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Town of Bassano
P.O. Box 299, 502 2nd Avenue
Bassano, Alberta T0J 0B0

May 4, 2021
File: N:\ 1446-013-00\L01-1.0

Attention: Amanda Davis
Chief Administrative Officer

Dear Ms. Davis:

Re: Town of Bassano
Former Stiles Building – Building Assessment

1 INTRODUCTION

The Town of Bassano (the Town) has retained MPE Engineering Ltd. (MPE) to conduct an assessment to provide recommendations to remediate or demolish the Former Stiles Building located at 413 2nd Avenue, Bassano, AB. It is understood that the building has historical significance on main street; however, the building has deteriorated and is currently a liability to the Town. MPE conducted a visual structural assessment and a hazardous material survey with the assistance of Squareone Consulting Limited (SCL) on March 26, 2021. The structural assessment was completed by Calvin van Mulligen and Craig Ambler from MPE and the hazardous material survey by Mike Anderson of SCL.



Historical Photo of the Former Stiles Building

The building is made up of a composite concrete and timber foundation walls which are likely placed on concrete footings. The concrete foundation walls appear to have some of the wood formwork still standing and acting as a load bearing along some of the exterior walls. The basement floor is a combination of dirt, concrete slab on grade and brick. Exterior walls were composed of bricks seated on the concrete foundation walls. The interior framing was made up of wood framing with timber floor joists and tongue and groove decking. The interior walls appeared to be lathe and plaster throughout the building. There was no access to the roof at the time of the inspection but is likely made wood joists and tongue and groove decking.

1.1 BUILDING HISTORY

Built in 1912, the building's original occupant was Joe Stiles which purchased the land for \$100 and operated Stiles "The Druggist" business. Stiles the Druggist became the first Rexall franchise in Alberta in 1912. The second floor was furnished as business offices and housed Bassano's first doctor, Dr. Harris. The second floor was originally the local telephone office but was renovated in the 1930s and became the Stiles family home. The Pharmacy continue to operate until 1974. Since then, several different businesses have operated on the main floor. The second floor has mainly been used as a private residence since the Stiles family moved out.

A recent tax recovery has allowed the Town of Bassano to take ownership of the building. The building has been entirely vacant for the passed few years.

1.2 LIMITATIONS OF REPORT

Existing record and/or construction drawings were not available for review for any of the buildings that were being assessed as part of this report: therefore, inspections were limited to visual review of the exposed interior and exterior building components. Below grade or concealed structural members were not assessed. Exterior soil properties, foundations and water table levels were not assessed.

Please note that the recommendations in this report are based on our professional experience and judgement. The costs presented herein are established with broad unit rates that are subject to change as result of: inflation, contractor discretion and price/availability of materials at the time of repair.

2 BUILDING ASSESSMENT

Currently the Former Stiles Building was in poor condition as seen in the following pictures and descriptions. The dilapidated state of the building is mostly caused by lack of maintenance in the past few years which has allowed pigeons to gain access to the building. The pigeon infestation has left a significant volume of fecal matter throughout the entire building and has caused considerable damage throughout the building.



Throughout the entire building carcasses and fecal matter of pigeons were observed. The fecal matter of pigeons, if particles become airborne, can pose an extreme health risk, especially to those with weakened immune systems. The quantity of fecal matter throughout the building varied, as the basement had minimal droppings but increased to as much as 150 mm in depth in the upper floors. Pigeon carcasses were scattered throughout but were more concentrated in the top floor. The fecal matter, carcasses, and any staining will need to be removed due to the health hazard no matter what decision is made with the building.



It is likely that the birds came into the building through holes in the building's envelope. The addition on the back of the building appears to have many penetrations in which there is access for the birds to get through. The skylight above the kitchen may be another access point for the bird to get inside. The skylight glass was cracked in several places and one portion of it is boarded up. It appears there was some water infiltration from the skylight as the ceiling directly below has suffered some damage which can be seen at the bottom of the photo above on the right.



Water damage was observed in the ceiling in several other locations throughout the building. Water damage is likely due to lack of regular maintenance on the building's roof. Assessment of the building's roof and roof structure was not possible due to no access, but it is likely in poor condition given the condition of the ceiling inside. From what could be seen from the ground, flashing has been bent or lifted which would not provide sufficient protection from the elements. The flashing damage can be seen in the photos below. It is likely that water has been infiltrating through the roof for an extended amount of time, resulting in the roof structure needing an entire replacement.



Due to the water infiltration, it is likely that much of the ceiling and within the walls there is a mold infestation. When moist, mold can continue to migrate through the walls and roof system and become health hazard to the building's occupants. Remediation of the mold would be needed as well as air testing to confirm the complete removal of all mold spores. Proper mold remediation would include hiring a contractor who specializes in the remediation of mold.



Many of the interior finishes were in poor condition likely due to the combination of age, water damage and the bird infestation. Assessing the condition of the floors throughout the upper levels was nearly impossible due to the layers of fecal matter. It is likely that the floors have been stained/damaged and will require a complete replacement. Some of the interior finishes on the ceilings can likely be refinished and used to keep the historic feel of the building.



The picture above on the left shows a bowed support beam and a column that has been placed under ceiling tiles. The bowed beam is likely to be passed its deflection limits that would be set forth in the building code, span should be reduced by adding support midspan to lessen the deflection of this beam. Ceiling finishes are not meant to be load bearing surfaces and are not likely to be able bear the loads from floor above. Several structural components appeared to have been added due to changes in the building's occupancy needs. The picture on the left shows some of the structural components that are supporting the mezzanine above the main floor. It is unclear if the mezzanine was added after initial construction. The mezzanine has a low ceiling (approximately 1.75 m, 5.7 ft) with ventilation ducts hanging below the ceiling. The mezzanine does not conform to current building code standards.

Several columns in the basement are seated on the soil below, some of which have succumbed to rot or will at some point if they have not already. It is recommended that the columns be seated on concrete or bracing rather than directly on the soil. The picture above on the right shows a column that has been severely damaged and no longer has any structural integrity. Other columns were observed to be leaning or entirely knocked over which is concerning structurally as other members will need to pick up additional loading. These other members were not intended to carry the additional loads and beams were not intended to have extended spans. It would be recommended to replace columns with teleposts or similar sized timbers until a permanent solution is decided upon, to ensure there is no unnecessary damage to the structure.



The concrete floors in the basement were in poor condition as the slab was broken into many pieces throughout the concrete floors. The slab that was poured appears to be thin (less than 50 mm). Several factors could contribute to the current condition of the slab including, slab thickness, lack of reinforcing and frost heave. Many tripping hazards are created by the slabs and additional debris found throughout the basement. Removal and replacement of the damaged slab is recommended if the building is refurbished in the future.



The foundation throughout the basement appeared to be in fair condition for a building of its age. The cracking should be monitored regularly to ensure there it does not worsen. The cracking is likely due to foundation settlement and/or frost heave of the soil. Settlement and foundation cracking is common for a building of this age. Construction methods of the buildings era commonly did not use any reinforcing which has led to the larger cracks which are shown in the picture above on the right. Injection of cracks could help prevent further propagation of the cracks in the concrete. Crack injections can help reduce the possibility of water infiltration which can worsen cracking due to freeze thaw cycles.

The picture above on the left shows a door constructed to retain the soil from the exterior but has since failed and is no longer retaining soil. This failure appears to have affected some of the structural columns in the area as there are columns that have been knocked over and leaning. It is difficult to tell if these columns were part of the original construction or if they were added later. A permanent solution for soil retention can be provided by MPE in the future.



Dry rot was observed on some of the floor joists and floor decking. The dry rot does not appear to be severe enough to be a structural concern at the time of this inspection as its structural integrity is still intact. Some of the x-bracing on the floor joists have fallen off the floor joists. This bracing adds to the stiffness of the floor and should be replaced or blocked with a solid piece of lumber. It was also observed that there was no insulation or vapour barrier in the basement. The lack of insulation and vapor barrier likely contributed to the frost heave and damage to other components of the building.



