



# Gaston County Fire Commission



## CERTIFICATE OF NEED APPLICATION

### Fire Department

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**Name**

Alexis Volunteer Fire Department, Inc

**Address**

PO Box 157, Alexis, North Carolina 28006

**Chief**

Brad Presswood

**Contact Phone #**

(704) 719-6400

**Board President**

Ronald Sadler

**Contact Phone #**

(704) 363-6836

**Fire Department Board Approval / Notification**

Yes

**General Description of Purchase**

Water damage and mold discovery in 5 bunks rooms of the main station. Water intrusion determined to be from wind driven rain, possibly back from Helene. Future prevention plan is to lower the exterior grade and add additional drainage catch basins to the current gutter downspouts. The cost of this specific item will be covered under the state grant we received for renovations to the buildings.

When presented with unforeseen expenses, we typically redirect funding from capital to cover the cost. With our FY26 capital adjusted to \$0 for this budget year, there are no fund revenues to pull from for this expense.

We are requesting the portion not covered by VFIS in the amount of \$5,629.00 for this CON.

**Time Line of Purchase**

Remediation and replacement of building materials have already been completed. VFIS did partially cover this expense, however, they do not cover the mold remediation aspect.

**List Specifics of Purchase**

Testing (Pre & Post Remediation) - \$ 2,675.00. Remediation - \$ 5,495.00. Building material removal and replacement - \$6,950.00. Total Cost - \$15,120.00.

**Estimated Cost**

\$5,629.00

### Financing Information

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**Lender**

N/A

**Amount Financed**

\$0.00

**Rate**

N/A

**Estimated Amount**

\$0.00

**Number of Payments**

N/A

**Down Payment Amount**

\$0.00

**Debt Ratio-Current / Post Purchase**

0.00

**Any Re-Financing or Bundling**

No

**If Yes, then Describe**

**How Will Purchase Benefit the Department (Safety/ISO/Cost Savings, etc)**

N/A

**How Will Purchase be Funded (Long Term - NOT Just Current Year)**

N/A

**If Purchase is NOT Approved for Funding, Describe Department Alternatives**

N/A

**Is This a Replacement?**

No

**If Yes, List Details (Make, Model, Years of Service, Remaining Balance, etc.)**

**What Will Become of Old Apparatus / Equipment?**

**Submit your last three 5-Year Capital Improvement Plans:**

**5-year Plan**

Gaston 5 YCIP.xlsx

**5-year Plan #2 (optional)**

**5-year Plan #3 (optional)**

**Account Balances:**

**Checking**

\$124,997.11

**CD**

**Savings**

**Relief Fund**

\$63,405.14

**Other**

**Other**

**UPLOAD FILE(S)**

Item 1

**Upload Files**

- Carolinas Mold Testing - C7 - \$675.00.pdf
- Carolinas Mold Testing - C7 - \$2,000.00.pdf
- Insurance Coverage for Mold-Water damage.pdf
- Enviro-Tek Remediation - C7 - \$5,495.00.pdf
- SDL&C - \$6950.00.pdf
- Alexis Fire Department Inspection Report.pdf

**STAFF ONLY**

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Received By (OEMFS Director):

Date:

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Fire Commission Meeting Date:

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APPROVED      NOT  
APPROVED

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Gaston County BOC Meeting Date:

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APPROVED      NOT  
APPROVED

**Certificate Number**

202512272-41

Kayla Parks  
Carolinas Mold Testing



# Alexis Fire Department

# **4168 NC-27 • Alexis, NC 28006**

**Date of Inspection: 10/29/2025**

**Prepared for: Alexis Fire Department**

**Point of contact: Brad**

**Location: Limited to Bunk Rooms 1-5**

# Inspection Summary:

## Purpose of Inspection

Brad and Austin with the Alexis Fire Department contacted Carolinas Mold Testing requesting an indoor air quality (IAQ) inspection for five bunk rooms within the department's facility.

Concerns were raised after visible mold growth and water damage were observed in several of the bunk areas.

The department is preparing to upgrade and renovate the bunk rooms, making this an ideal time to evaluate current air quality conditions and address any existing environmental concerns before construction begins.

The purpose of this inspection was to identify any areas of potential mold or moisture impact and ensure the health and safety of department personnel by confirming that air quality levels are within acceptable standards prior to renovation work.

