**PLANS AND SPECIFICATIONS**
**FOR**
**ASBESTOS CONTAINING BUILDING MATERIAL ABATEMENT**

Commercial Structures
La Salle County Public Safety Building and Shop/Storage Building
San Miguel Street at N. Main Street
Cotulla, Texas

***A Professional Document Prepared for:***

Judge Joel Rodriguez, Jr.
County Judge
La Salle County
P.O. Box 340
Cotulla, TX 78014

***Prepared by:***

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**OES PROJECT NO. OES-E3820001-02**

**May 2, 2017**


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## SUMMARY OF WORK

Purpose

This Work Plan is intended to give general methods and work procedures to be used by the Asbestos Abatement Contractor (Contractor) for the removal of identified asbestos containing building materials (ACBM) at the structures located at the northeast corner of the intersection of San Miguel Street and N. Main Street in Cotulla, Texas.

The Contractor is to adhere not only to this work plan, but also to all applicable local, state, and federal regulations governing the removal and disposal of ACBM.

Scope of Work

This project includes the removal and disposal of the following ACBM. The project scope is supported by the provided attachments. **THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL ELECTRICAL POWER AND WATER REQUIRED TO ACCOMPLISH THE SCOPE OF WORK UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE IN ADVANCE WITH THE OWNER.**

The following represents a summary of the identified ACBM scheduled for removal at the project site:

La Salle County Public Safety Building
***Drywall and Joint Compound (Appx. 4,500 Square Feet)***
***12 x 12 Off-White Floor Tile over Gray Tile and Black Mastic (Appx. 1,500 Square Feet)***

Shop/Storage Building
***Window Glazing (1 Unit)***

**It should be noted that the quantity of ACBM to be removed as stated herein is an estimate ONLY. The Contractor will be responsible for viewing the conditions of the site and measuring the materials scheduled for abatement prior to submitting a bid. Otherwise, the Contractor with the winning bid will accept the quantities stated and the conditions at the project site and perform the work as required without change order requests. Any discrepancies in the estimate provided shall be brought to the attention of OES prior to the project bid date to allow sufficient time to verify the claim and provide an addendum to the bid package as necessary.**

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The Contractor shall adhere to all applicable Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), and Texas Department of State Health Services (TDSHS) requirements. Prior to initiating work, the proper written notification to appropriate agencies shall be performed in accordance with applicable requirements. **THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH NOTIFICATIONS UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE IN ADVANCE WITH THE OWNER**. Current notifications shall be made available on-site during the asbestos abatement project. Any amended notifications shall also be copied to the Owner and Consultant.

Abatement Schedule:

The said abatement schedule shall be announced.

STOP WORK: If the Owner or the Owner's Representative presents a written or verbal stop work order, immediately stop all work or that portion of the work designated. A verbal stop work order will be confirmed by a written stop work order within 24 hours. Do not re-commence work until authorized in writing by the Owner or the Consultant.

Project Details

Abatement work shall not commence until the following operational equipment is on site:

- HEPA vacuums
- negative air machines
- air-less sprayers
- Respirators (as specified)
- Manometer
- 5-stage wet decontamination unit, adequately equipped
- Ground Fault Circuit Interrupter(s)
- Rolling scaffolding (if applicable)
- Fiberglass ladder(s), if applicable
- Adequate supply of 4 and 6-mil poly sheeting

The Contractor shall be responsible for de-energizing all electrical and plumbing fixtures which may be disturbed during the abatement process. The Contractor shall also be responsible for providing temporary electrical power and water as needed unless authorization from the Owner is granted for use of utilities accessible on-site.

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Submittals

The Contractor shall submit to the Owner, the following:

- TDSHS Notifications (Original and Amendments)
  **THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILING ALL APPLICABLE NOTIFICATIONS AND ALL ASSOCIATED FEES UNLESS OTHER ARRANGEMENTS ARE MADE IN ADVANCE WITH THE OWNER.**
- Material Safety Data Sheets (MSDS) for all materials used on site
- Project Progress Schedules (weekly basis, if applicable)
- TDSHS/TCEQ Licenses and Certificates (for company and all workers if applicable)
- Project Closeout Documents, including field logs, air sample data, and manifests
- Completed Punch-list (if applicable)

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## EMERGENCY PLANNING

The abatement contractor shall use the following emergency procedures:

Emergency Exit Plans - All emergency exits in each containment area shall be clearly marked in red lettering legible to all inside the area. Arrows denoting nearest emergency exits shall also be attached to the walls in areas where the emergency exits are not readily seen.