The exterior brick had cracking throughout the building. This is likely due to the settlement and/or frost heave encountered in the foundations. This type of cracking is typical for a building of its age. Another possible factor in foundation movement could be due to the downspout discharging directly against the wall which could allow water to infiltrate next to the foundation wall. The downspout should have an extension so it can disperse water away from the building's foundation. Most of the windows and doors appear to be in poor condition and would likely need to be replaced in order to make the building habitable.

The back porch appears to have been added well after original construction and is in poor condition. The doors and window are no longer in use and have been boarded up. The porch would not conform to current building code requirements. No insulation or vapour barrier was observed throughout the entire porch structure. This is likely one of the main locations of pigeon ingress as there are several openings. The demolition of the back porch should be considered as it appears to be contributing to the degradation of the rest of building.



Much of the exposed plumbing appeared to be damaged beyond repair. It appears that the plumbing has either been frozen, shifted due to frost heave, or contacted due to attempted repairs. In the upper floors there were exposed wires hanging from the ceiling, and many lights have been used as perches for birds and have been damaged beyond repair. It is expected that the entire electrical, plumbing, and HVAC systems are beyond repairs and would need to be replaced to bring the building back to an occupiable space.

3 HAZARDOUS MATERIAL SURVEY

Several hazardous materials were noted in the survey completed by SCL. Asbestos was encountered in the insulation around some of the pipe in the basement. Lead based paint was encountered throughout the building. Several mercury containing light tubes were found throughout the building, within the light fixtures themselves contained PCB's as well. The likelihood of mold throughout the building where water infiltration has occurred. Vast quantities of pigeon feces and deceased pigeons were noted throughout the building as previously mentioned.

The hazardous material should be removed from the building prior to renovations or demolition. The hazardous materials survey should be referred to, to find the appropriate steps for removal and disposal of these hazardous materials. The full hazardous materials survey can be found in Appendix A of this report.

4 RECOMMENDATIONS AND CLASS D COST ESTIMATE

The Town of Bassano expressed that they would like to explore 2 options. The first option being the remediation of the building and bringing it back to a state that it can be prepared for sale. Bringing it to a state with minimal tenant improvements. The second option would be to demolish the building and bring the land back to grade.

Due to the condition of the building at time of inspection the following will be required no matter the final decision:

- Removal of bird carcasses and fecal matter.
- Removal of hazardous materials noted in the previous section.
- Mold removal.
- Air testing to ensure removal of all contaminants from bird infestation and mold.

The hazardous materials and bird waste are required to be removed, due to the environmental hazard that they pose and cannot be disposed like conventional waste products.

4.1 BUILDING REMEDIATION

To remediate the entire building properly, many of the existing systems would need a complete replacement. Some of the existing structure may be able to be salvaged but it is likely that all that would be left of the original building is the “bare bones”. The components that can likely be salvaged would include the front façade, exterior walls, concrete foundations (with repairs), structural components and some of the architectural features that appear to be original like the ceiling. The Town of Bassano’s input would be utilized in deciding the extent of the renovations as it is likely the building will be sold shortly after completion. The redesign of the entire building would ensure it conforms with current building codes standards.

The new design would include a revamping of the entire electrical, plumbing and HVAC systems. For electrical it would include a new electrical panel, fixtures, and wiring throughout the building. Plumbing would be an entire replacement of the services (gas, water and sewer), fixtures, and hot/cold water systems and all their components. The HVAC system would include replacing furnace, ventilation, and adding an HRV unit. The structural components would need to be further evaluated once they can all be exposed as to assess the extent of their reusability. It can be assumed that most of the wood structural components will be replaced as many of the exposed components can are in generally poor condition.

It is recommended to remove the back porch due to the condition and poor construction practices used to build it. The same recommendation is afforded to the mezzanine that would does not conform to current building code requirements. The building lacks the height between floors to have the layout that it did at the time of the inspection. The desired layout of the building will help determine the renovated floor plan of the revitalized building.

The current condition of the roof was not assessed but due to the quantity of water damage throughout the ceiling, it is safe to assume a full replacement of the roofing system is required. This would include membranes, insulation, decking and structure. Architectural features like the skylights would likely need replacing or they could be framed over and covered up permanently depending on the architectural design. Framing over skylights would likely produce a cost savings during the renovation. Other architectural improvements that are included in the building code would include the addition of a proper air/vapor barrier and insulation. These along with replacement of doors and windows will help provide a better performing building in terms of energy savings.

Table 1 provides a summary for the remediation of the building. Recent volatility in building material costs have made costs estimates much more difficult. Contractor estimates should be considered more accurate to what actual costs of construction will be. A 15% material contingency is added to account for the recent volatility in the material markets.

Table 1 – Building Remediation Cost Estimate		
Item	Description	Capital Cost
1	Removal and Disposal of Bird Carcasses and Fecal Matter	\$110,000
2	Removal and Disposal of Hazardous Materials	\$25,000
3	Air Testing	\$5,000
5	Removal and Disposal of Back Porch	\$5,000
6	Removal and Disposal of Mezzanine	\$25,000
7	Structural Repairs (TBD)	\$60,000
8	Roof and skylight Replacement	\$45,000
9	Plumbing Replacement	\$50,000
10	HVAC Replacement	\$30,000
11	Electrical Replacement	\$40,000
12	Exterior Repairs (Brick Repointing, Window and Door Replacement)	\$85,000
13	Interior Finishes (Optional)	\$80,000
	Sub-Total:	\$560,000
	Contingency (15%):	\$84,000
	Engineering (10%):	\$65,000
	Total:	\$709,000

4.2 BUILDING DEMOLITION

Due to the proximity to the adjacent building, the demolition of the Former Stiles Building would have to use a more selective approach to avoid damage to adjacent buildings. The condition of the adjacent building is unknown so the demolition process would have to use less destructive means. Heavy machinery would complete the demolition much quicker but would likely cause damage to the adjacent buildings. Unfortunately, less destructive results in being more expensive due to the minimal amount of heavy machinery that can be used and the amount of time a selective demolition will take.

After demolition is completed, a fill soil will need to be imported and placed into the excavation. Again, care must be taken to avoid damage to adjacent buildings. To help avoid damage to the adjacent buildings while compacting the fill soil, vibrations should be minimized. A pre and post demolition condition assessment of the adjacent buildings to ensure that there has been no damage created from the demolition. A structural engineer should be consulted to provide a demolition plan and monitoring during the selective demolition.

Table 2 provide a summary of costs for the building's demolition. Contractor estimates should be considered more accurate to what actual costs of demolition will be. A 15% contingency has been provided for any unforeseen conditions.

Table 2 – Demolition Cost Estimate		
Item	Description	Capital Cost
1	Removal and Disposal of Bird Carcasses and Fecal Matter	\$110,000
2	Removal and Disposal of Hazardous Materials	\$25,000
3	Air Testing	\$5,000
4	Selective Demolition and Disposal of Building	\$160,000
5	Capping of Services	\$10,000
6	Importing Soil, Backfilling and Grading of Site	\$80,000
Sub-Total:		\$390,000
Contingency (15%):		\$59,000
Engineering (10%):		\$45,000
Total:		\$494,000

5 CLOSURE

MPE would like to thank Amanda Davis, and the Town of Bassano for the opportunity to provide this report. Please note that MPE can provide full Structural, Mechanical, and Electrical engineering services that may be required dependent on the scope of work to be completed. We look forward to working with the Town of Bassano to successfully take the next steps towards continuing this project. If you have any questions, comments or concerns please feel free to contact the undersigned.


Yours truly,
MPE ENGINEERING LTD.

