



## PROJECT

**State Road Women’s Detention Facility**  
**Philadelphia, PA**

## ARCHITECT

**Buell Kratzer Powell**  
**Philadelphia, PA**

## DETAILS

**SonaSpray “fc” White**  
**1” Thickness**

Detention facilities are designed to safely and securely hold individuals who threaten public safety. Unfortunately, in order to securely isolate these individuals, hard, reflective surfaces must be utilized. These acoustically reflective surfaces contribute to a cycle of escalating noise levels among prison staff and inmates.

The Philadelphia Women’s Detention Facility is no exception. The new 207,000 sq. ft. correctional facility located in northeast Philadelphia is designed to house 768 inmates. Construction was nearly complete when it was discovered that the acoustics within the prison dayrooms had not been addressed.

SonaSpray “fc” was chosen as the acoustical treatment for its superior sound absorption qualities and “fast-track” installation that was critical in meeting the scheduled completion date. When applied at its maximum installed thickness of 1”, SonaSpray “fc” achieves an unequalled NRC value of 0.90.

SonaSpray “fc” provides a strong, durable and resilient bond. It’s durable

surface resists impact damage without the cracking or spalling typical of many plaster or cementitious-based materials. SonaSpray “fc” will also conform to any surface configuration such as barrel vaults, pan construction and the concrete “T” ceilings within the prison’s dayrooms.

SonaSpray “fc” provides an attractive, high performance solution to acoustical and lighting objectives in both new construction and renovation projects. Typical installations include schools, churches, auditoriums, libraries, detention facilities, offices, and many more.

For more information on this project or a similar application, contact **Retrotherm** at **(610) 966-2400** or visit us at [www.retrotherm.com](http://www.retrotherm.com).

## PARTIAL LIST OF SIMILAR PROJECTS

Adams County Detention Facility  
Brighton, CO

Blue Ridge Jail Facilities  
Lynchburg, Campbell City &  
Halifax, Virginia

Brooks County Detention Facility  
Falfurrias, TX

Cass County Jail  
Logansport, IN

Cresson Prison  
Cambria County, PA

Escambia County Detention Facility  
Pensacola, FL

Jefferson County Jail  
Jefferson County, IL

Johnson County Jail  
Franklin, IN

Marion County  
Law Enforcement Center/Jail  
Salem, IL

Maple Lane School  
Juvenile Detention Facility  
Centralia, WA

Maximum Security Prison Facility  
Pine Grove, PA

Morris County  
Juvenile Detention Facility  
Morris, NJ

Pima County Jail  
Tucson, AZ

St. Charles Parish  
Correctional Facility  
Killona, LA

## Section 09212 SonaSpray® "fc" Spray On Acoustical Treatment Specification Guide

### PART 1 - GENERAL

#### 1.01 Section Includes

EDIT ACOUSTICAL WHERE REQUIRED

- A. Sprayed cellulose insulation finish system.

#### 1.02 Related Items

- A. Clips, hangers, supports, sleeves and other attachments to spray bases are to be placed by other trades prior to the application of sprayed insulation.
- B. Ducts, piping, conduit or other suspended equipment shall not be positioned until after the application of sprayed insulation.

#### 1.03 Submittals

- A. Copy of manufacturer's ISO 9001:2000 Certification.
- B. Submit 2 copies of these reports indicating compliance with the following:

**Light reflectivity** minimum 81 + Arctic White  
73 + White

**NRC VALUES** per ASTM C-423 conducted by a NVLAP certified testing laboratory:

	125	250	500	1000	2000	4000	NRC
0.50" <sup>1</sup>	.08	.16	.46	.87	1.07	1.12	.65
0.75" <sup>2</sup>	.25	.36	.74	.98	.99	.99	.75
0.75" <sup>3</sup>	.17	.58	.91	.89	.87	.84	.80
1.00" <sup>1</sup>	.12	.38	.88	1.15	1.15	1.15	.90

**Flame Spread Index** 5 ASTM E-84/UL 723  
**Smoke Developed** 5 ASTM E-84/UL 723

#### Bond Strength

SonaSpray "fc" >600 psf ASTM E-736  
SonaSpray "fc" Dura-k >900 psf ASTM E-736

#### Compression Strength

SonaSpray "fc" >400 psf ASTM E-761  
SonaSpray "fc" Dura-k >600 psf ASTM E-761

- C. Manufacturer's written certification that product contains no asbestos, fiberglass or other man made mineral fibers.

#### 1.04 Quality Assurance

- A. Manufacturer must be ISO 9001:2000 Certified
- B. Applicator: Licensed by manufacturer.
- C. Manufacturer must subscribe to independent laboratory follow-up inspection services of Underwriter Laboratories. Each bag shall be labeled accordingly.
- D. Mock-up: Apply a 100 square foot representative sample to be reviewed by the Architects and/or owner prior to proceeding.

#### 1.05 Delivery, Storage and Handling

- A. Materials shall be delivered in original, unopened containers bearing name of manufacturer, product identification and reference to U.L. testing.
- B. Store materials dry, off ground and under cover.
- C. Protect liquid adhesive from freezing.

### PART 2 - PRODUCTS

#### 2.01 Acceptable Manufacturers:

- A. International Cellulose Corporation  
12315 Robin Boulevard  
Houston, Texas 77045  
(713) 433-6701 or (800) 444-1252  
FAX: (713) 433-2029

#### 2.02 Materials: (Specify desired product)

- A. SonaSpray "fc" Acoustical Finish \_\_\_\_\_
- B. SonaSpray "fc" Dura-K \_\_\_\_\_

\*\*Color selection will affect price

- C. Color shall be as indicated in Schedule 3.05

### PART 3 - EXECUTION

#### 3.01 Examination

- A. Examine surfaces and report unsatisfactory conditions in writing. Do not proceed until unsatisfactory conditions are corrected.
- B. Verify surfaces to receive spray insulation to determine if priming/sealing is required to ensure bonding and/or to prevent discoloration caused by migratory stains.

#### 3.02 Preparation

- A. Provide masking, drop cloths or other satisfactory coverings for materials/surfaces that are not to receive insulation to prevent damage from over-spray.
- B. Coordinate installation of the sprayed cellulose fiber with work of other trades.
- C. Prime surfaces as required by manufacturers instructions or as determined by examination.

#### 3.03 Installation

- A. Average thickness to achieve NRC value of 0.65 or greater.
- B. Install spray applied insulation according to manufacturers recommendations.
- C. Cure insulation with continuous natural or mechanical ventilation.
- D. Remove and dispose of over-spray.

#### 3.04 Protection

- A. Protect finished surface under provisions of Division 1.

#### 3.05 Schedule

- A. Provide a schedule when insulation requires listing by color, insulation value, NRC values and other attributes.



800/444-1252  
713/433-2029 (FAX)  
www.spray-on.com



800/905-3730 toll free  
www.retrotherm.com