867	8BR30DLED27/G2/4P (4-Pack)	★	8W	65W	82	650	5.10" x 3.75"	2700K
96997	8BR30DLED27/G2BP (Bulk Pack)	★	8W	65W	82	650	5.10" x 3.75"	2700K
77628	8BR30DLED30/G2	★	8W	65W	82	650	5.10" x 3.75"	3000K
77629	8BR30DLED40/G2	★	8W	65W	84	650	5.10" x 3.75"	4000K
77630	11BR30DLED27/G2	★	11W	65W	82	850	5.10" x 3.75"	2700K
99974	11BR30DLED27/G2BP	★	11W	65W	82	850	5.10" x 3.75"	2700K
77631	11BR30DLED30/G2	★	11W	65W	82	850	5.10" x 3.75"	3000K
77632	11BR30DLED40/G2	★	11W	65W	84	850	5.10" x 3.75"	4000K
BR40								
77633	17BR40DLED27/G2	★	17W	100W	82	1400	6.25" x 4.75"	2700K
77634	17BR40DLED30/G2	★	17W	100W	82	1400	6.25" x 4.75"	3000K
77635	17BR40DLED40/G2	★	17W	100W	84	1400	6.25" x 4.75"	4000K
90 CRI LAMPS								
BR30								
96260	12BR30DLED927/G2		12W	65W	93	800	5.08" x 3.75"	2700K
91505	12BR30DLED930/G2		12W	65W	94	800	5.08" x 3.75"	3000K
BR40								
96384	14BR40DLED930/G2		14W	75W	93	1000	6.25" x 4.75"	3000K



Features & Benefits

- No rewiring needed
- Works with fluorescent electronic ballast (Instant Start, Programmed Start, and Dimming)*
- Long life
- High CRI
- Instant on, no delay
- Convenient and quick installation
- Utilizes existing instant start or rapid start sockets
- Compatible with controls and sensors
- Dimmable
- Works in cold temperature applications
- Glass tube for superior optical performance
- 5 Year Warranty



* EMERGENCY BALLAST RESTRICTIONS



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Commercial Grade LED T8 Lamp

Specification Data (with Normal Ballast Factor)

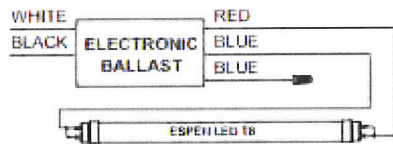
Order Code	Length	Lamp Wattage	System Wattage	CCT	Initial Lumens	CRI	Beam Angle	Lamp Efficacy	System Efficacy	Life	DLC
L24T8/835/8G-EB	24	8	10	3500K	1200	83	325	150	120	50000	Yes
L24T8/840/8G-EB	24	8	10	4000K	1200	83	325	150	120	50000	Yes
L24T8/850/8G-EB	24	8	10	5000K	1200	83	325	150	120	50000	Yes
L24T8/830/8G-EB	24	8	10	3000K	1200	83	325	150	120	50000	Yes

System Performance

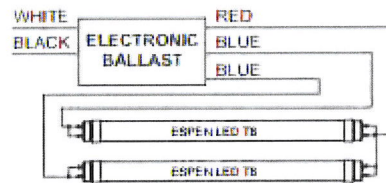
Lamp Model	Low Ballast Factor				High Ballast Factor			
	Lamp Power	System Power	Lumen Output	Lamp Efficacy	Lamp Power	System Power	Lumen Output	Lamp Efficacy
L24T8/835/8G-EB	7	10	945	135	10	13	1350	135
L24T8/840/8G-EB	7	10	945	135	10	13	1350	135
L24T8/850/8G-EB	7	10	945	135	10	13	1350	135
L24T8/830/8G-EB	7	10	945	135	10	13	1350	135

Wiring diagram

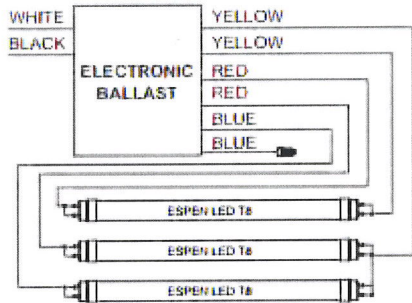
1-LAMP Instant Start Electronic Ballast



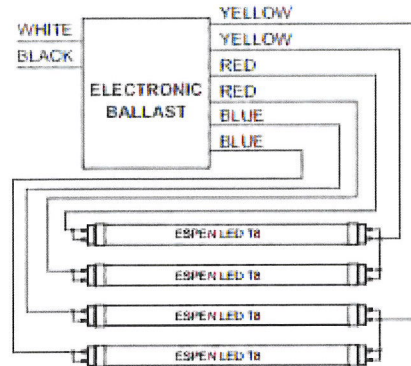
2-LAMP Instant Start Electronic Ballast



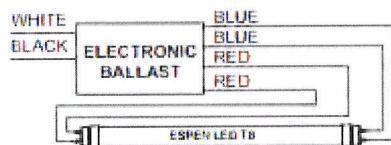
3-LAMP Instant Start Electronic Ballast



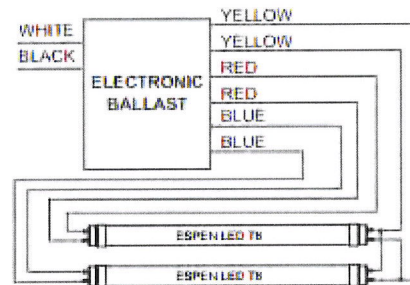
4-LAMP Instant Start Electronic Ballast



1-LAMP Programmed Start Electronic Ballast



2-LAMP Programmed Start Electronic Ballast



* Please refer to "Ballast Compatibility List" for compatible battery backup and/or emergency ballasts.

* Please refer to "Ballast Compatibility List" on Related Downloads.

Specification data is based on tests performed in a controlled environment and represents relative performance. Actual performance can vary depending on operating conditions. Application and performance data subject to change without notice. All specifications are nominal unless noted otherwise.

Features & Benefits

- No rewiring needed
- Works with fluorescent electronic ballast (Instant Start and Programmed Start)
- Long life
- High CRI
- Instant on, no delay
- Convenient and quick installation
- Utilizes existing instant start or rapid start sockets
- Works with dimming ballast
- Compatible with controls and sensors
- Works in cold temperature applications
- Glass tube for superior optical performance
- 5 Year Warranty



* EMERGENCY BALLAST RESTRICTIONS



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Specification Data

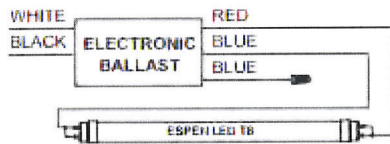
Order Code	Length	Power	Input Voltage (Depend on Ballast)	CCT	Initial Lumens	CRI	Beam Angle	Lamp Efficacy	System Efficacy	Life	DLC
LB48T8U6/830/12P-EB	48	16	120/277V, 347V	3000K	1800	83	240	150	112	50,000	Yes
LB48T8U6/835/12P-EB	48	16	120/277V, 347V	3500K	1800	83	240	150	112	50,000	Yes
LB48T8U6/840/12P-EB	48	16	120/277V, 347V	4000K	1800	83	240	150	112	50,000	Yes
LB48T8U6/850/12P-EB	48	16	120/277V, 347V	5000K	1800	83	240	150	112	50,000	Yes

System Performance

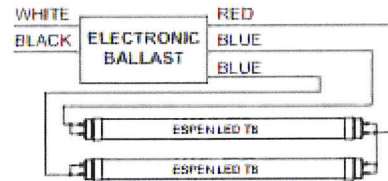
Lamp Model	Low Ballast Factor				High Ballast Factor			
	Lamp Power	System Power	Lumen Output	Lamp Efficacy	Lamp Power	System Power	Lumen Output	Lamp Efficacy
LB48T8U6/830/12P-EB								
LB48T8U6/835/12P-EB								
LB48T8U6/840/12P-EB								
LB48T8U6/850/12P-EB								

Wiring diagram

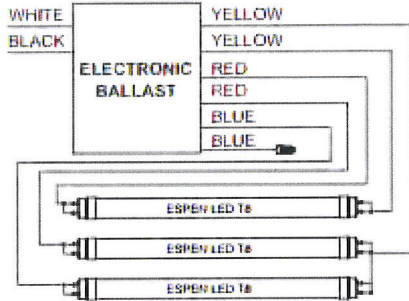
1-LAMP Instant Start Electronic Ballast



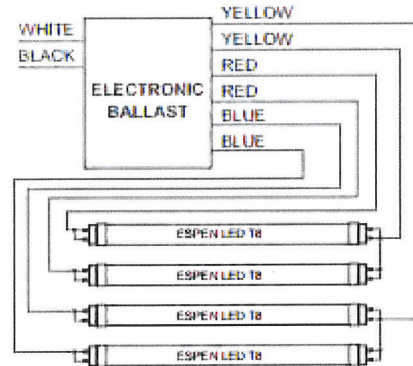
2-LAMP Instant Start Electronic Ballast



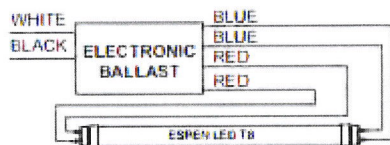
3-LAMP Instant Start Electronic Ballast



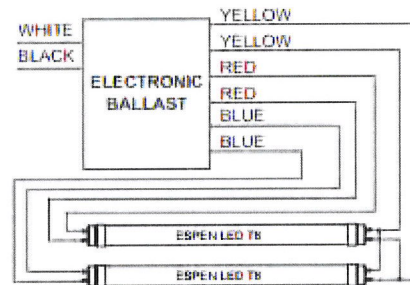
4-LAMP Instant Start Electronic Ballast



1-LAMP Programmed Start Electronic Ballast



2-LAMP Programmed Start Electronic Ballast



* Please check ballast compatibility list before installation.

Specification data is based on tests performed in a controlled environment and represents relative performance. Actual performance can vary depending on operating conditions. Application and performance data subject to change without notice. All specifications are nominal unless noted otherwise.

Features & Benefits

- No rewiring needed
- Works with fluorescent electronic ballast (Instant Start, Programmed Start, and Dimming)*
- Long life
- High CRI
- Instant on, no delay
- Convenient and quick installation
- Utilizes existing instant start or rapid start sockets
- Compatible with controls and sensors
- Dimmable
- Works in cold temperature applications
- Glass tube for superior optical performance
- 5 Year Warranty



* EMERGENCY BALLAST RESTRICTIONS



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Specification Data (with Normal Ballast Factor)

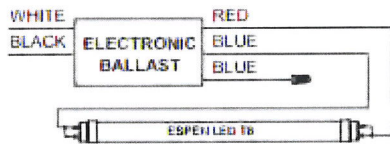
Order Code	Length	Lamp Wattage	System Wattage	CCT	Initial Lumens	CRI	Beam Angle	Lamp Efficacy	System Efficacy	Life	DLC
L36T8/835/10G-EB	36	10	13	3500K	1600	80+	325	160	123	50000	No
L36T8/840/10G-EB	36	10	13	4000K	1600	80+	325	160	123	50000	No
L36T8/850/10G-EB	36	10	13	5000K	1600	80+	325	160	123	50000	No
L36T8/830/10G-EB	36	10	13	3000K	1600	80+	325	160	123	50000	No

System Performance

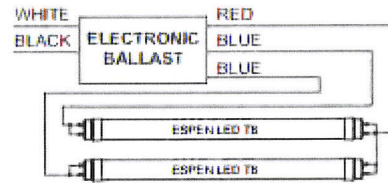
Lamp Model	Low Ballast Factor				High Ballast Factor			
	Lamp Power	System Power	Lumen Output	Lamp Efficacy	Lamp Power	System Power	Lumen Output	Lamp Efficacy
L36T8/835/10G-EB	8	11	1300	160	16.5	19.5	2500	150
L36T8/840/10G-EB	8	11	1300	160	16.5	19.5	2500	150
L36T8/850/10G-EB	8	11	1300	160	16.5	19.5	2500	150
L36T8/830/10G-EB	8	11	1300	160	16.5	19.5	2500	150

Wiring diagram

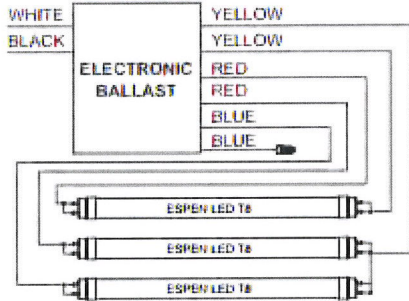
1-LAMP Instant Start Electronic Ballast



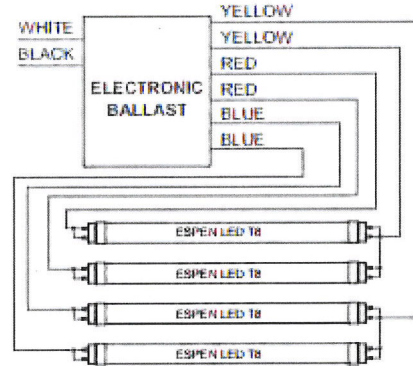
2-LAMP Instant Start Electronic Ballast



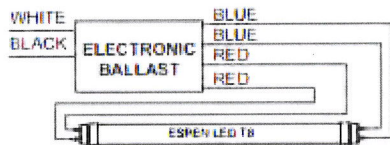
3-LAMP Instant Start Electronic Ballast



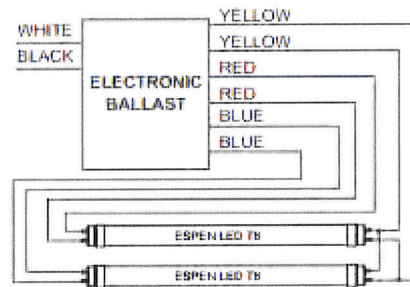
4-LAMP Instant Start Electronic Ballast



1-LAMP Programmed Start Electronic Ballast



2-LAMP Programmed Start Electronic Ballast



* Please refer to "Ballast Compatibility List" for compatible battery backup and/or emergency ballasts.

* Please refer to "Ballast Compatibility List" on Related Downloads.

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Features & Benefits

- No rewiring needed
- Works with fluorescent electronic ballast (Instant Start, Programmed Start, and Dimming)*
- Long life
- High CRI
- Instant on, no delay
- Convenient and quick installation
- Utilizes existing instant start or rapid start sockets
- Compatible with controls and sensors
- Dimmable
- Works in cold temperature applications
- Glass tube for superior optical performance
- 5 Year Warranty



* EMERGENCY BALLAST RESTRICTIONS



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Specification Data (with Normal Ballast Factor)

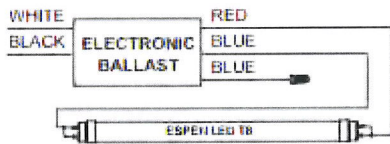
Order Code	Length	Lamp Wattage	System Wattage	CCT	Initial Lumens	CRI	Beam Angle	Lamp Efficacy	System Efficacy	Life	DLC
L48T8/835/10G-EB	48	10	13	3500K	1600	80+	325	160	123	50000	Yes
L48T8/840/10G-EB	48	10	13	4000K	1600	80+	325	160	123	50000	Yes
L48T8/850/10G-EB	48	10	13	5000K	1600	80+	325	160	123	50000	Yes
L48T8/830/10G-EB	48	10	13	3000K	1600	80+	325	160	123	50000	Yes
L48T8/845/10G-EB	48	10	13	4500K	1600	80+	325	160	123	50000	Yes

System Performance

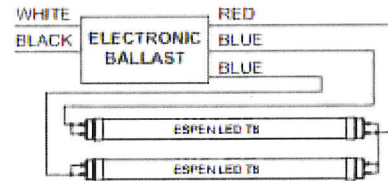
Lamp Model	Low Ballast Factor				High Ballast Factor			
	Lamp Power	System Power	Lumen Output	Lamp Efficacy	Lamp Power	System Power	Lumen Output	Lamp Efficacy
L48T8/835/10G-EB	8	11	1300	160	15	20	2350	155
L48T8/840/10G-EB	8	11	1300	160	15	20	2350	155
L48T8/850/10G-EB	8	11	1300	160	15	20	2350	155
L48T8/830/10G-EB	8	11	1300	160	15	20	2350	155
L48T8/845/10G-EB	8	11	1300	160	15	20	2350	155

Wiring diagram

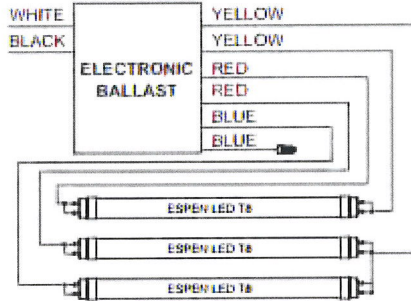
1-LAMP Instant Start Electronic Ballast



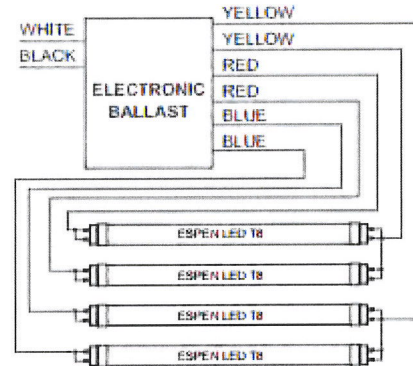
2-LAMP Instant Start Electronic Ballast



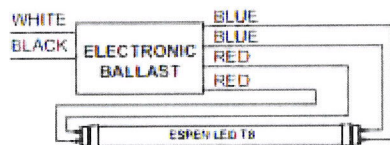
3-LAMP Instant Start Electronic Ballast



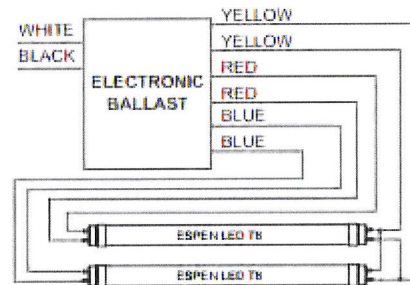
4-LAMP Instant Start Electronic Ballast



1-LAMP Programmed Start Electronic Ballast



2-LAMP Programmed Start Electronic Ballast



* Please refer to "Ballast Compatibility List" for compatible battery backup and/or emergency ballasts.

* Please refer to "Ballast Compatibility List" on Related Downloads.

Specification data is based on tests performed in a controlled environment and represents relative performance. Actual performance can vary depending on operating conditions. Application and performance data subject to change without notice. All specifications are nominal unless noted otherwise.

FSP-211 Digital High/Low Passive Infrared Fixture Integrated Outdoor Sensor

Fully adjustable high and low dimmed light levels

Designed for LED fixtures; rated for extreme temperatures and up to 200,000 on/off cycles

Hold off setpoint with automatic calibration option for convenience and added energy savings



Adjustable via handheld wireless configuration tool



IP66 rated with choice of lenses for wet and outdoor locations, and mounting heights from 8' to 40'

Adjustable time delay and cut off delay

PROJECT

LOCATION/TYPE

Product Overview

Description

The FSP-211 mounts in an outdoor lighting fixture and provides multi-level control based on motion. The sensor also includes a photocell to measure the ambient light level. It controls 0-10 VDC LED drivers or dimming ballasts, as well as non-dimming ballasts and, with an FSP-Lx Lens, is rated for wet and cold locations. All control parameters are adjustable via a wireless configuration tool capable of storing and transmitting sensor profiles.

Operation

The sensor ramps lighting On to the selected High mode level when motion is first detected and the ambient light level is below the hold off setpoint. After the sensor stops detecting movement and the time delay elapses, lights fade to the Low mode level. If there is no motion during the subsequent cut off time delay, the lights will turn Off. If the sensor detects motion before the lights turn Off, it ramps the light level back to High, unless the daylight contribution is sufficient to hold lighting at Low.

Features

- Provides line voltage On/Off switching and 0-10 VDC dimming control
- Works with ballasts or LED drivers
- High and low modes fully adjustable from 0 to 10V
- Time delay from 5 to 30 minutes
- Optional cut off delay
- Adjustable ramp up and fade down times
- Optional daylighting setpoint features automatic calibration, or permits manual adjustment
- Configuration tool stores five sensor profiles for quick setup and adjustment of multiple sensors
- Polycarbonate construction; flame retardant, UV resistant, impact resistant, recyclable
- UL244A and UL508; IP66 rated (when fully assembled and installed) for use in wet locations

Wireless Handheld Configuration Tool

Initial setup and subsequent sensor adjustments are made using a handheld configuration tool (FSIR-100). This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cut off and more. The FSIR-100 is also used to initiate automatic calibration of the FSP-211 ambient light level setpoint. The setpoint is used to hold the controlled lighting off or at low level when there is sufficient daylight. The wireless tool stores up to five sensor parameter profiles to speed configuration of multiple sensors.

Applications

The slim, low-profile FSP-211 is designed for installation inside the bottom of a light fixture body. When fully assembled and installed in an IP66-rated fixture, the sensor and FSP-Lx lenses are IP66 outdoor rated. The sensor is ideal for areas such as parking facilities, gas stations, pedestrian pathways and warehouses. A choice of four lenses ensures complete coverage for mounting heights up to 40'.

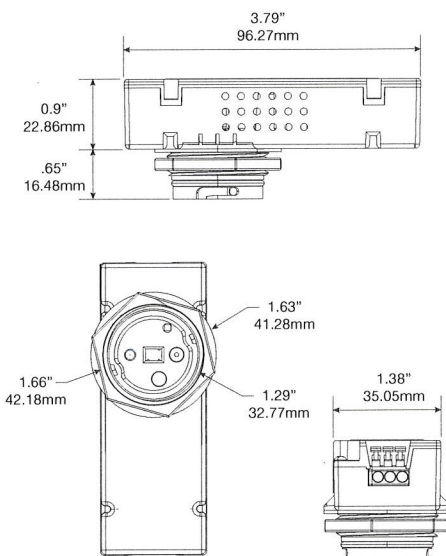


Specifications

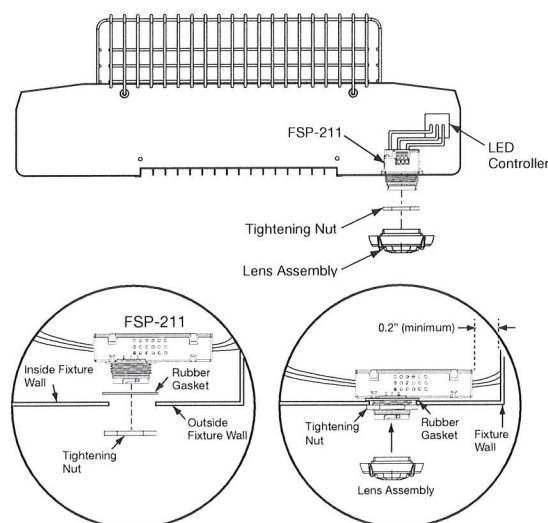
- 120/277 VAC, 50/60Hz
 - Load @120 VAC 0-800W ballast or incandescent
 - Load @277 VAC 0-1200W ballast
- 230 VAC, 50Hz; Load 0-300W ballast
- Relay life rating: 200,000 cycles (120/277 VAC); 50,000 cycles (230 VAC)
- High mode: 0-10 V; default 10 V
- Low mode: Off, 0-9.8 V; default 1 V
- Time delay: 30 sec., 5-30 min.; default 5 min.
- Cut off delay: none, 1-60 min. 1-5 hrs.; default 1 hr.
- Sensitivity: none, low, med, max; default max
- Setpoint: none, 1-250 fc, auto; default 4 fc
- Ramp up time: none, 1-60 sec.; default none
- Fade down time: none, 1-60 sec.; default none
- Operating temperature: -40-167°F (-40-75°C)
- Operating Humidity: 20-90%
- Weight: 2.8 oz (80 grams)
- IP66, CE compliant
- TUV, UL and cUL listed
- Five year warranty

Dimensions & Mounting

Sensor Dimensions



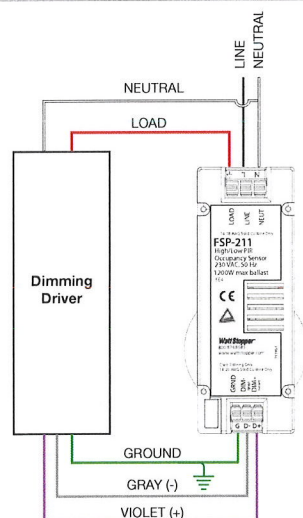
Sensor Mounting



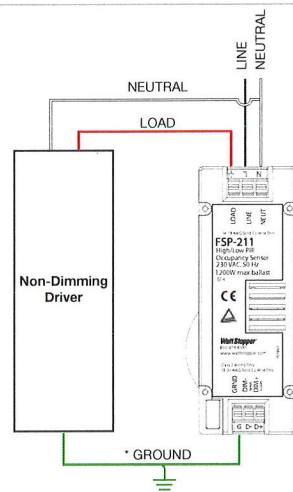
The FSP-211 accommodates fixture wall thickness up to 0.125" (3.18mm).

