Alpine Citadel
guide specification

CSI three-part Section 32 31 19 Decorative Metal Fences and Gates, cross-referenced to 32 35 00 Screening Devices, for structural steel slat enclosures, screen walls and gates. An editable Word version is available for project manuals at alpineenclosures.com.

01 USING THIS GUIDE SPECIFICATION

- Written in CSI three-part format following MasterFormat, SectionFormat and PageFormat conventions.
- Filed as Section 32 31 19 Decorative Metal Fences and Gates. For equipment screen walls the same text may be renumbered 32 35 00 Screening Devices; see the first Specifier Note.
- **[Specifier Note: ...]** paragraphs explain choices. Delete them before issue.
- Options appear in **[brackets]**: keep one, delete the rest. **[____]** marks project data to insert.
- Structural design is delegated: the manufacturer's professional engineer, licensed in the project state, designs the system for the site and seals the calculations.
- Coordinate the slab in Division 03. The project engineer designs the slab; the manufacturer provides the base-plate and slab requirements.

02 SPECIFIER SELECTIONS

CHOICE	OPTIONS IN THIS SECTION
Height	8 ft, 7 ft or 6 ft standard; 5 ft to 10 ft custom
Infill	Solid slats (100% opaque) · spaced slats · perforated metal panels
Mounting	Base-plated on concrete slab (standard) · embedded posts
Gates	12 ft or 16 ft clear, double leaf (standard) · 20 ft clear, 6 ft single leaf, corner-hinged and multiple gates (custom)
Color	Any RAL color, or matched to the building
Galvanizing	Standard system · entire structure hot-dip galvanized
Options	Bollards · steel roof (covered enclosure) · pedestrian gates
Site wind data	Basic wind speed, exposure category, risk category (ASCE 7-22)

Basis of design: Alpine Citadel by Alpine Enclosure Systems, engineered to ASCE 7-22 for the site. Sealed calculations in all 50 states; engineering included for the example configurations; typical turnaround under one week after complete project inputs. Product data: AES-CIT-DS-01.

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SECTION 32 31 19
DECORATIVE METAL FENCES AND GATES

[Specifier Note: This guide specification covers Alpine Citadel structural steel slat enclosures, screen walls and gates by Alpine Enclosure Systems. MasterFormat has no single title for a structural steel slat screen with integral gates. Section 32 31 19 Decorative Metal Fences and Gates is recommended for site enclosures (trash and recycling, compactor, tire storage, equipment yards) and slat fencing. Where the project manual places equipment screening (mechanical, generator, transformer, utility, data center or BESS screen walls) under 32 35 00 Screening Devices, renumber and retitle this section accordingly; the content does not change. Specify each screen in one section only and cross-reference the other under Related Requirements. Slatted steel screens are not sound barriers; do not use this section for acoustic walls.**]**

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Engineered structural steel slat [enclosures] [screen walls] [fencing] with integral swing gates.
2. Square structural steel tube posts with [base plates anchored to concrete slab] [embedded foundations].
3. Captive steel slat infill [solid, fully opaque] [with custom slat spacing] [and perforated metal panel infill].
4. Round steel gate posts, gate leaves and gate hardware.
5. Galvanizing and factory powder-coat finish.
6. Delegated structural design, including anchorage to concrete.
7. [Bollards.]
8. [Steel roof for covered enclosures.]

B. Related Requirements:

1. Section 03 30 00 "Cast-in-Place Concrete" for concrete slab, thickened slab at posts and gate-post pads.
2. Section 32 35 00 "Screening Devices" for [____].
3. Section [05 50 00 "Metal Fabrications"] for [bollards and steel items not furnished under this Section].
4. Section [31 20 00 "Earth Moving"] for subgrade preparation below slab.

> **[Specifier Note:** The concrete slab is not part of this Section. The project engineer designs the slab; the manufacturer furnishes the base-plate and slab requirements (thickened slab at posts, gate-post pads, edge distances) on the shop drawings for coordination.**]**

1.2 REFERENCES

> **[Specifier Note:** Retain only standards cited in the edited Section. Use the editions adopted by the authority having jurisdiction where they differ from those listed.**]**

A. American Concrete Institute (ACI):

1. ACI 318 - Building Code Requirements for Structural Concrete; Chapter 17, Anchoring to Concrete.

B. American Institute of Steel Construction (AISC):

1. AISC 360 - Specification for Structural Steel Buildings.

C. American Society of Civil Engineers (ASCE):

1. ASCE/SEI 7-22 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures.

D. ASTM International:

1. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
2. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
3. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
4. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus (test method).
5. ASTM D3359 - Standard Test Methods for Rating Adhesion by Tape Test (test method).

