Many myths exist regarding pole restoration. Some originated from misinformed perceptions, some from past practices that no longer reflect today’s design or installation processes, and others are simply misinterpretations or misunderstandings of key concepts.

11 Common Pole Restoration Myths

**MYTH**  Pole restoration is a “band-aid” and a temporary solution at best.

**TRUTH**  Osmose steel trusses provide decades of additional service life for deteriorated wood poles.

This myth originated by mistakenly associating steel truss restoration with pole stubbing (the use of wooden pole stubs) which was once a common practice by pole owners and was viewed as a temporary repair. Pole stubbing and Osmose truss restoration are NOT equivalent.

Pole stubbing involved the installation of a cut-off section of wood pole adjacent to an in-service pole and lashed to it by steel wire cable or other suitable fastener. It was usually performed by utility workers on an as needed basis, with little thought to engineering requirements. Pole stubs are not considered a unique repair due to variability of the materials used. In fact, sections of old poles removed from services were often used for the stubbing repair, further adding to its performance variability.

Osmose steel trusses are specifically designed and manufactured for the singular and unique purpose of restoring code-mandated strength to a deteriorated pole at groundline. They are manufactured to rigid specifications using high strength steel and are galvanized to meet the heaviest coating thickness grade specified in ASTM A-123 to ensure decades of service life.
**MYTH**  Pole restoration is an O&M expense and cannot be capitalized.

**TRUTH**  Restoration is a capital investment and has been capitalized by most Osmose restoration customers across the U.S.

Both the FERC and RUS Uniform System of Accounts reference “Reinforcing and stubbing” in their Poles, Towers and Fixtures capital account (364). Further, since steel trusses are specifically designed, engineered and manufactured to add decades of useful life to wood poles, they can be clearly differentiated from what has traditionally been referred to as “pole stubbing,” which is a temporary repair used to postpone the replacement of poles no longer meeting NESC requirements to remain in service and traditionally charged to O&M. Finally, given the documented life extension benefits of pole restoration, it meets the definition of a “betterment” or substantial addition to the pole plant which qualifies it as a capital expenditure. For all of these reasons, the majority of utilities nationally have historically treated pole restoration as a capital item.

**MYTH**  A truss on a pole does not fulfill aesthetic guidelines for a wood pole.

**TRUTH**  Trusses blend into the profile of the wood utility with great acceptability.

A steel truss has a profile similar to other equipment commonly attached to wood poles. Typical truss widths range from 6 to 10 inches and are most commonly installed with only 5 feet of the truss visible above ground. Risers and pedestals blend in with acceptability, as do Osmose trusses. Additionally, pole owners can elect to paint trusses brown to help further blend the aesthetics to the wood pole. If aesthetics remain a concern, FiberWrap™ II (a restoration product with wood-like aesthetic qualities) can be used.

**MYTH**  A trussed pole cannot be climbed by line personnel.

**TRUTH**  A trussed pole CAN safely be climbed by line personnel.

The truss covers approximately 10 inches or less of the pole circumference and only up to 5 feet above ground. If there are no other attachments to the pole at groundline, the exposed wood can easily be accessed to place gaffs. If other obstructions exist, options such as a five-foot ladder or climbing pegs/steps can be used to start the climb above the truss. Recently updated OSHA climbing requirements state “each employee in elevated locations more than four feet above the ground on poles, towers, or similar structures shall use a personal fall arrest system” (1910.269(g)(2)(iv)(C)(2)). Since trusses are typically only five feet above ground, climbers can use, if needed, a small ladder and tie in with a fall arrest system above the installed truss while still keeping their feet below the four-foot threshold.

**MYTH**  Poles in concrete cannot be restored.

**TRUTH**  Poles in concrete CAN and SHOULD be restored.

Not only is pole restoration in concrete possible, it is a wise practice. Poles set in concrete are more difficult to accurately inspect because the concrete restricts a full excavation inspection. An Osmose restoration will restore a decayed pole in concrete in excess of its code mandated strength, regardless of the pole’s condition below ground.

**MYTH**  Poles with wood-borer damage or termite damage cannot be restored.

**TRUTH**  These poles CAN be restored if they meet minimum sound wood criteria for restoration.

Although wood borers can cause significant damage to wood utility poles, in many cases these poles can be restored provided the pole meets the required minimum sound wood criteria for restoration and can be effectively treated with wood preservatives. Wood borer exit holes are only a signal to check the pole more thoroughly for internal damage and decay.

Termite damage can also typically be restored provided the pole meets the required minimum sound wood criteria and can be effectively treated. Since many termites require moisture, it is typical for damage to remain in or in close proximity to the groundline section of the pole, where the restoration truss is installed and insecticides can be easily administered.
**MYTH**  Poles with internal decay above the top band cannot be restored.  
**TRUTH**  They CAN be restored if it meets minimum sound wood criteria at the installation height.  

Osmose’s recommended restoration specification is not constrained by if decay is present, but rather, how much sound wood is found at the top of the truss. Internal decay extending above the truss is acceptable if sound wood requirements are met. The Osmose recommendation is to apply wood preservatives to every restored pole at the time of installation. A liquid internal treatment is recommended for internal decay or voids, and a fumigant is recommended for the solid wood above the decay or voids to arrest decay from progressing until the next treatment cycle.

