

AGENDA

GREEN MOUNTAIN FALLS/CHIPITA PARK FIRE PROTECTION DISTRICT

MEETING OF THE BOARD OF DIRECTORS May 12, 2022

Call to Order

Present:

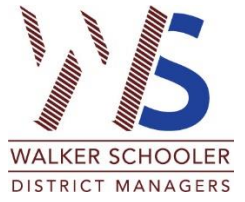
Absent:

- I. Approval of April 14, 2022 Minutes
 - a. Motion to Approve
- II. Treasurer Report for May 2022
 - a. Motion to approve
- III. Reading of the Monthly Bills & Cash Transfer
 - a. Bills were submitted in the amount of \$_____, Transfer of \$_____
 - b. Additions, subtractions or corrections
 - c. Motion to approve
- IV. Equipment Report
- V. Upcoming Purchases
 - a. Generator(s) for Apparatus Bay door.
 - b. Street Lighting
- VI. Old Business
 - a. Discussion of Hiring a Consultant to come up with a Personnel Solution for both GMFCP Fire Department and Cascade Fire Department
- VII. New Business

VIII. Fire Station Bond Comments:

IX. Other Business

X. Adjournment



MINUTES
GREEN MOUNTAIN FALLS/CHIPITA PARK
FIRE PROTECTION DISTRICT

MEETING OF THE BOARD OF DIRECTORS
APRIL 14, 2022

Meeting was called to order by Bowman at 6:39 p.m.

Present: Bowman, Florence, Walsh, Fuller

Also Present: Molly Gist, Kevin Walker – Walker Schooler: Steve Lewis – Cascade
Fire: Representatives from Black Hill Energy

Absent: Grassa

Prior to the meeting, Black Hills Energy presented a check to the District in the amount of \$6,756.00 as reimbursement for installing energy efficient equipment in the station.

- I. Approval of March 10, 2022 Minutes
Motion to approve by Florence, seconded by Walsh. Motion carried unanimously.
- II. Treasurer's Report for April 2022
Motion to approve by Bowman, seconded by Fuller. Motion carried unanimously.
- III. Reading of the Monthly Bills & Cash Transfer
 - a. Bills were submitted in the amount of \$12,356.92. Need to transfer \$14,000 to checking.
 - b. Additions, subtractions or corrections - None
Motion to approve made by Fuller and seconded by Bowman.
Motion carried unanimously.
- IV. Equipment Report
 - a. None
- V. Upcoming purchases
 - a. Generator(s) for Apparatus Bay door. Street Lighting – Gary will get with Systems Electric.

VI. Old Business:

- a. Reimbursement from Black Hills Energy was done prior to the meeting.

VII. New Business:

- a. Steve Lewis with Cascade Fire was present to discuss the possibility of staffing our department with people who can respond to both Districts on evenings and weekends. They would need to also respond to calls on Pikes Peak. After further discussion, the Board decided to check into hiring a consultant to come up with a solution for both Districts.
- b. We will hold an open house for the station on July 9, 2022.
- c. The department needs to order ten new air bottles. Motion was made by Fuller to expend \$10,000.00 for the purchase of the air bottles. Bowman seconded the Motion. The Motion carried unanimously.

VIII. Fire Station Bond Comments:

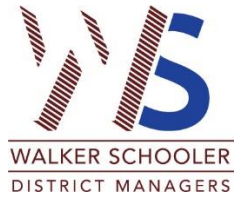
- a. None

IX. Other Business:

- a. Dirt work needs to be done at Station 2. It should be around \$800.00.
- b. The IGA with NETCO is in place. We are still waiting to hear from CSFD.
- c. Bowman will be getting inventory ready to the upcoming audit.

The Meeting was adjourned at 7:36 p.m.

Dana Fuller, Secretary



Green Mountain Falls & Chapita Park Fire Protec District

Balance Sheet

As of April 30, 2022

	Apr 30, 22
ASSETS	
Current Assets	
Checking/Savings	
BOTSJ - Checking 3979	4,054.86
BOTSJ - Capital Equipment 2761	248,438.66
BOTSJ - Emergency Operatr 2745	72,637.15
BOTSJ - Holding - 9526	103,616.77
BOTSJ - Bond Repayment 2532	299,950.67
Total Checking/Savings	728,698.11
Accounts Receivable	
Property Tax Receivable - EPC	240,191.30
Property Tax Receivable - TC	14,101.90
Total Accounts Receivable	254,293.20
Other Current Assets	
Due From CO State Treasurer	13,840.14
Total Other Current Assets	13,840.14
Total Current Assets	996,831.45
Fixed Assets	
Land - Fire Station	914,256.37
Property & Equipment	
Accum Deprec - Buildings	-58,069.36
Land	201,449.99
Buildings	3,397,061.39
Equipment	204,871.90
Equipment Acquired	14,805.48
Accum Deprec - Equipment	-176,632.00
Furniture	16,670.47
Vehicles	408,693.00
Vehicles Acquired	37,609.00
Accum Deprec - Vehicles	-352,928.00
Accum Amort - Bond Costs	-6,719.00
Total Property & Equipment	3,686,812.87
Total Fixed Assets	4,601,069.24
TOTAL ASSETS	5,597,900.69
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
Accounts Payable	4,978.81
Total Accounts Payable	4,978.81
Other Current Liabilities	
Payroll Liabilities	1,029.39
Deferred Property Tax - EPC	240,191.30
Deferred Property Tax - TC	14,101.90
Total Other Current Liabilities	255,322.59
Total Current Liabilities	260,301.40
Long Term Liabilities	
Bond Payable	3,108,825.95
Total Long Term Liabilities	3,108,825.95
Total Liabilities	3,369,127.35

10:12 AM

Green Mountain Falls & Chapita Park Fire Protec District

05/06/22

Balance Sheet

Accrual Basis

As of April 30, 2022

	Apr 30, 22
Equity	
Opening Balance Equity	1,524,271.25
Unrestricted Net Assets	559,690.41
Net Income	144,811.68
Total Equity	2,228,773.34
TOTAL LIABILITIES & EQUITY	5,597,900.69

Green Mountain Falls & Chapita Park Fire Protec District

Profit & Loss Budget vs. Actual

January through April 2022

	TOTAL				
	Apr 22	Jan - Apr 22	Budget	\$ Over Budget	% of Budget
Income					
Property Tax - O&M EPC	20,885.47	136,786.92	278,597.00	-141,810.08	49.1%
Spec Ownership Tax - O&M EPC	2,592.10	9,277.94	19,502.00	-10,224.06	47.57%
Prior Year Tax - O&M EPC	0.00	1.41			
Delinquent Interest - Debt EPC	0.75	0.83			
Property Tax - O&M TC	1,498.28	6,828.09	15,154.00	-8,325.91	45.06%
Spec Ownership Tax - O&M TC	129.25	454.03	1,061.00	-606.97	42.79%
Delinquent Interest - O&M TC	19.55	19.55			
Property Tax - Debt EPC	14,489.43	94,896.78	193,278.00	-98,381.22	49.1%
Spec Ownership Tax - Debt EPC	1,798.29	6,436.62	13,529.00	-7,092.38	47.58%
Prior Year Tax - Debt EPC	0.00	0.98			
Delinquent Interest - O&M EPC	1.07	1.18			
Property Tax - Debt TC	1,039.43	4,737.01	10,513.00	-5,775.99	45.06%
Spec Ownership Tax - Debt TC	89.67	366.74	736.00	-369.26	49.83%
Interest Income	1.03	16.48	120.00	-103.52	13.73%
Total Income	42,544.32	259,824.56	532,490.00	-272,665.44	48.79%
Gross Profit	42,544.32	259,824.56	532,490.00	-272,665.44	48.79%
Expense					
Administrative Expenses					
Contract Labor	0.00	1,452.50			
Audit	0.00	0.00	12,000.00	-12,000.00	0.0%
Bank Fees	0.00	6.00			
CPA Fees	0.00	0.00	2,000.00	-2,000.00	0.0%
Director Fees	200.00	900.00	3,000.00	-2,100.00	30.0%
Insurance - Volunteer Firefight	4,485.00	7,014.00	12,000.00	-4,986.00	58.45%
Insurance - Workers Comp	634.00	519.00	9,400.00	-8,881.00	5.52%
Legal Fees	0.00	0.00	3,000.00	-3,000.00	0.0%
Management & Accounting	1,250.00	5,000.00	16,000.00	-11,000.00	31.25%
Retirement Fund Contribution	164.25	26,388.72	27,500.00	-1,111.28	95.96%
Payroll Expenses	370.27	1,769.96	5,000.00	-3,230.04	35.4%
Salaries - Fire Chief	4,840.25	19,361.00	61,510.00	-42,149.00	31.48%
Salaries - Secretary	0.00	0.00	24,000.00	-24,000.00	0.0%
Contingent Firefighter	0.00	0.00	20,000.00	-20,000.00	0.0%
Supplies & Expenses	1,037.15	2,024.40	30,000.00	-27,975.60	6.75%
Total Administrative Expenses	12,980.92	64,435.58	225,410.00	-160,974.42	28.59%
Bond Interest Payment	0.00	25,055.08	95,021.00	-69,965.92	26.37%
Miscellaneous	0.00	0.00	5,000.00	-5,000.00	0.0%
Fire Department's Budgets					
Training Office Salary	0.00	0.00	500.00	-500.00	0.0%
Communications-Capital Outlay	0.00	0.00	3,000.00	-3,000.00	0.0%
Communications-Dispatch	375.00	375.00	12,000.00	-11,625.00	3.13%
Communications-Supplies & Exp.	2,967.18	12,026.57	5,000.00	7,026.57	240.53%
Firefighting-Capital Outlay	0.00	0.00	8,000.00	-8,000.00	0.0%
Firefighting-Supplies & Exp's	926.64	1,890.00	10,000.00	-8,110.00	18.9%