E. American Welding Society (AWS):

1. AWS D1.1/D1.1M - Structural Welding Code - Steel.

F. International Code Council (ICC):

1. International Building Code (IBC), edition adopted by the authority having jurisdiction.
2. [International Fire Code (IFC), for outdoor tire storage.]

G. QUALICOAT:

1. QUALICOAT quality-label specifications for powder organic coatings, current edition.

1.3 DEFINITIONS

A. Bay: The space between two adjacent posts. Bay width is the clear dimension, post to post.

B. Delegated Design: Design of the system, including anchorage, by a professional engineer engaged by the manufacturer, to the criteria in this Section.

C. Gate Clear Opening: The clear width available for vehicles and containers with the gate leaves fully open, as scheduled on Drawings.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct at Project site. Review slab dimensions and thickened areas, anchor type and installation, gate swing and hold-open positions, container and vehicle access, and sequencing with adjacent site work.

1.5 ACTION SUBMITTALS

A. Product Data: For posts, slats, [perforated panels,] gates, gate hardware, anchors and finish system. Include the anchor manufacturer's current code evaluation report and installation instructions.

B. Shop Drawings: Signed by the manufacturer. Include:

1. Layout plan dimensioned to the Drawings, with post locations, gate locations and swing, and overall dimensions.
2. Bay schedule listing every bay by clear width, with post and base-plate type at each end.
3. Elevations showing height, slat courses [and slat spacing] [and perforated panels], gates and hardware.
4. Post, base-plate and anchor details, including anchor pattern, embedment and edge distances [and embedded foundation details].
5. Gate details: leaf construction, hinges, latch box, cane bolts and slab-sleeve locations at closed and hold-open positions.
6. Slab and base-plate requirements for coordination with the slab design.
7. [Bollard locations and details.] [Roof framing, roofing and drainage details.]

C. Delegated-Design Submittal: Structural calculations signed and sealed by the qualified professional engineer responsible for their preparation, licensed in the state where the Project is located. Include:

1. Design criteria: code edition, basic wind speed, exposure category, risk category, height and infill type.
2. Design of posts, slats, channels, gate leaves, hinges, base plates and welds to AISC 360.
3. Anchorage design to ACI 318 Chapter 17 for the selected anchor type and concrete strength.
4. Reactions at each post type for the slab design [and design of embedded post foundations].
5. [Roof framing design, including snow and wind uplift.] [Bollard design.]

> **[Specifier Note:** For the manufacturer's example configurations, the sealed site engineering package (calculations, layout and bay schedule) is included in the manufacturer's price. Non-standard engineering (custom heights, high wind, Exposure D, embedded posts, roofs, custom profiles) is quoted per project.**]**

D. Samples: Finish samples on steel in the selected color [RAL ____] [matched to the building sample furnished by the Architect].

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer and professional engineer.

B. Certificates: Manufacturer's certificate of compliance stating that materials, galvanizing and finish comply with this Section.

C. Manufacturer's Installation Instructions.

D. Sample Warranty: Manufacturer's standard warranty form.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: Finish care and touch-up, gate and hardware adjustment.

B. Record Layout: Final layout and bay schedule reflecting installed conditions.

C. Warranty: Executed manufacturer's warranty.

1.8 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm that designs, fabricates and provides delegated engineering for structural steel screen and enclosure systems of the type specified, with sealed calculations available in the state where the Project is located.

B. Professional Engineer Qualifications: Licensed in the state where the Project is located and experienced in the design of steel structures and anchorage to concrete.

