

TECHNICAL SPECIFICATIONS

FOR

RENOVATIONS FOR

YORK COUNTY SHERIFF'S FACILITY

LOCATED AT

515 CHERRY ROAD

ROCK HILL, SOUTH CAROLINA 29732

OWNER

YORK COUNTY

SOUTH CAROLINA

ARCHITECT'S PROJECT NO. 1746

DATE:

5/17/2023



Stewart-Cooper-Newell Architects
719 E. Second Avenue
Gastonia, NC 28054
704-865-6311

DOCUMENT 003119 - EXISTING CONDITION INFORMATION

PART 1 – GENERAL

1.1 EXISTING CONDITION INFORMATION

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of the Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions. This Document and its attachments are part of the Contract Documents.
- B. This is to advise the Contractor, that the windows contain a glazing compound that has asbestos in the formulation. It is the responsibility of the contractor to properly encapsulate the glazing compound and glass as detailed on the drawings or abate the glazing compound as required. In addition, there is caulking compound at door frames that will need to be abated as well.
- C. Included with this Section of the Specifications is a Report titled "Asbestos Survey" by "ECS Environmental" (ECS Project No. 49:19708) that is hereby made a part of the requirements of the contract. This document contains all locations where work is to be performed under this contract.
- D. Contract drawings detail a suggested method of encapsulation of the windows prior to their removal. The Contractor, at his option, may use other methods that meets with the Owners approval prior to commencing work. All removal and abatement work must comply with the ECS Report and Governing Authorities referenced in the report.
- E. Drawings and Specifications which describe the existing conditions and the new work to be accomplished may be viewed at the office of the Architect.

END OF DOCUMENT 003119

ASBESTOS SURVEY



ROCK HILL SHERIFF'S DEPARTMENT

515 CHERRY ROAD
ROCK HILL, SOUTH CAROLINA 29732

ECS PROJECT NO. 49:19708

FOR: YORK COUNTY BUILDING MAINTENANCE

MARCH 10, 2023





March 10, 2023

Mr. Trey Janicke
York County Building Maintenance
220 Public Works Road
York, South Carolina 29745
Trey.Janicke@yorkcountygov.com

ECS Project No. 49:19708

Reference: Asbestos Survey, Rock Hill Sheriff's Department, 515 Cherry Road, Rock Hill, South Carolina

Dear Mr. Janicke:

ECS Southeast, LLP (ECS) is pleased to provide York County Building Maintenance with the results of the Asbestos Survey performed at the referenced property. This report summarizes our observations, analytical results, findings, and recommendations related to the work performed. The work described in this report was performed by ECS in general accordance with the Scope of Services described in ECS Proposal Number 49:36388P and the terms and conditions of the agreement authorizing those services.

ECS appreciates this opportunity to provide York County Building Maintenance with our services. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

ECS Southeast, LLP

Alex Sayre, CIEC
Environmental Senior Project Manager
asayre@ecslimited.com
704-525-5152

Tina M. Stewart, REM
Environmental Principal
tstewart@ecslimited.com
336-856-7150

EXECUTIVE SUMMARY

The subject property consists of an evidence warehouse and office building, associated with the York County Sheriff's Department located at 515 South Cherry Road in Rock Hill, South Carolina. ECS understands that York County is conducting a limited renovation project involving windows, doors and roll-up doors. ECS conducted an asbestos survey limited to these aforementioned areas.

The non-destructive asbestos survey was performed by Mr. Alex Sayre (SC Accreditation No. BI-01337) an asbestos inspector who has received EPA accredited training and is licensed by South Carolina. Samples of suspect ACMs were collected utilizing hand tools and placed into individual, labeled plastic bags. Unique bulk suspect ACM samples were submitted to Eurofins CEI in Fort Mill, South Carolina for analysis via Polarized Light Microscopy (PLM) in accordance with current EPA-600 methodology.

The following asbestos-containing materials (ACMs) were identified in the samples collected and analyzed:

- Warehouse window caulking;
- Warehouse window glazing;
- Warehouse Door caulk; and,
- Office Glazing.

A trace amount of asbestos ($\leq 1\%$) was detected in the bulk sample(s) of door caulk (HA 4) analyzed by the laboratory. Although materials that contain trace amounts of asbestos are not subject to U.S. EPA or South Carolina regulations for the handling and disposal of asbestos, OSHA still regulates any work which will disturb materials identified with trace amounts of asbestos (reference the November 24, 2003 OSHA Interpretation document - Compliance Requirements For Renovation Work Involving Materials Containing Less Than 1% Asbestos). Therefore, any Contractors disturbing these materials will need to comply with components of 29 CFR 1926.1101, as detailed in the 2003 OSHA Interpretation document.

ECS recommends that ACMs are properly abated prior to disturbance by renovation or demolition activities.

The executive summary is an integral portion of this report, however, ECS recommends the report be read in its entirety.

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1.0 SITE DESCRIPTION

The subject property consists of an evidence warehouse and office building, associated with the York County Sheriff's Department located at 515 South Cherry Road in Rock Hill, York County, South Carolina. ECS understands that York County is conducting a limited renovation project involving windows, doors and roll-up doors. ECS conducted an asbestos survey limited to these aforementioned areas.

2.0 METHODOLOGY

ECS performed the authorized Scope of Services in general accordance with our proposal, standard industry practice(s) and methods specified by regulation(s) for the identification of Asbestos-Containing Materials (ACMs).

2.1 Asbestos-Containing Materials

The non-destructive asbestos survey was performed by Mr. Alex Sayre (SC Accreditation No. BI-01337) an asbestos inspector who has received EPA accredited training and is licensed by South Carolina. Samples of suspect ACMs were collected utilizing hand tools and placed into individual, labeled plastic bags. Unique bulk suspect ACM samples were submitted to Eurofins CEI in Fort Mill, South Carolina for analysis via Polarized Light Microscopy (PLM) in accordance with current EPA-600 methodology. Materials consisting of additional layers were analyzed separately. Eurofins CEI is listed as an accredited laboratory by the National Voluntary Laboratory Accreditation Plan (NVLAP) managed by the National Institute of Standards and Technology (NIST) for bulk sample analysis by currently approved EPA methodology by PLM.

During the survey, ECS attempted to identify suspect ACMs in readily accessible areas. However, due to the destructive means required to identify some materials, certain areas were deemed inaccessible (i.e. behind walls or sub grade materials) and were not surveyed for suspect ACMs. Unidentified suspect ACMs may be located in these and/or other inaccessible areas.

Samples were collected in general accordance with EPA Standard 40 CFR 763 Subpart E, Asbestos Hazard Emergency Response Act (AHERA) and OSHA Standard 29 CFR 1926.1101 Inspection Protocol. Multiple samples of each unique material were submitted. Samples were analyzed using "Positive Stop" methodology. If one sample of a homogeneous material is reported to contain asbestos, the remaining samples of that material are not analyzed. EPA regulations stipulate that if one sample contains asbestos the entire quantity of that material contains asbestos, regardless of additional analysis.

3.0 RESULTS

The following is a summary of laboratory results, findings and observations.

3.1 Asbestos-Containing Materials

An ACM is defined as any material containing more than one percent (>1%) asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, PLM. Materials are categorized by the U.S. EPA in the following categories:



- Friable ACMs are defined as any ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. Non-friable ACMs are defined as any ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
- Category I non-friable ACM are listed as following: packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than one percent (>1%) asbestos.
- Category II non-friable ACM are listed as any material, excluding Category I non-friable ACM, containing more than one percent (>1%) asbestos.

Regulated Asbestos-Containing Materials (RACM) are friable ACM or non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading or has crumbled, been pulverized, or reduced to powder in the course of renovation and/or demolition operations.

Eurofins CEI submitted a signed final laboratory report to ECS on March 10, 2023. Four of the bulk samples submitted for analysis were reported to contain asbestos in detectable concentrations. These materials are summarized below. A complete list of the sampled materials submitted for analysis and sample locations are located in the Appendix of this report. Additional details regarding the overall locations of the materials identified as asbestos-containing are provided further in the report. Photographs of collected samples reported as asbestos-containing are also located in the Appendix of this report.

Summary of Asbestos-Containing Materials Identified

Sample ID	Location	Material Description	Analytical Results	Category	Estimated Quantity
01-01,02,03	Warehouse Windows	Window glazing compound	2% Chrysotile	CAT II	28 Windows
02-01,02,03	Warehouse Windows	Window caulk	2% Chrysotile	CAT II	28 Windows
03-01,02,03	Warehouse Door openings	Door caulk	2% Chrysotile	CAT II	2 Door openings
04-01,02,03	Office Building Door openings	Door caulk Glazing	Caulk: <1% Chrysotile (TEM) Old Caulking: 2 % Chrysotile	Caulk: Trace ACM Glazing: CAT II	4 Door openings
05-01,02,03	Office Building Window	Window caulk	None detected by PLM or TEM	N/A	N/A



Sample ID	Location	Material Description	Analytical Results	Category	Estimated Quantity
06-01,02,03	Office Building Concrete sill	Concrete	None detected by PLM	N/A	N/A

A trace amount of asbestos ($\leq 1\%$) was detected in the bulk sample(s) of door caulk (HA 4) analyzed by the laboratory. Although materials that contain trace amounts of asbestos are not subject to U.S. EPA or South Carolina regulations for the handling and disposal of asbestos, OSHA still regulates any work which will disturb materials identified with trace amounts of asbestos (reference the November 24, 2003 OSHA Interpretation document - Compliance Requirements For Renovation Work Involving Materials Containing Less Than 1% Asbestos). Therefore, any Contractors disturbing these materials will need to comply with components of 29 CFR 1926.1101, as detailed in the 2003 OSHA Interpretation document.

Please note that the old caulking in HA 04 was identified by the lab as old glazing, however based on the sampling location and lack of windows in this area ECS recommends this material is identified as old caulking.

3.2 Suspect or Assumed Asbestos-Containing Materials

Due to the inaccessibility or the destructive means that asbestos sampling requires, additional suspect ACMs may remain within the building hidden behind inaccessible areas that include, but are not limited to, sub-grade walls, structural members, topping slabs, sub-grade sealants, flooring located below underlayments, areas behind exterior walls, pipe trenches, and subsurface utilities, etc. These areas were deemed inaccessible and were not assessed.

If these materials are discovered during construction activities, they should be presumed to contain asbestos and be treated as ACMs or be sampled immediately upon discovery and prior to disturbance for asbestos content by a certified asbestos inspector in accordance with 29 CFR 1926.1101.

4.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

Based on our understanding of the purpose of the Asbestos Survey, the results of laboratory analysis, and our findings and observations, ECS presents the following recommendations.