Green Mountain Falls & Chapita Park Fire Protec District

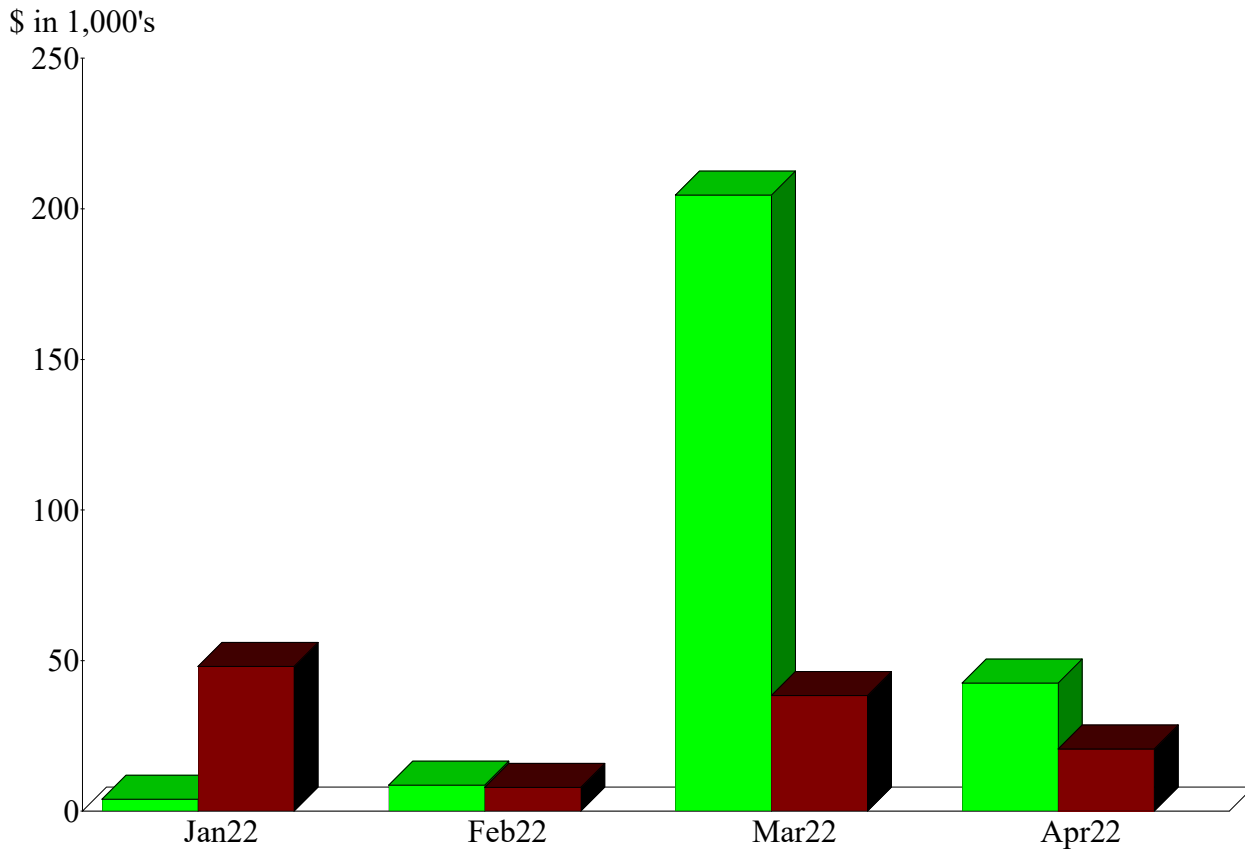
Profit & Loss Budget vs. Actual

January through April 2022

	TOTAL				
	Apr 22	Jan - Apr 22	Budget	\$ Over Budget	% of Budget
Medical Services-Supplies & Exp	0.00	97.50	3,000.00	-2,902.50	3.25%
Radio User Fees	0.00	0.00	12,000.00	-12,000.00	0.0%
Supplies & Expenses-Trucks, ...	608.01	1,771.93			
Traning Classes	0.00	0.00	500.00	-500.00	0.0%
Total Fire Department's Budgets	4,876.83	16,161.00	54,000.00	-37,839.00	29.93%
Stations & Buildings					
Capital Improvements	0.00	0.00	7,000.00	-7,000.00	0.0%
Snow Removal	120.00	860.00			
Supplies & Expenses	495.00	2,919.47	15,000.00	-12,080.53	19.46%
Utilities	1,548.72	1,758.89	15,000.00	-13,241.11	11.73%
Total Stations & Buildings	2,163.72	5,538.36	37,000.00	-31,461.64	14.97%
Treasurer Fees					
Teller County - Debt	31.42	142.36	315.00	-172.64	45.19%
Teller County - O&M	45.29	205.18	455.00	-249.82	45.1%
El Paso County - Debt	217.35	1,423.48	2,899.00	-1,475.52	49.1%
El Paso County - O&M	313.30	2,051.84	4,179.00	-2,127.16	49.1%
Total Treasurer Fees	607.36	3,822.86	7,848.00	-4,025.14	48.71%
Total Expense	20,628.83	115,012.88	424,279.00	-309,266.12	27.11%
Net Income	21,915.49	144,811.68	108,211.00	36,600.68	133.82%

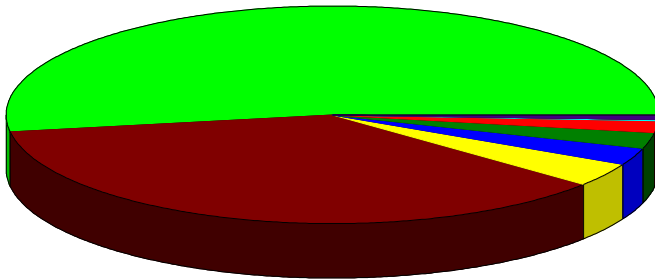
Income and Expense by Month January through April 2022

Income
Expense



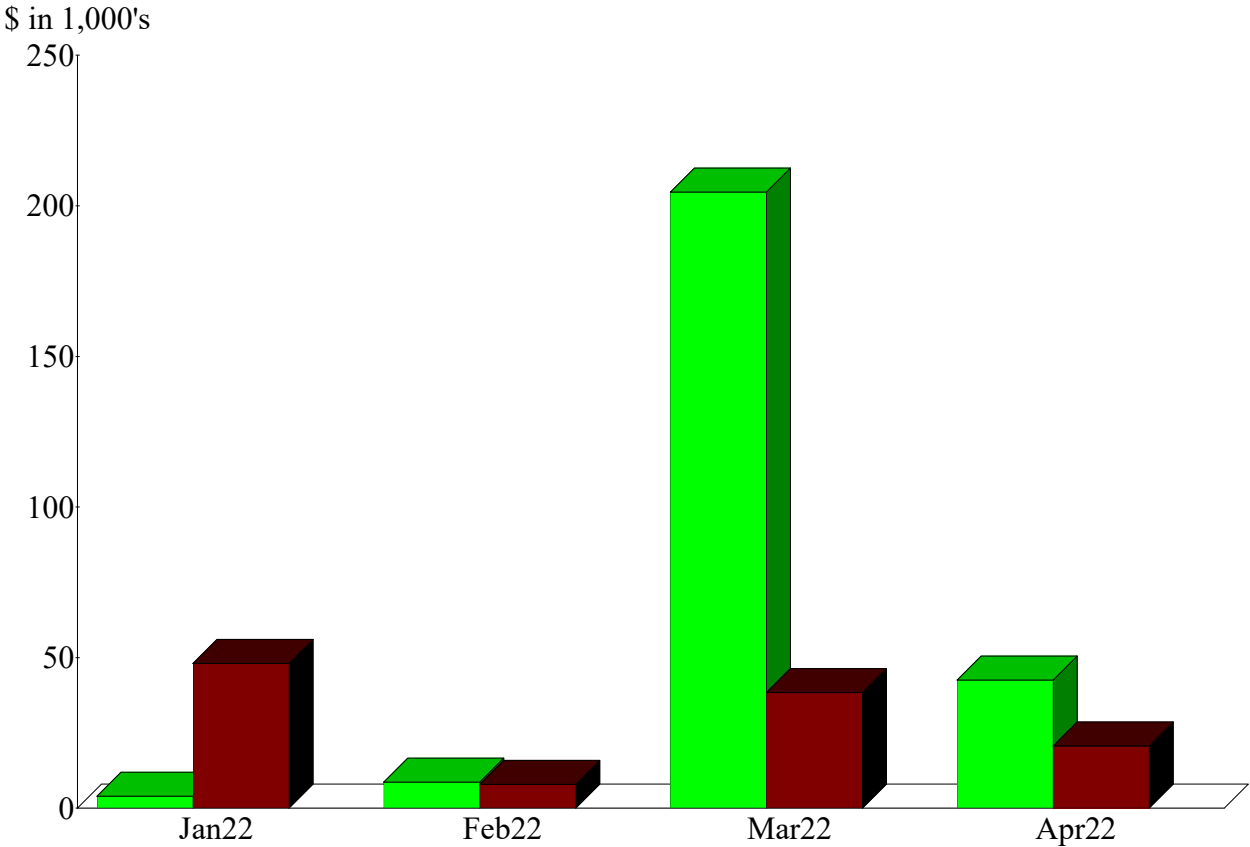
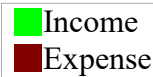
Income Summary January through April 2022

Property Tax - O&M EPC	52.65%
Property Tax - Debt EPC	36.52
Spec Ownership Tax - O&M EPC	3.57
Property Tax - O&M TC	2.63
Spec Ownership Tax - Debt EPC	2.48
Property Tax - Debt TC	1.82
Spec Ownership Tax - O&M TC	0.17
Spec Ownership Tax - Debt TC	0.14
Delinquent Interest - O&M TC	0.01
Interest Income	0.01
Other	0.01
Total	\$259,824.56



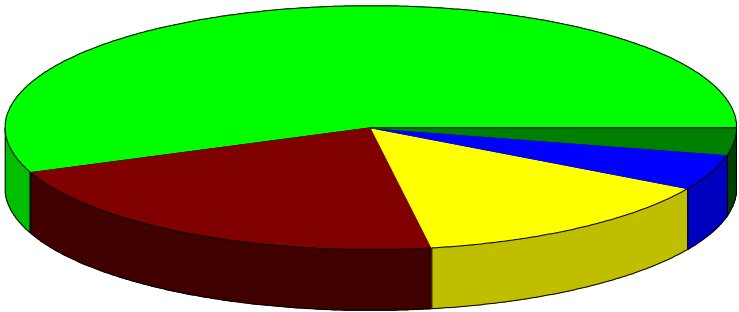
By Account

Income and Expense by Month
January through April 2022



Expense Summary
January through April 2022

Administrative Expenses	56.02%
Bond Interest Payment	21.78
Fire Department's Budgets	14.05
Stations & Buildings	4.82
Treasurer Fees	3.32
Total	\$115,012.88



By Account

Green Mountain Falls Chipita Park Fire District

PAYMENT REQUEST

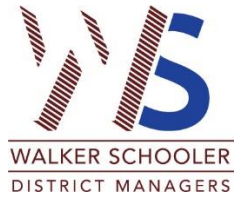
5/5/2022

GENERAL FUND ACCOUNT

Company	Invoice	Date	Amount	Comments
Dana Fuller	41422	4/14/2022	\$ 50.00	
Gary Florence	41422	4/14/2022	\$ 50.00	
Richard Bowman	41422	4/14/2022	\$ 50.00	
Stephen Walsh	41422	4/14/2022	\$ 50.00	
Black Hills Energy	2402362520	4/9/2022		
Bullseye	42435643	4/25/2022	\$ 162.26	
Century Link	7196847758	4/25/2022	\$ 94.94	
Colorado Springs Utilities	4895014031	5/2/2022	\$ 21.51	
Colorado Springs Utilities	9015963319	5/2/2022	\$ 284.06	
Comcast	849790080280401	4/13/2022	\$ 181.43	
Flair Data Systems	85690	1/21/2022	\$ 8,654.54	Paid Prior to the Meeting
Motorola Solutions	8281358179	4/7/2022	\$ 2,832.23	
Pinnacle Assurance	26525	5/7/2022	\$ 542.00	
Teller County Waste	101130274465	5/3/2022	\$ 67.95	
Walker School District Managers	7061	4/30/2022	\$ 1,298.00	
WEX	0202-00-108388-0	4/30/2022	\$ 75.00	
TOTAL			\$ 14,413.92	

\$14,413.92

Green Mountain Falls Chipita Park Fire District



Date:4/6/2022

Proposal: #SP0020.2

Gary Florence
Box 723
Green Mountain Falls, CO 80819
Phone:1.719.684.2466
Email: gflorenc@regis.edu

Attn: Gary Florence

Reference: Green Mountain Falls (3) solar streetlights

Systems Electric, Inc. appreciates your business and the time you will spend reviewing and awarding this project.

Please see our attached qualifications, inclusions, and exclusions for further clarification.