## Inspection Summary

A comprehensive indoor air quality and moisture assessment was performed throughout the property. The evaluation combined visual inspection with thermal imaging, moisture measurements (pin/pinless), and borescope (endoscope) viewing of hard-to-access areas. Air and surface (swab) samples were collected as indicated by site conditions. (See individual sections for details and results.)

# Equipment used

**Understanding Mold Growth: Mold does not appear without the presence of moisture. For mold to grow, a source of moisture is required, such as from leaks, condensation or high humidity levels.**

## Role of Equipment Used

### 1. Moisture Meter

- Purpose:Used to detect elevated moisture levels in materials that may not be visible to the naked eye.

Helps identify areas of concern that could promote mold growth or structural damage if left untreated.

### 2. Thermal Imaging

- Purpose:Utilized to locate potential hidden leaks or wet materials by identifying temperature variations that may indicate the presence of moisture.

Especially useful for inspecting areas behind walls, ceilings, and other inaccessible spaces without intrusive methods.

### 3. Relative Humidity Monitor

- Purpose:Measures the relative humidity levels in the home to assess whether conditions are conducive to mold growth.

Helps determine if dehumidification or ventilation improvements are necessary to maintain a healthy indoor environment.

### 4. Endoscope Camera

- Purpose:Allows for visual inspection of areas that are otherwise difficult to access, such as inside air vents, ductwork, or behind tight spaces.

Useful for identifying dust buildup, debris, or microbial growth in areas that could impact indoor air quality or HVAC efficiency.

Each piece of equipment plays a critical role in accurately identifying and addressing potential issues related to moisture, mold, and air quality, ensuring a thorough and effective inspection process.

# Air Sample

## 1. AIR SAMPLES; Air Sampling Details:

**Air samples are crucial for evaluating airborne spores and other pollutants, utilizing high-volume sampling pumps and Air-O-Cell spore trap cassettes. These samples are collected at designated time intervals, maintaining a flow rate of 15ml per minute. The spore trap sampling method involves the impaction of air onto an adhesive plate inside the sampling cassette. Subsequently, the particulates adhered to the sampling plate are identified in a laboratory through direct observation under a microscope. The concentration of particles is then calculated per unit volume, providing valuable insights based on the quantity of air sampled.**

- During the inspection, we conducted a comprehensive air sampling process, consisting of one outdoor controlled sample and 5 indoor air samples. This meticulous approach allows us to capture a holistic view of the air quality both within and surrounding your property, ensuring thorough analysis and detection of any potential contaminants or pollutants.

While the EPA does not establish strict numerical thresholds for acceptable indoor mold levels, general industry guidance—such as those referenced by the American Industrial Hygiene Association (AIHA) and other recognized environmental health standards—suggests that indoor air should contain fewer than 1,200 spores per cubic meter (spores/m<sup>3</sup>) to be considered within a normal fungal ecology, with no presence of zero-tolerance molds such as *Chaetomium* or *Stachybotrys*.

It's important to note that certain environmental conditions can influence indoor spore counts, even in homes without an active mold problem. These include:

- Homes with basements, which naturally carry higher ambient moisture levels
- Properties that lack central air systems or where HVAC systems are not run consistently
- Frequent opening of windows and exterior doors, which allows outdoor spores to enter
- Presence of pets, which can carry spores indoors on fur or paws
- Foot traffic and general lifestyle factors that stir up settled dust and spores

1. Bunk Room 1 -460m<sup>3</sup> Traces of Stachy present
2. Bunk Room 2- 1720m<sup>3</sup> - Traces of *Chaetomium* present
3. Bunk Room 3- 1070m<sup>3</sup>- Traces of *Chaetomium* present
4. Bunk Room 4 -890m<sup>3</sup>- Traces of *Chaetomium* present
5. Bunk Room 5- 387m<sup>3</sup>- No traces of *Chaetomium* and Stachy
6. Outdoor- 7290

## Air Sample Results & Notable Findings

Air sampling was performed within each of the five bunk rooms to assess current indoor air quality conditions prior to remediation. Laboratory analysis revealed the presence of *Stachybotrys* in one of the bunk rooms and *Chaetomium* present in the others. *Stachybotrys* "zero-tolerance" mold under industry standards due to the association with chronic moisture and potential health concerns.