Wiring

Dimming Wiring Diagram



Non-Dimming Wiring Diagram



*The FSP-211 must be properly grounded.

Ordering Information

Catalog No.	Color	Description	Input Voltage
☐ FSP-211	White	Fixture mount, passive infrared motion sensor	120/277V, 50/60Hz or 230V, 50Hz
☐ FSIR-100	Black	Remote handheld configuration tool	(3) 1.5V AAA alkaline batteries

Attachment “E” Solar PV Scope of Work

**ATTACHMENT E
TO ENERGY SERVICES AGREEMENT**

SOLAR PV SCOPE OF WORK

SYSTEM LOCATION AND DESCRIPTION

1. Site Location	City of Duarte
	City Hall/Community Center/Fitness Center
2. Point of Interconnection	Meter # SCE 259000-076340
3. System Size *	185.8 kWdc
4. Year 1 Expected Energy (kwh)*	161,123 kWh

* Subject to minor adjustment depending on final design and siting.

1. Permits and Regulatory Fees

Fees for building, fire and electrical permits are not included in this contract.

Climatec includes durations of 12 weeks for procuring permit and regulatory approvals. Climatec will not be responsible for construction delays caused by permit and approval requirements from local jurisdictions or regulatory review bodies. Any delays in procuring permits will entitle Climatec a time extension change order to the contract as a day for day extension to our plan for obtaining required permits and/or approvals, as defined above or in the proposal schedule.

2. Utility Requirements

Proposal assumes all utility-owned electrical equipment serving the sites electrical distribution system has adequate capacity to handle the photovoltaic system output. No utility required electrical equipment upgrade or replacement is included in this proposal, including design and coordination thereof.

Any costs associated with unforeseen utility interconnection requirements, including but not limited to utility-owned equipment upgrades or additions, relay protection equipment external to the inverters, system impact studies, or telemetry requirements and interconnection studies are not included in this proposal.

3. Facility Equipment

The existing electrical panels are assumed to have provisions to accept cable connections on the primary side of the main service breaker, or adequate space and capacity for a new breaker.

Agreement excludes Short-Circuit Coordination Study for this project. Climatec will provide overcurrent settings that will be coordinated with City overcurrent settings.

Agreement assumes current switchboards / panelboards meet all code requirements.

Solar system includes all standard interconnection related equipment on the City side of the meter, including panel circuit breakers, utility and/or visible utility lockable disconnect switches, solar metering, conduit, and wiring. Additional City-side protection required by the utilities, above that provided by the certified inverters, is not included.

4. *Shading*

The proposal design is based on existing visual conditions on site. Removal of trees or other obstructions to install the solar arrays and system components is included in the proposal. Trees and/or other obstructions subsequently identified for removal or trimming by the City must be removed or trimmed prior to substantial completion or performance expectations/guarantees will require adjustment.

5. *Landscaping*

Irrigation reconfiguration to complete any foundation construction/conduit boring is not included.

6. *Commissioning*

The solar scope assumes commissioning requirements for the solar scope only.

7. *Monitoring*

Energy Management System Integration or similar control or SCADA system integrations to the new photovoltaic array(s) is excluded from this proposal. Solar monitoring communication and low voltage infrastructure is included in this proposal.

8. *Soil Conditions*

Existing site soil is assumed to have the following characteristics:

- IBC or UBC Table 1804A.2, Class 3 or equivalent Non-hazardous, sandy gravel and/or gravel
- Allowable foundation pressure greater than or equal to 2000 psf Lateral Bearing strength below grade equal to 200 (Lbs. /Sq. Ft./Ft. of depth)
- Lateral sliding coefficient of friction greater than or equal to 0.35. No sub-grade rocks or rock formations
- Adequate drainage
- No seismic-related hazards (e.g. faults, liquefaction, seismically-induced settlement, lateral spreading) Limited expansiveness
- Low to moderate corrosiveness (PH is less than 5.5, electrical resistivity is more than 1000 OHM-cm, chloride is less than 500 ppm, sulfate is less than 2000 ppm)
- Depth to start of passive pressure is 0.5 feet.

9. *Site Conditions Assumed*

A normal embed depth of 10 feet is assumed. If additional width, embed depth or spread footing is needed due to soil conditions, additional costs will be the responsibility of the client.

10. *Site Preparation.*

Prior to commencement of the Work, Purchaser shall be responsible for any necessary Site and/or roof preparation, including any roof structural assessment and correction.

11. Data Transmission.

Where required, Purchaser shall cause to be installed a TCP/IP or telephone connection for data transmission and shall maintain such connection throughout the applicable Warranty Term.

12. Storage

City shall provide Climatec with an area for storage space located near the site for storage of materials, tools and equipment, and other purposes.

**City of Duarte:
Duarte City Hall & Fitness Center
109.6 kW, 252 SPR-435 Modules**



CLIMATEC MEASUREMENT AND VERIFICATION AGREEMENT FOR City of Duarte

SCOPE OF SERVICES

TERMS AND CONDITIONS

ATTACHMENTS

Attachment “A” – Guaranteed Savings Measurement & Verification

- I. Savings Guarantee
- II. Measurement And Verification Methods
- III. Selected Measurement And Verification Options
- IV. Specific M&V Plan For Each ECM:
 - a. Lighting System Upgrades
 - b. HVAC System Installation
 - c. HVAC Controls Upgrades
 - d. Solar PV System Installation

Attachment “B” – Utility Baseline Summary

Attachment “C” – Standards of Operation (Lighting & HVAC)

- I. Standards of Operation for HVAC
- II. Standards of Operation for Lighting

CLIMATEC M&V AGREEMENT

This Measurement and Verification ("M&V") Agreement ("Agreement") entered into as of August 27, 2019 ("Effective Date") is made by and between:

City of Duarte, CA ("Purchaser")
with its principal place of business at
1600 Huntington Drive, Duarte, CA 91010

and

Climatec LLC
with its principal place of business at
2150 Towne Centre Place, Suite 200, Anaheim, CA 92805

This agreement shall include the Attachment(s) listed below:

Attachment "A" - Guaranteed Savings Measurement & Verification

Attachment "B" – Utility Baseline Summary

Attachment "C" – Standards of Operation (Lighting & HVAC)

SCOPE OF SERVICES

Energy Savings Measurement & Verification Service:

Climatec LLC will provide measurement and verification services of the energy savings associated with Purchaser's Energy Retrofit Installation, as described in Attachment A - Scope of Work, located in the associated Installation Agreement. Energy Savings M&V reports will be provided to the Purchaser on an annual basis.

Term:

This Service Agreement shall commence upon the completion and acceptance of the Purchaser's energy retrofit installation project and receipt of final payment for the associated Installation Contract and shall continue for a term of 15 years. The Purchaser may terminate this service agreement at any time with a 60 day written notice. However, termination of this agreement will void any savings guarantee associated with this project.

Charges:

This Agreement shall be billed once per year and is due and payable within forty-five (45) days of the Purchaser's receipt of invoice, which shall be sent on or by June 30 of each year for the preceding twelve (12) month period. The annual Service Agreement charge is \$8,500 for the first three years and escalated at 4% annually for every subsequent year thereafter. This rate does not include taxes.

TERMS AND CONDITIONS

1. General Provisions:

1.1 Unless stated otherwise, the services provided under this Agreement shall be provided during Climatec LLC's normal business hours. Normal business hours are Monday through Friday, 8:00 A.M. to 5:00 P.M. inclusive, excluding holidays.

1.2 The Purchaser shall provide reasonable means of access to the equipment being measured or verified. Climatec LLC shall not be responsible for any removal, replacement, or refinishing of the building structure, if required to gain access to the

equipment. Climatec LLC shall be permitted to start and stop all equipment necessary to perform the services herein described as arranged with the Purchaser's representative.

1.3 This Agreement, when accepted in writing by authorized representatives of Purchaser and Climatec LLC, shall constitute the entire Agreement between the two (2) parties.

2. Charges:

2.1 For services specifically requested by purchaser and not covered by this Agreement, but performed by Climatec LLC upon the Purchaser's authorization, the Purchaser agrees to pay Climatec LLC within forty-five (45) days of presentation of properly itemized invoice(s) at Climatec LLC's then current rates.

2.2 If emergency service is requested by the Purchaser and inspection does not reveal any defect for which Climatec LLC is liable under this Agreement, the Purchaser will be charged at Climatec LLC's current emergency charge rates. The current hourly straight time rate is \$ 175.00.

3. Limitations of Liability:

3.1 Climatec LLC shall not be liable for any loss, delay, injury, or damage that may be caused by circumstances beyond its control including, but not restricted to; acts of God, war, civil commotion, acts of government, fire, theft, corrosion, floods, lightning strikes, freezes, strikes, lockouts, differences with workmen, riots, explosions, quarantine restrictions, delays in transportation, shortage of vehicles, fuel, labor or materials, or malicious mischief. IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR BUSINESS INTERRUPTION, LOSSES, OR CONSEQUENTIAL, INDIRECT, SPECIAL OR SPECULATIVE DAMAGES

3.2 Climatec LLC shall not be required to make safety tests, install new devices, or make modifications to any equipment to comply with recommendations or directives of insurance companies, governmental bodies,.

3.3 Climatec LLC shall not be required to make replacements or repairs necessitated by reason of negligence, abuse, misuse, unless such repairs are necessitated due to the actions or inaction of Climatec LLC, or its employees, representatives, agents, consultants, or subcontractors.

3.4 This agreement pre-supposes that all equipment is in satisfactory working order. Climatec LLC will inspect the equipment within sixty (60) days after the agreement takes effect and will advise the Purchaser of any equipment found to be in need of repair. If the Purchaser does not authorize Climatec LLC to make the repairs or if the Purchaser does not have the work performed, the equipment will be eliminated from coverage and the Agreement savings will be adjusted. Maintenance of existing equipment and systems is the responsibility of the Purchaser. Failure to properly maintain equipment and systems can result in reduced energy efficiency and may necessitate a baseline energy adjustment and annual Service Agreement charge will be proportionately reduced. There may be some equipment which, for reasons beyond Climatec LLC's control, cannot be inspected before this Agreement takes effect. Climatec LLC will inspect such equipment on the first visit where the equipment is available.

3.5 The amount of any present or future sales, use, occupancy excise, or other tax imposed by Purchaser. either on its own behalf shall not be paid by Climatec LLC.

3.6 If the equipment or software included under this Agreement is altered, modified, or changed by a party other than Climatec LLC, this Agreement shall be modified to incorporate such changes and the Agreement price and/or Savings shall be adjusted accordingly, and the Annual Service Agreement charge shall be adjusted accordingly.

3.7 Following twelve (12) months of service or any time thereafter, if individual item(s) cannot, in Climatec LLC's opinion, be properly repaired on-site because of excessive wear or deterioration, Climatec LLC may withdraw the item(s) from coverage upon ninety (90) days prior written notice. Energy savings may be adjusted accordingly.

3.8 This Agreement shall be governed by, construed, and enforced in accordance with the laws of the State of California.

4. Miscellaneous Provisions:

4.1 Safety and Security:

The services provided hereunder may occur on active Purchaser sites. As such, Climatec LLC shall ensure that its services on and around the Purchaser site comply with all applicable laws, regulations and standards including but not limited to, the fingerprinting requirements of the Education Code and any other legal requirements which may be applicable to Climatec LLC's activities on or about the Purchaser sites. While the Purchaser shall reasonably assist Climatec LLC in determining the applicable requirements, it shall be Climatec LLC's sole responsibility for determining and complying with all applicable laws, regulations, and standards.

4.2 Dispute Resolution:

a. In the event of any dispute whatsoever between the Parties, Parties shall exhaust every reasonable effort to settle or dispose of the same, including a discussion of the matter between senior executives of each Party.

b. Claims between Purchaser and Contractor shall first be resolved using the procedures set forth at California Public Contract Code section 9204. "Claims" are defined, pursuant to California Public Contract Code section 9204, as a separate demand by Contractor for one of the following: a time extension for relief from penalties for delay; payment of money or damages arising from work done; or payment of an amount disputed by Purchaser.

c. Upon receiving a claim sent by registered or certified mail, Purchaser must review and provide a written response within forty-five (45) days that identifies the disputed and undisputed portions of the claim. The forty-five (45) day period to respond may be extended by mutual agreement between the Parties. The claim is deemed rejected in its entirety if Purchaser does not issue a response. Any payment due on an undisputed portion of the claim must be processed within sixty (60) days after Purchaser's response. If a claimant disputes Purchaser's response or lack thereof, the claimant may demand to meet and confer for settlement of the issues in dispute. Any portion of a claim that remains in dispute after a meet and confer conference will be subject to nonbinding mediation process, as described in California Public Contract Code section 9204. Undisputed and unpaid claims accrue interest at seven percent (7%) per annum. A subcontractor or lower tier subcontractor may make a claim to the Purchaser through Contractor, as specified in California Public Contract Code section 9204. However, the procedures in this section shall not supersede the requirements of the Agreement with respect to Contractor's notification to Purchaser of such claim or extend the time for the giving of such notice as provided in the Agreement.

d. Any controversy or claim arising out of or relative to the Agreement, or the breach thereof, not adjusted or disposed of by mutual agreement between the Parties as described above, shall be first settled by mediation and then (in the absence of settlement after mediation), by arbitration under the American Arbitration Association Construction Arbitration Rules then in effect, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof, and arbitration decision shall be final and binding on the Parties and on all Parties subject to the following. Said arbitration proceedings shall be filed in the Regional office of the American Arbitration Association nearest to Purchaser. All arbitrators shall be bound by the terms of the Agreement. The expenses of any arbitration shall be borne equally by the Parties to the arbitration, provided that each Party shall pay for and bear the cost of its own experts, evidence, and counsel. The prevailing party in arbitration shall recover reasonable legal fees and costs as determined by the arbitrator.

e. Pending a final resolution of a Dispute, the Parties shall each proceed diligently and faithfully with performance of their respective obligations under this Agreement.

4.3 Indemnification:

To the extent it may lawfully do so, the Parties hereby indemnify, defend (with counsel of its choosing), and holds harmless the other party and its affiliates, directors, representatives, agents, officers, employees and volunteers from and against any and all liability or claim of liability, loss or expense, including defense costs and legal fees and claims for damages of whatsoever character, nature and kind, whether directly or indirectly arising from any third party actions from injury to or death of persons, and damage to or loss of property to the extent caused by or arising out of or connected with an act or omission of the indemnifying party, or an agent, invitee, guest, employee, or anyone in, on or about the Purchaser sites, including, but not limited to, liability, expense, and claims for: bodily injury, death, personal injury, or property damage caused by negligence, creation or maintenance of a dangerous condition of property, breach of express or implied warranty of product, defectiveness of product, or intentional infliction of harm, including any workers' compensation suits, liability, or expense, arising from or

connected with services performed by, or on behalf of the, indemnifying party, by any person pursuant to this Agreement; nonpayment for labor, materials, appliances, teams, or power, performed on, or furnished or contributed to the Purchaser sites. Notwithstanding the above, neither party shall be required to defend, indemnify and hold harmless the other for its own negligent acts and omissions or willful misconduct. It is the intent of the Parties that where negligence is determined to have been joint or contributory, principles of comparative negligence will be followed, and each Party shall bear the proportionate cost of any loss damage, expense or liability attributable to that Party's negligence. Nothing herein constitutes any waiver of any of the Purchaser's statutory immunities. .

5. **Occupational Safety and Health:** The Parties hereto agree to notify each other immediately upon becoming aware of any alleged violation of, the Occupational Safety and Health Act (OSHA) relating in any way to the project or project site.
6. **Entire Agreement:** This Agreement, upon acceptance, shall constitute the entire agreement between the parties and supersedes any prior representations or understandings.
7. **Changes:** No change or modification of any of the terms and conditions stated herein shall be binding upon either Party unless accepted by both Parties in writing.
8. **Severability:** If one or more of the provisions of this Agreement are held to be unenforceable under laws, such provision(s) shall be excluded from these terms and conditions and the remaining terms and conditions shall be interpreted as if such provision were so excluded and shall be enforced in accordance to their terms and conditions.
9. **Counterparts:** This Agreement may be executed in multiple counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument. A signature on a copy of this agreement received by either party by facsimile or portable document format (PDF) is binding upon the other party as an original. The parties shall treat a photocopy of such facsimile as a duplicate original.
10. **Assignment:** Climatec LLC retains the right to assign its rights and obligations of this Agreement only with advance written consent of Purchaser.
11. **Acknowledgment:** Both Climatec LLC and the Purchaser acknowledge having read this Agreement, and all Attachments hereto, and have executed this agreement on the date written above.
12. **Approval:** Each party represents that the person that has executed this Agreement on its' behalf is authorized to do so.

City of Duarte

Climatec LLC

Signature

Signature

Print Name

Print Name

Title

President – Energy Services
Title

Date

Date

Attachment “A”

Guaranteed Savings Measurement & Verification

Attachment A

Guaranteed Savings Measurement & Verification

This document contains the energy savings Measurement and Verification (M&V) plan for the Energy Conservation Measures (ECMs) contained in the Installation Agreement. The following table summarizes the ECMs proposed. – See below Table 1.0

TABLE 1.0

Site	Lighting System Upgrades	HVAC System Installation	HVAC Control Upgrades	Solar PV System Installation
Chamber of Commerce	X		X	
City Hall	X		X	X
Community Center	X		X	
Fitness Center	X		X	
Senior Center	X	X	X	
Teen Center	X	X	X	
Public Safety	X		X	
Royal Oaks Park Building	X		X	
Duarte Park Building	X			
Aloysia Moore Park	X			
Beardslee Park	X			
Encanto Park/Nature Walk	X			
Royal Oaks Park Extension	X			
Thorsen Park	X			
Street Lighting (on TC-1, LS-2 & LS-3 Rates)	X			

The scope also includes implementation of new pool solar thermal heating system at the Fitness Center and new weather-based irrigation system upgrades. A specific Measurement and Verification Plan is submitted for each Energy Conservation Measure (ECM) to provide a comprehensive overall Plan for Purchaser. Energy savings are to be compared to the Utility Baseline Summary, as shown in Attachment B. Each measure's M&V Plan provides:

- A description of how the savings shall be verified for each ECM.
- Selection of specific protocol for verification of savings of each ECM.
- Requirements for measurement or other means to establish the ECM savings.

Climatec Building Technologies Group (Climatec LLC) is responsible for the pre-retrofit measurement, energy savings calculations, equipment installation, and required post retrofit verification as outlined herein. Purchaser agrees to operate and maintain all equipment installed. **Proper operation and maintenance of equipment and systems is critical to long-term achievement of energy savings.**

SAVINGS GUARANTEE

Climatec LLC warrants that Purchaser shall realize total energy savings, total water savings, total operational savings and utility rebates ("Guaranteed Project Savings") in excess of the total project cost during the course of the useful life of the equipment. The effective date will begin on the date of final acceptance of the Installation project and receipt of final payment for the associated Installation Contract and continue for a term not to exceed 15 years (Guarantee Period). Climatec LLC agrees to complete the M&V Report on an annual basis and deliver to the Purchaser within sixty (60) days of the anniversary date of final acceptance and annually thereafter. Project savings that are verified during the course of construction will be applied to the 1st year guaranteed project savings.

If the annual M&V Report demonstrates that the project will achieve one hundred percent (100%) or more of the Guaranteed Project Annual Savings, then Climatec LLC shall have satisfied its energy performance guarantee obligation and the Purchaser shall accept the Annual M&V Report.

In the event that an annual M&V Report savings value (including any excess, unapplied savings from previous years) does not meet the Guaranteed Project Savings in accordance with the M&V Plan, then Climatec LLC shall repair, replace, or substitute the ECM that is not performing at the required level, as identified in the M&V Report, and at Climatec LLC's expense. Following corrective action, Climatec LLC shall re-perform the relevant M&V work for the affected ECM(s) and amend or supplement the M&V Report. If the sum of the ECMs indicates that the Guaranteed Project Savings are met or exceeded, then no further remedy shall be required.

If, after the opportunity to make corrections, the M&V Report, as amended, indicates that verified savings are less than the Guaranteed Project Savings as shown in the Savings Summary, then Climatec LLC shall pay the Purchaser the shortfall amount.

The Purchaser agrees that project savings, which exceed the guaranteed amount in any one (1) year, may be applied to future year's savings to offset an energy savings shortfall. The savings guarantee will remain in effect for the term of this agreement. Cancellation of this agreement will result in the termination of the savings guarantee.

The Utility Baseline Summary, as shown in Attachment B, may be modified over the course of the Guarantee Period to adjust for changes in utility rates, number of days in utility billing cycle, square footage, energy using equipment, building occupancy and weather. This Guarantee is subject to the Purchaser's adherence to the Standards of Operation for Lighting and HVAC systems, as documented in Attachment "C" of this agreement.

MEASUREMENT AND VERIFICATION METHODS

Measurement and Verification (M&V) of energy savings is a methodology based on standard industry protocol intended to provide reasonable assurance that energy savings calculated are realized over the term of the contract.

The development of the M&V plan is based on the IPMVP-2016 (International Performance Measurement and Verification Protocol) and the application of sound engineering and business guidelines to the overall need for verification of energy savings for each ECM. This plan contains methodology that shall cost effectively provide assurance of equipment savings through short term or spot measurements, engineering calculations and/or direct utility billing comparisons. The necessary components to a well-established M & V Plan are:

- Specific identification of each ECM and proposed M & V. Reporting requirements for overall savings.
- Participation of all parties and any necessary coordination with independent review.