Notification procedures (Asbestos) - Asbestos Danger signs, in accordance with OSHA 29 CFR 1926.1101, shall be posted at all entrances to the containment area and the regulated areas. Asbestos Danger barrier tape shall also be erected around the perimeters of all regulated areas and/or areas where unauthorized personnel shall not enter.

Fire Extinguishers - Provide and maintain temporary fire protection during construction in accordance with requirements of the local fire protection code and in accordance with the Texas Department of Health Asbestos Exposure Rules. Provide Type-"A" fire extinguishers for temporary offices and similar spaces where there is minimal danger of electrical, grease, oil or flammable liquid fires. In other locations, provide Type-"ABC" dry chemical extinguishers, or a combination of several extinguishers of NFPA-recommended types for the exposures in each case. Comply with local regulations and the applicable recommendations of NFPA Standard 10, "Standard for Portable Fire Extinguishers." Locate the fire extinguishers where they are most convenient and effective for their intended purpose. Provide not less than one extinguisher in each work area, one in the equipment room, and one outside the work area in the clean room, or as required by TDSHS regulations, whichever is the more stringent.

Telephone Numbers - Telephone numbers of all appropriate emergency response personnel shall be clearly posted in the clean room and equipment room. In addition, the nearest hospital shall be indicated with directions to the facility posted.

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## PROTECTIVE CLOTHING AND EQUIPMENT

Personal Protective Equipment

Each TDSHS licensed and/or certified person involved in the removal and disposal of ACM shall wear full-bodied protective disposable coveralls (Tyvek), coated canvas or rubber gloves, head covering, and non-skid foot coverings (steel toe/shank boots), whenever they are within the regulated area. The material shall be made of a material that is impervious to asbestos fibers. All seams shall be sealed using duct tape. When removal is accomplished without the use of a wet decontamination unit, each person shall wear at least two coveralls inside the regulated work area once removal begins and until final clearance is achieved.

In areas where half-faced respirators are worn, appropriate eye protection shall also be used.

In areas where the noise level may exceed the OSHA action level of 85 dB, appropriate hearing protection shall also be provided and worn.

Respiratory Protection

The Contractor shall comply with ANSI Z88.2 - 1980 "Practices for Respiratory Protection" and OSHA Regulations 29 CFR 1910 and 1926, with confirmation by the consultant.

A minimum of half-face air-purifying respirators with dual HEPA (High Efficiency Particulate Air) filters will be used at all times that there is any possibility of the disturbance of ACM, whether intentional or accidental.

The Contractor will require that a respirator be worn by anyone entering the work area at all times, regardless of activity, during a period that starts with any operation which could cause fibers to become airborne, until the work area has been cleared for re-occupancy by air sample analysis.

All respirators shall be approved by the National Institute of Occupational Safety and Health Administration (NIOSH) and the Mine Safety and Health Administration (MSHA) for use in asbestos work.

Each worker shall perform both a positive and negative air pressure fit test in accordance with ANSI Z88.2 (1980) or the manufacturer's instructions each time a respirator is put on or as the respirator design permits.

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Powered air purifying respirators (PAPR) with HEPA filters shall be used during work in full containment areas where friable ACM is being removed. The PAPRs shall be tested for adequate flow as specified by the manufacturer.

Successful fit testing (qualitative or quantitative) shall have been completed for each person wearing a negative pressure respirator within the last 6 months. No persons with beards and or other facial hair which may prevent a proper respirator seal will be allowed to enter the regulated area.

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## SITE PREPARATION

The Contractor shall isolate the regulated areas per OSHA Regulation 29 CFR 1910.1101 and the most recent publication of the TDSHS Texas Asbestos Health Protection Rules. **All cabinets, doors, trims, moveable items, etc. that require removal to gain access to ACBM scheduled for removal shall be pre-cleaned and removed by CONTRACTOR. All items removed from building shall be placed back inside upon completion of abatement activities. CONTRACTOR shall return items to building in a fashion that will allow OWNER to gain access to all rooms as needed.** The regulated work area shall be taped and marked off with clearly written signs (in English and Spanish) in order to keep unauthorized personnel out of the regulated area. The regulated area will encompass the entire area expected to have an airborne fiber concentration greater than 0.01 fibers per cubic centimeter (f/cc). The Contractor will erect critical barriers as required for each work area.

