



Project of Note

The Newest Tourist Attraction on the Central California Coast



Over 80 pressure treated timber piles support the promenade.

What is 330 feet long, varies 12 to 18 feet in width, and is made up of over 99,000 board feet of treated lumber and piling? The Pismo Beach Promenade.

The new boardwalk was designed to connect a shopping plaza on an existing pier with a concrete walkway to the south. Although the structure is not influenced by tidal water except in a worst-case scenario of severe beach erosion, it still required preservation and protection from the elements. When considering treatments, the contractor had several alternatives but chose ACZA for its proven performance and availability. The piles were treated according to AWP standards to 2.5 pcf; substructure, decking and railing to 0.40 pcf. Of course, all materials carried the WWPI CheckMark logo. (The CheckMark Identification Program allows for easy identification for material that had been quality inspected by an ALSC accredited agency).

In addition to being a popular, public walkway, the project was awarded the "1999 Outstanding Engineering Achievement Award" by the San Luis Obispo Branch of the American Society of Civil Engineers. The local civic leaders are so enthusiastic with the end result, they propose extending the project south to Grover Beach.

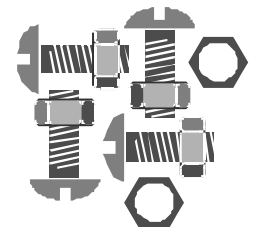
Technical Notes

Treated Wood, Fasteners, Corrosion and the UBC

Under typical conditions, the corrosion of fasteners and hardware in projects using wood treated with waterborne preservatives is affected more by atmospheric moisture than by the wood preservatives. Unprotected steel nails, exposed to the weather, will corrode regardless of what type of wood they may contact. For example, corroding nails on an untreated deck may leave unsightly rust streaks on the lumber.

When the relative humidity is below 85% (and consequently the moisture content of wood is less than 17%), the corrosiveness of the wood is negligible, whether the wood is treated or not.

As the moisture content of wood



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increases, the corrosion rate of metals in contact with the wood can become significant.

For common applications and where the wood was dried after treatment and will not be exposed to high moistures during use, the solution is simple and readily available – use hot-dipped, galvanized hardware (with the highest zinc content available). Hot-dipped galvanized fasteners have been recommended and successfully used for years in above ground residential applications such as decks and fencing.

At very high moisture and/or preservative retention levels, treated wood may be more corrosive to metal fasteners than untreated wood. In severe conditions, where the moisture content of the wood continually exceeds 22%, stainless steel, copper, silicon bronze, Monel, or corrosion-resistant alloys are recommended.

Other special circumstances, such as the presence of industrial process fumes or salt spray, may require surface coatings to protect exposed metal from the environment.

Contact the Preservative or Connector Manufacturer for Advice

Because the chemicals used in wood preservatives may react differently with various types of metals, WWPI suggests contacting the preservative manufacturer for their specific recommendations regarding fasteners.

You may also want to contact representatives in the connector industry for their advice on your particular project. Simpson Strong-Tie Company's website is www.strongtie.com, and USP Lumber Connectors' website is www.uspconnectors.com.



What Does the Uniform Building Code Require?

There has been some confusion. The 1997 UBC, Chapter 23 Wood, Section 2304.3 Timber Connectors and Fasteners states: *“Fasteners for pressure-preservative treated wood shall be of hot-dipped zinc coated galvanized, stainless steel, silicon bronze or copper.”*

The prior, 1994 UBC Edition, Section 2311.1 carried an “exception” which read: *“When approved, fasteners used in contact with preservative-treated wood products when not below grade or exposed to weather.”* The exception is applicable to the typical installation of foundation holddown bolts - anchor bolts, plate washers, straps, etc.

So what happened to the exception in the 1997 UBC? In a letter dated May 31, 2001, Paul D. Armstrong, Technical Services Manager for ICBO explains, “during the code change process, somehow the exception was not included in the 1997 Edition when the balance of the text from that section was relocated to Section 2304.3.” In discussions with those involved, ICBO determined the elimination of the exception was not intentional. Armstrong’s letter continues, “Therefore, we (ICBO) will issue an errata due to this being an inadvertent omission.” It will be as follows:

Section 2304.3. Add the following exception following the third paragraph:

“Exception: When approved, fasteners used in contact with preservative-treated wood products when not below grade or exposed to weather.”

Until the errata is issued, as a precaution, WWPI encourages the building industry to check with their local building departments for an interpretation to avoid unnecessary problems and delays. In the meantime, ICBO informed WWPI that the errata will also be published on ICBO’s website at www.icbo.org.