PRICING:

Base Price for Electrical: \$35,686.00

SYSTEM BREAKDOWN:

SITE LIGHTING: \$35,686.00

Deductive alternate for (3) solar light with 8' light pole

SL-SPT-20W-40K-SF-G2 instead: -\$14,841.00

QUALIFICATIONS:

1. Our proposal is based on the following contract documents listed below:
 - a) Specifications dated: N/A
 - b) Plans dated: N/A
 2. Proposal is based on a mutually agreeable lump sum contract and schedule to be determined.
 3. Our proposal is based on a 40-hour work week and anticipates a schedule yet to be determined.
 4. Assume 3-month lead time for 20' solar street light subject from time approved submittal.
 5. Our on-site mobilization has yet to be determined.
 6. We have not included premium costs in our proposal.
 7. Our proposal remains valid for 30 days.
-

8. Our proposal is based on retention not being withheld at a rate higher than it is in the prime contract.
9. Cancellation charges incurred by Systems Electric inc. shall be the responsibility of the customer along with associated freight charges.
10. Others shall not hold Systems Electric Inc. liable for errors, omissions, inadequacies of materials, or equipment specified or supplied by others.
11. Our estimate is based on all conduits being PVC below grade; EMT with steel set screw fittings, steel compression fittings, and MC cabling above grade.
12. We have not included provisions for differing site conditions.
13. We have not included dust control, de-watering, surveying, utility locates, or traffic control.
14. We assume all equipment furnished and installed by others will be delivered complete with cords and cord caps; and installed in a timely manner to allow timely completion of our portion of the work.
15. The utility transformer is located South of the electrical room.
16. We assume PVC schedule 40 for underground installations.
17. Value engineering on design drawings is subject to review by authority having jurisdiction.
18. **Due to the COVID-19 Pandemic, there may be commodity/quote items pricing increases, supply chain availability, and/or delays due to the current market situation. We reserve the right to amend pricing and lead times if imposed by manufacturers as outside of their reasonable control. Backup for any price increases will be provided.**

INCLUSIONS:

1. Proposal based on year 2020 NEC code.
2. Sales tax of 8.25%.
3. 1 year warranty.
4. All safety equipment and tools will be provided.
5. Mobilization of electrical equipment and supplies is provided.
6. Furnished labor and materials for complete electrical install.
7. We will provide clean-up of our own identifiable debris to an on-site dumpster furnished by the general contractor.
8. We have included floor and wall penetrations with fire protection seals for electrical conduit systems.
9. Excavation, trenching, backfill, and compaction associated with the electrical installations are included. We anticipate that this excavation can be accomplished with traditional excavation equipment and we presume that spoils can be dispersed on site. We have not included costs for rock excavation, blasting or haul-off and disposal of spoils.
10. Concrete for electrical underground is included as indicated on the drawings.
11. Solar Street Light:
 - a. Provide and install the following equipment.
 - i. (3) EverGen M Series 20' pole light
 - ii. 340W solar panel wattage
 - iii. LED fixture DSX0

EXCLUSIONS:

1. Delays and/or extension of the project schedule.

2. Bond premium-- can be added at 2.5%.
3. Engineering fees.
4. Electrical permit.
5. Builders Risk Insurance.
6. Sales taxes and electrical permit fees have not been included for all owner-furnished equipment or materials to be received and installed by Division 16 – Electrical.
7. Formed concrete, housekeeping pads, transformer pads, electrical equipment pads, and light pole bases.
8. Utility company development fees for permanent and temporary service and consumption charges.
9. Communications development charges.
10. Utility company primary raceway.
11. Tele/com company primary raceway.
12. Cut, patch, and replacement of concrete, asphalt, or landscaping.
13. All painting.
14. We are not providing third party commissioning for our systems. We assume the general contractor will hire a third-party commissioning agent for all the building systems including the electrical systems.
15. Additional manpower for composite clean up.
16. Directional boring.
17. All demolition.

We thank you for the opportunity to provide a proposal on this project and look forward to working with you. If you have any questions, please feel free to contact the undersigned.

Sincerely,



James Pival

Estimator

C: 719.426.1257

jamesp@systems-electric.com

www.Systems-Electric.com



Estimate ID #	2-18528-1
Date	2022/05/05 0:45:56
Project Name	
Location	Colorado Springs, CO, USA
Dimensions	50' x 50' ft
Application	General Area

Engineered smart. Built tough. Accurately sized.
Guaranteed reliability for 10 years.

At Sol, we develop products that we believe in: our EverGen solar light will perform exactly as promised—throughout its lifespan.

This detailed overview combines the complex algorithms of our sizing engine with the experience of our in-house lighting experts to give you the most reliable and cost-effective product for your location. Your EverGen model includes standard features such as a 12-month subscription to Sol's Insight remote monitoring platform, a warm light color temperature, and dark-sky lighting controls.

SOLAR ENGINE DETAILS

Model	EverGen™ M Series
System Color	BZ
Tilt Angle	30 Degrees
Solar Panel Wattage	340W



BATTERY DETAILS

Battery Type	GEL
Battery Quantity	2
Battery Capacity	95.0
Battery Location	HIGH

FIXTURE DETAILS

LED Fixture	DSX0
Fixture Color	BZ
Optical Distribution Type	3ME
Individual Fixture Wattage	44 W
Light Color Temp.	5000 K
Lumens per Fixture (approx.)	6396 Lumens
Fixtures per System	1

OPERATING DETAILS

Latitude	39N
Longitude	105W
Solar Insolation	3.75 kWh/m ² /day
Longest Night	14.5 hrs
Day/Night Transitioning	Solar panel voltage
Autonomy	4.03
Array-to-Load Ratio	2.04

REMOTE MONITORING

Insight Platform	Cloud-based dashboard and automatic notifications
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EVERGEN-BZ-2-170-2-GEL5-HIGH-N-30-1-DSX0-3ME-50K-BZ-STBTD-20-120-INTDIRECTA-44-5D2-81551

Warranty Details

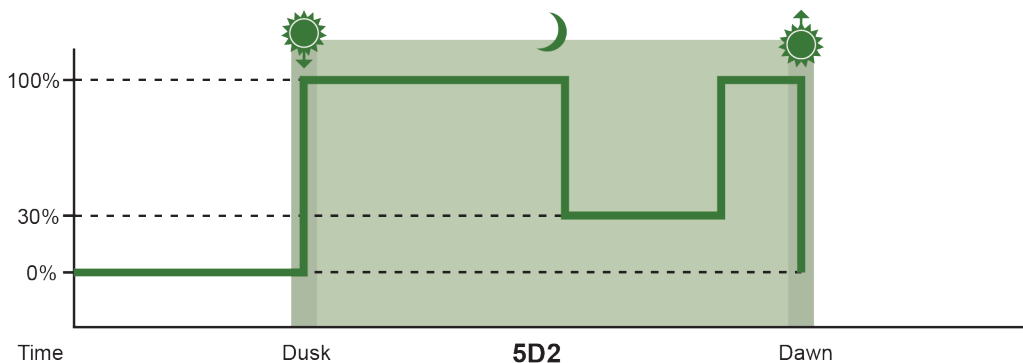
Battery	5 Years
Solar PV Panel Output Power	Manufacturer's Warranty — Minimum 20 Years
Mounting Hardware	10 Years
Pole (if provided)	Lifetime Excluding Finish
LED Fixture	Manufacturer's Warranty
Electronics (Charge Controller, LED Driver)	10 Years

Additional Details

Weight (with Batteries)	247 lb (112.14 kg)	Pole Type	Steel Bolt Down
EPA	16.0 Sq Ft (1.49 Sq m)	Pole Length	20FT
Tenon Requirements	3.5" OD x 6" long (88.9mm OD x 152.4mm long)	Wind Zone	120 MPH
		Arm Type	INTDIRECTA

Operating Profile

100% at dusk for 5hr - then dim to 30% - then 100% for 2hr before dawn



System Certifications

Solar Engine	CE 2004-108-CE, EN 55015, EN 61547 for emissions and immunity.
Panels	UL 1703, IEC 61215, IEC 61730, conformity to CE.
Fixture	cULus Listed, suitable for wet locations, CALTrans 611 Vibration testing. Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards. RoHS

Represented in your region by:

Specifications subject to local environmental conditions.
Specifications may be subject to change.
US and International patents apply. Other patents pending.
"Sol" logo is a trademark of Sunna Design.

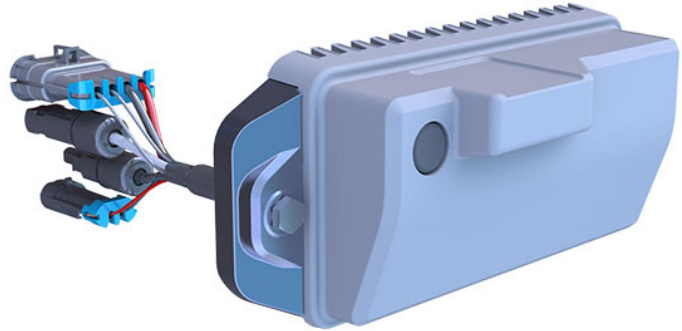
All Sol products are manufactured in facilities that are certified to ISO quality standards.
Document: System-Overview_RevD

Programmed or custom run modes include:

- Hrs after Dusk: 03, 05, 07, 09 or All Night
- Dimming Percentage: None, 30%,
- Hours Before Dawn: 02, or All Night

FEATURES

- Bluetooth and App for local configuration and testing
- Satellite modem for remote monitoring with Insight Remote Monitoring Platform Subscription
- Solar panel and battery overvoltage protection
- LED short circuit protection and unconnected LED protection
- Internal PV disconnect (no external diodes required)
- Reverse battery polarity protection
- Self calibrating load, timing, and charging circuitry



BENEFITS

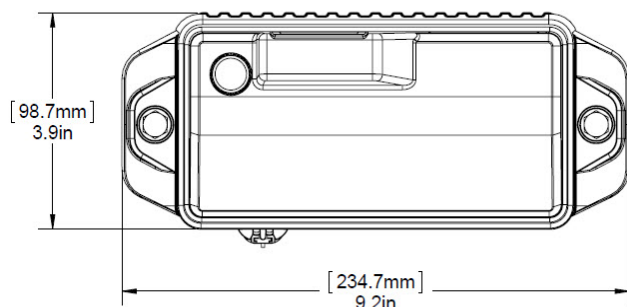
- Flexible operating modes (dusk-to-dawn, split night, split night with dimming)
- Fully tested at the Sol factory before installation and shipment to ensure reliable operation and trouble-free startup
- Programmed by Sol based on your project requirements eliminating confusing switch and knob setting
- Bluetooth and app for simple and secure setup
- Integrated MPPT charging and LED driving system reduces system failures, overall system complexity and cost
- Integrated surge protection and noise reduction
- Keyed connectors for simple and reliable assembly
- Temperature compensated and MPPT controlled battery charging to maximize battery life and energy collection
- High temperature charge compensation to ensure component longevity
- Ruggedized solid state design ensures long life and no maintenance
- Memory averaging to ensure accurate turn on and turn off of lights to prevent false response due to weather variations
- Ten-year limited warranty



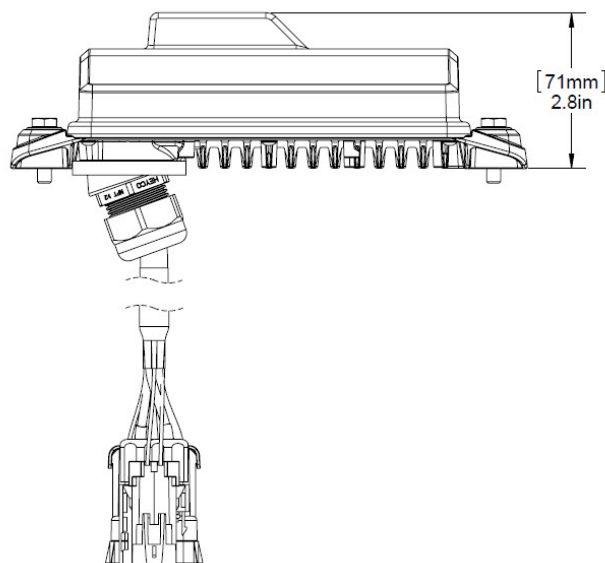
TECHNICAL

FEATURE	VALUE
ELECTRICAL	
Operating Voltage	12/24 VDC
Operating Current	25A max
LED Drive Current	3.5A max. 100W
Lamp Drive Voltage	65 VDC max.
PV Voltage Input	55 VDC max.
Low Voltage Disconnect (LVD)	11.6 / 23.2 VDC
Low Voltage Reconnect (LVR)	12.1 / 24.2 VDC
CHARGING	
Self-consumption	< 5 mA
Charging Method	Maximum Power Point Tracking (MPPT)
Battery Fuse, External	30A max.
COMMUNICATION	
Local Control	Bluetooth and app
Remote Monitoring	Satellite modem to Insight remote monitoring platform
PHYSICAL	
Operating Temperature	-40 to +60 °C (-40 to +140 °F)
Humidity	100% Condensing
Packaging	Aluminum heatsink, polycarbonate cover, gasket and vent, IP68
Weight	0.74 kg (26 oz.)
Size (L x W x H)	234.7 x 98.7 x 71.0 mm (9.2 x 3.9 x 2.8 in)

Top View



Side View



Specifications subject to local environmental conditions.
Specifications may be subject to change.
US and International patents apply. Other patents pending.
"Sol" logo is a trademark of Sunna Design.

