



Mount  
Vernon  
IOWA

Michael Beimer, City Administrator  
Mark Winder, Chief of Police  
Dan Boggs, P.E., City Engineer

**Jim Moore, Mayor**

**Council:**

Jamie Hampton  
Marianne Taylor  
Francesca Thompson  
Eric Roudabush

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**To:** Honorary Mayor Moore and Honorary Council Members  
**From:** Matt Siders, Director of Parks and Recreation  
**CC:**  
**Date:** August 13, 2015  
**Re:** Sauter Park Trail Lighting Project

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We are currently seeking approval from Council to move forward with the Sauter Park Trail Lighting project. Please review the attached document sharing the cost of the project. Currently, we have it broken down into two sections;

Section 1 (Middle Section) = 3<sup>rd</sup> Street NE to First Street E

Section 2 (South Section) = First Street E to Nature Park

We also have another section identified as the North Section which runs from the Park and Rec/City Engineer/ Park Maintenance Shop at Elliott Park to the Skate Park. We have decided to hold off on lighting this section of the trail at this time.

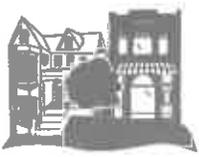
In this current budget year, Council was gracious enough to include in the Capital Projects for Park and Rec an amount of \$50,000 for the lighting of this trail. Four years ago when the trunk line (sewer) was put in we replaced the concrete trail that runs along Hahn Creek from 3<sup>rd</sup> Street NE to First Street E.

At that time, Council approved placing conduit at the trail to prepare for a future lighting project of the trail. Hawkeye Electric was contracted to do the work.

Last spring we contacted Hawkeye Electric to give us a quote on the project that they were already familiar with. We also worked with Randy Nicol, with NRG Sales Inc, to pick out the poles and lights. Randy picked out a pole and light fixture that will complement the Streetscape plan when it is implemented.

We have attached documents that will share the pole and fixture selected and I have attached the price quote. You will notice the total dollar amount (\$52,710) is slightly higher than the \$50,000 budgeted. The difference of \$2,710 could come out of Park and Rec operating budget, if so desired.

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Please consider approving this project as it will greatly improve the safety and aesthetics at the trail and the park in general.

Respectfully submitted,

**Matt Siders**

**Director of Parks and Recreation**

**City of Mount Vernon IA**

**Phone: 319-895-9513**



# HAWKEYE ELECTRIC

1705 Hawkeye Dr. \* Hiawatha, IA 52233  
Phone (319) 743-9891 Fax (319) 743-9893  
Web: [www.hawkeye-electric.com](http://www.hawkeye-electric.com)  
Email: [tylerr@hawkeye-electric.com](mailto:tylerr@hawkeye-electric.com)

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Date: 2-12-2015  
To: City of Mt. Vernon  
Attn: Matt Siders  
RE: Trail Lighting

## MT. VERNON - TRAIL LIGHTING PROJECT

\* (Middle Section of trail by the gazebo)

- 8 new 60 watt LED pole lights - 12ft poles
- Power feed will come from the existing maintenance shop panel by the skate park
- Wire, terminations and pole installation

Total = \$33,648.00

\*(Southside of 1<sup>st</sup> street)

- 4 new 60 watt LED pole lights.
- New power feed to come from the park end of the trail
- Wire, terminations and pole installation

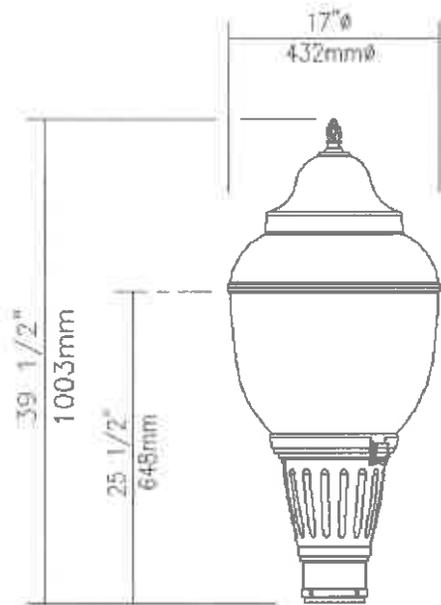
Total = \$19,062.00

Exclusions:

- Trenching
- 12 Concrete Pole Bases
- Conduit and conduit installation
- Concrete cutting, removal and patching
- [REDACTED]

Tyler Ross  
Hawkeye Electric

## Mount Vernon Walkway (Reference=35492-1)



EPA: 2.17 sq ft / weight: 60 lb (27.3 kg)  
Note: 3D image may not represent color or option selected.  
Logos above include link, click to access.

|     |   |           |   |
|-----|---|-----------|---|
| Qty | 1 | Luminaire | S56-55W32LED4K-R-ACDR-LE2-UNIV-SFX-FN8-BKTX |
|-----|---|-----------|---|

### Description of Components:

**Finial:** Decorative cast 356 aluminum, mechanically assembled.

**Hood:** (ACDR), One-piece, seamless, pressure-moulded impact-resistant (DR) acrylic globe having internal prisms with smooth external self-cleaning surface, permanently assembled to the globe.

**Access-Mechanism:** A cast A360.1 aluminum technical ring with latch and hinge. The mechanism shall offer tool-free access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofness.

**Globe:** (ACDR), One-piece, seamless, injected-moulded impact-resistant (DR) acrylic globe having an inner prismatic surface with semi-prismatic house side shield and glare softening prisms on the street side. The smooth external finish offers self-cleaning properties. The globe is permanently sealed onto the access-mechanism.

**Lamp: LED Module (Included),** LED type Philips Lumileds LUXEON R. Composed of 32 high-performance white LEDs. Color temperature of 4000 Kelvin nominal, 70 CRI. Operating lifespan based on TM-21 extrapolation to get results after which 50% of LEDs still emits over 70% (L70) of its original lumen output. Use of metal core board ensures greater heat transfer and longer lifespan of the light engine. The LED circuit board is included with a quick disconnect wiring connection for ease of replacement.

**Optical System:** (LE2), IES type II (asymmetrical). Composed of high-performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Optical system is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Street side indicated.

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## Mount Vernon Walkway (Reference=35492-1)

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**Heat Sink:** Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device)

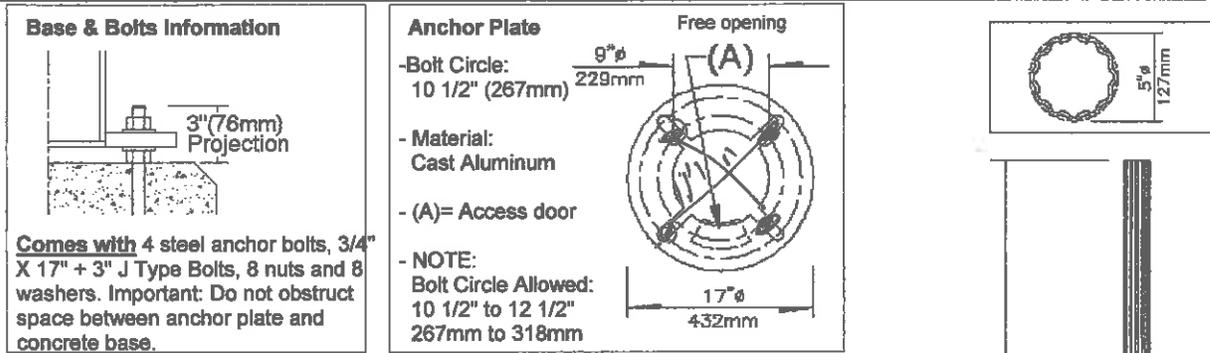
**Driver:** High power factor of 95%. Electronic driver, operating range 50/60 Hz. **Auto-adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max.** Maximum ambient operating temperature from -40F(-40C) to 130F(55C) degrees. Certified in compliance to UL1310 cULus requirement. Dry and damp location. Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221F(105C) degrees.

The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built-in driver surge protection of 2.5kV (min).

**Surge Protector:** Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

**Fitter:** Cast aluminum A360.1 c/w 4 set screws 3/8-16 UNC. Fits on a 4"(102mm) outside diameter by 4"(102mm) long tenon.