### **About *Stachybotrys***

*Stachybotrys chartarum*, often referred to as "black mold," is a slow-growing, moisture-dependent mold species that thrives on cellulose-based materials such as drywall, insulation paper, and wood.

- Its presence typically indicates long-term or chronic water intrusion, as it requires continuous moisture for growth.
- *Stachybotrys* spores are sticky and heavy, meaning they are not easily airborne unless disturbed — which makes airborne detection significant.
- This type of mold is associated with respiratory irritation, allergic symptoms, and immune sensitivity, especially in enclosed or poorly ventilated environments such as bunk rooms.

The detection of *Stachybotrys* strongly supports the need for controlled demolition and remediation per IICRC S520 standards to eliminate any remaining colonized materials and prevent recurrence.

### **About *Chaetomium***

*Chaetomium* is another indicator mold species that commonly develops on materials that have experienced extended or repeated moisture exposure.

- It is characterized by its ability to break down cellulose and is frequently found inside wall cavities, under carpet padding, or behind insulation.
- Its presence typically signals a history of water damage or inadequate drying after a leak or flood event.
- Like *Stachybotrys*, *Chaetomium* can release musty odors and has been associated with irritation of the respiratory system, sinuses, and skin in sensitive individuals.

Because *Chaetomium* spores are rarely dominant in outdoor environments, their elevated presence indoors indicates an active or previous moisture problem that requires remediation.

### **Summary Note**

The detection of both *Stachybotrys* and *Chaetomium* confirms that the affected bunk rooms experienced significant moisture intrusion at some point, creating conditions suitable for fungal colonization.

Both species warrant a full containment setup and detailed cleaning protocol, as outlined in the remediation scope, to ensure that all impacted materials are properly removed and that the indoor environment is returned to safe, normal fungal ecology prior to re-occupancy.

# Swab Sample

## 1. SWAB SAMPLES; SWAB Sampling Details:

- A sterile swab was employed to collect samples of the suspicious material, ensuring proper transfer for laboratory analysis. The swab was gently rubbed across the surface of interest to gather material, then carefully sealed and labeled with its corresponding area and sample number. These swabs were then sent to a reputable laboratory, where the samples will undergo microscopic examination. This careful collection process ensures precise and accurate analysis of the material gathered.
- Identification of Mold Type – Laboratory analysis will reveal the specific type of mold present on the surfaces.

**Airborne Mold Assessment – By comparing the surface samples with air quality data, we can determine if the visible mold growth is also airborne, posing potential risks to indoor air quality.**

- A swab sample was collected from the visible growth from Bunk Room 1/Storage room and was positive for high levels of Chaetomium.

# Inspection photo link

Please see link below for access to all pictures taken during inspection;

<https://app.companycam.com/galleries/ZqmfVyw6>

# Preventive Notes: Improving Indoor Air Quality

Maintaining good indoor air quality is essential for a healthy and comfortable living and working environment. Below are preventive measures and things to monitor regularly to improve and sustain indoor air quality:

## 1. Control Humidity Levels

- **Maintain Ideal Humidity:** Keep indoor humidity levels between 30%-50% to prevent mold growth and minimize dust mites.
- **Use Dehumidifiers:** In areas prone to high humidity, such as basements or crawlspaces, use a dehumidifier to regulate moisture levels.
- **Ventilation:** Ensure proper ventilation in moisture-prone areas like bathrooms, kitchens, and laundry rooms. Exhaust fans should vent outdoors, not into attics or crawlspaces.

## 2. Ensure Proper HVAC Functionality

- **Regular Maintenance:** Schedule professional HVAC inspections at least twice a year to ensure the system is functioning efficiently.
- **Replace Filters:** Change HVAC filters every 1–3 months, or more often if you have pets or allergies, to reduce dust and allergens.
- **Duct Cleaning:** Have the ductwork cleaned periodically to remove dust, debris, and potential mold.

## 3. Keep Air Vents Clear

- **Unblock Vents:** Ensure air vents are unobstructed to allow proper airflow and reduce strain on the HVAC system.
- **Dust and Clean:** Regularly clean vents and grilles to prevent the buildup of dust and allergens.

## 4. Minimize Indoor Pollutants

- **Reduce Chemical Usage:** Limit the use of harsh cleaning products, air fresheners, and other chemicals that release volatile organic compounds (VOCs).
- **Proper Storage:** Store chemicals, paints, and fuels in well-ventilated areas away from living spaces.