All Sol products are manufactured in facilities that are certified to ISO quality standards.
Document: SPEC_SOL-Sunna_EverGen-EMS_RevB

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density.

Applications: Residential roads, collector roads, parking lots, and general area spaces

PERFORMANCE SUMMARY

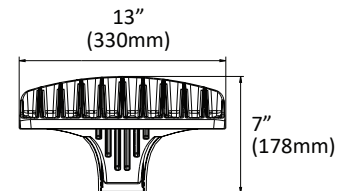
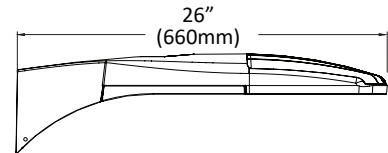
Initial Delivered Lumens: Up to 12,800

Efficacy: Up to 155 LPW

CRI: Minimum 70 CRI

CCT: 3000K, 4000K, 5000K

Limited Warranty: 5 years on luminaire



Weight: 16 lbs (7.25 kg)

OPTIONS

Product	Mounting	Optic	Input Power*	CCT	CRI	Color Options	Mount	Options
DSX0	P5 40LED	2ME Type II Medium 3ME Type III Medium 4ME Type IV Medium 5ME Type V Medium	10-100W (based on location and profile)	30K 3000K 40K 4000K 50K 5000K	>70	BK Black BZ Bronze SV Natural Aluminum	RPA Round Pole Mounting	Powered by EverGen EMS

* Please refer to System Overview page for your exact fixture specifications.



PRODUCT SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 0 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and pedestrian areas.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft²) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS

Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in 3000 K, 4000 K or 5000 K (70 CRI) configurations. The D-Series Size 0 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°).

INSTALLATION

Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 0 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 0 utilizes the AERIS™ series pole drilling pattern (template #8). Optional terminal block and NEMA photocontrol receptacle are also available.

LISTINGS

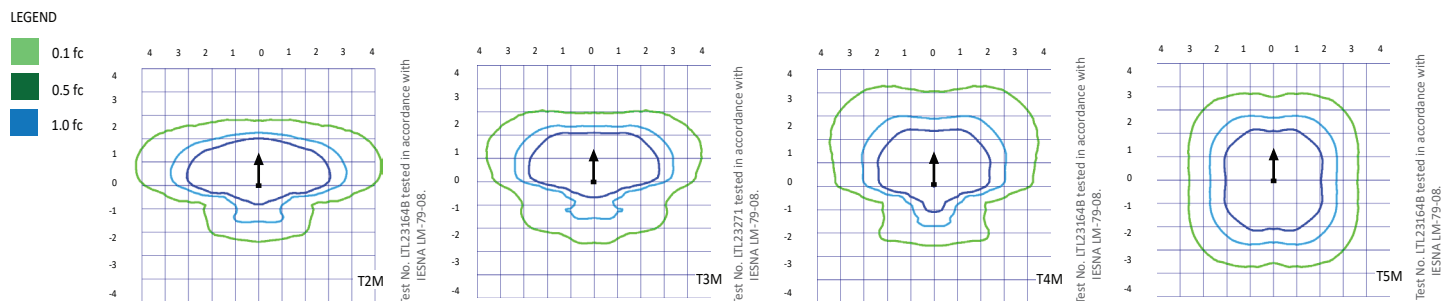
UL Listed for wet locations. luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY

5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/resources/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Isofootcandle plots for the DSX0 LED 40C 1000 40K. Distances are in units of mounting height (25'). *For visual reference only; please see Sol-provided IES Files and Photometrics.



LUMINAIRE EPA

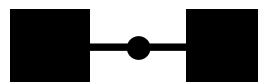
Direct Mount – Weight: 16 lbs (7.25 kg)

Single



0.95 sqft (0.09 sqm)

2 @ 180



1.9 sqft (0.18 sqm)

Specifications subject to local environmental conditions.

Specifications may be subject to change.

US and International patents apply. Other patents pending.

"Sol" logo is a trademark of Sunna Design.

All Sol products are manufactured in facilities that are certified to ISO quality standards.

Document: SPEC_SOL-Sunna_DSX0_RevA

FEATURES

- Gel deep cycle battery
- Ideal for solar applications
- Maintenance-free, sealed construction
- Spill proof / leak proof
- ABS case and cover
- UL recognized
- 100% recyclable
- **5-year warranty***



SOL-GEL-100

SPECIFICATIONS

Nominal Voltage	12V
Nominal Capacity	95.0Ah
Rated Capacity (at 77°F /25°C)	100.0Ah/1.00A (100hr,1.80V/cell) 85.0Ah/4.25A (20hr,1.80V/cell)
Nominal Operating Temperature	77 ±5° F (25 ±3° C)
Operating Temperature Range	Discharge: -4~140°F (-20~60°C) Charge: 32~122°F (0~50°C)
Maximum Discharge Current	850A (5s)
Internal Resistance	Approx 6.0mΩ
Cycle Use	Initial Charging Current less than 25.0A. Voltage: 14.4V~15.0V at 77°F (25°C) Temp. Coefficient -30mV/°C
Standby Use	No limit on Initial Charging Current Voltage: 13.5V~13.8V at 77°F (25°C) Temp. Coefficient -20mV/°C
Self Discharge	Batteries can be stored for up to 6 months at 77°F (25°C) before a freshening charge is required. <i>*Batteries stored at temperatures greater than 77°F (25°C) will require a recharge sooner.</i>
Certifications	UL; CE; IEC60896-21 & 22

MATERIALS AND MECHANICAL

Case and Cover	ABS
Separator	PVC-SiO ₂
Active	PbO ₂ + Pb
Electrolyte	LPG Sulfuric Acid Gel
Venting Valve	Rubber, opening pressure 8-20kPa
BCI Group #	27
Terminals	T6
Carrying	Integrated Flush Mount Handle

DIMENSIONS

Length	12.01 in / 305 mm
Width	6.61 in / 168 mm
Height	8.15 in / 207 mm
Total Height (including terminals)	8.38 in / 213 mm
Weight	59.8 lbs / 26.7 kg



Specifications subject to local environmental conditions.
Specifications may be subject to change.
US and International patents apply. Other patents pending.
"Sol" logo is a trademark of Sunna Design.

All Sol products are manufactured in facilities that are certified to ISO quality standards.
Document: SPEC_SOL-Sunna_SOL-GEL-100_RevA

RELIABLE

Sol's CTI-170 is a high-efficiency polycrystalline solar module that provides outstanding performance and cost-effective solar power for high-end off-grid and mobile applications. The module is built to last and features a 20-year limited power output warranty.

DURABLE

To ensure long life, the high-efficiency solar cells are encapsulated between a special tempered, low-iron solar glass and a Tedlar[®]/polyester backing material. The mounting frame, manufactured from anodized marine-grade aluminum, allows the CTI-170 to be installed in extreme conditions.

FEATURES

- Compact and rugged design
- Plug and play junction box
- Lightweight anodized aluminum frame
- High transmissivity tempered glass
- Industry standard quick-connect cables (MC4) work in series or in parallel
- **20-year limited power output warranty**



CTI-170



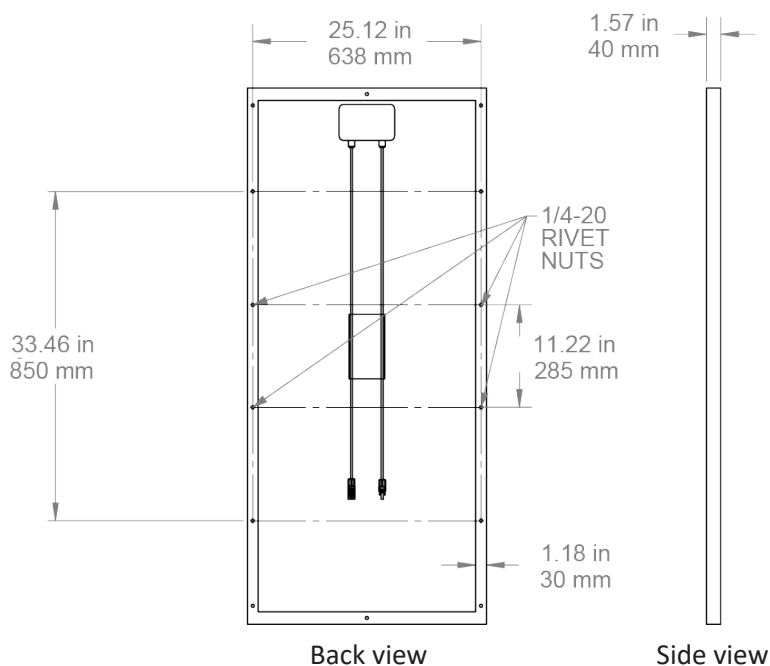
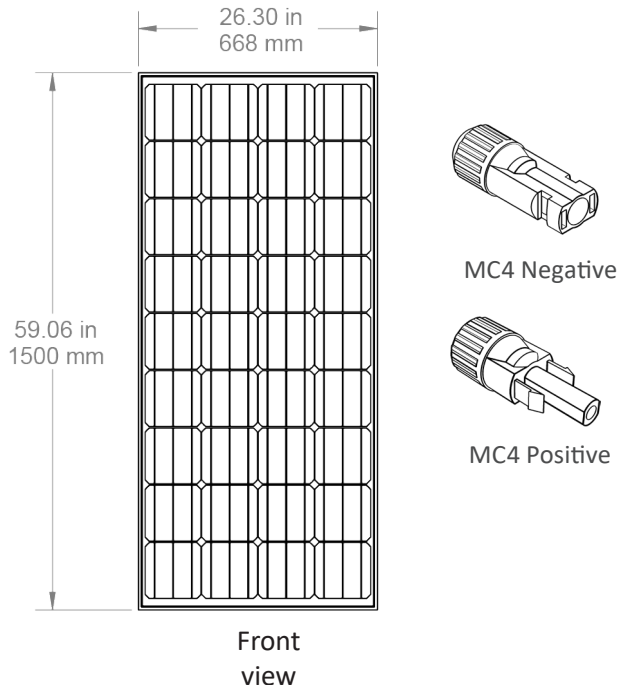
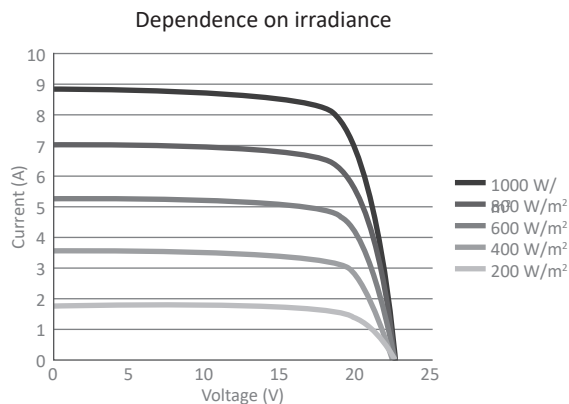
SPECIFICATIONS

