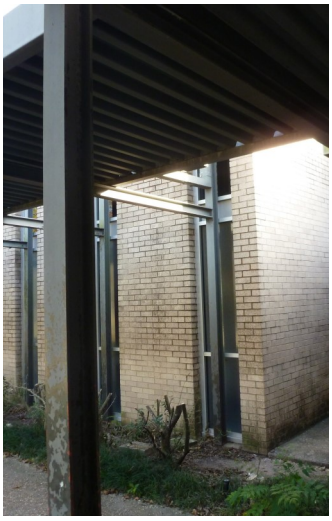
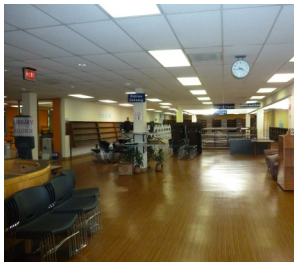
FEASIBILITY ASSESSMENT REPORT

Old Library

707 East College Street





THE CITY OF Seguin TEXAS

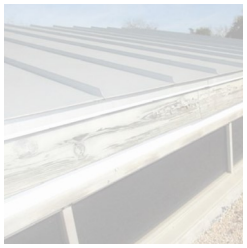
TSG AIA ARCHITECTS

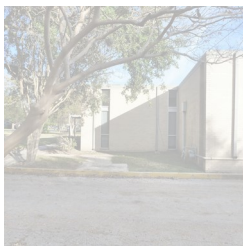
TABLE OF CONTENTS

TSG ARCHITECTS AIA

ARCHITECTURAL

overview
interior conditions
existing conditions
accessibility





OVERVIEW

Introduction

The purpose of this report is to provide the City of Seguin with basic information to use in determination of the usability and possible renovation of 707 East College Street, the former Public Library. The desired use of the building after renovation is undecided at the time this assessment was completed.

This report analyzes the building's history, accessibility, structural integrity, mechanical, electrical and plumbing infrastructure, as well as existing roof conditions and a report addressing asbestos and any lead content. Each section of this report will provide a detailed description of existing conditions and may also provide corresponding recommendations to aid in making educated decisions for improvements.

Building History

Built in 1964, the original Seguin City-County Library was one story and approximately 6,500 square feet. The Library was built on a site given to the City of Seguin by the Bauer family. The facility offered natural light through floor to ceiling storefront windows on all sides of the building. Additionally, steel wide flange details and canopies add to the building's architectural character.

In 1985, an 8,500 square foot addition more than doubled the Library's area. The addition continued the architectural theme of natural light by including more floor to ceiling windows. Additionally, clerestories were added to the design to bring light to the center of the large open space. The most striking feature of the new addition is vertical brick fins on the South side between the large windows.

As from its conception, the Library is the only building on a block that is designated as Bauer Park. The vast open area surrounding the Library has beautiful trees that add to the building's charm.

Applicable Code Requirements

The former Library is located in a residential area of Seguin, surrounded by private single family homes on all sides. The Library is outside of Seguin's Downtown Historic District, and the facility does not have any recognitions as far as a historic building or site.

The site for the Library was donated by the Bauer family on the Bauer Park block. Any deed restrictions will need to be consulted as to what is allowed to be built on this donated property.

Since the building is not designated as a Historic building or in the Downtown Historic District, no known historic preservation applications or reviews will be required to be submitted. Any renovation will be subject to the City of Seguin's adopted codes and ordinances. The City of Seguin's Code of Ordinances and all permit applications can be found on the City of Seguin's website for download.

EXISTING EXTERIOR CONDITIONS

Observations

The exterior of the Library is overall in fair condition; however, with some cleaning and attention, the façades could visually be restored to the original aesthetic intent. The Library has a large number of windows that appear to be in good condition. The window systems will need to be tested for energy efficiency to verify that code requirements are met.

The facility has several steel canopies to cover walkways around the Library. The steel seems to be in good condition, but the paint is peeling from many of the members.

Drainage is a major concern at the front entrance to the Library from East College Street. The site gradually slopes toward the building from East College Street. The media room on the North side appears to be especially susceptible to water runoff collection.

At the roofline, the fascia has been warped and worn on all sides of the building. Refer to the roof assessment section of this report for further information on the roof and fascia condition. Additionally near the roofline, some of the exterior light fixtures are broken, and all of the fixtures are discolored from age.

A central architectural feature of the 1985 addition is the masonry fins on the South side of the Library. The foundation beneath and between the fins was not executed well. The foundation is exposed in many areas, which detracts from the aesthetic value of this feature.

Recommendations

The main improvement architecturally to all of the façades is for a thorough cleaning of all of the brick and mortar with some re-pointing work. The North façade on East College Street is especially in need of attention.

The steel canopies are a unique feature of the Library's exterior, and we would recommend utilizing this covered walkway. In addition to repainting the steel members, we recommend removing the corrugated metal panels added between the framed bays. These corrugated metal panels were not part of the original design intent.

The drainage condition and grading should be investigated further, especially from East College Street to the front entry. Regrading may be required to prevent water runoff from entering the building.

We recommend replacing the fascia on all sides of the Library, in addition to recommendations made by the roof assessment report.

Addressing the eroding foundation between the masonry fins on the South side of the Library would increase the aesthetic value of the architecture. While this does not affect the function of the building, it would be a great opportunity to add character to the South façade.

Brick and joints needs to be cleaned

Fascia in poor condition on all sides of the buildng

Paint on steel canopy is peeling

Corrugated metal panels added between framed bays recommended to be removed

Drainage from East College Street slopes down toward the entrance of the Library

Broken and faded exterior light fixture

Exposed foundation at masonry fins on South façade eroding

EXISTING INTERIOR CONDITIONS

Observations

Overall, the interior is in generally good condition. The space is currently being utilized for storage of past library equipment and other furnishings. The large open Library stack area consists of most of the 1985 addition. As expected, the many support spaces have more worn finishes, since they were used on a daily basis by staff members. The wall covering on the interior walls have some seams that are curling in some areas.

The circulation desk and other furnishings in the space are in good condition. If desired, the circulation desk could be reused in a renovation.

Some of the acoustical ceiling tiles are stained, which points toward roof issues. Refer to the roof assessment for additional information. Many of the acoustical ceiling tiles are dirty from age.

Most of the support spaces have carpeted flooring that is aged and worn. The meeting rooms and media spaces are in similar condition. The open stack area has some carpet and some vinyl sheet flooring. The vinyl flooring does not appear to have any tears and is in good condition, although the pattern and color may seem dated.

The restroom finishes and fixtures are worn, since they are all appear to be from the original 1964 Library. There are also accessibility issues with the restrooms. Refer to the Accessibility narrative for further discussion. Furthermore, depending on the use of the facility, additional plumbing fixtures will likely be required to comply with the International Plumbing Code.

Recommendations

The wall covering on the interior walls is detaching at some of the seams. We recommend addressing these finish areas and giving the walls a fresh finish.

To give the space a facelift, we recommend replacing all of the acoustical ceiling tiles. In many areas, exposing the structure above may be a great method for utilizing the large perimeter windows, as well as increasing the height of the space.

We recommend replacing all of the flooring throughout the Library, both carpet, tile and vinyl flooring. Replacement flooring types will depend on the future use of the space. Note that any asbestos containing materials will need to be addressed with caution in any finish work. Refer to the asbestos survey for further information.

The restrooms will require attention both for function, aesthetics, and accessibility compliance. Refer to the Accessibility section for further discussion.

The original circulation desk and other furnishings are in good condition

Expansion joints are visible between the original 1964 Library and the 1985 addition

Some acoustical ceiling tiles are stained and many are dirty from age

Carpet and vinyl flooring shows some wear and dirt, especially in support areas

ACCESSIBILITY

Background

The Texas Accessibility Standards (TAS) was implemented in 1991 as a requirement that all public and commercial buildings provide access for persons with disabilities, as determined by the Americans with Disabilities Act (ADA). Texas is one of the few states that is governed by its own accessibility standards.

TSG Architects conducted a general visual inspection of ADA compliance that does not constitute an official ADA inspection.

Observations & Recommendations

The front entry from East College Street has a gradual slope down to the front doors from the curb. The slope will need to be verified for accessibility compliance. A curb ramp is located at the corner of the block.

The Library stack area has two exterior emergency exit doors. If these doors are utilized as required emergency exit doors, the exterior step will need to be addressed. A level landing will be required for accessibility.

Many of the interior doorways are not wide enough for wheel chair access. If the interior walls and doors are kept, numerous doorways will need to be widened by a few inches to be in compliance.

In addition to door opening widths, many area of the existing Library do not have the proper clearances around the doors. When space planning any renovation, these required clearances will need to be kept in mind.

The countertop and sink at the break room are not ADA compliant. The sink requires a knee space for wheel chair access to roll beneath the counter. Furthermore, the countertop height in this room is above the required countertop height.

The restrooms will need a large amount of attention and renovation to be brought into compliance with ADA. Some of the restrooms do not have proper clearance around the lavatory. Additionally, none of the restrooms have an accessible stall. The accessible stall will be required to have all of the required grab bars mounted at the appropriate height. The mirrors are also mounted too high above the lavatories. For the facility to pass an ADA inspection, all of the restrooms will need to be redesigned.

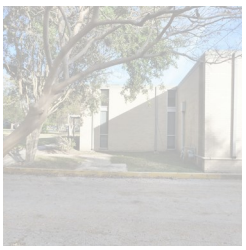
Exterior exit door has a step down to the exterior

Countertop and sink do not comply with accessibility standards

All restrooms will require a redesign in order to comply with accessible clearances

ASBESTOS & HAZARDOUS MATERIALS

building description
field activities
regulatory overview
findings and recommendations



TSG ARCHITECTS

ASBESTOS SURVEY REPORT

Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas 78155
Terracon Project No. 96167943
December 27, 2016

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted an asbestos survey of the Seguin – Guadalupe County Library building located at 707 East College Street in Seguin, Texas. The survey was conducted on December 8, 2016, by State of Texas licensed Asbestos Inspectors in general accordance with our proposal dated November 18, 2016. Interior and exterior building components were surveyed and homogeneous areas of suspect asbestos-containing materials (ACM) were visually identified and documented. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA). Samples were delivered to a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and Texas Department of State Health Services (TDSHS) licensed laboratory for analysis by Polarized Light Microscopy (PLM) protocol.

1.1 Project Objective

We understand this asbestos survey was requested to facilitate planned interior and exterior renovations. The Texas Asbestos Health Protection Rules (TAHPR) and EPA regulation 40 CFR 61, Subpart M, The National Emission Standards for Hazardous Air Pollutants (NESHAP) requires that an asbestos survey be performed prior to renovation or demolition activities.

2.0 BUILDING DESCRIPTION

The building is a one-story, metal frame and masonry block structure atop a concrete slab-on-grade foundation. The roof is primarily a flat built-up system with several sections of sloped metal. Interior walls consisted of a combination of gypsum wallboard and concrete masonry unit (CMU) construction with a painted and textured finish. The walls of the restrooms were finished with grouted ceramic tile. The floors were observed with a combination of resilient floor tile, sheet flooring, adhered carpet, grouted ceramic tile, and bare concrete (mechanical rooms). The majority of ceilings throughout were finished with a suspended ceiling system. The ceilings of the skylight areas in the Main Library were finished with gypsum wallboard with a painted and textured finish. The heating, ventilation and air conditioning (HVAC) system equipment was observed above the ceilings and in the mechanical rooms.

3.0 FIELD ACTIVITIES

The survey was conducted by Mr. Mitch Stogner (License No. 10-5648), a TDSHS licensed Individual Asbestos Consultant, and Mr. Roman Fanelli (License No. 60-3437), a TDSHS licensed Asbestos Inspector. A copy of each individual's asbestos consultant/inspector license is attached as Appendix D. The survey was conducted in general accordance with the sample collection protocols established in EPA regulation 40 CFR 763 (AHERA). A summary of survey activities is provided below.

3.1 Visual Assessment

Our survey activities began with visual observation of the interior and exterior portions of the building to identify homogeneous areas of suspect ACM. A homogeneous area consists of building materials that appear similar throughout in terms of color, texture and date of application. Interior assessment was conducted throughout visually accessible areas of the building. The exterior elevations and roof of the building were included in the scope of this survey. Building materials identified as concrete, glass, wood, masonry, metal or rubber were not considered suspect ACM.

Suspect materials located within CMU block cavity areas, behind mirrors or beneath ceramic tile were not sampled in order to prevent excessive damage to the material. Suspect materials, such vermiculite fill, mastic or thin set, should be sampled prior to renovation activities if the activities will disturb the materials.

3.2 Physical Assessment

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a material which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

3.3 Sample Collection

Based on results of the visual observation, bulk samples of suspect ACM were collected in general accordance with AHERA sampling protocols. Random samples of suspect materials were collected in each homogeneous area. Sample team members collected bulk samples using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

Ninety-one (91) bulk samples were collected from twenty-nine (29) homogeneous areas of suspect ACM. A summary of suspect ACM samples collected during the survey is included as Appendix A.

3.4 Sample Analysis

Suspect ACM bulk samples were submitted under chain of custody to Moody Labs of Farmers Branch, Texas for analysis by PLM with dispersion staining techniques per EPA's Method for the Determination of Asbestos in Bulk Building Materials (600/R-93-116). The percentage of asbestos, where applicable, was determined by microscopical visual estimation. Moody Labs is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP Accreditation No. 102056-0) and licensed by the TDSHS (License No. 300084). Analytical results and sample chain-of-custody documentation are included in Appendix C of this report.

4.0 REGULATORY OVERVIEW

The State of Texas has established the TAHPR which requires any asbestos-related activity to be performed by an individual licensed by the State of Texas, through the TDSHS. An asbestos related activity consists of the disturbance (whether intentional or unintentional), removal, encapsulation, or enclosure of asbestos, including preparations or final clearance, the performance of asbestos surveys, the development of management plans and response actions, asbestos project design, the collection or analysis of asbestos samples, monitoring for airborne asbestos, bidding for a contract for any of these activities, or any other activity required to be licensed under TAHPR.

Abatement must be performed by a State of Texas licensed asbestos abatement contractor in accordance with a project design prepared by a State of Texas licensed asbestos consultant. In addition, third party air monitoring must be conducted during the abatement activities.

The asbestos NESHAP (40 CFR Part 61 Subpart M) regulates asbestos fiber emission and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packing, gaskets, resilient floor coverings and asphalt roofing products containing more than 1% asbestos. Category II non-friable ACM are any materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and II non-friable ACM which is in poor condition and has become friable or which will be subject to drilling, sanding, grinding, cutting, or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities.

The TAHPR and NESHAP require that written notification be submitted before beginning

renovation projects which include the disturbance of any asbestos-containing material (ACM) in a building or facility, or before the demolition of a building or facility, even when no asbestos is present. This written notification must be provided to the TDSHS at least 10 working days prior to the commencement of asbestos abatement or demolition activities. Removal of RACM must be conducted by a State of Texas licensed asbestos contractor. In addition, third party air monitoring must be performed during the abatement.

The OSHA Asbestos standard for the construction industry (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc).

The OSHA standard classifies construction and maintenance activities which could disturb ACM and specifies work practices and precautions which employers must follow when engaging in each class of regulated work. States that administer their own federally approved state OSHA programs may require other precautions.

5.0 FINDINGS AND RECOMMENDATIONS

Nine (9) of the homogeneous materials sampled and analyzed as part of this survey were found to contain asbestos.

- Concrete Masonry Unit Texture - The concrete masonry unit (CMU) texture materials utilized on select walls in Vestibule 102, Storage 113, Research Storage 116, and Children's Area 117 were found to contain 2% Chrysotile asbestos. The asbestos-containing concrete masonry unit texture materials identified were noted to be in good condition and were assessed as being non-friable. It is estimated that there exists approximately 2,000 square feet of these materials in the above listed areas. Additional CMU texture may be present behind ceramic tile or drywall construction on the perimeter walls of the original structure.

- Resilient Floor Tile and Mastic - The beige 12" x 12" floor tile with brown and gray streaks and associated black mastic materials utilized in Vestibule 102, Janitor 110, Storage 113, and Research Storage 114 were found to contain 5% Chrysotile asbestos in the black mastic. No asbestos was detected in the floor tile. The asbestos-containing floor tile mastic materials identified were noted to be in good condition and were assessed as being non-friable. It is estimated that there exists approximately 580 square feet of these materials in the above listed areas.

- Residual Floor Tile Mastic (Below Adhered Carpet) - The black residual floor tile mastic materials (below adhered carpet with yellow mastic) utilized in Hall 103, Office 104, Office 105, Head Librarian 106, Work Room 108, Staff Room 109, Storage 112, Projection Room 115, and Activities Room 116 were found to contain 5% Chrysotile asbestos in the black mastic. No asbestos was detected in the yellow carpet mastic. The asbestos-containing

black residual floor tile mastic materials identified were noted to be in good condition and were assessed as being non-friable. It is estimated that there exists approximately 2,540 square feet of these materials in the above listed areas.

- Residual Floor Tile Mastic (Below Sheet Flooring) - The black residual floor tile mastic materials (below brown sheet flooring with a wood design and yellow mastic) utilized in Circulation 107 and in the room east of Offices 104/105 were found to contain 5% Chrysotile asbestos in the black mastic. No asbestos was detected in the sheet flooring and yellow mastic. The asbestos-containing black residual floor tile mastic materials identified were noted to be in good condition and were assessed as being non-friable. It is estimated that there exists approximately 360 square feet of these materials in the above listed areas.

- Thermal System Insulation (Fittings) – The white, hard pack thermal system insulation materials utilized on select fittings on the older horizontal and/or vertical water lines observed in the original structure (above suspended ceilings) and in the Original Mechanical Room (southeast portion) were found to contain 10% Chrysotile asbestos. The asbestos-containing thermal system insulation materials identified were noted to be in fair condition and were assessed as being friable. It is estimated that there exists approximately 100 linear feet of these materials in the above listed areas. It is assumed these thermal system insulation materials are also present in the chase areas of the original structure.

- Cement Fiber Board Panel - The gray cement fiber board panel materials utilized on the upper portion of the south wall in the Original Mechanical Room (above door) were found to contain 15% Chrysotile asbestos. The asbestos-containing cement fiber board panel materials identified were noted to be in good condition and were assessed as being non-friable. It is estimated that there exists approximately 10 square feet of these materials in the above listed area.

- Interior Window and Door Frame Caulk - The gray and tan caulk materials utilized around the door frame in Vestibule 102 and around the window frames in Storage 113, Research Storage 114 and Men's Restroom 123 were found to contain 2% Chrysotile asbestos. The asbestos-containing interior window and door frame caulk materials identified were noted to be in fair condition and were assessed as being non-friable. It is estimated that there exists approximately 80 linear feet of these materials in the above listed areas.

- Exterior Plaster - The plaster materials with a sandy texture utilized on the exterior soffits at the Original Mechanical Room and at the south exterior elevation windows were found to contain 2% Chrysotile asbestos. The asbestos-containing exterior plaster materials identified were noted to be in good condition and were assessed as being non-friable. It is estimated that there exists approximately 430 square feet of these materials in the above listed areas.

- Exterior Window Frame Caulk - The gray and tan white caulk materials utilized around the exterior sides of the window frames at Storage 113, Research Storage 114, and Men's Restroom 123 were found to contain 5% Chrysotile asbestos. The asbestos-containing exterior window frame caulk materials identified were noted to be in good condition and were assessed as being non-friable. It is estimated that there exists approximately 60 linear feet of these materials in the above listed areas.

The following homogeneous material sampled and analyzed as part of a previous investigation conducted by STC Environmental Services, Inc. on April 6, 2006, was found to contain asbestos and was observed in the building during this investigation.

- Resilient Floor Tile and Mastic - The cream 9" x 9" floor tile with black streaks and associated black mastic materials utilized in Children's Area 117 and Waiting 118 (below adhered carpet) were found to contain 4% Chrysotile asbestos in the floor tile and 3% Chrysotile asbestos in the mastic. The asbestos-containing floor tile and mastic materials identified were noted to be in good condition and were assessed as being non-friable. It is estimated that there exists approximately 1,620 square feet of these materials in the above listed areas.