C. Installer Qualifications: Acceptable to the manufacturer, installing to the manufacturer's installation instructions.

D. Welding: Shop welding procedures and welders qualified to AWS D1.1.

E. Factory Gate Test: Assemble and function-test every gate before shipping.

F. Regulatory Requirements: Comply with the IBC and local ordinances for height, opacity, gate width and permitting.

> **[Specifier Note:** IBC Section 105.2 exempts fences up to 7 ft high from a building permit; 8 ft enclosures and roofed enclosures usually need one. Alpine Citadel is accepted in the majority of jurisdictions for trash enclosures and general enclosure systems. Where a local code names masonry, the manufacturer provides an alternate-materials submittal with sealed calculations and a building-matched finish.**]**

G. [Mockup: Install one typical bay and one gate at a location selected by the Architect. Approved mockup may remain as part of the Work.]

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver one kit per enclosure, with posts, gates and slats tagged by bay, hardware packed with 10 percent extra, spare slats, a packing list and a layout drawing. [For programs, kit by site and release.]

B. Check each kit against the packing list on receipt and report shortages or damage to the manufacturer before installation.

C. Store components off the ground on level supports, covered and ventilated. Protect finished surfaces from abrasion, standing water and construction traffic.

1.10 FIELD CONDITIONS

A. Do not install anchors until the slab has reached the strength and age required by the anchor manufacturer and the delegated design, and within the anchor manufacturer's installation temperature limits.

1.11 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components that fail in materials or workmanship within the specified warranty period, under the manufacturer's standard warranty.

1. Warranty Period: [__] years from date of Substantial Completion.

B. Finish Warranty: Manufacturer's standard finish warranty covering deterioration of the factory finish as defined in the warranty, including [cracking, peeling, blistering and loss of adhesion].

1. Finish Warranty Period: [__] years from date of Substantial Completion.

> **[Specifier Note:** Warranty terms and periods are set by the manufacturer's current published warranty. Request a copy and insert the periods it states; do not insert periods from other products.**]**

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide Alpine Citadel by Alpine Enclosure Systems, a division of Alpine International Trading Co.; alpineenclosures.com.

B. [Substitutions: [Not permitted.] [Comparable products complying with every requirement of this Section, including delegated design, captive slat infill and factory-tested gates, per Section 01 25 00 "Substitution Procedures."]]

C. Source Limitations: Obtain posts, infill, gates, hardware and finish from a single manufacturer.

2.2 SYSTEM DESCRIPTION

A. System: Engineered all-steel slat screen and enclosure system of square structural steel tube posts, captive slide-in steel slats held in channels welded to the posts, round steel gate posts and swing gates. Galvanized steel throughout, factory powder coated. Noncombustible steel construction.

B. Height above Finished Slab: [8 ft] [7 ft] [6 ft] [____ ft].

> **[Specifier Note:** Standard heights are 6, 7 and 8 ft. Custom heights are built from 5 ft to 10 ft; other heights by engineering.**]**

C. Layout: As indicated on Drawings. Manufacturer solves the bay layout to the Drawings, with overall dimensions within plus or minus 1 in (25 mm) of those indicated. Angles, L-shapes, notches, interior partitions and multi-bay enclosures are designed per project.

D. Bay Width: 15 in to 96 in clear, post to post, from the manufacturer's standard set [; non-standard widths where indicated].

E. Enclosure Configuration:
   1. [As indicated on Drawings.]
   2. [Single, nominal 12 × 16 ft: interior clear 16 ft 8 in × 12 ft 2 in; outside 17 ft 4 in × 13 ft 2 in; one 12 ft clear gate.]
   3. [Double, nominal 24 × 12 ft: interior clear 26 ft 2 in × 12 ft 2 in; outside 26 ft 10 in × 13 ft 2 in; two 12 ft clear gates on a shared center post.]

[Specifier Note: The two example configurations are shown at 8 ft; any other size is laid out and engineered per project. Both at 8 ft; 6 and 7 ft use the same plan. Some jurisdictions prohibit center posts; a double enclosure with one wide opening is a custom design.**]**

F. Infill and Opacity: [Solid slats stacked tight, 100 percent opaque face complying with opaque-screening requirements.] [Spaced slats, spacing [____] in.] [Perforated metal panels.]

[Specifier Note: Spaced slats and perforated panels are chosen for airflow or visibility and are not opaque; check local screening ordinances before selecting them.**]**

2.3 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, licensed in the state where the Project is located, to design posts, infill, channels, gates, hinges, base plates, welds and anchorage [, embedded post foundations] [, roof framing] [and bollards] to the criteria below.