Written By:



Craig Ambler, E.I.T.
Structural Engineer
cambler@mpe.ca
403-329-3442

Reviewed By:

PERMIT TO PRACTICE MPE ENGINEERING LTD.	
Signature	
Date	2021-05-04
PERMIT NUMBER: P 3680 The Association of Professional Engineers and Geoscientists of Alberta	

Calvin van Mulligen, M.Sc., P.Eng.
Structural Manager
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APPENDIX A:
HAZARDOUS MATERIALS REPORT



FORMER STILES BUILDING, BASSANO, AB ASBESTOS BUILDING ASSESSMENT

Project# SQJMH21048
APRIL 21, 2021

PREPARED FOR:

Craig Ambler
MPE Engineering
Lethbridge, AB

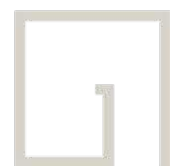
PREPARED BY:

Mike Anderson
Squareone Consulting Ltd.
629 UPP 3rd Street SE
Medicine Hat, AB



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1.0 Introduction

Squareone Consulting Ltd. (Squareone) was authorized by Craig Ambler of MPE Engineering to conduct a Hazardous Materials Assessment on Former Stiles Building, Bassano, Alberta. The assessment was conducted from on March 26, 2021 by Squareone's Mike Anderson.

The intent of this assessment is to identify both building materials as well as general products that are considered to be hazardous to humans and/or the environment, then produce all findings in a comprehensive and user-friendly report. This will be achieved by not only displaying results and findings in tables but also using colour coded floorplans, charts, and links within the report.

2.0 Scope of Work

The scope of work involved in the assessment conducted by Squareone Consulting consist of sampling and/or identifying the following:

- Asbestos containing materials
- Lead based materials
- Mercury containing materials
- Polychlorinated biphenyls (PCB's)
- Radioactive components
- Ozone depleting substances
- Urea formaldehyde
- Visible mould and water damage
- Fecal or microbial

Once the field assessment had been completed, Squareone will compile all information into a comprehensive report. This report will include tables, graphs, photographs, and colour coded floorplans.

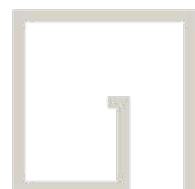
3.0 Methodology

For the completion of this assessment, sampling and/or identifying hazardous materials throughout the building was conducted following general standards outlined by the Alberta Occupational Health and Safety Code, Alberta Asbestos Abatement Manual – 2019 and National Institute for Occupational Safety and Health (NIOSH). This was a non-intrusive assessment so areas with little to no access were not inspected. Due do the different nature of each material assessed, below is an outline for all material's specific methodologies.

3.1 Asbestos Containing Materials

Suspected asbestos containing materials were sampled and sent for laboratory analysis. Once the sample was taken, it was documented with the following information:

- Sample#
- Specific identifying location
- Specific material type
- Material distribution throughout building



All asbestos samples were taken following guidelines outlined in the Alberta Asbestos Abatement Manual – 2019 Section 5.6.4.

All bulk asbestos samples are analysed at EMC Scientific Inc. using Polarized Light Microscopy (PLM) and dispersion staining techniques. All analytical procedures are in accordance with EPA 600/R-93/116 method.

3.2 Lead Based Materials

Materials suspected to contain lead were identified or sampled and sent for laboratory analysis. All lead bulk and paint samples were sent to IATL International Asbestos Testing Laboratories for analysis. All samples were analysed using the ASTM D3335-85A “Standard Method to Test for Low Concentration of lead in Paint by Atomic Absorption Spectrophotometry” method. All samples were then compared to standards provided by Work Safe Alberta of 0.009%.

3.3 Mercury Containing Materials

A visual inspection was conducted on all thermostats, light bulbs and tubes and pressure-sensing products to determine the presence of mercury. If found, the product was documented and photographed.

3.4 Polychlorinated Biphenyls (PCB's)

PCB's are most common in florescent light ballasts. Newer T-5 tubes will not work with ballasts containing PCB's, only fixtures with T-12 - T-8 lighting tubes need to have the ballasts checked. In accordance to the Alberta Occupational Health and Safety Act, ballasts are inaccessible in the fixture is not de-energized and tagged out. For this reason, only a visual inspection was conducted on all lighting fixtures.

3.5 Radioactive Components

A visual inspection was conducted throughout the building to determine the presence of radioactive products. If found, the product was documented and photographed.

3.6 Ozone Depleting Substances

A visual inspection was conducted throughout the building for products and systems that usually containing Ozone Depleting Substances. If found, the product was documented and photographed.

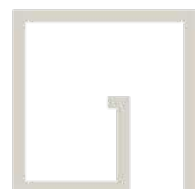
3.7 Urea Formaldehyde

A visual inspection was conducted throughout the building to determine the presence of Urea Formaldehyde. If found, the product was documented and photographed.

3.8 Visible Mould and Water Damage

A visual inspection was conducted throughout the building to determine the presence of visible mould and water damage suggesting possible mould growth. If found, the product was documented and photographed. If mould growth was suspected, a swab sample was taken to determine any mould growth.

All swab samples were analysed using the method: Direct Microscopy Examination based on “CBS Laboratory Manual Series – Food and Indoor Fungi (2010)”.



3.9 Fecal or microbial

A visual inspection was conducted throughout the building to determine the presence of Fecal or Microbial Contamination. If found, the product was documented and photographed.

4.0 Results and Discussion

All results from any laboratory analysis will be shown using a table to display all information pertaining to that sampling.

All Laboratory Certificate of Analysis will be displayed in the corresponding Appendix as stated at the top of the Table.

4.1 Asbestos Containing Materials

Sample #	Location	Description	Asbestos Type & %
A1	Basement	Elbow Insulation	Chrysotile - 60
A2	Basement	Pipe Run Insulation	Chrysotile - 70
A3	Basement	Wall Plaster	N/A
A4	Front Room Interior Wall	Wall Plaster	N/A
A5	Back Exterior Wall	Wall Plaster	N/A
A6	2 nd Floor	Wall Plaster	N/A
A7	Bathroom 2 nd Floor	Wall Plaster	N/A
A8	2 nd Floor; Front Exterior Wall	Wall Plaster	N/A

Note:

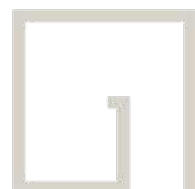
highlight indicates sample came back positive for asbestos content

N/A indicated that the sample was negative, so the information was not applicable

Blank sample number Indicates additional layering of above sample

4.2 Lead Based Materials

A total of three (3) paint samples were collected for analysis from throughout the building. Results from the laboratory analysis show that all three (3) of the samples returned with a concentration in excess of 0.009% (90 mg/kg) by weight. Meaning that all three (3) samples are to be considered lead containing as stated by Work Safe Alberta. Due to the toxicity of lead and the chance of lead release during renovations, Squareone Consulting suggests that all precautions be taken during any removal or renovations.



The following table is a representation of the sampling results. For lab results see the attached document in Appendix II.

Sample #	Location	Description	Concentration (% by weight)
L1	Main Floor; Tin Roof	White Paint	0.513
L2	2 nd Floor; Ceiling	White Paint	0.0171
L3	2 nd Floor; Bathroom	Blue Paint	0.25

Notes:

highlight indicates sample came back higher than the 0.5%

All samples are represented in lead by weight %.

4.3 Mercury Containing Materials

During the building assessment mercury containing lighting tubes were found.

- o Approximately 25 fluorescent lighting tubes were counted throughout the building.



Mercury Containing Fluorescent lighting tubes

4.4 Polychlorinated Biphenyls (PCB's)

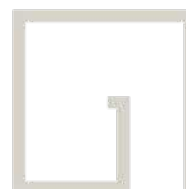
During the assessment, approximately six (6) fluorescent lighting fixtures were observed. All fixtures contain fluorescent T-12 lighting tubes which work with ballasts that contain PCB's.

4.5 Radioactive Components

During the assessment no products are considered to contain radioactive components.

4.6 Ozone Depleting Substances

During the assessment no products are considered to contain ozone depleting substances.



4.7 Urea Formaldehyde

During the assessment no products are considered to contain urea formaldehyde.

4.8 Visible Mould and Water Damage

During the assessment visible water damage was observed and noted throughout the building. No visible mould was observed but is suspected.

- o The east doorway of the street sweeper garage



4.9 Fecal or microbial

During the assessment large amounts of pigeon fecal contamination was observed. Approximately 30 dead pigeons were also observed throughout the building.