None of the other suspect building materials sampled and analyzed were found to contain asbestos. It should be noted that suspect materials, other than those identified during the December 8, 2016, survey may exist within the building. Should suspect materials other than those which were identified during this survey be uncovered prior to or during the renovation process, those materials should be assumed asbestos-containing until sampling and analysis can confirm or deny their asbestos content.

A summary of the classification, condition and approximate quantity of confirmed ACM are presented in Appendix B. Laboratory analytical reports are included in Appendix C.

If the Client does not intend to renovate or demolish the building, the asbestos-containing materials associated with the building, should be managed in place. This in-place management should include such operations as repairing any damaged materials, protecting the remaining asbestos-containing materials from further damage, and developing a plan to periodically monitor the condition of the asbestos-containing materials. Notification of the presence of the materials should also be made to residents, employees and outside contractors so that they do not inadvertently disturb the remaining asbestos-containing materials.

As it is understood renovation operations which may disturb the asbestos-containing materials are planned, it is recommended that the asbestos-containing materials be removed prior to conducting any renovations. The TDSHS Texas Asbestos Health Protection Rules (TAHPR) require that any removal of asbestos-containing materials associated with the structure be conducted by trained and licensed asbestos abatement personnel.

According to the TDSHS TAHPR, an abatement project involving the removal of friable asbestos-containing materials and/or the removal of more than 160 square feet or 260 linear feet of non-friable asbestos-containing materials would need to be designed by a licensed Individual Asbestos Consultant. Air monitoring by a licensed third-party Air Monitor would be required during the actual removal work regardless of the size of the project. Terracon would be pleased to provide a proposal to provide these services.

It is important to note the TAHPR and NESHAP require that written notification be submitted before beginning renovation projects which include the disturbance of any asbestos-containing material (ACM) in a building or facility, or before the demolition of a building or facility, even when no asbestos is present. This written notification must be provided to the TDSHS at least 10 working days prior to the commencement of asbestos abatement or demolition activities. These activities must be performed in accordance with the current TDSHS, EPA, and OSHA guidelines.

6.0 GENERAL COMMENTS

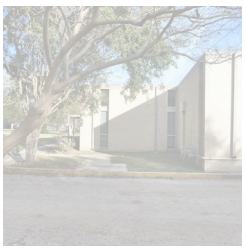
This asbestos survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the building. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date.

This report has been prepared on behalf of and exclusively for use by TSG Architects AIA, Inc. for specific application to their project as discussed.

This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied is made.

STRUCTURAL

general structural description
structural observations
assessment and recommendations



INTELLIGENT
ENGINEERING
SERVICES

707 E COLLEGE STREET STRUCTURAL ASSESSMENT
Seguin, Texas
IES Project No: 1162417
December 30, 2016

INTRODUCTION:
This report provides a description of the conditions observed in the existing building, and assessment of the structure with recommendations based upon our observations. We observed the conditions on Tuesday, December 6, 2016 beginning at 9:00 am. All observations of the existing building are in accordance with our proposal to your office dated November 17, 2016. Mr. Greg Duenes with the City of Seguin provided access to the building for our observation.

The building is single story, with a footprint of approximately 14,700 square feet scaled from a low-resolution pdf of an architectural floor plan produced from plans for a 1985 Addition and Renovation to the Library. The accuracy of the building area was not confirmed by field measurements, and should only be considered approximate. The front of the building is on East College Street and faces toward the north. The construction date of the structure was determined from a plaque on the front of the building dated 1964 for the original building listing the project Architect as Barnes Landes Goodman and Youngblood, and 1985 for the construction date for the Addition taken from the title block of four (4) available plan sheets prepared by Johnson-Dempsey Associates, Inc.

Photographs taken during our observation (30 total) are included at the end of this report, and are referenced in the following narrative. Further, recommendations for the observed conditions are offered at the end of this report.

GENERAL STRUCTURAL DESCRIPTION:
The building is located in Bauer Park in the City of Seguin within the block bounded by East College St to the north, Park St to the east, E Elm St to the south, and N Bauer St to the west (see Photos 1-4, 6, & 12-13). The building was constructed at two different times as noted above.

The foundation for the building is presumed to be a concrete beam-stiffened slab-on grade type foundation based upon visual observation. No structural drawings were provided for our review, so the size and spacing of beams, footings or piers at column locations could not be determined. The interior floor slab was entirely concealed beneath VCT, vinyl flooring, ceramic tile in the restrooms, and carpet, and could not be visually observed for signs of cracking. Some areas of the floor appeared to be somewhat out of level perhaps due to foundation movement, but no elevation measurements were made to confirm.

Each of the two sections of the building is framed as follows:

> **Original 1964 Library:** The original library construction faces toward E College St, and covers approximately 6,500 square feet of floor area.

10001 Reunion Place, Suite 200
San Antonio, Texas 78216
210.349.9098 Office

Perimeter walls are all 8” thick, load bearing CMU with a continuous modular brick veneer (see Photos 1, 2 & 18). A row of interior steel tube columns, typically HSS (Hollow Structural Section) 3½x3½ in size, is located inside the current office/administration section of the building. The steel tube columns support a line of wide flange steel beams oriented in the north-south direction. Open web steel joists span between the exterior load bearing CMU walls and the interior steel beam in the admin area of the building. The typical joist size in this area of the building was 16” deep at most areas of the admin portion of the building, but some 12” deep joists were used for shorter spans.

Two column free areas at a large reading area on the east wing of the original building, and at an open activity/meeting room located at the front of the building to the west of the front doors had 24” deep open web steel joists that clear spanned the space between exterior, load bearing CMU walls.

The top of steel elevation above the floor was measured to be about 13 feet. Steel roof joists are typically spaced at 6 feet on center. A ¾” deep corrugated, galvanized steel roof deck spans across the joists to support a lightweight insulating roof fill, and the roof membrane system.

1985 Addition: This portion of the building is generally south of the original building construction and covers approximately 8,200 square feet of floor area.

The superstructure of the addition is steel framed with HSS 5x5 steel columns supporting a framework of steel roof beams (see Photo 19). Typical interior roof beams span in the north-south direction and are W14x22 wide flange steel beams. Open web steel joists span between beams in the east-west direction, and are typically 14” deep. Longer joist spans occur on the east and west sides of the addition where 20” deep joists were used. The typical joist spacing for all joists in the addition is 4 feet on center.

Joists in the addition support a ¾” deep corrugated, galvanized, and vented steel roof deck (see Photo 19). Lightweight cementitious insulating fill poured over the steel roof deck was visible in the deck vent openings.

There are three (3) clerestory window, raised skylights in the Addition (see Photo 21). All three are framed similarly at the main roof level with wide flange steel beams around the perimeter of the opening. A building column is located in each corner and projects above the level of the roof to the top of the sloped steel roof framing. We were not able to observe what type of steel framing was used at the top of the clerestory skylights for the sloped roof framing as it was concealed by gypsum board. The clerestory opening located furthest to the east was framed with metal studs to a smaller north-south dimension in comparison to the other two. The clerestory windows on the south side of this smaller skylight were omitted to create a space for ductwork serving the Addition to pass through from a mechanical room located on the west side of the addition.

STRUCTURAL OBSERVATIONS:

Original Library:

There are only a few areas where we observed areas that require repair of this portion of the building structure. Two of the observed areas requiring repair are a result of modifications made to the building during construction of the 1985 Addition at tie-in points as follows:

1. A portion of the original load bearing, exterior CMU wall along the east side of the large Activities room (located west of the front entry doors) was removed at the south end of the wall. A steel beam was installed to support existing roof framing where the masonry wall was removed. An existing open web steel roof joist was left too close to the edge of the CMU wall after the wall was selectively demolished, and the joist has insufficient bearing on the remaining CMU (see Photos 23 & 25). The added beam that bears on the CMU wall adjacent to this joist has cracked the ungrouted supporting masonry, and does not currently have sufficient bearing on the wall (see Photos 23 & 24).
2. An opening was cut through the south exterior CMU wall with brick veneer in the Administrative area of the original building (see Photo 26). At this opening, the CMU was removed up to the bond beam at the top of the wall, and the brick was left in place extending down to the ceiling level without support (see Photos 27 & 28). The existing CMU was removed too close to the end of a steel roof beam leaving insufficient bearing for the beam. The remaining CMU under the beam has cracked, and the beam no longer has adequate structural support (see Photos 29 & 30).

As noted in the General Structural Description, above, the floor slab was concealed from observation by tile, vinyl flooring and carpet and could not be observed for cracking of the slab.

The exterior of the building is brick veneer, and aluminum storefront and windows. Exterior steel columns welded at window locations appeared to be in need of paint for protection from corrosion. The columns for the covered front canopy were supported by round concrete footings where these columns occur away from the building. No details for the footings were available, so the depth could not be determined. Horizontal steel canopy beams weld between the canopy columns, and where the canopy is oriented parallel to the exterior building wall, these beams are welded to wide flange columns supported by the building foundation (see Photo 1). Some of the canopy beams were visibly out of level indicating differential movement between the canopy columns supported on isolated footings and columns supported on the building foundation.

1985 Addition:

The Addition has a structural steel frame to support the roof, unlike the original Library construction where load bearing CMU exterior walls were used. Metal stud wall framing with brick veneer was used for the exterior walls at the addition.

We observed evidence of substantial foundation movement in the newer foundation. Cracked brick veneer (see Photos 5 east side; 7 on the east side; 10 on the south side; 11 on the west side), especially at the many reentrant and outside corners in the foundation, is indicative of foundation movement. Also, torn and visibly separated sealant at expansion joints in the brick veneer (see Photo 9), and between the original construction and the addition (see Photos 16 at interior floor joint and 22 at interior ceiling) shows ongoing active foundation movement.

The site generally slopes downward from the high point along E College Street toward the south and west side of the property. An area along the original north face of the building appeared to have poor drainage, but most of the site drainage appears to move away from the building. Some regrading work may be required at the front (north) side of the building to direct runoff water around the building and away from the foundation.

Several existing foundation beams on the south side had an excessive amount of exposed concrete under the formed portion of the beam (see Photo 15). This condition shows that the foundation beams were earth excavated, and only the uppermost portion of the beams were formed prior to concrete placement. The rough and irregular shape of the concrete in contact with the soil provides a beam surface that promotes adhesion between expansive clay soils and the concrete foundation beams. This leads to an increased probability for expansive soil related movement.

The steel framing for the addition appeared to be in generally good condition. We did not see any areas of structural concern related to the steel framing in the addition.

ASSESSMENT AND RECOMMENDATIONS:

The structural condition of the building is fair based on our observation as detailed in this report, but some repairs are required, and other repairs would serve to limit the ongoing damage to the brick veneer and walls caused by expansive soil conditions at the site.

The original 1964 building construction appears to have experienced less damage to the masonry and brick due to foundation movement in comparison to the 1985 Addition. Soils in this area of Seguin generally tend to be expansive clay soils that shrink in volume as they dry out, and expand in volume as they become wet. Shallow foundations supported on this type of soil tend to move when the moisture content of the clay changes. Subgrade improvement methods are often used to reduce the amount of anticipated movement by removing some of the expansive soil, and replacing with a non-expansive compacted select fill material. We did not have a soils report, or construction drawings that show whether any subgrade improvement methods were employed in either the original construction, or for the later addition, but whatever measures were taken for foundation design apparently were more successful in the older, original portion of the building.

The existing slab-on-grade foundation can be underpinned at the perimeter of the building to limit the amount of foundation movement. It is not economically feasible to eliminate foundation movement for this type of shallow foundation system, but underpinning can serve to limit or mitigate the amount the foundation moves downward as the soils dry out.

We offer the following structural repair recommendations:

1. Repair of the broken load bearing CMU in the 1964 Original Library as required to restore joist and beam bearing at the south end of the east exterior wall (see Photos 23-25) is required. This repair must be completed prior to the building being reoccupied for use.
2. Restore beam bearing and provide support for existing brick veneer at south exterior wall of 1964 Original Library (see Photos 27-30). This repair must also be completed prior to the building being reoccupied for use.

3. Remove the existing exterior steel canopy and isolated footings at the north side of the building where the steel framing is out of level, and to eliminate the mixed support of canopy columns on the building foundation, and on isolated footings (see Photo 1).
4. Survey the floor elevations and underpin the foundation at the perimeter of the Addition with drilled piers to limit expansive soil movement of the foundation. Closely spaced piers would allow the foundation to be levelled somewhat to reduce the difference with interior floor elevations. A grade supported foundation is designed to be in contact with the ground for support of the floor slabs and beams. Spaces or voids that might potentially be created when the foundation is lifted during leveling operations need to be filled with a grout, or inert filler suitable for ground exposure, that is pumped into place so that the floor slab remains properly supported. Grade supported foundations in expansive clay soils, such as at this site, will remain vulnerable to future ground movements since the foundation remains in contact with the expansive soils. If the soil expands, it can lift the beams off of the pier supports resulting in upward movement, but as the soil dries and shrinks, the foundation settles back down on the piers. In this way, the total amount of movement is mitigated because the piers will only allow the foundation to move to the point where the beams are once again in contact with the top of the piers.
5. We recommend consideration be given to placing a continuous concrete maintenance strip adjacent to the exterior foundation line and sloped away from the building to help to limit the amount of moisture fluctuation in the soils at the exterior beams. The concrete maintenance strip would also eliminate any planting adjacent to the foundation, and watering that the planting requires for growth.
6. Repair broken brick which has occurred due to foundation movement (see Photos 5,7, 10, & 11).
7. Reseal exterior sealant joints damaged by foundation movement (see Photo 9), and torn or damaged sheet metal flashings (see Photo 8).

Limits:

This assessment consisted of a visual observation only. Observations were limited to areas specifically addressed in the body of this report and should not be construed as involving an exhaustive review of all conditions present in the existing structure. Demolition or removal of materials was not conducted to gain access to hidden structural conditions, unless specifically noted otherwise in the report. No testing was performed to determine the strength and or quality of existing, in-place materials, and no floor elevation surveys were conducted as a part of this assessment.

We were not provided original design drawings, “as-built” record drawings, shop drawings, or related construction documentation reflecting actual in place construction, or engineering calculations to verify design assumptions and capacities for this structure. Therefore, we made the assumption that the facility was constructed using construction techniques typical as we understand them for the time period when the facility was constructed. Furthermore, our conclusions are based only upon our interpretations of our visual site observations made on the date(s) indicated.

Neither the observation, nor this report is intended to directly cover environmental, mechanical, electrical or architectural features, despite the fact that some of these conditions are specifically noted because they potentially affect the structural performance of this building. Notify this office of any questions or comments

regarding the information contained in this report. If none are received it is concluded than no exceptions are taken regarding the professional opinion(s) rendered.

Please feel free to contact our office, at your convenience, should you have any questions or comments regarding the matters addressed or if additional information is required. We appreciate the opportunity to be of service.

Submitted By:

David Gauthier, PE
Senior Project Manager
Intelligent Engineering Services, LLP
Texas Registered Engineering Firm F-432

12/30/2016

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Photo 1: Steel canopy framing at the north (front) side of the building. Individual canopy columns supported by drilled footings were at a visibly different elevation compared to those at building foundation. The canopy roof beam (red arrow) is lower at building side of canopy.

Photo 2: Exterior view looking east along the original front of the building showing potentially poor drainage in this area. The front canopy is visible in this photograph.

Photo 3: East wall of the Library. One of the three sloping skylights in the 1985 addition can be seen above the roof edge line. The east end of the original building is visible at the right side of the photo.

Photo 4: Southeast corner of the 1985 Addition where the exterior wall slopes up to match the sloping roof at the three clerestory skylights constructed in the Addition roof. Also, see Photo 5 for crack in brick at this location.

Photo 5: Close-up view of a crack in the brick veneer visible on the east face of the addition where the red arrow occurs in Photo 4.

Photo 6: South face of building addition showing sloping roof over clerestory skylights.

Photo 7: Horizontal crack in brick at top of door frame on east wall of addition. The cracked brick in Photo 5 is at the right side of this Photo. Note the torn sheet metal gravel guard at the top of the brick.

Photo 8: Close-up view of torn sheet metal gravel guard noted in Photo 7 caused by movement of the brick veneer in response to foundation movement.

Photo 9: Separated sealant joint caused by foundation movement at re-entrant corner on south side of building.

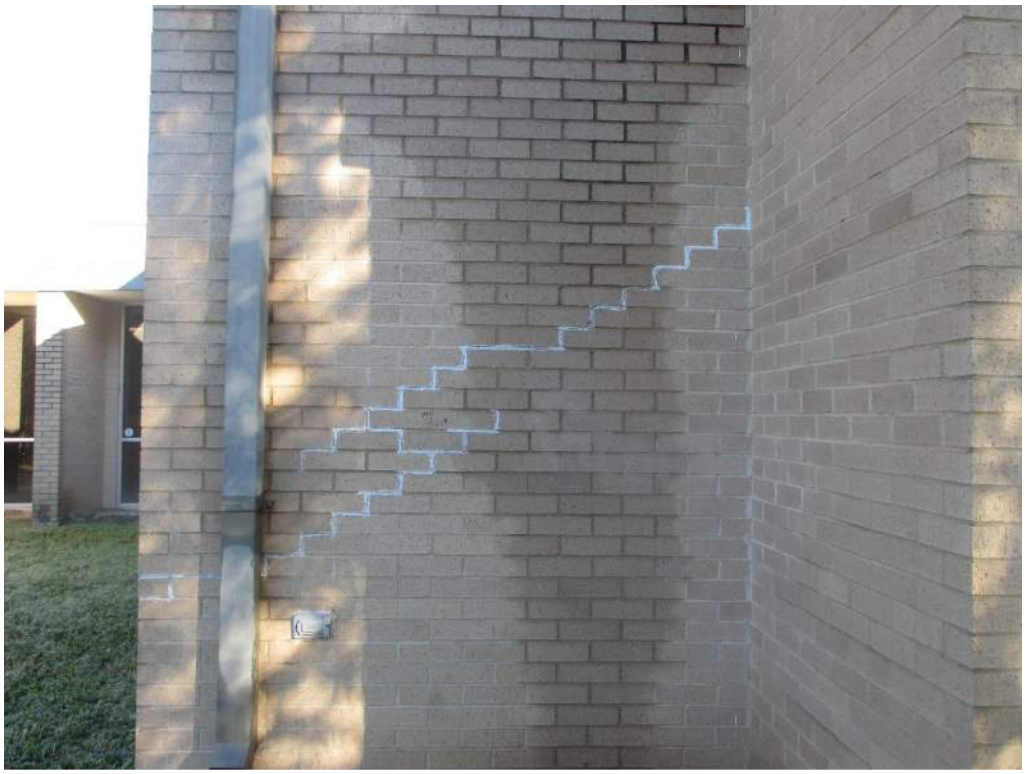

Photo 10: Crack in brick veneer at the south side of the 1985 addition filled with a cracked, non-matching sealant. The many reentrant corners in the Addition create stress risers in the brittle masonry veneer.

Photo 11: Crack in brick at the southwest corner of the addition.

Photo 12: West face of building showing joint between original Library to left, and 1985 Addition to the right. Note the difference in brick color between 1964 and 1985 in the building and mechanical screen wall.

Photo 13: West side of 1985 Addition showing sloped roof/wall at skylight. Note expansion joint in brick at reentrant building corner.

Photo 14: Close-up of cracked sealant in expansion joint shown in previous photograph.

Photo 15: Excess exposed concrete extending beyond formwork line at the foundation for wingwalls on the south side of the addition.

Photo 16: Condition of a floor joint at door into north meeting room of the original building.

Photo 17: Example of steel roof framing at addition tie-in to existing lobby framing. The existing column at (red arrow) has been supplemented with new columns and framing to create an expansion joint between structures.

Photo 18: View of a 24" deep open web steel joist bearing on top of load bearing CMU wall in the original Library building. Batt insulation concealed much of the existing roof deck from view in this part of the building.

