

## TECHNICAL INFORMATION

# ACRYLITE® Soundstop Ready Fit System Installation Instruction Manual

Reduce noise while maintaining views



**ACRYLITE® Soundstop Ready Fit System**  
on I-75 in Dayton, OH



**ACRYLITE® Soundstop Ready Fit System**  
on Park Drive above the South Bay Freeway (CA-54)  
in Spring Valley, CA

## PREFACE

This Manual for the Installation of the ACRYLITE® Soundstop Ready Fit System has been prepared as a guide to install ACRYLITE® Soundstop noise barrier panels. Its contents should be thoroughly reviewed by the Contractor, Superintendent, and Foreman responsible for construction prior to the delivery of ACRYLITE® Soundstop products to the job site.

Roehm America representatives are available to assist the Contractor in the implementation of correct construction procedures. However, in the event of any conflict between this manual and the Plans, Specifications, or Contract Documents, the latter shall prevail. If there is any doubt with regard to any aspect of the ACRYLITE® Soundstop wall construction, contact Roehm America or its representatives directly.

Roehm America will supply pre-assembled ACRYLITE® Soundstop Ready Fit Panels and accessories to be used in conjunction with other materials in the construction of sound walls detailed in the construction drawings. This Manual for the Installation of the ACRYLITE® Soundstop Ready Fit

System is intended to provide a general explanation of the system. It is the Contractor's obligation to devise and execute a project specific erection sequence, panel unloading, handling, and fall protection system. Compliance with the guidelines in this manual does not relieve the contractor of its responsibility to adhere to the project plans, specifications, and contract documents or compliance with all fall protection, safety laws, standards and procedures at the job site. Contractors should take special precautions to prevent the panels from shifting or falling during the unloading and erection process.

## INTRODUCTION

### Purpose

This document is intended to provide the Owner, Contractor, Engineer, and the inspection staff; those who are responsible for overall quality control and inspection during construction, with the criteria necessary to monitor the installation of the ACRYLITE® Soundstop Ready Fit System for compliance with the Plans, Specifications, and Contract Documents.

## Responsibilities

It is the Contractor's responsibility to complete construction in strict accordance with the Plans, Specifications, and Contract Documents. To assist the Contractor in this regard, this Document provides recommended installation procedures. Nothing in this document is intended to relieve the Contractor of the responsibility of complying with all safety standards and construction procedures, including fall protection, at the job site.

The Contractor and Owner should verify that the Contractor's on-site erection personnel are in possession of and are familiar with the recommendations of this Manual for the Installation and Quality Control Procedures for the ACRYLITE® Soundstop Ready Fit System.

A Project Manager (PM) representing Roehm America may be available on-site during initial construction and thereafter on a request basis. The PM may assist the Contractor with material scheduling and provide advice on recommended installation procedures for the ACRYLITE® Soundstop Ready Fit System as defined here.

A PM is not available on-site on a full-time basis and is not provided with the intent of replacing the Owner's and Contractor's designated quality control and/or inspection staff.

## Plans, Specifications, Layout

Prior to commencing any site work, the contractor shall verify that the latest issue of the Plans, Specifications, and Contract Documents - approved for construction - are being used to install the ACRYLITE® Soundstop Ready Fit System.

The Contractor should also confirm that the ACRYLITE® Soundstop structure is being installed at the proper location by verifying elevations, lines, grades, offsets, and all other location criteria.

## Materials and Services Provided by Roehm

- Engineering and design of the ACRYLITE® Soundstop Ready Fit System
- Design of Posts and Foundations may or may not be included in the scope of work
- Pre-assembled ACRYLITE® Soundstop Ready Fit Panels including caps for lifting holes and blocking materials as necessary to account for up to 1" of post gap variance.
- Delivery of materials to the site (per shipping terms of the contract between Roehm America and buyer), with 1.5 hours of time allowed for unloading unless otherwise stipulated
- On-site technical assistance at start of wall construction

## Equipment, Materials, Tools, and Work supplied by the Contractor

- Suitable equipment for caisson/foundation construction
- All reinforcing cages as specified in drawings
- All concrete and reinforcing for construction of footings
- A hydraulic crane, boom truck, or similar equipment is required for post and panel erection
- Survey equipment including levels, lasers, and measuring devices to ensure proper horizontal and vertical alignment of wall.
- Any other site specific tools and equipment needed as dictated by site conditions for the safe and proper handling and storage of ACRYLITE® Soundstop materials.
- Lifting cables, spreader beams, shackles, vacuum hoist, lifting eyes, and guide cables for hoisting and installing ACRYLITE® Soundstop materials.
- All equipment for off loading ACRYLITE® Soundstop materials from delivery trucks.