4.1 Asbestos-Containing Materials

ECS recommends that ACMs are properly removed prior to disturbance for upcoming renovation. ECS recommends where a material type has been identified as asbestos-containing that other materials with similar color, texture, age and size throughout the building's interior and exterior be assumed to contain asbestos. Please refer to Section 4.1 for a complete list of building materials that were reported positive for asbestos and to Section 4.2 for materials that were assumed to contain asbestos.



A trace amount of asbestos ($\leq 1\%$) was detected in the bulk sample(s) of door caulk (HA 4) analyzed by the laboratory. Although materials that contain trace amounts of asbestos are not subject to U.S. EPA or South Carolina regulations for the handling and disposal of asbestos, OSHA still regulates any work which will disturb materials identified with trace amounts of asbestos (reference the November 24, 2003 OSHA Interpretation document - Compliance Requirements For Renovation Work Involving Materials Containing Less Than 1% Asbestos). Therefore, any Contractors disturbing these materials will need to comply with components of 29 CFR 1926.1101, as detailed in the 2003 OSHA Interpretation document.

If ACMs are to be removed, it is recommended that an industrial hygienist monitor the project. This involves collecting air samples from within and outside abatement work areas to monitor the asbestos abatement contractor's work practices over the course of the project. The industrial hygienist should evaluate if the asbestos abatement work is in accordance with project specifications, U.S. EPA regulation 40 CFR Part 61-National Emission Standards for Hazardous Air Pollutants Subpart M: National Emission Standard for Asbestos, and U.S. Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101 – Asbestos in Construction. The industrial hygienist should assess each work area to monitor the removal of ACMs. Only after the industrial hygienist has determined the identified ACMs have been removed should final clearance air samples be collected (if necessary).

Suspect ACMs not observed due to inaccessibility or not sampled due to the destructive means that sampling would require may also be encountered during construction activities. At the time of the survey, only limited destructive means were used to locate or sample suspect ACMs; therefore, additional suspect ACMs may remain within inaccessible areas that include, but are not limited to, sub-grade walls, structural members, topping slabs, exterior areas, sub-grade sealants, flooring located below underlayments, vapor barriers, pipe trenches and other subsurface utilities, etc. If additional suspect ACMs are uncovered which were not accessible during this survey, it is recommended that these materials either be assumed to contain asbestos or be sampled prior to disturbance upon discovery for asbestos content by an asbestos inspector in accordance with 29 CFR 1926.1101.

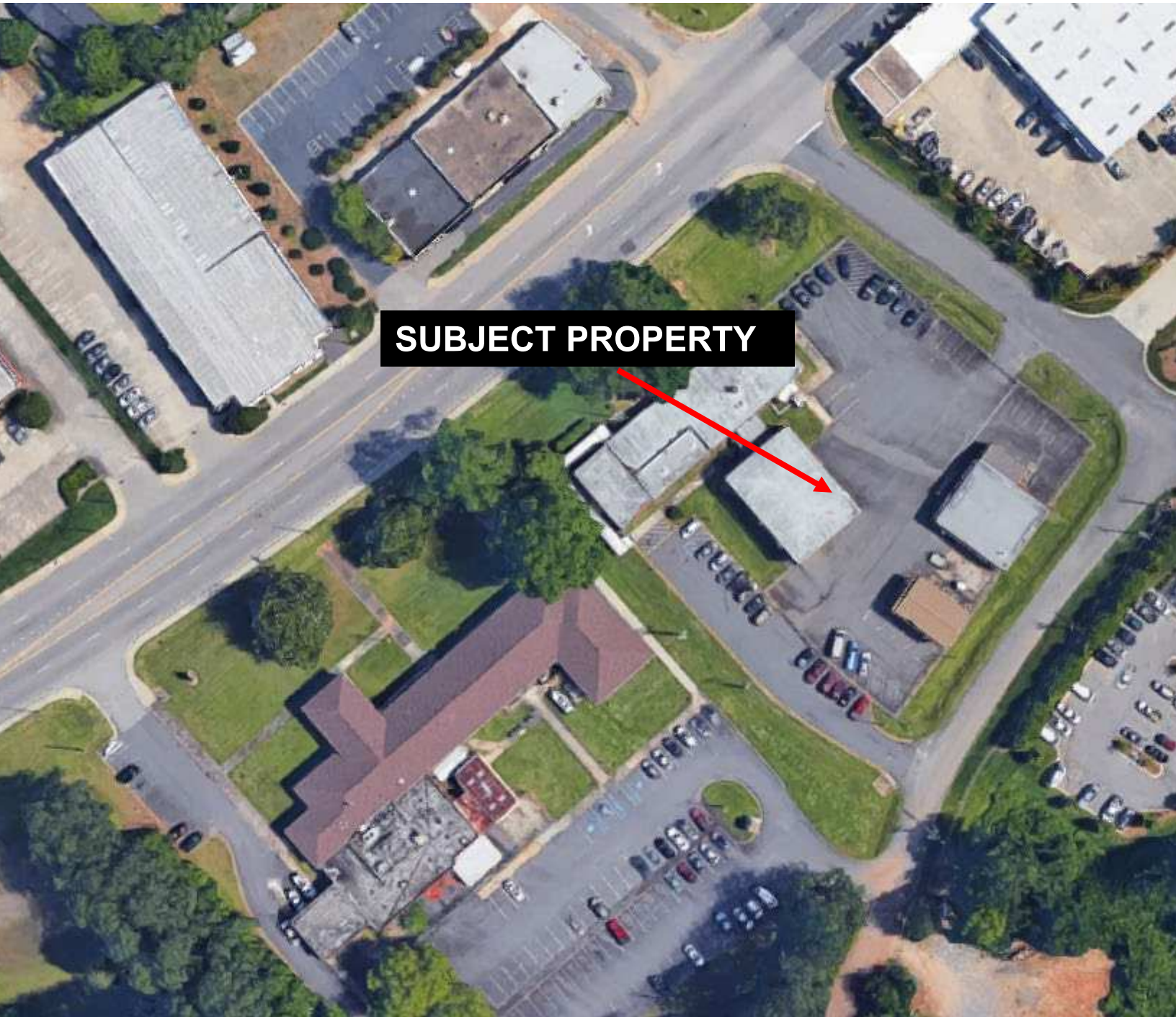
5.0 LIMITATIONS

The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries.

The observations, conclusions, and recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and/or materials reviewed at the time this study was undertaken. No warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report. This report is provided for the exclusive use of the client. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of ECS and the client.

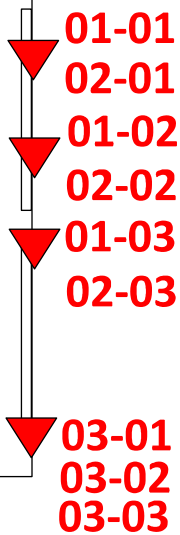
Our recommendations are in part based on federal, state, and local regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies, any conditions at the site that may present a potential danger to public health, safety, or the environment. Under this scope of services, ECS assumes no responsibility regarding any response actions initiated as a result of these findings. General compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements.

Appendix I: Figures



SUBJECT PROPERTY

Warehouse



Appendix II: Site Photographs



1 - View of the subject site.



2 - Additional view of ACM window caulking.



3 - View of ACM window glazing and caulking.



4 - View of the office building and non-ACM window caulking and rubber/silicone glazing.

Appendix III: Asbestos Bulk Sample Results

March 6, 2023

ECS Southeast, LLC
1812 Center Park Drive, Suite D
Charlotte, NC 28217

CLIENT PROJECT: York County Sherrif
CEI LAB CODE: SA230409

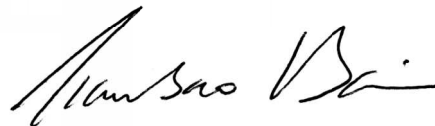
Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on March 3, 2023. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director

ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

ECS Southeast, LLC

CLIENT PROJECT: York County Sherrif

LAB CODE: SA230409

TEST METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORT DATE: 03/06/23

TOTAL SAMPLES ANALYZED: 10

SAMPLES >1% ASBESTOS: 4



CEI

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: York County Sherrif

LAB CODE: SA230409

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
01-01		SA230409.01	White	Window Glazing	Chrysotile 2%
01-02		SA230409.02		Sample Not Analyzed per COC	
01-03		SA230409.03		Sample Not Analyzed per COC	
02-01		SA230409.04	White	Window Caulk	Chrysotile 2%
02-02		SA230409.05		Sample Not Analyzed per COC	
02-03		SA230409.06		Sample Not Analyzed per COC	
03-01		SA230409.07	White	Door Caulk	Chrysotile 2%
03-02		SA230409.08		Sample Not Analyzed per COC	
03-03		SA230409.09		Sample Not Analyzed per COC	
04-01	Layer 1	SA230409.10	White	Door Caulk	None Detected
	Layer 2	SA230409.10	White	Glazing	Chrysotile 2%
04-02	Layer 1	SA230409.11	White	Door Caulk	None Detected
	Layer 2	SA230409.11		Sample Not Analyzed per COC	
04-03	Layer 1	SA230409.12		Sample Submitted for TEM Analysis	
	Layer 2	SA230409.12		Sample Not Analyzed per COC	
05-01	Layer 1	SA230409.13	Gray	Window Caulk (Type 1)	None Detected
	Layer 2	SA230409.13	Black	Window Caulk (Type 2)	None Detected
05-02	Layer 1	SA230409.14	Gray	Window Caulk (Type 1)	None Detected
	Layer 2	SA230409.14	Black	Window Caulk (Type 2)	None Detected
05-03	Layer 1	SA230409.15		Sample Submitted for TEM Analysis	
	Layer 2	SA230409.15		Sample Submitted for TEM Analysis	
06-01		SA230409.16	White	Concrete Sill	None Detected
06-02		SA230409.17	White	Concrete Sill	None Detected
06-03		SA230409.18	White	Concrete Sill	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECS Southeast, LLC
 1812 Center Park Drive, Suite D
 Charlotte, NC 28217

Lab Code: SA230409
Date Received: 03-03-23
Date Analyzed: 03-06-23
Date Reported: 03-06-23

Project: York County Sherrif

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
01-01 SA230409.01	Window Glazing	Heterogeneous	85%	Binder	2% Chrysotile
		White	8%	Calc Carb	
		Non-fibrous	5%	Paint	
		Bound			
01-02 SA230409.02	Sample Not Analyzed per COC				
01-03 SA230409.03	Sample Not Analyzed per COC				
02-01 SA230409.04	Window Caulk	Heterogeneous	85%	Binder	2% Chrysotile
		White	8%	Calc Carb	
		Non-fibrous	5%	Paint	
		Bound			
02-02 SA230409.05	Sample Not Analyzed per COC				
02-03 SA230409.06	Sample Not Analyzed per COC				
03-01 SA230409.07	Door Caulk	Heterogeneous	85%	Binder	2% Chrysotile
		White	8%	Calc Carb	
		Non-fibrous	5%	Paint	
		Bound			
03-02 SA230409.08	Sample Not Analyzed per COC				
03-03 SA230409.09	Sample Not Analyzed per COC				
04-01 Layer 1 SA230409.10	Door Caulk	Heterogeneous	95%	Caulk	None Detected
		White	5%	Paint	
		Non-fibrous			
		Bound			