Methods of M&V vary in accordance with the type of project, level of assurance of savings, cost, and availability of data, financing constraints, and energy costs. The methods selected must be cost effective given the financial savings to the Purchaser. The methods used for the ECMs detailed herein were selected to minimize M&V cost while still providing a reasonable assurance of the savings calculations.

The IPMVP-2016 guideline provides the following options related to methodology for M&V:

Option A – Partially Measured Retrofit Isolation. Option A uses a combination of stipulated and/or measured factors to calculate baseline usage and savings associated with the ECM. Spot or short-term measurement would be used for the measured values. Stipulated values are supported by Purchaser input, historical data, or manufacturer data.

- Baseline and savings calculations are provided through engineering calculations, component or system models.
- Depending on number of points measured, Option A provides the least cost alternative to M&V.

Option B – Retrofit Isolation. Option B provides for measurement to provide data for assessing values or variables. Spot or short-term measurement, taken at the component and/or system level are taken when variations in factors can

be accounted for or eliminated. Continuous measurement at the component and/or system level can also be used to account for the variations in factors over time.

- Baseline and savings calculations are provided through engineering calculations, component or system models.
- Cost is variable depending on the points measured, and the term of the measurement process used. Option B provides a better scenario for ECMs where a small number of factors can be accurately measured with a measurement plan.

Option C – Whole Building. Option C involves the use of utility meters or whole building sub-metering to assess the energy performance of the entire building. After an ECM is implemented the billing data is assessed in accordance with an approved plan to determine actual ECM savings.

- Baseline is established through utility data and engineering/regression analysis.
- Engineering calculations or modeling initially provides estimated ECM savings.
- Actual ECM savings are based on the utility or metered data. Savings must be adjusted for changes in building operation and variables assumed in the engineering calculations or modeling (such as weather, occupancy, etc.).
- Cost of this approach is variable based on the availability of utility data, sub-metered data, and overall savings guarantee. If the metered data is used for a savings guarantee, all variables related to building performance must be measured and adjusted, usually on an annual basis. Option C usually requires a substantial amount of time and effort to establish the baseline, provide adjustments and track the savings.

Option D – Calibrated computer simulation. Option D uses computer-modeling techniques to provide an engineering model of component and/or system performance. The inputs to the computer simulation may be made by engineering estimates, short or long term measurements, and utility or other metered data. Once the model is properly calibrated it is used for the establishment of the baseline and savings by changing appropriate inputs.

- Baseline is established through a calibration process for the computer modeling. Appropriate measurements and inputs are reflected against regression analysis for the metered data.
- Once the model is calibrated and the baseline established inputs are varied for the proposed ECM to establish savings.
- Actual ECM savings are stipulated based on the computer model. There may be follow up calibration of the model with the ECM in place to affirm the overall building simulation model.
- Cost of this method varies based on the complexity and accuracy of model desired, availability of data and overall measurement required.

SELECTED MEASUREMENT AND VERIFICATION OPTIONS

For the ECM's covered under this M&V plan, the Table of Selected M&V Options, located on the following page summarizes the proposed **IPMVP Options selected**: See table 1.1 below

TABLE 1.1

Site	Lighting System Upgrades	HVAC System Installation	HVAC Control Upgrades	Solar PV System Installation
Chamber of Commerce	A		A	
City Hall	A		A	A
Community Center	A		A	
Fitness Center	A		A	
Senior Center	A	A	A	
Teen Center	A	A	A	
Public Safety	A		A	
Royal Oaks Park Building	A		A	
Duarte Park Building	A			
Aloysia Moore Park	A			
Beardslee Park	A			
Encanto Park/Nature Walk	A			
Royal Oaks Park Extension	A			
Thorsen Park	A			
Street Lighting (on TC-1, LS-2 & LS-3 Rates)	A			

The particular option selected for each ECM was based on a number of related issues including: ECM cost, ECM savings, cost of Measurement and Verification and the ability to accurately determine whole building operations. Savings from the irrigation system upgrades and the pool solar thermal system are stipulated and agreed by the Purchaser and are met upon the completed installation of these retrofit projects.

The baseline and the post-installation energy use depend on various system and external factors, such as energy demand, operating hours, weather conditions, motor loading, energy rates, and occupancy. Development of the baseline, post ECM consumption, cost avoidances and simple payback for each ECM covered by this M&V plan includes:

- Stipulated Values – These values are important in the overall calculations for energy consumption, financial calculations, and operating conditions. Climatec LLC and Purchaser have agreed to these values for purposes of establishing savings.
- Developed/Measured Values – These are the values determined by spot or short-term measurement. Values are determined based on a sound engineering approach to variable determination. Both values used for baseline consumption and values to be measured/determined as parts of the post ECM implementation are detailed.
- Assumptions – Some values that are assumed in order to calculate energy use are necessary in certain circumstances.
- Calculations – The necessary calculations for baseline energy and demand usage, the calculation of the energy and demand components with implementation of the ECM, the calculation of costs, and annual savings are the primary tool for assessing the estimated and actual savings of any ECM.
- Instrumentation – The type and specifications, if applicable, for any instrumentation used for developed/measured values is provided to ensure appropriate meters and measurement equipment is used for specified applications.
- Pre Retrofit Measurements – Each ECM may have a section detailing the measurements required prior to the retrofit. These measurements are used to establish the baseline or adjustments required to establish an accurate baseline.

- Post Retrofit Measurements – Each ECM may have a section that details the measurements required if any after the retrofit is completed. This section is utilized to detail the type of measurements required for verification of the energy savings calculations.
- Adjustments – Each ECM may have a section for adjustments. This section includes possible adjustments to the actual Energy Audit Report and energy information, appropriate adjustments to the M&V plan, and adjustments to any savings guarantee. This section is utilized to anticipate changes necessary due to field conditions and provide an appropriate response in the verification of actual energy and cost avoidances.
- Commissioning – Each ECM may have a section regarding the commissioning process. This provides the detail for how the savings will be verified upon project completion, and the type of inspection that will be completed, and the billing method for verified savings. This section is utilized to provide a standard approach for each ECM upon project completion.

Climatec LLC will follow the agreed-upon M&V protocols for the measurement period and will prepare post-installation reports with supporting documentation for the Purchaser. The cost of M&V is included in the project cash flow requirements.

SPECIFIC MEASUREMENT AND VERIFICATION PLAN

“OPTION A” FOR LIGHTING SYSTEM UPGRADES

Introduction

This Measurement and Verification Plan (M&V) is specific to all lighting retrofits and occupancy sensor installations. The sites receiving these upgrades are listed in the Table of Recommended Measures located at the beginning of this Attachment.

M&V Protocol

For this ECM, IPMVP Protocol – Option A shall be utilized. This option provides for the measurement of at least one variable pre and post retrofit with other variables allowed for stipulation. For this retrofit, a representative sample of each of the fixture types will be measured. The same sample will be used for both pre and post retrofit calculations. Wattage shall be measured with an appropriate instrument that is properly calibrated.

Light Levels

A representative sample of the light levels shall be measured. Where rooms have similar or identical lighting design, it is not required that each room be measured. Light levels shall be measured by an appropriate instrument that is properly calibrated. Light level measurements apply to both pre and post retrofit areas and shall be recorded at the work surface. Where rooms do not have a specific work surface (such as gymnasiums) light levels shall be measured at the floor.

Documentation

All areas measured shall be documented. The data shall indicate areas that do not meet IESNA standard light level requirements. All instrumentation used shall be clearly documented.

Stipulated Values

Operating Hours are stipulated for purposes of M&V. Please see Attachment “C”, Lighting Standards of Operation for a complete list of lighting hours of operation. Stipulated values are agreed to by the Purchaser.

Savings Calculations

The calculations for the baseline energy consumption and post retrofit savings provide the basis for the overall financial viability of this ECM.

kWh and/or kW Savings

The electrical consumption reduction of a particular lighting ECM is determined by comparing the pre and post conditions applied to the hours agreed upon in the Standards of Operation.

$$\{[(\text{Existing watts/fixture}) \times (\text{existing quantity}) \times (\text{existing hours of operation})] - [(\text{proposed watts/fixture}) \times (\text{proposed quantity}) \times (\text{proposed hours of operation})]\} / 1000 = \text{kWh savings}$$

Dollar Savings

After calculating the kWh saved, the specific facility's average cost per kilowatt hour shall be used to determine dollar savings.

$$(\text{kWh saved}) \times (\text{average kWh rate}) = \$ \text{ kWh saved}$$
$$(\$ \text{ kWh saved}) = \text{the total dollars saved}$$

Operational Savings

The Purchaser will realize maintenance and operational savings resulting from the new lighting system installations, extended warranties, and/or service agreements provided by Climatec LLC. The operational savings are stipulated and met upon the completed installation of the energy retrofit contract.

Adjustments

For this ECM the following adjustments are allowed for purposes of Measurement and Verification:

- Light level requirements may be modified as detailed in this plan.
- Changes in actual construction including number and/or type of fixtures. All changes shall be clearly documented and provided to the Purchaser's representative.
- Utility rates, billing days or degree days.

Commissioning

Commissioning shall consist of inspections and a final savings verification report. Inspections shall consist of:

- During the construction phase of the project, Climatec LLC shall keep a detailed record of the quantity and types of fixtures retrofitted and fixtures installed in each building. A post construction inspection is required by the responsible M&V party.
- After lighting modifications have been made, the installations shall be inspected to verify the retrofit counts by fixture code.
- Post retrofit lighting levels shall be measured to verify compliance with the contract standards.

SPECIFIC MEASUREMENT AND VERIFICATION PLAN

“OPTION A” FOR HVAC SYSTEMS INSTALLATION

Introduction

This Measurement and Verification Plan (M&V) is specific to the installation of new high efficiency HVAC units at the sites listed in the Table of Recommended Measures located at the beginning of this Attachment.

M&V Protocol

For this ECM, IPMVP Protocol – Option A shall be utilized. This option shall provide for the measurement of at least one variable pre and post retrofit with other variables allowed for stipulation. For this retrofit, field data shall be collected which includes, unit counts, unit tonnage, nameplate horsepower and efficiency rating for each existing HVAC system.

Stipulated Values

Hours of Operation, heating/cooling loads and runtime hours of the existing HVAC systems are stipulated for purposes of M & V. Please refer to Attachment C, HVAC Standards of Operation in this agreement for specific operating hours and runtime hours for each HVAC unit or area. Stipulated values are agreed to by Purchaser.

Calculations

The calculations for the baseline energy consumption and post-retrofit savings provide the basis for the overall financial viability of these ECM's. The following equations summarize the calculation of savings:

Electric (kWh) Savings

The electrical usage reduction of this ECM is determined by the following equation:

$$((\text{Size of Existing HVAC Unit}) \times (\text{Unit Efficiency}) \times (\text{Stipulated Load Factor}) - (\text{Size of New Cooling Unit}) \times (\text{Unit Efficiency}) \times (\text{Stipulated Load Factor})) \times (\text{Annual Operating Hours}) = \text{kWh Savings}$$

Dollar Savings

After calculating the kWh saved, the specific facility's average cost per kilowatt hour shall be used to determine dollar savings.

$$\begin{aligned} (\text{kWh saved}) \times (\text{average kWh rate}) &= \$ \text{ kWh saved} \\ (\$ \text{ kWh saved}) &= \text{Total dollars saved} \end{aligned}$$

Operational Savings

The Purchaser will realize maintenance and operational savings resulting from the new system installations, extended warranties, and/or service agreements provided by Climatec LLC. The operational savings are stipulated and met upon the completed installation of the energy retrofit contract.

Pre Retrofit Measurements

None required for this ECM.

Post Retrofit Measurements

None required for this ECM.

Adjustments

None required for this ECM.

Commissioning

Commissioning shall consist of inspections, and a final Commissioning report. The Inspections and Report shall consist of:

- Commissioning of the newly installed HVAC equipment shall include verification that each new unit is operating, as specified, in all modes (heat/cool).

SPECIFIC MEASUREMENT AND VERIFICATION PLAN

“OPTION A” FOR HVAC CONTROLS UPGRADE

Introduction

This Measurement and Verification Plan (M&V) is specific to the energy management system upgrades at the sites listed in the Table of Recommended Measures located at the beginning of this Attachment.

M&V Protocol

For this ECM, IPMVP Protocol – Option A shall be utilized. This option shall provide for the measurement of at least one variable pre and post retrofit with other variables allowed for stipulation. The cooling and heating setpoints during occupied and unoccupied modes of the HVAC equipment will be verified and documented. For this retrofit, field data shall be collected which includes, unit counts, unit tonnage, nameplate horsepower, efficiency rating, operating schedules, cooling and heating temperature setpoints for each HVAC system.

Stipulated Values

Hours of operation and heating/cooling load factors are stipulated for purposes of M&V. Please refer to the Attachment C, HVAC Standards of Operations for specific existing and proposed operating hours for each HVAC unit or area. Stipulated values are agreed to by Purchaser.

Calculations

The calculations for the baseline energy consumption and post retrofit savings provide the basis for the overall financial viability of these ECM's. Post-retrofit operating schedules and trend reports will be used to verify the inputs such as operating hours, cooling/heating temperature setpoints that are used in the calculations to validate the savings. The following equations summarize the calculation of savings:

Electric (kWh) Savings

The electrical usage reduction of this ECM is determined by applying the stipulated runtime reduction to the calculated energy usage of the HVAC unit.

$(\text{Size of HVAC unit}) \times (\text{Unit efficiency}) \times (\text{Stipulated load factor}) \times (\text{Existing annual operating hours} - \text{Proposed annual operating hours}) = \text{kWh savings}$

Natural Gas (Therms) Savings

The natural gas usage reduction of this ECM is determined by applying the stipulated runtime reduction to the calculated energy usage of the HVAC unit.

$(\text{Size of Heating unit}) \times (\text{Unit efficiency}) \times (\text{Stipulated load factor}) \times (\text{Existing annual operating hours} - \text{Proposed annual operating hours}) = \text{Therm savings}$

Dollar Savings

After calculating the kWh saved and the Therms saved, the specific facility's average cost per kilowatt hour and the average cost per Therm of natural gas shall be used to determine dollar savings.

$(\text{kWh saved}) \times (\text{average kWh rate}) = \$ \text{ kWh saved}$
 $(\text{Therms saved}) \times (\text{average Therm rate}) = \$ \text{ Therms saved}$
 $(\$ \text{ kWh saved}) + (\$ \text{ Therms saved}) = \text{Total dollars saved}$

Operational Savings

The Purchaser will realize maintenance and operational savings resulting from the new system installations, extended warranties, and/or service agreements provided by Climatec LLC. The operational savings are stipulated and met upon the completed installation of the energy retrofit contract.

Pre Retrofit Measurements

Existing operating hours and cooling/heating temperature setpoints for each HVAC unit or area will be obtained from current thermostats/EMS.

Post Retrofit Measurements

Post-retrofit operating schedules, cooling and heating temperature setpoints in both occupied and unoccupied modes for the HVAC equipment will be obtained using the new controls system.

Adjustments

For this ECM the following adjustments are allowed for purposes of Measurement and Verification:

- Addition or subtraction to the conditioned square footage of facilities.
- Utility rates, billing days or degree days.
- Equipment changes.
- Increase or decrease in facility usage as associated with daily occupancy times and special events.

Commissioning

Commissioning shall consist of inspections, and a final Commissioning report. The Inspections and Report shall consist of:

- Commissioning of the newly installed energy management system (EMS) shall include verification that the operating schedules, cooling and heating temperature set points and the control sequences for the HVAC equipment have been programmed as specified.

SPECIFIC MEASUREMENT AND VERIFICATION PLAN

“OPTION A” FOR SOLAR PHOTOVOLTAIC INSTALLATION

Introduction

This Measurement and Verification Plan (M&V) is specific to the solar photovoltaic (PV) installations at the sites listed in the Table of Recommended Measures located at the beginning of this Attachment.

M&V Protocol

For this ECM, IPMVP Protocol – Option A shall be utilized. This option shall provide for the measurement of at least one variable pre and post retrofit with other variables allowed for stipulation. For this installation, the kilowatt-hour (kWh) production from the solar PV systems shall be measured and recorded.

Stipulated Values

The solar panel degradation factor (0.25%) and utility escalation rate (4%/year) are stipulated for the purposes of M&V. Stipulated values are agreed to by Purchaser.

Calculations

The calculations for the baseline energy consumption and post installation savings provide the basis for the overall financial viability of these ECM's. The following equations summarize the calculation of savings:

Electricity Production

Electricity production of the PV system is determined by recording the kilowatt hours (kWh) off the net electric meter/Data Acquisition System (DAS) and recording the results.

Dollar Savings

After recoding the kWh generated from the PV system, the specific facility's average cost per kWh shall be used to determine dollar savings.

$$\begin{aligned} (\text{kWh generated}) \times (\text{average kWh rate}) &= \$ \text{ kWh saved} \\ (\$ \text{ kWh saved}) &= \text{Total dollars saved} \end{aligned}$$

Maintenance of System

Calculation of energy cost savings from the solar PV systems are contingent upon the Purchaser maintaining an active operations and maintenance (O&M) contract for the term of the solar lease agreement.

Pre Retrofit Measurements

Existing utility electrical energy (kWh) consumption as shown in Attachment B “Baseline Summary”.

Post Retrofit Measurements

Electrical energy (kWh) produced from the solar PV systems recorded from the net electrical meter/DAS.

Adjustments

For this ECM the following adjustments are allowed for purposes of Measurement and Verification:

- Addition or subtraction to the square footage of facilities.
- Utility rates, billing days or degree days.
- Addition or subtraction of electrical load at the facilities.
- Any structural failure in a building supporting the PV system.
- Unexpected weather conditions falling outside of the normal weather for the location.
- Legislative, administrative or executive action, regulation, order or requisition of any federal, state or local government, local utility or public utilities commission.
- There is an event of Force Majeure or changes in the conditions at or near any of the sites, which causes additional shading, soiling, or otherwise reduced performance of the solar PV systems.

Commissioning

Commissioning shall consist of inspections, and a final Commissioning report. The Inspections and Report shall consist of:

- Commissioning of the new solar PV system shall include securing the Utility Interconnect agreement with SCE, proper alignment of the solar panels and functional testing.

Attachment “B”

Utility Baseline Summary

Energy Baseline

City of Duarte											
Utility Baseline Summary											
			1/1/2018 through 12/31/2018								
Site Name	Address	Square Footage	Dollars Electric	kWh	\$ / kWh	Dollars Gas	Therms	\$ / Therms	Dollars Water	cGal	\$ / cGal
Chamber of Commerce	1735 Huntington Dr, Duarte CA 91010		\$301	1,167	\$0.26	\$0	0		\$222	157	\$1.42
City Hall	1850 HIGHLAND AVE	23,350	\$60,402	395,503	\$0.15	\$17	1	\$16.88	\$1,818	1,968	\$0.92
Community Center (electric included in City Hall)	1600 E Huntington Dr	6,500				\$99	75	\$1.31	\$22,679	39,768	\$0.57
Fitness Center (electric included in City Hall)	1600 E Huntington Dr	7,700				\$305	266	\$1.15	\$0	0	
Senior Center	1610 E Huntington Dr	13,475	\$21,074	92,967	\$0.23	\$60	40	\$1.50	\$7,898	11,110	\$0.71
Teen Center	1400 Buena Vista Street	6,665	\$14,997	52,276	\$0.29	\$20	4	\$5.05	\$6,741	10,828	\$0.62
Public Safety	1042 E Huntington Dr	3,500	\$6,937	52,306	\$0.13	\$0	0		\$877	502	\$1.75
Museum	777 Encanto Park		\$1,176	5,798	\$0.20	\$0	0		\$0	0	
Aloysia Moore Park	1100 Duarte Road		\$708	3,644	\$0.19	\$0	0		\$11,795	16,637	\$0.71
Beardslee Park	2000 Buena Vista Street		\$343	789	\$0.43	\$0	0		\$22,845	39,072	\$0.58
Bike Trail	Various		\$823	105	\$7.84	\$0	0		\$4,502	6,618	\$0.68
Duarte Sports Park Field B	1344 Bloomdale Street		\$7,914	96,939	\$0.08	\$10	9	\$1.10	\$42,225	66,874	\$0.63
Duarte Skate Park	1401 Central Avenue		\$0	0	\$0.31	\$0	0		\$13,985	23,790	\$0.59
Encanto Park / Nature Walk	751 Encanto Parkway		\$1,706	7,527	\$0.23	\$0	0		\$48,393	81,270	\$0.60
Valley View Park	205 Melcanyon Road		\$777	4,025	\$0.19	\$0	0		\$3,211	4,584	\$0.70
Hacienda Park	2695 Hacienda Drive		\$303	362	\$0.84	\$0	0		\$0	0	
Otis Gordon Sports Park	2351 Central Avenue		\$0	0	\$0.31	\$0	0		\$35,672	63,124	\$0.57
Royal Oaks Park	2627 Royal Oaks Drive		\$11,798	42,422	\$0.28	\$0	0		\$16,354	25,204	\$0.65
Royal Oaks Park Extension	2701 Royal Oaks Drive		\$0	0	\$0.31	\$0	0		\$0	0	
Third Street Park	1634 3rd St, Duarte CA 91010		\$0	0	\$0.31	\$0	0		\$1,728	1,855	\$0.93
Thorsen Park	2801 Huntington Dr		\$780	3,832	\$0.20	\$0	0		\$0	0	
TC-1	Various		\$13,267	74,013	\$0.18	\$0	0		\$0	0	
LS1	Various		\$114,628	342,919	\$0.33	\$0	0		\$0	0	
LS2	Various		\$40,930	452,076	\$0.09	\$0	0		\$0	0	
LS3	Various		\$4,421	45,175	\$0.10	\$0	0		\$0	0	
Street Lights	Various		\$12,572	101,382	\$0.12	\$0	0		\$0	0	
Landscape Irrigation	Various		\$9,511	38,525	\$0.25	\$0	0		\$44,325	71,841	\$0.62
Miscellaneous Other Meters	Various		\$10,812	49,471	\$0.22	\$619	615	\$1.01	\$135,677	206,618	\$0.66
Project Total		65,790	\$339,118	1,882,347	\$0.18	\$1,169	1,031	\$1.13	\$423,419	675,295	\$0.63

Attachment “C”

Standards of Operation for HVAC & Lighting

STANDARDS OF OPERATION

The hours of operation for the Purchaser's Lighting and HVAC systems, located on the following pages, were used to calculate the energy savings in the Savings Summary section of this agreement and will be used in all measurement and verification calculations.