[Specifier Note: Design loads, exposure and the foundation type (base-plated or embedded posts) are determined per project by the delegated design. The bracketed values in this Article are placeholders for the Project, not a product rating.**]**

B. Structural Performance: Withstand the effects of loads and stresses within limits and under conditions indicated, per the IBC and ASCE/SEI 7-22.
   1. Wind Loads: ASCE/SEI 7-22, Chapters 26 and 29 (other structures, freestanding walls), for the Project site's ultimate wind speed, exposure category and risk category as indicated on the Drawings:
      a. Basic (Ultimate) Wind Speed V: [As indicated on the Drawings] [____ mph].
      b. Exposure Category: [B] [C] [D].
      c. Risk Category: [I] [II] [____], as determined by the authority having jurisdiction.
      d. Topographic Factor Kzt: As determined for the site by the delegated design engineer [____].

[Specifier Note: Look up the basic wind speed with the ASCE Hazard Tool for the site and risk category. Alpine Citadel has no single wind rating; every project is engineered for its own wind speed, exposure category, risk category, height, anchor type and foundation. Higher-wind sites are handled with closer post spacing, heavier base plates and anchors, or embedded posts. Confirm the risk category with the authority having jurisdiction. Spaced slats and perforated panels reduce wind load under the porous-wall provisions of ASCE 7; the delegated design applies any reduction for the actual infill, and solid slats are designed as a solid freestanding wall.**]**

   2. Gates: Design gate leaves, hinges and gate posts for self-weight, operating loads and wind, with leaves closed and latched and with leaves held open.
   3. Seismic: ASCE/SEI 7-22, where required by the authority having jurisdiction.
   4. [Roof: Dead load, roof live load, snow load (ground snow load [____] psf) and wind, including uplift, per ASCE/SEI 7-22.]

C. Design Standards: Steel to AISC 360. Anchorage to ACI 318 Chapter 17. Concrete compressive strength for anchorage design: [4,000 psi minimum] [____ psi].

[Specifier Note: Typical configuration slab: concrete f′c 4,000 psi minimum, thickened to 12 in at posts, 30 × 30 × 12 in at gate posts. The project engineer designs the slab from the reactions and requirements on the shop drawings.**]**

D. Serviceability: Under the serviceability wind load defined below:
   1. Slats and Infill: Remain captive in the post channels, with no permanent deformation, and with midspan deflection not exceeding [L/180] [____] of the clear bay width.
   2. Posts: Lateral deflection at top of post not exceeding [____] [as established by the delegated design engineer].
   3. Gates: Remain latched with cane bolts engaged in the closed position; after loading, leaves remain level and operate without binding.

4. Serviceability Wind Load: [10]-year mean recurrence interval, with reference to ASCE/SEI 7-22 Appendix C and its commentary, unless otherwise indicated.

[Specifier Note: Building codes set no deflection limit for freestanding screens; the limits above are serviceability criteria for the visual and functional performance of a slat screen and are the specifier's to set. Where no post limit is required, leave it to the delegated design engineer.**]**

E. Fire Performance: Noncombustible steel construction.

[Specifier Note: Slatted steel screens are not fire barriers. For BESS and similar equipment, NFPA 855 clearances apply independently of the screen.**]**

2.4 MATERIALS

A. Steel, General: New material, free of defects that impair strength, durability or appearance.

B. Structural Steel Members and Plates: ASTM A36 or equivalent, sized as required by the delegated design; mill certificates.

[Specifier Note: Posts, gate posts, slats, channels and base plates are ASTM A36 or equivalent structural steel; member sizes are stated in the project calculations (delegated design). Require mill certificates with the submittals.**]**

C. Posts: 4 in square (HSS 4 × 4) structural steel tube, wall thickness as required by the delegated design. Top capped. [Custom post profile or size: ____.]

D. Gate Posts: 8 in round structural steel tube, wall thickness as required by the delegated design. Top capped.

E. Slats: Solid steel tube slats, 0.79 × 3.15 in (20 × 80 mm), wall thickness as required by the delegated design.

F. Slat Channels: Steel channels welded to posts to receive slats, thickness as required by the delegated design.

G. [Perforated Metal Panels: Steel sheet [____] in thick, [round] hole pattern [____], [____] percent open area, framed to fit the post channels as designed by the manufacturer.]