The Contractor shall obtain approval of local utility companies and the Owner prior to electrical connections. In addition, the Owner shall be notified of wastewater discharge for decontamination units, and discharge points for negative pressure units.

The Contractor will pre-clean all objects in the work area using HEPA vacuum and/or wet cleaning methods prior to any asbestos abatement. Non-removable objects in the work area shall be provided with critical barriers consisting of at least one layer of 6-mil poly sheeting.

At the discretion of the Owner or the Consultant, the Contractor will cover any windows in the work area with 6-mil, opaque, flame retardant sheeting in order to obstruct the view into the work area.

For asbestos abatement requiring full-containment, the Contractor shall provide a sufficient quantity (at a minimum, the quantity specified in this document) of fully operational negative pressure ventilation units in order to provide a minimum of one (1) air exchange every 15 minutes within the work area. The negative pressure ventilation units must continuously maintain a pressure differential across the work area enclosure of at least -0.02 inches of water and must be placed as specified in this document in an effort for air flow to optimally cross the entire enclosure. A manometer, with a paper recording mechanism, shall be placed at each containment area.

The contractor shall provide a decontamination unit consisting of a serial arrangement of connected rooms or spaces, changing room, shower room, and equipment room, each separated by an air-lock. The unit shall be enclosed by two layers of 6-mil poly with one additional layer on the floor. These rooms must be adjacent and attached to the work area. Require all persons to pass through this decontamination unit for entry into and exit from the work area. A sufficient supply of shampoo, soap, and hot and cold water shall be provided in the unit.

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## AIR MONITORING PLAN

General Procedures

Monitoring of airborne fiber concentrations of asbestos fibers will be in accordance with OSHA Regulations 29 CFR 1926.1101, most recent publication or the TDSHS Asbestos Health Protection Rules, and as specified in this Work Plan. Personnel air monitoring and sample analysis, in addition to baseline, inside area, outside area, and clearance air monitoring and sample analysis shall be conducted using phase contrast microscopy (PCM) NIOSH 7400 counting rules.

Electrically operated sampling pumps with a flow rate of less than 10 liters per minute (LPM) may be used for baseline, project, and clearance samples. Low-volume sampling pumps calibrated to approximately 2.0 LPM may be used for personnel sampling.

Sampling cassettes (25 millimeters) shall be 0.8 micron (µm) mixed cellulose ester (MCE) for PCM and 0.45 micron MCE for TEM.

Baseline Air Sampling

Air monitoring shall be performed by the Consultant in the work areas prior to the start of asbestos abatement in order to establish a baseline fiber concentrations inside each work area. In addition, air monitoring shall be performed outside each work area prior to asbestos abatement activities in order to establish a baseline fiber concentration outside of the work area. Such samples shall be used to illustrate airborne fiber concentrations in these areas during normal conditions. A minimum volume of 1,250 liters of air at a flow rate of less than 10 liters per minute (LPM) will be used. Hi-volume sampling pumps shall be used to collect baseline samples. These samples shall be analyzed via PCM.

Project Air Sampling

Area air monitoring shall be performed by the Consultant in order to provide exposures to airborne fiber concentrations in the working environment. Environmental monitoring shall be performed in order to provide exposures to airborne fiber concentrations outside of the working environment. Monitoring of the area inside and surrounding the asbestos work area will be performed on a daily basis.

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Project air sampling will include negative air machine exhaust, decontamination unit, inside the work area, critical barriers, and adjacent areas. The number of samples and the sample volumes will be dependent upon the work activities and time constraints of the project. If air monitoring data outside of the work area shows air concentrations greater than 0.01 f/cc, the abatement contractor will be notified and all work will be stopped until a determination is made as to why this occurred, and if necessary, what action needs to be taken, including decontamination, wet-wiping, and re-establishment of regulated areas.

