

Lady Bird Lake Hiking Trail Restrooms

Austin, Texas, USA — Miró Rivera Architects
COR-TEN steel

DESIGN INTENTION

This restroom structure is the first building in thirty years to be added to the Lady Bird Lake Hike and Bike Trail, a scenic path that runs along ten miles of the Colorado River and provides an escape from nearby Austin. The architects were charged to create a dynamic sculpture that complemented the active trail and the beauty of the surrounding landscape. The design achieves this by creating a unique sculptural landmark from the banal nature of public restrooms. It required several considerations, in particular that the new restrooms require minimal maintenance, and be universally accessible.

MATERIALITY

A single material, COR-TEN weathering steel, was used for the structure as well as the cladding, roof, and one door. Because of COR-TEN's natural weathering process, it will not lose its structural integrity over time or require any coating. For the design's sculptural element, freestanding upright plates of COR-TEN were staggered to form the edge of the entry path and coil around to create the restroom enclosure. Steel plates of varying heights and widths are used to give a naturalistic, varied appearance. Where privacy is required, the plates are arranged to block any views, still allowing light and air to pass between them.

Plumbing fixtures, the structure's only services, were chosen for their durability. The polished stainless-steel toilet and sink create a stunning contrast with the rough steel cladding. The exterior drinking fountain and rinse shower are encased with galvanized steel.

Integration with the context was accomplished through the building's organic form and the natural mineral tones of the materials. Over time the steel will form a speckled pattern as it oxidizes to a reddish-brown hue. Concrete flooring inside and an orange-hued crushed granite exterior will take on the steel's rust-staining runoff that will inevitably flow into the space and over surfaces. The designers selected and utilized the materials' inherent qualities to be harnessed and exploited into the overall design, resulting in a unique and compelling project.

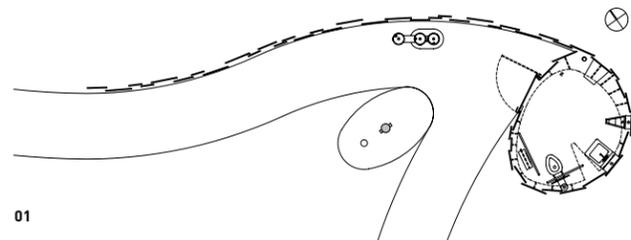
TECHNICAL

The restroom facility takes advantage of the many qualities of alloy steel that allow it to be used in its raw, planar state. Weathering steel—ASTM606-Type 4, in this case—is mild steel with at least 0.2 percent copper, and up to 0.55 percent total alloy metals including copper, chromium, and nickel. This combination makes it stronger than mild structural steel and corrosion resistant because of the dense, semi-protective layer of rust that forms when it is exposed to the elements. And while Type 4 weathering steel can be left bare, the project has very few visible welded COR-TEN connections because the welded joints can often weather unevenly compared to the panel faces.

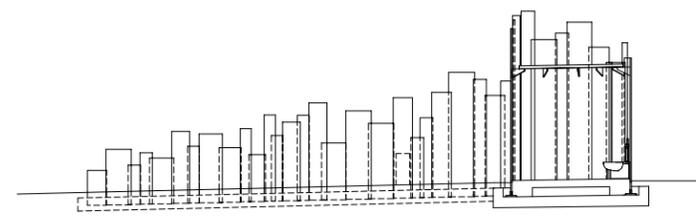
Because of their high strength, the forty-nine plates were placed as freestanding elements, with support only at their footing. The plates are 0.75" (19 mm) thick and range in widths of 1–2' (305–610 mm) and heights of 2–13' (610–3,960 mm). The roof of the enclosure is formed by a single plate; it is held in place by five brackets welded to the vertical plates, all of the same material and thickness as the plates they join.

The foundation consists of a continuous shallow concrete footing. Steel angles were welded to the bottom of each plate, coated with a cold galvanizing compound, and bolted into the concrete with steel embed anchor bolts. Although the depth of the foundation is less than 2' (610 mm), it supports vertical cantilevers of up to 13' (3,960 mm) high. The footings' continuous winding shape below the discontinuous steel plates is exceptionally stable.

