SmartCycle
SOLUTIONS



CSS 1.05

Freeway Soffit Security System

The SmartCycle CSS 1.05 Freeway Soffit-Mounted Mechanical Access System

It is a fully mechanical, high-durability enclosure engineered for installation beneath bridge structures. It protects critical infrastructure components—cabling, control systems, and junctions—located in elevated or exposed environments.

Built with no electrical or electronic components, the CSS 1.05 delivers maximum reliability, zero maintenance complexity, and proven performance in vibration-intense, moisture-prone, and temperature-fluctuating environments.

Ideal for transportation departments, civil engineering firms, and infrastructure security teams, the SmartCycle Soffit System enhances safety, prevents vandalism, and extends bridge service life.

Key Features

- Tamper-resistant proprietary lock operated only with SmartCycle tools.
- Structural-grade carbon steel with hot-dip galvanized finish (ASTM A123 / ISO 1461).
- Built to resist vibration, moisture, and temperature extremes.
- Prevents unauthorized crawlspace access to maintain bridge integrity.
- Available in standard or custom project-specific dimensions.
- Surface-mounted or recessed, adaptable for horizontal or vertical orientations.
- Locking Mechanism:
  - Proprietary mechanical lock requires specialized tools
  - Tamper-resistant design
- Heavy-duty steel hinges, optionally concealed or reinforced.
- Fasteners: Galvanized or stainless-steel tamper-proof bolts and anchors.

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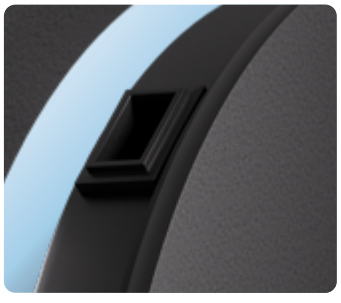
SmartCycle

Technical Specifications

PARAMETER	SPECIFICATION
DIMENSIONS	30 in by 30 in
BASE MATERIAL	Structural-grade carbon steel (ASTM A36 / AISI 1018 or equivalent)
FINISH	Hot-dip galvanized per ASTM A123 / ISO 1461
OPTIONAL COATING	Powder coat or epoxy for marine/high-salinity environments
LOCKING MECHANISM	Proprietary mechanical lock; tamper-resistant; special tool required
HINGES	Heavy-duty steel, optional concealed or reinforced
FASTENERS	Tamper-proof galvanized or stainless bolts and anchors
MOUNTING TYPE	Surface-mounted or recessed into soffit structure
ORIENTATION	Horizontal or vertical (per bridge design)
LOAD RATING	Supports static loads typical of soffit installations
VIBRATION RESISTANCE	Engineered for bridge-induced dynamic stress
INGRESS PROTECTION	IP65 or higher (dust-tight and water-resistant)
TEMPERATURE RANGE	−40 °C to +85 °C (−40 °F to +185 °F)
COMPLIANCE	RoHS compliant (if applicable)
SECURITY STANDARDS	Infrastructure protection guidelines compliant
STRUCTURAL REQUIREMENTS	Requires pre-deployment structural assessment and anchoring

Advantages

- Protects critical under-bridge systems and prevents vandalism or tampering.
- Extends structural longevity and reduces maintenance cycles.
- Performs reliably in extreme weather and vibration conditions.
- Designed for easy field installation and long-term serviceability.
- Customizable sizes for specific bridge designs and agency standards.







Ordering Information

Model: CSS 1.05 — Freeway Soffit Security System
Options: Standard or custom sizing; optional coatings and hinge styles
Lead Time: 6–8 weeks typical production

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