**MYTH**  Pole changes outs, in lieu of restoration, are a great way to provide linemen consistent work.  
**TRUTH**  When restoration is used where possible, and pole change outs are done when necessary, linemen are still provided consistent work as the demand on an aging infrastructure increases.  

As the utility infrastructure ages, most utility companies are finding a growing number of poles needing restoration or replacement. While common pole change outs can fill linemen’s days, most utility companies are finding it hard keeping up with the change-out demand. Restoration is able to bring a deteriorated pole back into NESC compliance, and reduce backlog of non-compliant poles, allowing utility linemen to focus on other critical system improvement activities.

**MYTH**  It’s cheaper to replace smaller poles (20ft-35ft long) than restore them.  
**TRUTH**  Regardless of pole size, a restoration solution is available that saves money over replacement.  

Poles of all sizes, including smaller circumference poles can be restored. Osmose has an assortment of trusses to fit a variety of pole sizes. Currently the smallest steel truss is a 5100 X 10’ that will fit a pole with a minimum circumference of 18” (that’s as small as a 20ft Class 9 pole).  

Many pole owners assume small poles can be replaced for prices comparable to restoration. This simply is not the case. When all costs associated with replacement are taken into account, restoration is consistently the lower cost alternative. Small poles should be restored when possible to save money and improve system reliability without the hassle of change-outs and service interruptions.

**MYTH**  Once a pole is restored, it does not need to be inspected or treated anymore.  
**TRUTH**  To achieve the longest possible life extension on a restored pole, Osmose recommends inspection and treatment on a recommended standard cycle.  

Restored poles should remain on the same inspection cycle with the rest of the owner’s pole plant. During a follow-up inspection, restored poles should be evaluated to the minimum restorable criteria to ensure they can remain in service until the next inspection cycle. It is also recommended that remedial wood preservatives be applied to the pole at the time of truss installation, as well as at the time of all future inspection/treatment cycles. Pole owners should question any service provider or truss manufacturer who claims that restored poles do not need to be remedially treated or inspected during future inspection cycles.

**MYTH**  Poles with mechanical damage or fire damage cannot be restored.  
**TRUTH**  Many poles with damage in the groundline zone CAN be restored.  

The location of the damage determines how the repair should be executed. Extra banding or longer truss lengths may be required for these repair solutions, depending on the severity and location of the damage.

**MYTH**  Poles with obstructions attached cannot be restored.  
**TRUTH**  Poles with obstructions CAN be restored safely and effectively.  

Common obstructions include power and communication risers, pedestals, roots, fences, etc. The obstruction may have to be partially removed (and later reinstalled) to allow room for the driving of the steel and installation of banding. Osmose pole restoration crews are specifically trained on how to safely install around all types of obstructions on and around the pole.
Pole Restoration vs. Replacement

Reliable long-term solutions for restoring code-mandated strength at a fraction of the cost of replacement

The NESC states that wood structures should be replaced or rehabilitated when deterioration reduces the structure strength to two-thirds of that required when installed. When strength drops below the two-thirds threshold, pole owners are faced with two options for bringing the pole back into compliance – Restore or Replace.

<table>
<thead>
<tr>
<th>Restoration (trussed pole)</th>
<th>Replacement (new pole)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$</td>
</tr>
<tr>
<td>Can be funded as CAPEX</td>
<td>✓</td>
</tr>
<tr>
<td>Provides code-mandated strength</td>
<td>✓</td>
</tr>
<tr>
<td>Timely resolution of a liability</td>
<td>✓</td>
</tr>
<tr>
<td>Quick installation time</td>
<td>✓</td>
</tr>
<tr>
<td>Requires no interruption of service</td>
<td>✓</td>
</tr>
<tr>
<td>No construction admin or make-ready</td>
<td>✓</td>
</tr>
<tr>
<td>Requires no coordination with joint users</td>
<td>✓</td>
</tr>
<tr>
<td>No double wood to remove</td>
<td>✓</td>
</tr>
<tr>
<td>Environmentally preferable (no new pole required)</td>
<td>✓</td>
</tr>
</tbody>
</table>

Osmose - 50 Years of Reliable Restoration

Osmose trusses are designed, engineered, and tested for safety and reliability - with strict specifications for materials, size, and shape to optimize performance and longevity, ensuring that each truss provides a long-term solution, NOT a short-term deferral.

As a turnkey service provider, Osmose offers an end-to-end solution for pole owners that begins with a thorough inspection and treatment program to identify restoration candidates, followed by the safe and reliable installation of an Osmose truss that restores the pole to code-mandated strength.

As both the product designer and the service provider, we take full responsibility for ensuring poles are reinforced properly and that owners receive the highest possible return on their restoration investment.

Each year, Osmose technicians evaluate millions of poles and successfully restore tens of thousands of those poles. In fact, we’ve been doing that since 1965, with many of those trussed poles still in service 50 years later!

For more information on restoration, contact your local Osmose representative or:

CALL 716.319.3423 | EMAIL poleinfo@osmose.com

© 2016 Osmose Utilities Services, Inc.