Rated power (P _m)	170W
Maximum power voltage (V _{mp})	19.60V
Maximum power current (I _{mp})	8.77A
Open circuit voltage (V _{oc})	23.20V
Short circuit current (I _{sc})	9.35A
Power coefficient	-0.42% / °C
Voltage coefficient	-0.31% / °C
Current coefficient	0.033% / °C
Max power tolerance	+/- 3W
Cell type	Polycrystalline
Module efficiency	17.0%
Series fuse rating	15A
Maximum system voltage	600VDC
Operating temperature	-40°C to 85°C (-40°F to 185°F)
Weight	11.16 kg (24.6 lb)
Dimensions	1500 x 668 x 40 mm 59.1 x 26.3 x 1.57 in
Frame type / material	Clear anodized aluminum frame
Certifications	UL 1703

Power Specifications calculated at STC:

- Irradiance: 1000 W/m²
- Cell Temperature: 77°F (25°C)
- Air Mass: 1.5

IV CURVE PARAMETERS



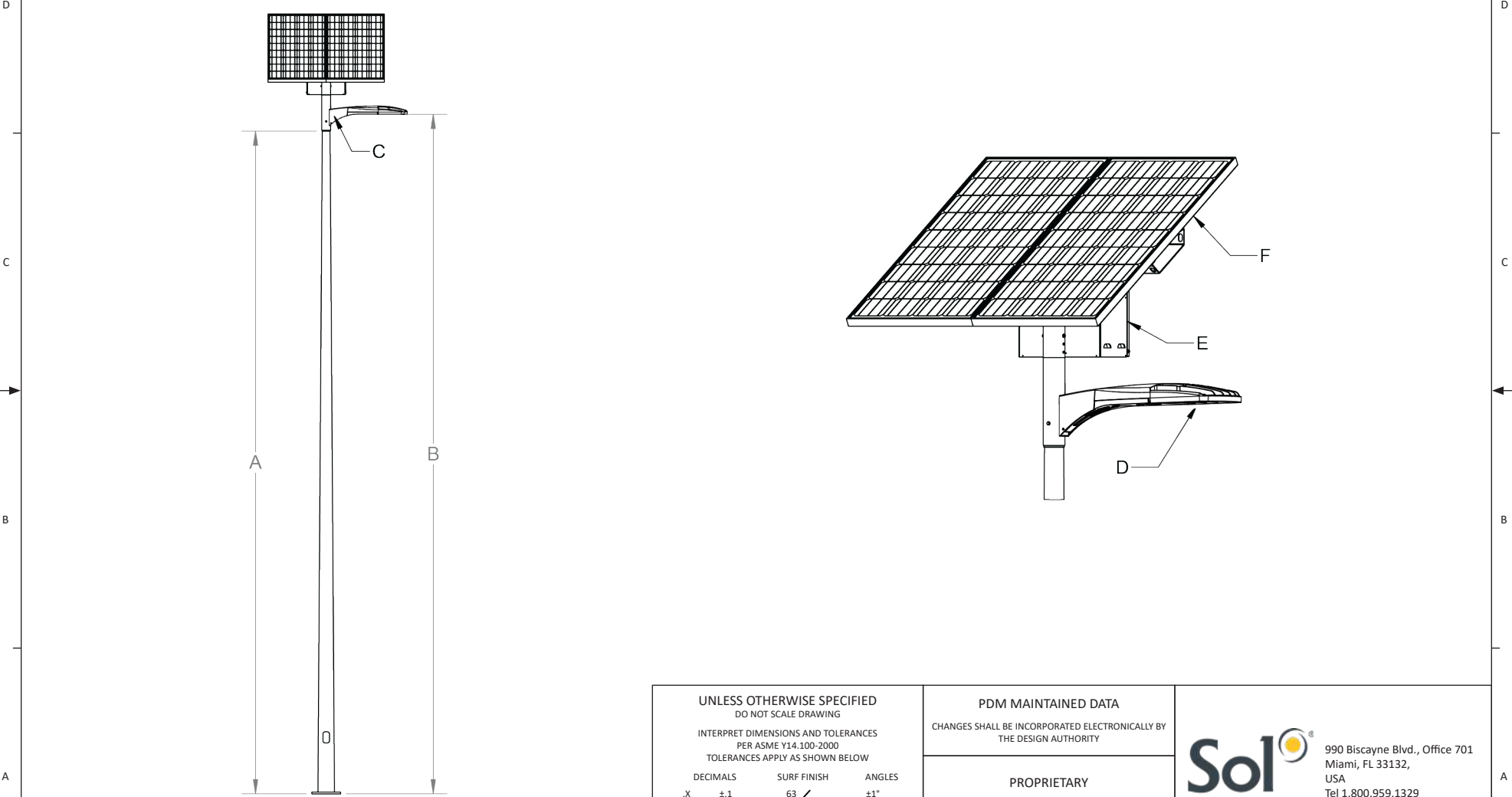
Specifications subject to local environmental conditions.
Specifications may be subject to change.
US and International patents apply. Other patents pending.
"Sol" logo is a trademark of Sunna Design.

All Sol products are manufactured in facilities that are certified to ISO quality standards.
Document: SPEC_SOL-Sunna_CTI-170_RevA



SYSTEM DRAWING

8		7		6		5		4		3		2		1		
MODEL		A [Pole Length Above Grade]		B [Fixture Mount Height]		C/D [Arm Type]		E [Battery Mount]		F [System EPA]		[System Weight]		POLE Type	POLE Info 1	POLE Info 2
EverGen™ M Series		20FT		Based on Photometric Design**		INTDIRECTA		HIGH		16.0 Ft² (1.49 m²)		246.1LB		Steel Bolt Down	Bolt Length 42 inch	Bolt Circle 11 inch

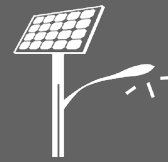
Note: Line Drawings May Not Entirely Resemble Shipped Product



**DISCLAIMER: Arm(s) will be drilled and installed on site as per customer or photometric requirements.

<p>UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING</p> <p>INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.100-2000 TOLERANCES APPLY AS SHOWN BELOW</p> <table><tr><th>DECIMALS</th><th>SURF FINISH</th><th>ANGLES</th></tr><tr><td>.X ±.1</td><td>63 ✓</td><td>±1°</td></tr><tr><td>.XX ±.01</td><td></td><td></td></tr><tr><td>.XXX ±.005</td><td></td><td></td></tr><tr><td>.XXXX ±.0005</td><td></td><td></td></tr></table>		DECIMALS	SURF FINISH	ANGLES	.X ±.1	63 ✓	±1°	.XX ±.01			.XXX ±.005			.XXXX ±.0005			<p>PDM MAINTAINED DATA</p> <p>CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN AUTHORITY</p>		<div><p>990 Biscayne Blvd., Office 701 Miami, FL 33132, USA Tel 1.800.959.1329</p></div>
DECIMALS	SURF FINISH	ANGLES																	
.X ±.1	63 ✓	±1°																	
.XX ±.01																			
.XXX ±.005																			
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<p>THIRD ANGLE PROJECTION</p> 		<p>PROPRIETARY</p> <p>COPYRIGHT © 2020 BY Sol by Sunna Design.</p> <p>ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF Sol by Sunna Design.</p>																	
<p>SCALE</p> <p>1:64</p>		<p>Estimate ID:</p> <p>2-18528-1</p>		<p>Pole Part #:</p> <p>81551</p>															

WARNING: DO NOT INSTALL POLES WITHOUT SOLAR LIGHTING SYSTEMS



Helpful data when you want it, automatic alerts when you need it.™

Insight remote monitoring allows you to view how your entire network of solar lights are performing on the ground—from the comfort of your desk.

At any time, simply log in to the Insight platform to see the status and geolocation of each light. If further diagnostics is desired, you can drill down into recent data to determine if a system was commissioned properly and if it is working as expected. And if regularly reviewing your dashboard doesn't fit into your schedule, Insight will send automatic notifications if any system is compromised or not working the way it's supposed to.

Sol's Insight platform is a tool that can save your department time by removing the guesswork and by protecting your investment.



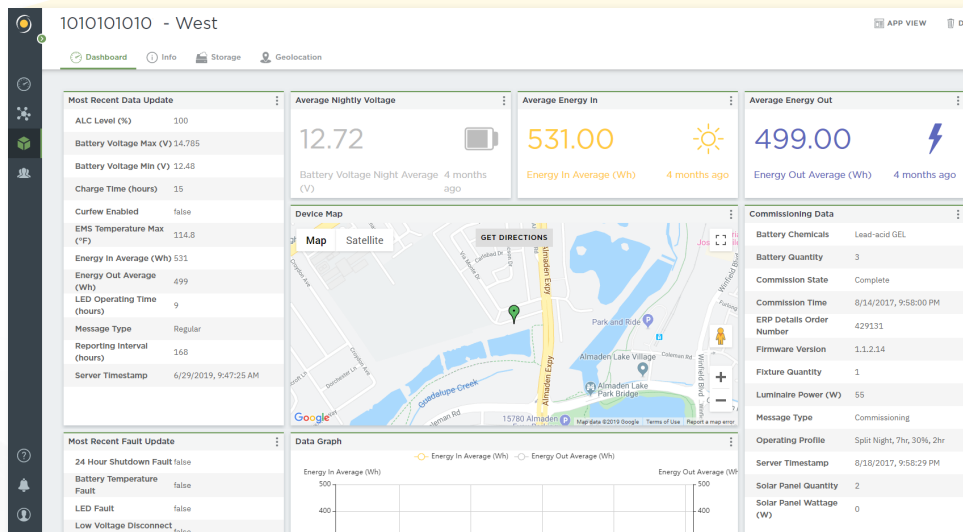
FEATURES



Receive automated notifications



Our expert product technologists can access your platform's data to help resolve issues



Check light status anytime with an easy-to-use, cloud-based dashboard that includes Google Map overlays, battery health, faults, and more



Provide peace of mind with smart monitoring that ensures the systems' health over time and protects your investment



Commissioning confirmation



API integration available

PRICING

Every EverGen lighting system includes a **complimentary 12-month subscription** to Sol's Insight remote monitoring platform. Extended subscription packages are available. Contact our sales team for more information.

To receive Insight remote monitoring, customers must sign off on terms and conditions. An email address is also required to receive Insight services. Contact a Sol sales representative for details.

STEP 1

Ensure your installer has the right tools before going on site.

- Smartphone or tablet built within the last three years (iPhone 6 or newer running iOS 12.0+ / Android 6.0+ and Bluetooth Low Energy).
- The EverGen Setup App (see Step 2).
- The Sol order number (e.g. ORD12345).