Personnel Air Sampling

Monitoring of asbestos workers is the responsibility of the Contractor. This monitoring shall take place as required by OSHA 29 CFR 1926.1101. This type of monitoring shall be performed daily during different phases of the asbestos abatement process. Both 8-hour time weighted averages (TWA) and short term exposure limit (STEL) samples shall be collected. Low-volume sampling pumps calibrated to approximately 2.0 LPM will be used for personnel air sampling. These samples will be analyzed via PCM.

Clearance Air Sampling

Clearance air monitoring shall be conducted by the Consultant upon the completion of the asbestos abatement process and after the walk-through inspection by the consultant reveals that removal has been completed and the work area has been satisfactorily decontaminated. Each of these air samples must be below 0.01 f/cc before the abatement contractor will be allowed to remove the asbestos enclosure. A minimum volume of 1,250 liters of air at a flow rate of less than 15 LPM will be used. Areas of full containment, shall be cleared using aggressive clearance methods.

Air Sample Analysis

The air samples will be analyzed in accordance with the NIOSH 7400 Method using Phase Contrast Microscopy (PCM) by a PATS certified and Texas Department of State Health Services licensed microscopist employed by a TDSHS licensed Asbestos Laboratory.

Transmission Electron Microscopy (TEM) may be used if the PCM clearance criteria of 0.01 f/cc can not be obtained after the second attempt or at the request of the Owner. Also, TEM analysis may be requested by the Contractor, at no additional expenses to the Owner.

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## ACBM ABATEMENT PROCEDURES

The following sections detail abatement methods to be used during this project. Variances from these methods must be pre-approved by the Consultant. In areas where a combination of ACM are encountered the most stringent abatement procedures shall govern.

Wet-Methods (General Information)

The following information shall be used when removing and/or disturbing any ACBM:

Spray asbestos-containing materials with a light mixture of amended water. Use a mixture of surfactant and water which results in a thorough wetting of the ACBM and retardation of fiber release during disturbance of the material. This mixture shall be equal to or greater than that provided by the use of one (1) fluid ounce of surfactant, consisting of 50% polyoxyethylene ester and 50% polyoxyethylene ether, mixed with five (5) gallons of water. Allow the amended water time to thoroughly saturate the material. Remove all material in manageable quantities such that removed materials are placed in asbestos bags promptly following removal. Remove all residue on surfaces with a stiff nylon hand brush. After the work area has been cleaned of all visible debris and has been visually inspected by OES, coat removed surfaces with a thin coat of penetrating encapsulant approved by OES in order to seal any non-visible asbestos fibers. Encapsulant shall be sprayed using airless sprayers.

Drywall and Joint Compound

The Contractor shall install critical barriers (6-mil poly) over all penetrations into the work area and erect a containment unit (two layers of 6-mil floor poly in areas not requiring flooring removal and two layers of 4-mil wall poly in areas not requiring wall material removal) with negative pressure.

Remove the entire drywall section containing joint compound (including portions above the ceiling if applicable) by component removal and dispose of all materials as ACM waste. The ACM shall be thoroughly wetted prior to removal and maintained in a wet condition by misting with amended water. As the material is removed, amended water shall be applied to minimize fiber release. The debris shall be immediately containerized to prevent the material from drying out. In addition, any over spray of texture behind the walls or ceilings shall also be removed.

Floor Tile and Mastic

Flooring shall be removed under containment. The Contractor shall install critical barriers (6-mil poly) over all penetrations into the work area. Install splash guards, consisting of at least one layer of 6-mil poly sheeting, up 48 inches from the floor level along walls and provide negative pressure in areas where wall material will not be removed. The flooring materials shall be thoroughly wetted prior to removal and maintained in a wet condition by misting with amended water. Removal procedures shall entail the lifting of the flooring materials from the substrate. The flooring materials shall not be sanded, ground, sawed or abraded in any manner which could cause a friable asbestos hazard or visible fiber release. As the flooring materials are removed, the debris shall be containerized to avoid excessive accumulation. Ensure, using engineering controls, that water and debris do not exit the containment areas.

Only pre-approved non-hydrocarbon based mastic solvents shall be used. Solvents used shall have a flash point greater than 140 degrees Fahrenheit.