5.0 Conclusions

Based on all observations, documentation and laboratory analysis, Squareone Consulting has collected enough information to make the following conclusions:

5.1 Asbestos Containing Materials

Results show that multiple samples returned positive for asbestos content. Due to the friable nature of the asbestos containing materials and chance that the asbestos fibres may become air born. Squareone Consulting suggests that all appropriate measures be taken to limit the amount of disturbance to the asbestos containing materials; the appropriate measures can be found in the Alberta Abatement Manual. Below is a list of all asbestos containing materials identified:

- Elbow Insulation
- Pipe Run Insulation

5.2 Lead Containing Materials

Paint with lead levels exceeding 0.009% by weight is considered to be “lead containing” by Safety Alberta.

Alberta Occupational Health and Safety does not regulate the concentration of lead in paint, but they do have an 8-hour Occupational Exposure Limit of 0.1 ppm. Below is a list of all paint samples that returned greater than 0.009%. If any of the materials below will be altered either during renovations or demolition, all precautions should be taken to limit the amount of lead release and to ensure air levels never exceed the Occupational Exposure Limit.

- White Paint – Tin Roof
- White Paint – 2nd Floor Ceiling
- Blue Paint – 2nd Floor Bathroom

5.3 Mercury Containing Materials

Fluorescent lighting tubes and thermostats that were identified during the assessment should be disposed of in accordance to the Waste Control Regulations under the Alberta Environmental Protection and Enhancement Act.

5.4 Polychlorinated Biphenyls (PCB's)

Fluorescent lighting may contain PCB containing ballasts. Any disposal should be in accordance to the Waste Control Regulations under the Alberta Environmental Protection and Enhancement Act.

5.5 Radioactive Components

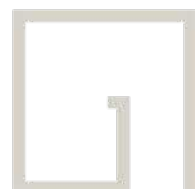
At this moment there are no concerns for radioactive components.

5.6 Ozone Depleting Substances

At this moment there are no concerns for Ozone depleting substances.

5.7 Urea Formaldehyde

At this moment there is no concern for urea formaldehyde.



5.8 Visible Mould and Water Damage

Visible water damage is a clear indication that there could be mould present. All areas where water damage was observed was then inspected closer for possible mould growth. If suspected mould growth is present, sampling can be used for identification

5.9 Fecal or Microbial

Vast quantities of pigeon feces and deceased pigeons are present throughout the building. Both pigeon feces and deceased pigeons are suspected to contain multiple types of diseases and pathogens. Extreme caution should be taken when disturbing and/or removing either. Detailed removal and decontamination procedures should be put in place before dealing with pigeon feces or deceased pigeons.

6.0 Closure

Squareone Consulting Ltd produced this assessment report for the sole purposes of MPE Engineering. All use of this report must be made with the acknowledgment of MPE Engineering. It is a statement that the presence of all hazardous materials as outlined in the report and as observed on the date this survey was conducted. The conclusions and recommendations contained in this assessment report are based upon professional opinion about the subject matter. These opinions are in accordance with accepted hygiene assessment standards and practices applicable to these locations and are subject to the following inherent limitations:

The data and findings in this assessment report are valid as of the date of the investigation. The passage of time, manifestation of latent conditions may warrant further exploration at the properties, analysis of data, and re-evaluation of the findings, observations, and conclusions expressed in this report.

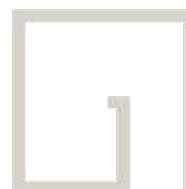
The data reported and the findings, observations and conclusions expressed in this report are limited by the Scope of Work. The Scope of Work was defined by but not limited to: the requests of the client, the time and budgetary constraints, and availability of access to the site.

Because of the limitations stated above, the findings, observations and conclusions expressed by Squareone Consulting Ltd. in this report are not, and should not, be considered an opinion concerning compliance of any past or present owner or operator of the site with any federal, provincial or local laws or regulations.

No warranty or guarantee, whether expressed or implied, is made with respect to the data or the report findings, observations, and conclusions, which are based solely upon site conditions in existence at the time of investigation.

If you have any questions, comments, or are in need of further assistance please contact me directly.

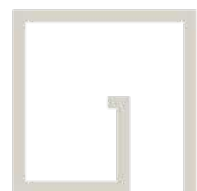
Sincerely,

A handwritten signature in black ink, appearing to read 'M. J. A.', followed by a horizontal line.

Mike Anderson
President & CEO
Squareone Consulting Ltd.

Appendices:

Appendix I	Sample Photographs
Appendix II	Laboratory Results
Appendix III	Sample/Analysis Floor Plan



Appendix I



A1- Elbow Insulations/Basement



A2- Pipe Insulation/Basement



A3- Wall Plaster/ Basement



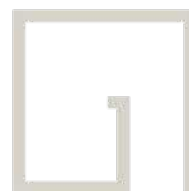
A4- Wall Plaster/ Front Room Interior Wall



Sample A5- Wall Plaster/ Back Exterior Wall



Sample A6- Wall Plaster/ 2nd Floor



A7- Wall Plaster/ Bathroom 2nd Floor



A8- Wall plaster 2nd Floor; Front Exterior Wall



L1- White Paint / Bathroom 2nd Floor



A8- Wall plaster 2nd Floor; Front Exterior Wall



A7- Wall Plaster/ Bathroom 2nd Floor



Appendix II



Laboratory Analysis Report

To:

Mike Anderson
 Squareone Consulting
 629 UPP 3rd Street South East
 Medicine Hat, Alberta
 T1A 0H4

EMC LAB REPORT NUMBER: A67939

Job/Project Name:

Analysis Method: Polarized Light Microscopy – EPA 600

Date Received: Apr 13/21

Date Analyzed: Apr 13/21

Analyst: Chengming Li, *Analyst*

Reviewed By: Malgorzata Sybydlo, *Laboratory Manager*

Job No: SQ1MH21

Number of Samples: 8

Date Reported: Apr 13/21

Client's Sample ID	Lab Sample No.	Description/Location	Sample Appearance	SAMPLE COMPONENTS (%)		
				Asbestos Fibres	Non-asbestos Fibres	Non-fibrous Material
A1	A67939-1	Elbow insulation / basement	Grey, parging cement	Chrysotile	60	40
A2	A67939-2	Pipe insulation / basement	Grey, paper	Chrysotile	70	20
A3	A67939-3	Wall plaster / basement stairs	Grey, plaster	ND		100
A4	A67939-4	Wall plaster / front rm; interior wall	Grey, plaster	ND		100
A5	A67939-5	Wall plaster / back exterior wall	Grey, plaster	ND		100
A6	A67939-6	Wall plaster / 2 nd floor	Grey, plaster	ND		100
A7	A67939-7	Wall plaster / bathroom; 2 nd floor	Grey, plaster	ND		100
A8	A67939-8	Wall plaster / 2 nd floor; front exterior wall	Grey, plaster	ND		100

Note:

1. Bulk samples are analyzed using Polarized Light Microscopy (PLM) and dispersion staining techniques. The analytical procedures are in accordance with EPA 600/R-93/116 method.
2. The results are only related to the samples analyzed. **ND** = None Detected (no asbestos fibres were observed), **NA** = Not Analyzed (analysis stopped due to a previous positive result).
3. This report may not be reproduced, except in full without the written approval of EMC Scientific Inc. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.
4. The limit of quantification (LOQ) is 1%.

C.O.C.: ---

REPORT No. B21-10741

Report To:

EMC Scientific Inc.
 5800 Ambler Dr. #100,
 Mississauga ON L4W 4J4 Canada

Attention: Alister Haddad

Caduceon Environmental Laboratories

2378 Holly Lane
 Ottawa Ontario K1V 7P1
 Tel: 613-526-0123
 Fax: 613-526-1244

DATE RECEIVED: 16-Apr-21

JOB/PROJECT NO.: SQ1MH21048

DATE REPORTED: 16-Apr-21

P.O. NUMBER:

SAMPLE MATRIX: Paint Chips

WATERWORKS NO.