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECS Southeast, LLC
 1812 Center Park Drive, Suite D
 Charlotte, NC 28217

Lab Code: SA230409
Date Received: 03-03-23
Date Analyzed: 03-06-23
Date Reported: 03-06-23

Project: York County Sherrif

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
Layer 2 SA230409.10	Glazing	Homogeneous White Non-fibrous Bound	85%	Binder 13% Calc Carb	2% Chrysotile
04-02 Layer 1 SA230409.11	Door Caulk	Heterogeneous White Non-fibrous Bound	95%	Caulk 5% Paint	None Detected
Layer 2 SA230409.11	Sample Not Analyzed per COC				
04-03 Layer 1 SA230409.12	Sample Submitted for TEM Analysis				
Layer 2 SA230409.12	Sample Not Analyzed per COC				
05-01 Layer 1 SA230409.13	Window Caulk (Type 1)	Homogeneous Gray Non-fibrous Bound	100%	Caulk	None Detected
Layer 2 SA230409.13	Window Caulk (Type 2)	Homogeneous Black Non-fibrous Bound	100%	Caulk	None Detected
05-02 Layer 1 SA230409.14	Window Caulk (Type 1)	Homogeneous Gray Non-fibrous Bound	100%	Caulk	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECS Southeast, LLC
 1812 Center Park Drive, Suite D
 Charlotte, NC 28217

Lab Code: SA230409
Date Received: 03-03-23
Date Analyzed: 03-06-23
Date Reported: 03-06-23

Project: York County Sherrif

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
Layer 2 SA230409.14	Window Caulk (Type 2)	Homogeneous Black Non-fibrous Bound	100%	Caulk	None Detected
05-03 Layer 1 SA230409.15	Sample Submitted for TEM Analysis				
Layer 2 SA230409.15	Sample Submitted for TEM Analysis				
06-01 SA230409.16	Concrete Sill	Homogeneous White Non-fibrous Bound	65% 35%	Silicates Binder	None Detected
06-02 SA230409.17	Concrete Sill	Homogeneous White Non-fibrous Bound	65% 35%	Silicates Binder	None Detected
06-03 SA230409.18	Concrete Sill	Homogeneous White Non-fibrous Bound	65% 35%	Silicates Binder	None Detected

LEGEND: Non-Anth = Non-Asbestiform Anthophyllite
Non-Trem = Non-Asbestiform Tremolite
Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORTING LIMIT: <1% by visual estimation

REPORTING LIMIT FOR POINT COUNTS: 0.25% by 400 Points or 0.1% by 1,000 Points

REGULATORY LIMIT: >1% by weight

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. *Estimated measurement of uncertainty is available on request.*


This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by Eurofins CEI. Eurofins CEI makes no warranty representation regarding the accuracy of client submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the client. Samples were received in acceptable condition unless otherwise noted. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Information provided by customer includes customer sample ID and sample description.

ANALYST:


Adrian Meyer

APPROVED BY:


Tianbao Bai, Ph.D., CIH
Laboratory Director



March 10, 2023

ECS Southeast, LLC
1812 Center Park Drive, Suite D
Charlotte, NC 28217

CLIENT PROJECT: York County Sherrif
LAB CODE: ST230238

Dear Customer:

Enclosed are asbestos analysis results for TEM bulk samples received at our laboratory on March 6, 2023. The samples were analyzed for asbestos using transmission electron microscopy (TEM) per Chatfield/EPA 600/R-93/116 Sec. 2.5.5.1 method.

Sample results containing > 1% asbestos are considered asbestos-containing materials (ACMs) per the EPA regulatory requirements. The detection limit for the TEM Chatfield/EPA 600/R-93/116 Sec. 2.5.5.1 method is <1% depending on the processed weight and constituents of the sample.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director



CEI

ASBESTOS ANALYTICAL REPORT
By: Transmission Electron Microscopy

Prepared for

ECS Southeast, LLC

CLIENT PROJECT: York County Sherrif

LAB CODE: ST230238

TEST METHOD: Bulk Chatfield
EPA 600 / R93 / 116 Sec. 2.5.5.1

REPORT DATE: 03/10/23



CEI

ASBESTOS BULK ANALYSIS

By: TRANSMISSION ELECTRON MICROSCOPY

Client: ECS Southeast, LLC
1812 Center Park Drive, Suite D
Charlotte, NC 28217

Lab Code: ST230238
Date Received: 03-06-23
Date Analyzed: 03-10-23
Date Reported: 03-10-23

Project: York County Sherrif

TEM BULK CHATFIELD / EPA 600 / R93 / 116 Sec. 2.5.5.1

Client ID Lab ID	Material Description	Sample Weight (g)	Organic Material %	Acid Soluble Material %	Acid Insoluble Material %	Asbestos %
04-03 ST04661	White Door Caulk	0.0791	29.8	69.4	.8	<1% Chrysotile
05-03 ST04662	Gray Window Caulk (Type 1)	0.0811	78.5	19.5	2	None Detected
05-03 ST04663	Black Window Caulk (Type 2)	0.0503	40.4	20.1	39.5	None Detected

LEGEND: None

METHOD: CHATFIELD & EPA/600/R-93/116 Sec. 2.5.5.1

LIMIT OF DETECTION: Varies with the weight and constituents of the sample (<1%)

REGULATORY LIMIT: >1% by weight

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by Eurofins CEI (ECEI). ECEI makes no warranty representation regarding the accuracy of client submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the client. *Estimated measurement of uncertainty is available on request and in compliance with regulatory requirements.* Samples were received in acceptable condition unless otherwise noted.

Information provided by customer includes customer sample ID, location, volume and area as well as date and time of sampling.

ECEI recommends between 0.20 and 0.50 grams of sample material for TEM bulk analysis.

Any weight below 0.10 grams is considered below protocol guidelines.

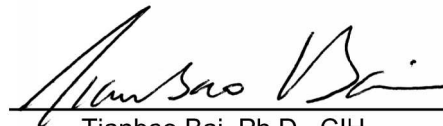
***Indicates sample weight below 0.05 grams and is considered insufficient for quantitative analysis.*

ANALYST:



Miguel Angel Maysonet

APPROVED BY:



Tianbao Bai, Ph.D., CIH
Laboratory Director



CEI

CHAIN OF CUSTODY

2752 Pleasant Rd. Suite 100A Fort Mill, SC 29708
 Tel: 803-526-5146; Fax: 919-481-1442

ECEI Lab Code:
SA230409
 ECEI Lab I.D. Range:

COMPANY INFORMATION	PROJECT INFORMATION
ECEI CLIENT #:	Job Contact:
Company: ECS Southeast LP	Email / Tel:
Address: 141 Center Rd Bldg Charlotte NC	Project Name: York County Sheriff
Billing Email: csayne@essltd.com	Project ID#:
Tel:	PO #:
	State of sample origin SC

ECEI standard terms are Net 30 days

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600/R-93/116	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (400)	EPA 600/R-93/116	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (1000)	EPA 600/R-93/116	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM GRAV w POINT COUNT	EPA 600/R-93/116		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM BULK	CARB 435		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCM AIR*	NIOSH 7400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	EPA AHERA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	NIOSH 7402	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR (PCME)	ISO 10312	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	ASTM 6281-15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM BULK	CHATFIELD / EPA 600/R-93/116 Sec. 2.5.5.1		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM SOIL	ASTM D7521-16			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM VERMICULITE	CINCINNATI METHOD			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM QUALITATIVE	IN-HOUSE METHOD		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Blanks should be taken from the same sample lot as field samples.

REMARKS / SPECIAL INSTRUCTIONS:		<input checked="" type="checkbox"/> Accept Samples <input type="checkbox"/> Reject Samples	
Positive Stop			
Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	3/3/23	<i>[Signature]</i>	3/3/23 11:50 am

By submitting samples, you are agreeing to ECEI's Terms and Conditions.
 Samples will be disposed of 30 days after analysis



CEI

COMPANY CONTACT INFORMATION	
Company: _____	Job Contact: _____
Project Name: _____	_____
Project ID #: _____	Tel: _____

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	Positive Scop TEST	
			PLM	TEM
01-01, 02, 03	Window glazing - Ev. Wh.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
02-01, 02, 03	Window caulk		<input type="checkbox"/>	<input type="checkbox"/>
03-01, 02, 03	Door caulk		<input type="checkbox"/>	<input type="checkbox"/>
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06-01, 02, 03	Concrete sill		<input type="checkbox"/>	<input type="checkbox"/>
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			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

Appendix IV: Certifications/ Licenses

SCDHEC ISSUED

Asbestos ID Card

Alex Sayre



**CONSULTBI
CONSULTPD**

**BI-01337
PD-00212**

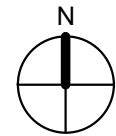
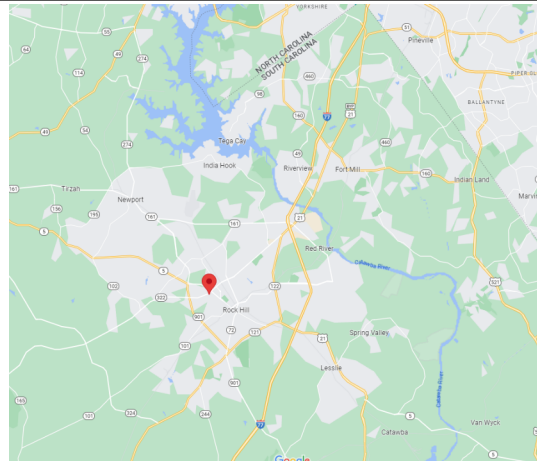
**Expiration Date:
04/11/23
05/18/22**

RENOVATIONS FOR YORK COUNTY SHERIFF'S OFFICE

515 CHERRY ROAD, ROCK HILL, SC 29732

STATE MAP

N.T.S.