Photo 19: View of expansion joint between original building and addition looking southwest. Roof framing on the left with vented roof deck is part of the Addition. Beam at red arrow was added in 1985 renovation to support existing joists (upper right) and allow removal of a section of original load bearing CMU wall.

Photo 20: East end of steel beam shown in previous photo, showing new steel column and end of original load bearing CMU wall at connection between original building and addition. Note brick was the original south exterior wall.

Photo 21: View inside one of the three clerestory skylights showing sloped roof framing at the top of the skylight.

Photo 22: Ceiling expansion joint between the original building and new addition. Evidence of movement, and water staining on the ceiling.

Photo 23: Existing damaged load bearing CMU wall (on east side of the activities/meeting room located west of front entry doors). The steel beam was part of the Addition work, and the joist is part of the original construction. Both the joist and beam have inadequate bearing on the partially removed and cracked CMU. This condition requires structural repair prior to reoccupying the building.

Photo 24: Another view of the cracked load bearing CMU (shown in previous photo) under the steel roof beam.

Photo 25: Close-up view of the inadequate joist bearing on the CMU wall. Half of the joist bearing seat no longer has supporting CMU under the seat, and the remaining CMU is cracked.

Photo 26: View looking north into the administrative office area of the original building from the Addition. The original load bearing CMU wall and brick veneer were cut through at this location in the 1985 Addition work.

Photo 27: Close-up of unsupported brick veneer above the ceiling at the location of the previous photograph.

Photo 28: Unsupported brick veneer at the location of the previous photo as viewed looking south from the original building. The existing CMU was removed up to the continuous bond beam at the top of the wall.

Photo 29: Existing load bearing CMU the was partially removed at the location of the previous photos. An existing original window is visible to the left that was covered over with metal stud wall framing at the Addition. The remaining CMU supporting the beam is cracked and damaged.

Photo 30: Another view of the end of the partially demolished CMU bond beam, and inadequate bearing for the steel roof beam shown in the previous photo. This condition requires structural repair prior to reoccupying the building.

PROJECT: 707 E College St. Seguin, TX
OWNER:
CLIENT: TSG Architects AIA

DATE: December 30, 2016

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Structural Opinion of Probable Cost

ITEM	DESCRIPTION	QUANTITIES		COST		COMMENTS:
		Unit	Quantity	Unit Cost	Amount	
1.	Repair broken load bearing CMU as required to restore joist and beam bearing on north side of 1964 Original Library (see Photo 23).	LS	1.00	$7,500.00	$7,500.00	Repair is required prior to building being reoccuppied.
2.	Restore beam bearing and provide support for existing brick veneer at south exterior wall of 1964 Original Library (see Photo 30).	LS	1.00	$6,500.00	$6,500.00	Repair is required prior to building being reoccuppied.
3.	Remove the existing steel canopy and isolated footings at the north side (Photo 1).	LS	1.00	$2,000.00	$2,000.00	
4.	Survey floor elevations and obtain geotechnical report.	LS	1.00	$3,000.00	$3,000.00	
5.	Pier underpin the foundation at the perimeter of the Addition to limit movement due to expansive soil.	EA	34.00	$1,750.00	$59,500.00	
6.	Repair broken brick and joints resulting from foundation movement (see Photo 5).	LS	1.00	$7,500.00	$7,500.00	
7.	Reseal exterior sealant joints damaged by foundation movement (see Photo 9).	LS	1.00	$1,250.00	$1,250.00	
8.	Repair/replace damaged sheet metal flashing reulting from foundation movement (see Photo 8).	LS	1.00	$1,500.00	$1,500.00	
9.	Regrade areas of site for proper drainage away from foundation (see Photo 2).	LS	1.00	$1,000.00	$1,000.00	
				Subtotal	$89,750.00	

ITEM	DESCRIPTION	QUANTITIES		COST		COMMENTS:
		Unit	Quantity	Unit Cost	Amount	
	Subtotal from previous page				$89,750.00	
	Division 1 General Requirements @10%				$8,975.00	
	Sales Tax - NA				$0.00	
				Subtotal	$98,725.00	
	GC O'hd & Profit @ 15%				$14,808.75	
				Subtotal	$113,533.75	
	Contingency @ 15%				$17,030.06	
				Subtotal	$130,563.81	
	Bond @ 1.5%				$1,958.46	
				TOTAL	**$132,522.27**	

NOTES:

1. The costs presented are not based on detailed design which is beyond the scope of this assessment.
2. Costs can be influenced by many factors that can only be considered as a particular design is developed. Presented costs should only be considered as rough order of magnitude as an aid to initial decision making.
3. Structural opinion of probable cost is based solely upon prior project experience, and may not be valid at time of bidding, and based upon the final selected design.
4. Costs do not include architectural, MEP and environmental costs that may be required in addition to the indicated costs.
5. Photographs noted in item descriptions are for illustrative purposes, and are not intended to depict all conditions addressed in this report.

MEP SYSTEMS

assessment summary
recommendations
photographs

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Background

The City of Seguin requested that TSG Architects provide a report on the current conditions of The Seguin Library located at 707 East College Street. M&S conducted an MEP assessment of the existing building to document existing locations, capacities, and general condition of MEP systems.

Assessment Summary

The existing building was built in 1964 with a major remodel in 1985 and is approximately 14,500 square feet. Its future intended use is currently undetermined. The following report details the findings of the assessment and outlines recommendations moving forward. All codes referenced are 2015 ICC codes and the 2014 National Electric Code (NEC).

Mechanical

The existing mechanical systems consist of 3 Split DX heat pump units. The systems appear to be in operating condition but have reached and or exceed the typical life expectancy for HVAC equipment (see attached ASHRAE Life Expectancy chart). The temperature outside at the time of the assessment was 50 degrees F. During the assessment the building quickly warmed up and was comfortable.

Unit	Area Served	Capacity	Notes
AHU-1 / HP-2	North side of the building	15 tons	HP-2 has abnormal vibrations
AHU-2 / HP-1A & HP-1B	South side of the building	20 tons	HP-1A has abnormal vibrations
AHU-3 / HP-3	Office area and circulation desk	7.5 tons	None
EF-1	Employee Restrooms	-	Not in operation during assessment
EF-2	Main restrooms near entry	500 CFM	None
EF-3	Comm Room	100 CFM	Not in operation during assessment

The air devices serving the building appear to be of adequate size and quantity for the spaces but are dirty due to the age of the air devices.

There were several areas observed that had damaged insulation on the ductwork and piping serving the building.

Electrical

The existing facility currently has a 120/208 volt, three-phase, 600 amp electrical service. The main distribution panel "MDP" is located outdoors at the utility transformer pole. This panel is a main lugs only configuration, rated to interrupt a maximum of 14,000 amps, and contains one 250 amp circuit breaker and one 300 amp circuit breaker. The 14,000 amp interrupting rating of panel "MDP" conflicts with the engineering drawings for the building, which called for a 22,000 amp interrupting rating. The neutral conductor is not bonded to the equipment grounding conductor in accordance with the NEC.

The 250 amp circuit breaker in panel "MDP" serves electrical panel "M," located in the older mechanical room. Panel "M" serves HVAC equipment and sub-feeds an adjacent electrical panel "L." Both electrical panels were part of the original building construction in 1964, and are very old and in poor condition. Panel "L" serves the 120 volt lighting and power circuits in the area of the original building. It was noted that the same terminal bar was being used to land neutral and equipment grounding conductors, which does not comply with 2014 NEC Article 250.6(A).

The 300 amp circuit breaker in panel "MDP" serves electrical panel "A," located in the newer mechanical room near the outdoor condensing units. Panel "A" serves HVAC equipment and sub-feeds an adjacent electrical panel "LA." Both electrical panels were part of the building addition in 1985, and appear to be in good condition. Panel "LA" served the 120 volt lighting and power circuits in the addition area. It was noted that there is at least one circuit inside panel "A," where the equipment grounding conductor is terminated on the neutral bus bar, which does not comply with 2014 NEC Article 250.6(A).

The existing light fixtures consist almost entirely of four-lamp fluorescent recessed troffers. The existing lighting power density is close to 1.7 watts per square foot, which does not meet the currently adopted energy code. Lighting controls also do not meet code. Additionally, there are several skylights and large windows that would require daylight-responsive controls.

The existing server room has a few orange colored receptacles. It is unclear whether these were intended to be isolated ground receptacles, but they do not appear to have equipment grounding conductors that are isolated from the rest of the system.

The building is equipped with a Fire-Lite fire alarm system that appears to be in good condition. As of this report, the last fire alarm inspection was performed and passed on October 26, 2016.

Plumbing

The existing facility is currently served by the municipal water system with a 1-1/2" domestic water meter located on the west side of the site. The pipe serving the building is 2" diameter. The water pressure was measured at the mop sink and the pressure reading was 50 PSI.

There is a 40 gallon natural gas water heater located in the Mechanical Room with a recirculating pump. The water heater is 5 years old and both it and the recirculation pump appear to be in proper working order.

There appears to be two 4” sanitary sewer exits. One appears to be located on the north side of the building and the other on the west side of the building.

The natural gas meter is located on the northwest side of the building. The gas piping is 1-1/4” upstream of the gas meter and changes to a 2” pipe downstream of the meter. The gas piping enters the building through the mechanical room.

The Men’s and Women’s Restrooms on the west side of the building appear to be in poor condition and do not meet ADA standards. The Men’s and Women’s restrooms on the north side of the building have lavatories that do not meet ADA standards

The mop sink serving the building has a crack in the basin.

The wall hydrant on the southwest side of the building is damaged.

The floor drain in the Women’s rest room on the west side of the building is completely blocked by a solid obstruction, the drain grate will need to be removed to remove the obstruction.

Recommendations

Mechanical

Recommendations for the mechanical systems are as follows:

1. Once the new occupancy for the building is determined M&S recommends running a complete HVAC Load calculation on the building and installing new split DX heat pump systems to serve the spaces.
2. Install new exhaust systems to serve the restrooms.
3. Install a new cooling only mini-split system to serve the Comm. Room.
4. Replace the existing air devices with new air devices.
5. Patch or repair damage to ductwork and piping insulation.

Electrical

Recommendations for the electrical systems are as follows:

1. Depending on future electrical load calculations, the existing electrical service may be re-used. Bond the neutral and ground in accordance with NEC requirements.
2. Replace panels “M” and “L”, and ground them in accordance with NEC requirements.
3. Existing electrical panels “A” and “LA” may be re-used. The grounding system needs to be brought into compliance with the NEC.
4. Perform a short circuit calculation to ensure that all overcurrent protection devices are rated to interrupt the maximum available fault current.
5. To comply with energy code, if future alterations affect more than 10 percent of the lighting in any space, all light fixtures will need to be replaced.
6. To comply with energy code, install a lighting control system, to include occupancy sensors, time-switch controls, light-reduction controls and daylight-responsive controls.

Plumbing

Recommendations for the plumbing systems are as follows:

1. Once the new occupancy for the building is determined M&S recommends running a plumbing load calculation to determine existing service adequacy.
2. The toilet rooms should be renovated to meet ADA standards.
3. The mop sink should be replaced.
4. The damaged wall hydrant should be replaced.
5. Clean the floor drains of any blockages.
6. Patch or repair damaged piping insulation.
7. The building sanitary sewer systems should be video scoped by a licensed plumber to inspect for deficiencies in the sanitary sewer systems.
8. The plumbing systems should be modified to meet current codes.

Appendix I – Photographs

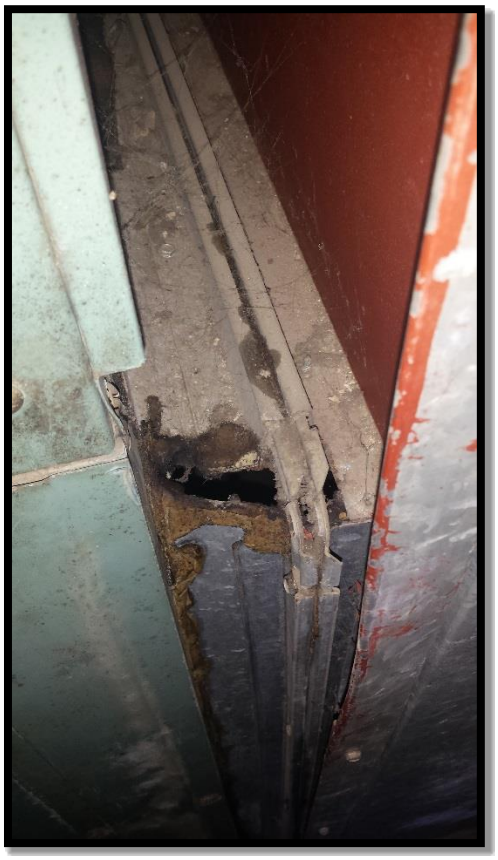


Figure 1 – Ductwork damage on AHU-1

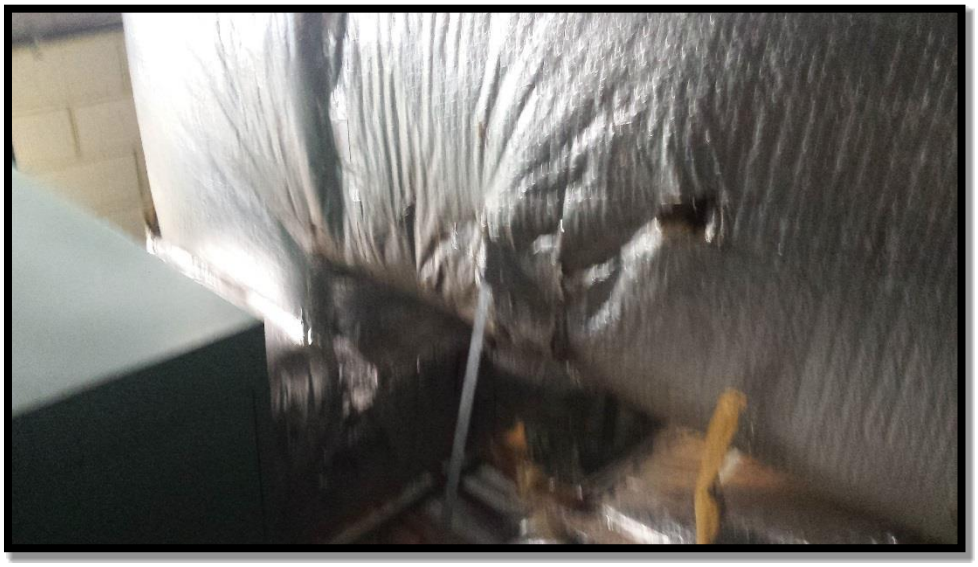


Figure 2 – Insulation damage near AHU-3

Figure 3 – Heat pump yard

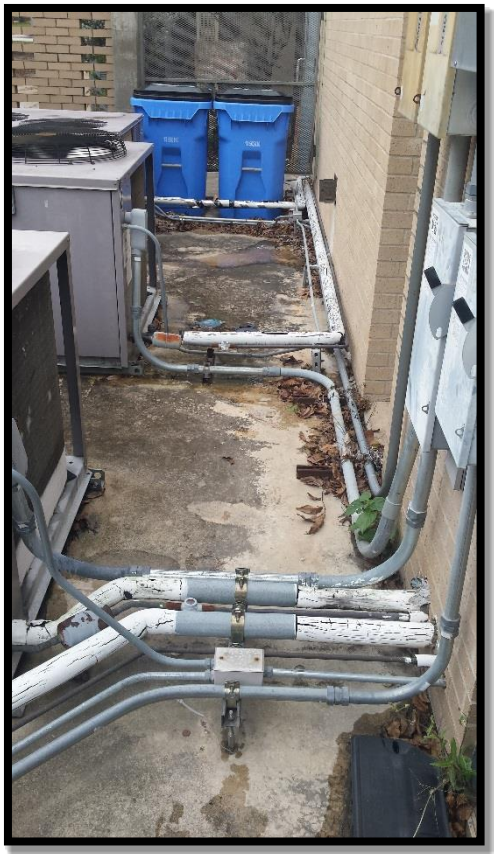


Figure 4 – Refrigerant piping insulation damage

Figure 5 – Electrical Service

Figure 6 – Electrical Panel “M”

Figure 7 – Electrical Panel “L”

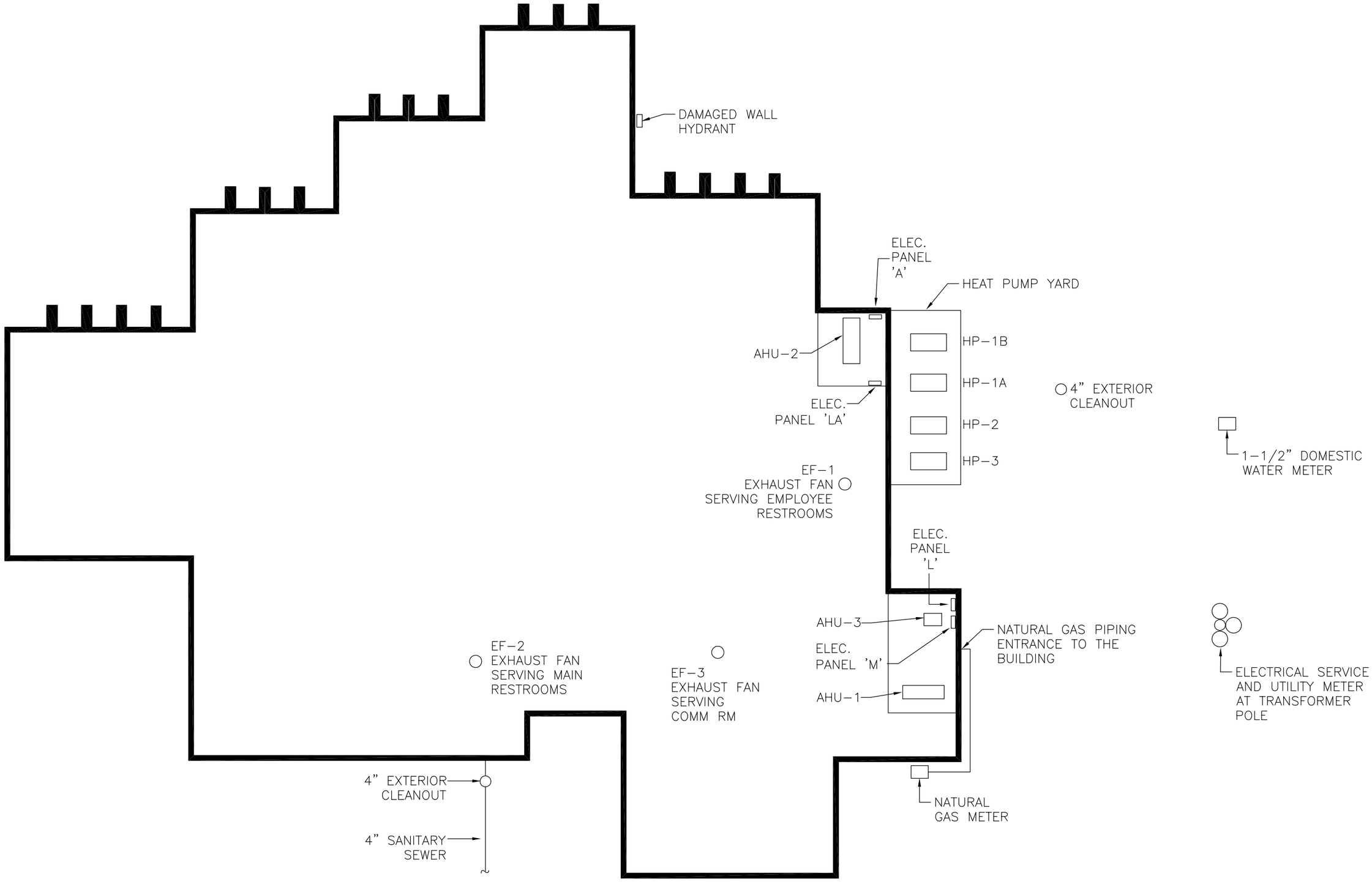
Figure 8 – Electrical Panel “A”

Figure 9 – Electrical Panel “LA”

Figure 10 – Cracked Mop Basin

Figure 11 – Blocked Floor Drain

Figure 12 – Damaged Wall Hydrant



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ASHRAE Equipment Life Expectancy chart

ASHRAE is the industry organization that sets the standards and guidelines for most all HVAC-R equipment. For additional info about ASHRAE the website is www.ashrae.org .