STEP 2

Download the app.

From a smartphone/tablet, the installer can go to the [iOS App Store](#) / [Google Play Store](#) and search for "EverGen Setup App" by Sol Inc. (or click the links above).



If the app is not showing up in the App Store, the phone/tablet may not be compatible. Try installing on another iPhone/Android phone/tablet.

STEP 3

Sign Up for access in the app.

Using the "Sign Up" tab, installers can enter their information to create a profile to access the app. A verification email will be sent to the address used for the profile. Once the account is verified, login and move to step 4.

STEP 4

Download the order information to the app.

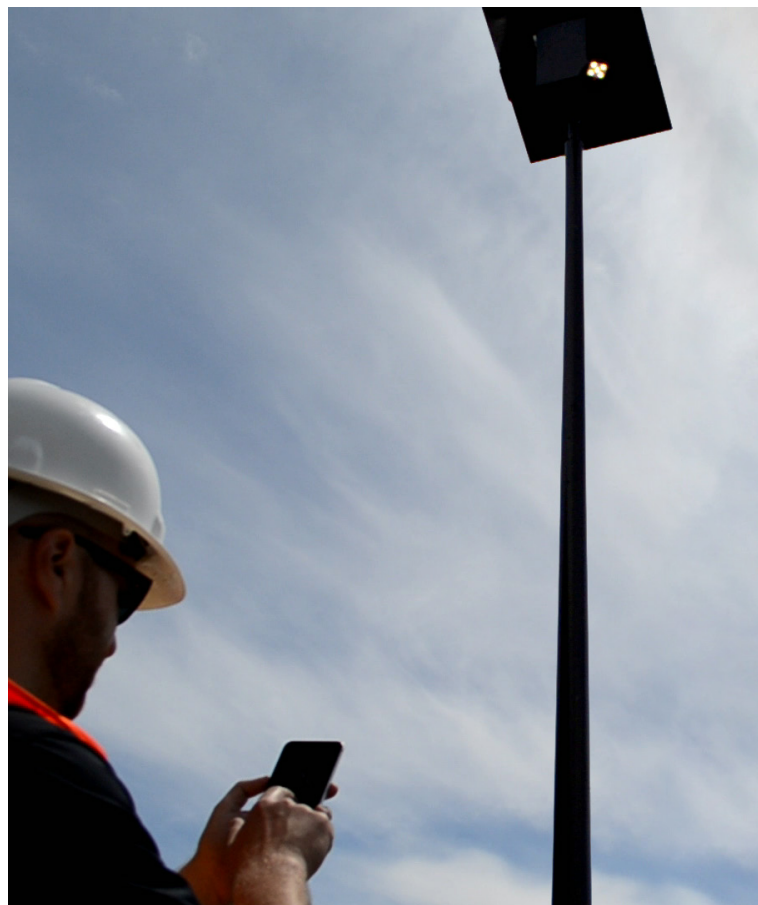
Prior to installation, the installer will need to download their order information to the app so the correct settings can be applied to the EverGen. Enter the order number provided on the shipping documentation (ORDXXXXXX). Downloading requires an internet connection.



If there will be no internet access onsite, the contractor should download order information before arriving. After downloading the order information, the contractor can complete the rest of the steps even while offline. Order information remains available in the app for two weeks.



NEXT STEPS: Follow the EverGen Setup App instructions onsite.



US and International patents apply. Other patents pending. "Sol" logo is a trademark of Sunna Design. All Sol products are manufactured in facilities that are certified to ISO quality standards.
Document: SELL_SOL-Sunna_EverGen-4-Steps-Setup-App_RevC



Terms and Conditions of Warranty and Other Details

Limited Warranty

By purchasing the Product, the Buyer, or the owner of the Product ("you") are agreeing to be bound by the terms of this limited warranty. The Company provides the following limited warranty coverage as applicable to the Product.

Subject to the terms and conditions of the Limited Warranty as set forth herein (the "Terms and Conditions of Warranty"), a Product shall be considered a "Deficient Product" if Buyer provides written notification of the occurrence of the following within the associated warranty period enumerated below and proves to SUNNA DESIGN's satisfaction that the defect exists.

The Limited Warranty applies exclusively to the Buyer, and third parties will have no rights or benefits under the Limited Warranty. The Limited Warranty is non-assignable, except upon the written consent of SUNNA DESIGN. Claims for a breach of the Limited Warranty can only be made: (i) during the relevant Limited Warranty periods as set forth above, (ii) with a proof of purchase as was issued by SUNNA DESIGN to Buyer which includes the Product purchase date and (iii) written notification of such Limited Warranty claim being given in writing within thirty (30) days of the alleged occurrence giving rise to the Limited Warranty claim to SUNNA DESIGN at the following address: 990 Biscayne Boulevard, Suite 701, Miami, 33132 Florida.

What the Warranty Covers and for How Long

- Subject to the exclusions and claim procedure set out below, the Company warrants each new lighting system to be free from defects in materials and workmanship that performs under normal use and service. The Company will, at its option and discretion, repair or replace any system or system component that is defective in materials or manufacture within a specific timeframe after purchase—the Warranty Period (the "Warranty"). Additionally, specific items within the system may have extended warranty protection as noted.
- The Company shall be entitled, at its discretion, to use new and/or reconditioned parts or products in performing warranty repair or providing a replacement Product in accordance with the Warranty Coverage. The Company also reserves the right to use parts or products of original or improved design in any repair or replacement in accordance with the Warranty Coverage. It further reserves the right to make changes in design or improvements to its products without notice to you and without obligation to incorporate the same in any product previously manufactured. Any products or parts which are replaced shall become the property of the Company.
- If the Company repairs or replaces a Product in accordance with the Warranty Coverage, the Warranty will continue to apply and remain in effect for the balance of the Warranty Period calculated from the date you purchased the Product from the Company (the "Date of Purchase") and not the repair or replacement date.
- If the Company chooses to offer a credit towards the purchase of new Product in accordance with the Warranty Coverage, then the warranty applicable to the new product shall apply. All credits must be used within 90 days of issuance from the Company towards the purchase of new Product or such credits become null and void.
- Shipping the Product to the Company's factory remains at the expense and responsibility of the Buyer. The Warranty does not cover import fees, duties, and taxes.

What the Warranty Does Not Cover

The Warranty does not provide coverage for the following which are expressly excluded from the Warranty:

- Failure due to normal wear and tear of the Product;
- Failure caused by improper user programming of Product settings through computer software supplied with or associated with the Product;
- Failure due to accident, abuse, misuse, liquid contact, neglect, improper installation, generalized corrosion, biological infestations, or input voltages that create operating conditions beyond the maximum or minimum listed in the Company's specifications;
- Products which have been repaired or altered other than by the Company or as authorized by its employees or agents;
- Products that have their original identification (including, but not limited to, trademarks or serial numbers) markings defaced, altered, or removed;
- Products utilized as a component part of a product expressly warranted by another manufacturer;



by Sunna Design®

- Operation or storage of the Product outside the specification ranges disclosed by the Company, and/or alteration or deployment of the Product other than in accordance with any published or provided user, storage, or maintenance requirements; Specifically, the warranty does not cover storage of the Product for more than 365 days, or in a location where temperatures may exceed 25°C (77°F).
- Failure that is in any way attributable to the improper use, storage, maintenance, installation, or placement of the Product;
- Failure caused by use in violation or contravention of any applicable laws, statutes, rules, regulations, and ordinances or any applicable standard, code, or instructions for use in installations, including, but not limited to, those contained in the *National Electrical Code* and published by the *Standards for Safety of Underwriters Laboratory*, the *International Electrotechnical Commission*, the *American National Standards Institute*, and the *Canadian Standards Association*;
- Failure caused by any acts of God, including, but not limited to, earthquakes, lightning strikes, and flooding; and
- Any additional costs required to repair or replace the defective Product, including, but not limited to, legislatively imposed fees where applicable.

Restrictions and Limitations to Warranty

- The Company is not responsible for repairs, disassembly, or re-assembly of other products that are not supplied, provided, or sold by the Company.
- The Company is not liable for any losses, expenses, damages, or costs incurred by you incidental or collateral to the Warranty, including, but not limited to, shipping, retrieval, and redeployment of the Product.
- This Warranty is not transferable or assignable by you and only applies to you. Upon written notice to you, the Company may assign this Warranty. In other words, warranty claims can only be made by the company that purchased the products from the Company.
- The Company does not warrant the results obtained from the implementation of recommendations made by the Company or its authorized distributors concerning the use, design, or application of the Product.
- You assume all responsibility and liability for loss or damage resulting from your handling or use of the Product.
- The onus is on you to provide evidence satisfactory to the Company that any event that may invalidate the Warranty has not occurred, including, but not limited to, providing evidence of specific storage, maintenance, or operational procedures to assure Product performance.
- The Company has the sole discretion in determining the validity of any Warranty claim and reserves the right to determine the cause of Product defect including examining patterns in Product usage, trends in Product failure, and to review your documentation of installation, use, maintenance, storage procedures, and test results.
- The Company's liability on any claim, whether in warranty, contract, negligence, or any other legal theory, for loss, damage, or injury arising directly or indirectly from or in relation to the use of the Product shall in no event exceed the purchase price paid by you for the Product as stated in the original invoice.
- The repair or replacement of the Product or granting of credit by the Company in accordance with the Warranty Coverage shall be your sole remedy and IN NO EVENT SHALL THE COMPANY BE LIABLE FOR PUNITIVE, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES INCURRED BY YOU WHETHER FORSEEABLE OR NOT, INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUES, LOSS OF USE OF GOODS (EXCLUDING THE PRODUCT), LOSS OF BARGAIN, LOSS OF BUSINESS, LOSS OF OPPORTUNITY, OR LOSS OF REPUTATION.
- The Warranty set out above is the sole warranty granted by the Company with respect to the Product. No oral understanding, representations or warranties shall be of any effect and the Company makes no further warranties, express or implied, concerning the Product other than the Warranty. You, where permitted by applicable law, hereby expressly waive any statutory or implied warranties including, but not limited to, that the Product shall be merchantable, fit for a particular purpose, or durable. All other warranties, conditions, and representations are hereby cancelled and are null and void. This Warranty may only be modified or amended by written agreement signed by the Company.
- This Warranty Terms shall be governed exclusively by the laws of the state of Delaware, United States excluding rules of international law that would result in the application of the laws of any other jurisdiction. The United Nations Convention on Contracts for the International Sale of Goods (1980) does not apply to this Agreement. If Buyer's principal place of business is located within the United States, the parties hereby irrevocably attorn and submit to the exclusive jurisdiction of Delaware, United States of America in respect of all disputes arising under or in respect of this Agreement. If Buyer's principal place of business is located outside of the United States of America, then all disputes arising out of or in respect of this Agreement shall be determined by arbitration administered by the International Centre for Dispute Resolution in accordance with its International Arbitration Rules. The number of arbitrators shall be one. The place of arbitration shall be Wilmington, Delaware, United States of America. The language of the arbitration shall be English.
- To the extent that this Warranty is inconsistent with mandatory applicable laws, this Warranty shall be deemed modified to be consistent with such mandatory applicable local laws.



