

# Quazite<sup>®</sup>

Solutions for Safe Transportation Infrastructure



# Precast Polymer Concrete Products for Safe Transportation Infrastructure

Since 1971, QUAZITE® precast polymer concrete products have been used by utilities and contractors for durable, cost-effective applications. QUAZITE® offers a full line of products for safe transportation infrastructure applications, including handholes, junction boxes, median barrier enclosures, traffic signal cabinet bases and work pads.

QUAZITE® manufacturing/distribution centers are in Lenoir City, Tennessee and Corcoran, CA and Juarez, MX providing nationwide service and prompt delivery.



QUAZITE® median barrier enclosures (configuration shown matches the Texas wall design) allow for proper conduit fitting and permit slip forming machines to pass directly over the enclosure without stopping.



QUAZITE® enclosures can be imbedded in median barriers to serve as signal and lighting junction boxes.

QUAZITE® traffic signal cabinet bases can be installed in less than one hour using a two-person crew.



## Demand Better Performance

Cracked concrete enclosures are not an acceptable part of a traffic control system. Neither are crumbling concrete traffic signal cabinet bases, rusted out median barrier enclosures or plastic covers that no longer fit on their enclosures because of sidewall deflection. Poor product performance should never be acceptable, especially when there is a better alternative.

QUAZITE® precast polymer concrete underground handhole enclosures, median barrier enclosures and traffic signal cabinet bases are the superior choice over products made from traditional materials like concrete, plastic and metal. QUAZITE® products provide better protection of expensive equipment and vital lighting, traffic control and intelligent highway systems because they are:

- **Lightweight** — 1/10 to 1/3 the weight of concrete
- **High Strength** — compressive, flexural and tensile strengths three to five times higher than traditional concrete
- **Less Expensive to Install** — easy to handle, no special equipment required
- **Stable Under Freeze/Thaw Conditions**
- **Impact Resistant** — tested per ASTM D-2444
- **Low in Water Absorption** — less than 1% per ASTM D-570
- **Corrosion Resistant** — resistant to alkalines, acids, weathering and other forms of deterioration
- **Cost Effective** — outperforms conventional materials for longer service and lower life cycle costs
- **Nonflammable** — will not support combustion
- **Nonconductive** — no grounding required for the box or cover

Consider the performance issues on the facing page and then decide for yourself whether QUAZITE® products offer not only better overall performance, but better value and safety as well.

### What Is Polymer Concrete?

Polymer concrete is made from selectively-graded aggregates in combination with a polymer resin system. When combined through a process of mixing, molding and curing, an extremely powerful cross-linked bond is formed. Precast polymer concrete is reinforced with fiberglass for exceptional strength and durability.

# The Problem With Traditional Materials

Precast Concrete	Poured-in-Place Concrete	Plastic and Fiberglass
<ul style="list-style-type: none"> <li>• Brittle and easily damaged by impacts.</li> <li>• Porous and can absorb significant amounts of water. In freezing temperatures, the water turns to ice and breaks the concrete apart.</li> <li>• Sidewalls and covers of precast concrete enclosures must be thick to provide enough strength. Thickness increases weight, which makes enclosures more difficult to handle and install. Depending on size, special equipment may be needed for the installation.</li> <li>• Deteriorates when exposed to inorganic acids, strong alkalines, salt, equipment lubricants and other corrosive chemicals found on or near roadways.</li> </ul>	<ul style="list-style-type: none"> <li>• Poured-in-place concrete shares the same drawbacks as precast concrete.</li> <li>• Requires significant planning and coordination of crews for installation. Forms must also be constructed and then discarded.</li> <li>• Can take traffic signal cabinet bases as long as two days to set up before the cabinet can be installed.</li> <li>• Traffic signal cabinet bases absorb the energy in the event of an accident and cause much more damage than break-away bases.</li> </ul>	<ul style="list-style-type: none"> <li>• Plastic and fiberglass enclosures and cabinet bases do not have enough strength and durability to ensure safe, long-term performance.</li> <li>• Easily damaged by lawn care equipment, which can lead to exposure of dangerous electrical wires or delicate system components.</li> <li>• Affected by temperature extremes. Plastic can become soft in high temperatures and brittle in cold temperatures.</li> <li>• Both are subject to UV degradation.</li> </ul>

## The QUAZITE® Solution

### Superior Performance

QUAZITE® simply outperforms concrete, plastic and fiberglass, no matter how they are compared. The excellent material properties of polymer concrete, when combined with Quazite's superior product design engineering, ensure that QUAZITE® products will last in the field with little to no maintenance for years to come.