## Mount Vernon Walkway (Reference=35492-1)



|     |   |      |              |
|-----|---|------|--------------|
| Qty | 1 | Pole | RA40-12-BKTX |
|-----|---|------|--------------|

### Description of Components:

**Pole Shaft:** Shall be made from a 5" (127mm) 12 fluted round extruded 6061-T6 aluminum tubing, having a 0.208" (5.3mm) wall thickness, welded to the pole base.

**Joint Cover:** One-piece round joint cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

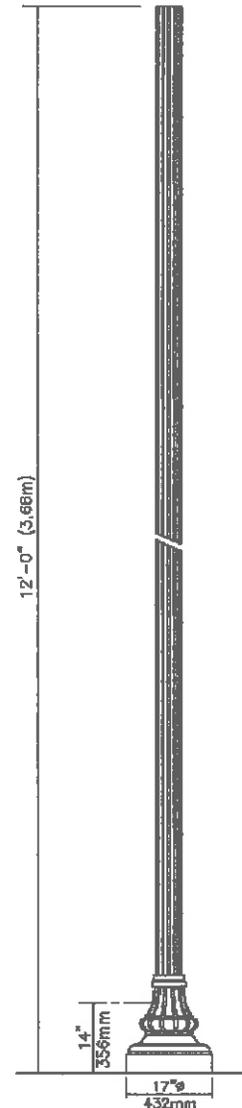
**Pole Base:** Shall be made from a round fluted cast 356-T6 aluminum base having a 0.375" (9.5mm) wall thickness, complete with a cast-in anchor plate.

**Maintenance Opening:** The pole shall have a 2 7/8" to 6" wide x 5 1/2" long (73mm x 152mm x 140mm) maintenance opening centered 14" (356mm) from the bottom of the anchor plate, complete with a weatherproof cast 356 aluminum cover and a copper ground lug.

**Note:** A tenon will be provided when the luminaire or bracket does not fit directly on pole shaft. Tenon not shown on the drawing.

**IMPORTANT:** Philips Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.

**Pole Weight:** 59 lbs (26.8 kg)



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## Mount Vernon Walkway (Reference=35492-1)

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|               |
|---------------|
| Miscellaneous |
|---------------|

### Description of Components:

**Wiring:** Gauge (#14) TEW/AWM 1015 or 1230 wires, 6" (152mm) minimum exceeding from luminaire.

**Hardware:** All exposed screws shall be stainless steel with Ceramic primer-seal basecoat to reduce seizing of the parts. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

**Finish:** Color to be **black textured RAL9005TX (BKTX)** and in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with  $\pm 1$  mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

**LED products manufacturing standard:** The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

**Quality Control:** The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

**Web site information details:** Click on any specific information details you need:

[Paint finish](#) / [Warranties](#) / [ISO 9001-2008 Certification](#) / [ISO 14001-2004 Certification](#) / [CSA Pole Certification](#)