## Summary of Work Performed by the Contractor

- Site preparation including excavation, compaction of fill, and installation of sound barrier foundations.
- Construction of the ACRYLITE® Soundstop Ready Fit Panel support structure consisting of the erection and positioning of posts, installation of the ACRYLITE® Soundstop Ready Fit Panels (by others), and placement and compaction of backfill.
- Final grading and restoration as needed, with touchup to any wall panels damaged during installation.
- Identification of all underground and above ground utilities for clearance certificates.



### ACRYLITE® Soundstop Ready Fit System

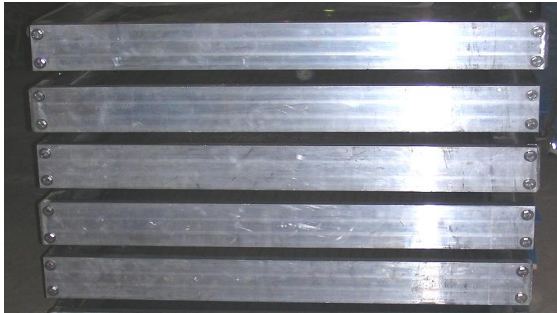
with black powder coated aluminum frames on Route 18 in New Brunswick, NJ

## HANDLING ACRYLITE® MATERIALS & PANELS

### Panel Delivery

Prior to the start of construction the Contractor should establish a delivery schedule that will allow Roehm America to match its panel production and delivery to the Contractor's construction schedule.

The ACRYLITE® Soundstop Ready Fit System may consist of multiple deliveries. Panels are usually delivered in horizontal stacks on pallets delivered by flatbed trailers. Stacks typically consist of six to twelve panels. Panels may be placed on pallets to expedite unloading and subsequent handling or may be stacked directly on the flatbed. Shipping details will be discussed with the designated Roehm America representative.



If pallets are specified, a 1.5 hour unloading period is allowed per delivery to unload panels. In the event panels are placed directly on the flatbed (typically for installation as removed) it is typical to designate a 10 hour unloading period.

Shipping details will be discussed with the designated Roehm America Project Manager. Care must be taken to protect panels from damage during handling and storage.

### Offloading

1.5 hours maximum are allowed for unloading each delivery. Demurrage costs will apply for additional waiting time on site. See Roehm America proposal/quotation for additional costs. Shipping is also predicated on day time deliveries, between the hours of 6:30am and 4:30pm., Monday to Friday. Deliveries requested outside these times will be subject to additional cost.

### Safety Restraints

Contractor shall supply and use safety restraints, when offloading of panels direct from truck to barrier. Roehm America can suggest methods and designs of safety restraints but these restraint designs shall be used strictly at the contractors risk and liability. Roehm America assumes no liability for the use of these restraints.

### Inspection

Materials should be thoroughly inspected upon delivery to the job site. Any damaged items should be set aside and Roehm America shall be notified immediately. Damage must be noted on the delivery waybill before signing release from site to be eligible for claim. Materials should be handled and stored to prevent damage or theft.

Roehm America, upon request, furnishes certificates of compliance with project specifications for delivered wall materials. However, it is the Contractor's responsibility to verify that all materials received at the job site are in accordance with shipping documents and project requirements. Any discrepancies should be reported to Roehm America immediately.

To prevent construction delays, the Contractor should continuously monitor the quantity of materials on hand to ensure an adequate supply consistent with the Plans, Specifications, and Contract Documents.

## CONSTRUCTION PROCEDURES

The basic installation sequence for the ACRYLITE® Soundstop Ready Fit System can be summarized in the following steps. These steps should be reviewed prior to the start of installation.

1. If setting ACRYLITE® Soundstop Ready Fit Panels atop concrete panels, it is recommended to first lay a closed cell neoprene foam or EPDM strip gasket atop the concrete panel to take up and irregularity in the surface of the concrete. This strip also will prevent abrasion between the concrete and aluminum surfaces.
2. Prior to setting the initial panel note that the protective film on the ACRYLITE® panel must be removed during the install or at a date no later than 2 weeks after install. This protective film will become more difficult to remove over time. If panels are to be stored outside for a period of more than 2 weeks prior to installation, they should be covered.
3. Prior to setting the initial panel check the horizontal level of the support panel or footing. Level of the support panel or footing should be checked and adjusted to assure a uniform appearance of the structure. Shims may only be installed between the bottom panel and the footing or support plate.
4. Panels must be lifted from the horizontal position by attaching a lifting device to each of the two 9/16" through holes in the top member of the ACRYLITE® frame. Use a spreader bar, lifting straps, or other appropriate method in

conjunction with the lifting device. Note - Use of clamps, which may mar the surface of the aluminum panels, is not recommended.



5. Panels are sized such that when fully pressed against the inside of one post there shall be no less than 1" engagement between the panel and the far post. By design this provides no less than 2" engagement along each edge when the panel is centered between the posts. Given that there is often variation in post placement, it is critical to ensure the installed panel shall have no less than 1" engagement even when fully installed to one side. Where post spacing is larger than plan, insert spacing blocks (available from Roehm America upon request), to ensure panels cannot shift to one side.
6. Depending on the post, it may be necessary to insert an EPDM gasket between the sides of the post and the panel to prevent rocking. If necessary, this material will be set at this point of the installation. Where the panel is a snug fit, caulking (and potentially backer rod) is typically used to seal the edges and dampen movement and abrasion.