## 5. Monitor and Address Moisture Issues

- **Fix Leaks Promptly:** Repair any plumbing or roof leaks immediately to prevent water damage and mold growth.
- **Inspect Regularly:** Check for water stains, condensation, or musty odors, which could indicate hidden moisture issues.

## 6. Regular Cleaning and Maintenance

- Vacuum and Dust: Use a vacuum with a HEPA filter and dust surfaces regularly to reduce allergens and particulates.
- Wash Linens: Frequently wash bedding, curtains, and other fabrics that can trap allergens.

## 7. Monitor for Mold Growth

- Check Humid Areas: Regularly inspect areas like bathrooms, basements, and around windows for signs of mold or mildew.
- Act Quickly: Address visible mold or musty odors promptly to prevent further spread.

## 8. Consider Air Purification

- Air Purifiers: Use HEPA air purifiers in common living spaces to reduce airborne allergens, particulates, and spores.
- Plants with Caution: While plants can improve air quality, ensure they do not contribute to excessive humidity or mold growth.

## Things to Look Out For

- Musty Smells: This could indicate hidden mold or moisture issues.
- Condensation on Windows or Walls: A sign of high indoor humidity.
- Visible Mold Growth: Even small patches should be addressed promptly.
- Uneven Heating or Cooling: May indicate HVAC issues affecting airflow and air quality.

# Protocol:

## Protocol – Bunk Room Remediation (All Five Bunk Rooms)

Based on the visible mold growth, water damage, and environmental concerns observed during the inspection, the following remediation protocol is recommended for all five bunk rooms at the Alexis Fire Department. All remediation work should be performed by a qualified restoration contractor following IICRC S520 standards for mold remediation and applicable OSHA safety regulations.

### 1. Preparation & Room Clearance

- Each of the five bunk rooms must be completely emptied prior to beginning any remediation work.
- All personal belongings, furniture, mattresses, and non-remediable items should be removed from the rooms and either:  
Cleaned off-site using HEPA vacuuming and antimicrobial wiping, or  
Properly discarded if visibly impacted by mold or water damage.
- Items that can be salvaged should be cleaned using HEPA filtration equipment and stored in a clean, dry area outside containment until final clearance is achieved.

### 2. Containment Setup

- Establish full containment around each of the five bunk rooms using 6-mil polyethylene sheeting sealed floor-to-ceiling.
- Create negative air pressure within each containment zone using HEPA-filtered air scrubbers exhausting outdoors or to an appropriate safe location.
- Seal all HVAC registers, returns, and vents to prevent cross-contamination throughout the facility.
- All entry/exit points should include zippered access and a decontamination chamber where feasible.

### 3. Controlled Demolition

- Perform selective demolition of all visibly impacted or water-damaged drywall and insulation materials within each bunk room.
- Remove drywall a minimum of two feet beyond visible impact, or further if elevated moisture readings are detected.
- Bag and dispose of all contaminated materials under containment as regulated waste.
- Clean all exposed framing, substructure, and remaining surfaces using the IICRC S520 multi-step process:  
HEPA vacuum all exposed surfaces.  
Wipe down framing and sheathing with an EPA-registered antimicrobial solution.  
Repeat HEPA vacuuming after the area has dried.

Apply an antimicrobial coating or encapsulant to cleaned surfaces where appropriate.

#### **4. Environmental Cleaning**

- Conduct a HEPA sandwich cleaning throughout each containment area (HEPA vacuum → antimicrobial wipe → HEPA vacuum).
- Clean all non-porous materials, fixtures, and mechanical components within containment.
- Maintain negative air machines and HEPA scrubbers operating continuously during cleaning and drying phases.

#### **5. Drying & Environmental Stabilization**

- Ensure all areas are dried to within 10–15% of normal ambient moisture content using dehumidifiers and air movement equipment.
- Maintain temperature and RH control within optimal drying conditions (RH 40–50%) throughout the process.

#### **6. Post-Remediation Verification (PRV)**

- PRV inspection and clearance testing must be completed by Carolinas Mold Testing (or another independent testing agency) prior to the removal of any containment or reconstruction ("put back") work.
- No containment should be taken down until PRV air and surface samples pass clearance standards and the visual inspection confirms the absence of visible dust, debris, or mold growth.