SUNNA DESIGN shall, at its sole option and discretion, either repair or replace with a comparable product, or give a credit to Buyer ("Remedy"). Buyer and SUNNA DESIGN acknowledge and agree that the Remedy is SUNNA DESIGN's sole and exclusive obligation and Buyer's sole and exclusive remedy under this Limited Warranty and with respect to the Product. Where a Deficient Product is no longer being manufactured by SUNNA DESIGN, SUNNA DESIGN reserves the right to supply another type. Absence of SUNNA DESIGN's receipt of written notification within the applicable warranty period in compliance with the terms and conditions set forth herein shall constitute a waiver of all claims under the Limited Warranty.

SUNNA DESIGN's performance of a Remedy shall not cause the beginning of a new warranty period, nor otherwise extend the applicable warranty period. SUNNA DESIGN's cumulative aggregate liability under this Limited Warranty shall not exceed the original purchase price of the Product. Buyer shall bear all costs of shipment and transportation related to the repair or replacement of Deficient Product.

EXCEPT FOR THE LIMITED WARRANTY EXPRESSLY SET FORTH HEREIN, SUNNA DESIGN MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND WHATSOEVER REGARDING THE PRODUCT AND DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, COURSE OF DEALING AND USAGE OF TRADE.

IN NO EVENT SHALL SUNNA DESIGN BE LIABLE FOR, AND BUYER HEREBY AGREES TO INDEMNIFY SUNNA DESIGN FROM AND AGAINST, ANY AND ALL CLAIMS AND COSTS, INCLUDING ATTORNEY'S FEES, ARISING IN ANY WAY FROM THE SALE, USE OR INABILITY TO USE THE PRODUCT, BASED ON: LOSS OF USE, REVENUE OR PROFIT; DIRECT, INDIRECT, SPECIAL, PUNITIVE, LIQUIDATED, INCIDENTAL, CONSEQUENTIAL, OR ANY OTHER DAMAGE; OR INJURY TO PERSONS OR PROPERTY.

The rights, obligations and limitations contained herein are specifically negotiated as part of the agreement between the parties, and represent the specific intent to allocate risks, including those arising due to each party's own negligence or breach, and the potential of the Limited Warranty failing of its essential purpose.

Neither the sales personnel of SUNNA DESIGN nor its distributors are authorized to make warranties or representations, whether oral or written about the Products beyond those set forth in these Warranty Terms and Conditions, and no other warranties are given to Buyer other than the Limited Warranty set forth herein. These Warranty Terms and Conditions constitute the final expression of the parties' agreement, and it is a complete and exclusive statement of the terms of that agreement and supersedes all prior agreements, warranties, or statements regarding Products or any warranty associated with the Products. These Warranty Terms and Conditions cannot be amended, altered or modified in any way except in writing signed by an authorized officer of SUNNA DESIGN. These Warranty Terms and Conditions shall be governed by and construed in accordance with the laws of the State of Delaware without regard to principles of conflicts of laws.



10 Year Limited Warranty

The Company warrants that each new solar lighting system to have a component or system free from defects in materials and workmanship that performs under normal use and service. The Company will, at its option, repair or replace any system or system component that is defective in materials or manufacture within a specific timeframe after purchase. Warranties are a minimum of five (5) years, with specific items within the system noted below having additional warranty protection against failure. For full details regarding this warranty, review the Terms and Conditions below.

Item	EverGen M Series	iSSL & UP Series
Solar PV Panel Output Power	20 Years	10 Years
Mounting Hardware	10 Years	10 Years
Pole (if provided)	Manufacturer's Warranty	Manufacturer's Warranty
LED Fixture	Manufacturer's Warranty	10 Years
Electronics (Charge Controller, LED Driver)	10 Years	10 Years
Energy Storage Array (Battery)	5 Years/10 Years*	10 Years**

* Batteries provided by the Company have a limited warranty for battery replacement (batteries must be provided by Sunna Design), based on the date of shipment, with the following pro-rated coverage:

** This warranty is applicable for products installed in the United States and Canada only. iSSL & UP systems installed in other territories benefit from a 6 Years warranty.

5 Year EverGen Battery Warranty:

- 0 to 36 months: 100% credit (user pays 0% of replacement battery price)
- 37 to 48 months: 40% credit (user pays 60% of replacement battery price)
- 49 to 60 months: 20% credit (user pays 80% of replacement battery price)

10 Year EverGen, iSSL & UP Series Battery Warranty:

- 0 to 84 months: 100% credit (user pays 0% of replacement battery price)
- 85 to 96 months: 30% credit (user pays 70% of replacement battery price)
- 97 to 108 months: 20% credit (user pays 80% of replacement battery price)
- 109 to 120 months: 10% credit (user pays 90% of replacement battery price)



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OFF-GRID

LED SOLAR POST TOP LIGHT

The Solera Solar Lighting Post Top Light features an all-in-one design. The solar panel, light engine and battery are built right into the LED fixture. No need for a power source, which eliminates the need for wiring and trenching. The Solar Post Top Light is easy to install, just use the supplied screws to secure the light to the pole.



- Comparable to 150W HID
- Fixture turns on at night automatically and can be set to different operating modes (see installation instructions for details)
- Aluminum alloy + polycarbonate material makes it strong and lightweight
- Li-Ion battery lasts at least 1500 charge cycles and is replaceable
- Perfect for parks, city streets, school campuses and more...
- Dimensions (H x W): 32" x 16"

(The fixture will fit poles between 3" - 3.5" - pole not included/offered)

PART #	UPC	COMPARABLE TO	LUMENS	CCT
SL-SPT-20W-40K-SF-G2	844006069100	150W HID	2000	4000K



WARRANTY



CHARGE TIME



BATTERY LIFE



BATTERY CHARGING TEMP



OPERATING TEMP



BEAM ANGLE



REPLACEABLE BATTERY



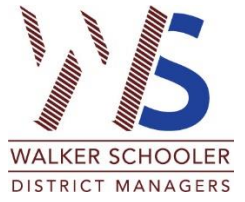
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07.28.21 Information is subject to change without notice.





Here is an initial detailed scope of work. I would pursue this work with a Retired CPA, Mike Gesin and possibly his wife who I've worked with before and who I know well. They are based in Parker. We would start ASAP and complete by end of August. I will be in Lake George/CS from mid June through August.

Possible Scope of Work

1. Review Departments Strategic Plans or Goals Documents
2. Review Departments metrics collected
3. Secondary research of common metrics for similar departments
4. Review Department design using 7-S model
5. Review personnel status (age, training, tenure)
6. Review capital status (equipment age and capability)
7. Review station locations
8. Review financial audits/reviews and budget history
9. Review financial data of comparable districts
10. Review funding and expenditure cycles
11. Review funding and expenditure drivers
12. Interview key stakeholder leaders and department staff

13. Identify critical success outcomes
14. Identify major resource vs need gaps
15. Identify major change challenges
16. Develop managerial cost accounting model for scenario analysis
17. Identify key latent, emerging, and manifest sources of conflict pre and post merger
18. Propose administrative and operational structure
19. Document via a strategic and tactical business plan

My only concern is the budget for this scope of work. Give me a time we can visit later in the week to discuss

Thanks,

Tom Binnings

Senior Partner

719-471-0000 Cell: 719-650-5898



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COOPERATIVE EFFORTS FEASIBILITY STUDY

It is often assumed that legal merger of agencies is the only cooperative effort alternative that is available. However, there are many different approaches available to fire departments when considering consolidation of services, not limited to merger. The options fall on a spectrum from a do-nothing approach to various forms of administrative, operational and functional consolidation – none of which mean dissolving any single agency - up to complete unification of the organizations into what is, essentially, a new emergency service provider.

ESCI evaluates each participating agency independently and in detail. Based on those findings an analysis is conducted of the operational, management and financial feasibility of various forms of cooperative service delivery that may be applicable to the client agencies.

Sample Scope of Work | Cooperative Efforts Feasibility Study

Phase I: Project Initiation

Task 1-A: Project Initiation & Development of Work Plan

ESCI will converse with the management teams of the various governments and organizations involved in the study or their project liaisons to gain a comprehensive understanding of the communities' backgrounds, goals, and expectations for the project. ESCI's project manager will develop and refine a proposed work plan that will guide the project team. This work plan will be developed identifying:

- Primary tasks to be performed
- Person(s) responsible for each task
- Time table for each objective to be completed
- Method of evaluating results
- Resources to be utilized
- Possible obstacles or problem areas associated with the accomplishment of each task

This process will also help to establish working relationships, make logistical arrangements, determine an appropriate line of communications, and finalize contractual arrangements.

Task 1-B: Acquisition & Review of Background Information

ESCI will request pertinent information and data from each organization's assigned project manager. This data will be used extensively in the analysis and development of the report document. The documents and information relevant to this type of project will include, but not be limited to, the following:

- Past or current emergency service studies or research
- Community Comprehensive Plan documents, including current and future land use information

- Local census and demographics data
- Zoning maps and zoning codes
- Financial data, including debt information, long-range financial plans and projections
- Department administrative policies and procedures
- Standard Operating Guidelines (SOGs) and service delivery practices
- Current service delivery objectives and targets for each community
- Facilities and apparatus inventories
- Local collective bargaining agreements, if applicable
- Automatic and mutual aid agreements
- Records management data, including National Fire Incident Reporting System (NFIRS) incident data
- Computer-Aided Dispatch (CAD) incident records
- Local Geographic Information Systems (GIS) data, where available

Task 1-C: Stakeholder Input

The ESCI project team will conduct site visits in each community and department for the purpose of conducting interviews with, and gathering information from, key personnel including:

- Elected or appointed officials
- Fire department managers and other key staff
- Finance function managers
- Community planning staff
- Human resource function coordinators
- Medical Director for regional or community EMS, where applicable
- Employee and volunteer groups
- Others as they may contribute to this project

The project team will interview key stakeholders of any organization associated with this study. At a minimum, members of the project team will interview appropriate community officials, fire department officials, volunteer association leaders, labor organization representatives and others that the project team deems necessary.

From these interviews, ESCI will obtain additional perspective on operational, economic, and policy issues facing the agency. In addition, the project team will learn more about availability of data necessary to meet projected goals.

Phase II: Baseline Agency Evaluations

The initial phases of the study focus on a baseline assessment of the current organizational conditions of each agency and current service performance of the departments and the study area as a whole. ESCI will conduct an organizational review of these departments based on the elements included in the following tasks. The purpose of this evaluation is to assess the agencies' operations in comparison to industry standards and best practices, as well as to create a benchmark against which the options for future service delivery can be measured.