City of Duarte							Lighting Standards of Operations					
Space Usage	24/7	Admin Open Area	Classroom	Dusk /<Dawn	Dusk /Dawn	Hallway	Kitchen	Mech /Elec/Strg	MPR	Office Admin	Private Restroom	Restroom
Chamber of Commerce		1700		1092			1700	500		1700	1700	
City Hall		3640		1092	4380	3640	2500	500		2800	2800	3000
Community Center		2500		1092			1800	1200		2000		3000
Fitness Center		4732		1092	4380	4732		500		3500	1500	4732
Senior Center		1820	1820		4380	1820	1820	500		1820		1820
Teen Center	8760	1770	1770		4380	1770	1500	200	1770	1500		1770
Public Safety	8760			1092				500		2900		3500
Royal Oaks Park Building		1000			4380			350				1000
Duarte Park Building		3000			4380							3000
Museum		1100			4380		1100	50		1100		250
Post Office					4380			500				
Redevelopment Agency					4380			500				
Aloysia Moore Park					4380							
Beardslee Park					4380							
Bike Trail					4380			500				
Duarte Sports Park Field B				800								
Duarte Skate Park					4380			500				
Canto Park / Nature Walk				1092	4380							
Valley View Park					4380			500				
Hacienda Park					4380			500				
Lena Valenzuela Park					4380			500				
Montgomery Field					4380			0				
Northview Park					4380			500				
Orange Blossom Park					4380			500				
Otis Gordon Sports Park				910				1092				
Royal Oaks Park				910								
Royal Oaks Park Extension					4380							
Third Street Park					4380			500				
Thorsen Park					3000							
TC-1					4380							
LS1					4380							
LS2					4380							
LS3					4380							
Street Lights					4380							

			Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
City Hall	<u>Mon - Thurs</u> 6:30 AM 6:00 PM	Unoccupied or by Event Only	Occupied Setpoint ² : 76 °F Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability ² Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Community Center	<u>Mon - Thurs</u> 6:30 AM 6:00 PM	Unoccupied or by Event Only	Occupied Setpoint ² : 76 °F Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability ² Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Fitness Center	<u>Weekdays</u> 5:00 AM 9:00 PM <u>Weekends</u> Sat - 7:00:00 AM 5:00 PM Sun - 11:00 AM 5:00 PM	Unoccupied or by Event Only	Occupied Setpoint ² : 76 °F Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability ² Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Senior Center	8:00 AM 2:00 PM	Unoccupied or by Event Only	Occupied Setpoint ² : 76 °F Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability ² Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Teen Center	<u>Regular Schedule</u> 2:00 PM 8:00 PM <u>Summer Schedule</u> 10:00 AM 8:00 PM	Unoccupied or by Event Only	Occupied Setpoint ² : 76 °F Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability ² Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Public Safety	24 hours per day, 365 days per year	Unoccupied or by Event Only	Occupied Setpoint ² : 76 °F Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability ² Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Royal Oaks Park Building	Hours of operation vary by class schedules	Unoccupied or by Event Only	Occupied Setpoint ² : 76 °F Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability ² Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
*Only the newly installed control systems will be capable of these features (local setpoint adjustments and set back controls).			

END

DOCUMENT CHECKLIST

PLEASE EXECUTE ONE (1) ORIGINAL SET OF ALL DOCUMENTS
(NO FRONT & BACK COPIES, PLEASE)

RETURN ALL ORIGINALS TO:
U.S. BANCORP GOVERNMENT LEASING AND FINANCE, INC.
FRANCINE NEVILLE
950 17TH STREET, 8TH FLOOR
DENVER, CO 80202
303-585-4054

- ☐ **Master Tax-Exempt Lease/Purchase Agreement** – This document must be executed in the presence of a witness/attestor. The attesting witness does not have to be a notary, just present at the time of execution.
- ☐ **Property Schedule No. 1** - This document must be executed in the presence of a witness/attestor. The attesting witness does not have to be a notary, just present at the time of execution.
- ☐ **Property Description and Payment Schedule – Exhibit 1**
- ☐ **Lessee's Counsel's Opinion – Exhibit 2.** This exhibit will need to be executed by your attorney, dated and placed on their letterhead. Your attorney will likely want to review the agreement prior to executing this opinion.
- ☐ **Lessee's General and Incumbency Certificate – Exhibit 3.** Include in your return package a copy of the board minutes or resolution for our files.
- ☐ **Payment of Proceeds Instructions – Exhibit 4.** Intentionally Omitted.
- ☐ **Acceptance Certificate – Exhibit 5.** Intentionally Omitted.
- ☐ **Bank Qualification and Arbitrage Rebate – Exhibit 6.**
- ☐ **Notification of Tax Treatment** – Please provide your State of Sales/Use tax Exemption Certificate.
- ☐ **Form 8038-G** – Blank form and instructions provided to Lessee. Please consult your CPA, local legal or bond counsel to fill out.
- ☐ **Escrow Agreement** – This document needs to be executed by the Executing Official defined in the Lessee's Certificate – Exhibit 3.
 - o **Investment Direction Letter – Exhibit 1.** This document needs to be executed by the Executing Official.
 - o **Schedule of Fees – Exhibit 2.**
 - o **Requisition Request – Exhibit 3.** This document should be retained by Lessee and utilized to request disbursements from the escrow account. Please make copies and fill out as many as are needed.
 - o **Final Acceptance Certificate - Exhibit 4.** This document should be retained by Lessee and provided to Lessor once all the proceeds have been disbursed from the escrow account.
 - o **Class Action Negative Consent Letter – Exhibit 6.**
 - o **IRS Form W-9.** This document should be retained by Lessee and submitted with the Requisition Request(s) for each vendor being paid. Please make copies and fill out as many as are needed.
- ☐ **Insurance Authorization and Verification** – To be filled out by the Purchaser and sent to your insurance carrier. A valid insurance certificate, or self-insurance letter if the Purchaser self-insures, is required prior to funding.

Master Tax-Exempt Lease/Purchase Agreement

Between: U.S. Bancorp Government Leasing and Finance, Inc. (the "Lessor")
13010 SW 68th Parkway, Suite 100
Portland, OR 97223

And: City of Duarte (the "Lessee")
1600 Huntington Drive
Duarte, CA 91010
Attention: Kristen Petersen
Telephone: (626) 357-7931 ext. 211

Dated: August 30, 2019

ARTICLE I DEFINITIONS

The following terms will have the meanings indicated below unless the context clearly requires otherwise:

"Agreement" means this Master Tax-Exempt Lease/Purchase Agreement, including all exhibits and schedules attached hereto.

"Code" is defined in Section 3.01(f).

"Commencement Date" is the date when the term of a Property Schedule and Lessee's obligation to pay rent thereunder commences, which date shall be set forth in such Property Schedule.

"Event of Default" is defined in Section 13.01.

"Lease Payments" means the Lease Payments payable by Lessee under Article VI of this Agreement and each Property Schedule, as set forth in each Property Schedule.

"Lease Payment Dates" means the Lease Payment dates for the Lease Payments as set forth in each Property Schedule.

"Lease Term" means, with respect to a Property Schedule, the Original Term and all Renewal Terms. The Lease Term for each Property Schedule executed hereunder shall be set forth in such Property Schedule, as provided in Section 4.02.

"Lessee" means the entity identified as such in the first paragraph hereof, and its permitted successors and assigns.

"Lessor" means the entity identified as such in the first paragraph hereof, and its successors and assigns.

"Nonappropriation Event" is defined in Section 6.06.

"Original Term" means, with respect to a Property Schedule, the period from the Commencement Date until the end of the budget year of Lessee in effect at the Commencement Date.

"Property" means, collectively, the property lease/purchased pursuant to this Agreement, and with respect to each Property Schedule, the property described in such Property Schedule, and all replacements, repairs, restorations, modifications and improvements thereof or thereto made pursuant to Section 8.01 or Article IX.

"Property Schedule" means a Property Schedule in the form attached hereto for Property Schedule 1. Subsequent Property Schedules pursuant to this Agreement shall be numbered consecutively, beginning with Property Schedule 2.

"Purchase Price" means the amount that Lessee may, in its discretion, pay to Lessor to purchase the Property under a Property Schedule, as provided in Section 11.01 and as set forth in the Property Schedule.

"Renewal Terms" means the renewal terms of a Property Schedule, each having a duration of one year and a term coextensive with Lessee's budget year.

"State" means the state where Lessee is located.

"Vendor" means the manufacturer or contractor of the Property as well as the agents or dealers of the manufacturer or contractor from whom Lessor or Lessee purchased or is purchasing all or any portion of the Property.

ARTICLE II

2.01 Property Schedules Separate Financings. Each Property Schedule executed and delivered under this Agreement shall be a separate financing, distinct from other Property Schedules. Without limiting the foregoing, upon the occurrence of an Event of Default or a Nonappropriation Event with respect to a Property Schedule, Lessor shall have the rights and remedies specified herein with respect to the Property financed and the Lease Payments payable under such Property Schedule, and except as expressly provided in Section 12.02 below, Lessor shall have no rights or remedies with respect to Property financed or Lease Payments payable under any other Property Schedules unless an Event of Default or Nonappropriation Event has also occurred under such other Property Schedules.

ARTICLE III

3.01 Covenants of Lessee. As of the Commencement Date for each Property Schedule executed and delivered hereunder, Lessee shall be deemed to represent, covenant and warrant for the benefit of Lessor as follows:

- (a) Lessee is a public body corporate and politic duly organized and existing under the constitution and laws of the State with full power and authority to enter into this Agreement and the Property Schedule and the transactions contemplated thereby and to perform all of its obligations thereunder.
- (b) Lessee will do or cause to be done all things necessary to preserve and keep in full force and effect its existence as a body corporate and politic. To the extent Lessee should merge with another entity under the laws of the State, Lessee agrees that as a condition to such merger it will require that the remaining or resulting entity shall be assigned Lessee's rights and shall assume Lessee's obligations hereunder.
- (c) Lessee has been duly authorized to execute and deliver this Agreement and the Property Schedule by proper action by its governing body, or by other appropriate official approval, and all requirements have been met and procedures have occurred in order to ensure the validity and enforceability of this

Agreement and the Property Schedule, and Lessee has complied with such public bidding requirements as may be applicable to this Agreement and the Property Schedule and the acquisition by Lessee of the Property thereunder. On or before the Commencement Date for the Property Schedule, Lessee shall cause to be delivered an opinion of counsel in substantially the form attached to the form of the Property Schedule as Exhibit 2.

- (d) During the Lease Term for the Property Schedule, the Property thereunder will perform and will be used by Lessee only for the purpose of performing essential governmental uses and public functions within the permissible scope of Lessee's authority.
- (e) Lessee will provide Lessor with current financial statements, budgets and proof of appropriation for the ensuing budget year and other financial information relating to the ability of Lessee to continue this Agreement and the Property Schedule in such form and containing such information as may be requested by Lessor.
- (f) Lessee will comply with all applicable provisions of the Internal Revenue Code of 1986, as amended (the "Code"), including Sections 103 and 148 thereof, and the regulations of the Treasury Department thereunder, from time to time proposed or in effect, in order to maintain the excludability from gross income for federal income tax purposes of the interest component of Lease Payments under the Property Schedule and will not use or permit the use of the Property in such a manner as to cause a Property Schedule to be a "private activity bond" under Section 141(a) of the Code. Lessee covenants and agrees that it will use the proceeds of the Property Schedule as soon as practicable and with all reasonable dispatch for the purpose for which the Property Schedule has been entered into, and that no part of the proceeds of the Property Schedule shall be invested in any securities, obligations or other investments except for the temporary period pending such use nor used, at any time, directly or indirectly, in a manner which, if such use had been reasonably anticipated on the date of issuance of the Agreement, would have caused any portion of the Property Schedule to be or become "arbitrage bonds" within the meaning of Section 103(b)(2) or Section 148 of the Code and the regulations of the Treasury Department thereunder proposed or in effect at the time of such use and applicable to obligations issued on the date of issuance of the Property Schedule.
- (g) The execution, delivery and performance of this Agreement and the Property Schedule and compliance with the provisions hereof and thereof by Lessee does not conflict with or result in a violation or breach or constitute a default under, any resolution, bond, agreement, indenture, mortgage, note, lease or other instrument to which Lessee is a party or by which it is bound by any law or any rule, regulation, order or decree of any court, governmental agency or body having jurisdiction over Lessee or any of its activities or properties resulting in the creation or imposition of any lien, charge or other security interest or encumbrance of any nature whatsoever upon any property or assets of Lessee or to which it is subject.
- (h) Lessee's exact legal name is as set forth on the first page of this Agreement. Lessee will not change its legal name in any respect without giving thirty (30) days prior notice to Lessor.

ARTICLE IV

4.01 Lease of Property. On the Commencement Date of each Property Schedule executed hereunder, Lessor will be deemed to demise, lease and let to Lessee, and Lessee will be deemed to rent, lease and hire from Lessor, the Property described in such Property Schedule, in accordance with this Agreement and such Property Schedule, for the Lease Term set forth in such Property Schedule.

4.02 Lease Term. The term of each Property Schedule shall commence on the Commencement Date set forth therein and shall terminate upon payment of the final Lease Payment set forth in such Property Schedule and the exercise of the Purchase Option described in Section 11.01, unless terminated sooner pursuant to this Agreement or the Property Schedule.

4.03 Delivery, Installation and Acceptance of Property. Lessee shall order the Property, shall cause the Property to be delivered and installed at the locations specified in the applicable Property Schedule and shall pay all taxes, delivery costs and installation costs, if any, in connection therewith. To the extent funds are deposited under an escrow agreement or trust agreement for the acquisition of the Property, such funds shall be disbursed as provided therein. When the Property described in such Property Schedule is delivered, installed and accepted as to Lessee's specifications, Lessee shall immediately accept the Property and evidence said acceptance by executing and delivering to Lessor the Acceptance Certificate substantially in the form attached to the Property Schedule.

ARTICLE V

5.01 Enjoyment of Property. Lessee shall during the Lease Term peaceably and quietly have, hold and enjoy the Property, without suit, trouble or hindrance from Lessor, except as expressly set forth in this Agreement. Lessor shall not interfere with such quiet use and enjoyment during the Lease Term so long as Lessee is not in default under the subject Property Schedule.

5.02 Location; Inspection. The Property will be initially located or based at the location specified in the applicable Property Schedule. Lessor shall have the right at all reasonable times during business hours to enter into and upon the property of Lessee for the purpose of inspecting the Property.

ARTICLE VI

6.01 Lease Payments to Constitute a Current Expense of Lessee. Lessor and Lessee understand and intend that the obligation of Lessee to pay Lease Payments hereunder shall constitute a current expense of Lessee and shall not in any way be construed to be a debt of Lessee in contravention of any applicable constitutional, statutory or charter limitation or requirement concerning the creation of indebtedness by Lessee, nor shall anything contained herein constitute a pledge of the faith and credit or taxing power of Lessee. Upon the appropriation of Lease Payments for a fiscal year, the Lease Payments for said fiscal year, and only the Lease Payments for said current fiscal year, shall be a binding obligation of Lessee; provided that such obligation shall not include a pledge of the taxing power of Lessee.

6.02 Payment of Lease Payments. Lessee shall promptly pay Lease Payments under each Property Schedule, exclusively from legally available funds, in lawful money of the United States of America, to Lessor in such amounts and on such dates as described in the applicable Property Schedule, at Lessor's address set forth on the first page of this Agreement, unless Lessor instructs Lessee otherwise. Lessee shall pay Lessor a charge on any delinquent Lease Payments under a Property Schedule in an amount sufficient to cover all additional costs and expenses incurred by Lessor from such delinquent Lease Payment. In addition, Lessee shall pay a late charge of five cents per dollar or the highest amount permitted by applicable law, whichever is lower, on all delinquent Lease Payments and interest on said delinquent amounts from the date such amounts were due until paid at the rate of 12% per annum or the maximum amount permitted by law, whichever is less.

6.03 Interest Component. A portion of each Lease Payment due under each Property Schedule is paid as, and represents payment of, interest, and each Property Schedule hereunder shall set forth the interest component (or method of computation thereof) of each Lease Payment thereunder during the Lease Term.

6.04 Lease Payments to be Unconditional. SUBJECT TO SECTION 6.06, THE OBLIGATIONS OF LESSEE TO PAY THE LEASE PAYMENTS DUE UNDER THE PROPERTY SCHEDULES AND TO PERFORM AND OBSERVE THE OTHER COVENANTS AND AGREEMENTS CONTAINED HEREIN SHALL BE ABSOLUTE AND UNCONDITIONAL IN ALL EVENTS WITHOUT ABATEMENT, DIMINUTION, DEDUCTION, SET-OFF OR DEFENSE, FOR ANY REASON, INCLUDING WITHOUT LIMITATION, ANY DEFECTS, MALFUNCTIONS, BREAKDOWNS OR INFIRMITIES IN THE PROPERTY OR ANY ACCIDENT, CONDEMNATION OR UNFORESEEN CIRCUMSTANCES. THIS PROVISION SHALL NOT LIMIT LESSEE'S RIGHTS OR ACTIONS AGAINST ANY VENDOR AS PROVIDED IN SECTION 10.02.

6.05 Continuation of Lease by Lessee. Lessee intends to continue all Property Schedules entered into pursuant to this Agreement and to pay the Lease Payments thereunder. Lessee reasonably believes that legally available funds in an amount sufficient to make all Lease Payments during the term of all Property Schedules can be obtained. Lessee agrees that its staff will provide during the budgeting process for each budget year to the governing body of Lessee notification of any Lease Payments due under the Property Schedules during the following budget year. Notwithstanding this covenant, if Lessee fails to appropriate the Lease Payments for a Property Schedule pursuant to Section 6.06, such Property Schedule shall terminate at the end of the then current Original Term or Renewal Term. Although Lessee has made this covenant, in the event that it fails to provide such notice, no remedy is provided and Lessee shall not be liable for any damages for its failure to so comply.

6.06 Nonappropriation. If during the then current Original Term or Renewal Term, sufficient funds are not appropriated to make Lease Payments required under a Property Schedule for the following fiscal year, Lessee shall be deemed to not have renewed such Property Schedule for the following fiscal year and the Property Schedule shall terminate at the end of the then current Original Term or Renewal Term and Lessee shall not be obligated to make Lease Payments under said Property Schedule beyond the then current fiscal year for which funds have been appropriated. Upon the occurrence of such nonappropriation (a "Nonappropriation Event") Lessee shall, no later than the end of the fiscal year for which Lease Payments have been appropriated, deliver possession of the Property under said Property Schedule to Lessor. If Lessee fails to deliver possession of the Property to Lessor upon termination of said Property Schedule by reason of a Nonappropriation Event, the termination shall nevertheless be

effective but Lessee shall be responsible for the payment of damages in an amount equal to the portion of Lease Payments thereafter coming due that is attributable to the number of days after the termination during which the Lessee fails to deliver possession and for any other loss suffered by Lessor as a result of Lessee's failure to deliver possession as required. In addition, Lessor may, by written instructions to any escrow agent who is holding proceeds of the Property Schedule, instruct such escrow agent to release all such proceeds and any earnings thereon to Lessor, such sums to be credited to Lessee's obligations under the Property Schedule and this Agreement. Lessee shall notify Lessor in writing within seven (7) days after the failure of the Lessee to appropriate funds sufficient for the payment of the Lease Payments, but failure to provide such notice shall not operate to extend the Lease Term or result in any liability to Lessee.

6.07 Defeasance of Lease Payments. Lessee may at any time irrevocably deposit in escrow with a defeasance escrow agent for the purpose of paying all of the principal component and interest component accruing under a Property Schedule, a sum of cash and non-callable securities consisting of direct obligations of, or obligations the principal of an interest on which are unconditionally guaranteed by, the United States of America or any agency or instrumentality thereof, in such aggregate amount, bearing interest at such rates and maturing on such dates as shall be required to provide funds sufficient for this purpose. Upon such defeasance, all right, title and interest of Lessor in the Property under said Property Schedule shall terminate. Lessee shall cause such investment to comply with the requirements of federal tax law so that the exclusion from gross income of the interest component of Lease Payments on said Property Schedule is not adversely affected.

6.08 Gross-Up. If an Event of Taxability occurs with respect to a Property Schedule, the interest component of Lease Payments on the Property Schedule shall thereafter be payable at the Taxable Rate, and Lessee shall pay to Lessor promptly following demand an amount sufficient to supplement prior Lease Payments on such Property Schedule so that Lessor receives the interest component of such Lease Payments, retroactive to the date as of which the interest component is determined to be includible in the gross income of Lessor for federal income tax purposes, calculated at the Taxable Rate, together with any penalties and interest actually imposed on Lessor as a result of the Event of Taxability. For purposes of this Section, "Event of Taxability" means, with respect to a Property Schedule, (a) a final determination by the Internal Revenue Service or a court of competent jurisdiction that the interest component of Lease Payments on the Property Schedule is includible for federal income tax purposes in the gross income of Lessor, or (b) receipt by Lessor of a written opinion of a nationally recognized public finance lawyer or law firm to the effect that there exists substantial doubt whether the interest component of Lease Payments on the Property Schedule is excludible for federal income tax purposes from the gross income of Lessor, in each case due to any action or failure to take action by Lessee. "Taxable Rate" means the interest rate at which the interest component of Lease Payments on a Property Schedule was originally calculated, divided by 0.79.

ARTICLE VII

7.01 Title to the Property. Upon acceptance of the Property by Lessee and unless otherwise required by the laws of the State, title to the Property shall vest in Lessee, subject to Lessor's interests under the applicable Property Schedule and this Agreement.

7.02 Personal Property. The Property is and will remain personal property and will not be deemed to be affixed to or a part of the real estate on which it may be situated, notwithstanding that the Property or any part thereof may be or hereafter become in any manner physically affixed or attached to real estate or any building thereon. If requested by Lessor, Lessee will, at Lessee's expense, furnish a waiver of any interest in the Property from any party having an interest in any such real estate or building.

7.03 Security Interest. To the extent permitted by law and to secure the performance of all of Lessee's obligations under this Agreement with respect to a Property Schedule, including without limitation all Property Schedules now existing are hereafter executed, Lessee grants to Lessor, for the benefit of Lessor and its successors and assigns, a security interest constituting a first lien on Lessee's interest in all of the Property under the Property Schedule, whether now owned or hereafter acquired, all additions, attachments, alterations and accessions to the Property, all substitutions and replacements for the Property, and on any proceeds of any of the foregoing, including insurance proceeds. Lessee shall execute any additional documents, including financing statements, affidavits, notices and similar instruments, in form and substance satisfactory to Lessor, which Lessor deems necessary or appropriate to establish, maintain and perfect a security interest in the Property in favor of Lessor and its successors and assigns. Lessee hereby authorizes Lessor to file all financing statements which Lessor deems necessary or appropriate to establish, maintain and perfect such security interest.

ARTICLE VIII

8.01 Maintenance of Property by Lessee. Lessee shall keep and maintain the Property in good condition and working order and in compliance with the manufacturer's specifications, shall use, operate and maintain the Property in conformity with all laws and regulations concerning the Property's ownership, possession, use and maintenance, and shall keep the Property free and clear of all liens and claims, other than those created by this Agreement. Lessee shall have sole responsibility to maintain and repair the Property. Should Lessee fail to maintain, preserve and keep the Property in good repair and working order and in accordance with manufacturer's specifications, and if requested by Lessor, Lessee will enter into maintenance contracts for the Property in form approved by Lessor and with approved providers.