SITE MAP



EVIDENCE STORAGE BUILDING

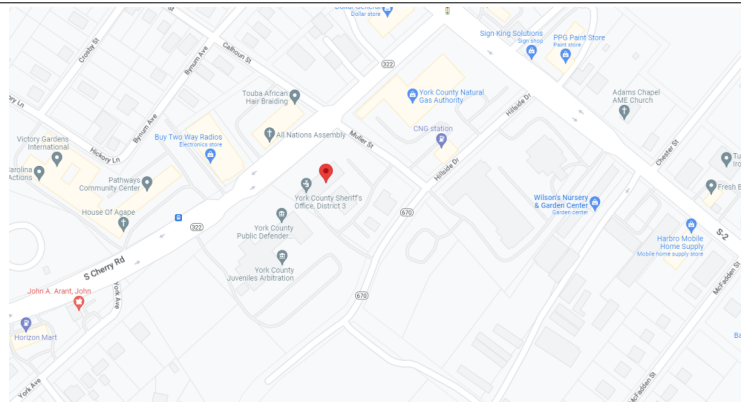
SWAT BUILDING

INDEX OF DRAWINGS

COVER PAGE	0.00
WALK IN DOORS DEMO AND REPAIR	1.00
WALK IN DOORS DEMO AND REPAIR CONT'D	2.10
WINDOW DEMOLITION	3.00
ROLL-UP DOOR DEMO @ SWAT BUILDING	4.00
ROLL-UP DOOR DEMO @ EVIDENCE BUILDING	4.10
WALL REPAIR DETAIL AND ROLL-UP DOOR SPECS	5.00
SPECIFICATIONS	6.00
SPECIFICATIONS	6.10
SPECIFICATIONS	6.20

VICINITY MAP

N.T.S.



ARCHITECT

STEWART COOPER NEWELL ARCHITECTS
719 E. SECOND AVENUE
GASTONIA, NC 28054
ph: (704) 865-6311 fx: (704) 865-0046



NOTE: ALL NOTES APPLY TO ALL DRAWINGS AND ALL TRADES. IT IS THE RESPONSIBILITY OF ALL CONTRACTORS AND TRADES TO COORDINATE THE INSTALLATION OF THEIR WORK WITH THE INSTALLATION OF WORK BY ALL OTHER CONTRACTORS AND TRADES. THE REQUIREMENTS OF THE DRAWINGS, GENERAL REQUIREMENTS AND ALL ITEMS OF THE CONTRACT DOCUMENTS ARE EQUALLY BINDING ON ALL CONTRACTORS AND TRADES. EACH CONTRACTOR IS REQUIRED TO MAINTAIN FULL SETS OF THE CONTRACT DOCUMENTS ON SITE FOR HIS/HER EMPLOYEES USE ON THE PROJECT TO ASSURE THAT ALL WORK IS PROPERLY COORDINATED AND INSTALLED WITH THE WORK OF OTHER CONTRACTORS AND TRADES.



1746

RENOVATIONS FOR YORK COUNTY SHERIFF'S OFFICE



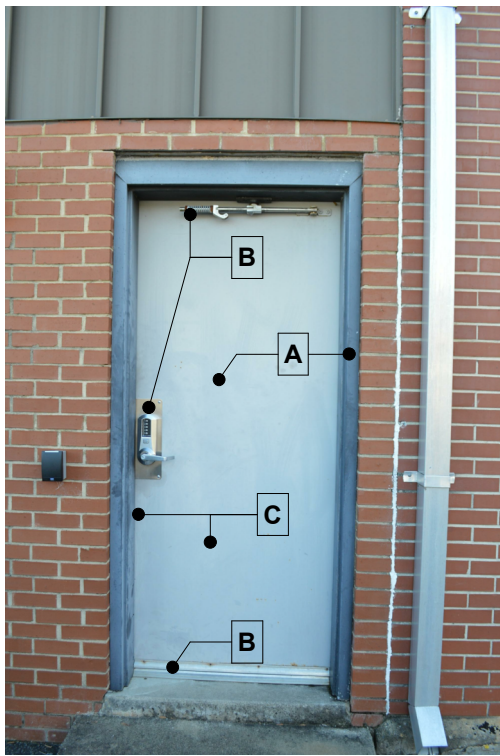
© STEWART-COOPER-NEWELL ARCHITECTS, P.A.
THIS DRAWING IS THE PROPERTY OF STEWART-COOPER-NEWELL ARCHITECTS, P.A. AND IS SUBJECT TO FEDERAL COPYRIGHT LAWS. THIS DRAWING MAY NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF STEWART-COOPER-NEWELL ARCHITECTS, P.A.

COVER PAGE

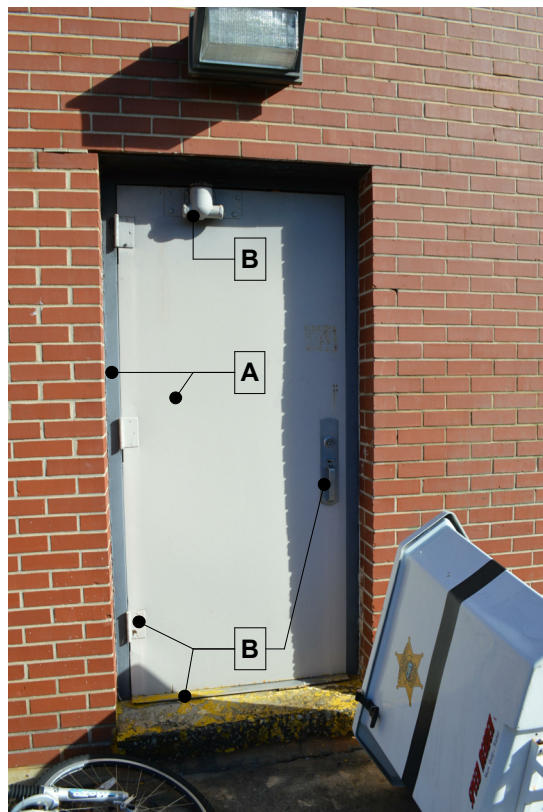
Scale:

Sheet No.

0.00



ENTRANCE DOOR TO SWAT BUILDING



EXIT DOOR FROM SWAT BUILDING

DOCUMENT 003119 - EXISTING CONDITION INFORMATION

PART 1 – GENERAL

1.1 EXISTING CONDITION INFORMATION

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of the Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions. This Document and its attachments are part of the Contract Documents.
- B. This is to advise the Contractor, that the windows contain a glazing compound that has asbestos in the formulation. It is the responsibility of the contractor to properly encapsulate the glazing compound and glass as detailed on the drawings or abate the glazing compound as required. In addition, there is caulking compound at door frames that will need to be abated as well.
- C. Included with this Section of the Specifications is a Report titled "Asbestos Survey" by "ECS Environmental" (ECS Project No. 49:19708) that is hereby made a part of the requirements of the contract. This document contains all locations where work is to be performed under this contract.
- D. Contract drawings detail a suggested method of encapsulation of the windows prior to their removal. The Contractor, at his option, may use other methods that meets with the Owners approval prior to commencing work. All removal and abatement work must comply with the ECS Report and Governing Authorities referenced in the report.
- E. Drawings and Specifications which describe the existing conditions and the new work to be accomplished may be viewed at the office of the Architect.

END OF DOCUMENT 003119

SECTION 011000 SUMMARY

THE WORK FOR THIS PROJECT CONSISTS OF THE REMOVAL AND REPLACEMENT OF THREE OVERHEAD COILING DOORS WITH ALL ASSOCIATED ACCESSORIES AND DOOR CONTROLS. REWORK OR REPLACE WALK-IN DOORS, FRAMES, HARDWARE AS INDICATED AND DETAILED ON THE DRAWINGS.

REMOVAL OF EXISTING STEEL WINDOWS AND REPLACING WITH MASONRY AS INDICATED AND DETAILED ON THE DRAWINGS. THE DEMOLISHED MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.

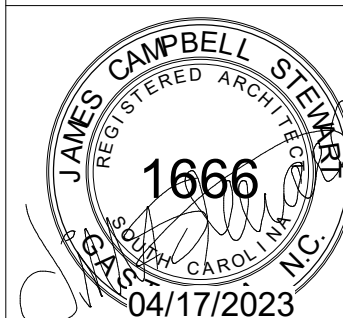
IMPORTANT NOTE:

- A. OWNER WILL ESTABLISH WORK HOURS.
- B. OWNER WILL PROVIDE FULL TIME SECURITY DURING CONSTRUCTION.

DOOR AND DOOR FRAME WORK REQUIRED:

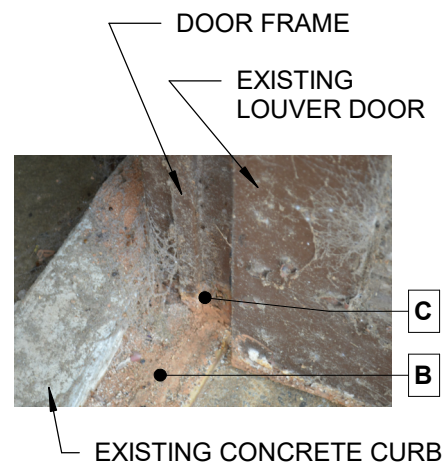
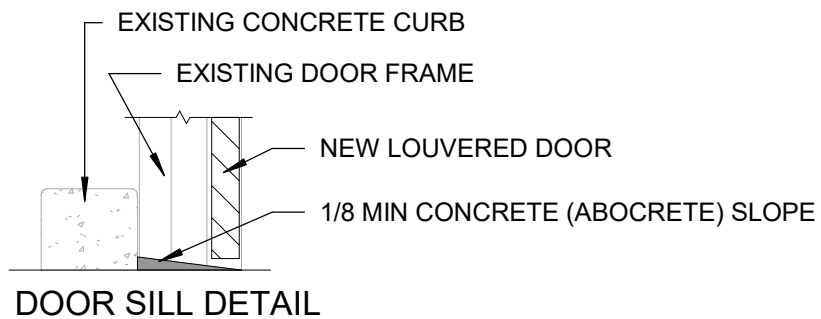
- A. This door and frame appear to be in good condition.
- B. Remove bottom sweep and threshold and clean thoroughly. Remove all hardware and clean and prepare for re-use. Clean concrete surface below threshold and prepare for patching and leveling. Patch and level concrete with " Abocrete " Epoxy Patching and Resurfacing Compound.
- C. Remove all paint and rust from door and frame. Remove all caulking from joints on both front and back.
- D. Where rust has damaged frame, clean, sand or grind out and repair with " ABATRON " Ferrobond-P Steel-filled structural adhesive putty.
- E. Sand and prep door and frame for primer and painting.
- F. Paint door and frame with Zinc Chromate Primer. Apply 2- Coats of exterior semi-gloss oil based enamel. Frame shall be Dark Gray. Door shall be Light Gray.
- G. Caulk(use Sikaflex-1A) around door frame to brick joint with polyurethane sealant in gray color.
- H. Re-install all hardware after cleaning. Use only stainless steel screws. Bed threshold in a full bed of polyurethane mastic.
- I. Install new Hardware Accessorries:

CLOSER: LCN 4040XP, TOP Jamb Mounting, Metal Cover, Aluminum
 THRESHOLD: ZERO #566a
 WEATHERSTRIPPING: (1) ZERO #328





SWAT BUILDING OUTSIDE STORAGE ENTRANCE DOOR

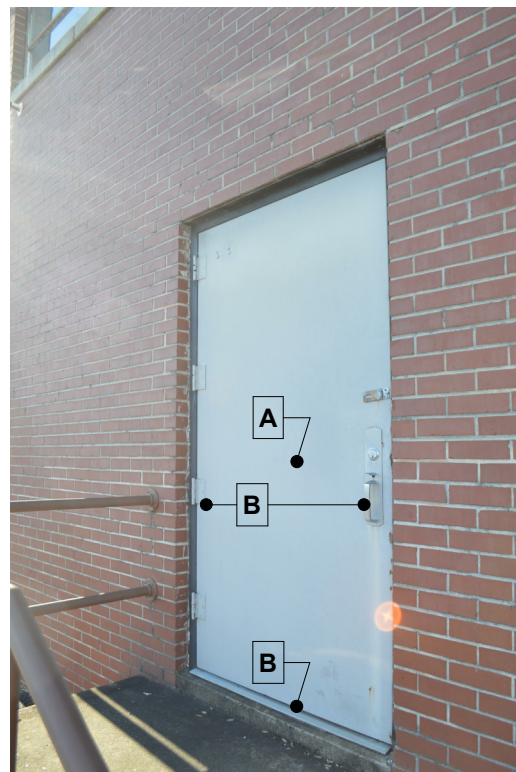


DOOR AND DOOR FRAME WORK REQUIRED:

- A. Remove and Replace louvered door only. Frame appears to be in good condition. The following work is required.
- B. Remove all hardware. Clean concrete surface below existing door and prepare for patching. Patch concrete with "Abocrete" Epoxy Patching and Resurfacing Compound.
- C. Remove all paint and rust from frame. Remove all caulking from joints on both front and back. Where rust has damaged frame, clean, sand or grind out and repair with "ABATRON" Ferrobond-P Steel-filled structural adhesive putty. Sand and prep frame for primer and painting.
- D. Paint new door and frame with Zinc Chromate Primer. Apply 2- Coats of exterior semi-gloss oil based enamel. Frame shall be Dark Gray. Door shall be Light Gray.
- E. Caulk (use Sikaflex-1A) around door frame to brick joint with polyurethane sealant in gray color.
- F. Install new hardware after cleaning. Use only stainless steel screws.

- DOOR: Hollow Metal Louvered(Top and Bottom) Door
(Basis of Design: Steel Door Institute - LL Door Nomenclature)
- HINGE: (3) Pairs, 4 1/2" x 4 1/2" Hager AB700 x US32D
- LOCK/LATCH: 3400 Series (Hager), Storeroom (Function no. 80), August Lever, US26D Finish
- LATCH SHIELD: 3" X 7" Stainless Steel
- CLOSER: LCN 4040XP, TOP Jamb Mounting, Metal Cover, Aluminum
- THRESHOLD: ZERO #566A
- WEATHERSTRIPPING: (1) ZERO #328

NOTE: Verify door dimensions in field before procurement.



EVIDENCE BUILDING ENTRANCE DOOR

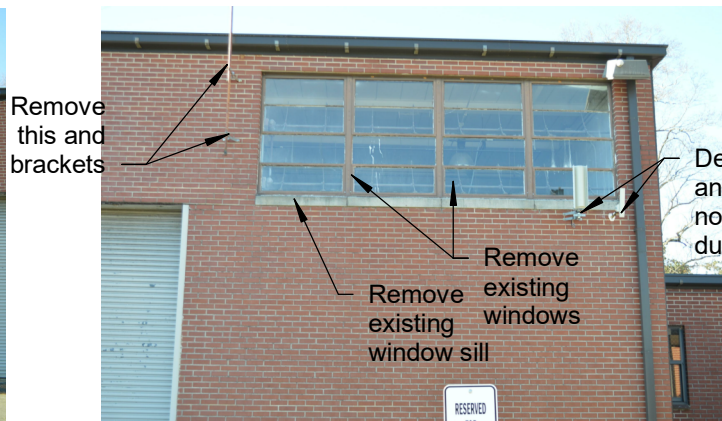


DOOR AND DOOR FRAME WORK REQUIRED:

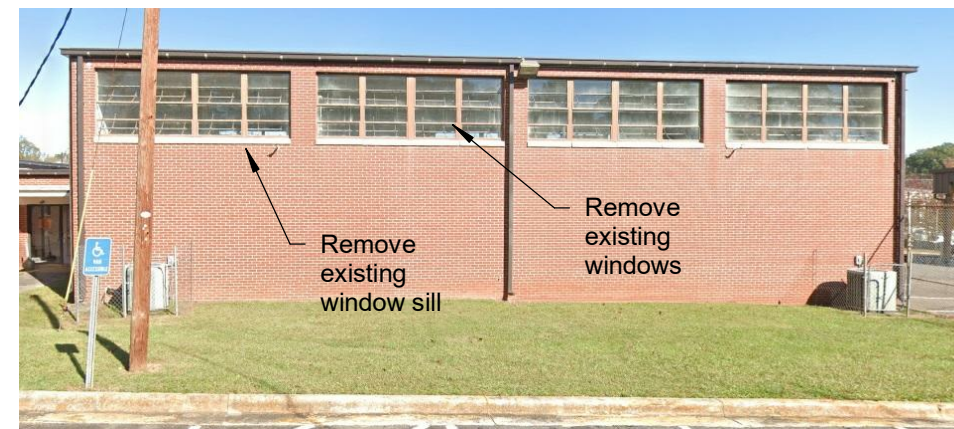
- A. This door and frame appear to be in good condition.
- B. Remove bottom sweep and threshold and clean thoroughly. Remove all hardware and clean and prepare for re-use. Clean concrete surface below threshold and prepare for patching and leveling. Patch and level concrete with "Abocrete" Epoxy Patching and Resurfacing Compound.
- C. Remove all paint and rust from door and frame. Remove all caulking from joints on both front and back.
- D. Where rust has damaged frame, clean, sand or grind out and repair with "ABATRON" Ferrobond-P Steel-filled structural adhesive putty.
- E. Sand and prep door and frame for primer and painting.
- F. Paint door and frame with Zinc Chromate Primer. Apply 2- Coats of exterior semi-gloss oil based enamel. Frame shall be Dark Gray. Door shall be Light Gray.
- G. Caulk (use Sikaflex-1A) around door frame to brick joint with polyurethane sealant in gray color.
- H. Re-install all hardware after cleaning. Use only stainless steel screws. Bed threshold in a full bed of polyurethane mastic.
- I. Install new Hardware Accessories:

- CLOSER: LCN 4040XP, TOP Jamb Mounting, Metal Cover, Aluminum
- THRESHOLD: ZERO #566a
- WEATHERSTRIPPING: (1) ZERO #328





EVIDENCE BUILDING WINDOW FRONT ELEVATION

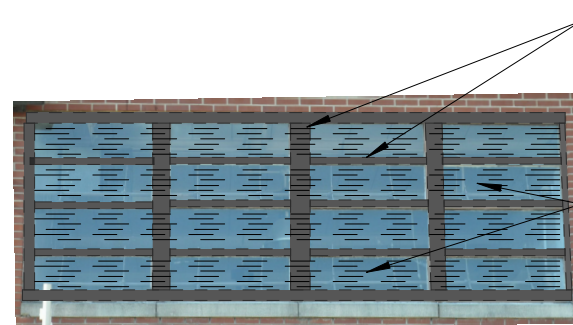


EVIDENCE BUILDING WINDOW LEFT ELEVATION

EXISTING WINDOW ENCAPSULATION PRIOR TO REMOVAL:

- A. Prior to window removal, coat the glazing compound with *Serpiflex - Asbestos Encapsulant (or equal), dry and cover with a 2.8in Gorilla Tough & Wide tape (see below for Taping procedure).
- B. Remove each section one at a time, wrap in 6 mil heavy poly wrap.
- C. Dispose at approved landfill.
- D. Apply Serpiflex on wall surfaces where windows were removed. Dry and in-fill per detail 1/5.00 sheet.
- E. Follow the same procedure with the concrete window sill.

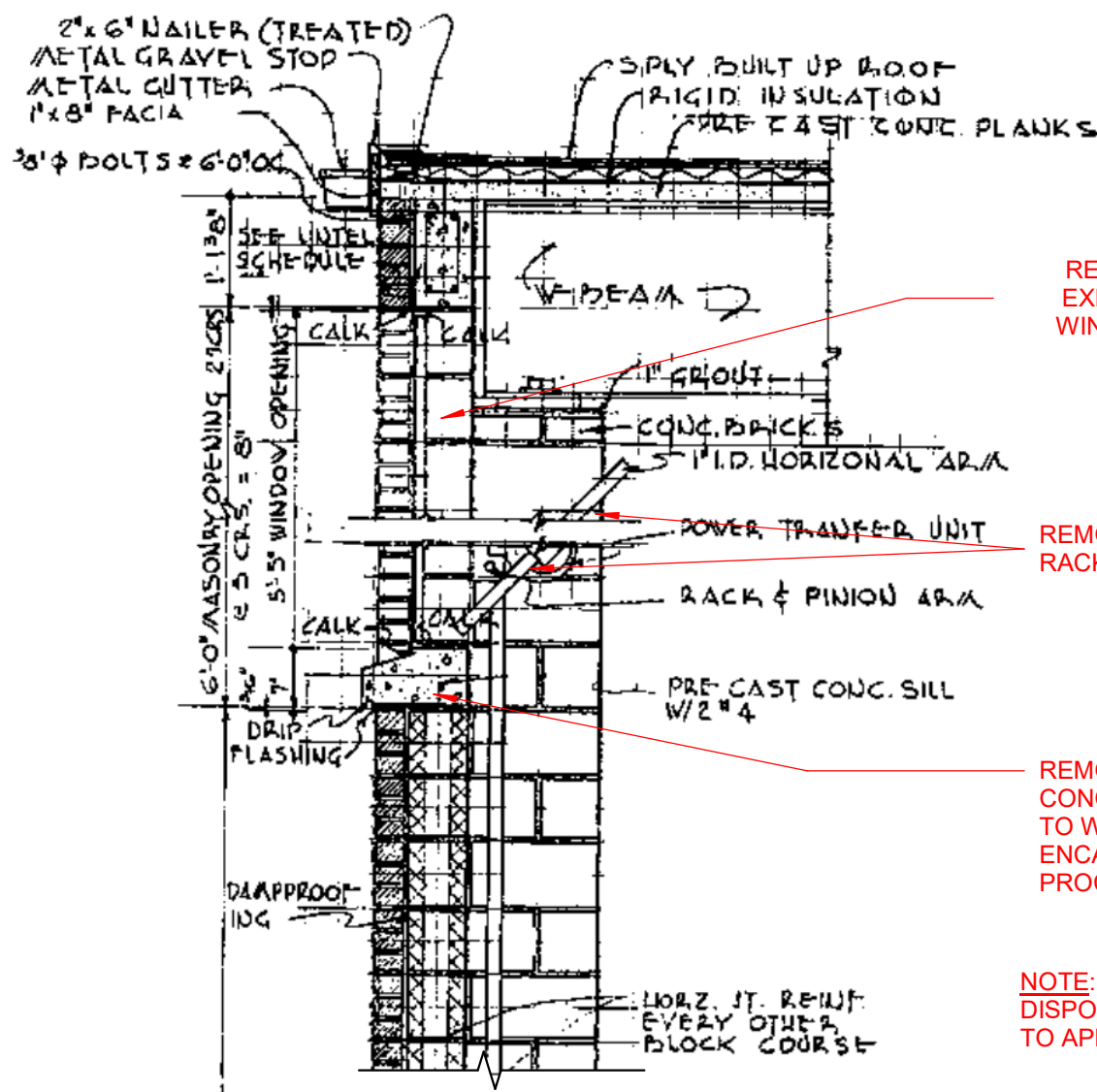
*Note: Apply Serpiflex compound per manufacturer procedure.