Task 2-A: Organization Overview

An overview of each organization and community will be developed discussing:

- Service area population and demographics
- History, formation, and general description of the fire agencies
- Description of the current service delivery infrastructure
- Governance and lines of authority
- Foundational policy documents
- Organizational design
- Operating budget, funding, fees, taxation, and financial resources

Task 2-B: Management Components

Each organization's basic management processes will be reviewed, including:

- Mission, vision, strategic planning, goals, and objectives
- Internal assessment of critical issues
- Internal assessment of future challenges
- Internal and external communications processes
- Document control and security
- Reporting and recordkeeping
- Information technology systems

Task 2-C: Capital Assets and Capital Improvement Programs

ESCI will review status of current major capital assets (facilities and apparatus) and analyze needs relative to the existing condition of those assets and their viability for continued use in future service delivery, including:

Facilities – Tour and make observations in areas related to station efficiency and functionality. Items to be contained in the report include:

- | | |
|------------------------|--------------------|
| • Design | • Code compliance |
| • Construction | • Staff facilities |
| • Safety | • Efficiency |
| • Environmental issues | • Future viability |

Apparatus/Vehicles – Review and make observations regarding inventory of apparatus and equipment. Items to be reviewed include:

- Age, condition, and serviceability
- Distribution and deployment
- Maintenance
- Regulations compliance
- Future needs

Task 2-D: Staffing and Personnel Management

ESCI will review each department's staffing levels. Areas to be considered include:

- Review and evaluate administration and support staffing levels
- Review and evaluate operational staffing levels
- Review staff allocation to various functions and divisions
- Review staff scheduling methodology
- Analyze current standard of coverage and staffing performance for incidents
- Review firefighter/EMS staff distribution
- Review utilization of career and volunteer companies, where applicable
- Review responsibilities and activity levels of personnel

Personnel management systems of the departments will also be reviewed, focusing on:

- Human resources policies and handbooks
- Quality and status of job descriptions
- Personnel reports and recordkeeping
- Compensation systems
- Disciplinary process
- Counseling services
- Application and recruitment processes
- Testing, measuring, and promotion processes
- Member retention efforts and programs
- Health and wellness programs

Task 2-E: Service Delivery and Performance

ESCI will review and make observations in areas specifically involved in, or affecting, service levels and performance of the departments, either individually or when operating in concert with one another in the study area (the collective jurisdiction of all organizations included in the study). Areas to be reviewed shall include, but not necessarily be limited to:

- Service Demand Analysis—
 - Analysis of current service demand by incident type and temporal variation for each individual organization
 - Analysis and geographic display of current service demand density within the overall study area
- Resource Distribution Study—
 - Overview of the current facility and apparatus deployment strategy, analyzed through Geographical Information Systems software, with identification of service gaps and redundancies. This distribution study will be conducted for the study area as a whole, with all existing facilities included in the analysis.
- Resource Concentration Review—

- Analysis of geographic display of the response time necessary to achieve full effective response force arrival in the study area using existing distribution of all organizational resources
- Analysis of company and staff distribution as related to effective response force assembly in the study area
- Response Reliability Study—
 - Analysis of current workload, including unit hour utilization of individual companies (to the extent data is complete)
 - Review of actual or estimated failure rates of individual companies (to the extent data is complete)
 - Analysis of call concurrency and impact on effective response force assembly
- Response Performance Analysis—
 - Analysis of actual system response time performance, analyzed by individual companies (to the extent data is available). Performance analysis will be conducted for each jurisdiction individually and for the study area as a whole.
- Mutual and Automatic Aid Systems

Task 2-F: Support Programs

ESCI will review and make overall observations involving support programs within each organization for the critical areas of training, life safety services, and communications. Items to be reviewed include:

Training

- General training competencies
- Training administration
- Training schedules
- Training facilities
- Training procedures, manuals, and protocols
- Training recordkeeping

Life Safety Services (Fire Prevention)

- Code enforcement activities
- New construction inspection and involvement
- General inspection program
- Fire and life-safety public education programs
- Fire investigation programs
- Pre-incident planning
- Statistical collection and analysis

Communications

- Alarm systems and communications infrastructure
- PSAP and Dispatch Center capabilities and methods
- Dispatch center staffing

Task 2-G: Planning for Fire Protection and Emergency Medical Services

The planning processes within the agency shall be reviewed. Key components include:

- Review and evaluate the adequacy of the current planning process
- Review elements of tactical planning within the organization
- Review operational planning within the organization
- Review strategic planning practices
- Review long range or other planning efforts
- Make recommendations relative to future planning process needs

Phase III: Future Opportunities for Cooperative Efforts

ESCI will use the completed baseline assessment of each agency to identify opportunities and feasibility for cooperative efforts. The project team will identify areas of duplication that can be reduced through consolidation efforts, as well as potential service improvements that can be accomplished. Experience has shown that this frequently becomes the overriding influence for public fire service consolidation efforts.

Items in this section of the report include but are not limited to the areas listed below. The detailed information provides department heads and elected officials with the information necessary to make important decisions regarding emergency services consolidation. Included are:

Task 3-A: General Partnering Strategies

The various partnering strategies are described, beginning with a do-nothing approach and ending with complete consolidation of the agencies into a new emergency service provider. The following alternatives will be evaluated and discussed:

- Complete autonomy
- Advanced auto aid systems
- Functional consolidation
- Operational consolidation
- Legal unification or merger

Task 3-B: Options for Shared Services

The study takes into account the many shared issues that face each agency, and how such matters affect the effort to construct a regional model for efficient service. These issues are identified and analyzed. Within each presented option for shared services, ESCI will evaluate and discuss the following:

- Level of cooperation
- Estimated timeline for completion
- Affected section, i.e. Administration, Operations, Support Services
- Affected stakeholders
- Objective of strategy
- Summary of strategy
- Guidance

- Fiscal considerations
- Social considerations
- Policy actions

Task 3-C: Fiscal Analysis

ESCI uses computer-driven model budgets for each agency to allow a comparative examination of the actual public costs for each fire agency, and as a tool for analyzing the financial effects of any type of consolidation. Budget modeling is also used to measure the effects of the proposed change(s). Funding mechanisms are identified financial outcomes are provided for each consolidation strategy offered.

- Review and analyze department budgets and revenues
- Review separate budgets
- Develop projected consolidated budget extending to a minimum of five years
- Identify financial issues of consolidation
- Identify areas of short and long-term savings and costs

Fiscal analysis is an important component of the emergency services evaluation. Long-term survival of an emergency services system requires that the system be adequately funded. ESCI determines the fiscal state of each agency and develops recommendations on improving the financial resources available for emergency services. All recommendations are consistent with the municipalities' financial capability to provide adequate, cost effective services to citizens. In addition, budgeting practices are thoroughly examined, and alternate methodologies may be suggested.

In addition to the fiscal state evaluation of each agency, ESCI will present an evaluation of various funding alternatives to assist the region in the sharing of the cost of providing any consolidated or merged emergency services. Presented alternatives will include, but not necessarily be limited to, the following:

- Funding based on:
 - Redirected funds
 - Charitable foundations
 - Mill levy
- Cost allocation based on:
 - Area
 - Assessed value
 - Deployment
 - Service demand
 - Fixed rate
 - Population
 - Multiple variables

Task 3-D: Findings, Recommendations, and Plan of Implementation

Any cooperative venture among the agencies presents the organizational leaders with a series of challenges. Successful implementation of this proposal will require that significant matters be addressed regardless of which form of consolidation is chosen. Those issues will be identified here.

- Findings
 - Feasibility of each option will be presented
- Preferred Option
 - The preferred option or options will be presented and discussed at length
- Policy Action
 - Necessary policy action by the elected bodies will be described
- Timelines
 - The recommendations outlined in this section provide general completion timelines offered to guide the agencies in developing a more detailed listing during the formal planning process
- Process Issues
 - Strategic planning, legal considerations, management and governance, funding, and other issues will be provided in detail

Phase IV: Development, Review, and Delivery of Project Report

Task 4-A: Development and Review of Draft Project Report

ESCI will develop and produce an electronic version of the draft written report for review by the client and client representatives. Client feedback is a critical part of this project and adequate opportunity will be provided for review and discussion of the draft report prior to finalization. The report will include:

- Detailed narrative analysis of each report component structured in easy-to-read sections and accompanied by explanatory support to encourage understanding by both staff and civilian readers
- Clearly designated recommendations highlighted for easy reference and catalogued as necessary in a report appendix
- Supportive charts, graphs, and diagrams, where appropriate
- Supportive maps, utilizing GIS analysis, as necessary

Task 4-B: Delivery and Presentation of Final Project Report

ESCI will complete any necessary revisions of the draft and produce two copies per organization of the bound, final version of the written report, along with an electronic version in PDF file format.

A formal presentation of the project report will be made by ESCI project team member(s) to a joint meeting of the community leaders and/or organizations included in this study. The presentation will include the following:

- A summary of the nature of the report, the methods of analysis, the primary findings, and critical recommendations
- Supportive audio-visual presentation
- Review and explanation of primary supportive charts, graphs, diagrams, and maps, where appropriate
- Opportunity for questions and answers, as needed
- All presentation materials, files, graphics, and written material will be provided to the client at the conclusion of the presentation(s)

Optional Study Areas to Be Inserted or Substituted:

Task 2-H: Emergency Medical Services Support and System Oversight

Evaluate the agencies' Emergency Medical Services support and oversight mechanisms to include, but not limited to, the following:

- Review of logistical support services
- Review of current medical control and oversight
- Review of quality assurance/quality improvement mechanisms in place
- Review of system integrity regarding required credentialing

Task 2-I: HAZMAT Services Support and Response Capability

Evaluate the agencies' capabilities regarding hazardous materials incident response to include, but not limited to, the following:

- Review of physical and personnel resources
- Review of training and educational compliance
- Review of historical staffing performance regarding hazardous materials responses

Task 2-J: Technical Rescue Services Support and Response Capability

Evaluate the agencies' capabilities regarding technical rescue incident response to include, but not limited to, the following:

- Review of physical and personnel resources
- Review of training and educational compliance
- Review of historical staffing performance regarding technical rescue responses

Task 3-D: Public Input Meetings

At the conclusion of Phases I, II, and III, ESCI staff will facilitate a community public input meeting intended to provide information and gather input from members of the general public, community organizations, and neighborhood associations. In order to assess public sentiment toward potential future system changes, discussions will center on the following issues:

- Customer perception of emergency services
- Desired level of service

- Support for a consolidated emergency services system
- General input

The project team will prepare survey instruments, questionnaires, and forms to be used during the community meeting. Professional graphics and a presentation of study objectives will be used to increase customers' understanding of their role in the process. The results of the assessment of current resources, projections of future demand and risk, and the fire service costs and existing funding sources will be summarized, presented and discussed in the public input meeting. Data and input gathered from the meeting will be summarized within the study, as well as during meetings with internal stakeholders. ESCI will provide facilitation staff for the public meeting, but will expect the client to assist with logistics, scheduling, meeting locations, and public advertising.

Molly Gist

From: Stuart McElhaney <stuart.mcelhaney@esci.us>
Sent: Friday, April 22, 2022 9:11 AM
To: Molly Gist
Cc: Andrea Hobi; Sheldon Gilbert
Subject: Walker Schooler District Managers, CO - Two District Cooperative Services Feasibility Study
Attachments: Sample SOW-Cooperative Efforts Feasibility Study.pdf; NPPGov_Frequently Asked Questions.pdf; ESCI - NPPGov Contract Overview.pdf

Molly,

It was a pleasure speaking with you this morning about a two agency cooperative services feasibility study. ESCI can certainly assist with this having been in business for over 45 years assisting local governments with public safety consulting services. ESCI was started by Chief Jack Snook as a result of a major fire district consolidation in Oregon and is now the consulting arm of the International Association of Fire Chiefs.

I have attached a generic scope of work for a cooperative services study so that you can see the types of analyses we perform, the process we use and the products you can expect. If you want to move forward with this, we will develop a specific project understanding and scope of work for you. For example, we can include a section on the potential for providing ambulance service by either the separate districts or a single combined entity, depending upon the direction the policy makers wish to pursue. We do a very detailed analysis of the individual departments and use that as a basis for the analysis of various potential options from shared services through total consolidation.

Further, you can obtain our services under a Group Purchase Organization (GPO) called NPPGov. ESCI competitively bid and was awarded the ability to provide a wide range of studies and services at fixed pricing under the GPO. This process typically saves both time and money over the RFP process. If you are not already a member of NPPGov, it costs nothing to join. I have attached a FAQ sheet and contract summary for your review. The cost of a two agency cooperative services study would be \$51,171 and the study will take approximately six months from date of contract signing.

If you have questions about any of this and/or wish to proceed, please don't hesitate to contact me directly.

Regards.

M. Stuart McElhaney | Senior Consultant
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