8.02 Liens, Taxes, Other Governmental Charges and Utility Charges. Lessee shall keep the Property free of all levies, liens and encumbrances, except for the interest of Lessor under this Agreement. The parties to this Agreement contemplate that the Property will be used for a governmental or proprietary purpose of Lessee and, therefore, that the Property will be exempt from all property taxes. The Lease Payments payable by Lessee under this Agreement and the Property Schedules hereunder have been established to reflect the savings resulting from this exemption from taxation. Lessee will take such actions necessary under applicable law to obtain said exemption. Nevertheless, if the use, possession or acquisition of the Property is determined to be subject to taxation or later becomes subject to such taxes, Lessee shall pay when due all taxes and governmental charges lawfully assessed or levied against or with respect to the Property. Lessee shall pay all gas, water, steam, electricity, heat, power, telephone, utility and other charges incurred in the operation, maintenance, use, occupancy and upkeep of the Property. Lessee shall pay such taxes or charges as the same may become due; provided that, with respect to any such taxes or charges that may lawfully be paid in installments over a period of years, Lessee shall be obligated to pay only such installments as accrue during the then current fiscal year of the Lease Term for such Property.

8.03 Insurance. At its own expense, Lessee shall maintain (a) casualty insurance insuring the Property against loss or damage by fire and all other risks covered by the standard extended coverage endorsement then in use in the State and any other risks reasonably required by Lessor in an amount equal to at least the outstanding principal component of Lease Payments, and (b) liability insurance that protects Lessor from liability in all events in an amount reasonably acceptable to Lessor, and (c) worker's compensation insurance covering all employees working on, in, near or about the Property; provided that Lessee may self-insure against all such risks. All insurance proceeds from casualty losses shall be payable as hereinafter provided in this Agreement. All such insurance shall be with insurers that are authorized to issue such insurance in the State. All such liability insurance shall name Lessor as an additional insured. All such casualty insurance shall contain a provision making any losses payable to Lessor and Lessee as their respective interests may appear. All such insurance shall contain a provision to the effect that such insurance shall not be canceled or modified without first giving written notice thereof to Lessor and Lessee at least thirty (30) days in advance of such cancellation or modification. Such changes shall not become effective without Lessor's prior written consent. Lessee shall furnish to Lessor, on or before the Commencement Date for each Property Schedule, and thereafter at Lessor's request, certificates evidencing such coverage, or, if Lessee self-insures, a written description of its self-insurance program together with a certification from Lessee's risk manager or insurance agent or consultant to the effect that Lessee's self-insurance program provides adequate coverage against the risks listed above.

8.04 Advances. In the event Lessee shall fail to either maintain the insurance required by this Agreement or keep the Property in good repair and working order, Lessor may, but shall be under no obligation to, purchase the required insurance and pay the cost of the premiums thereof or maintain and repair the Property and pay the cost thereof. All amounts so advanced by Lessor shall constitute additional rent for the Lease Term for the applicable Property Schedule and shall be due and payable on the next Lease Payment Date and Lessee covenants and agrees to pay such amounts so advanced by Lessor with interest thereon from the date such amounts are advanced until paid at the rate of 12% per annum or the maximum amount permitted by law, whichever is less.

ARTICLE IX

9.01 Damage or Destruction. If (a) the Property under a Property Schedule or any portion thereof is destroyed, in whole or in part, or is damaged by fire or other casualty, or (b) title to, or the temporary use of, the Property under a Property Schedule or any part thereof shall be taken under the exercise or threat of the power of eminent domain by any governmental body or by any person, firm or corporation acting pursuant to governmental authority, Lessor and Lessee will cause the Net Proceeds (as hereinafter defined) of any insurance claim, condemnation award or sale under threat of condemnation to be applied to the prompt replacement, repair, restoration, modification or improvement of the Property, unless Lessee shall have exercised its right to defease the Property Schedule as provided herein, or unless Lessee shall have exercised its option to purchase Lessor's interest in the Property if the Property Schedule so provides. Any balance of the Net Proceeds remaining after such work has been completed shall be paid to Lessee. For purposes of Section 8.03 and this Article IX, the term "Net Proceeds" shall mean the amount remaining from the gross proceeds of any insurance claim, condemnation award or sale under threat of condemnation after deducting all expenses, including attorneys' fees, incurred in the collection thereof.

9.02 Insufficiency of Net Proceeds. If the Net Proceeds are insufficient to pay in full the cost of any repair, restoration, modification or improvement referred to in Section 9.01, Lessee shall (a) complete such replacement, repair, restoration, modification or improvement and pay any costs thereof in excess of the amount of the Net Proceeds and, if Lessee shall make any payments pursuant to this Section, Lessee shall not be entitled to any reimbursement therefor from Lessor nor shall Lessee be entitled to any diminution of the amounts payable under Section 6.02, or (b) defease the Property Schedule pursuant to Section 6.07, or (c) exercise its option to purchase Lessor's interest in the Property pursuant to the optional purchase provisions of the Property Schedule, if any. The amount of the Net Proceeds, if any, remaining after completing such repair, restoration, modification or improvement or after such defeasance or purchase may be retained by Lessee.

ARTICLE X

10.01 Disclaimer of Warranties. LESSOR MAKES NO (AND SHALL NOT BE DEEMED TO HAVE MADE ANY) WARRANTIES, EXPRESS OR IMPLIED, AS TO ANY MATTER WHATSOEVER, INCLUDING, WITHOUT LIMITATION, THE DESIGN, OPERATION OR CONDITION OF, OR THE QUALITY OF THE MATERIAL, EQUIPMENT OR WORKMANSHIP IN, THE PROPERTY, ITS MERCHANTABILITY OR ITS FITNESS FOR ANY PARTICULAR PURPOSE, THE STATE OF TITLE THERETO OR ANY COMPONENT THEREOF, THE ABSENCE OF LATENT OR OTHER DEFECTS (WHETHER OR NOT DISCOVERABLE), AND LESSOR HEREBY DISCLAIMS THE SAME; IT BEING UNDERSTOOD THAT THE PROPERTY IS LEASED TO LESSEE "AS IS" ON THE DATE OF THIS AGREEMENT OR THE DATE OF DELIVERY, WHICHEVER IS LATER, AND ALL SUCH RISKS, IF ANY, ARE TO BE BORNE BY LESSEE. Lessee acknowledges that it has made (or will make) the selection of the Property from the Vendor based on its own judgment and expressly disclaims any reliance upon any statements or representations made by Lessor. Lessee understands and agrees that (a) neither the Vendor nor any sales representative or other agent of Vendor, is (i) an agent of Lessor, or (ii) authorized to make or alter any term or condition of this Agreement, and (b) no such waiver or alteration shall vary the terms of this Agreement unless expressly set forth herein. In no event shall Lessor be liable for any incidental, indirect, special or consequential damage in connection with or arising out of this Agreement, the Property Schedules, or the existence, furnishing, functioning or use of any item, product or service provided for in this Agreement or the Property Schedules.

10.02 Vendor's Warranties. Lessor hereby irrevocably assigns to Lessee all rights that Lessor may have to assert from time to time whatever claims and rights (including without limitation warranties) related to the Property against the Vendor. Lessee's sole remedy for the breach of such warranty, indemnification or representation shall be against the Vendor of the Property, and not against Lessor, nor shall such matter have any effect whatsoever on the rights and obligations of Lessor with respect to this Agreement, including the right to receive full and timely payments hereunder. Lessee expressly acknowledges that Lessor makes, and has made, no representations or warranties whatsoever as to the existence or the availability of such warranties of the Vendor of the Property.

10.03 Use of the Property. Lessee will not install, use, operate or maintain the Property improperly, carelessly, in violation of any applicable law or in a manner contrary to that contemplated by this Agreement and the applicable Property Schedule. Lessee shall provide all permits and licenses, if any, necessary for the installation and operation of the Property. In addition, Lessee agrees to comply in all respects with all laws of the jurisdiction in which its operations involving any item of Property may extend and any legislative, executive, administrative or judicial body exercising any power or jurisdiction over the items of the Property; provided that Lessee may contest in good faith the validity or application of any such law or rule in any reasonable manner that does not, in the opinion of Lessor, adversely affect the interest of Lessor in and to the Property or its interest or rights under this Agreement. Lessee shall promptly notify Lessor in writing of any pending or threatened investigation, inquiry, claim or action by any governmental authority which could adversely affect this Agreement, any Property Schedule or the Property thereunder.

10.04 Modifications. Subject to the provisions of this Section, Lessee shall have the right, at its own expense, to make alterations, additions, modifications or improvements to the Property. All such alterations, additions, modifications and improvements shall thereafter comprise part of the Property and shall be subject to the provisions of this Agreement. Such alterations, additions, modifications and improvements shall not in any way damage the Property, substantially alter its nature or cause it to be used for purposes other than those authorized under the provisions of state and federal law; and the Property, on completion of any alterations, additions, modifications or improvements made pursuant to this Section, shall be of a value which is equal to or greater than the value of the Property immediately prior to the making of such alterations, additions, modifications and improvements. Lessee shall, at its own expense, make such alterations, additions, modifications and improvements to the Property as may be required from time to time by applicable law or by any governmental authority.

ARTICLE XI

11.01 Option to Purchase. Lessee shall have the option to purchase Lessor's entire interest in all of the Property subject to a Property Schedule and to terminate any restrictions herein on the Property under such Property Schedule on the last day of the Lease Term for a Property Schedule, if the Property Schedule is still in effect on such day, upon payment in full of the Lease Payments due thereunder plus payment of One (1) Dollar to Lessor. Upon exercise of the purchase option as set forth in this Section 11.01 and payment of the purchase price under the applicable Property Schedule, and performance by Lessee of all other terms, conditions and provisions hereof, Lessor shall deliver to Lessee all such documents and instruments as Lessee may reasonably require to evidence the transfer, without warranty by or recourse to Lessor, of all of Lessor's right, title and interest in and to the Property subject to such Property Schedule to Lessee.

11.02 Option to Prepay. Lessee shall have the option to prepay in whole the Lease Payments due under a Property Schedule, but only if the Property Schedule so provides, and on the terms set forth in the Property Schedule. Lessee shall give written notice to Lessor of its intent to purchase Lessor's interest in the Property at least sixty (60) days prior to the last day of the Lease Term for applicable Property Schedule.

ARTICLE XII

12.01 Assignment by Lessor. Lessor's right, title and interest in, to and under each Property Schedule and the Property under such Property Schedule may be assigned and reassigned in whole or in part to one or more assignees or subassignees by Lessor without the necessity of obtaining the consent of Lessee; provided that any assignment shall not be effective until Lessee has received written notice, signed by the assignor, of the name, address and tax identification number of the assignee. Lessee shall retain all such notices as a register of all assignees and shall make all payments to the assignee or assignees designated in such register. Lessee agrees to execute all documents, including notices of assignment and chattel mortgages or financing statements that may be reasonably requested by Lessor or any assignee to protect its interests in this Agreement and the Property Schedules.

12.02 Property Schedules Separate Financings. Assignees of the Lessor's rights in one Property Schedule shall have no rights in any other Property Schedule unless such rights have been separately assigned.

12.03 Assignment and Subleasing by Lessee. NONE OF LESSEE'S RIGHT, TITLE AND INTEREST IN, TO AND UNDER THIS AGREEMENT AND IN THE PROPERTY MAY BE ASSIGNED, SUBLEASED OR ENCUMBERED BY LESSEE FOR ANY REASON, WITHOUT THE PRIOR WRITTEN CONSENT OF LESSOR.

12.04 Release and Indemnification Covenants. To the extent permitted by applicable law, Lessee shall indemnify, protect, hold harmless, save and keep harmless Lessor from and against any and all liability, obligation, loss, claim and damage whatsoever, regardless of cause thereof, and all expenses in connection therewith, including, without limitation, counsel fees and expenses, penalties and interest (collectively, "Losses") arising out of or resulting from the entering into this Agreement, any Property Schedules hereunder, the ownership of any item of the Property, the loss of federal tax exemption of the interest on any of the Property Schedules, the ordering, acquisition, use, operation, condition, purchase, delivery, rejection, storage or return of any item of the Property or any accident in connection with the operation, use, condition, possession, storage or return of any item of the Property resulting in damage to property or injury to or death to any person; provided, however, that Lessee shall not be required to indemnify Lessor for Losses arising out of or resulting from Lessor's own willful or negligent conduct, or for Losses arising out of or resulting from Lessor's preparation of disclosure material relating to certificates of participation in this Agreement and any Property Schedule (other than disclosure material provided to Lessor by Lessee). The indemnification arising under this Section shall continue in full force and effect notwithstanding the full payment of all obligations under this Agreement, or the applicable Property Schedule, or the termination of the Lease Term for such Property Schedule for any reason.

ARTICLE XIII

13.01 Events of Default Defined. Any of the following shall constitute an "Event of Default" under a Property Schedule:

- (a) Failure by Lessee to pay any Lease Payment under the Property Schedule or other payment required to be paid with respect thereto at the time specified therein;
- (b) Failure by Lessee to observe and perform any covenant, condition or agreement on its part to be observed or performed with respect to the Property Schedule, other than as referred to in subparagraph (a) above, for a period of thirty (30) days after written notice specifying such failure and requesting that it be remedied is given to Lessee by Lessor, unless Lessor shall agree in writing to an extension of such time prior to its expiration; provided that, if the

failure stated in the notice cannot be corrected within the applicable period, Lessor will not unreasonably withhold its consent to an extension of such time if corrective action is instituted by Lessee within the applicable period and diligently pursued until the default is corrected;

- (c) Any statement, representation or warranty made by Lessee in or pursuant to the Property Schedule or its execution, delivery or performance shall prove to have been false, incorrect, misleading or breached in any material respect on the date when made;
- (d) Lessee shall (i) apply for or consent to the appointment of a receiver, trustee, custodian or liquidator of Lessee, or of all or a substantial part of the assets of Lessee, (ii) be unable, fail or admit in writing its inability generally to pay its debts as they become due, (iii) make a general assignment for the benefit of creditors, (iv) have an order for relief entered against it under applicable federal bankruptcy law, or (v) file a voluntary petition in bankruptcy or a petition or an answer seeking reorganization or an arrangement with creditors or taking advantage of any insolvency law or any answer admitting the material allegations of a petition filed against Lessee in any bankruptcy, reorganization or insolvency proceeding; or
- (e) An order, judgment or decree shall be entered by any court of competent jurisdiction, approving a petition or appointing a receiver, trustee, custodian or liquidator of Lessee or of all or a substantial part of the assets of Lessee, in each case without its application, approval or consent, and such order, judgment or decree shall continue unstayed and in effect for any period of 60 consecutive days.

The foregoing provisions of Section 13.01 are subject to the following limitation: if by reason of force majeure Lessee is unable in whole or in part to perform its agreements under this Agreement and the Property Schedule (other than the obligations on the part of Lessee contained in Article VI hereof) Lessee shall not be in default during the continuance of such inability. The term "force majeure" as used herein shall mean the following: acts of God; strikes, lockouts or other industrial disturbances; acts of public enemies; orders or restraints of any kind of the government of the United States or of the State or any of their departments, agencies or officials, or any civil or military authority; insurrections, riots, landslides, earthquakes, fires, storms, droughts, floods, explosions, breakage or accident to machinery, transmission pipes or canals; or any other cause or event not reasonably within the control of Lessee.

A Nonappropriation Event is not an Event of Default.

13.02 Remedies on Default. Whenever any Event of Default exists with respect to a Property Schedule, Lessor shall have the right, at its sole option without any further demand or notice, to take one or any combination of the following remedial steps:

- (a) Without terminating the Property Schedule, and by written notice to Lessee, Lessor may declare all Lease Payments and other amounts payable by Lessee thereunder to the end of the then-current budget year of Lessee to be due, including without limitation delinquent Lease Payments under the Property Schedule from prior budget years, and such amounts shall thereafter bear interest at the rate of 12% per annum or the maximum rate permitted by applicable law, whichever is less;
- (b) Lessor may terminate the Property Schedule, may enter the premises where the Property subject to the Property Schedule is located and retake possession of the Property, or require Lessee, at Lessee's expense, to promptly return any or all of the Property to the possession of Lessor at such place within the United States as Lessor shall specify, and Lessor may thereafter dispose of the Property in accordance with Article 9 of the Uniform Commercial Code in effect in the State; provided, however, that any proceeds from the disposition of the property in excess of the sum required to (i) pay off any outstanding principal component of Lease Payments, (ii) pay any other amounts then due under the Property Schedule, and (iii) pay Lessor's costs and expenses associated with the disposition of the Property (including attorneys fees), shall be paid to Lessee or such other creditor of Lessee as may be entitled thereto, and further provided that no deficiency shall be allowed against Lessee except with respect to unpaid costs and expenses incurred by Lessor in connection with the disposition of the Property;
- (c) By written notice to any escrow agent who is holding proceeds of the Property Schedule, Lessor may instruct such escrow agent to release all such proceeds and any earnings thereon to Lessor, such sums to be credited to payment of Lessee's obligations under the Property Schedule;
- (d) Lessor may take any action, at law or in equity, that is permitted by applicable law and that may appear necessary or desirable to enforce or to protect any of its rights under the Property Schedule and this Agreement.

Notwithstanding the foregoing, if the proceeds are insufficient to pay items (i) to (iii) in Section 13.02(b) in whole, Lessee shall remain obligated after application of proceeds to items (i) and (ii), to pay in whole the amounts for item (iii).

13.03 No Remedy Exclusive. No remedy herein conferred upon or reserved to Lessor is intended to be exclusive and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Agreement now or hereafter existing at law or in equity. No delay or omission to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver thereof, but any such right or power may be exercised from time to time and as often as may be deemed expedient. In order to entitle Lessor to exercise any remedy reserved to it in this Article it shall not be necessary to give any notice, other than such notice as may be required in this Article.

13.04 Costs and Attorney Fees. Upon the occurrence of an Event of Default by Lessee in the performance of any term of this Agreement, Lessee agrees to pay to Lessor or reimburse Lessor for, in addition to all other amounts due hereunder, all of Lessor's costs of collection, including reasonable attorney fees, whether or not suit or action is filed thereon. Any such costs shall be immediately due and payable upon written notice and demand given to Lessee, shall be secured by this Agreement until paid and shall bear interest at the rate of 12% per annum or the maximum amount permitted by law, whichever is less. In the event suit or action is instituted to enforce any of the terms of this Agreement, the prevailing party shall be entitled to recover from the other party such sum as the court may adjudge reasonable as attorneys' fees at trial or on appeal of such suit or action or in any bankruptcy proceeding, in addition to all other sums provided by law.

ARTICLE XIV

14.01 Notices. All notices, certificates or other communications hereunder shall be sufficiently given and shall be deemed given when delivered or mailed by certified mail, postage prepaid, to the parties hereto at the addresses as specified on the first page of this Agreement (or at such other address as either party hereto shall designate in writing to the other for notices to such party), to any assignee at its address as it appears on the registration books maintained by Lessee.

14.02 Arbitrage Certificates. Unless a separate Arbitrage Certificate is delivered on the Commencement Date, Lessee shall be deemed to make the following representations and covenants as of the Commencement Date for each Property Schedule:

- (a) The estimated total costs, including taxes, freight, installation, and cost of issuance, of the Property under the Property Schedule will not be less than the total principal amount of the Lease Payments.
- (b) The Property under the Property Schedule has been ordered or is expected to be ordered within six months after the Commencement Date and the Property is expected to be delivered and installed, and the Vendor fully paid, within eighteen months from the Commencement Date. Lessee will pursue the completion of the Property and the expenditure of the net proceeds of the Property Schedule with due diligence.
- (c) Lessee has not created or established, and does not expect to create or establish, any sinking fund or other similar fund (i) that is reasonably expected to be used to pay the Lease Payments under the Property Schedule, or (ii) that may be used solely to prevent a default in the payment of the Lease Payments under the Property Schedule.
- (d) The Property under the Property Schedule has not been and is not expected to be sold or otherwise disposed of by Lessee, either in whole or in major part, prior to the last maturity of the Lease Payments under the Property Schedule.
- (e) There are no other obligations of Lessee which (i) are being sold within 15 days of the Commencement Date of the Property Schedule; (ii) are being sold pursuant to the same plan of financing as the Property Schedule; and (iii) are expected to be paid from substantially the same source of funds.
- (f) The officer or official who has executed the Property Schedule on Lessee's behalf is familiar with Lessee's expectations regarding the use and expenditure of the proceeds of the Property Schedule. To the best of Lessee's knowledge, information and belief, the facts and estimates set forth in herein are accurate and the expectations of Lessee set forth herein are reasonable.

14.03 Further Assurances. Lessee agrees to execute such other and further documents, including, without limitation, confirmatory financing statements, continuation statements, certificates of title and the like, and to take all such action as may be necessary or appropriate, from time to time, in the reasonable opinion of Lessor, to perfect,

confirm, establish, reestablish, continue, or complete the interests of Lessor in this Agreement and the Property Schedules, to consummate the transactions contemplated hereby and thereby, and to carry out the purposes and intentions of this Agreement and the Property Schedules.

14.04 Binding Effect. This Agreement shall inure to the benefit of and shall be binding upon Lessor and Lessee and their respective successors and assigns.

14.05 Severability. In the event any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

14.06 Waiver of Jury Trials. Lessee and Lessor hereby irrevocably waive all right to trial by jury in any action, proceeding or counterclaim (whether based on contract, tort or otherwise) arising out of or relating to this Agreement or the actions of Lessor or Lessee in the negotiation, administration, performance or enforcement hereof.

14.07 Amendments, Changes and Modifications. This Agreement may be amended in writing by Lessor and Lessee to the extent the amendment or modification does not apply to outstanding Property Schedules at the time of such amendment or modification. The consent of all assignees shall be required to any amendment or modification before such amendment or modification shall be applicable to any outstanding Property Schedule.

14.08 Execution in Counterparts. This Agreement and the Property Schedules hereunder may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

14.09 Applicable Law. This Agreement shall be governed by and construed in accordance with the laws of the State.

14.10 Captions. The captions or headings in this Agreement are for convenience only and in no way define, limit or describe the scope or intent of any provisions or sections of this Agreement.

14.11 Continuing Disclosure. Lessor acknowledges that, in connection with Lessee's compliance with any continuing disclosure undertakings (each, a "Continuing Disclosure Agreement") entered into by Lessee pursuant to SEC Rule 15c2-12 promulgated pursuant to the Securities and Exchange Act of 1934, as amended (the "Rule"), Lessee may be required to file with the Municipal Securities Rulemaking Board's Electronic Municipal Market Access system, or its successor ("EMMA"), notice of its incurrence of its obligations under this Agreement and notice of any accommodation, waiver, amendment, modification of terms or other similar events reflecting financial difficulties in connection with this Agreement, in each case including a description of the material terms thereof (each such notice, an "EMMA Notice"). Lessee shall not file or submit or permit the filing or submission of any EMMA Notice that includes any of the following unredacted information regarding Lessor or the Escrow Agent: physical or mailing addresses, account information, e-mail addresses, telephone numbers, fax numbers, tax identification numbers, or titles or signatures of officers, employees or other signatories. Lessee acknowledges and agrees that Lessor is not responsible in connection with any EMMA Notice relating to this Agreement for Lessee's compliance or noncompliance (or any claims, losses or liabilities arising therefrom) with the Rule, any Continuing Disclosure Agreement or any applicable securities laws, including but not limited to those relating to the Rule.