WINDOW TAPING, TYP.



*Note: Apply Serpiflex compound per manufacturer procedure.

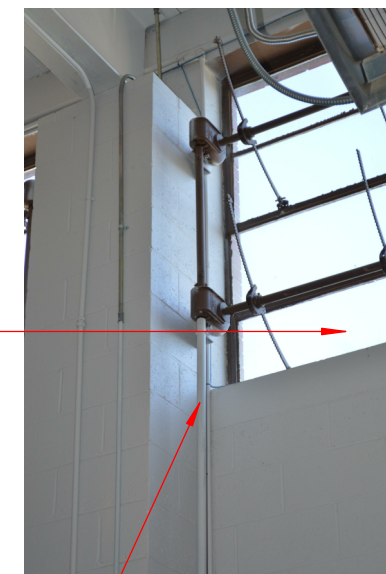


REMOVE EXISTING WINDOWS

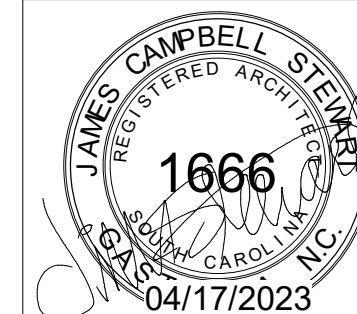
REMOVE TRANSFER UNIT, RACK & PINION ARM

REMOVE PRE-CAST CONC. SILL, REFER TO WINDOW ENCAPSULATION PROCEDURE

NOTE: DISPOSE ALL REMOVED ELEMENTS TO APPROVED LANDFILL

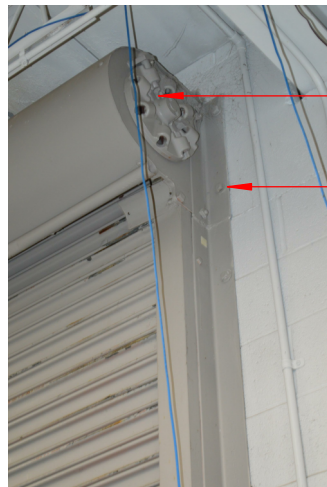


EXISTING WALL SECTION DETAIL





Remove and replace existing roll-up doors,
See New Roll-up door on detail 2/5.00.
Install per manufacturer

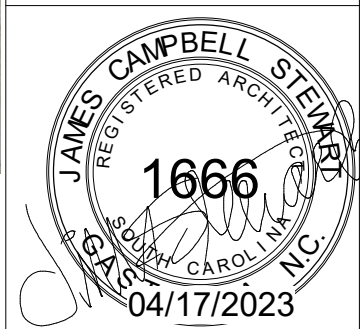


Remove roll-up door casing and accessories

Remove roll-up door track



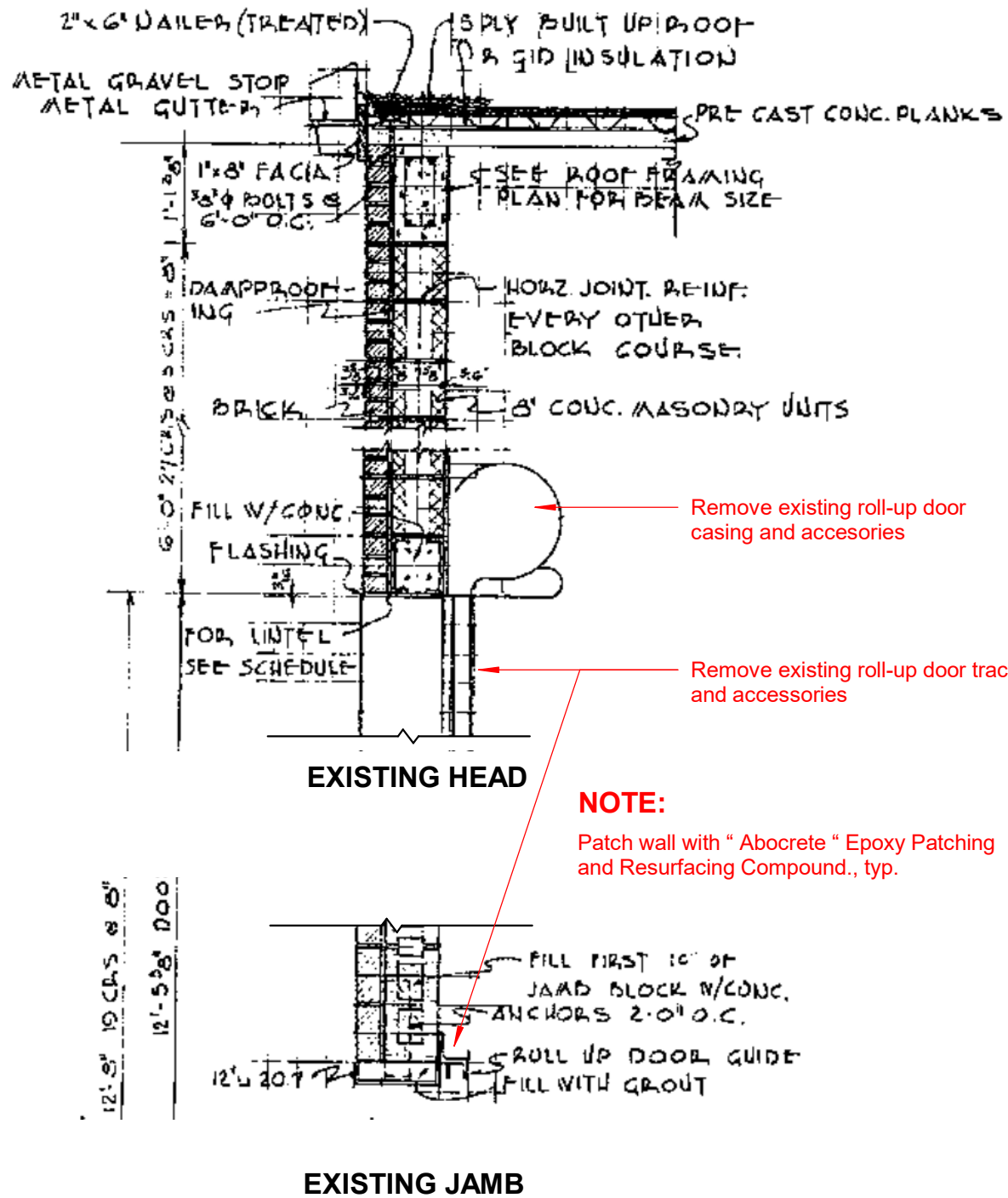
Remove roll-up door operator and sensors



NOTE:

1. Dispose all removed elements to approved landfill.
2. Patch wall and floor with " Abocrete " Epoxy Patching and Resurfacing Compound., typ.

1 TWO (2) EXISTING ROLL-UP DOOR DEMO@ SWAT BUILDING
Scale: 1/32" = 1'-0"



NOTE:
Patch wall with " Abocrete " Epoxy Patching and Resurfacing Compound., typ.

NOTE:
1. Dispose all removed elements to approved landfill.
2. Patch wall with " Abocrete " Epoxy Patching and Resurfacing Compound., typ.



Remove and replace existing roll-up door, casing and accessories. See 2/5.00 for new Roll-up door details, install per manufacturer.

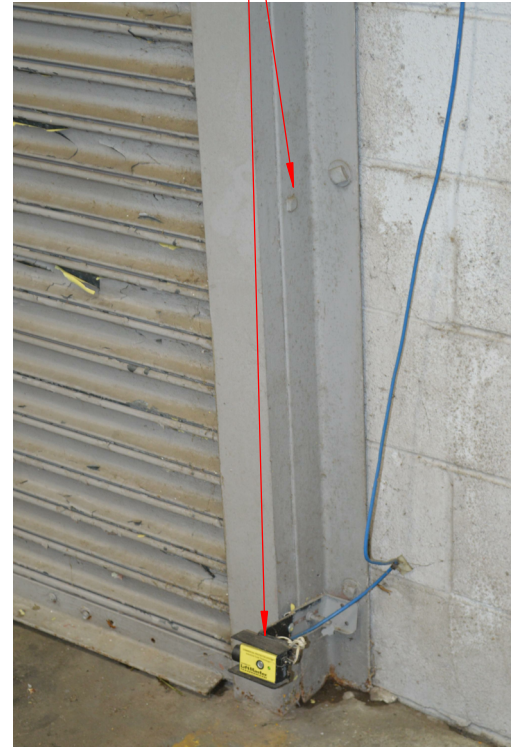
Remove existing roll-up door controller

Remove track and sensors

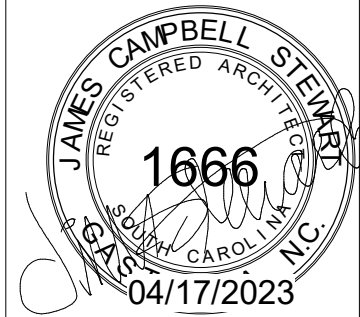
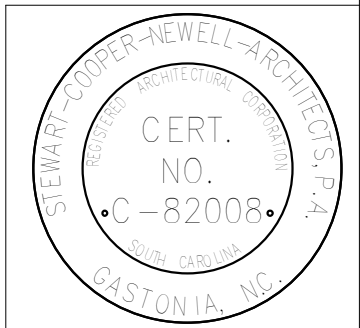
Remove Stop and Go controller and conduit