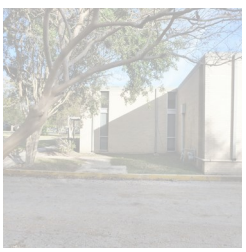
Equipment Item	Median Years
Air conditioners	
Window unit	10
Residential single or Split Package	15
Commercial through-the wall	15
Water-cooled package	15
Heat Pumps	
Residential air-to-air	15
Commercial air-to-air	15
Commercial water-to-air	19
Roof-top air conditioners	
Single-zone	15
Multi-zone	15
Boilers, hot water (steam)	
Steel water-tube	24 (30)
Steel fire-tube	25 (25)
Cast iron	35 (30)
Electric	15
Burners	21
Furnaces	
Gas- or oil-fired	18
Unit heaters	
Gas or electric	13
Hot water or steam	20
Radiant Heaters	
Electric	10
Hot water or steam	25

Equipment Item	Median Years
Air terminals	
Diffusers, grilles, and registers	27
Induction and fan coil units	20
VAV and double-duct boxes	20
Air washers	17
Ductwork	30
Dampers	20
Fans	
Centrifugal	25
Axial	20
Propeller	15
Ventilating roof-mounted	20
Coils	
DX, water, or steam	20
Electric	15
Heat Exchangers	
Shell-and-tube	24
Reciprocating compressors	20
Packaged chillers	
Reciprocating	20
Centrifugal	23
Absorption	23
Cooling towers	
Galvanized metal	20
Wood	20
Ceramic	34

Equipment Item	Median Years
Air-cooled condensers	20
Evaporative condensers	20
Insulation	
Molded	20
Blanket	24
Pumps	
Base-mounted	20
Pipe-mounted	10
Sump and well	10
Condensate 15	
Reciprocating engines	20
Steam turbines	30
Electric motors	18
Motor starters	17
Electric transformers	30
Controls	
Pneumatic	20
Electric	16
Electronic	15
Valve actuators	
Hydraulic	15
Pneumatic	20
Self-contained	10

ROOF

roof system description
observations & comments
recommendations



City of Seguin Former Library

Scope

We have conducted an examination of the existing roofs to determine their general condition, and provide recommendations. Opinions, comments, and recommendations expressed below are based on available information, and may require subsequent revision.

Summary

The Facility is a former library located at 707 East College Street, Seguin, Texas. The Facility includes both low-sloped and steep sloped roof areas. The low-sloped areas are covered with an asphalt, built-up, roof assembly with gravel surfacing. The steep sloped areas are covered with standing-seam metal roofs.

The low-sloped, asphalt built-up roofs are in poor condition with various deficiencies noted. The steep-sloped metal roofs are in fair condition but transition flashings are in poor condition.

We recommend replacement of the low-sloped, built-up roof assemblies and the existing standing-seam metal roofs as the best long-term solution. We recommend monitoring the roofs and repairing to address leakage until such time as the replacement work can be designed, bid, funded and undertaken.

Roof System Description

A. The low-sloped roofs are multiple-ply, asphalt, built-up membrane assemblies with gravel surfacing.

B. Interior review found corrugated metal decking staining which likely portions of the decking is a poured-in-place lightweight insulating concrete assembly.

C. The Facility includes clerestory areas with vertical windows for natural lighting. The clerestory areas are covered with standing-seam metal roof panels. The metal panels include mechanically closed seams, and are hooked over a receiver flashing at the bottom then mechanically attached to the structure under the half ridge flashing at the top.

D. The Facility includes covered canopies over certain entrances and sidewalks. The canopy covers are exposed metal decking panels in structural steel framing.

E. It should be noted that core sampling was not accomplished therefore we do not know the exact concealed system nor the thickness, if any, of the insulation in the systems.

Observations & Comments

A. **General:** The items below were found during a cursory review (non-destructive evaluation). Important items, such as actual attachment techniques used to fasten the roofs, were not observed during this review. If additional items are discovered, in future site visits, they would need to be added to the list below.

B. **Low-Sloped Roof Membrane:** The low-sloped roof membrane is a multiple-ply asphalt built-up assembly. It appears the system is installed over a lightweight insulating concrete deck. Therefore, there is likely a membrane base sheet. The low-sloped roofs include a limited amount of blistering and ridging. The existing roof membrane is in poor general condition and is nearing the end of its service-life.

Overview of the roof membrane at the Facility.

C. **Low-Sloped Roof Membrane:** The low-sloped roofs include various membrane flashings. The flashings include transitions to vertical walls, expansion joints and curbs. The membrane flashings include some wrinkling and delamination. The vertical flashings have been coated with an elastomeric coating possibly in an attempt to extend the service-life or address leakage.

Overview of vertical membrane flashings. Note the wrinkling and delamination of the flashing. Note the expansion joint cover on the joint shown.

D. **Expansion Joints:** The low sloped areas are divided by vertical expansion joint type flashings. The vertical flashings include membrane flashings on both sides and include sheet metal covers. The membrane flashings are deteriorated and voided in various locations. The sheet metal covers are in fair to good condition.

E. **Low-Sloped Roof Edge:** The low-sloped roofs include low roof edges in most of the perimeter locations. The low roof edge consists of a gravel guard edge flashing that is stripped into the roof membrane system. The roof edges also include guttering which will be addressed below. The gravel guard edge flashing is in fair condition with indications of leakage a certain location.

Overview of the low-sloped roof edge. Note the staining of the membrane above the flashing and the open lower flashing joint.

F. **Vertical Walls:** The low-sloped roofs transition to vertical walls at the clerestory areas. The walls include sheet metal counter flashings at the foot of the walls. In certain areas, the walls include windows for natural interior lighting. The transition flashings are low and will be well below the minimum required height for transitions if insulation is added during the roof renovation project.

G. **Steep-Sloped Metal Roofs:** The steep sloped metal roofs are standing-seam metal roof panels with related flashings over decking. The metal roofs include rake flashings, lower roof edge flashings and half ridge flashings. The metal roof panels and flashings are in fair condition. But may need to be replaced as the desire is to increase the insulation thickness during the renovation work.

Overview of the metal roof edge and deteriorated wooden fascia.

H. **Steep-Sloped Metal Roofs:** The transitions at the metal roofs included exposed wood fascia. The exposed wood is deteriorated and warping.

I. **Drainage:** Roof drainage is achieved by slope to the roof edges at the majority of the low-sloped roof areas. The roof edge includes a gravel-guard edge and guttering. The gutter is installed on a step-back ledge; therefore, the downspouts outlets are installed in the exterior face of the gutter. The low-slope roof drainage appears to be fair to poor with areas of dark staining likely indicating standing water.

J. **Drainage:** There is one low-sloped roof area which includes roof drains and interior down leaders. This roof areas is bordered by expansion joints and the clerestory walls with a small open area around the end of the clerestory wall.

K. **Drainage:** Drainage at the steep-sloped metal roofs is the lower roof edge. The metal roofs do not include guttering therefore the water can cascade off the upper roof onto the lower low-sloped roof. In light rains and dew or condensation the water flows down the exposed wood fascia continuing the deterioration of that wood.

Overview of roof edge guttering. Note the downspout outlet is through the face of the gutter as the gutter is installed on a recessed ledge.

The roof area depicted above include primary roof drains to support drainage. The opening in the background acts as the overflow provision.

L. **Overflow Drainage:** The roof edges act as the overflow provisions for the drainage system. At the area with primary roof drains described in Item J. above there is an open area of the low-slope roof around the clerestory wall therefore that area acts as the overflow provision. The exterior face of the gutter is lower that the roof flange therefore if the gutter fills the water would flow over the exterior flange.

M. **Exterior Walls:** The exterior walls will be addressed in other portions of the overall assessment report. This item addresses only the waterproofing aspect of the exterior walls. The vertical walls include brick veneer in most locations. The front of the Facility includes store front type window assemblies. The brick veneer walls are cracking and show other sizes of movement such as displacement of sheet metal flashings and transitions.

Cracking at an exterior brick veneer wall.

N. **Exterior Walls:** The exterior walls include sealant control joints. That sealant is deteriorated and those joints are voided and open.

O. **Exterior Canopy Walkways:** The Facility includes exterior canopied walkways along the front and over certain entrances. The walkways are covered with structural steel framing and metal decking panels. The metal panels and some of the framing is corroded. If the walkways are to be reused they should be cleaned and coated.

Overview of covered canopy walkways.

Recommendations

A. We recommend replacing the existing roofs and related flashings as the best long-term solution. The existing roofs can be monitored and leaks addressed as they occur until roof replacement documents can be developed and the Project funded. We recommend adding insulation to the new system to bring the system up to the current requirements of the Energy Code.

B. We recommend raising the flashing heights to compensate for the added insulation and to acquire the required transition heights. We recommend replacing the existing gutters and downspouts. If a similar profile is desired the new guttering can be installed on the existing ledge, if a more traditional profile is desired the ledge can be filled in and the guttering and roof edge exposed on the exterior face.

C. We recommend replacing the existing sheet metal flashings completely. We also recommend replacing the deteriorated wooden fascia and then installing a sheet metal cover over the wood.

D. We recommend addressing the movement in the existing wall assemblies to facilitate a water tight assembly when complete.

E. We recommend cleaning, preparing and coating the existing exterior walkway canopies.

General Comments

A. The above information and recommendations were developed anticipating that the existing Facility would be used as a occupied space facility with the interior spaces being developed into offices, meeting areas and common areas. If the use of the Facility changes it may become necessary to add to or change the recommendations above.

Preliminary Estimate of Probable Costs

A. Cost Estimates are Statements of Probable Construction Cost. Estimates are based upon available information at this time. During the Design Phase estimates of probable cost will be refined and those revised estimates provided with design review submittals. The cost presented here are for budgetary purposes only and do not include amounts for professional fees, construction observation, contract administration and factors not in our control. Austech Roof Consultants Inc. therefore makes no guarantee regarding cost estimate accuracy.

B. Estimates of Probable Construction Costs:

DESCRIPTION	ANTICIPATED CONSTR COST
Membrane Roof Replacement	282,750.00
Metal Roof Replacement	35,700.00
Gutter and Downspout Replacement	21,600.00
Clean, Prepare & Seal Control Joints	13,750.00
TOTAL	**353,800.00**

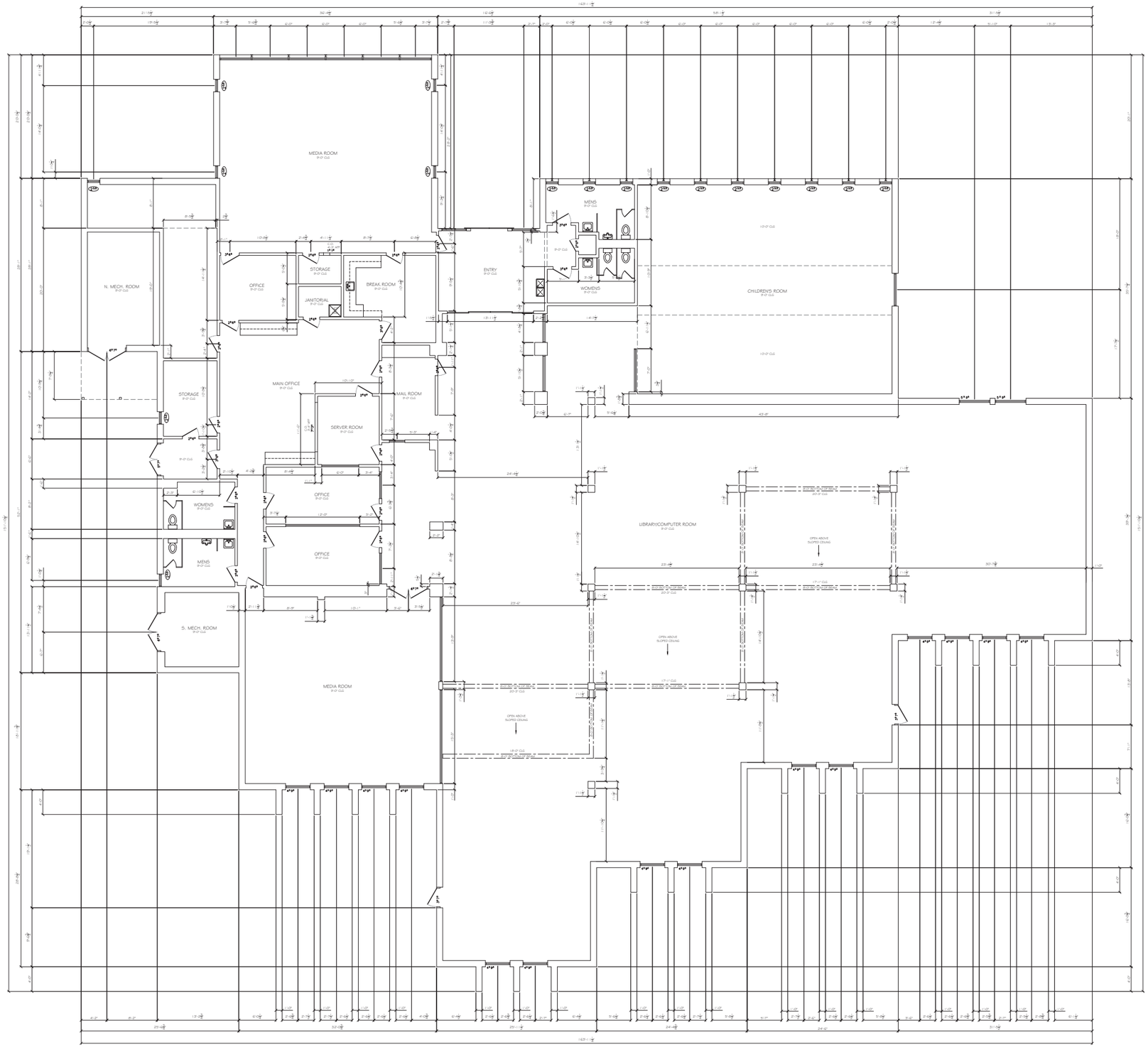
DESCRIPTION	ANTICIPATED CONSTR COST
Clean, Prepare & Cost Exterior Canopies	24,300.00
TOTAL	**24,300.00**

C. Based upon information gathered to-date, the anticipated continued use of the Facility and the anticipate remaining service-life of the items described we recommend scheduling the replacement work as soon as the Work can be designed, scheduled and funded.

AS-BUILT DRAWINGS

existing floor plan
existing exterior elevations

TSG ARCHITECTS



Floor Plan

707 E COLLEGE

DATE: Dec 23, 2016

SCALE: 3/16"=1'-0"

CONTACT:

TSG Architects
312 Saint Francis Street
Gonzales, Texas 78629
(830) 672-7801

DRAFTER:

AUSTIN CAD SERVICES
5524 BEE CAVES ROAD SUITE C-1 AUSTIN, TEXAS
TBPAE-PE# 13-168-98/TBPLS# 10193-00/08
www.austincadservices.com

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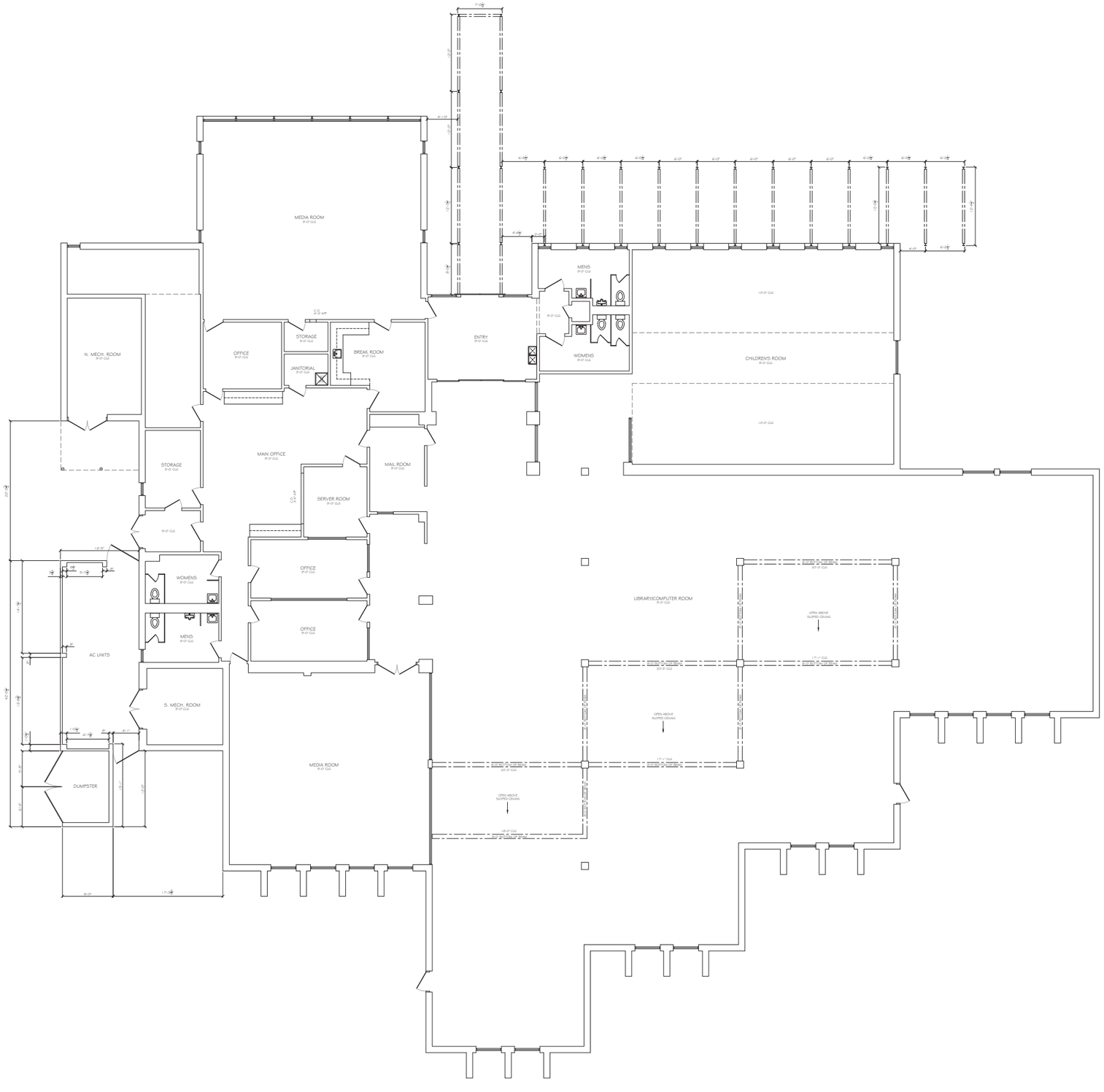

Exterior Plan

707 E COLLEGE

DATE: Dec 23, 2016

SCALE: 3/16"=1'-0"

CONTACT:

TSG Architects
312 Saint Francis Street
Gonzales, Texas 78629
(830) 672-7801

DRAFTER:

AUSTIN CAD SERVICES
5524 BEE CAVES ROAD SUITE J-1 AUSTIN, TEXAS 78746 PH 512-328-5670 FX 512-328-3005
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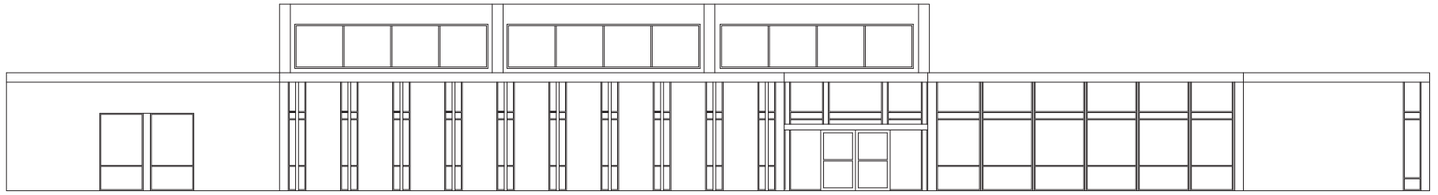
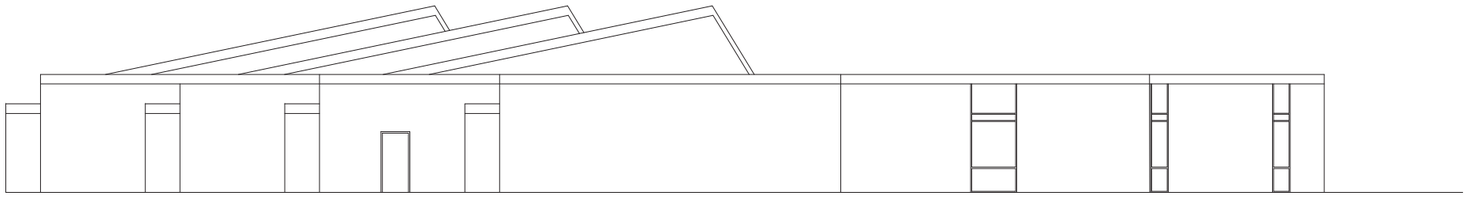
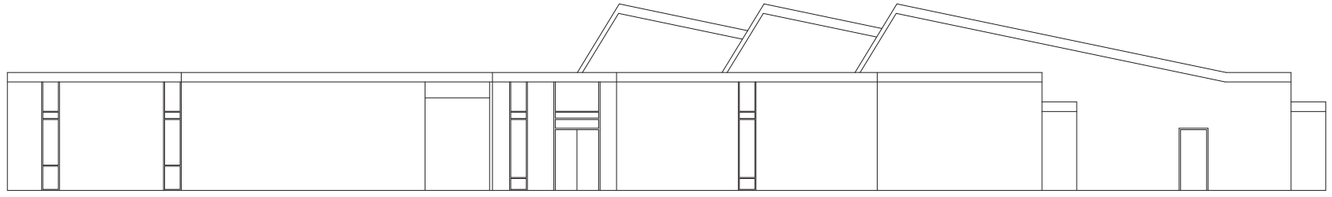


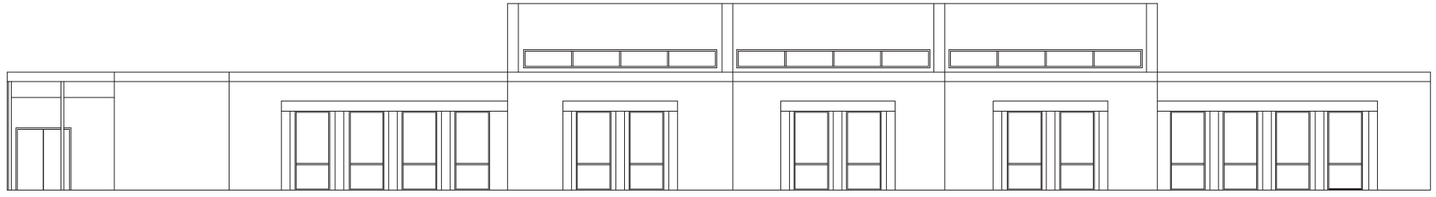
Front Elevaton



Left Elevaton



Right Elevaton



Rear Elevaton

707 E COLLEGE

DATE: Dec 23, 2016

SCALE: 3/16"=1'-0"

CONTACT:

TSG Architects
312 Saint Francis Street
Gonzales, Texas 78629
(830) 672-7801

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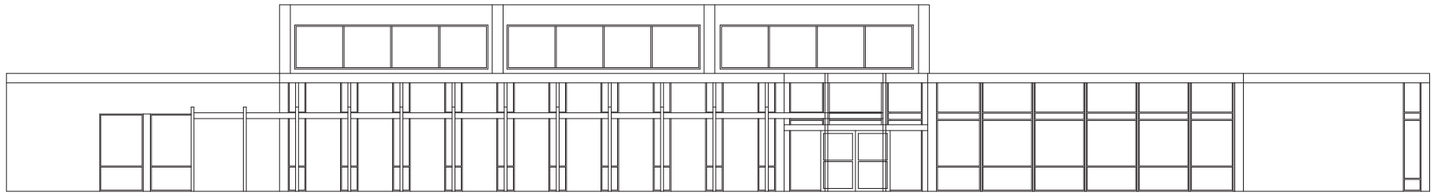
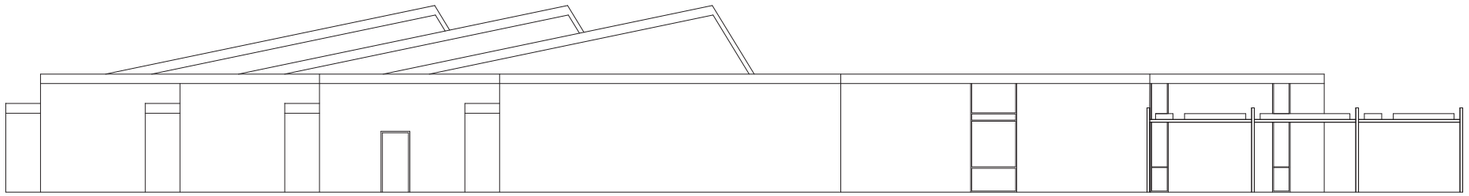
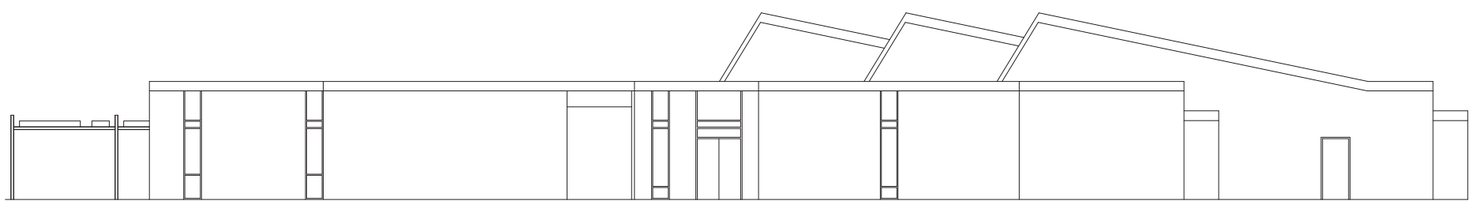


Front Elevaton with Awning



Left Elevaton with Awning



Right Elevaton with Awning

707 E COLLEGE

DATE: Dec 23, 2016

SCALE: 3/16"=1'-0"

CONTACT:

TSG Architects

312 Saint Francis Street
Gonzales, Texas 78629
(830) 672-7801

DRAFTER:

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www.austincadservices.com

FILE: 707 E COLLEGE.dwg

SHEET: A4

APPENDIX A

Asbestos Survey Sample Summary

APPENDIX A
ASBESTOS SURVEY SAMPLE SUMMARY
Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-01	Suspended Acoustic Ceiling Tile – 2' x 4', White with small random fissures and pinholes	Utilized throughout the majority of the building	Research Storage 114, central portion	No Asbestos Detected
GCL-02	Suspended Acoustic Ceiling Tile – 2' x 4', White with small random fissures and pinholes	Utilized throughout the majority of the building	Main Library, north-central portion	No Asbestos Detected
GCL-03	Suspended Acoustic Ceiling Tile – 2' x 4', White with small random fissures and pinholes	Utilized throughout the majority of the building	Children's Area 117, east-central portion	No Asbestos Detected
GCL-04	**Concrete Masonry Unit Texture - Light**	**Utilized on select walls in Vestibule 102, Storage 113, Research Storage 116, and Children's Area 117 (additional CMU texture may be present behind ceramic tile or drywall construction on the perimeter walls of the original structure)**	**Vestibule 102, west wall, south portion**	**2% Chrysotile**
GCL-05	**Concrete Masonry Unit Texture - Light**	**Utilized on select walls in Vestibule 102, Storage 113, Research Storage 116, and Children's Area 117 (additional CMU texture may be present behind ceramic tile or drywall construction on the perimeter walls of the original structure)**	**Activities Room 116, east wall, north portion**	**2% Chrysotile**
GCL-06	**Concrete Masonry Unit Texture - Light**	**Utilized on select walls in Vestibule 102, Storage 113, Research Storage 116, and Children's Area 117 (additional CMU texture may be present behind ceramic tile or drywall construction on the perimeter walls of the original structure)**	**Children's Area 117, east wall, central portion**	**2% Chrysotile**

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SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-07	Drywall Construction – Medium to heavy splatter texture and joint compound	Utilized on select walls in Janitor 110, Janitor 111, Storage 112, Storage 113, Research Storage 114, and Activities Room 116	Janitor 110, southeast corner	No Asbestos Detected
GCL-08	Drywall Construction – Medium to heavy splatter texture and joint compound	Utilized on select walls in Janitor 110, Janitor 111, Storage 112, Storage 113, Research Storage 114, and Activities Room 116	Storage 113, southeast corner	No Asbestos Detected
GCL-09	Drywall Construction – Medium to heavy splatter texture and joint compound	Utilized on select walls in Janitor 110, Janitor 111, Storage 112, Storage 113, Research Storage 114, and Activities Room 116	Storage 112, north wall, west portion	No Asbestos Detected
GCL-10	Drywall Construction – Tape and float with joint compound (behind vinyl cover)	Utilized on the majority of walls in Vestibule 101, Vestibule 102, Hall 103, Office 104, Office 105, Head Librarian 106, Circulation 107, Work Room 108, Staff Room 109, and Projection Room 115	Office 105, southwest corner	No Asbestos Detected
GCL-11	Drywall Construction – Tape and float with joint compound (behind vinyl cover)	Utilized on the majority of walls in Vestibule 101, Vestibule 102, Hall 103, Office 104, Office 105, Head Librarian 106, Circulation 107, Work Room 108, Staff Room 109, and Projection Room 115	Work Room 108, southwest corner	No Asbestos Detected
GCL-12	Drywall Construction – Tape and float with joint compound (behind vinyl cover)	Utilized on the majority of walls in Vestibule 101, Vestibule 102, Hall 103, Office 104, Office 105, Head Librarian 106, Circulation 107, Work Room 108, Staff Room 109, and Projection Room 115	Staff Room 109, northeast corner	No Asbestos Detected

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SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-13	Drywall Construction – Tape and float with joint compound (behind vinyl cover)	Utilized on the majority of walls in Vestibule 101, Vestibule 102, Hall 103, Office 104, Office 105, Head Librarian 106, Circulation 107, Work Room 108, Staff Room 109, and Projection Room 115	Head Librarian 106, northwest corner	No Asbestos Detected
GCL-14	Drywall Construction – Tape and float with joint compound (behind vinyl cover)	Utilized on the majority of walls in Vestibule 101, Vestibule 102, Hall 103, Office 104, Office 105, Head Librarian 106, Circulation 107, Work Room 108, Staff Room 109, and Projection Room 115	Room east of Offices 104/105, northwest corner	No Asbestos Detected
GCL-15	Drywall Construction – Light to medium sandy texture and joint compound	Utilized on the walls at the east portion of Vestibule 101	Vestibule 101, foyer at restrooms, northwest corner	No Asbestos Detected
GCL-16	Drywall Construction – Light to medium sandy texture and joint compound	Utilized on the walls at the east portion of Vestibule 101	Vestibule 101, foyer at restrooms, southeast corner	No Asbestos Detected
GCL-17	Drywall Construction – Light to medium sandy texture and joint compound	Utilized on the walls at the east portion of Vestibule 101	Vestibule 101, southeast corner	No Asbestos Detected
GCL-18	Drywall Construction – Medium splatter texture and joint compound	Utilized on the south and west walls in Children's Area 117 and on the north wall in Waiting 118	Children's Area 117, west wall, north portion	No Asbestos Detected
GCL-19	Drywall Construction – Medium splatter texture and joint compound	Utilized on the south and west walls in Children's Area 117 and on the north wall in Waiting 118	Children's Area 117, south wall, west corner	No Asbestos Detected
GCL-20	Drywall Construction – Medium splatter texture and joint compound	Utilized on the south and west walls in Children's Area 117 and on the north wall in Waiting 118	Children's Area 117, south wall, east portion	No Asbestos Detected

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Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-21	Drywall Construction – Tape and float with joint compound (behind vinyl cover)	Utilized on the majority of walls in the Main Library and in Historical Documents 126	Historical Documents 126, north wall, central portion	No Asbestos Detected
GCL-22	Drywall Construction – Tape and float with joint compound (behind vinyl cover)	Utilized on the majority of walls in the Main Library and in Historical Documents 126	Main Library, Stack 2, south wall, west portion	No Asbestos Detected
GCL-23	Drywall Construction – Tape and float with joint compound (behind vinyl cover)	Utilized on the majority of walls in the Main Library and in Historical Documents 126	Main Library, Stack 3, southeast corner	No Asbestos Detected
GCL-24	Drywall Construction – Tape and float with joint compound (behind vinyl cover)	Utilized on the majority of walls in the Main Library and in Historical Documents 126	Main Library, Stack 5, southeast corner	No Asbestos Detected
GCL-25	Drywall Construction – Tape and float with joint compound (behind vinyl cover)	Utilized on the majority of walls in the Main Library and in Historical Documents 126	Main Library, north wall, central portion	No Asbestos Detected
GCL-26	Drywall Construction – Light to medium splatter texture and joint compound	Utilized on the upper walls and ceilings in the skylight areas in the Main Library	Main Library, southwest skylight area, northeast corner	No Asbestos Detected
GCL-27	Drywall Construction – Light to medium splatter texture and joint compound	Utilized on the upper walls and ceilings in the skylight areas in the Main Library	Main Library, central skylight area, southeast corner	No Asbestos Detected
GCL-28	Drywall Construction – Light to medium splatter texture and joint compound	Utilized on the upper walls and ceilings in the skylight areas in the Main Library	Main Library, northeast skylight area, southwest corner	No Asbestos Detected
GCL-29	**Resilient Floor Tile – 12" x 12", Beige with brown and gray streaks and black mastic**	**Utilized in Vestibule 102, Janitor 110, Storage 113, and Research Storage 114**	**Vestibule 102, northeast portion**	**No Asbestos Detected in tile** **5% Chrysotile in mastic**

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Terracon Project No. 96167943

SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-30	**Resilient Floor Tile – 12" x 12", Beige with brown and gray streaks and black mastic**	**Utilized in Vestibule 102, Janitor 110, Storage 113, and Research Storage 114**	**Research Storage 114, southwest portion**	**No Asbestos Detected in tile** **5% Chrysotile in mastic**
GCL-31	**Resilient Floor Tile – 12" x 12", Beige with brown and gray streaks and black mastic**	**Utilized in Vestibule 102, Janitor 110, Storage 113, and Research Storage 114**	**Janitor 110, southwest portion**	**No Asbestos Detected in tile** **5% Chrysotile in mastic**
GCL-32	**Residual Floor Tile Mastic – Black (below adhered carpet with yellow mastic)**	**Utilized below adhered carpet in Hall 103, Office 104, Office 105, Head Librarian 106, Work Room 108, Staff Room 109, Storage 112, Projection Room 115, and Activities Room 116**	**Work Room 108, north-central portion**	**No Asbestos Detected in yellow mastic** **5% Chrysotile in black mastic**
GCL-33	**Residual Floor Tile Mastic – Black (below adhered carpet with yellow mastic)**	**Utilized below adhered carpet in Hall 103, Office 104, Office 105, Head Librarian 106, Work Room 108, Staff Room 109, Storage 112, Projection Room 115, and Activities Room 116**	**Activities Room 116, northwest corner**	**No Asbestos Detected in yellow mastic** **5% Chrysotile in black mastic**
GCL-34	**Residual Floor Tile Mastic – Black (below adhered carpet with yellow mastic)**	**Utilized below adhered carpet in Hall 103, Office 104, Office 105, Head Librarian 106, Work Room 108, Staff Room 109, Storage 112, Projection Room 115, and Activities Room 116**	**Office 104, southeast corner**	**No Asbestos Detected in yellow mastic** **5% Chrysotile in black mastic**
GCL-35	Resilient Floor Tile – 12" x 12", Black with white streaks and yellow mastic on brown leveling compound	Utilized in Vestibule 101 and Janitor 111	Vestibule 101, northwest corner	No Asbestos Detected

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Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-36	Resilient Floor Tile – 12" x 12", Black with white streaks and yellow mastic on brown leveling compound	Utilized in Vestibule 101 and Janitor 111	Vestibule 101, east-central portion	No Asbestos Detected
GCL-37	Resilient Floor Tile – 12" x 12", Black with white streaks and yellow mastic on brown leveling compound	Utilized in Vestibule 101 and Janitor 111	Vestibule 101, southwest portion	No Asbestos Detected
GCL-38	**Residual Floor Tile Mastic – Black (below brown sheet flooring with wood design and yellow mastic)**	**Utilized in Circulation 107 and room east of Offices 104/105**	**Circulation 107, northeast portion**	**No Asbestos Detected in sheet flooring and yellow mastic** **5% Chrysotile in black mastic**
GCL-39	**Residual Floor Tile Mastic – Black (below brown sheet flooring with wood design and yellow mastic)**	**Utilized in Circulation 107 and room east of Offices 104/105**	**Circulation 107, southwest portion**	**No Asbestos Detected in sheet flooring and yellow mastic** **5% Chrysotile in black mastic**
GCL-40	**Residual Floor Tile Mastic – Black (below brown sheet flooring with wood design and yellow mastic)**	**Utilized in Circulation 107 and room east of Offices 104/105**	**Room east of Offices 104/105, southeast portion**	**No Asbestos Detected in sheet flooring and yellow mastic** **5% Chrysotile in black mastic**

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Seguin, Texas
Terracon Project No. 96167943

SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-41	Sheet Flooring – Brown wood design with yellow mastic	Utilized throughout the majority of the Main Library	Main Library, northeast portion	No Asbestos Detected
GCL-42	Sheet Flooring – Brown wood design with yellow mastic	Utilized throughout the majority of the Main Library	Main Library, southeast portion	No Asbestos Detected
GCL-43	Sheet Flooring – Brown wood design with yellow mastic	Utilized throughout the majority of the Main Library	Main Library, northwest portion	No Asbestos Detected
GCL-44	Carpet Mastic - Yellow	Utilized in the Main Library (northeast and southwest sections) and Historical Documents 126	Historical Documents 126, southwest portion	No Asbestos Detected
GCL-45	Carpet Mastic - Yellow	Utilized in the Main Library (northeast and southwest sections) and Historical Documents 126	Main Library, south-central portion	No Asbestos Detected
GCL-46	Carpet Mastic - Yellow	Utilized in the Main Library (northeast and southwest sections) and Historical Documents 126	Main Library, northeast portion	No Asbestos Detected
GCL-47	Sink Coating - White	Utilized below the stainless steel sink in Staff Room 109	Staff Room 109, below sink	No Asbestos Detected
GCL-48	Sink Coating - White	Utilized below the stainless steel sink in Staff Room 109	Staff Room 109, below sink	No Asbestos Detected
GCL-49	Sink Coating - White	Utilized below the stainless steel sink in Staff Room 109	Staff Room 109, below sink	No Asbestos Detected
GCL-50	HVAC Duct Mastic – Yellow on foil wrap with black mastic layer over yellow fiberglass	Utilized on the insulated HVAC ducts in select portions of the original structure (above suspended ceilings)	Research Storage 114, central portion, above suspended ceiling	No Asbestos Detected
GCL-51	HVAC Duct Mastic – Yellow on foil wrap with black mastic layer over yellow fiberglass	Utilized on the insulated HVAC ducts in select portions of the original structure (above suspended ceilings)	Activities Room 116, southeast portion, above suspended ceiling	No Asbestos Detected