IN WITNESS WHEREOF, Lessor and Lessee have caused this Agreement to be executed in their names by their duly authorized representatives as of the date first above written.

Lessor: U.S. Bancorp Government Leasing and Finance, Inc.
By:
Name:
Title:

Lessee: City of Duarte
By:
Name:
Title:

Attest:
By:
Name:
Title:

Property Schedule No. 1

Master Tax-Exempt Lease/Purchase Agreement

This **Property Schedule No. 1** is entered into as of the Commencement Date set forth below, pursuant to that certain Master Tax-Exempt Lease/Purchase Agreement (the "Master Agreement"), dated as of August 30, 2019, between U.S. Bancorp Government Leasing and Finance, Inc., and City of Duarte.

1. Interpretation. The terms and conditions of the Master Agreement are incorporated herein by reference as if fully set forth herein. Reference is made to the Master Agreement for all representations, covenants and warranties made by Lessee in the execution of this Property Schedule, unless specifically set forth herein. In the event of a conflict between the provisions of the Master Agreement and the provisions of this Property Schedule, the provisions of this Property Schedule shall control. All capitalized terms not otherwise defined herein shall have the meanings provided in the Master Agreement.
2. Commencement Date. The Commencement Date for this Property Schedule is August 30, 2019.
3. Property Description and Payment Schedule. The Property subject to this Property Schedule is described in Exhibit 1 hereto. Lessee shall not remove such property from the locations set forth therein without giving prior written notice to Lessor. The Lease Payment Schedule for this Property Schedule is set forth in Exhibit 1.
4. Opinion. The Opinion of Lessee's Counsel is attached as Exhibit 2.
5. Lessee's Certificate. The Lessee's Certificate is attached as Exhibit 3.
6. Proceeds. Exhibit 4 is intentionally omitted.
7. Acceptance Certificate. Exhibit 5 is intentionally omitted.
8. Additional Purchase Option Provisions. In addition to the Purchase Option provisions set forth in the Master Agreement, Lease Payments payable under this Property Schedule shall be subject to prepayment in whole at any time by payment of the applicable Termination Amount set forth in Exhibit 1 (Payment Schedule) and payment of all accrued and unpaid interest through the date of prepayment.
9. Private Activity Issue. Lessee understands that among other things, in order to maintain the exclusion of the interest component of Lease Payments from gross income for federal income tax purposes, it must limit and restrict the rights private businesses (including, for this purpose, the federal government and its agencies and organizations described in the Code § 501(c)(3)) have to use the Property. Each of these requirements will be applied beginning on the later of the Commencement Date or date each portion of the Property is placed in service and will continue to apply until earlier of the end of the economic useful life of the property or the date the Agreement or any tax-exempt obligation issued to refund the Property Schedule is retired (the "Measurement Period"). Lessee will comply with the requirements of Section 141 of the Code and the regulations thereunder which provide restrictions on special legal rights that users other than Lessee or a state or local government or an agency or instrumentality of a state or a local government (an "Eligible User") may have to use the Property. For this purpose, special legal rights may arise from a management or service agreement, lease, research agreement or other arrangement providing any entity except an Eligible User the right to use the Property. Any use of the Property by a user other than an Eligible User is referred to herein as "Non-Qualified Use". Throughout the Measurement Period, all of the Property is expected to be owned by Lessee. Throughout the Measurement Period, Lessee will not permit the Non-Qualified Use of the Property to exceed 10%.
10. Bank Qualification and Arbitrage Rebate. Attached as Exhibit 6.
11. Expiration. Lessor, at its sole determination, may choose not to accept this Property Schedule if the fully executed, original Master Agreement (including this Property Schedule and all ancillary documents) is not received by Lessor at its place of business by September 17, 2019.

IN WITNESS WHEREOF, Lessor and Lessee have caused this Property Schedule to be executed in their names by their duly authorized representatives as of the Commencement Date above.

Lessor: U.S. Bancorp Government Leasing and Finance, Inc.
By:
Name:
Title:

Lessee: City of Duarte
By:
Name:
Title:

Attest:
By
Name:
Title:

Note: this payment schedule reflects original financing proposal dated June 18th, 2019. Final payment schedule will be updated to reflect Funding Plan Option A or B, whichever plan is approved by Council. Interest rate will be updated to reflect current market conditions at terms equal to or better than those described herein.

EXHIBIT 1

Property Description and Payment Schedule

Re: **Property Schedule No. 1** to Master Tax-Exempt Lease/Purchase Agreement between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte.

THE PROPERTY IS AS FOLLOWS: The Property as more fully described in Exhibit A incorporated herein by reference and attached hereto. It includes all replacements, parts, repairs, additions, accessions and accessories incorporated therein or affixed or attached thereto and any and all proceeds of the foregoing, including, without limitation, insurance recoveries.

PROPERTY LOCATION:

Address

City, State Zip Code

USE: Energy Performance Contract - This use is essential to the proper, efficient and economic functioning of Lessee or to the services that Lessee provides; and Lessee has immediate need for and expects to make immediate use of substantially all of the Property, which need is not temporary or expected to diminish in the foreseeable future.

Lease Payment Schedule

Total Principal Amount: \$1,286,597.00

Payment No.	Due Date	Lease Payment	Principal Portion	Interest Portion	Termination Amount (After Making Payment for said Due Date)
1	30-Aug-2020	107,384.00	69,430.12	37,953.88	N/A
2	30-Aug-2021	107,384.00	71,478.27	35,905.73	1,180,059.28
3	30-Aug-2022	107,384.00	73,586.83	33,797.17	1,104,264.84
4	30-Aug-2023	107,384.00	75,757.60	31,626.40	1,026,234.51
5	30-Aug-2024	107,384.00	77,992.41	29,391.59	945,902.32
6	30-Aug-2025	107,384.00	80,293.14	27,090.86	863,200.39
7	30-Aug-2026	107,384.00	82,661.74	24,722.26	778,058.79
8	30-Aug-2027	107,384.00	85,100.22	22,283.78	690,405.57
9	30-Aug-2028	107,384.00	87,610.63	19,773.37	600,166.62
10	30-Aug-2029	107,384.00	90,195.09	17,188.91	507,265.68
11	30-Aug-2030	107,384.00	92,855.80	14,528.20	411,624.21
12	30-Aug-2031	107,384.00	95,594.99	11,789.01	313,161.37
13	30-Aug-2032	107,384.00	98,414.99	8,969.01	211,793.93
14	30-Aug-2033	107,384.00	101,318.17	6,065.83	107,436.21
15	30-Aug-2034	107,384.00	104,307.00	3,077.00	0.00
TOTALS:		1,610,760.00	1,286,597.00	324,163.00	

Interest Rate: 2.95%

Lessee: City of Duarte
By:
Name:
Title:

EXHIBIT A

Property Description

Scope of Work:

LED Street Light Modernization 39%
Roof Mounted Solar PV System 24%
High Efficiency Heating & Cooling Equipment 10%
Interior & Exterior LED Lighting Modernization 8%
Smart Connectivity Street Light Control System 7%
Smart Building Automation System 5%
Solar Thermal Pool Heating 4%
Smart Irrigation Weather-Based Control System 3%

EXHIBIT 2

Lessee's Counsel's Opinion

[To be provided on letterhead of Lessee's counsel.]

August 30, 2019

U.S. Bancorp Government Leasing and Finance, Inc.
13010 SW 68th Parkway, Suite 100
Portland, OR 97223

City of Duarte
1600 Huntington Drive
Duarte, CA 91010
Attention: Kristen Petersen

RE: Property Schedule No. 1 dated as of August 30, 2019 to the Master Tax-Exempt Lease/Purchase Agreement dated August 30, 2019 between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte.

Ladies and Gentlemen:

We have acted as special counsel to City of Duarte ("Lessee"), in connection with the Master Tax-Exempt Lease/Purchase Agreement, dated as of August 30, 2019 (the "Master Agreement"), between City of Duarte, as lessee, and U.S. Bancorp Government Leasing and Finance, Inc. as lessor ("Lessor"), and the execution of Property Schedule No. 1 (the "Property Schedule") dated as of August 30, 2019, pursuant to the Master Agreement. We have examined the law and such certified proceedings and other papers as we deem necessary to render this opinion.

All capitalized terms not otherwise defined herein shall have the meanings provided in the Master Agreement and Property Schedule.

As to questions of fact material to our opinion, we have relied upon the representations of Lessee in the Master Agreement and the Property Schedule and in the certified proceedings and other certifications of public officials furnished to us without undertaking to verify the same by independent investigation.

Based upon the foregoing, we are of the opinion that, under existing law:

1. Lessee is a public body corporate and politic, duly organized and existing under the laws of the State, and has a substantial amount of one or more of the following sovereign powers: (a) the power to tax, (b) the power of eminent domain, and (c) the police power.

2. Lessee has all requisite power and authority to enter into the Master Agreement and the Property Schedule and to perform its obligations thereunder.

3. The execution, delivery and performance of the Master Agreement and the Property Schedule by Lessee has been duly authorized by all necessary action on the part of Lessee.

4. All proceedings of Lessee and its governing body relating to the authorization and approval of the Master Agreement and the Property Schedule, the execution thereof and the transactions contemplated thereby have been conducted in accordance with all applicable open meeting laws and all other applicable state and federal laws.

5. Lessee has acquired or has arranged for the acquisition of the Property subject to the Property Schedule, and has entered into the Master Agreement and the Property Schedule, in compliance with all applicable public bidding laws.

6. Lessee has obtained all consents and approvals of other governmental authorities or agencies which may be required for the execution, delivery and performance by Lessee of the Master Agreement and the Property Schedule.

7. The Master Agreement and the Property Schedule have been duly executed and delivered by Lessee and constitute legal, valid and binding obligations of Lessee, enforceable against Lessee in accordance with the terms thereof, except insofar as the enforcement thereof may be limited by any applicable bankruptcy, insolvency, moratorium, reorganization or other laws of equitable principles of general application, or of application to municipalities or political subdivisions such as the Lessee, affecting remedies or creditors' rights generally, and to the exercise of judicial discretion in appropriate cases.

8. As of the date hereof, based on such inquiry and investigation as we have deemed sufficient, no litigation is pending, (or, to our knowledge, threatened) against Lessee in any court (a) seeking to restrain or enjoin the delivery of the Master Agreement or the Property Schedule or of other agreements similar to the Master Agreement; (b) questioning the authority of Lessee to execute the Master Agreement or the Property Schedule, or the validity of the Master Agreement or the Property Schedule, or the payment of principal of or interest on, the Property Schedule; (c) questioning the constitutionality of any statute, or the validity of any proceedings, authorizing the execution of the Master Agreement and the Property Schedule; or (d) affecting the provisions made for the payment of or security for the Master Agreement and the Property Schedule.

This opinion may be relied upon by Lessor, its successors and assigns, and any other legal counsel who provides an opinion with respect to the Property Schedule.

Very truly yours,

By: _____

Name: _____

Title: _____

Dated: _____

EXHIBIT 3

Lessee's General and Incumbency Certificate

GENERAL CERTIFICATE

Re: **Property Schedule No. 1** dated as of August 30, 2019 to the Master Tax-Exempt Lease/Purchase Agreement dated August 30, 2019 between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte.

The undersigned, being the duly elected, qualified and acting _____
(Title of Person to Execute Lease/Purchase Agreement)
of the City of Duarte ("Lessee") does hereby certify, as of August 30, 2019, as follows:

1. Lessee did, at a meeting of the governing body of the Lessee, by resolution or ordinance duly enacted, in accordance with all requirements of law, approve and authorize the execution and delivery of the above-referenced Property Schedule (the "Property Schedule") and the Master Tax-Exempt Lease/Purchase Agreement (the "Master Agreement") by the undersigned.

2. The meeting(s) of the governing body of the Lessee at which the Master Agreement and the Property Schedule were approved and authorized to be executed was duly called, regularly convened and attended throughout by the requisite quorum of the members thereof, and the enactment approving the Master Agreement and the Property Schedule and authorizing the execution thereof has not been altered or rescinded. All meetings of the governing body of Lessee relating to the authorization and delivery of Master Agreement and the Property Schedule have been: (a) held within the geographic boundaries of the Lessee; (b) open to the public, allowing all people to attend; (c) conducted in accordance with internal procedures of the governing body; and (d) conducted in accordance with the charter of the Lessee, if any, and the laws of the State.

3. No event or condition that constitutes, or with the giving of notice or the lapse of time or both would constitute, an Event of Default or a Nonappropriation Event (as such terms are defined in the Master Agreement) exists at the date hereof with respect to this Property Schedule or any other Property Schedules under the Master Agreement.

4. The acquisition of all of the Property under the Property Schedule has been duly authorized by the governing body of Lessee.

5. Lessee has, in accordance with the requirements of law, fully budgeted and appropriated sufficient funds for the current budget year to make the Lease Payments scheduled to come due during the current budget year under the Property Schedule and to meet its other obligations for the current budget year and such funds have not been expended for other purposes.

6. As of the date hereof, no litigation is pending, (or, to my knowledge, threatened) against Lessee in any court (a) seeking to restrain or enjoin the delivery of the Master Agreement or the Property Schedule or of other agreements similar to the Master Agreement; (b) questioning the authority of Lessee to execute the Master Agreement or the Property Schedule, or the validity of the Master Agreement or the Property Schedule, or the payment of principal or of interest on, the Property Schedule; (c) questioning the constitutionality of any statute, or the validity of any proceedings, authorizing the execution of the Master Agreement and the Property Schedule; or (d) affecting the provisions made for the payment of or security for the Master Agreement and the Property Schedule.

IN WITNESS WHEREOF, the undersigned has executed this Certificate as of August 30, 2019.

City of Duarte

By _____
Signature of Person to Execute Lease/Purchase Agreement

Print Name and Title of Person to Execute Lease/Purchase Agreement

INCUMBENCY CERTIFICATE

Re: **Property Schedule No. 1** dated as of August 30, 2019 to the Master Tax-Exempt Lease/Purchase Agreement dated as of August 30, 2019 between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte.

The undersigned, being the duly elected, qualified and acting Secretary or Clerk of the City of Duarte ("Lessee") does hereby certify, as of August 30, 2019, as follows:

As of the date of the meeting(s) of the governing body of the Lessee at which the above-referenced Master Agreement and the Property Schedule were approved and authorized to be executed, and as of the date hereof, the below-named representative of the Lessee held and holds the office set forth below, and the signature set forth below is his/her true and correct signature.

(Signature of Person to Execute Lease/Purchase Agreement)

(Print Name and Title)

IN WITNESS WHEREOF, the undersigned has executed this Certificate as of August 30, 2019.

Secretary/Clerk

Print Name

and Title: _____

EXHIBIT 4

Payment of Proceeds Instructions

Intentionally Omitted.

EXHIBIT 5

Acceptance Certificate

Intentionally Omitted.

EXHIBIT 6

Bank Qualification And Arbitrage Rebate

U.S. Bancorp Government Leasing and Finance, Inc.
13010 SW 68th Parkway, Suite 100
Portland, OR 97223

Re: **Property Schedule No. 1** to Master Tax-Exempt Lease/Purchase Agreement between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte

PLEASE CHECK EITHER:

Bank Qualified Tax-Exempt Obligation under Section 265

_____ Lessee hereby designates this Property Schedule as a "qualified tax-exempt obligation" as defined in Section 265(b)(3)(B) of the Code. Lessee reasonably anticipates issuing tax-exempt obligations (excluding private activity bonds other than qualified 501(c)(3) bonds and including all tax-exempt obligations of subordinate entities of the Lessee) during the calendar year in which the Commencement Date of this Property Schedule falls, in an amount not exceeding \$10,000,000.

or

_____ Not applicable.

Arbitrage Rebate

Eighteen Month Exception:

Pursuant to Treasury Regulations Section 1.148-7(d), the gross proceeds of this Property Schedule will be expended for the governmental purposes for which this Property Schedule was entered into, as follows: at least 15% within six months after the Commencement Date, at least 60% within 12 months after the Commencement Date, and 100% within 18 months after the Commencement Date. If Lessee is unable to comply with Section 1.148-7(d) of the Treasury Regulations, Lessee shall compute rebatable arbitrage on this Agreement and pay rebatable arbitrage to the United States at least once every five years, and within 60 days after payment of the final Lease Payment due under this Agreement.

Consult tax counsel if there is any chance that the Eighteen Month Exception will not be met.

Lessee: City of Duarte
By:
Name:
Title:

*Please be sure to select ONE option above.

Language for UCC Financing Statements

Property Schedule No. 1

SECURED PARTY: U.S. Bancorp Government Leasing and Finance, Inc.

DEBTOR: City of Duarte

This financing statement covers all of Debtor's right, title and interest, whether now owned or hereafter acquired, in and to the equipment leased to Debtor under Property Schedule No. 1 dated August 30, 2019 to that certain Master Tax-Exempt Lease Purchase Agreement dated as of August 30, 2019, in each case between Debtor, as Lessee, and Secured Party, as Lessor, together with all accessions, substitutions and replacements thereto and therefore, and proceeds (cash and non-cash), including, without limitation, insurance proceeds, thereof, including without limiting, all equipment described on Exhibit A attached hereto and made a part hereof.

Debtor has no right to dispose of the equipment.

Notification of Tax Treatment to Tax-Exempt Lease/Purchase Agreement

This **Notification of Tax Treatment** is pursuant to the Master Tax-Exempt Lease/Purchase Agreement dated as of August 30, 2019 and the related Property Schedule No. 1 dated August 30, 2019, between Lessor and Lessee (the "Agreement").

- X Lessee agrees that this Property Schedule SHOULD be subject to sales/use taxes
- Lessee agrees that this Property Schedule should NOT be subject to sales/use taxes and Lessee has included our tax-exemption certificate with this document package
- Lessee agrees that this Property Schedule should NOT be subject to sales/use taxes and no tax-exemption certificate is issued to us by the State
- Lessee agrees that this Property Schedule is a taxable transaction and subject to any/all taxes
- Lessee agrees that this Property Schedule is subject to sales/use taxes and will pay those taxes directly to the State or Vendor

IN WITNESS WHEREOF, Lessee has caused this Notification of Tax Treatment to be executed by their duly authorized representative.

Lessee: City of Duarte
By:
Name:
Title:

Information Return for Tax-Exempt Governmental Bonds

► Under Internal Revenue Code section 149(e)

► See separate instructions.

Caution: If the issue price is under \$100,000, use Form 8038-GC.► Go to www.irs.gov/F8038G for instructions and the latest information.

OMB No. 1545-0720

Part I Reporting Authority		If Amended Return, check here ☐	
1 Issuer's name		2 Issuer's employer identification number (EIN)	
3a Name of person (other than issuer) with whom the IRS may communicate about this return (see instructions)		3b Telephone number of other person shown on 3a	
4 Number and street (or P.O. box if mail is not delivered to street address)	Room/suite	5 Report number (For IRS Use Only)	
6 City, town, or post office, state, and ZIP code		7 Date of issue	
8 Name of issue		9 CUSIP number	
10a Name and title of officer or other employee of the issuer whom the IRS may call for more information (see instructions)		10b Telephone number of officer or other employee shown on 10a	

Part II Type of Issue (enter the issue price). See the instructions and attach schedule.			
11 Education		11	
12 Health and hospital		12	
13 Transportation		13	
14 Public safety		14	
15 Environment (including sewage bonds)		15	
16 Housing		16	
17 Utilities		17	
18 Other. Describe ►		18	
19a If bonds are TANs or RANs, check only box 19a	► ☐		
b If bonds are BANs, check only box 19b	► ☐		
20 If bonds are in the form of a lease or installment sale, check box	► ☐		

Part III Description of Bonds. Complete for the entire issue for which this form is being filed.					
	(a) Final maturity date	(b) Issue price	(c) Stated redemption price at maturity	(d) Weighted average maturity	(e) Yield
21		\$	\$	years	%

Part IV Uses of Proceeds of Bond Issue (including underwriters' discount)				
22	Proceeds used for accrued interest		22	
23	Issue price of entire issue (enter amount from line 21, column (b))		23	
24	Proceeds used for bond issuance costs (including underwriters' discount)	24		
25	Proceeds used for credit enhancement	25		
26	Proceeds allocated to reasonably required reserve or replacement fund	26		
27	Proceeds used to refund prior tax-exempt bonds. Complete Part V	27		
28	Proceeds used to refund prior taxable bonds. Complete Part V	28		
29	Total (add lines 24 through 28)		29	
30	Nonrefunding proceeds of the issue (subtract line 29 from line 23 and enter amount here)		30	

Part V Description of Refunded Bonds. Complete this part only for refunding bonds.			
31	Enter the remaining weighted average maturity of the tax-exempt bonds to be refunded	►	years
32	Enter the remaining weighted average maturity of the taxable bonds to be refunded	►	years
33	Enter the last date on which the refunded tax-exempt bonds will be called (MM/DD/YYYY)	►	
34	Enter the date(s) the refunded bonds were issued ► (MM/DD/YYYY)		

Part VI Miscellaneous

35	Enter the amount of the state volume cap allocated to the issue under section 141(b)(5)	35	
36a	Enter the amount of gross proceeds invested or to be invested in a guaranteed investment contract (GIC). See instructions	36a	
b	Enter the final maturity date of the GIC ► (MM/DD/YYYY) _____		
c	Enter the name of the GIC provider ► _____		
37	Pooled financings: Enter the amount of the proceeds of this issue that are to be used to make loans to other governmental units	37	
38a	If this issue is a loan made from the proceeds of another tax-exempt issue, check box ► ☐ and enter the following information:		
b	Enter the date of the master pool bond ► (MM/DD/YYYY) _____		
c	Enter the EIN of the issuer of the master pool bond ► _____		
d	Enter the name of the issuer of the master pool bond ► _____		
39	If the issuer has designated the issue under section 265(b)(3)(B)(i)(III) (small issuer exception), check box		☐
40	If the issuer has elected to pay a penalty in lieu of arbitrage rebate, check box		☐
41a	If the issuer has identified a hedge, check here ► ☐ and enter the following information:		
b	Name of hedge provider ► _____		
c	Type of hedge ► _____		
d	Term of hedge ► _____		
42	If the issuer has superintegrated the hedge, check box		☐
43	If the issuer has established written procedures to ensure that all nonqualified bonds of this issue are remediated according to the requirements under the Code and Regulations (see instructions), check box		☐
44	If the issuer has established written procedures to monitor the requirements of section 148, check box		☐
45a	If some portion of the proceeds was used to reimburse expenditures, check here ► ☐ and enter the amount of reimbursement ► _____		
b	Enter the date the official intent was adopted ► (MM/DD/YYYY) _____		

Signature and Consent

Under penalties of perjury, I declare that I have examined this return and accompanying schedules and statements, and to the best of my knowledge and belief, they are true, correct, and complete. I further declare that I consent to the IRS's disclosure of the issuer's return information, as necessary to process this return, to the person that I have authorized above.