H. Base Plates: ¾ in (19 mm) structural steel plate. Line posts 10½ × 8 in; corner posts 10½ × 10½ in; gate posts 18½ × 13 in [; or as required by the delegated design].

J. Anchors: ¾ in diameter; four per line and corner base plate, eight per gate base plate. Type selected and engineered per project: [adhesive anchors: threaded rod set in a code-listed adhesive] [code-listed mechanical anchors]. Qualified by a current code evaluation report for the concrete condition assumed in the design. Embedment and edge distance per the delegated design. Corrosion protection: [stainless steel] [hot-dip galvanized, ASTM A153].

K. Fasteners: Corrosion-resistant, typically Grade 8 and Type 316 stainless steel, compatible with the finish.

L. Post Caps: Steel, finished to match posts.

2.5 FABRICATION

A. General: Fabricate to approved shop drawings and the delegated design. Shop-assemble to the greatest extent practical. Complete shop welding before powder coating; no field welding.

B. Welding: To AWS D1.1, sizes as required by the delegated design. Remove spatter, slag and sharp edges before finishing.

C. Posts: Slat channels welded to posts; posts joined to base-plate assemblies per the manufacturer's standard details. Cap post tops.

D. Slats: Cut to length for each bay and tag by bay. Slats are captive: they slide into the post channels and stack tight, with the bottom slat 3 in above the slab. Middle slats are unfastened; only the top and bottom slat of each bay are bolted through the channels.

E. Tolerances: Overall enclosure dimensions within plus or minus 1 in (25 mm) of those indicated; bay widths as scheduled on the shop drawings.

F. Kitting: Package each enclosure as a kit, parts tagged by bay, with packing list and layout drawing.

2.6 GATES AND HARDWARE

A. Gates: Welded steel leaf frames with slat infill matching the adjacent screen, hung on round gate posts. Quantity, location and swing as indicated on Drawings.

1. Gate Type and Clear Opening: [12 ft clear, double leaf] [16 ft clear, double leaf] [20 ft clear, double leaf] [6 ft clear, single leaf] [Pedestrian gate, [____] clear].

2. Swing: [Out] [In] [As indicated]. [Corner-hinged gates where indicated.]

[Specifier Note: Standard gates are 12 ft or 16 ft clear, double leaf, swing out; 20 ft clear, 6 ft single leaf, corner-hinged and multiple gates are custom. Haulers typically require 12 ft clear per container; confirm the net clear after hardware with the hauler. IFC Section 3407.2 requires gates at least 20 ft wide for outdoor tire storage over 20,000 cubic feet.**]**

B. Hinges: Heavy-duty, sized by the delegated design for leaf weight and wind.

C. Latch: Heavy-duty lockable latch box accepting the Owner's padlock.

D. Cane Bolts: Drop rods engaging slab sleeves to hold leaves closed.

E. Hold-Open Cane Bolts: Drop rods engaging slab sleeves to hold leaves in the open position.

F. Slab Sleeves: Furnished by the manufacturer for installation in the slab at closed and hold-open positions shown on the shop drawings.

G. Factory Test: Function-test every gate before shipping.

2.7 FINISHES

A. Galvanizing:

1. Base plates, post sleeves and round gate posts: Hot-dip galvanized after fabrication to ASTM A123.
2. Square posts, channels and slats: Electro-galvanized steel. [Entire structure hot-dip galvanized after fabrication to ASTM A123.]
3. Hardware: Hot-dip galvanized to ASTM A153 [or stainless steel].

[Specifier Note: Specify hot-dip galvanizing of the entire structure by site location and exposure, for example coastal sites, de-icing salt exposure or corrosive industrial atmospheres.**]**

B. Powder Coating: After galvanizing, clean and pretreat to the powder manufacturer's requirements; then powder coated to Qualicoat standards, superdurable polyester with UV protection, cured per the powder manufacturer's instructions, at the film thickness of the manufacturer's published coating standard.

1. Color: [RAL ____] [Custom color matched to the building, per Architect's sample].
2. Test Methods: Where coating verification is required, test adhesion by ASTM D3359 and corrosion resistance by ASTM B117. Acceptance criteria per the manufacturer's published coating data.