**Methods described for the removal of vinyl flooring by the Resilient Floor Covering Institute may be implemented in situations that are amenable.**

Window Glazing

Scheduled window(s) shall be abated by component removal. Two layers of 6-mil floor poly shall be placed beneath each window scheduled for removal. The ACM glazing shall not be sanded, ground, sawed or abraded in any manner which could cause a friable asbestos hazard or visible fiber release. The Contractor shall ensure that the ACM is thoroughly wetted prior to removal and maintained in a wet condition by misting with amended water. As the material is removed, amended water shall be applied to minimize fiber release. The debris shall be immediately containerized by double bagging or double 4-mil poly wrapping to prevent the material from drying out.

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## WASTE DISPOSAL PROCEDURES

No waste shall be stored in the containment areas overnight. Disposal bags shall be 6-mil polyethylene bags that are preprinted with labels as required by EPA NESHAPS 40 CFR Subpart M and OSHA CFR 1926.1101. All asbestos-containing and asbestos-contaminated materials shall be double-bagged, goose necked, and duct taped at the top of the bags in order to prevent any fiber release. The excess air in disposal bags will be HEPA vacuumed prior to sealing.

The Contractor shall take care to prevent asbestos-containing and asbestos-contaminated material from clinging to the outside of the filled bags. The bags shall be HEPA vacuumed, wet wiped, or washed in the decontamination unit prior to leaving the work area. The abatement contractor will transfer filled bags to the on-site asbestos waste dumpster in an enclosed cart. The bags in this cart will be covered with an opaque polyethylene sheet.

The waste transporter shall be properly licensed by the Texas Department of State Health Services bearing a TDSHS Asbestos Transporter license.

The Contractor shall be protected by donning disposable clothing and a minimum of half-face air-purifying respirators with HEPA cartridges while loading and disposing of asbestos waste.

The cargo truck or dumpster (waste vehicle) shall be lined with at least two layers 6-mil polyethylene sheeting in order to prevent contamination from leaking bags. The vehicle shall not be open topped and the vehicle must be locked and secured at the end of each shift. In addition, appropriate asbestos warning signs must be placed on the vehicle exterior. The location of the waste vehicle must be pre-approved by the Owner.

Asbestos waste bags shall be disposed of in an approved landfill according to current State of Texas regulations as well as the landfill operator's requirements.

Once final air clearance has been achieved with the negative air units turned on and the containment in place, the Contractor shall remove all pre-filters from the buildings' HVAC system (if applicable) and provide new pre-filters. The Contractor shall dispose of used pre-filters as asbestos contaminated waste.

A proper waste manifest(s) shall be required of all asbestos waste shipments as per 30 TAC 335.10 and EPA NESHAPS 40 CFR Part 61, Subpart M. A legible copy of the waste manifest will be sent to the consultant upon completion of the project. The original shall be submitted to the Owner.

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## DECONTAMINATION PROCEDURES

The work area and the decontamination area shall be thoroughly cleaned using a HEPA vacuum and wet wiping methods after removal work is complete.

After HEPA vacuuming or wet-wiping is complete, the Consultant shall be notified and will perform a visual inspection of the area. If the visual inspection is successful, the polyethylene barriers will be sprayed with an encapsulant and allowed to dry. Clearance sampling will then be conducted. Once air clearance is successfully obtained, the entire containment area shall be disposed of as ACM waste. The areas underneath the former containment area shall be wet-wiped and HEPA vacuumed to remove any residual debris.

A walk-through with the Consultant, the Owner or his representative and the abatement contractor will be conducted and, if necessary, a punch list will be prepared by the Consultant. The Contractor will remedy all punch list items to the satisfaction of the Owner or his representative before leaving the work area.

