Alpine Citadel structural steel screen walls and enclosures

Architectural steel screening for trash, recycling, tire storage and equipment. Structural steel throughout, with no aluminum components. Built to any size, for less than a comparable CMU enclosure.

ASCE 7-22
engineered for each site's wind, exposure and risk category

50 states
sealed structural calculations available

< 1 week
typical engineering turnaround*

70+
locations installed, including 60+ for a multi-state tire & automotive service brand

01 SYSTEM

Alpine Citadel combines structural steel components, ASTM A36 or equivalent, in a coordinated enclosure kit: 4 in square steel posts on hot-dip galvanized ¾ in base plates, captive steel slats that slide into welded channels, and heavy-duty gates on 8 in round steel gate posts. Each enclosure ships as one kit, tagged by bay, and installs on a prepared slab in typically one to two days.

- **100% opaque** solid-slat face meets opaque-screening requirements.
- **Captive slats.** Slats slide into the post channels and stack tight; middle slats are unfastened, and only the top and bottom slat of each bay are bolted through the channels.
- **Galvanized steel throughout**, then powder coated to Qualicoat standards, superdurable polyester with UV protection. Any RAL color.
- **Noncombustible** steel construction.
- **Local approval support.** Where a code names masonry, Alpine provides an alternate-materials submittal with sealed calculations and a building-matched finish. Confirm acceptance with the approving authority.

02 APPLICATIONS

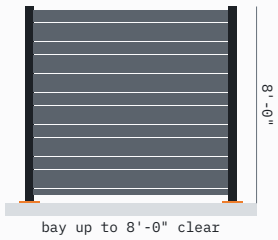
Enclosures

- Trash, recycling & compactor
- Tire and dead-tire storage
- Equipment yards
- Covered (steel-roofed)

Screen walls

- Mechanical & HVAC
- Generator & transformer
- Utility, data center & BESS
- Outdoor storage & perimeter screening

03 TYPICAL BAY



8 ft height, 29 slat courses, bottom slat 3 in above slab. Illustrative; every project is engineered.

04 STANDARD AND CUSTOM CONFIGURATIONS

OPTION	STANDARD	CUSTOM — ENGINEERED PER PROJECT
Height	6 ft, 7 ft, 8 ft	Built from 5 ft to 10 ft; other heights by engineering
Layout	Solved to your drawing; overall dimensions met within ±1 in	Any angle, L-shapes, notches, interior partitions, multi-bay and double enclosures
Bay width	15 in to 96 in clear, post to post	Non-standard widths
Infill	Solid steel tube slats, 0.79 × 3.15 in (20 × 80 mm), fully opaque	Custom slat spacing for airflow or visibility; perforated metal panels
Posts	4 in square structural steel tube; 8 in round gate posts; capped	Custom post profiles and sizes
Mounting	Base plates on concrete slab: line 10½ × 8 × ¾ in, corner 10½ × 10½ × ¾ in, gate 18½ × 13 × ¾ in	Embedded posts
Anchors	¾ in: four per line and corner plate, eight per gate plate	Adhesive or mechanical anchor type selected and engineered per project
Gates	12 ft or 16 ft clear, double leaf, swing out	20 ft clear, 6 ft single leaf, corner-hinged and multiple gates
Hardware	Lockable latch box, cane bolts with slab sleeves, hold-open cane bolts	Pedestrian gates
Finish	Galvanized steel, powder coated to Qualicoat standards, superdurable polyester with UV protection	Any RAL color; the entire structure can be hot-dip galvanized for coastal or corrosive sites
Options	—	Bollards; covered (steel-roofed) enclosures

05 ENGINEERING

- Designed to **ASCE 7-22**; steel per AISC 360; anchorage per ACI 318 Chapter 17.
- Engineered for each site's wind speed, exposure category and risk category, with its height, anchor type and foundation. Alpine Citadel has no single wind rating.
- For higher wind loads, engineering may adjust post spacing, plates, anchors or embedded posts.
- **Sealed calculations in all 50 states.** Engineering for the example configurations included; custom engineering quoted separately. *Typical turnaround: under one week from complete project inputs.
- Slab (typical configuration): f′c ≥ 4,000 psi, thickened to 12 in at posts, 30 × 30 × 12 in at gate posts. The project engineer designs the slab; Alpine provides the base-plate and slab requirements.