Signature of issuer's authorized representative _____	Date _____	Type or print name and title _____
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Paid Preparer Use Only

Print/Type preparer's name	Preparer's signature	Date	Check ☐ if self-employed	PTIN
Firm's name ► _____			Firm's EIN ► _____	
Firm's address ► _____			Phone no. _____	

Instructions for Form 8038-G

(Rev. September 2018)

Information Return for Tax-Exempt Governmental Bonds



Department of the Treasury
Internal Revenue Service

Section references are to the Internal Revenue Code unless otherwise noted.

Future Developments

For the latest information about developments related to Form 8038-G and its instructions, such as legislation enacted after they were published, go to [IRS.gov/Form8038G](https://www.irs.gov/Form8038G).

What's New

The Tax Cuts and Jobs Act (P.L. 115-97) repealed the exclusion from gross income for interest on bonds issued to advance refund tax-exempt bonds. The repeal applies to advance refunding bonds issued after 2017. A bond is an advance refunding bond if it is issued more than 90 days before the redemption of the refunded bonds.

The Tax Cuts and Jobs Act also repealed the authority to issue tax-credit bonds and direct-pay bonds. The repeal applies to qualified forestry conservation bonds, new clean renewable energy bonds, qualified energy conservation bonds, qualified zone academy bonds, and qualified school construction bonds issued after 2017. The authority to issue recovery zone economic development bonds and build America bonds expired on January 1, 2011.

Note. The creation of an advance refunding escrow account to advance refund tax-credit bonds and/or direct-pay bonds may result in the reissuance of the bonds and the loss of the tax benefits.

General Instructions

Purpose of Form

Form 8038-G is used by issuers of tax-exempt governmental bonds to provide the IRS with the information required by section 149(e) and to monitor compliance with the requirements of sections 141 through 150.

Who Must File

IF the issue price (line 21, column (b)) is...	THEN, for tax-exempt governmental bonds issued after December 31, 1986, issuers must file...
\$100,000 or more	a separate Form 8038-G for each issue.
less than \$100,000	Form 8038-GC, Information Return for Small Tax-Exempt Governmental Bond Issues, Leases, and Installment Sales.

When To File

File Form 8038-G on or before the 15th day of the 2nd calendar month after the close of the calendar quarter in which the bond is issued. Form 8038-G may not be filed before the issue date and must be completed based on the facts as of the issue date.

Late filing. An issuer may be granted an extension of time to file Form 8038-G under section 3 of Rev. Proc. 2002-48, 2002-37 I.R.B. 531, if it is determined that the failure to file timely is not due to willful neglect. Type or print at the top of the form "Request for Relief under section 3 of Rev. Proc. 2002-48" and attach a letter explaining why Form 8038-G was not submitted to the IRS on time. Also indicate whether the bond issue in question is under examination by the IRS. Do not submit copies of the trust indenture or other bond documents. See *Where To File* next.

Where To File

File Form 8038-G, and any attachments, with the Department of the Treasury, Internal Revenue Service Center, Ogden, UT 84201.

Private delivery services. You can use certain private delivery services (PDS) designated by the IRS to meet the "timely mailing as timely filing" rule for tax returns. Go to [IRS.gov/PDS](https://www.irs.gov/PDS) for the current list of designated services.

The PDS can tell you how to get written proof of the mailing date.

For the IRS mailing address to use if you're using PDS, go to [IRS.gov/PDSstreetAddresses](https://www.irs.gov/PDSstreetAddresses).



PDS can't deliver items to P.O. boxes. You must use the U.S. Postal Service to mail any item to an IRS P.O. box address.

Other Forms That May Be Required

For rebating arbitrage (or paying a penalty in lieu of arbitrage rebate) to the federal government, use Form 8038-T, Arbitrage Rebate, Yield Reduction and Penalty in Lieu of Arbitrage Rebate.

For private activity bonds, use Form 8038, Information Return for Tax-Exempt Private Activity Bond Issues.

Rounding to Whole Dollars

You can round off cents to whole dollars. If you do round to whole dollars, you must round all amounts. To round, drop amounts under 50 cents and increase amounts from 50 to 99 cents to the next dollar (for example, \$1.39 becomes \$1 and \$2.50 becomes \$3).

If two or more amounts must be added to figure the amount to enter on a line, include cents when adding the amounts and round off only the total.

Definitions

Bond. This is any obligation, including bond, note, commercial paper, installment purchase agreement, or financing lease.

Taxable bond. This is any bond the interest on which is not excludable from gross income under section 103. Taxable bonds include tax credit bonds and direct pay bonds.

Tax-exempt bond. This is any obligation, including a bond, installment purchase agreement, or financial lease, on which the interest is excluded from income under section 103.

Tax-exempt governmental bond. A tax-exempt bond that is not a private activity bond (see next) is a tax-exempt governmental bond. This includes a bond issued by a qualified volunteer fire department under section 150(e).

Private activity bond. This includes a bond issued as part of an issue in which:

- More than 10% of the proceeds are to be used for any private activity business use; **and**
- More than 10% of the payment of principal or interest of the issue is **either (a)** secured by an interest in property to be used for a private business use (or

payments for such property), **or (b)** to be derived from payments for property (or borrowed money) used for a private business use.

It also includes a bond, the proceeds of which **(a)** are to be used directly or indirectly to make or finance loans (other than loans described in section 141(c)(2)) to persons other than governmental units, and **(b)** exceeds the lesser of 5% of the proceeds **or** \$5 million.

Issue price. The issue price of bonds is generally determined under Regulations section 1.148-1(f). Thus, when issued for cash, the issue price is the first price at which a substantial amount of the bonds are sold to the public. To determine the issue price of a bond issued for property, see sections 1273 and 1274 and the related regulations.

Issue. Generally, bonds are treated as part of the same issue if they are issued by the same issuer, on the same date, and in a single transaction, or a series of related transactions (see Regulations section 1.149(e)-1(e)(2)). However, bonds issued during the same calendar year **(a)** under a loan agreement under which amounts are to be advanced periodically (a “draw-down loan”), or **(b)** with a term not exceeding 270 days, may be treated as part of the same issue if the bonds are equally and ratably secured under a single indenture or loan agreement and are issued under a common financing arrangement (for example, under the same official statement periodically updated to reflect changing factual circumstances). Also, for bonds issued under a draw-down loan that meet the requirements of the preceding sentence, bonds issued during different calendar years may be treated as part of the same issue if all of the amounts to be advanced under the draw-down loan are reasonably expected to be advanced within 3 years of the date of issue of the first bond. Likewise, bonds (other than private activity bonds) issued under a single agreement that is in the form of a lease or installment sale may be treated as part of the same issue if all of the property covered by that agreement is reasonably expected to be delivered within 3 years of the date of issue of the first bond.

Arbitrage rebate. Generally, interest on a state or local bond is not tax exempt unless the issuer of the bond rebates to the United States arbitrage profits earned from investing proceeds of the bond in higher yielding nonpurpose investments. See section 148(f).

Construction issue. This is an issue of tax-exempt bonds that meets **both** of the following conditions.

1. At least 75% of the available construction proceeds are to be used for

construction expenditures with respect to property to be owned by a governmental unit or a section 501(c)(3) organization.

2. All the bonds that are part of the issue are qualified 501(c)(3) bonds, bonds that are not private activity bonds, or private activity bonds issued to finance property to be owned by a governmental unit or a section 501(c)(3) organization.

In lieu of rebating any arbitrage that may be owed to the United States, the issuer of a construction issue may make an irrevocable election to pay a penalty. The penalty is equal to 1¹/₂% of the amount of construction proceeds that do not meet certain spending requirements. See section 148(f)(4)(C) and the Instructions for Form 8038-T.

Pooled financing issue. This is an issue of tax-exempt bonds, the proceeds of which are to be used to finance purpose investments representing conduit loans to two or more conduit borrowers, unless those conduit loans are to be used to finance a single capital project.

Specific Instructions

Part I—Reporting Authority

Amended return. An issuer may file an amended return to change or add to the information reported on a previously filed return for the same date of issue. If you are filing to correct errors or change a previously filed return, check the *Amended Return* box in the heading of the form.

The amended return must provide all the information reported on the original return, in addition to the new or corrected information. Attach an explanation of the reason for the amended return and write across the top, “Amended Return Explanation.” Failure to attach an explanation may result in a delay in processing the form.

Line 1. The issuer's name is the name of the entity issuing the bonds, not the name of the entity receiving the benefit of the financing. For a lease or installment sale, the issuer is the lessee or the purchaser.

Line 2. An issuer that does not have an employer identification number (EIN) should apply online by visiting the IRS website at [IRS.gov/EIN](https://www.irs.gov/EIN). The organization may also apply for an EIN by faxing or mailing Form SS-4 to the IRS.

Line 3a. If the issuer wishes to authorize a person other than an officer or other employee of the issuer (including a legal representative or paid preparer) to communicate with the IRS and whom the IRS may contact about this return (including in writing or by telephone), enter the name of such person here. The person listed on line 3a must be an individual. Do

not enter the name and title of an officer or other employee of the issuer here (use line 10a for that purpose).

Note. By authorizing a person other than an authorized officer or other employee of the issuer to communicate with the IRS and whom the IRS may contact about this return, the issuer authorizes the IRS to communicate directly with the individual entered on line 3a and consents to disclose the issuer's return information to that individual, as necessary, to process this return.

Lines 4 and 6. If you listed an individual on line 3a to communicate with the IRS and whom the IRS may contact about this return, enter the number and street (or P.O. box if mail is not delivered to street address), city, town, or post office, state, and ZIP code of that person. Otherwise, enter the issuer's number and street (or P.O. box if mail is not delivered to street address), city, town, or post office, state, and ZIP code.

Note. The address entered on lines 4 and 6 is the address the IRS will use for all written communications regarding the processing of this return, including any notices.

Line 5. This line is for IRS use only. Do not make any entries in this box.

Line 7. The date of issue is generally the first date on which the issuer physically exchanges any bond included in the issue for the underwriter's (or other purchaser's) funds. For a lease or installment sale, enter the date interest starts to accrue in an MM/DD/YYYY format.

Line 8. If there is no name of the issue, please provide other identification of the issue.

Line 9. Enter the CUSIP (Committee on Uniform Securities Identification Procedures) number of the bond with the latest maturity. If the issue does not have a CUSIP number, write “None.”

Line 10a. Enter the name and title of the officer or other employee of the issuer whom the IRS may call for more information. If the issuer wishes to designate a person other than an officer or other employee of the issuer (including a legal representative or paid preparer) whom the IRS may call for more information about the return, enter the name, title, and telephone number of such person on lines 3a and 3b.



Complete lines 10a and 10b even if you complete lines 3a and 3b.

Part II—Type of Issue



Elections referred to in Part II are made on the original bond documents, not on this form.

Identify the type of bonds issued by entering the issue price in the box corresponding to the type of bond (see *Issue price* under *Definitions*, earlier). Attach a schedule listing names and EINs of organizations that are to use proceeds of these bonds, if different from those of the issuer, include a brief summary of the use and indicate whether or not such user is a governmental or nongovernmental entity.

Line 18. Enter a description of the issue in the space provided.

Line 19. If the bonds are short-term tax anticipation notes or warrants (TANs) or short-term revenue anticipation notes or warrants (RANs), check box 19a. If the bonds are short-term bond anticipation notes (BANs), issued with the expectation that they will be refunded with the proceeds of long-term bonds at some future date, check box 19b. Do not check both boxes.

Line 20. Check this box if property other than cash is exchanged for the bond, for example, acquiring a police car, a fire truck, or telephone equipment through a series of monthly payments. (This type of bond is sometimes referred to as a “municipal lease.”) Also check this box if real property is directly acquired in exchange for a bond to make periodic payments of interest and principal. **Do not** check this box if the proceeds of the bond are received in the form of cash, even if the term “lease” is used in the title of the issue.

Part III—Description of Bonds

Line 21. For column (a), the final maturity date is the last date the issuer must redeem the entire issue.

For column (b), see *Issue price* under *Definitions*, earlier.

For column (c), the stated redemption price at maturity of the entire issue is the sum of the stated redemption prices at maturity of each bond issued as part of the issue. For a lease or installment sale, write “N/A” in column (c).

For column (d), the weighted average maturity is the sum of the products of the issue price of each maturity and the number of years to maturity (determined separately for each maturity and by taking into account mandatory redemptions), divided by the issue price of the entire issue (from line 21, column (b)). For a lease or installment sale, enter instead the total number of years the lease or installment sale will be outstanding.

For column (e), the yield, as defined in section 148(h), is the discount rate that, when used to figure the present value of all payments of principal and interest to be paid on the bond, produces an amount equal to the purchase price, including accrued interest. See Regulations section 1.148-4 for specific rules to figure the yield on an issue. If the issue is a variable rate issue, write “VR” as the yield of the issue. For other than variable rate issues, carry the yield out to four decimal places (for example, 5.3125%). If the issue is a lease or installment sale, enter the effective rate of interest being paid.

Part IV—Uses of Proceeds of Bond Issue

For a lease or installment sale, write “N/A” in the space to the right of the title for Part IV.

Line 22. Enter the amount of proceeds that will be used to pay interest on the issue accruing prior to the date of issue. For definition of date of issue, see these instructions, line 7.

Line 24. Enter the amount of the proceeds that will be used to pay bond issuance costs, including fees for trustees and bond counsel. If no bond proceeds will be used to pay bond issuance costs, enter zero. Do not leave this line blank.

Line 25. Enter the amount of the proceeds that will be used to pay fees for credit enhancement that are taken into account in determining the yield on the issue for purposes of section 148(h) (for example, bond insurance premiums and certain fees for letters of credit).

Line 26. Enter the amount of proceeds that will be allocated to such a fund.

Line 27. Enter the amount of the proceeds that will be used to pay principal, interest, or call premium on any tax-exempt bonds, including proceeds that will be used to fund an escrow account for this purpose.

Line 28. Enter the amount of the proceeds that will be used to pay principal, interest, or call premium on any taxable bonds, including proceeds that will be used to fund an escrow account for this purpose.

Part V—Description of Refunded Bonds

Complete this part only if the bonds are to be used to refund a prior issue of tax-exempt bonds or taxable bonds. For a lease or installment sale, write “N/A” in the space to the right of the title for Part V.

Lines 31 and 32. The remaining weighted average maturity is determined without regard to the refunding. The weighted average maturity is determined

in the same manner as on line 21, column (d).

Line 34. If more than a single issue of tax-exempt bonds or taxable bonds will be refunded, enter the date of issue for each refunded issue. Enter the date in an MM/DD/YYYY format.

Part VI—Miscellaneous

Line 35. An allocation of volume cap is required if the nonqualified amount for the issue is more than \$15 million but is not more than the amount that would cause the issue to be private activity bonds.

Line 36. If any portion of the gross proceeds of the issue is or will be invested in a guaranteed investment contract (GIC), as defined in Regulations section 1.148-1(b), enter the amount of the gross proceeds so invested, as well as the final maturity date of the GIC and the name of the provider of such contract.

Line 37. If the issue is a pooled financing issue (as defined under *Pooled financing issue* in *Definitions*, earlier), enter the amount of the proceeds used to make loans to other governmental units, the interest on which is tax exempt.

Line 38. If the issue is a loan of proceeds from a pooled financing issue (as defined under *Pooled financing issue* in *Definitions*, earlier), check the box and where asked for the date of issue, EIN, and name of the issuer of the master pool bond, enter the date of issue, EIN, and name of the issuer of the pooled financing issue.

Line 40. Check this box if the issue is a construction issue and an irrevocable election to pay a penalty in lieu of arbitrage rebate has been made on or before the date the bonds were issued. The penalty is payable with a Form 8038-T for each 6-month period after the date the bonds are issued. Do not make any payment of penalty in lieu of arbitrage rebate with this form. See Rev. Proc. 92-22, 1992-1 C.B. 736, for rules regarding the “election document.”

Line 41a. Check this box if the issuer has identified a hedge on its books and records according to Regulations sections 1.148-4(h)(2)(viii) and 1.148-4(h)(5) that permit an issuer of tax-exempt bonds to identify a hedge for it to be included in yield calculations for figuring arbitrage.

Line 42. In determining if the issuer has super-integrated a hedge, apply the rules of Regulations section 1.148-4(h)(4). If the hedge is super-integrated, check the box.

Line 43. If the issuer takes a “deliberate action” after the issue date that causes the conditions of the private business tests or the private loan financing test to be met, then such issue is also an issue of private

activity bonds. Regulations section 1.141-2(d)(3) defines a deliberate action as any action taken by the issuer that is within its control regardless of whether there is intent to violate such tests. Regulations section 1.141-12 explains the conditions to taking remedial action that prevent an action that causes an issue to meet the private business tests or private loan financing test from being treated as a deliberate action. Check the box if the issuer has established written procedures to ensure timely remedial action for all nonqualified bonds according to Regulations section 1.141-12 or other remedial actions authorized by the Commissioner under Regulations section 1.141-12(h).

Line 44. Check the box if the issuer has established written procedures to monitor compliance with the arbitrage, yield restriction, and rebate requirements of section 148.

Line 45a. Check the box if some part of the proceeds was used to reimburse expenditures. Figure and then enter the amount of proceeds that are used to reimburse the issuer for amounts paid for a qualified purpose prior to the issuance of the bonds. See Regulations section 1.150-2.

Line 45b. An issuer must adopt an official intent to reimburse itself for preissuance expenditures within 60 days after payment of the original expenditure unless excepted by Regulations section 1.150-2(f). Enter the date the official intent was adopted. See Regulations section 1.150-2(e) for more information about official intent.

Signature and Consent

An authorized representative of the issuer must sign Form 8038-G and any applicable certification. Also print the

name and title of the person signing Form 8038-G. The authorized representative of the issuer signing this form must have the authority to consent to the disclosure of the issuer's return information, as necessary to process this return, to the person(s) that have been designated in Form 8038-G.

Note. If the issuer in Part I, lines 3a and 3b, authorizes the IRS to communicate (including in writing and by telephone) with a person other than an officer or other employee of the issuer, by signing this form, the issuer's authorized representative consents to the disclosure of the issuer's return information, as necessary to process this return, to such person.

Paid Preparer

If an authorized officer of the issuer filled in this return, the paid preparer's space should remain blank. Anyone who prepares the return but does not charge the organization should not sign the return. Certain others who prepare the return should not sign. For example, a regular, full-time employee of the issuer, such as a clerk, secretary, etc., should not sign.

Generally, anyone who is paid to prepare a return must sign it and fill in the other blanks in the *Paid Preparer Use Only* area of the return.

- The paid preparer must:
- Sign the return in the space provided for the preparer's signature (a facsimile signature is acceptable),
 - Enter the preparer information, and
 - Give a copy of the return to the issuer.

Paperwork Reduction Act Notice. We ask for the information on this form to carry out the Internal Revenue laws of the

United States. You are required to give us the information. We need it to ensure that you are complying with these laws.

You are not required to provide the information requested on a form that is subject to the Paperwork Reduction Act unless the form displays a valid OMB control number. Books or records relating to a form or its instructions must be retained as long as their contents may become material in the administration of any Internal Revenue law. Generally, tax returns and return information are confidential, as required by section 6103.

The time needed to complete and file this form varies depending on individual circumstances. The estimated average time is:

Learning about the law or the form	2 hr., 41 min.
Preparing, copying, assembling, and sending the form to the IRS	3 hr., 3 min.

If you have comments concerning the accuracy of these time estimates or suggestions for making this form simpler, we would be happy to hear from you. You can send us comments through [IRS.gov/FormComments](https://www.irs.gov/FormComments).

Or you can write to:

Internal Revenue Service
Tax Forms and Publications
1111 Constitution Ave. NW, IR-6526
Washington, DC 20224

Do not send the form to this address. Instead, see *Where To File*, earlier.

ESCROW AGREEMENT

THIS ESCROW AGREEMENT ("*Escrow Agreement*") is made as of August 30, 2019 by and among U.S. Bancorp Government Leasing and Finance, Inc. ("*Lessor*"), City of Duarte ("*Lessee*") and U.S. BANK NATIONAL ASSOCIATION, as escrow agent ("*Escrow Agent*").

Lessor and Lessee have heretofore entered into that certain Master Tax-Exempt Lease/Purchase Agreement dated as of August 30, 2019 (the "*Master Agreement*") and a Property Schedule No. 1 thereto dated August 30, 2019 (the "*Schedule*" and, together with the terms and conditions of the Master Agreement incorporated therein, the "*Agreement*"). The Schedule contemplates that certain personal property described therein (the "*Equipment*") is to be acquired from the vendor(s) or manufacturer(s) thereof (the "*Vendor*"). After acceptance of the Equipment by Lessee, the Equipment is to be financed by Lessor to Lessee pursuant to the terms of the Agreement.

The Master Agreement further contemplates that Lessor will deposit an amount equal to the anticipated aggregate acquisition cost of the Equipment (the "*Purchase Price*"), being \$1,286,597.00, with Escrow Agent to be held in escrow and applied on the express terms set forth herein. Such deposit, together with all interest and other additions received with respect thereto (hereinafter the "*Escrow Fund*") is to be applied to pay the Vendor its invoice cost (a portion of which may, if required, be paid prior to final acceptance of the Equipment by Lessee); and, if applicable, to reimburse Lessee for progress payments already made by it to the Vendor of the Equipment.

The parties desire to set forth the terms on which the Escrow Fund is to be created and to establish the rights and responsibilities of the parties hereto.

NOW, THEREFORE, in consideration of the sum of Ten Dollars (\$10.00) in hand paid, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Escrow Agent hereby agrees to serve as escrow agent upon the terms and conditions set forth herein. The moneys and investments held in the Escrow Fund are for the benefit of Lessee and Lessor, and such moneys, together with any income or interest earned thereon, shall be expended only as provided in this Escrow Agreement, and shall not be subject to levy or attachment or lien by or for the benefit of any creditor of either Lessee or Lessor. Lessor, Lessee and Escrow Agent intend that the Escrow Fund constitute an escrow account in which Lessee has no legal or equitable right, title or interest until satisfaction in full of all conditions contained herein for the disbursement of funds by the Escrow Agent therefrom. However, if the parties' intention that Lessee shall have no legal or equitable right, title or interest until all conditions for disbursement are satisfied in full is not respected in any legal proceeding, the parties hereto intend that Lessor have a security interest in the Escrow Fund, and such security interest is hereby granted by Lessee to secure payment of all sums due to Lessor under the Master Agreement. For such purpose, Escrow Agent hereby agrees to act as agent for Lessor in connection with the perfection of such security interest and agrees to note, or cause to be noted, on all books and records relating to the Escrow Fund, the Lessor's interest therein.

2. On such day as is determined to the mutual satisfaction of the parties (the "*Closing Date*"), Lessor shall deposit with Escrow Agent cash in the amount of the Purchase Price, to be held in escrow by Escrow Agent on the express terms and conditions set forth herein.

On the Closing Date, Escrow Agent agrees to accept the deposit of the Purchase Price by Lessor, and further agrees to hold the amount so deposited together with all interest and other additions received with respect thereto, as the Escrow Fund hereunder, in escrow on the express terms and conditions set forth herein.