**END OF DOCUMENT**

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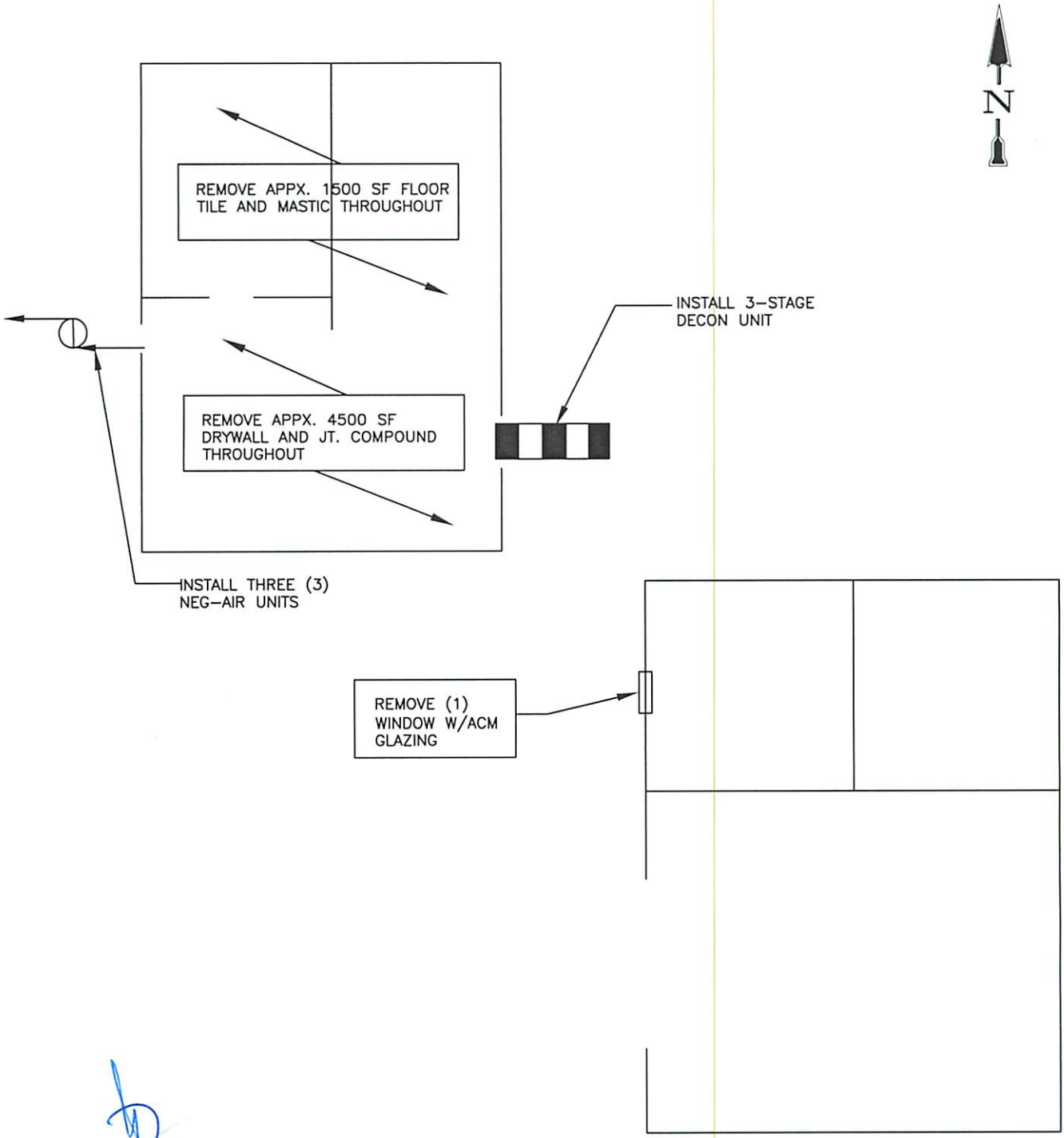
# APPENDIX A

# ABATEMENT FLOOR PLAN

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| O'CONNOR ENGINEERING & SCIENCE, INC. | DRAWN BY: M.F FILE NAME: E3820001-02<br>DATE: 5/2/2017 REVISION#:<br>CHKD BY: TJO SCALE: NTS<br>919 VICTORIA<br>LAREDO, TEXAS 78040<br>TEL (956)728-1123 FAX (956)728-7075 | COMMERCIAL STRUCTURES<br>FORMER LA SALLE CO. PUBLIC SAFETY DEPT. SHOP/ STORAGE BUILDING<br>SAN MIGUEL ST. AT N. MAIN ST.<br>COTULLA, LA SALLE CO., TEXAS | LA SALLE COUNTY<br>ABATEMENT PLAN | 1<br>1 OF 1 |