## Mount Vernon Walkway (Reference=35492-1)

| LED light engine technical information for S55 S56 S55C1 S56C1 S55C2 S56C2 |                          |   |                             |                             |                             |                             |                  |                            |                                  |            |
|--|--------------------------|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------|----------------------------|----------------------------------|------------|
| LED = Philips Lumileds Luxeon R, CRI = 70, CCT = 4000K (+/- 350K)          |                          |   |                             |                             |                             |                             |                  |                            |                                  |            |
| System (LED + driver) rated life = 100,000 hrs <sup>1</sup>                |                          |   |                             |                             |                             |                             |                  |                            |                                  |            |
| Lamp   | Typical delivered lumens | Typical system wattage <sup>2</sup> (W) | Typical current @ 110 V (A) | Typical current @ 120 V (A) | Typical current @ 240 V (A) | Typical current @ 277 V (A) | LED current (mA) | VD equivalent <sup>3</sup> | Luminaire efficacy rating (lm/W) | LED rating |
| 35W32LED4K-R-LE2   | 3468                     | 36                                      | 0.29                        | 0.17                        | 0.16                        | 0.15                        | 350              | 70-100                     | 95.3                             | B1-U2-G1   |
| 35W32LED4K-R-LE3   | 3439                     | 36                                      | 0.29                        | 0.17                        | 0.16                        | 0.15                        | 350              | 70-100                     | 95.5                             | B1-U2-G2   |
| 35W32LED4K-R-LE4   | 3520                     | 36                                      | 0.29                        | 0.17                        | 0.16                        | 0.15                        | 350              | 70-100                     | 97.8                             | B1-U2-G1   |
| 35W32LED4K-R-LE5   | 3694                     | 36                                      | 0.29                        | 0.17                        | 0.16                        | 0.15                        | 350              | 70-100                     | 102.6                            | B3-U2-G1   |
| 55W32LED4K-R-LE2   | 4916                     | 53                                      | 0.40                        | 0.23                        | 0.21                        | 0.19                        | 530              | 100-150                    | 92.8                             | B1-U3-G1   |
| 55W32LED4K-R-LE3   | 4880                     | 53                                      | 0.40                        | 0.23                        | 0.21                        | 0.19                        | 530              | 100-150                    | 92.1                             | B1-U3-G2   |
| 55W32LED4K-R-LE4   | 4984                     | 53                                      | 0.40                        | 0.23                        | 0.21                        | 0.19                        | 530              | 100-150                    | 94.0                             | B1-U3-G2   |
| 55W32LED4K-R-LE5   | 5232                     | 53                                      | 0.40                        | 0.23                        | 0.21                        | 0.19                        | 530              | 100-150                    | 98.7                             | B3-U3-G1   |
| 55W48LED4K-R-LE2   | 5105                     | 55                                      | 0.38                        | 0.22                        | 0.23                        | 0.21                        | 350              | 100-150                    | 92.8                             | B2-U3-G2   |
| 55W48LED4K-R-LE3   | 5064                     | 55                                      | 0.38                        | 0.22                        | 0.23                        | 0.21                        | 350              | 100-150                    | 92.1                             | B2-U3-G2   |
| 55W48LED4K-R-LE4   | 5172                     | 55                                      | 0.38                        | 0.22                        | 0.23                        | 0.21                        | 350              | 100-150                    | 94.0                             | B1-U3-G2   |
| 55W48LED4K-R-LE5   | 5429                     | 55                                      | 0.38                        | 0.22                        | 0.23                        | 0.21                        | 350              | 100-150                    | 98.7                             | B3-U3-G1   |
| 80W48LED4K-R-LE2   | 7192                     | 79                                      | 0.63                        | 0.36                        | 0.34                        | 0.31                        | 530              | 150-175                    | 91.0                             | B2-U3-G2   |
| 80W48LED4K-R-LE3   | 7132                     | 79                                      | 0.63                        | 0.36                        | 0.34                        | 0.31                        | 530              | 150-175                    | 90.3                             | B2-U3-G2   |
| 80W48LED4K-R-LE4   | 7287                     | 79                                      | 0.63                        | 0.36                        | 0.34                        | 0.31                        | 530              | 150-175                    | 92.2                             | B2-U3-G2   |
| 80W48LED4K-R-LE5   | 7649                     | 79                                      | 0.63                        | 0.36                        | 0.34                        | 0.31                        | 530              | 150-175                    | 96.8                             | B3-U3-G2   |

<sup>1</sup> L70 = 100,000 hrs (at ambient temperature = 25°C)

<sup>2</sup> System wattage includes the lamp and the LED driver.