APPENDIX A
ASBESTOS SURVEY SAMPLE SUMMARY
Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-52	HVAC Duct Mastic – Yellow on foil wrap with black mastic layer over yellow fiberglass	Utilized on the insulated HVAC ducts in select portions of the original structure (above suspended ceilings)	Children's Area 117, west-central portion, above suspended ceiling	No Asbestos Detected
GCL-53	**Thermal System Insulation Fittings – White, hard pack**	**Utilized on select fittings on the insulated water lines in the original structure (above suspended ceilings and in the Original Mechanical Room; assumed in chase areas)**	**Research Storage 114, southwest portion, above suspended ceiling**	**10% Chrysotile**
GCL-54	**Thermal System Insulation Fittings – White, hard pack**	**Utilized on select fittings on the insulated water lines in the original structure (above suspended ceilings and in the Original Mechanical Room; assumed in chase areas)**	**Women's Restroom 122, southwest portion, debris above suspended ceiling**	**10% Chrysotile**
GCL-55	**Thermal System Insulation Fittings – White, hard pack**	**Utilized on select fittings on the insulated water lines in the original structure (above suspended ceilings and in the Original Mechanical Room; assumed in chase areas)**	**Original Mechanical Room, southeast portion**	**10% Chrysotile**
GCL-56	Drywall Construction – Smooth texture and joint compound	Utilized on the south, west, and east walls in Mechanical Room 124	Mechanical Room 124, west wall, south corner	No Asbestos Detected
GCL-57	Drywall Construction – Smooth texture and joint compound	Utilized on the south, west, and east walls in Mechanical Room 124	Mechanical Room 124, south wall, central portion	No Asbestos Detected
GCL-58	Drywall Construction – Smooth texture and joint compound	Utilized on the south, west, and east walls in Mechanical Room 124	Mechanical Room 124, east wall, north portion	No Asbestos Detected
GCL-59	AHU Mastic – Gray on metal	Utilized on the air handler unit in Mechanical Room 124	Mechanical Room 124, southwest portion of AHU	No Asbestos Detected

APPENDIX A
ASBESTOS SURVEY SAMPLE SUMMARY
Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-60	AHU Mastic – Gray on metal	Utilized on the air handler unit in Mechanical Room 124	Mechanical Room 124, northwest portion of AHU	No Asbestos Detected
GCL-61	AHU Mastic – Gray on metal	Utilized on the air handler unit in Mechanical Room 124	Mechanical Room 124, east-central portion of AHU	No Asbestos Detected
GCL-62	**Cement Fiber Board Panel - Gray**	**Utilized on the upper portion of the south wall in the Original Mechanical Room (above door)**	**Original Mechanical Room, southwest portion, above door**	**15% Chrysotile**
GCL-63	**Cement Fiber Board Panel - Gray**	**Utilized on the upper portion of the south wall in the Original Mechanical Room (above door)**	**Original Mechanical Room, southwest portion, above door**	**15% Chrysotile**
GCL-64	**Cement Fiber Board Panel - Gray**	**Utilized on the upper portion of the south wall in the Original Mechanical Room (above door)**	**Original Mechanical Room, southwest portion, above door**	**15% Chrysotile**
GCL-65	**Interior Window and Door Frame Caulk – Gray and tan**	**Utilized around the door frame in Vestibule 102 and around the window frames in Storage 113, Research Storage 114, and Men's Restroom 123**	**Vestibule 102, southwest portion, at door frame**	**2% Chrysotile**
GCL-66	**Interior Window and Door Frame Caulk – Gray and tan**	**Utilized around the door frame in Vestibule 102 and around the window frames in Storage 113, Research Storage 114, and Men's Restroom 123**	**Storage 113, southwest portion, at window frame**	**2% Chrysotile**
GCL-67	**Interior Window and Door Frame Caulk – Gray and tan**	**Utilized around the door frame in Vestibule 102 and around the window frames in Storage 113, Research Storage 114, and Men's Restroom 123**	**Research Storage 114, northwest portion, at window frame**	**2% Chrysotile**

APPENDIX A
ASBESTOS SURVEY SAMPLE SUMMARY
Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-68	Interior Window and Door Frame Caulk – Dark gray	Utilized around the majority of the perimeter window and door frames	Historical Documents 126, southwest portion, at window frame	No Asbestos Detected
GCL-69	Interior Window and Door Frame Caulk – Dark gray	Utilized around the majority of the perimeter window and door frames	Main Library, southeast portion, at door frame	No Asbestos Detected
GCL-70	Interior Window and Door Frame Caulk – Dark gray	Utilized around the majority of the perimeter window and door frames	Children's Area 117, northeast portion, at window frame	No Asbestos Detected
GCL-71	Ceramic Wall Tile Grout - White	Utilized on the walls in the restrooms	Men's Restroom 123, south wall, east portion	No Asbestos Detected
GCL-72	Ceramic Wall Tile Grout - White	Utilized on the walls in the restrooms	Women's Restroom 122, north wall, west portion	No Asbestos Detected
GCL-73	Ceramic Wall Tile Grout - White	Utilized on the walls in the restrooms	Men's Restroom 121, west wall, north portion	No Asbestos Detected
GCL-74	Ceramic Floor Tile Grout - Gray	Utilized on the floors in the restrooms	Men's Restroom 123, northeast portion, at drain	No Asbestos Detected
GCL-75	Ceramic Floor Tile Grout - Gray	Utilized on the floors in the restrooms	Women's Restroom 122, southeast portion, at drain	No Asbestos Detected
GCL-76	Ceramic Floor Tile Grout - Gray	Utilized on the floors in the restrooms	Women's Restroom 120, southwest portion, at damaged area	No Asbestos Detected
GCL-77	**Exterior Plaster – Sandy texture**	**Utilized on the exterior soffit at the Original Mechanical Room and on the exterior soffits on the south elevation of the building (near windows to Main Library and Historical Documents 126)**	**Exterior, soffit at Original Mechanical Room, northeast corner**	**2% Chrysotile**

APPENDIX A
ASBESTOS SURVEY SAMPLE SUMMARY
Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-78	Exterior Plaster – Sandy texture	Utilized on the exterior soffit at the Original Mechanical Room and on the exterior soffits on the south elevation of the building (near windows to Main Library and Historical Documents 126)	Exterior, soffit at southwest window to Main Library, northeast corner	No Asbestos Detected
GCL-79	Exterior Plaster – Sandy texture	Utilized on the exterior soffit at the Original Mechanical Room and on the exterior soffits on the south elevation of the building (near windows to Main Library and Historical Documents 126)	Exterior, soffit at southeast window to Main Library, northeast corner	No Asbestos Detected
GCL-80	Built-Up Roofing – Tar and gravel	Utilized on the flat roof areas throughout	Roof, northwest portion	No Asbestos Detected
GCL-81	Built-Up Roofing – Tar and gravel	Utilized on the flat roof areas throughout	Roof, southwest portion	No Asbestos Detected
GCL-82	Built-Up Roofing – Tar and gravel	Utilized on the flat roof areas throughout	Roof, southeast portion	No Asbestos Detected
GCL-83	Roof Curb Flashing – Gray mastic with black asphaltic layer	Utilized on the roof curb areas throughout	Roof, east-central portion, at expansion joint curb	No Asbestos Detected
GCL-84	Roof Curb Flashing – Gray mastic with black asphaltic layer	Utilized on the roof curb areas throughout	Roof, north-central portion, at vent hood curb	No Asbestos Detected
GCL-85	Roof Curb Flashing – Gray mastic with black asphaltic layer	Utilized on the roof curb areas throughout	Roof, southwest portion, at expansion joint curb	No Asbestos Detected
GCL-86	**Exterior Window Frame Caulk – Gray and tan**	**Utilized around the exterior window frames at Storage 113, Research Storage 114, and Men's Restroom 123**	**Exterior, at window to Storage Room 113**	**5% Chrysotile**

APPENDIX A
ASBESTOS SURVEY SAMPLE SUMMARY
Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NUMBER	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	SAMPLE LOCATION	LAB RESULTS
GCL-87	**Exterior Window Frame Caulk – Gray and tan**	**Utilized around the exterior window frames at Storage 113, Research Storage 114, and Men's Restroom 123**	**Exterior, at window to Men's Restroom 132**	**5% Chrysotile**
GCL-88	**Exterior Window Frame Caulk – Gray and tan**	**Utilized around the exterior window frames at Storage 113, Research Storage 114, and Men's Restroom 123**	**Exterior, at window to Research Storage 114**	**5% Chrysotile**
GCL-89	Exterior Window Frame Caulk – Light gray and tan	Utilized around the majority of exterior window frames throughout	Exterior, at northwest window to Activities Room 116	No Asbestos Detected
GCL-90	Exterior Window Frame Caulk – Light gray and tan	Utilized around the majority of exterior window frames throughout	Exterior, at west window to Children's Area 117	No Asbestos Detected
GCL-91	Exterior Window Frame Caulk – Light gray and tan	Utilized around the majority of exterior window frames throughout	Exterior, at southwest window to Historical Documents 126	No Asbestos Detected

APPENDIX B

Confirmed Asbestos-Containing Materials

APPENDIX B
CONFIRMED ASBESTOS-CONTAINING MATERIALS
Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NO.	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	PERCENT / TYPE ASBESTOS	NESHAP CLASSIFICATION	MATERIAL CONDITION	ESTIMATED QUANTITY
GCL-04/05/06	Concrete Masonry Unit Texture - Light	Utilized on select walls in Vestibule 102, Storage 113, Research Storage 116, and Children's Area 117 (additional CMU texture may be present behind ceramic tile or drywall construction on the perimeter walls of the original structure)	2% Chrysotile	RACM	Good	2,000 Sq. Ft.
GCL-29/30/31	Resilient Floor Tile – 12" x 12", Beige with brown and gray streaks and black mastic	Utilized in Vestibule 102, Janitor 110, Storage 113, and Research Storage 114	No Asbestos Detected in tile 5% Chrysotile in mastic	Category I Non-Friable	Good	580 Sq. Ft.
GCL-32/33/34	Residual Floor Tile Mastic – Black (below adhered carpet with yellow mastic)	Utilized below adhered carpet in Hall 103, Office 104, Office 105, Head Librarian 106, Work Room 108, Staff Room 109, Storage 112, Projection Room 115, and Activities Room 116	No Asbestos Detected in yellow mastic 5% Chrysotile in black mastic	Category I Non-Friable	Good	2,540 Sq. Ft.
GCL-38/39/40	Residual Floor Tile Mastic – Black (below brown sheet flooring with wood design and yellow mastic)	Utilized in Circulation 107 and room east of Offices 104/105	No Asbestos Detected in sheet flooring and yellow mastic 5% Chrysotile in black mastic	Category I Non-Friable	Good	360 Sq. Ft.

APPENDIX B
CONFIRMED ASBESTOS-CONTAINING MATERIALS
Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NO.	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	PERCENT / TYPE ASBESTOS	NESHAP CLASSIFICATION	MATERIAL CONDITION	ESTIMATED QUANTITY
GCL-53/54/55	Thermal System Insulation Fittings – White, hard pack	Utilized on select fittings on the insulated water lines in the original structure (observed above suspended ceilings and in the Original Mechanical Room; assumed in chase areas)	10% Chrysotile	RACM	Fair	100 Lin. Ft.
GCL-62/63/64	Cement Fiber Board Panel - Gray	Utilized on the upper portion of the south wall in the Original Mechanical Room (above door)	15% Chrysotile	Category II Non-Friable	Good	10 Sq. Ft.
GCL-65/66/67	Interior Window and Door Frame Caulk – Gray and tan	Utilized around the door frame in Vestibule 102 and around the window frames in Storage 113, Research Storage 114, and Men's Restroom 123	2% Chrysotile	Category II Non-Friable	Fair	80 Lin. Ft.
GCL-77	Exterior Plaster – Sandy texture	Utilized on the exterior soffits at the Original Mechanical Room and at the south exterior elevation windows	2% Chrysotile	RACM	Good	430 Sq. Ft.
GCL-86/87/88	Exterior Window Frame Caulk – Gray and tan	Utilized around the exterior window frames at Storage 113, Research Storage 114, and Men's Restroom 123	5% Chrysotile	Category II Non-Friable	Fair	60 Lin. Ft.

APPENDIX B
CONFIRMED ASBESTOS-CONTAINING MATERIALS
Seguin – Guadalupe County Library
707 E. College Street
Seguin, Texas
Terracon Project No. 96167943

SAMPLE NO.	MATERIAL DESCRIPTION	HOMOGENEOUS AREA	PERCENT / TYPE ASBESTOS	NESHAP CLASSIFICATION	MATERIAL CONDITION	ESTIMATED QUANTITY
N/A (Visually Confirmed ACM from Previous Survey Data)	Resilient Floor Tile – 9" x 9", Cream with black streaks and black mastic	Utilized in Waiting 116 and Children's Area 117 (below adhered carpet)	4% Chrysotile in tile 3% Chrysotile in mastic	Category I Non-Friable	Good	1,620 Sq. Ft.

Sq. Ft. = square feet
Lin. Ft. = linear feet

Category I: Includes asbestos-containing packings, gaskets, asphaltic roofing products, and resilient flooring.

Category II: Includes any non-friable asbestos-containing materials not categorized as Category I.

Regulated Asbestos-containing Material (RACM): Friable asbestos-containing materials and/or Category I and II non-friable asbestos-containing materials which have a high probability of or have become friable by forces expected to be exerted in the course of a renovation or demolition process.

APPENDIX C

Asbestos Laboratory Analytical Reports

PLM Summary Report

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client : Terracon - Austin
Project : Seguin, Guadalupe County Library
Project # : 96167943
Identification : Asbestos, Bulk Sample Analysis
Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
EPA Method 600 / R-93 / 116

Lab Job No. : 16B-15315
Report Date : 12/14/2016
Sample Date : 12/09/2016

On 12/12/2016, ninety one (91) bulk material samples were submitted by Mitch Stogner of Terracon - Austin for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
GCL-01	Not Provided	None Detected - Acoustic Tile
GCL-02	Not Provided	None Detected - Acoustic Tile
GCL-03	Not Provided	None Detected - Acoustic Tile
GCL-04	Not Provided	None Detected - CMU 2% Chrysotile - Texture None Detected - Paint
GCL-05	Not Provided	None Detected - CMU 2% Chrysotile - Texture None Detected - Paint
GCL-06	Not Provided	None Detected - CMU 2% Chrysotile - Texture None Detected - Paint
GCL-07	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Texture
GCL-08	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Texture
GCL-09	Not Provided	None Detected - Drywall Material None Detected - Texture / Joint Cmpd
GCL-10	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Wall Covering
GCL-11	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Wall Covering
GCL-12	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Wall Covering

PLM Summary Report

2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client : Terracon - Austin
Project : Seguin, Guadalupe County Library
Project # : 96167943
Identification : Asbestos, Bulk Sample Analysis
Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
EPA Method 600 / R-93 / 116

Lab Job No. : 16B-15315
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On 12/12/2016, ninety one (91) bulk material samples were submitted by Mitch Stogner of Terracon - Austin for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
GCL-13	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Wall Covering
GCL-14	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Wall Covering
GCL-15	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Texture
GCL-16	Not Provided	None Detected - Drywall Material No Joint Compound or Texture
GCL-17	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Texture
GCL-18	Not Provided	None Detected - Drywall Material None Detected - Texture / Joint Cmpd
GCL-19	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Texture
GCL-20	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Texture
GCL-21	Not Provided	No Drywall None Detected - Joint Compound None Detected - Wall Covering
GCL-22	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Wall Covering
GCL-23	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Wall Covering

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Sample Number	Client Sample Description / Location	Asbestos Content
GCL-24	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Wall Covering
GCL-25	Not Provided	None Detected - Drywall Material None Detected - Wall Covering
GCL-26	Not Provided	No Drywall None Detected - Texture / Joint Cmpd
GCL-27	Not Provided	No Drywall None Detected - Texture / Joint Cmpd
GCL-28	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Texture
GCL-29	Not Provided	None Detected - Floor Tile 5% Chrysotile - Old Black Mastic None Detected - New Black Mastic
GCL-30	Not Provided	None Detected - Floor Tile 5% Chrysotile - Old Black Mastic None Detected - New Black Mastic
GCL-31	Not Provided	None Detected - Floor Tile 5% Chrysotile - Old Black Mastic None Detected - New Black Mastic None Detected - Leveling Compound
GCL-32	Not Provided	None Detected - Yellow Mastic 5% Chrysotile - Black Mastic
GCL-33	Not Provided	None Detected - Yellow Mastic 5% Chrysotile - Black Mastic
GCL-34	Not Provided	None Detected - Yellow Mastic 5% Chrysotile - Black Mastic

PLM Summary Report

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On 12/12/2016, ninety one (91) bulk material samples were submitted by Mitch Stogner of Terracon - Austin for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
GCL-35	Not Provided	None Detected - Floor Tile None Detected - Yellow Mastic None Detected - Leveling Compound
GCL-36	Not Provided	None Detected - Floor Tile None Detected - Yellow Mastic
GCL-37	Not Provided	None Detected - Floor Tile None Detected - Yellow Mastic None Detected - Leveling Compound
GCL-38	Not Provided	None Detected - Floor Tile None Detected - Yellow Mastic 5% Chrysotile - Black Mastic
GCL-39	Not Provided	None Detected - Floor Tile None Detected - Tan Mastic 5% Chrysotile - Black Mastic None Detected - Leveling Compound
GCL-40	Not Provided	None Detected - Floor Tile None Detected - Tan Mastic 5% Chrysotile - Black Mastic None Detected - Leveling Compound
GCL-41	Not Provided	None Detected - Floor Tile None Detected - Tan Mastic
GCL-42	Not Provided	None Detected - Floor Tile None Detected - Tan Mastic
GCL-43	Not Provided	None Detected - Floor Tile None Detected - Tan Mastic
GCL-44	Not Provided	None Detected - Yellow Mastic
GCL-45	Not Provided	None Detected - Yellow Mastic
GCL-46	Not Provided	None Detected - Yellow Mastic
GCL-47	Not Provided	None Detected - Sink Undercoating

PLM Summary Report

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TDSHS License No. 30-0084

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Project : Seguin, Guadalupe County Library
Project # : 96167943
Identification : Asbestos, Bulk Sample Analysis
Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
EPA Method 600 / R-93 / 116

Lab Job No. : 16B-15315
Report Date : 12/14/2016
Sample Date : 12/09/2016

On 12/12/2016, ninety one (91) bulk material samples were submitted by Mitch Stogner of Terracon - Austin for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
GCL-48	Not Provided	None Detected - Sink Undercoating
GCL-49	Not Provided	None Detected - Sink Undercoating
GCL-50	Not Provided	None Detected - Thermal Insulation None Detected - Paper/Tar/Foil Wrap None Detected - Glass Fiber Mesh None Detected - Tan Mastic
GCL-51	Not Provided	None Detected - Thermal Insulation None Detected - Paper/Tar/Foil Wrap None Detected - Tan Mastic
GCL-52	Not Provided	None Detected - Thermal Insulation None Detected - Paper/Tar/Foil Wrap None Detected - Tan Mastic
GCL-53	Not Provided	10% Chrysotile - Insulation None Detected - Cotton Wrap
GCL-54	Not Provided	10% Chrysotile - Insulation
GCL-55	Not Provided	10% Chrysotile - Insulation None Detected - Cotton Wrap
GCL-56	Not Provided	None Detected - Drywall Material None Detected - Joint Compound None Detected - Texture
GCL-57	Not Provided	None Detected - Drywall Material None Detected - Texture / Joint Cmpd
GCL-58	Not Provided	None Detected - Drywall Material None Detected - Texture / Joint Cmpd
GCL-59	Not Provided	None Detected - Grey Mastic
GCL-60	Not Provided	None Detected - Grey Mastic
GCL-61	Not Provided	None Detected - Grey Mastic

PLM Summary Report

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NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

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Project : Seguin, Guadalupe County Library
Project # : 96167943
Identification : Asbestos, Bulk Sample Analysis
Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
EPA Method 600 / R-93 / 116

