



King Luminaire • StressCrete • Est. 1953

**STRESSCRETE
GROUP**

Quality People • Quality Products

THE STRESSCRETE GROUP & LEED® CERTIFICATION

The LEED® (Leadership in Energy and Environmental Design) certification system is a rating system developed by the United States Green Building Council to rate the environmental performance of a building and its site. Using five main criteria, it provides a measurable benchmark of a building's impact on the environment. The five key criteria are: sustainable site development, water-savings, energy efficiency, materials selection and indoor environmental quality. Through our innovative product line we can contribute to points in many of the LEED® categories, with the ultimate goal of helping your project achieve the highest LEED® certified rating.

The StressCrete Group is a leading manufacturer of outdoor lighting products, such as concrete lighting poles and outdoor decorative luminaires. Since our establishment in 1953, we have been dedicated to creating high-quality lighting products while treating the environment with respect.

StressCrete's concrete poles are 100% recyclable and reusable and have an extremely long service life of over 75 years, reducing the need for replacement. They are constructed with materials that are abundant, and can be made with an exposed surface with no toxic coatings.

Under the King Luminaire name, the StressCrete Group manufactures high-performance luminaires that also provide environmental benefits. We have a line of Dark-Sky Friendly Fixtures™ that emit minimal or no uplight, preserving the night sky. Our high efficiency lights reduce the amount of electricity being used, saving money and the environment simultaneously. The Gemini Grid-Free Lighting Solution is a revolutionary new innovation that uses solar and wind power to provide streetlighting independent of the electrical grid.



**When it
comes to
preserving
our planet,
we're taking
the LEED®**



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SITE CREDIT 7 – REDUCTION OF HEAT ISLANDS

This credit is extended for reducing the heat signature of the site by using light colored/high albedo materials (reflectance of $>.3$) for 30% of the site's non-roof impervious surfaces. By reducing the heat signature (Heat Island Affect) it reduces the temperature of the site, therefore reducing the amount of energy used for air conditioning.

StressCrete concrete poles contain Portland cement which has a very good reflectance ratio (approx $.35$) and they can be made of a light colored concrete; this in turn leads to a reduction in Heat Island affect for the site. Alternate pole materials like steel and aluminum have much lower reflectance ratio and therefore they generate much more heat for the site. Concrete poles, working in conjunction with using light colored concrete materials for the rest of the landscape site works to provide 1 credit for reducing the amount of heat island affect on the site.

The thermal mass of concrete allows for a significant amount of heat absorptions before heating up itself, helping to reduce peak temperatures.

MATERIALS CREDIT 1.3 – BUILDING REUSE

The purpose of this credit is to leave the main portion of the building structure and shell in place when renovating the building.

Concrete poles are 100% reusable at both the existing site and for new site applications. The extremely long life span (75+ years) means that they can be reused to mount new upgraded lighting fixtures for future site upgrades and expansions. As well, the benefit of direct burial means that it will cost minimal energy and no new materials to move and reinstall the poles at new locations. Therefore, concrete poles can potentially offer up to 2 credits to MR 1.3.

MATERIALS CREDIT 2 – CONSTRUCTION WASTE

This section provides credits for diverting construction , demolition and land clearing materials waste from landfills. It is awarded by diverting 50% of the weight (1 credit) or + 75% of the materials (2 credits).

Concrete poles are 100% recyclable, with the concrete being crushed down for use in things like aggregate for road construction and the steel for use in new recycled steel products. As well, any waste generated during the production of concrete poles is 100% recyclable. Therefore, by using concrete poles for your site lighting you can allocate the weight of these materials towards achieving up to 2 credits for construction waste diversion.



MATERIALS CREDIT 4.1, 4.2 RECYCLED CONTENT

Credits can be achieved by using materials with a recycled content such that post-consumer recycled content constitutes at least 5% of the total value of the materials in the project or combined post-consumer and one-half of the post-industrial recycled content constitutes at least 10%. This is determined by multiplying the cost of the item by the percentage of recycled materials (on a mass basis) that make up that item. One point can be secured for meeting the above requirements and an additional 1 point can be given for an additional 10% post-industrial content.

Concrete poles by StressCrete contain silica fume which is a post-industrial material.

Therefore, by using concrete poles for site lighting on a project in conjunction with our recycled content materials up to 2 credits can be achieved.



MATERIALS AND RESOURCES CREDIT 5 LOCAL/REGIONAL MATERIALS

Credit is given if building materials are manufactured within a 500 mile (800 km) radius of the job site. One (1) credit is awarded if a minimum of 20% of the materials are manufactured within this distance and an additional 1 credit is awarded if more than 50% of building materials are within this distance.

StressCrete has three manufacturing facilities that allow us to offer a complete line of concrete poles within 500 miles (800kms) of most project location from the mid-west to the eastern seaboard; this in turn helps to secure up to 2 credits for purchasing regional materials.



SUSTAINABLE SITE CREDIT 8.8 EXTERIOR LIGHTING

Credits are given if the site lighting used provides optimum down lighting (Dark Sky Friendly™) fixtures. Fixtures must be full cut-off for park/rural settings and for residential/commercial settings have less than 2% uplight above 90 degrees.

King Luminaire offers a wide variety of pendant and post top fixtures that are certified to be full cut-off or cut-off; that meet or exceed the above requirements; thereby offering the potential of 1 credit for environmentally friendly exterior lighting.

INNOVATION AND DESIGN PROCESS

This section can provide up to 4 credits for using products that are considered innovative; these can include using products that go beyond the LEED® rating system and that offer exceptional environmental performance.

Several areas that can generate extra LEED® credits include: life cycle costing, moisture resistant materials and low VOC coatings/structural finish combinations.

StressCrete's high performance concrete poles offer the lowest life cycle costs of any lighting product in the industry due to their long life span (+75 years) and the fact that they are virtually maintenance free (will not rot, rust or require repainting). As well, concrete poles come with a natural stone finish, eliminating the need to apply environmentally harmful coatings like galvanizing and polyester powder paint as required on other products.

Both of the above points can be used to apply for an additional 1 credit for using an innovative environmentally friendly product.

| LEED CERTIFICATION | CREDIT | HOW THE STRESSCRETE GROUP CAN HELP |
|---|--------|--|
| Site Credit 7 - Reduction of Heat Islands | 1 | Any of our concrete poles in a light finish |
| Materials Credit 1.3 - Building Re-use | 1 | All our concrete poles are completely re-usable & convenient with a direct buried pole |
| Materials Credit 2 - Construction Waste | 2 | All our concrete poles are 100% recyclable |
| Materials Credit 4.1,4.2 - Recycled Content | 2 | StressCrete concrete poles are made with silica fume, a recycled material |
| Materials and Resources Credit 5 - Local / Regional Materials | 2 | Four manufacturing facilities across North America |
| Sustainable Site Credit 8.8 - Exterior Lighting | 1 | Full Cutoff Lighting Fixtures such as the K901 or K800 series |
| Innovation and Design Process | 1-4 | Lifetime warranty, maintenance free, environmentally friendly |