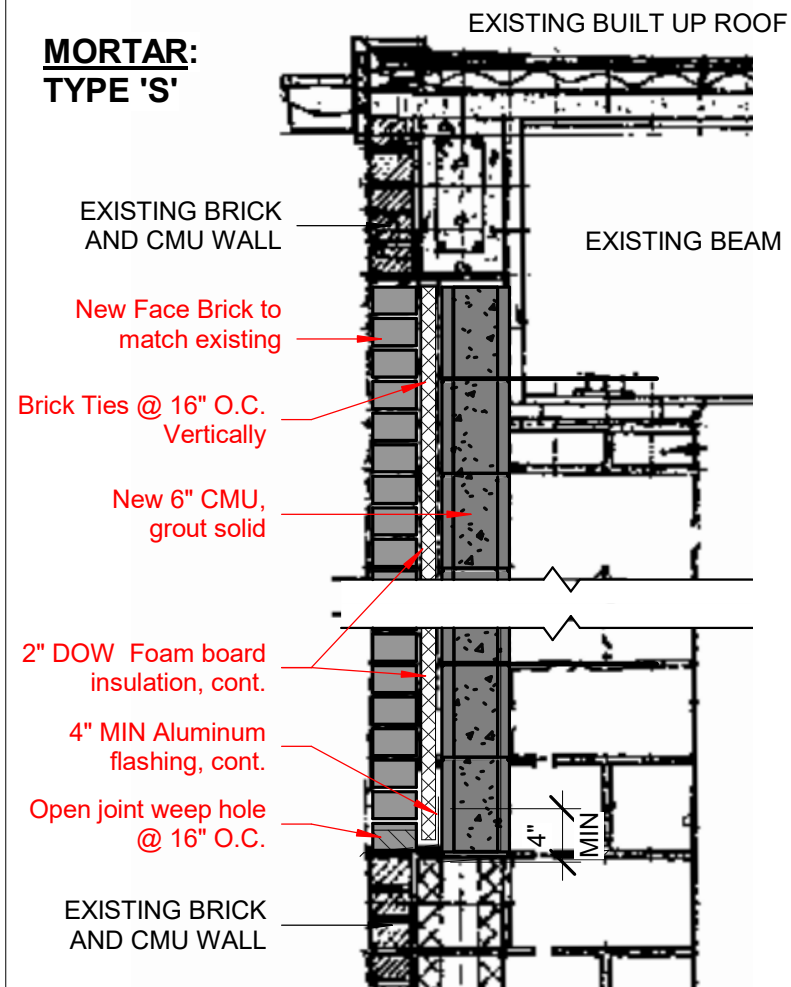
Remove all paint and rust from lintel. Remove all caulking from joints. Where rust has damaged lintel, clean, sand or grind out and repair with " ABATRON " Ferrobond-P Steel-filled structural adhesive putty. Sand and prep frame for primer and painting.



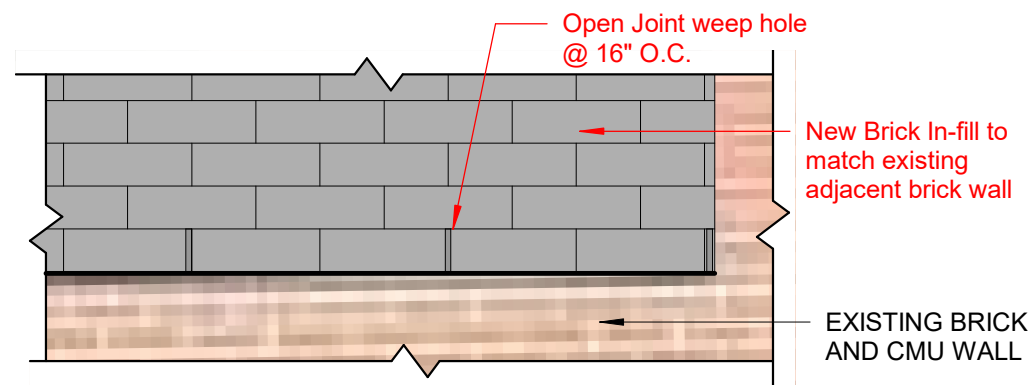
1 EXISTING ROLL-UP DOOR DEMO @ EVIDENCE BUILDING
Scale: 1/2" = 1'-0"



**MORTAR:
TYPE 'S'**

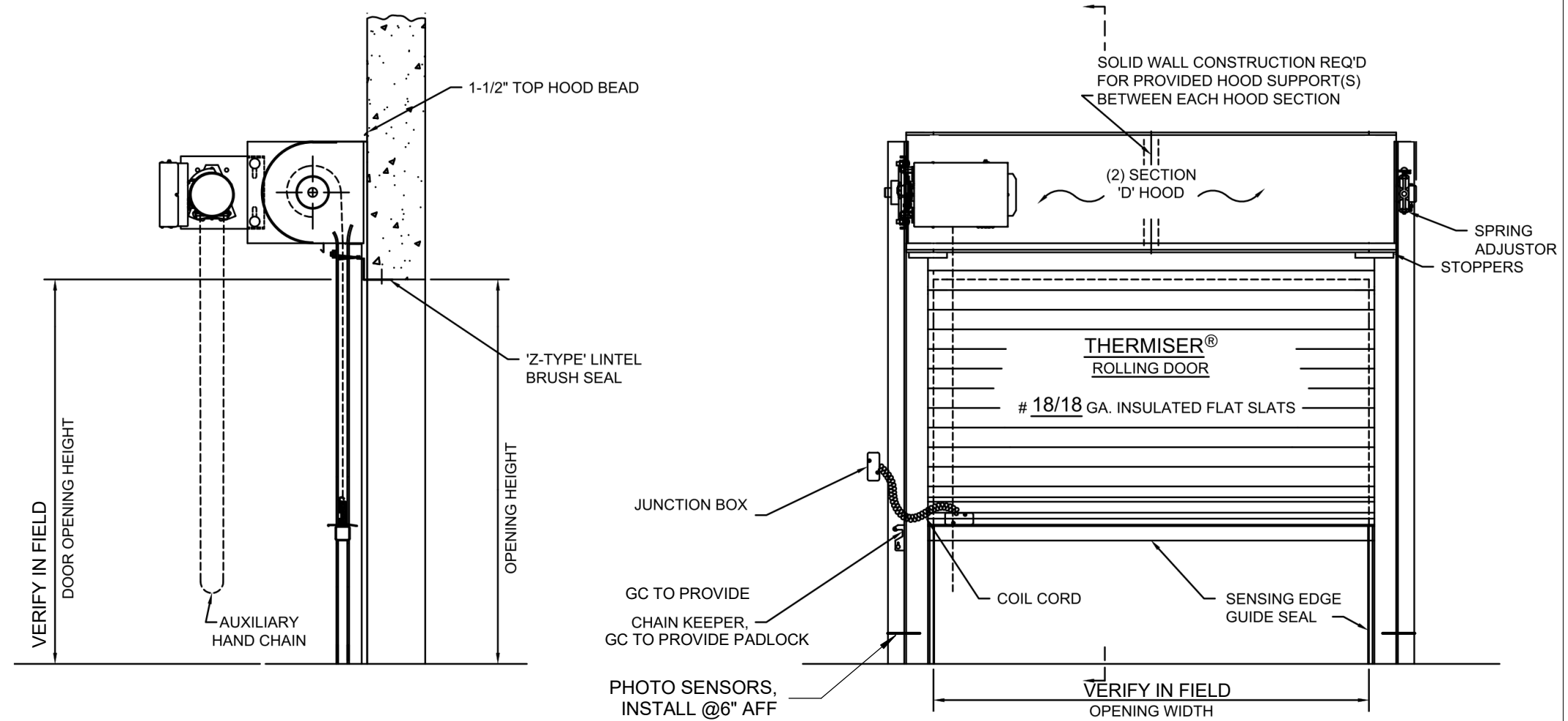


TYPICAL WALL REPAIR SECTION



TYPICAL PARTIAL WALL REPAIR ELEVATION

1 WALL REPAIR @ WINDOW OPENING
Scale: 3/4" = 1'-0"

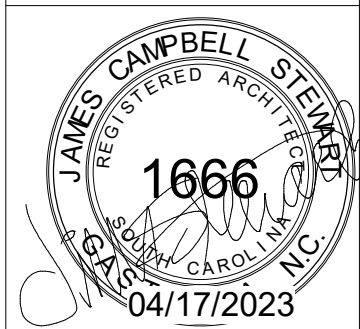
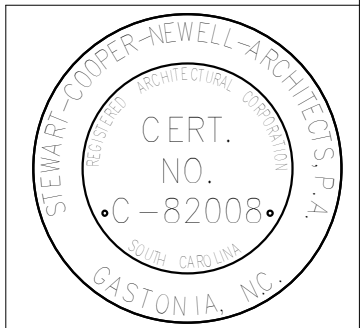


CORNELL THEMISER INSULATED ROLLING DOOR (ESD20)

QUANTITY: THREE (3) TOTAL
EVIDENCE BUILDING: ONE (1)
SWAT BUILDING: TWO (2)

REFER TO SPECIFICATIONS, FOR INSULATED ROLLING SERVICE DOOR

2 NEW ROLL-UP DOOR ELEVATION (COIL SIDE) AND SECTION
Scale: 1/4" = 1'-0"



**SPECIFICATIONS FOR
INSULATED ROLLING SERVICE DOOR**

PART 1 GENERAL

1.1 SUMMARY

- A. **Summary:** This specification is for the removal of three (3) existing doors, tracks, operators and all associated equipment and: The installation of three (3) new insulated rolling doors, operators, track, safety devices, electrical, weather-stripping and all associated material and equipment required for a complete functioning installation.
- B. **Section Includes:** Electric operated overhead insulated rolling doors.
- C. **Related Sections:**
 - 1. Metal Fabrications. Door opening jamb and head members.
 - 2. Rough Carpentry. Door opening jamb and head members.
 - 3. Hardware. Padlocks.
 - 4. Painting. Field painting.
 - 5. Electrical wiring and conduit, fuses, disconnect switches, connection of operator to power supply, and installation of control station and wiring.
 - 6. Control Stations.