Lab Job No. : 16B-15315
Report Date : 12/14/2016
Sample Date : 12/09/2016

On 12/12/2016, ninety one (91) bulk material samples were submitted by Mitch Stogner of Terracon - Austin for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
GCL-62	Not Provided	15% Chrysotile - Cement Asbestos Board
GCL-63	Not Provided	15% Chrysotile - Cement Asbestos Board
GCL-64	Not Provided	15% Chrysotile - Cement Asbestos Board
GCL-65	Not Provided	2% Chrysotile - Surfacing Material
GCL-66	Not Provided	2% Chrysotile - Surfacing Material
GCL-67	Not Provided	2% Chrysotile - Surfacing Material
GCL-68	Not Provided	None Detected - Sealant
GCL-69	Not Provided	None Detected - Sealant
GCL-70	Not Provided	None Detected - Sealant
GCL-71	Not Provided	None Detected - Grout
GCL-72	Not Provided	None Detected - Grout
GCL-73	Not Provided	None Detected - Grout
GCL-74	Not Provided	None Detected - Grout
GCL-75	Not Provided	None Detected - Grout
GCL-76	Not Provided	None Detected - Grout
GCL-77	Not Provided	2% Chrysotile - Plaster
GCL-78	Not Provided	None Detected - Plaster None Detected - Paint
GCL-79	Not Provided	None Detected - Plaster None Detected - Paint

PLM Summary Report

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Project # : 96167943
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Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
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Lab Job No. : 16B-15315
Report Date : 12/14/2016
Sample Date : 12/09/2016

On 12/12/2016, ninety one (91) bulk material samples were submitted by Mitch Stogner of Terracon - Austin for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
GCL-80	Not Provided	None Detected - Roofing Tars None Detected - Roofing Material None Detected - Roofing Felts
GCL-81	Not Provided	None Detected - Roofing Tars None Detected - Roofing Material None Detected - Roofing Felts
GCL-82	Not Provided	None Detected - Roofing Tars None Detected - Roofing Felts
GCL-83	Not Provided	None Detected - Silver Paint None Detected - Sealant 1 None Detected - Rubber Membrane None Detected - Silver Paint None Detected - Sealant 2
GCL-84	Not Provided	None Detected - Silver Paint None Detected - Sealant 1 None Detected - Rubber Membrane None Detected - Silver Paint None Detected - Sealant 2
GCL-85	Not Provided	None Detected - Silver Paint None Detected - Sealant 1 None Detected - Rubber Membrane None Detected - Silver Paint None Detected - Sealant 2
GCL-86	Not Provided	5% Chrysotile - Old Caulking None Detected - New Caulking
GCL-87	Not Provided	5% Chrysotile - Old Caulking None Detected - New Caulking
GCL-88	Not Provided	5% Chrysotile - Caulking
GCL-89	Not Provided	None Detected - Caulking
GCL-90	Not Provided	None Detected - Caulking

PLM Summary Report

2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client :	Terracon - Austin	Lab Job No. :	16B-15315
Project :	Seguin, Guadalupe County Library	Report Date :	12/14/2016
Project # :	96167943	Sample Date :	12/09/2016
Identification :	Asbestos, Bulk Sample Analysis		
Test Method :	Polarized Light Microscopy / Dispersion Staining (PLM/DS) EPA Method 600 / R-93 / 116		

On 12/12/2016, ninety one (91) bulk material samples were submitted by Mitch Stogner of Terracon - Austin for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
GCL-91	Not Provided	None Detected - Caulking

NVLAP LAB #102056-0

Analyst(s): Ashley Chambers, Willie Pruitt

Lab Manager : Heather Lopez Approved Signatory : Heather Lopez

Lab Director : Bruce Crabb Approved Signatory : Bruce Crabb

Moody Labs
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PLM Detail Report

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0
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Client : Terracon - Austin
Project : Seguin, Guadalupe County Library
Project # : 96167943

Lab Job No. : 16B-15315
Report Date : 12/14/2016

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-01	Acoustic Tile (Light Grey)	100%	Cellulose Fibers	50%	12/14	WP
			Mineral Wool Fibers	30%		
			Perlite	20%		
GCL-02	Acoustic Tile (Light Grey)	100%	Cellulose Fibers	50%	12/14	WP
			Mineral Wool Fibers	30%		
			Perlite	20%		
GCL-03	Acoustic Tile (Light Grey)	100%	Cellulose Fibers	50%	12/14	WP
			Mineral Wool Fibers	30%		
			Perlite	20%		
GCL-04	CMU (Grey)	50%	Aggregate	65%	12/14	WP
			Cement Binders	35%		
	Texture (Off-White)	1%	Chrysotile	2%		
			Binders / Fillers	98%		
	Paint (Tan)	49%	Pigment / Binders	100%		
GCL-05	CMU (Grey)	3%	Aggregate	65%	12/14	WP
			Cement Binders	35%		
	Texture (Off-White)	1%	Chrysotile	2%		
			Binders / Fillers	98%		
	Paint (Grey)	96%	Pigment / Binders	100%		
GCL-06	CMU (Grey)	3%	Aggregate	65%	12/14	WP
			Cement Binders	35%		
	Texture (Off-White)	1%	Chrysotile	2%		
			Binders / Fillers	98%		
	Paint (Orange)	96%	Pigment / Binders	100%		
GCL-07	Drywall Material (White)	25%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	25%	Cellulose Fibers	100%		
	Joint Compound (White)	25%	Calcite / Talc / Binders	100%		
	Texture (White)	25%	Calcite / Talc / Binders	100%		

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Client : Terracon - Austin
Project : Seguin, Guadalupe County Library
Project # : 96167943

Lab Job No. : 16B-15315
Report Date : 12/14/2016

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-08	Drywall Material (White)	25%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	25%	Cellulose Fibers	100%		
	Joint Compound (White)	25%	Calcite / Talc / Binders	100%		
	Texture (White)	25%	Calcite / Talc / Binders	100%		
GCL-09	Drywall Material (White)	25%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper Facing (Tan)	5%	Cellulose Fibers	100%		
	Texture / Joint Cmpd (White)	70%	Calcite / Talc / Binders	100%		
GCL-10	Drywall Material (White)	50%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	12%	Cellulose Fibers	100%		
	Joint Compound (White)	25%	Calcite / Talc / Binders	100%		
	Yellow Mastic (Yellow)	3%	Glue Binders	100%		
	Wall Covering (Off-White)	10%	Synthetic Fibers	40%		
			Vinyl Binders	60%		
GCL-11	Drywall Material (White)	20%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	12%	Cellulose Fibers	100%		
	Joint Compound (White)	55%	Calcite / Talc / Binders	100%		
	Yellow Mastic (Yellow)	3%	Glue Binders	100%		
	Wall Covering (Off-White)	10%	Synthetic Fibers	40%		
			Vinyl Binders	60%		

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Lab Job No. : 16B-15315
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Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-12	Drywall Material (White)	20%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	12%	Cellulose Fibers	100%		
	Joint Compound (White)	55%	Calcite / Talc / Binders	100%		
	Yellow Mastic (Yellow)	3%	Glue Binders	100%		
	Wall Covering (Off-White)	10%	Synthetic Fibers	40%		
			Vinyl Binders	60%		
GCL-13	Drywall Material (White)	40%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	12%	Cellulose Fibers	100%		
	Joint Compound (White)	35%	Calcite / Talc / Binders	100%		
	Yellow Mastic (Yellow)	3%	Glue Binders	100%		
	Wall Covering (Off-White)	10%	Synthetic Fibers	40%		
			Vinyl Binders	60%		
GCL-14	Drywall Material (White)	40%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	12%	Cellulose Fibers	100%		
	Joint Compound (White)	35%	Calcite / Talc / Binders	100%		
	Yellow Mastic (Yellow)	3%	Glue Binders	100%		
	Wall Covering (Off-White)	10%	Synthetic Fibers	40%		
			Vinyl Binders	60%		
GCL-15	Drywall Material (Beige)	65%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	10%	Cellulose Fibers	100%		
	Joint Compound (White)	5%	Calcite / Talc / Binders	100%		
	Texture (White)	20%	Calcite / Talc / Binders	100%		

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Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-16	Drywall Material (Beige)	90%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	10%	Cellulose Fibers	100%		
	No Joint Compound or Texture					
GCL-17	Drywall Material (Beige)	25%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	25%	Cellulose Fibers	100%		
	Joint Compound (White)	25%	Calcite / Talc / Binders	100%		
	Texture (White)	25%	Calcite / Talc / Binders	100%		
GCL-18	Drywall Material (White)	90%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper Facing (Tan)	5%	Cellulose Fibers	100%		
	Texture / Joint Cmpd (White)	5%	Calcite / Talc / Binders	100%		
GCL-19	Drywall Material (Beige)	55%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	10%	Cellulose Fibers	100%		
	Joint Compound (White)	10%	Calcite / Talc / Binders	100%		
	Texture (White)	25%	Calcite / Talc / Binders	100%		
GCL-20	Drywall Material (Beige)	25%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	5%	Cellulose Fibers	100%		
	Joint Compound (White)	35%	Calcite / Talc / Binders	100%		
	Texture (White)	35%	Calcite / Talc / Binders	100%		

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Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-21	No Drywall				12/14	WP
	No Paper or Tape					
	Joint Compound (White)	80%	Calcite / Talc / Binders	100%		
	Wall Covering (Off-White)	20%	Synthetic Fibers	40%		
			Vinyl Binders	60%		
GCL-22	Drywall Material (White)	65%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper Facing (Tan)	5%	Cellulose Fibers	100%		
	Joint Compound (White)	20%	Calcite / Talc / Binders	100%		
	Wall Covering (Off-White)	10%	Synthetic Fibers	40%		
			Vinyl Binders	60%		
GCL-23	Drywall Material (White)	25%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	25%	Cellulose Fibers	100%		
	Joint Compound (White)	25%	Calcite / Talc / Binders	100%		
	Wall Covering (Off-White)	25%	Synthetic Fibers	40%		
			Vinyl Binders	60%		
GCL-24	Drywall Material (White)	25%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	10%	Cellulose Fibers	100%		
	Joint Compound (White)	50%	Calcite / Talc / Binders	100%		
	Wall Covering (Off-White)	15%	Synthetic Fibers	40%		
			Vinyl Binders	60%		

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Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-25	Drywall Material (White)	25%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper Facing (Tan)	25%	Cellulose Fibers	100%		
	Wall Covering (Off-White)	10%	Synthetic Fibers	40%		
			Vinyl Binders	60%		
GCL-26	No Drywall				12/14	WP
	No Paper or Tape					
	Texture / Joint Cmpd (White)	100%	Calcite / Talc / Binders	100%		
GCL-27	No Drywall				12/14	WP
	No Paper or Tape					
	Texture / Joint Cmpd (White)	100%	Calcite / Talc / Binders	100%		
GCL-28	Drywall Material (White)	25%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	25%	Cellulose Fibers	100%		
	Joint Compound (White)	25%	Calcite / Talc / Binders	100%		
	Texture (White)	25%	Calcite / Talc / Binders	100%		
GCL-29	Floor Tile (Tan)	98%	Calcite / Vinyl Binders	100%	12/14	WP
	Old Black Mastic (Black)	<1%	Chrysotile	5%		
			Tar Binders	95%		
	New Black Mastic (Black)	2%	Polyethylene Fibers	5%		
			Tar Binders	95%		
GCL-30	Floor Tile (Tan)	96%	Calcite / Vinyl Binders	100%	12/14	WP
	Old Black Mastic (Black)	1%	Chrysotile	5%		
			Tar Binders	95%		
	New Black Mastic (Black)	3%	Polyethylene Fibers	5%		
			Tar Binders	95%		

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Lab Job No. : 16B-15315
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Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-31	Floor Tile (Tan)	93%	Calcite / Vinyl Binders	100%	12/14	AC
	Old Black Mastic (Black)	<1%	Chrysotile	5%		
			Tar Binders	95%		
	New Black Mastic (Black)	2%	Polyethylene Fibers	5%		
			Tar Binders	95%		
	Leveling Compound (Off-White)	5%	Calcite / Binders	100%		
GCL-32	Yellow Mastic (Yellow)	65%	Glue Binders	100%	12/14	AC
	Black Mastic (Black)	35%	Chrysotile	5%		
			Tar Binders	95%		
GCL-33	Yellow Mastic (Yellow)	65%	Glue Binders	100%	12/14	AC
	Black Mastic (Black)	35%	Chrysotile	5%		
			Tar Binders	95%		
GCL-34	Yellow Mastic (Yellow)	65%	Glue Binders	100%	12/14	AC
	Black Mastic (Black)	35%	Chrysotile	5%		
			Tar Binders	95%		
GCL-35	Floor Tile (Black)	63%	Calcite / Vinyl Binders	100%	12/14	AC
	Yellow Mastic (Yellow)	2%	Glue Binders	100%		
	Leveling Compound (Brown)	35%	Cellulose Fibers	10%		
			Calcite / Binders	90%		
GCL-36	Floor Tile (Black)	99%	Calcite / Vinyl Binders	100%	12/14	AC
	Yellow Mastic (Yellow)	1%	Glue Binders	100%		
GCL-37	Floor Tile (Black)	93%	Calcite / Vinyl Binders	100%	12/14	AC
	Yellow Mastic (Yellow)	2%	Glue Binders	100%		
	Leveling Compound (Grey)	5%	Cellulose Fibers	10%		
			Calcite / Binders	90%		
GCL-38	Floor Tile (Brown)	40%	Calcite / Vinyl Binders	100%	12/14	AC
	Yellow Mastic (Yellow)	30%	Glue Binders	100%		
	Black Mastic (Black)	30%	Chrysotile	5%		
			Tar Binders	95%		

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Project # : 96167943

Lab Job No. : 16B-15315
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Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-39	Floor Tile (Wood Pattern)	95%	Calcite / Vinyl Binders	100%	12/14	WP
	Tan Mastic (Tan)	3%	Calcite	40%		
			Glue Binders	60%		
	Black Mastic (Black)	1%	Chrysotile	5%		
			Tar Binders	95%		
	Leveling Compound (Grey)	1%	Calcite / Binders	100%		
GCL-40	Floor Tile (Wood Pattern)	95%	Calcite / Vinyl Binders	100%	12/14	WP
	Tan Mastic (Tan)	3%	Calcite	40%		
			Glue Binders	60%		
	Black Mastic (Black)	1%	Chrysotile	5%		
			Tar Binders	95%		
	Leveling Compound (Grey)	1%	Calcite / Binders	100%		
GCL-41	Floor Tile (Wood Pattern)	97%	Calcite / Vinyl Binders	100%	12/14	WP
	Tan Mastic (Tan)	3%	Calcite	40%		
			Glue Binders	60%		
GCL-42	Floor Tile (Wood Pattern)	97%	Calcite / Vinyl Binders	100%	12/14	WP
	Tan Mastic (Tan)	3%	Calcite	40%		
			Glue Binders	60%		
GCL-43	Floor Tile (Wood Pattern)	97%	Calcite / Vinyl Binders	100%	12/14	WP
	Tan Mastic (Tan)	3%	Calcite	40%		
			Glue Binders	60%		
GCL-44	Yellow Mastic (Yellow)	100%	Glue Binders	100%	12/14	WP
GCL-45	Yellow Mastic (Yellow)	100%	Glue Binders	100%	12/14	WP
GCL-46	Yellow Mastic (Yellow)	100%	Glue Binders	100%	12/14	WP
GCL-47	Sink Undercoating (Off-White)	100%	Cellulose Fibers	10%	12/14	WP
			Calcite / Talc	50%		
			Binders / Fillers	40%		

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Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-48	Sink Undercoating (Off-White)	100%	Cellulose Fibers	10%	12/14	WP
			Calcite / Talc	50%		
			Binders / Fillers	40%		
GCL-49	Sink Undercoating (Off-White)	100%	Cellulose Fibers	10%	12/14	WP
			Calcite / Talc	50%		
			Binders / Fillers	40%		
GCL-50	Thermal Insulation (Yellow)	75%	Mineral Wool Fibers	95%	12/14	WP
			Resin Binders	5%		
	Paper/Tar/Foil Wrap (Tan / Silver)	10%	Cellulose Fibers	50%		
			Tar Binders	30%		
			Metal Foil	20%		
	Glass Fiber Mesh (Green)	10%	Glass Wool Fibers	100%		
	Tan Mastic (Tan)	5%	Glue Binders	100%		
GCL-51	Thermal Insulation (Yellow)	85%	Mineral Wool Fibers	95%	12/14	WP
			Resin Binders	5%		
	Paper/Tar/Foil Wrap (Tan / Silver)	10%	Cellulose Fibers	50%		
			Tar Binders	30%		
			Metal Foil	20%		
	Tan Mastic (Tan)	5%	Glue Binders	100%		
GCL-52	Thermal Insulation (Yellow)	85%	Mineral Wool Fibers	95%	12/14	WP
			Resin Binders	5%		
	Paper/Tar/Foil Wrap (Tan / Silver)	10%	Cellulose Fibers	50%		
			Tar Binders	30%		
			Metal Foil	20%		
	Tan Mastic (Tan)	5%	Glue Binders	100%		
GCL-53	Insulation (Off-White)	85%	Chrysotile	10%	12/14	WP
			Mineral Wool Fibers	15%		
			Binders / Fillers	75%		
	Cotton Wrap (Off-White)	15%	Cotton Fibers	100%		

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Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-54	Insulation (Off-White)	100%	Chrysotile	10%	12/14	WP
			Mineral Wool Fibers	15%		
			Binders / Fillers	75%		
GCL-55	Insulation (Off-White)	50%	Chrysotile	10%	12/14	WP
			Mineral Wool Fibers	15%		
			Binders / Fillers	75%		
	Cotton Wrap (Off-White)	50%	Cotton Fibers	100%		
GCL-56	Drywall Material (White)	15%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper / Tape (Tan / White)	10%	Cellulose Fibers	100%		
	Joint Compound (White)	50%	Calcite / Talc / Binders	100%		
	Texture (White)	25%	Calcite / Talc / Binders	100%		
GCL-57	Drywall Material (White)	55%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper Facing (Tan)	10%	Cellulose Fibers	100%		
	Texture / Joint Cmpd (White)	35%	Calcite / Talc / Binders	100%		
GCL-58	Drywall Material (White)	55%	Glass Wool Fibers	2%	12/14	WP
			Cellulose Fibers	1%		
			Gypsum / Binders	97%		
	DW Paper Facing (Tan)	10%	Cellulose Fibers	100%		
	Texture / Joint Cmpd (White)	35%	Calcite / Talc / Binders	100%		
GCL-59	Grey Mastic (Grey)	100%	Calcite	60%	12/14	WP
			Glue Binders	40%		
GCL-60	Grey Mastic (Grey)	100%	Calcite	60%	12/14	WP
			Glue Binders	40%		
GCL-61	Grey Mastic (Grey)	100%	Calcite	60%	12/14	WP
			Glue Binders	40%		

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

PLM Detail Report

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client : Terracon - Austin
Project : Seguin, Guadalupe County Library
Project # : 96167943

Lab Job No. : 16B-15315
Report Date : 12/14/2016

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-62	Cement Asbestos Board (Grey)	100%	Chrysotile	15%	12/14	WP
			Cement Binders	85%		
GCL-63	Cement Asbestos Board (Grey)	100%	Chrysotile	15%	12/14	WP
			Cement Binders	85%		
GCL-64	Cement Asbestos Board (Grey)	100%	Chrysotile	15%	12/14	WP
			Cement Binders	85%		
GCL-65	Surfacing Material (Off-White)	100%	Chrysotile	2%	12/14	WP
			Calcite	58%		
			Binders / Fillers	40%		
GCL-66	Surfacing Material (Off-White)	100%	Chrysotile	2%	12/14	WP
			Calcite	58%		
			Binders / Fillers	40%		
GCL-67	Surfacing Material (Off-White)	100%	Chrysotile	2%	12/14	WP
			Calcite	58%		
			Binders / Fillers	40%		
GCL-68	Sealant (Grey)	100%	Calcite	40%	12/14	WP
			Binders / Fillers	60%		
GCL-69	Sealant (Grey)	100%	Calcite	40%	12/14	WP
			Binders / Fillers	60%		
GCL-70	Sealant (Grey)	100%	Binders / Fillers	100%	12/14	WP
GCL-71	Grout (White)	100%	Calcite / Binders	100%	12/14	WP
GCL-72	Grout (White)	100%	Calcite / Binders	100%	12/14	WP
GCL-73	Grout (White)	100%	Calcite / Binders	100%	12/14	WP
GCL-74	Grout (White)	100%	Aggregate	65%	12/14	WP
			Binders / Fillers	35%		
GCL-75	Grout (White)	100%	Aggregate	65%	12/14	WP
			Binders / Fillers	35%		
GCL-76	Grout (White)	100%	Aggregate	65%	12/14	WP
			Binders / Fillers	35%		