### Cost Effectiveness

The up-front cost of precast concrete, plastic and fiberglass enclosures and traffic signal cabinet bases may be attractive at first. Factor in the long-term costs associated with failures, repairs, replacement and even litigation costs, and those materials suddenly become much more expensive to own. In the case of poured-in-place concrete, the material itself may be inexpensive, but the installation process is labor intensive and time consuming.

QUAZITE® products have a long life cycle, making them more cost effective long-term than traditional materials. QUAZITE® products are also quicker and easier to install than concrete, making QUAZITE® an even more cost effective choice.

### Reduced Liability

Product failures lead to increased liability. Just thinking about exposed electrical wires inside a failed enclosure should make you stop and think carefully about the enclosures being installed in your jurisdiction.

The outstanding durability and performance of QUAZITE® products equates to reduced liability. In fact, QUAZITE® enclosures have been designed to meet or exceed the ANSI/SCTE 77 2007 "Specification for Underground Enclosure Performance" and most enclosures sized 30" x 48" and smaller are UL Listed to meet the standard.

*Broken concrete, warped plastic and cracked fiberglass enclosures are a costly and potentially dangerous problem for many end-users.*



## The Choice is Obvious



**QUAZITE®**



**Precast Concrete**

**Inside dimensions:** 24" x 36" x 42"  
**Weight:** 265 lbs.  
**Excavation size:** 33.8 cu. ft.  
**Compression strength:** 9,000 - 11,000 psi  
**Tensile strength:** 600 - 700 psi  
**Flexural strength:** 800 - 1700 psi  
**Installation:** Backhoe

**Inside dimensions:** 24" x 36" x 42"  
**Weight:** 3,600 lbs.  
**Excavation size:** 63 cu. ft.  
**Compression strength:** 2,000 - 4,000 psi  
**Tensile strength:** 200 - 400 psi  
**Flexural strength:** 400 - 800 psi  
**Installation:** Boom truck or secondary handling equipment

# QUAZITE® Solutions for Safe Transportation Infrastructure

## Enclosures

QUAZITE® enclosures are for use as splice/pull boxes, junction boxes and equipment enclosures. Enclosures meet or exceed the ANSI/SCTE 77 2007 "Specification for Underground Enclosure Performance" and most enclosures sized 30" x 48" and smaller are UL Listed to meet the standard.



- Available in a wide variety of sizes and styles
- Select from standard, heavy duty, or extra heavy duty covers
- No grounding required
- Skid-resistant covers
- Grade adjustable extensions available for some enclosures

## Median Barrier Enclosures

QUAZITE® median barrier enclosures are easier to install and more corrosion resistant than cast iron enclosures. Their unique angled design matches the barrier face and allows for proper conduit fitting. The design also allows slip forming machines to pass directly over the box without stopping, saving both time and money.

## Traffic Signal Bases

Quazite offers a variety of QUAZITE® precast polymer concrete traffic signal bases that work with every NEMA and 170E cabinet manufactured today. Throat sizes and insert locations can be tailored to meet your requirements.

- Easy, same day installation - no forming, pouring or waiting for concrete to dry
- Lightweight - easily handled by a two-person crew
- Breakaway base - results in less damage and injury in the event of an accident
- Relocatable



Many Departments of Transportation choose QUAZITE® traffic signal cabinet bases when they have projects requiring new and retrofit installations of traffic control cabinets. QUAZITE® traffic signal bases are less expensive than concrete to install, can be quickly installed by one or two employees, can be relocated, and can reduce potential injury and/or liability if struck by a vehicle.

In this application, the DOT had previously poured concrete in place at an approximate cost of \$1,000 for each traffic signal foundation. The installation using concrete took up to a week or more depending on weather and involved scheduling around work crews. The cost of the QUAZITE® base was \$500 (1/2 the cost of the alternative method) and installation time was reduced to one-half day.

QUAZITE® traffic signal cabinet bases further appeal to DOTs because pouring concrete for retrofit applications in urban areas can often be very difficult. QUAZITE® bases are the perfect solution to the problem because they can be easily installed over existing conduit runs and old bases and can be easily bolted to the sidewalk. The need to block traffic during retrofit installations is therefore dramatically reduced.

The potential liability of a massive poured in place foundation in a traffic right of way area is also a major concern. QUAZITE® bases weigh only a fraction of what concrete bases weigh and will cause less damage to vehicle and driver in the event of an accident.

## QUAZITE®

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