The restroom's stout door was also fabricated from 0.75" (19 mm) thick steel plates, and weighs approximately 650 lbs. (295 kg). A CNC mill was used to carve a commemorative inscription in a COR-TEN panel alongside the path, with no need for superficial finishes to make it long lasting.



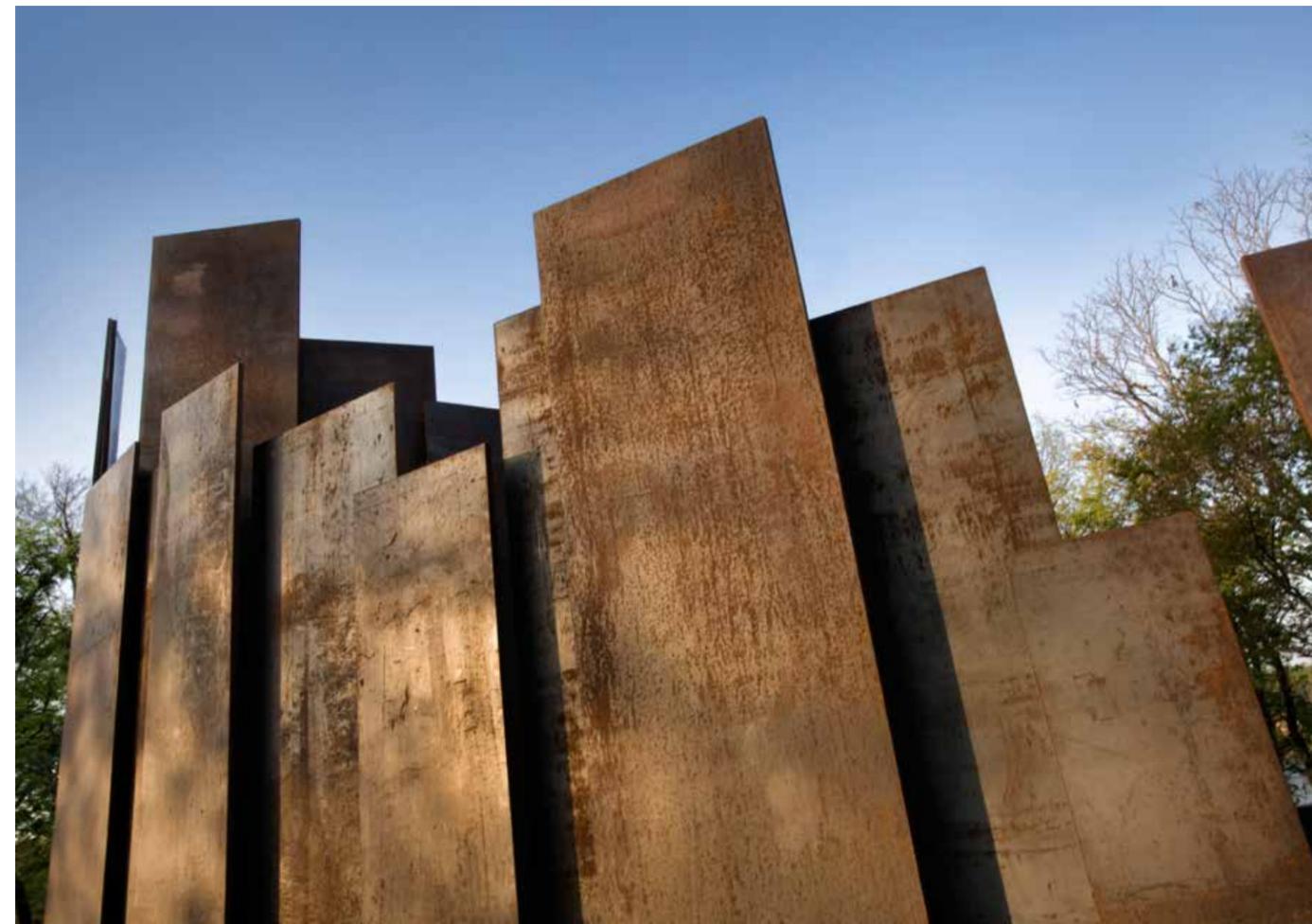
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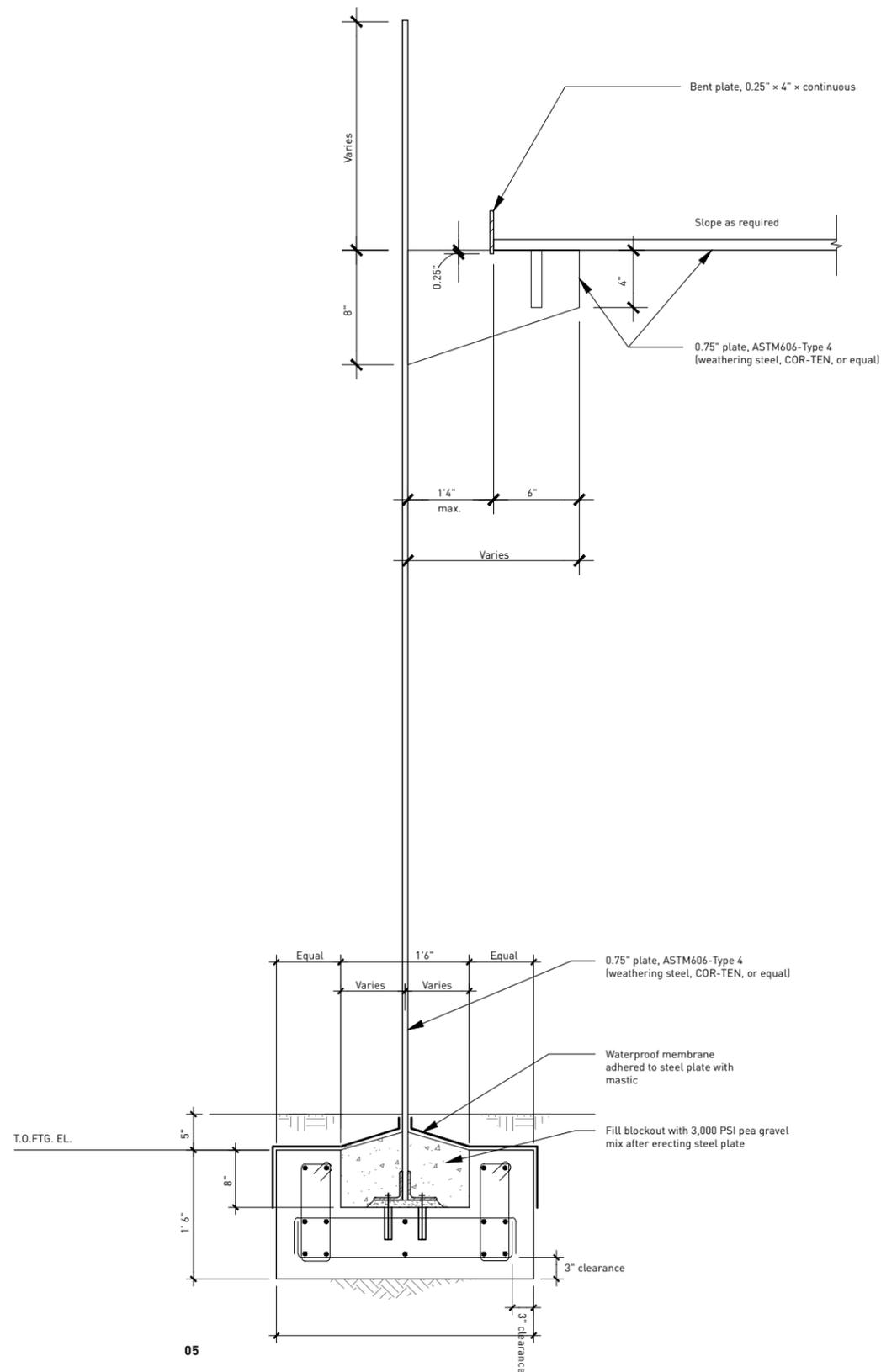