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PLM Detail Report

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NVLAP Lab Code 102056-0
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Client : Terracon - Austin
Project : Seguin, Guadalupe County Library
Project # : 96167943

Lab Job No. : 16B-15315
Report Date : 12/14/2016

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-77	Plaster (White)	100%	Chrysotile	2%	12/14	WP
			Aggregate	63%		
			Calcite / Binders	35%		
GCL-78	Plaster (Grey)	5%	Aggregate	65%	12/14	WP
			Calcite / Binders	35%		
	Paint (White)	95%	Pigment / Binders	100%		
GCL-79	Plaster (Grey)	5%	Aggregate	65%	12/14	WP
			Calcite / Binders	35%		
	Paint (White)	95%	Pigment / Binders	100%		
GCL-80	Roofing Tars (Black)	20%	Tar Binders	100%	12/14	WP
	Roofing Material (Black)	50%	Cellulose Fibers	5%		
			Glass Wool Fibers	10%		
			Tar Binders	85%		
	Roofing Felts (Black)	30%	Glass Wool Fibers	45%		
			Tar Binders	55%		
GCL-81	Roofing Tars (Black)	20%	Tar Binders	100%	12/14	WP
	Roofing Material (Black)	25%	Cellulose Fibers	25%		
			Calcite	20%		
			Tar Binders	55%		
	Roofing Felts (Black)	55 %	Glass Wool Fibers	45%		
			Tar Binders	55%		
GCL-82	Roofing Tars (Black)	40%	Tar Binders	100%	12/14	WP
	Roofing Felts (Black)	60%	Glass Wool Fibers	45%		
			Tar Binders	55%		
GCL-83	Silver Paint (Silver)	2%	Pigment / Binders	100%	12/14	WP
	Sealant 1 (Black)	30%	Binders / Fillers	100%		
	Rubber Membrane (Beige / Black)	36%	Synthetic Fibers	5%		
			Rubber Binders	95%		
	Silver Paint (Silver)	2%	Pigment / Binders	100%		
	Sealant 2 (Black)	30%	Binders / Fillers	100%		

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

PLM Detail Report

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client : Terracon - Austin
Project : Seguin, Guadalupe County Library
Project # : 96167943

Lab Job No. : 16B-15315
Report Date : 12/14/2016

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
GCL-84	Silver Paint (Silver)	2%	Pigment / Binders	100%	12/14	WP
	Sealant 1 (Black)	30%	Binders / Fillers	100%		
	Rubber Membrane (Beige / Black)	36%	Synthetic Fibers	5%		
			Rubber Binders	95%		
	Silver Paint (Silver)	2%	Pigment / Binders	100%		
	Sealant 2 (Black)	30%	Binders / Fillers	100%		
GCL-85	Silver Paint (Silver)	2%	Pigment / Binders	100%	12/14	WP
	Sealant 1 (Black)	30%	Binders / Fillers	100%		
	Rubber Membrane (Beige / Black)	36%	Synthetic Fibers	5%		
			Rubber Binders	95%		
	Silver Paint (Silver)	2%	Pigment / Binders	100%		
	Sealant 2 (Black)	30%	Binders / Fillers	100%		
GCL-86	Old Caulking (Grey)	3%	Chrysotile	5%	12/14	WP
			Calcite	45%		
			Binders / Fillers	50%		
	New Caulking (White)	97%	Calcite	50%		
			Binders / Fillers	50%		
GCL-87	Old Caulking (Grey)	90%	Chrysotile	5%	12/14	WP
			Calcite	45%		
			Binders / Fillers	50%		
	New Caulking (White)	10%	Calcite	50%		
			Binders / Fillers	50%		
GCL-88	Caulking (Grey)	100%	Chrysotile	5%	12/14	WP
			Calcite	45%		
			Binders / Fillers	50%		
GCL-89	Caulking (Grey)	100%	Binders / Fillers	100%	12/14	WP
GCL-90	Caulking (Grey)	100%	Binders / Fillers	100%	12/14	WP
GCL-91	Caulking (Tan)	100%	Binders / Fillers	100%	12/14	WP

Moody Labs **Chain of Custody**

Lab Job # 16B-15315 PLM 91
Lab Job # _____
Lab Job # _____

Please call in advance for immediate, after-hour, & weekend pricing & availability.

ASBESTOS PLM
Bulk ☐ Immediate ☐ 1 day ☐ 2 day ☒ 3 day ☐ 5 day
☒ **Analyze All** ☐ **Positive Stop**

PCM Air (7400)
☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day

TOTAL DUST (0500/0600)
☐ 1 day ☐ 2 day

ASBESTOS TEM
Air AHERA Method ☐ 6 hr ☐ 12 hr ☐ 24 hr
Air 7402 (Modified) ☐ 1 day ☐ 2 day ☐ 3 day
Bulk ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Water/Wipe/Micro Vac ☐ 1 day ☐ 2 day ☐ 3 day
Analyze Blanks ☐ **Yes** ☐ **No**

MOLD
Direct Exam ☐ Immediate ☐ 1 day ☐ 2 day
Standard Air ☐ Immediate ☐ 1 day ☐ 2 day
Expanded Air ☐ Immediate ☐ 1 day ☐ 2 day
Culture** ☐ 10-14 days
Analyze Blanks ☐ **Yes** ☐ **No**

****Turnaround of Culture Samples subject to Culture Growth****

BACTERIA**
Colony Counts (CC) ☐ 3 day ☐ 5 day
CC + Gram Stain ☐ 3 day ☐ 5 day
Coliform & E. coli (P/A) ☐ 2-3 day
Legionella ☐ 14 days

OTHER: _____

Billing Company / City: **Terracon Consultants, Inc. / Austin**
Submitter's Company: **Terracon Consultants, Inc.**
Submitter's Name: **Mitch Stogner**
Project: **Seguin – Guadalupe County Library**
Contact Information: Name: **Mitch Stogner**
E-mail Results to: **mwstogner@terracon.com (and kdramirez@terracon.com)**
Invoice Address: **5307 Industrial Oaks Blvd., Ste. 160 – Austin, TX 78735**

# of Samples: **91**
Sample Date: **12/09/16**
Project #: **96167943**
Phone #: **(512) 442-1122**
Mobile #: **(512) 653-4138**
Fax #: **(512) 442-1181**
P.O. #: _____

Please review paperwork and samples before submitting to lab. Unsealed / improperly packaged / damaged / expired samples or excessive administrative requests may incur additional fees

Notes: _____

Sample #	Sample Description	Vol. / Area (if applicable)	Location / Notes
GCL-01			
Through			
GCL-91			

Released By:	Date / Time:	Received By:	Date / Time:
[signature]	12/09/16	[signature] via Fed Ex 12.12.16	8:55 Am.
Released By:	Date / Time:	Received By:	Date / Time:

APPENDIX D

Licenses and Certifications

TEXAS DEPARTMENT OF STATE HEALTH SERVICES

TERRACON CONSULTANTS INC

is certified to perform as a

Asbestos Consultant Agency

in the State of Texas within the purview of Texas Occupations Code, chapter 1954, so long as this license is not suspended or revoked and is renewed according to the rules adopted by the Texas Board of Health.

JOHN HELLERSTEDT, M.D.
COMMISSIONER OF HEALTH

License Number: 100157

Expiration Date: 11/30/2018

Control Number: 96944

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

Texas Department of State Health Services

Asbestos Individual Consultant

MITCHELL W STOGNER

License No. 105648

Control No. 96925

Expiration Date: 12/26/2017

Texas Department of State Health Services

Asbestos Inspector

ROMAN N FANELLI
License No. 603437
Control No. 98037
Expiration Date: 7/22/2017

TEXAS DEPARTMENT OF STATE HEALTH SERVICES

STEVE MOODY MICRO SERVICES LLC

is certified to perform as a

Asbestos Laboratory
PCM, PLM, TEM

in the State of Texas within the purview of Texas Occupations Code, chapter 1954, so long as this license is not suspended or revoked and is renewed according to the rules adopted by the Texas Board of Health.

JOHN HELLERSTEDT, M.D.
COMMISSIONER OF HEALTH

License Number: 300084

Expiration Date: 5/31/2018

Control Number: 96126

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 102056-0

Steve Moody Micro Services, LLC

Farmers Branch, TX

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2016-07-01 through 2017-06-30

Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Steve Moody Micro Services, LLC
2051 Valley View Lane
Farmers Branch, TX 75234-8956
Mr. Bruce Crabb
Phone: 972-241-8460 Fax: 972-241-8461
Email: bruce.crabb@moodylabs.com
http://www.moodylabs.com

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 102056-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

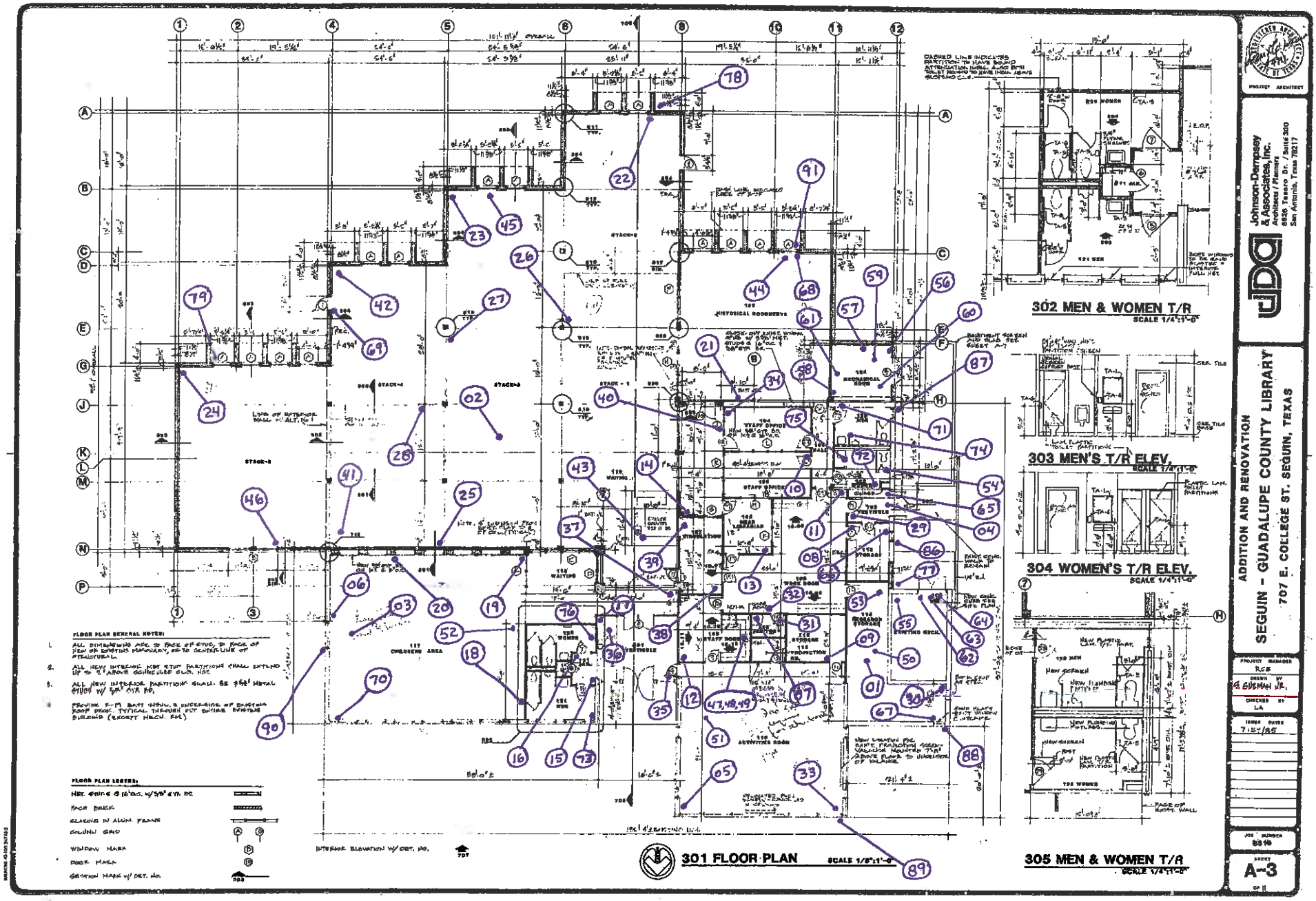
Airborne Asbestos Analysis

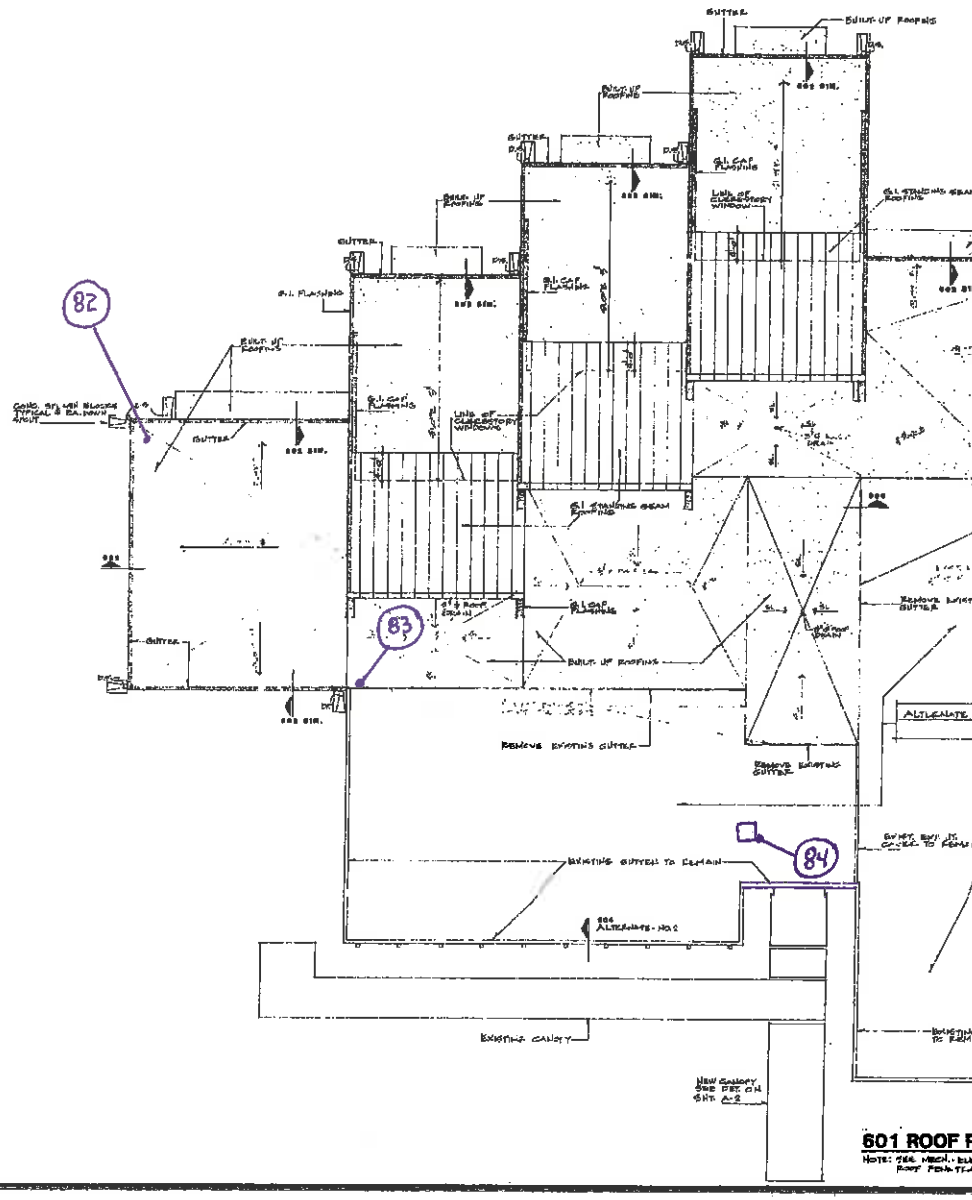
Code	*Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

APPENDIX E

Sample Location Maps

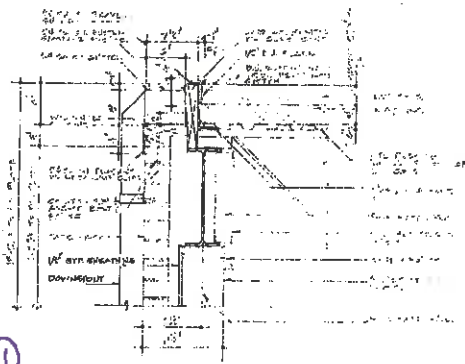

301 FLOOR PLAN
SCALE 1/8"=1'-0"
302 MEN & WOMEN T/R
SCALE 1/4"=1'-0"
303 MEN'S T/R ELEV.
SCALE 1/4"=1'-0"
304 WOMEN'S T/R ELEV.
SCALE 1/4"=1'-0"
305 MEN & WOMEN T/R
SCALE 1/4"=1'-0"
FLOOR PLAN GENERAL NOTES:
FLOOR PLAN LEGEND:
INTERIOR ELEVATION W/ DET. NO.
SEGUIN - GUADALUPE COUNTY LIBRARY
ADDITION AND RENOVATION
707 E. COLLEGE ST. SEGUIN, TEXAS
Johnson-Dempsey & Associates, Inc.
Architects / Planners
8836 Tesoro Dr. / Suite 300
San Antonio, Texas 78217
PROJECT ARCHITECT
PROJECT MANAGER
RCE
DRAWN BY
G. BUSMAN JR.
CHECKED BY
LA
ISSUE DATE
7-12-95
JOB NUMBER
9316
SHEET
A-3
OF 11



601 ROOF PLAN

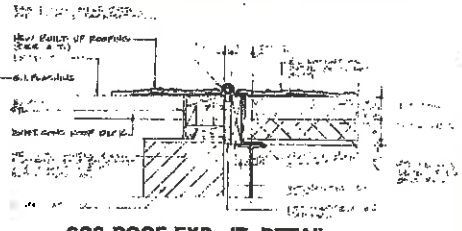
SCALE 1/8"=1'-0"

NOTE: SEE MECH., ELEC., PLUMBING FOR FLASHING AT ROOF PENETRATIONS.



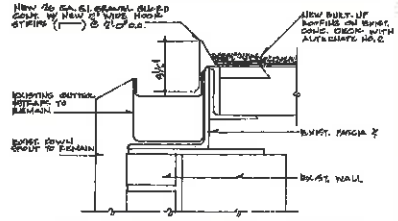
602 GUTTER DETAIL

SCALE 11/2"=1'-0"



603 ROOF EXP. JT. DETAIL

SCALE 11/2"=1'-0"



604 ALTERNATE NO. 2 -REROOF EXIST.BUILDING

Johnson-Dempsey & Associates, Inc.
Architects / Planners
8626 Tesoro Dr. / Suite 300
San Antonio, Texas 78217

ADDITION AND RENOVATION
SEGUIN - GUADALUPE COUNTY LIBRARY
707 E. COLLEGE ST. SEGUIN, TEXAS

PROJECT MANAGER: RGS
DRAWN BY: [illegible]
CHECKED BY: LA
ISSUE DATES: 7/21/05
JOB NUMBER: 0410

SHEET A-6 OF 11