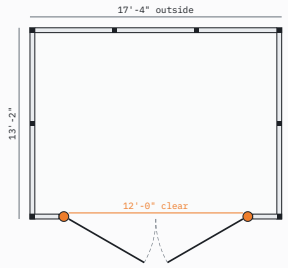
06 FINISH AND CORROSION PROTECTION

- Hot-dip galvanized base plates, post sleeves and round gate posts.
- Electro-galvanized square posts, channels and slats: no bare steel.
- Powder coated to Qualicoat standards, superdurable polyester with UV protection; any RAL color.
- Alpine offers different types of galvanizing and can hot-dip galvanize the entire structure where the site or specification calls for it.

Specifying Alpine Citadel

- CSI 3-part guide spec: Section 32 31 19, cross-referenced to 32 35 00 (Screening Devices).
- Basis of design: "Alpine Citadel, Alpine Enclosure Systems," with site wind speed, exposure and risk category.
- Downloads: CAD details, guide spec, example configuration sheets, engineering approach, install guide; Revit on request.
- Submittals: layout and bay schedule, product data, sealed calculations, finish specification.

07 EXAMPLE ENCLOSURE CONFIGURATIONS (8 ft shown; 6 and 7 ft use the same plan)

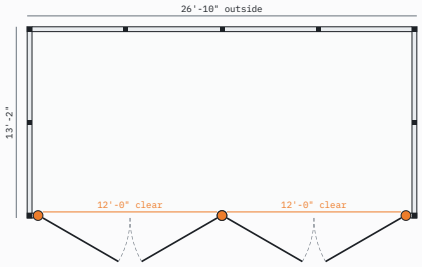


Single · nominal 12 × 16 ft · interior 16'-8" × 12'-2" · outside 17'-4" × 13'-2" · one 12 ft clear gate · container + carts

Any size, built to your site

Every Alpine Citadel enclosure is laid out and engineered to the drawing. We publish two example sizes and their typical installed prices so you can compare.

Costs less than CMU. A 12 × 16 ft single typically installs for $15,000–20,000 excluding slab; 2025 public bids priced complete single enclosures at $20,000–30,000, one a confirmed CMU enclosure at $27,000.



Double · nominal 24 × 12 ft · interior 26'-2" × 12'-2" · outside 26'-10" × 13'-2" · two 12 ft clear gates on a shared center post · 2 containers. Where a jurisdiction prohibits center posts, a wide single opening is designed per project.

08 VERSUS CMU BLOCK WALL

	ALPINE CITADEL	CMU ENCLOSURE
On site	Most in one day on a prepared slab	Weeks: footing, block, grout, cap, cure
Trades	One install crew	Concrete, mason, gate fabricator
Footing	Base plates on the slab; no continuous wall footing	Continuous wall footing
Gates	Engineered steel gates on 8 in posts, included	Separate steel gates, $4,000–8,000 a pair
Installed cost	Single $15,000–20,000 · Double $21,000–30,000*	Complete single: $20,000–30,000 (2025 public bids)

*Typical installed cost for an 8 ft Alpine Citadel enclosure, excluding slab and site work, is $15,000–20,000 for a single and $21,000–30,000 for a double, including engineering for the configurations shown. Program pricing for multi-site rollouts is available on request. Installed covers the kit, anchors, finish, delivery and installation; slab, bollards and permits are excluded. Ranges are typical, not quotations.

09 DELIVERY

- One kit per enclosure; posts, gates and slats tagged by bay.
- Hardware packed with 10% extra; spare slats included.
- Packing list and layout drawing in every kit; installation guide online.
- Installed by Alpine, or supply-only for your contractor, with the installation guide and phone support.

Start a project

Send a site plan, prototype detail or sketch. We return a layout, bay schedule and engineering package typically in under one week after complete project inputs.

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CMU sources: wall $18–24/SF installed national (Terrapin Construction Group, May 2026, citing RSMeans); complete-enclosure bids: Utica Community Schools MI (Apr 2025), Gardnerville NV (Jun 2025).

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