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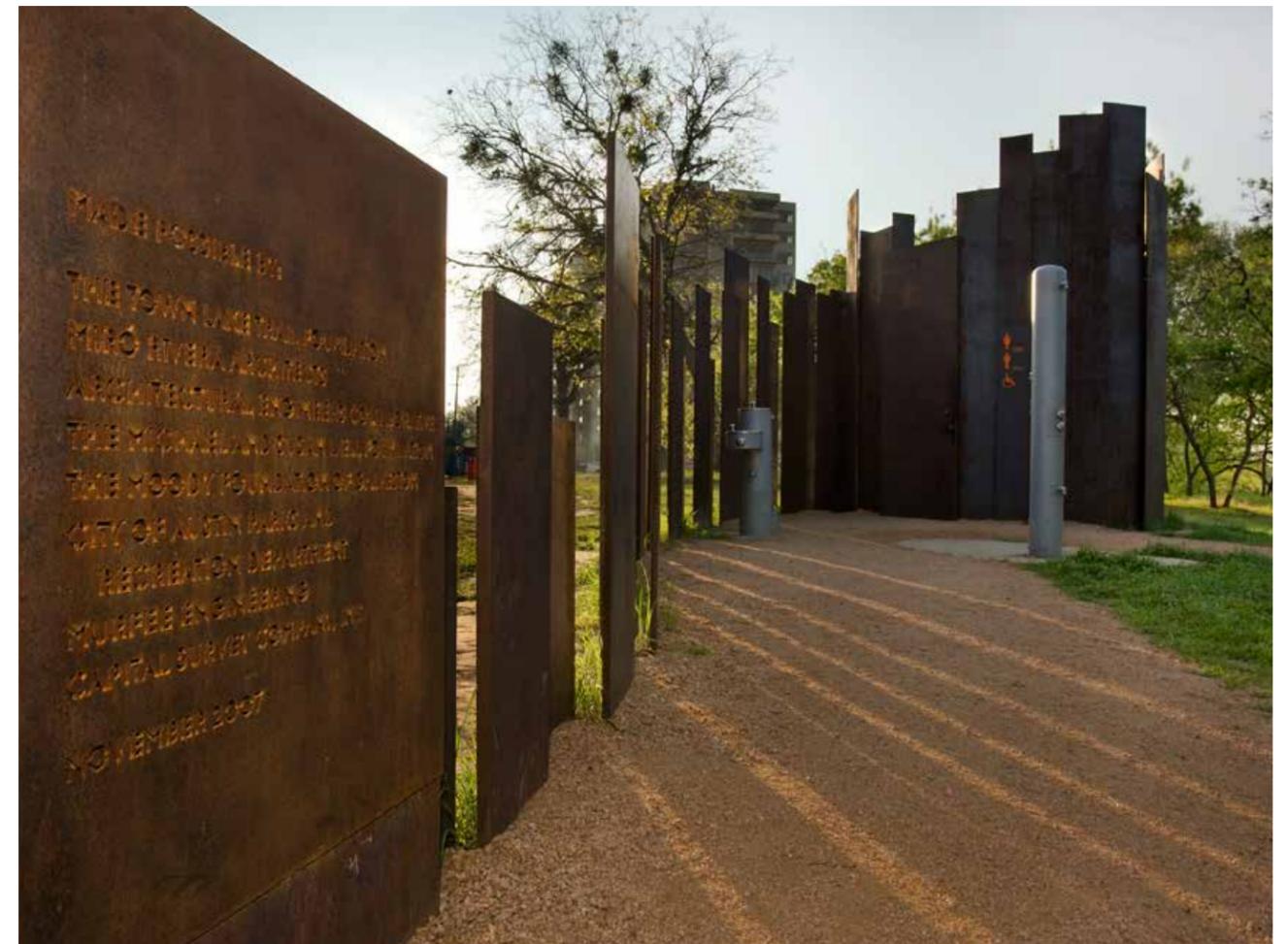
- 01 Plan
- 02 Section through restroom with elevation beyond to COR-TEN steel plates
- 03 COR-TEN steel plates frame path toward restroom from hiking trail
- 04 Weathering steel wall plates



- 05 Section details where vertical steel plates connect to foundation and COR-TEN roof of restroom
- 06 Restroom interior
- 07 Weathering steel plates along the path toward rinse shower, drinking fountain, and restroom



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