#### **7. Final Notes**

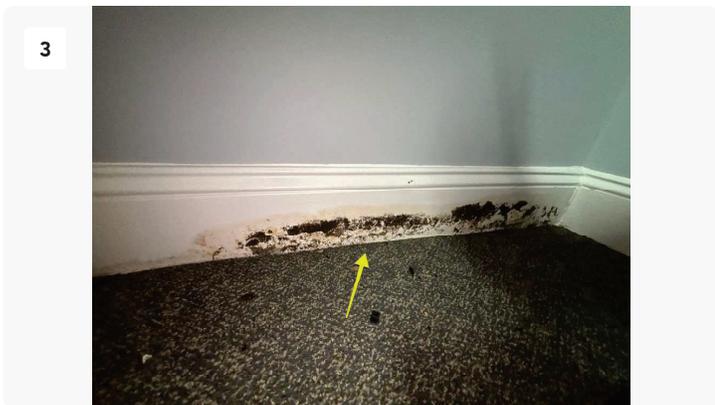
- Upon successful PRV clearance, the facility may proceed with rebuild and renovation of the bunk rooms.
- Continued humidity and HVAC monitoring is recommended during and after renovation to prevent recurrence of mold-related issues.



Project: Alexis Fire Department



Project: Alexis Fire Department



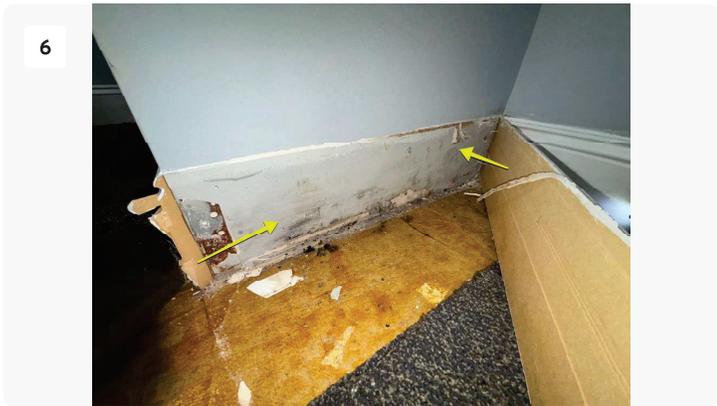
Project: Alexis Fire Department



Project: Alexis Fire Department



Project: Alexis Fire Department



Project: Alexis Fire Department



Project: Alexis Fire Department

# Liability

## Liability and Limitations

### 1. Scope of Services

Carolinas Mold Testing provides mold inspection and testing services based on visual assessments, air sampling, and surface sampling. Our services are intended to identify the presence of mold, moisture, and potential sources of contamination. However, mold growth can be unpredictable and is influenced by various factors, including humidity, water intrusion, and structural conditions.

### 2. Limitations of Testing

While we strive for thoroughness, our testing services may have limitations:

- **Sampling Limitations:** The nature of mold and its growth patterns can vary. Our inspections and sampling (air, tape, and surface) are not exhaustive and do not guarantee the absence of mold in inaccessible areas (e.g., behind walls, within HVAC systems, etc.).
- **Visual Inspections:** Visual inspections are based on the accessibility of areas and may not reveal hidden mold or moisture problems. Conditions may change after testing, which can lead to new mold growth.
- **Dynamic Environment:** Environmental conditions can change rapidly, and factors beyond our control can contribute to mold growth after the assessment is completed.

### 3. Liability Disclaimer

Carolinas Mold Testing shall not be held liable for any damages, losses, or claims arising from:

- The presence of mold or moisture not detected during testing.
- Mold-related health issues experienced by occupants or users of the property.
- The effectiveness of remediation efforts, including those conducted by third-party contractors.
- Any changes to the property or environmental conditions after the inspection.

### 4. Client Responsibilities

Clients are encouraged to maintain a proactive approach to mold management, including regular inspections and moisture control. Clients should also disclose any prior mold issues or water intrusion events to assist us in providing a thorough assessment.

### 5. Compliance with Local Regulations

Clients are responsible for ensuring that any remedial actions taken comply with local, state, and federal regulations regarding mold remediation and indoor air quality.