Parameter	Lead				
Units	% by wt				
R.L.	0.0005				
Reference Method	EPA 6010				
Date Analyzed/Site	16-Apr-21/O				

Client I.D.	Sample I.D.	Date Collected				
L1 White/ Main Floor, Tin Roof	B21-10741-1	18-Jan-21	0.513			
L2 White/2nd Floor Ceiling	B21-10741-2	18-Jan-21	0.0171			
L3 Blue/2nd Floor, Bathroom	B21-10741-3	18-Jan-21	0.25			



Greg Clarkin, BSc., C. Chem
 Lab Manager - Ottawa District

R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an *

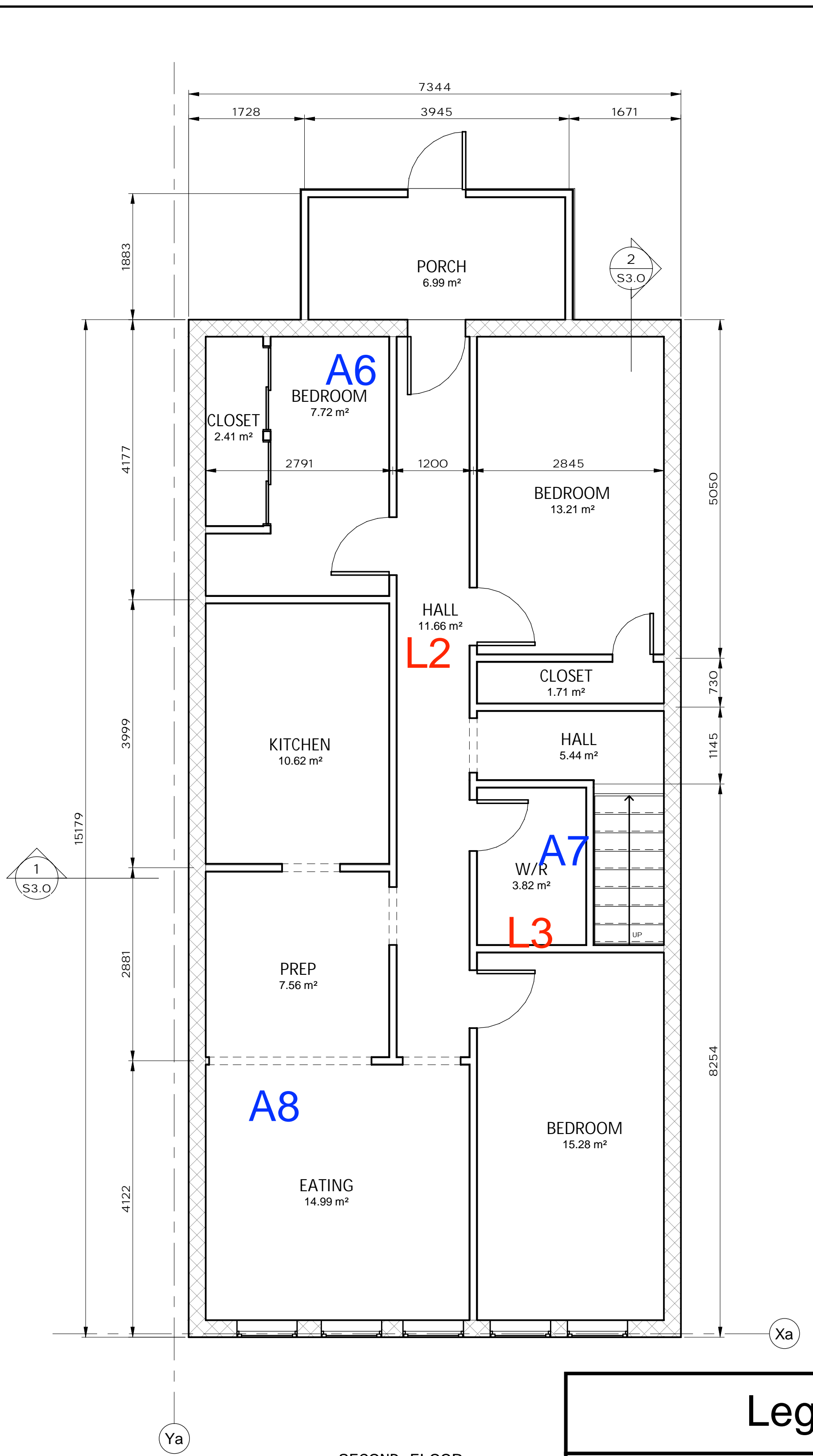
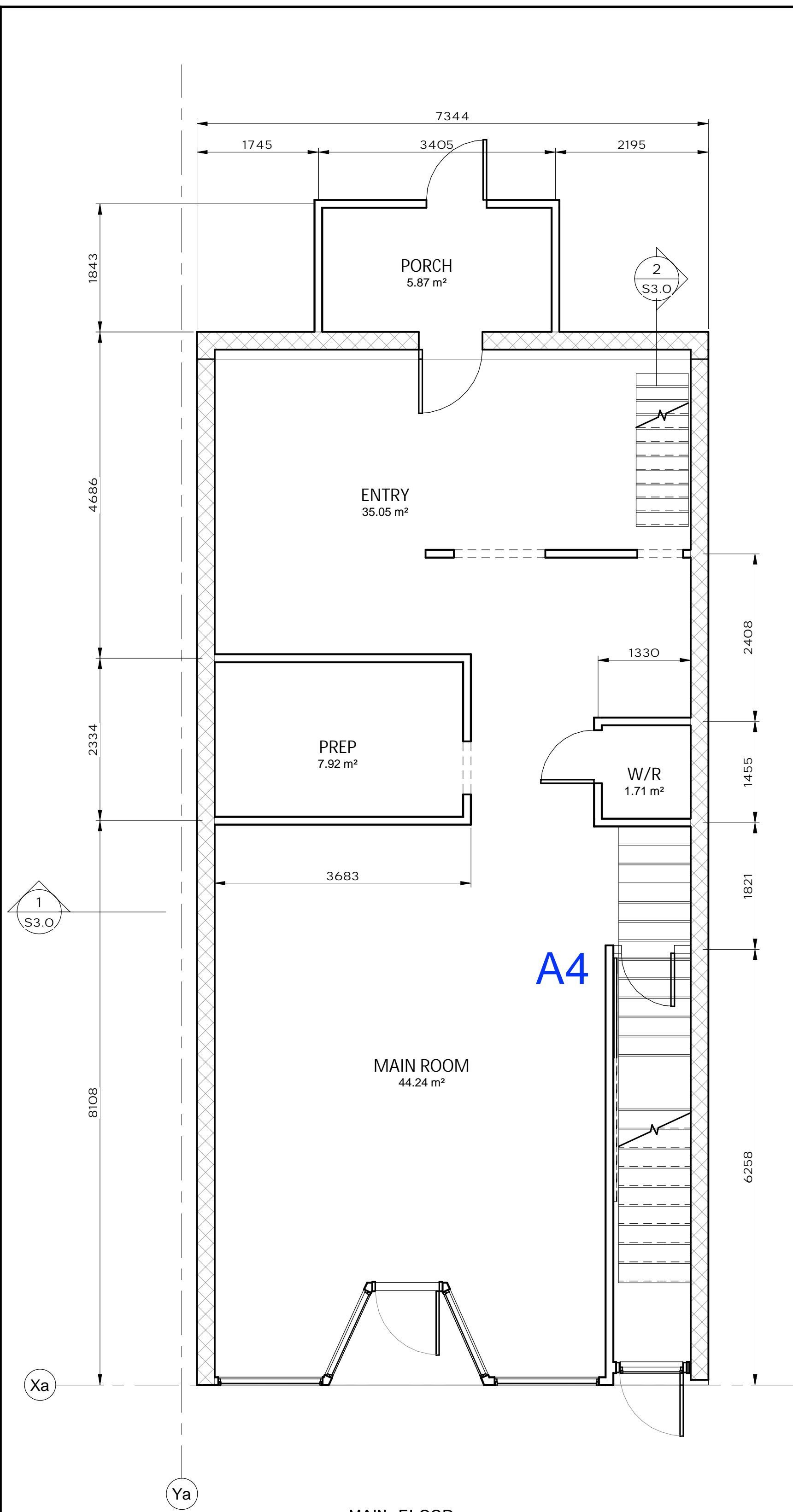
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from