[Specifier Note: ASTM D3359 and B117 are listed as test methods only. Do not insert ratings or exposure hours unless they appear in the manufacturer's published coating data. AAMA 2603, 2604 and 2605 are aluminum coating standards and do not apply to steel.**]**

C. Touch-Up Material: Furnish color-matched touch-up material compatible with the factory finish.

2.8 OPTIONS

[Specifier Note: Retain the options required for the Project and delete the rest. Each option is engineered per project.**]**

A. [Spaced Slats: Custom slat spacing of [____] in for airflow or visibility.]

B. [Perforated Metal Panels: In lieu of slats where indicated, as specified under Materials.]

C. [Embedded Posts: Posts embedded in concrete foundations in lieu of base plates, foundation type and dimensions per the delegated design.]

D. [Hot-Dip Galvanized Structure: Entire structure hot-dip galvanized, as specified under Finishes.]

E. [Bollards: Steel bollards at locations indicated, size and foundation per the delegated design, finished to match the enclosure.]

[Specifier Note: Bollards position containers and vehicles away from the screen. No impact or crash rating is claimed.**]**

F. [Steel Roof (Covered Enclosure): Steel roof framing and roofing as indicated, designed per Performance Requirements, with [gutters and downspouts] [drainage as indicated] and clear height of [____] ft.]

[Specifier Note: Roofed enclosures usually need a building permit. Coordinate roof drainage with site storm and sanitary requirements where the local code governs enclosure runoff.**]**

G. [Pedestrian Gates: As specified under Gates and Hardware.]

H. [Custom Post Profiles and Sizes: ____.]

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine the slab for dimensions, elevations, thickened areas at posts, gate-post pads, flatness at base plates, concrete strength and age, and anchor edge distances, against the shop drawings.

B. Verify gate swing clearances, hold-open positions and container and vehicle access.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install to the manufacturer's installation instructions, approved shop drawings and the delegated design. Lay out from the approved layout plan and bay schedule.

B. Posts: Set posts plumb and aligned, with base plates bearing on the slab, within the tolerances of the manufacturer's installation instructions [; shim or grout only as permitted by the delegated design].

C. Anchors: Drill, clean and install anchors to the anchor manufacturer's instructions and code evaluation report, with embedment, edge distance and installation torque as indicated. Do not load adhesive anchors before the adhesive's full cure time.

D. Slats: Install slats captive in the post channels in bay order, following the bay tags, stacked tight to the manufacturer's instructions.

E. Gates: Hang, align and level gate leaves. Install slab sleeves for cane bolts at closed and hold-open positions. Install latch box.

F. [Embedded Posts: Set posts in foundations per the delegated design; brace until concrete reaches design strength.]

G. [Bollards and Roof: Install per approved shop drawings.]

H. Do not field-weld, field-cut or modify components without the manufacturer's written approval.

3.3 FIELD QUALITY CONTROL

A. Special Inspections: Where required by IBC Chapter 17 and the authority having jurisdiction, including post-installed anchors. [Owner will engage a qualified special inspector.]

B. Inspection: Verify plumb and alignment, anchor installation, slat engagement, gate operation, latch engagement and cane-bolt engagement at closed and hold-open positions.

C. Remove and replace components that do not comply.

3.4 ADJUSTING

A. Adjust gates to swing freely without binding, to latch positively, and to engage cane bolts at closed and hold-open positions.

B. Touch up minor finish damage with the manufacturer's touch-up material. Replace components whose finish damage exceeds the touch-up limits in the manufacturer's instructions.

3.5 CLEANING

A. Remove packaging and debris. Clean finished surfaces with mild detergent and water; do not use abrasive or solvent cleaners.

B. Turn over spare slats and extra hardware to the Owner.

3.6 PROTECTION

A. Protect installed work from damage by construction traffic and operations until Substantial Completion. Replace components damaged before Substantial Completion.

END OF SECTION 32 31 19

Alpine Enclosure Systems is a division of Alpine International Trading Co. This guide specification is provided to assist design professionals; the specifier is responsible for editing it to suit the project and for compliance with the codes adopted by the authority having jurisdiction. Alpine Citadel is engineered per project; dimensions, loads and foundations stated are typical and are confirmed by project engineering. Specifications subject to change. © 2026 Alpine International Trading Co.