### 6. Communication Policy

For any questions or concerns regarding the report, an appropriate time can be scheduled between

9 AM and 4 PM. After-hours calls will be subject to a fee billed per hour. Please email or text us to schedule any follow-up phone calls with questions after reading through the report.

## **7. Report Applicability**

This report is only for the current client and the address listed above and is not suitable for any other areas.

By proceeding with our services, clients acknowledge and accept these limitations and understand that Carolinas Mold Testing is not liable for any outcomes related to mold that may arise after the inspection.

Carolinas Mold Testing LLC

Kayla Parks

Licensed Asbestos Inspector NC & SC

Certified Mold Inspector - #84585

Certified Mold Remediation Contractor- #84584

## Carolinas Mold Testing

1694 Mount Zion Church Rd  
Iron Station, NC 28080 US  
+17043876937  
kayla@carolinasmoldtesting.com

## INVOICE

BILL TO  
Alexis Volunteer Fire Department  
4168 Highway 27 PO Box 157  
Alexis, North Carolina 28006  
United States

INVOICE 1668  
DATE 11/03/2025  
TERMS Due on receipt  
DUE DATE 11/03/2025

DATE	ACTIVITY	DESCRIPTION
10/29/2025	Indoor Air Quality test	Visual Inspection of bunk rooms. 4 bunk rooms total.  - Moisture mapping, Inspection holes. Thermal imaging and moisture readings, - 4 indoor air samples, 1 outdoor - 1 swab - Protocol report included

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SUBTOTAL	2,000.00
TAX	0.00
TOTAL	2,000.00
PAYMENT	2,000.00
BALANCE DUE	<b>\$0.00</b>

**PAID**

Pay invoice





# Invoice

11/11/2025  
 Alexis Fire Department  
 4168 Charles Raper Jones  
 Alexis NC 28006

Invoice	Job Type	Payment Terms
	Containment/Mold Remediation	Balance due upon completion
<b>Remediation</b> <ul style="list-style-type: none"> <li>• Construction of containment*</li> <li>• Removal of all porous building material 24" beyond visible microbial growth</li> <li>• Sand/Scrub remaining surfaces to dislodge any remaining microbial growth</li> <li>• Perform 1st contact HEPA vacuum</li> <li>• Air wash (with compressed air) all small spaces to remove remaining debris</li> <li>• Perform 2nd contact HEPA vacuum</li> <li>• Perform a series of 3 wet wipes on all areas in containment</li> <li>• Apply anti-microbial solution to all infected areas</li> <li>• Apply IAQ 6100 (sealer) and place containment in "scrubber mode"</li> </ul> <p><i>*Construction of containment</i>  <i>Zip walls and 6 mil poly are used to create the containment. Make-up Air filter(s) and zipper door(s) are fixed to the containment walls. A HEPA 500 Air Scrubber is used to draw negative air</i></p>		
Item	Description	Total
<b>NOTE</b>	ETR is setting up containments (5), placing under negative pressure and chalking lines for the Departments contractor to removed all damaged dry wall and insulation. ETR will come in behind and complete the remediation portion for the PRV.	
<b>Containment x 5</b>	1. 6 mil poly will be attached at the jamb entry of double doors. A make up air filter and zipper door will be installed. A HEPA 500 Air scrubber will be used to place the containment under negative pressure. Each door \$168.00 x 5	<b>\$840.00</b>
<b>HEPA 500 Air Scrubber</b>	Per Insurance standard pricing, each HEPA goes for \$ 105.00 per day x 4 scrubbers= \$420.00 x 4 days	<b>\$1,680.00</b>
<b>Remediation</b>	1. Approximately 38 sft of wood framing will be exposed after the demolition is completed, in each bunk. 2. All areas will be remediated per the standards (See above for details***) 3. All bunk rooms will then be prepared for the PRV. Dropped ceiling	



# Sunny Day Landscaping & Construction

4690 Leeper Street  
Iron Station, NC 28080

# Invoice

Date	Invoice #
11/17/2025	1532

Bill To
Alexis VFD Alexis, NC 28006

Description	Amount
Material and Labor for Mold Remediation for bunk rooms to include Removal of carpet, base boards, sheet rock and insulation Caulk bottom plates, install R-15 backed insulation, 5/8" moisture board drywall, taped, mud drywall, sand, install baseboard, paint walls and baseboard	6,950.00
<b>Total</b>	<b>\$6,950.00</b>