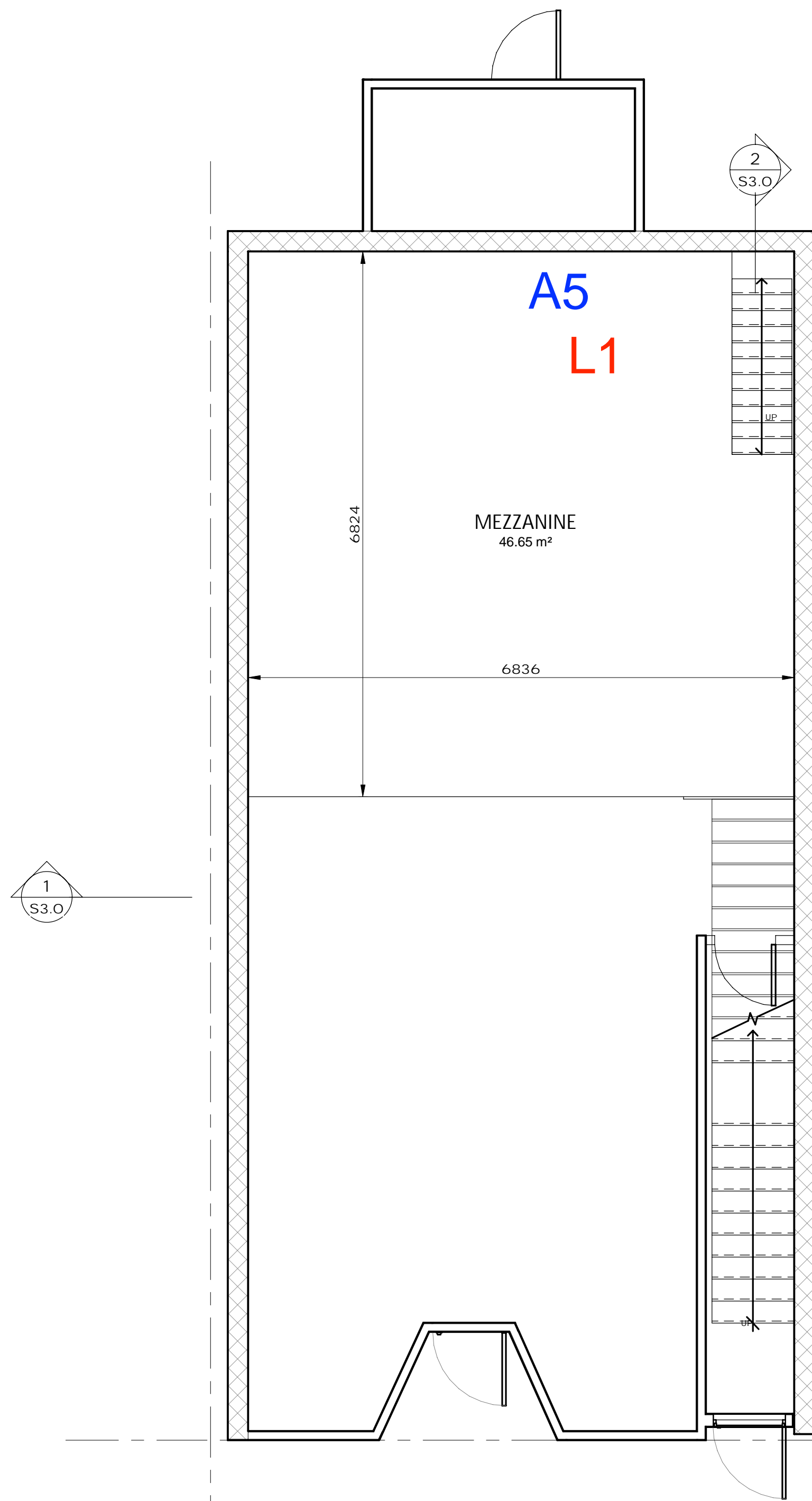
Appendix III

Floor Plan with Sampling Locations and Results





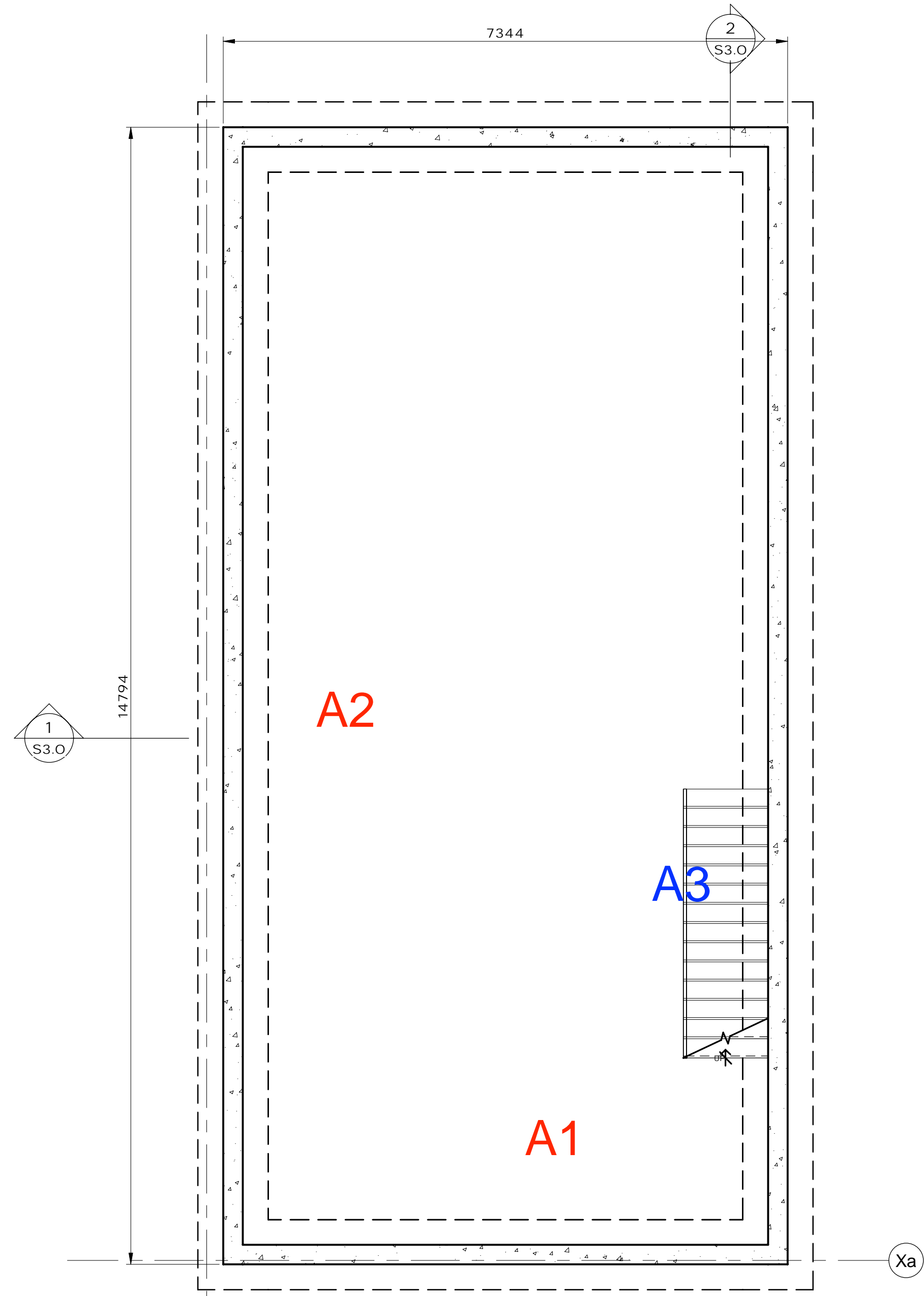
Legend	
A#	- Negative Asbestos Sample
A#	- Positive Asbestos Sample
L#	- Negative Lead Sample
L#	- Positive Lead Sample