1.2 SYSTEM DESCRIPTION

- A. **Design Requirements:**
 - 1. **Wind Loading:**
 - a. Supply doors to be operational up to 20 PSF maximum wind load
 - 2. **Cycle Life:**
 - a. Design doors of heavy duty construction for continuous duty 1024 High-Speed, High-Cycle Insulated Door for the life of the door.
 - 3. **Seismic Performance:**
 - a. Provide manufacturer's seismic calculations confirming ASCE7-10
 - 4. **Insulated Door Slat Material Requirements:**
 - a. Flame Spread Index of 0 and a Smoke Developed Index of 10 as tested per ASTM E84.
 - b. Minimum R-value of 8.0 (U-value of 0.125) as calculated using the ASHRAE Handbook of Fundamentals.
 - c. Insulation to be CFC Free with an Ozone Depletion Potential (ODP) rating of zero.
 - 5. **Safety:**
 - a. Chain operated doors shall be designed so that the door immediately stops upward or downward travel and is maintained in a stationary position when the hand chain is released by user.

1.3 SUBMITTALS

- A. Reference Section 01 33 00 Submittal Procedures; submit the following items:
 - 1. **Product Data.**
 - 2. **Shop Drawings:** Include special conditions not detailed in Product Data. Show interface with adjacent work.
 - 3. **Quality Assurance/Control Submittals:**
 - a. Provide manufacturer ISO 9001:2015 registration.
 - b. Provide manufacturer and installer qualifications - see below.
 - c. Provide manufacturer's installation instructions.

- 4. **Closeout Submittals:**
 - a. Operation and Maintenance Manual.
 - b. Certificate stating that installed materials comply with this specification.

1.4 QUALITY ASSURANCE

- A. **Qualifications:**
 - 1. **Manufacturer Qualifications:** ISO 9001:2015 registered and a minimum of five years experience in producing doors of the type specified
 - 2. **Installer Qualifications:** Manufacturer approved firm specializing in work of this Section, with minimum 2 years' experience.

1.5 DELIVERY STORAGE AND HANDLING

- A. Reference Section 01 66 00 Product Storage and Handling Requirements.
- B. Follow manufacturer's instructions.

1.6 WARRANTY

- A. Standard Warranty: Two years from date of shipment against defects in material and workmanship.
- B. Maintenance: Submit for owner's consideration and acceptance of a maintenance service agreement for installed products.

PART 2 PRODUCTS

2.1 MANUFACTURER

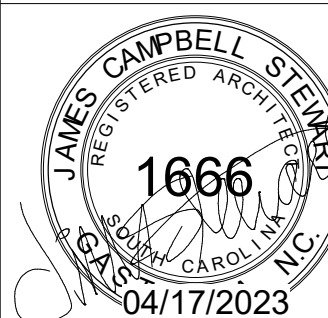
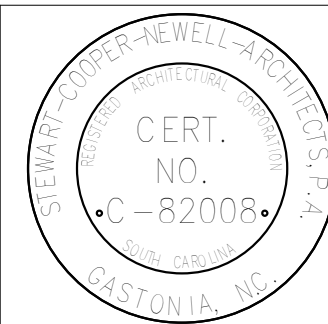
- A. **Manufacturer:**
 - 1. **The following product shall be the insulated rolling service door for the project. Substitutions are not permitted.**
 - 2. **Cornell Thermiser Model: ESD20**
- Substitutions: Not permitted**

2.2 PRODUCT INFORMATION

- A. **Model:** ESD20

2.3 MATERIALS

- A. **Curtain:**
 - 1. **Fabrication:**
 - a. **Slat Material:** No. 6F, (Listed Exterior/Interior):
 - 1) **Aluminum/Aluminum:** 0.040 inch (1.016 mm) aluminum
 - b. **Insulation:** 7/8 inch (22 mm) foamed-in-place, closed cell urethane
 - c. **Total Slat Thickness:** 15/16 inch (24 mm)
 - d. **Flame Spread Index** of 0 and a **Smoke Developed Index** of 10 as tested per ASTM E84
 - e. **R-value:** 8.0
 - 2. **Exterior Slat Finish:**
 - a. **Aluminum:** Clear anodized.



3. **Interior Slat Finish:**

- a. **Aluminum:** Clear anodized.

B. **Endlocks:** Fabricate interlocking sections with high strength nylon or galvanized cast iron endlocks on alternate slats each secured with two 1/4" (6.35 mm) rivets. Provide windlocks as required to meet specified wind load.

1. **Nylon:** Required up to 21'-5" width (DBG - Distance Between Guides)
2. **Galvanized cast iron:** Required if above 21'-5" width (DBG - Distance Between Guides)

C. **Bottom Bar**

1. **Configuration:**

- a. **Insulated Bottom Bar:** Reinforced extruded aluminum interior face with full depth insulation and exterior skin slat to match curtain material and gauge. Minimum 4" tall x 1-1/16" thickness.

2. **Finish:**

- a. **Exterior:** Match slats
b. **Interior:** Clear anodized.

D. **Guides:**

1. **Fabrication:**

- a. Minimum 3/16 inch (4.76 mm) structural steel angles. Provide windlock bars of same material when windlocks are required to meet specified wind load. Top of inner and outer guide angles to be flared outwards to form bellmouth for smooth entry of curtain into guides. Provide removable guide stoppers to prevent over travel of curtain and bottom bar. Top 16 1/2" (419.10 mm) of coil side guide angles to be removable for ease of curtain installation and as needed for future curtain service.

2. **Finish:**

- a. **Hot-dip Galvanized:** ASTM A 123, Grade 85 zinc coating, hot-dip galvanized after fabrication

E. **Counterbalance Shaft Assembly:**

1. **Barrel:** Steel pipe capable of supporting curtain load with maximum deflection of 0.03 inches per foot (2.5 mm per meter) of width
2. **Spring Balance:** Oil-tempered, heat-treated steel helical torsion spring assembly designed for proper balance of door to ensure that maximum effort to operate will not exceed 25 lbs (110 N). Provide wheel for applying and adjusting spring torque.

F. **Brackets:**

Fabricate from minimum 3/16 inch (5 mm) steel plate with permanently lubricated ball or roller bearings at rotating support points to support counterbalance shaft assembly and form end closures

1. **Finish:**

- a. **Hot-dip Galvanized:** ASTM A 123, Grade 85 zinc coating, hot-dip galvanized after fabrication

G. **Hood:**

Minimum 0.040 inch (1.016 mm) aluminum with reinforced top and bottom edges. Provide minimum 1/4 inch (6.35 mm) steel intermediate support brackets as required to prevent excessive sag.

1. **Finish:**

- a. **Aluminum:** Clear anodized.

H. **Weatherstripping:**

1. **Bottom Bar:**

- a. **Bottom Bar, Motor Operated Doors:** Sensing/weather edge with neoprene astragal extending full width of door bottom bar

2. **Guides:** Replaceable vinyl strip on guides sealing against both sides of curtain

3. **Hood:** Neoprene/rayon baffle to impede air flow above coil
4. **Lintel Seal:** Nylon brush seal fitted at door header to impede air flow

2.4 OPERATION

A. **Door Operators:**

1. Model H Logic 5.0 hoist operator by LiftMaster. www.LiftMaster.com
a) Substitutions: Not permitted.
2. Operation: Hoist.
3. Drive type: V-belt primary reduction.
4. Mounting: Door hood.
5. Disconnect for manual operation: Floor level emergency release sash chain hoist with electric interlock.
6. Rated duty cycle: Maximum 25 cycles per hour and 90 cycles per day.
7. Meet UL 325.
8. Motor: Continuous-duty, high starting torque motor with instant reverse and overload protection, listed by Underwriters Laboratories, sized to door conditions, removable without affecting limit switch settings.
9. Enclosure: NEMA 1.
10. Travel rate: 8 to 9 inches per second.
11. Radio receiver: Logic 5.0 on-board; accept Security+ 2.0 rolling code technology remote controls and binary DIP switch remote controls.
12. Internet connectivity: 50 channel FHSS myQ technology.
13. Control station: Three push button type in NEMA 1 enclosure.
14. Remote controls: Four button rolling code Security+ 2.0.
15. Primary monitored entrapment protection: Light curtain.
16. Secondary non-monitored entrapment protection: Photo eyes, (rigid housing) and sensing edge system.

B. **Control Station:**

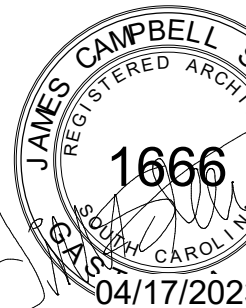
1. **Surface mounted:** "Open/Close/Stop" push buttons; NEMA 1

C. **Control Operation:**

1. **Momentary Contact to Close:**
Fail-safe, UL325-2010 Compliant Entrapment Protection for Motor Operation.
a. **SafetyGard UL325 Light Curtain with Dynamic Sequential Blanking:** Provide monitored, non-contact light curtain consisting of a transmitter and a receiver to be mounted to the guide assembly of the door in the provided mounting channel, projecting a thru beam across the width of the door for the height of the light curtain (3ft or 6ft depending on opening size of the door). Interruption of beam before door fully closes shall cause door to immediately stop downward travel and reverse direction to the fully opened position
b. **2-wire, E.L.R. electric sensing/weather edge seal** extending full width of door bottom bar.
c. **NEMA 1 photo eye sensors** consisting of a transmitter and receiver that are to be mounted within 6" (152.4 mm) of the floor, projecting an IR beam across the entire width of the door. Electrical contractor to provide low voltage wiring from the transmitter and receiver to the door operator.
2. **Sensing/Weather Edge:** Automatic reversing control by an automatic sensing switch within neoprene or rubber astragal extending full width of door bottom bar.
a. **Electric sensing edge device.** Provide a wireless sensing edge connection to motor operator eliminating the need for a physical traveling electric cord connection between bottom bar sensing edge device and motor operator.

2.5 ACCESSORIES

A. **Locking:**



1. **Padlockable slide bolt** on coil side of bottom bar at each jamb extending into slots in guides. Provide interlock switches on Motor operated units.

D. **Strip Door Bracket:** Assembly integral to coiling door to hang strip door on interior of building. Contact factory for sizes greater than 12'-0" x 12'-0". Powder coated finish to match coiling door.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates upon which work will be installed and verify conditions are in accordance with approved shop drawings.
- B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.
- C. Commencement of work by installer is acceptance of substrate.

3.2 INSTALLATION

- A. General: Install door and operating equipment with necessary hardware, anchors, inserts, hangers and supports.
- B. Follow manufacturer's installation instructions.

3.3 ADJUSTING

- A. Following completion of installation, including related work by others, lubricate, test, and adjust doors for ease of operation, free from warp, twist, or distortion.

3.4 CLEANING

- A. Clean surfaces soiled by work as recommended by manufacturer.
- B. Remove surplus materials and debris from the site.

3.5 DEMONSTRATION

- A. Demonstrate proper operation to Owner's Representative.
- B. Instruct Owner's Representative in maintenance procedures.

END OF SECTION