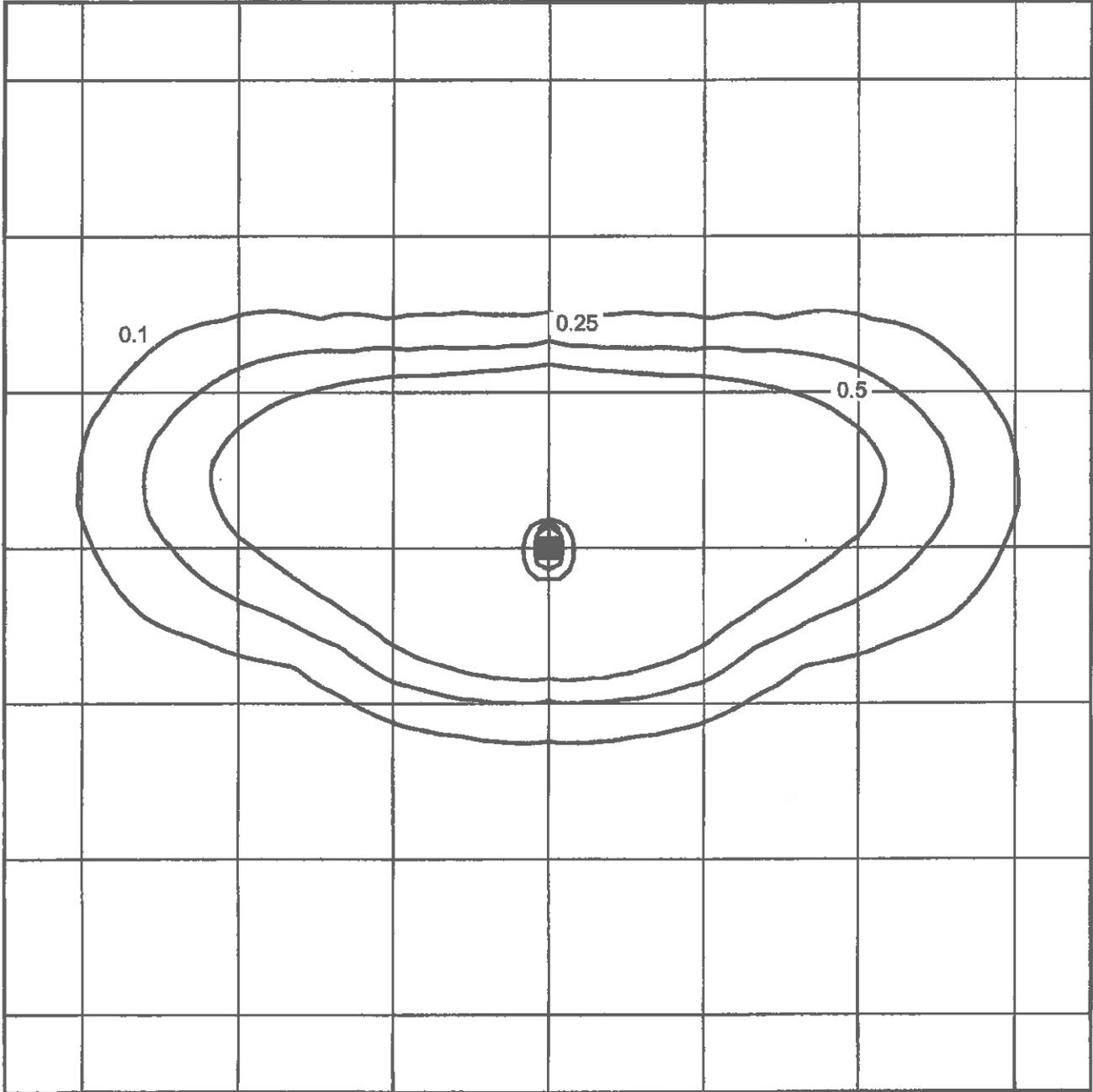
<sup>3</sup> Equivalence should always be confirmed by a photometric layout.

Note : Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.



S56-55W32LED4K-R-LE2 (LRP0793Bm).ies  
 LUMEC  
 S56-55W32LED4K-R-LE2  
 S56 WITH LE2 OPTICS, NW  
 LEDgine 32 NW LUXEON R.

*Approx 2,500 / pole from Van Meter same as bank except they used 80w*



LUMENS PER LAMP = -1  
 LIGHT LOSS FACTOR = 0.9  
 OPTICAL HEIGHT = 14 FEET  
 ARM LENGTH = 0 FEET  
 TILT = 0 DEGREES FROM NADIR

20 FEET BETWEEN GRIDLINES  
 MAXIMUM ILLUMINANCE = 2.7 FOOTCANDLES

Footprints™ by Philips-Gardco Lighting



Staggered  
● - light poles





*Staggered  
● Light Poles*





*Straight Line  
Light  
● - Poles*

60m  
200ft



• Straight Line  
• Light Poles