Evaluation and approval of foundation suitability is the responsibility of the Owner's or Contractor's Engineer. Any foundation soils found to be unsuitable shall be removed and replaced with material approved by the Engineer. The material shall then be compacted, as directed by the Engineer, to a density suitable for the application.



## Foundations

A concrete foundation is augered or formed and cast at each foundation elevation. Foundations must be cast to the design elevations as shown on the Plans. The allowable elevation tolerances are +0.01 feet (1/8") and -0.02 feet (1/4") at design elevation.

An improperly placed foundation can result in subsequent panel misalignment and decreased wall construction productivity.

Panels should be free of any surface defects that may occur in transportation, unloading, storage or installation at the construction site. Panels with chipped or broken corners, or permanent stains on exposed face should be repaired prior to, or after, installation in the wall.

Any repairs to panels must be completed in accordance with Roehm America's specifications and to the satisfaction of the Engineer.

## Safety Tips for Unloading ACRYLITE® Products

1. Upon arrival of truck, examine the load for any shifting of product or unstable conditions prior to removing tie downs.
2. The truck should be on level ground when unloading. Unloading on uneven ground could result in shifting of product or possibly product falling from trailer.
3. Lifting equipment (straps, cables, ring clutches, etc.) should be checked for excessive wear or cracking prior to unloading truck. Use only sound and properly sized equipment.
4. Do not move the tractor unless all product is secured in place.
5. If drivers are required to remove chains or binders next to lane of moving traffic, cones and flagmen should be used to direct traffic away from the trailer and driver.
6. Drivers are not trained as riggers or swampers and should stay in cab or clear away from unloading operations. The drivers are acting in a delivery capacity only.
7. Personal protective equipment required by the general contractor on site shall also be required and worn by delivery drivers.
8. No personnel shall be allowed under a suspended load.
9. Once removed from the trailer, panels not placed directly in the wall should be stacked or secured on flat ground, and stored in such a way as to prevent tipping or falling.
10. Areas between the truck and crane should be restricted to personnel required to unload trailer.
11. If any unsafe situations exist or arise while loading or unloading ACRYLITE® products, operations shall cease in order to avoid any hazards or injury.

## GLOSSARY OF TERMS

### Agency

The person(s), firm, or corporation acting as Agent for the Owner.

### Contract Documents

The Owner-Contract agreement, including the conditions of the Contract (general, supplementary, and other conditions), the drawings, Specifications and the provisions of the agreement between the Contractor and Roehm America; and also including all addenda issued prior to execution of the Contract, all modifications thereto and any other items specifically stipulated as being included in the Contract Documents.

### Contractor

The individual, firm, or corporation undertaking the execution of the Work under the terms on the Contract, and acting directly through its Agents or employees.

### Engineer

The person(s) designated by the Owner, as having authoritative charge over certain specific engineering operations and duties.

### Inspector

The authorized representative assigned to make a detailed inspection of any or all portions of the Work or materials on the Owner's behalf.

### Owner

The Owner of a project. The agency, person, firm, or corporation with a Contract that has been made for the payment of the Work performed under the Contract.

### Plans

The official approved plans, profiles, typical cross sections, working drawings, and supplemental drawings, or exact reproductions thereof, which show the locations, character, dimensions and detail of the work to be performed.

### Specifications

A description, for contract purposes, of the materials and workmanship required in a structure(s), as also shown on the related working drawings. The written material containing the standard provisions and special provisions, as may be necessary, pertaining to the quantities and qualities of materials to be furnished under the Contract.

### Technical Advisor

Representative of Roehm America who may be available to assist the Contractor with material scheduling and coordination, and give advice on the recommended construction procedures applicable to Roehm America structures as set out in this manual.

### Work

The entire scope of the Work to be performed at the site of the construction project including labor, materials, equipment, transportation and such other facilities as are necessary to fulfil all obligations under the Contract.

## NON-DISCLOSURE NOTICE & DISCLAIMER

1. This Document is the property Roehm America, LLC. This Document is being made available solely for use in connection with the client/contractor's interest or participation in the proposed ACRYLITE® wall project, and for no other purpose.
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4. Receipt of Documents gives no entitlement to any property right in the Document or in the information contained therein by virtue of the temporary supply of the Document in accordance herewith.
5. The ACRYLITE® Soundstop Ready Fit System is based solely upon:
  - a. The layout and geometry of the structure based upon survey details, plans and drawings supplied by or on behalf of the Owner, and
  - b. The Job Specifications.
6. Upon demand, the Document and all copies thereof must be immediately surrendered and returned.

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