3. Escrow Agent shall at all times segregate the Escrow Fund into an account maintained for that express purpose, which shall be clearly identified on the books and records of Escrow Agent as being held in its capacity as Escrow Agent. Securities and other negotiable instruments comprising the

Escrow Fund from time to time shall be held or registered in the name of Escrow Agent (or its nominee). The Escrow Fund shall not, to the extent permitted by applicable law, be subject to levy or attachment or lien by or for the benefit of any creditor of any of the parties hereto (except with respect to the security interest therein held by Lessor).

4. The cash comprising the Escrow Fund from time to time shall be invested and reinvested by Escrow Agent in one or more investments as directed by Lessee. Absent written direction from Lessee, the cash will be invested in the U.S. Bank National Association Money Market Deposit Fund. See Exhibit 1 Investment Direction Letter. Lessee represents and warrants to Escrow Agent and Lessor that the investments selected by Lessee for investment of the Escrow Fund are permitted investments for Lessee under all applicable laws. Escrow Agent will use due diligence to collect amounts payable under a check or other instrument for the payment of money comprising the Escrow Fund and shall promptly notify Lessee and Lessor in the event of dishonor of payment under any such check or other instruments. Interest or other amounts earned and received by Escrow Agent with respect to the Escrow Fund shall be deposited in and comprise a part of the Escrow Fund. Escrow Agent shall maintain accounting records sufficient to permit calculation of the income on investments and interest earned on deposit of amounts held in the Escrow Fund. The parties acknowledge that to the extent regulations of the Comptroller of Currency or other applicable regulatory entity grant a right to receive brokerage confirmations of security transactions of the escrow, the parties waive receipt of such confirmations, to the extent permitted by law. The Escrow Agent shall furnish a statement of security transactions on its regular monthly reports. Attached as Exhibit 6 is the Class Action Negative Consent Letter to be reviewed by Lessee.

5. Upon request by Lessee and Lessor, Escrow Agent shall send monthly statements of account to Lessee and Lessor, which statements shall set forth all withdrawals from and interest earnings on the Escrow Fund as well as the investments in which the Escrow Fund is invested.

6. Escrow Agent shall take the following actions with respect to the Escrow Fund:

(a) Upon Escrow Agent's acceptance of the deposit of the Purchase Price, an amount equal to Escrow Agent's set-up fee, as set forth on Exhibit 2 hereto, shall be disbursed from the Escrow Fund to Escrow Agent in payment of such fee.

(b) Escrow Agent shall pay costs of the Equipment upon receipt of a duly executed Requisition Request (substantially in the format of Exhibit 3) signed by Lessor and Lessee. Lessor's authorized signatures are provided in Exhibit 5. Lessee's authorized signatures will be provided in Exhibit 3 of Master Lease Purchase Agreement. Escrow Agent will use best efforts to process requests for payment within one (1) business day of receipt of requisitions received prior to 2:00 p.m. Central Time. The final Requisition shall be accompanied by a duly executed Final Acceptance Certificate form attached as Exhibit 4 hereto.

(c) Upon receipt by Escrow Agent of written notice from Lessor that an Event of Default or an Event of Nonappropriation (if provided for under the Master Agreement) has occurred under the Agreement, all funds then on deposit in the Escrow Fund shall be paid to Lessor for application in accordance with the Master Agreement, and this Escrow Agreement shall terminate.

(d) Upon receipt by Escrow Agent of written notice from Lessor that the purchase price of the Equipment has been paid in full, Escrow Agent shall pay the funds then on deposit in the Escrow Fund to Lessor to be applied first to the next Lease Payment due under the Master Agreement, and second, to prepayment of the principal component of Lease Payments in inverse order of maturity without premium. To the extent the Agreement is not subject to prepayment, Lessor consents to such prepayment to the extent of such prepayment amount from the Escrow Fund. Upon disbursement of all amounts in the Escrow Fund, this Escrow Agreement shall terminate.

(e) This Escrow Agreement shall terminate eighteen (18) months from the date of this Escrow Agreement. It may, however, be extended by mutual consent of Lessee and Lessor in writing to Escrow Agent. All funds on deposit in the Escrow Fund at the time of termination under this paragraph, unless otherwise directed by Lessee in writing (electronic means acceptable), shall be transferred to Lessor.

7. The fees and expenses, including any legal fees, of Escrow Agent incurred in connection herewith shall be the responsibility of Lessee. The basic fees and expenses of Escrow Agent shall be as set forth on Exhibit 2 and Escrow Agent is hereby authorized to deduct such fees and expenses from the Escrow Fund as and when the same are incurred without any further authorization from Lessee or Lessor. Escrow Agent may employ legal counsel and other experts as it deems necessary for advice in connection with its obligations hereunder. Escrow Agent waives any claim against Lessor with respect to compensation hereunder.

8. Escrow Agent shall have no liability for acting upon any written instruction presented by Lessor in connection with this Escrow Agreement, which Escrow Agent in good faith believes to be genuine. Furthermore, Escrow Agent shall not be liable for any act or omission in connection with this Escrow Agreement except for its own negligence, willful misconduct or bad faith. Escrow Agent shall not be liable for any loss or diminution in value of the Escrow Fund as a result of the investments made by Escrow Agent.

9. Escrow Agent may resign at any time by giving thirty (30) days' prior written notice to Lessor and Lessee. Lessor may at any time remove Escrow Agent as Escrow Agent under this Escrow Agreement upon written notice. Such removal or resignation shall be effective on the date set forth in the applicable notice. Upon the effective date of resignation or removal, Escrow Agent will transfer the Escrow Fund to the successor Escrow Agent selected by Lessor.

10. Lessee hereby represents, covenants and warrants that pursuant to Treasury Regulations Section 1.148-7(d), the gross proceeds of the Agreement will be expended for the governmental purposes for which the Agreement was entered into, as follows: at least 15% within six months after the Commencement Date, such date being the date of deposit of funds into the Escrow Fund, at least 60% within 12 months after the Commencement Date, and 100% within 18 months after the Commencement Date. If Lessee is unable to comply with Section 1.148-7(d) of the Treasury Regulations, Lessee shall, at its sole expense and cost, compute rebatable arbitrage on the Agreement and pay rebatable arbitrage to the United States at least once every five years, and within 60 days after payment of the final rental or Lease Payment due under the Agreement.

11. In the event of any disagreement between the undersigned or any of them, and/or any other person, resulting in adverse claims and demands being made in connection with or for any moneys involved herein or affected hereby, Escrow Agent shall be entitled at its option to refuse to comply with any such claim or demand, so long as such disagreement shall continue, and in so refusing Escrow Agent may refrain from making any delivery or other disposition of any moneys involved herein or affected hereby and in so doing Escrow Agent shall not be or become liable to the undersigned or any of them or to any person or party for its failure or refusal to comply with such conflicting or adverse demands, and Escrow Agent shall be entitled to continue so to refrain and refuse so to act until:

(a) the rights of the adverse claimants have been finally adjudicated in a court assuming and having jurisdiction of the parties and the moneys involved herein or affected hereby; or

(b) all differences shall have been adjusted by Master Agreement and Escrow Agent shall have been notified thereof in writing signed by all of the persons interested.

12. All notices (excluding billings and communications in the ordinary course of business) hereunder shall be in writing, and shall be sufficiently given and served upon the other party if delivered (a) personally, (b) by United States registered or certified mail, return receipt requested, postage prepaid, (c) by an overnight delivery by a service such as Federal Express or Express Mail from which written

confirmation of overnight delivery is available, or (d) by facsimile with a confirmation copy by regular United States mail, postage prepaid, addressed to the other party at its respective address stated below the signature of such party or at such other address as such party shall from time to time designate in writing to the other party, and shall be effective from the date of mailing.

13. This Escrow Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective successors and assigns. No rights or obligations of Escrow Agent under this Escrow Agreement may be assigned without the prior written consent of Lessor.

14. This Escrow Agreement shall be governed by and construed in accordance with the laws in the state of the Escrow Agent's location. This Escrow Agreement constitutes the entire Agreement between the parties hereto with respect to the subject matter hereof, and no waiver, consent, modification or change of terms hereof shall bind any party unless in writing signed by all parties.

15. This Escrow Agreement and any written direction may be executed in two or more counterparts, which when so executed shall constitute one and the same agreement or direction.

IN WITNESS WHEREOF, the parties hereto have caused this Escrow Agreement to be duly executed as of the day and year first above set forth.

U.S. Bancorp Government Leasing and Finance, Inc., as Lessor
By:
Name:
Title:
Address: 13010 SW 68 th Parkway, Suite 100 Portland, OR 97223

City of Duarte, as Lessee
By:
Name:
Title:
Address: 1600 Huntington Drive Duarte, CA 91010

U.S. BANK NATIONAL ASSOCIATION, as Escrow Agent
By:
Name:
Title:
Address: U.S. Bank National Association 950 17 th Street, 12 th Floor Denver, CO 80202

EXHIBIT 1

U.S. BANK NATIONAL ASSOCIATION MONEY MARKET ACCOUNT AUTHORIZATION FORM DESCRIPTION AND TERMS

The U.S. Bank Money Market account is a U.S. Bank National Association ("U.S. Bank") interest-bearing money market deposit account designed to meet the needs of U.S. Bank's Corporate Trust Services Escrow Group and other Corporate Trust customers of U.S. Bank. Selection of this investment includes authorization to place funds on deposit and invest with U.S. Bank.

U.S. Bank uses the daily balance method to calculate interest on this account (actual/365 or 366). This method applies a daily periodic rate to the principal balance in the account each day. Interest is accrued daily and credited monthly to the account. Interest rates are determined at U.S. Bank's discretion, and may be tiered by customer deposit amount.

The owner of the account is U.S. Bank as Agent for its trust customers. U.S. Bank's trust department performs all account deposits and withdrawals. Deposit accounts are FDIC Insured per depositor, as determined under FDIC Regulations, up to applicable FDIC limits.

AUTOMATIC AUTHORIZATION

In the absence of specific written direction to the contrary, U.S. Bank is hereby directed to invest and reinvest proceeds and other available moneys in the U.S. Bank Money Market Account. The U.S. Bank Money Market Account is a permitted investment under the operative documents and this authorization is the permanent direction for investment of the moneys until notified in writing of alternate instructions.

City of Duarte

Company Name

Signature of Authorized Directing Party

Trust Account Number – includes existing and future sub-accounts unless otherwise directed

Title/Date

EXHIBIT 2

Schedule of Fees for Services as Escrow Agent Equipment Lease Purchase Escrow

CTS01010A	Acceptance Fee The acceptance fee includes the administrative review of documents, initial set-up of the account, and other reasonably required services up to and including the closing. This is a one-time, non-refundable fee, payable at closing.	WAIVED
CTS04460	Escrow Agent Annual fee for the standard escrow agent services associated with the administration of the account. Administration fees are payable in advance.	WAIVED
	Direct Out of Pocket Expenses Reimbursement of expenses associated with the performance of our duties, including but not limited to publications, legal counsel after the initial close, travel expenses and filing fees.	At Cost
	Extraordinary Services Extraordinary Services are duties or responsibilities of an unusual nature, including termination, but not provided for in the governing documents or otherwise set forth in this schedule. A reasonable charge will be assessed based on the nature of the services and the responsibility involved. At our option, these charges will be billed at a flat fee or at our hourly rate then in effect.	

Account approval is subject to review and qualification. Fees are subject to change at our discretion and upon written notice. Fees paid in advance will not be prorated. The fees set forth above and any subsequent modifications thereof are part of your agreement. Finalization of the transaction constitutes agreement to the above fee schedule, including agreement to any subsequent changes upon proper written notice. In the event your transaction is not finalized, any related out-of-pocket expenses will be billed to you directly. Absent your written instructions to sweep or otherwise invest, all sums in your account will remain uninvested and no accrued interest or other compensation will be credited to the account. Payment of fees constitutes acceptance of the terms and conditions set forth.

IMPORTANT INFORMATION ABOUT PROCEDURES FOR OPENING A NEW ACCOUNT:

To help the government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to obtain, verify and record information that identifies each person who opens an account.

For a non-individual person such as a business entity, a charity, a Trust or other legal entity we will ask for documentation to verify its formation and existence as a legal entity. We may also ask to see financial statements, licenses, identification and authorization documents from individuals claiming authority to represent the entity or other relevant documentation.

EXHIBIT 3

REQUISITION REQUEST

The Escrow Agent is hereby requested to pay from the Escrow Fund established and maintained under that certain Escrow Agreement dated as of August 30, 2019 (the "*Escrow Agreement*") by and among U.S. Bancorp Government Leasing and Finance, Inc. (the "*Lessor*"), City of Duarte (the "*Lessee*"), and U.S. Bank National Association (the "*Escrow Agent*"), the amount set forth below to the named payee(s). The amount shown is due and payable under a purchase order or contract (or has been paid by and not previously reimbursed to Lessee) with respect to equipment being financed under that certain Master Tax-Exempt Lease Purchase Agreement dated as of August 30, 2019 (the "*Master Agreement*") and Property Schedule No. 1 thereto dated August 30, 2019 (the "*Schedule*") and, together with the terms and conditions of the Master Agreement incorporated therein, the "*Agreement*"), by and between the Lessor and the Lessee, and has not formed the basis of any prior requisition request.

PAYEE	AMOUNT	INVOICE NO.	EQUIPMENT

Total requisition amount \$ _____

The undersigned, as Lessee under the Master Agreement, hereby certifies:

1. The items of the Equipment being acquired with the proceeds of this disbursement have been delivered and installed at the location(s) contemplated by the Master Agreement. The Lessee has conducted such inspection and/or testing of the Equipment being acquired with the proceeds of this disbursement as it deems necessary and appropriate, and such Equipment has been accepted by Lessee.
2. The costs of the Equipment to be paid from the proceeds of this disbursement have been properly incurred, are a proper charge against the Escrow Fund and have not been the basis of any previous disbursement.
3. No part of the disbursement requested hereby will be used to pay for materials not yet incorporated into the Equipment or for services not yet performed in connection therewith.
4. The Equipment is covered by insurance in the types and amounts required by the Agreement.
5. No Event of Default or Event of Nonappropriation (if applicable), as each such term is defined in the Master Agreement, and no event which with the giving of notice or lapse of time, or both, would become such an Event of Default or Event of Nonappropriation has occurred and is continuing on the date hereof.
6. If Lessee paid an invoice prior to the commencement date of the Master Agreement, and is requesting reimbursement for such payment, Lessee has satisfied the requirements for reimbursement set forth in Treas. Reg. §1.150-2.

Request Date: _____

Lessor: U.S. Bancorp Government Leasing and Finance, Inc.

By:

Name:

Title:

Lessee: City of Duarte

By:

Name:

Title:

Exhibit 4

Final Acceptance Certificate

U.S. Bancorp Government Leasing and Finance, Inc.
13010 SW 68th Parkway, Suite 100
Portland, OR 97223

Re: **Property Schedule No. 1** to Master Tax-Exempt Lease/Purchase Agreement between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte

Ladies and Gentlemen:

In accordance with the above-referenced Master Tax-Exempt Lease/Purchase Agreement (the "Master Agreement"), the undersigned ("Lessee") hereby certifies and represents to, and agrees with, U.S. Bancorp Government Leasing and Finance, Inc. ("Lessor"), as follows:

- (1) The Property, as such terms are defined in the above-referenced Property Schedule, has been acquired, made, delivered, installed and accepted on the date indicated below.
- (2) Lessee has conducted such inspection and/or testing of the Property as it deems necessary and appropriate and hereby acknowledges that it accepts the Property for all purposes.
- (3) No event or condition that constitutes, or with notice or lapse of time, or both, would constitute, an Event of Default or a Nonappropriation Event (as such terms are defined in the Master Agreement) exists at the date hereof.

Acceptance Date: _____

Lessee: City of Duarte
By:
Name:
Title:

Exhibit 6

Class Action Negative Consent Letter

August 30, 2019

City of Duarte
1600 Huntington Drive
Duarte, CA 91010

RE: USBGLF/City of Duarte - - Class Action Litigation Claims

Dear Kristen Petersen:

U.S. Bank National Association ("U.S. Bank") has established its policies and procedures relative to class action litigation claims filed on behalf of its clients' accounts. This policy may impact future claims filed by U.S. Bank on behalf of the above-referenced account. Listed below are the policies regarding class action litigation claims:

1. U.S. Bank will file class action litigation claims, at no charge, on behalf of open, eligible agency or custody accounts upon receipt of proper documented authorization. This notice, with your ability to opt out as further described below, constitutes such documented authorization.
2. U.S. Bank will not file claims for agency or custody accounts that were open during the class action period but were closed prior to receipt of any notice of the class action litigation.
3. Assuming requisite information is provided by the payor to identify the applicable account, settlement proceeds of the class action litigation will be posted within a reasonable time following receipt of such proceeds to the entitled accounts that are open at such time. If entitled accounts are closed prior to distribution and receipt of settlement proceeds, they will be remitted to entitled beneficiaries or successors of the account net of any research and filing fees. Proceeds, less any research and filing fees, will be escheated if the entitled beneficiaries or successors of the account cannot be identified /located.

If you wish U.S. Bank to continue to file class action litigation proofs of claim on behalf of your account, you do not need to take any further action. However, if you do not wish U.S. Bank to file class action proofs of claim on behalf of your account, you may notify us of this election by returning this letter with your signature and date provided below within 30 days or by filing a separate authorization letter with your Account Manager by the same date.

The authorization and understanding contained in this communication constitutes an amendment of any applicable provisions of the account document for the above-referenced account.

If you have any questions, please contact me at the below number.

Sincerely,

Mike McGuire
Vice President
303-585-4594

☐ No, U.S. Bank is not authorized to file class action litigation proofs of claim on behalf of the above-referenced account(s). By making this election, I acknowledge that U.S. Bank is not responsible for forwarding notices received on class action or litigation claims.

Authorized Signer

Date

Request for Taxpayer Identification Number and Certification

Give Form to the
requester. Do not
send to the IRS.

► Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes. ☐ Individual/sole proprietor or single-member LLC ☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► _____ Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. ☐ Other (see instructions) ► _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>
	5 Address (number, street, and apt. or suite no.) See instructions.	Requester's name and address (optional)
	6 City, state, and ZIP code	
	7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number									
				-				-	
or									
Employer identification number									
				-					

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ►	Date ►
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.SSA.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/Businesses and clicking on Employer Identification Number (EIN) under Starting a Business. Go to www.irs.gov/Forms to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to www.irs.gov/OrderForms to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.

You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor ²
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee ¹
b. So-called trust account that is not a legal or valid trust under state law	The actual owner ¹
6. Sole proprietorship or disregarded entity owned by an individual	The owner ³
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity ⁴
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee

For this type of account:	Give name and EIN of:
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

***Note:** The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes.

Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at spam@uce.gov or report them at www.ftc.gov/complaint. You can contact the FTC at www.ftc.gov/idtheft or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see www.IdentityTheft.gov and Pub. 5027.

Visit www.irs.gov/IdentityTheft to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

INSURANCE AUTHORIZATION AND VERIFICATION

Date: August 30, 2019

Property Schedule No: 1

To: City of Duarte (the "Lessee")

From: U.S. Bancorp Government Leasing and Finance, Inc. (the
"Lessor")
1310 Madrid Street
Marshall, MN 56258

TO THE LESSEE: In connection with the above-referenced Property Schedule, Lessor requires proof in the form of this document, executed by both Lessee* and Lessee's agent, that Lessee's insurable interest in the financed property (the "Property") meets Lessor's requirements as follows, with coverage including, but not limited to, fire, extended coverage, vandalism, and theft:

Lessor, AND ITS SUCCESSORS AND ASSIGNS, shall be covered as both ADDITIONAL INSURED and LENDER'S LOSS PAYEE with regard to all equipment financed or leased by policy holder through or from Lessor. All such insurance shall contain a provision to the effect that such insurance shall not be canceled or modified without first giving written notice thereof to Lessor and Lessee at least thirty (30) days in advance of such cancellation or modification.

Lessee must carry GENERAL LIABILITY (and/or, for vehicles, Automobile Liability) in the amount of no less than \$1,000,000.00 (one million dollars).

Lessee must carry PROPERTY Insurance (or, for vehicles, Physical Damage Insurance) in an amount no less than the 'Insurable Value' \$1,286,597.00, with deductibles no more than \$10,000.00.

**Lessee: Please execute this form and return with your document package. Please fax this form to your insurance agency for endorsement. In lieu of agent endorsement, Lessee's agency may submit insurance certificates demonstrating compliance with all requirements.*

By signing, Lessee authorizes the Agent named below: 1) to complete and return this form as indicated; and 2) to endorse the policy and subsequent renewals to reflect the required coverage as outlined above.

Agency/Agent:		
Address:		
Phone/Fax:		
Email:		

Lessee: City of Duarte
By:
Name:
Title:

TO THE AGENT: In lieu of providing a certificate, please execute this form in the space below and promptly fax it to Lessor at 303-585-5985. This fully endorsed form shall serve as proof that Lessee's insurance meets the above requirements.

Agent hereby verifies that the above requirements have been met in regard to the Property listed below.

Print Name of Agency: **X** _____

By: **X** _____
(Agent's Signature)

Print Name: **X** _____

Date: **X** _____

Insurable Value: \$1,286,597.00

ATTACHED: PROPERTY DESCRIPTION FOR PROPERTY SCHEDULE NO.: 1

Duarte City Councilmember Meeting Attendance Report

Per Government Code Section 53232.3 (d): Members of a legislative body shall provide brief reports on meetings attended at the expense of the local agency at the next regular meeting of the legislative body.

City Council Agenda dated August 27, 2019

COUNCILMEMBER NAME	EVENT DESCRIPTION	DATE OF EVENT	PURPOSE/VALUE
Tzeitel Paras-Caracci	None reported as of August 22, 2019		
Sam Kang	None reported as of August 22, 2019		
John Fasana	None reported as of August 22, 2019		
Liz Reilly	CCCA Executive Board Meeting SGV Homeless Consortium LA County Solid Waste Task Force Stormwater Litigation Hearing Duarte Woman's Club Event TALK Chamber of Commerce Networking Breakfast	8/7/19 8/14 8/15 8/16 8/18 8/19 8/20	Mileage Mileage Mileage Mileage Dinner Lunch Breakfast
Margaret Finlay	None reported as of August 22, 2019		
Bryan Urias	None reported as of August 22, 2019		
Toney Lewis	None reported as of August 22, 2019		

Meetings attended that did not require financial support from the City.

COUNCILMEMBER NAME	EVENT DESCRIPTION	DATE OF EVENT	PURPOSE/VALUE
Tzeitel Paras-Caracci	None reported as of August 22, 2019		
Sam Kang	None reported as of August 22, 2019		
John Fasana	None reported as of August 22, 2019		
Liz Reilly	Duarte Breakfast with Supervisor Barger What's Happening in Duarte Cristo Rey Cottage Ribbon Cutting – Santa Teresita Duarte Boxing Show/Tournament	8/12/19 8/12/19 8/17/19 8/17/19	
Margaret Finlay	None reported as of August 22, 2019		
Bryan Urias	None reported as of August 22, 2019		
Toney Lewis	None reported as of August 22, 2019		