MEZZANINE PLAN
1 : 50

Ya

Xa



BASEMENT PLAN
1 : 50

Ya

Xa

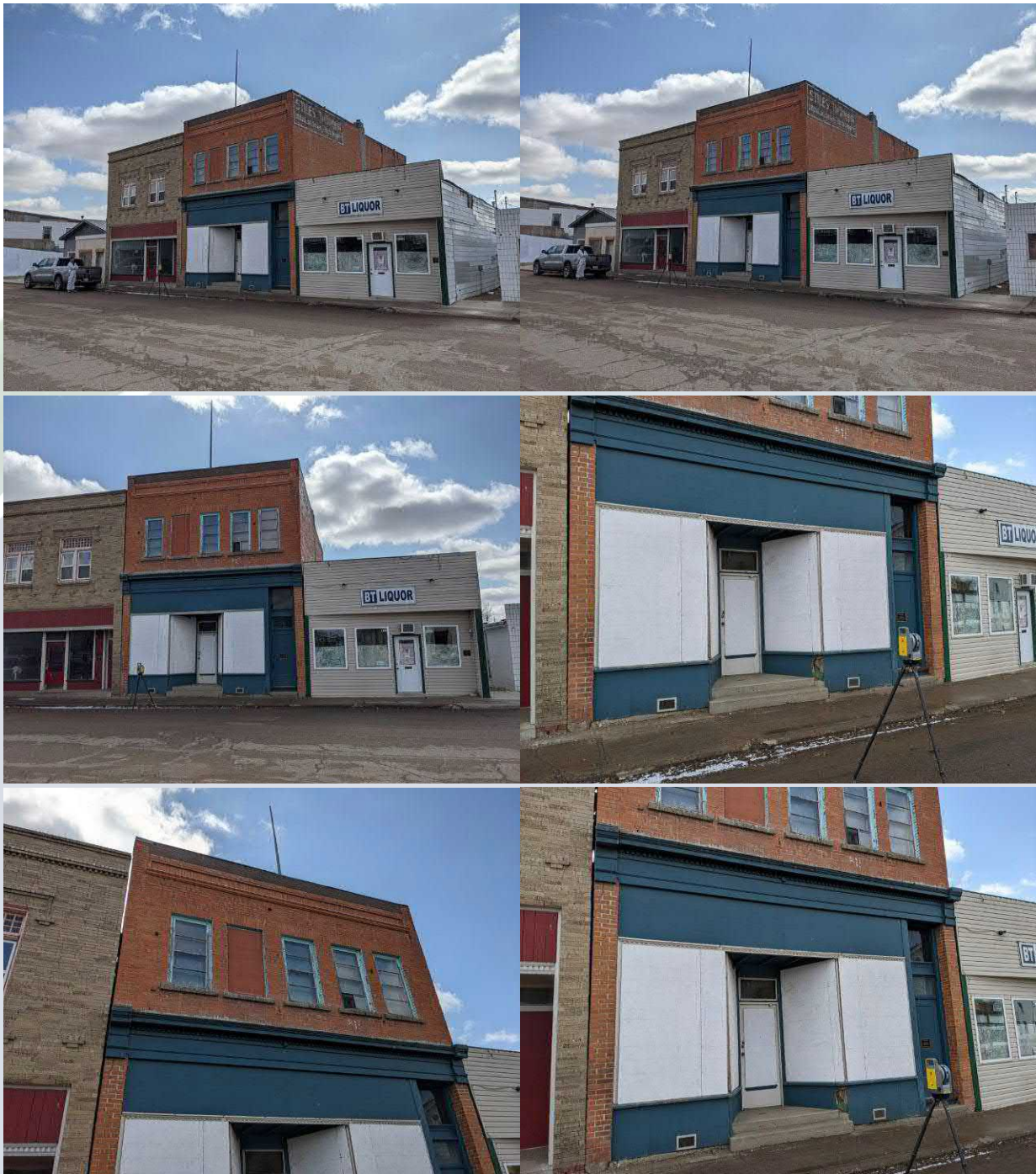
APPENDIX B:

SITE PHOTOS

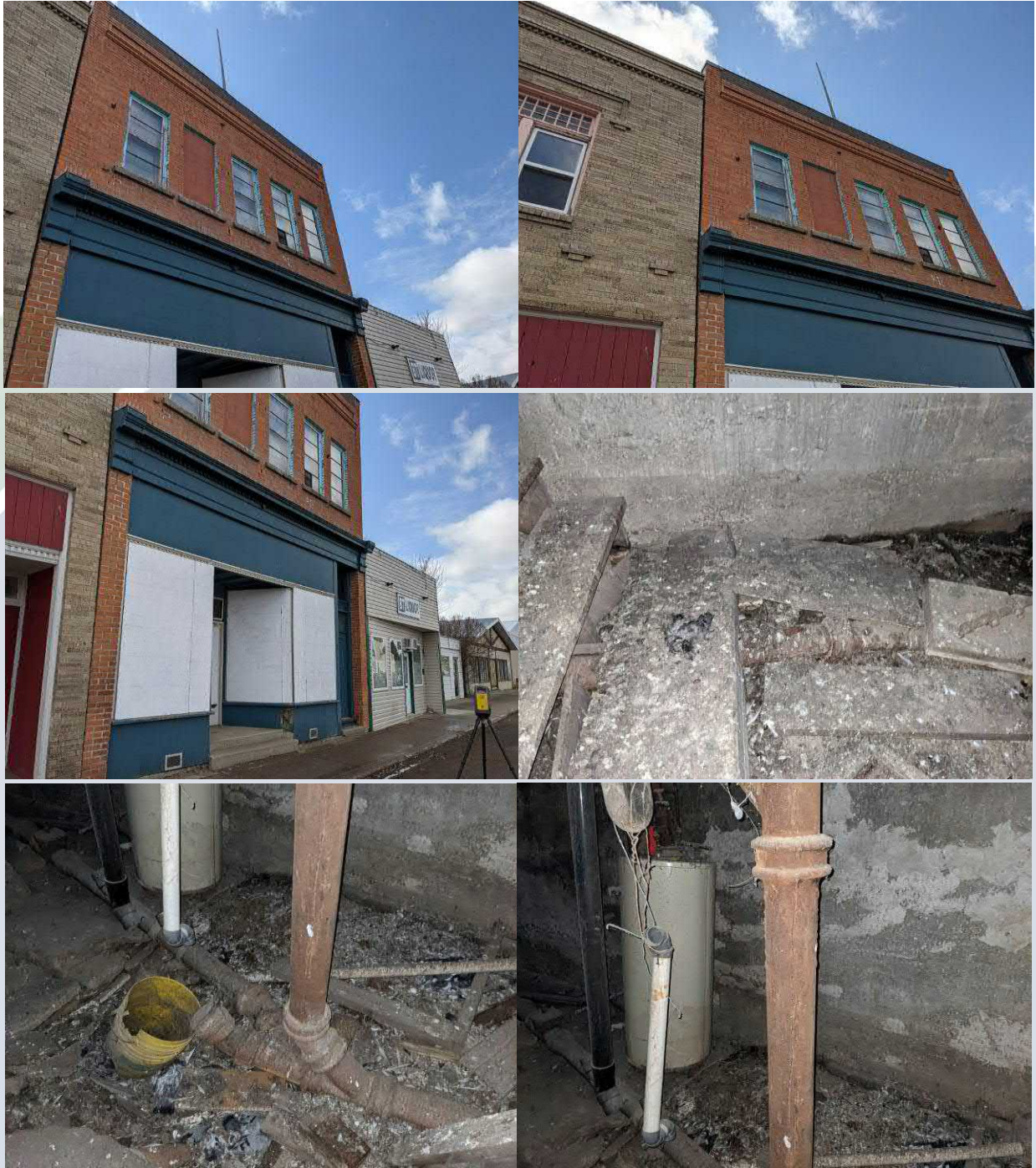
Appendix B: Site Photographs



Appendix B: Site Photographs



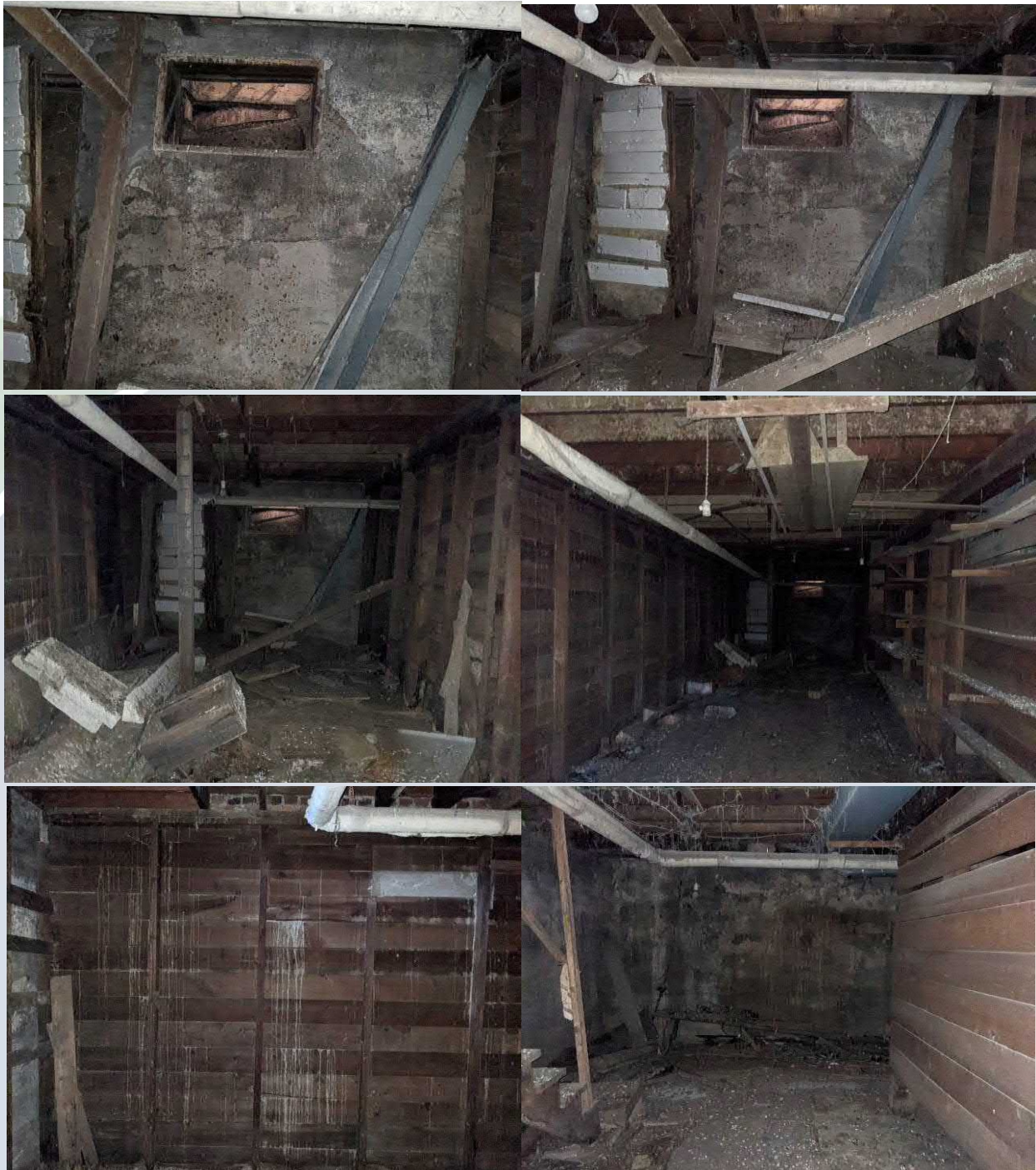
Appendix B: Site Photographs



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Appendix B: Site Photographs



Appendix B: Site Photographs



Appendix B: Site Photographs



Appendix B: Site Photographs



Appendix B: Site Photographs



Appendix B: Site Photographs



Appendix B: Site Photographs



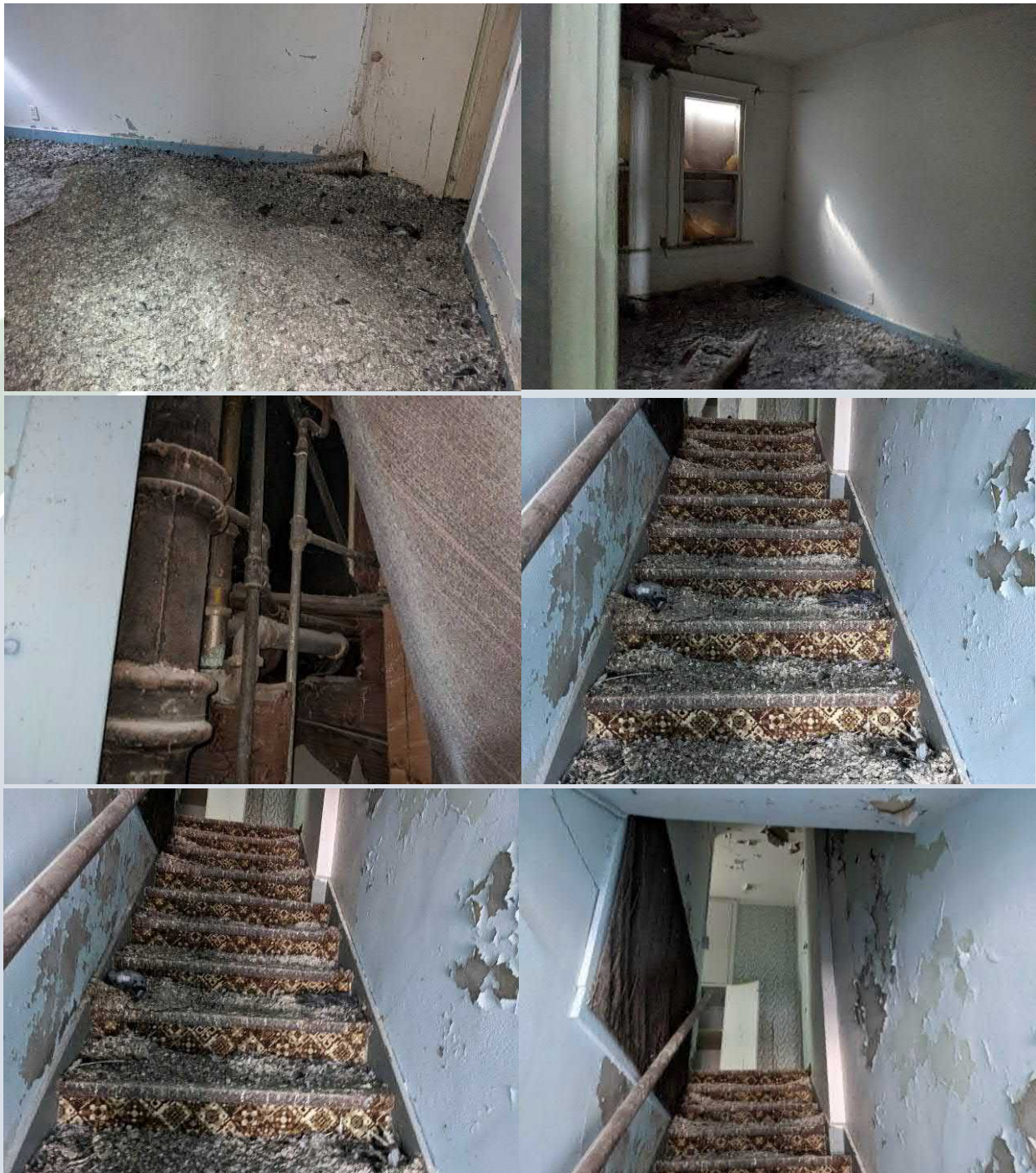
Appendix B: Site Photographs



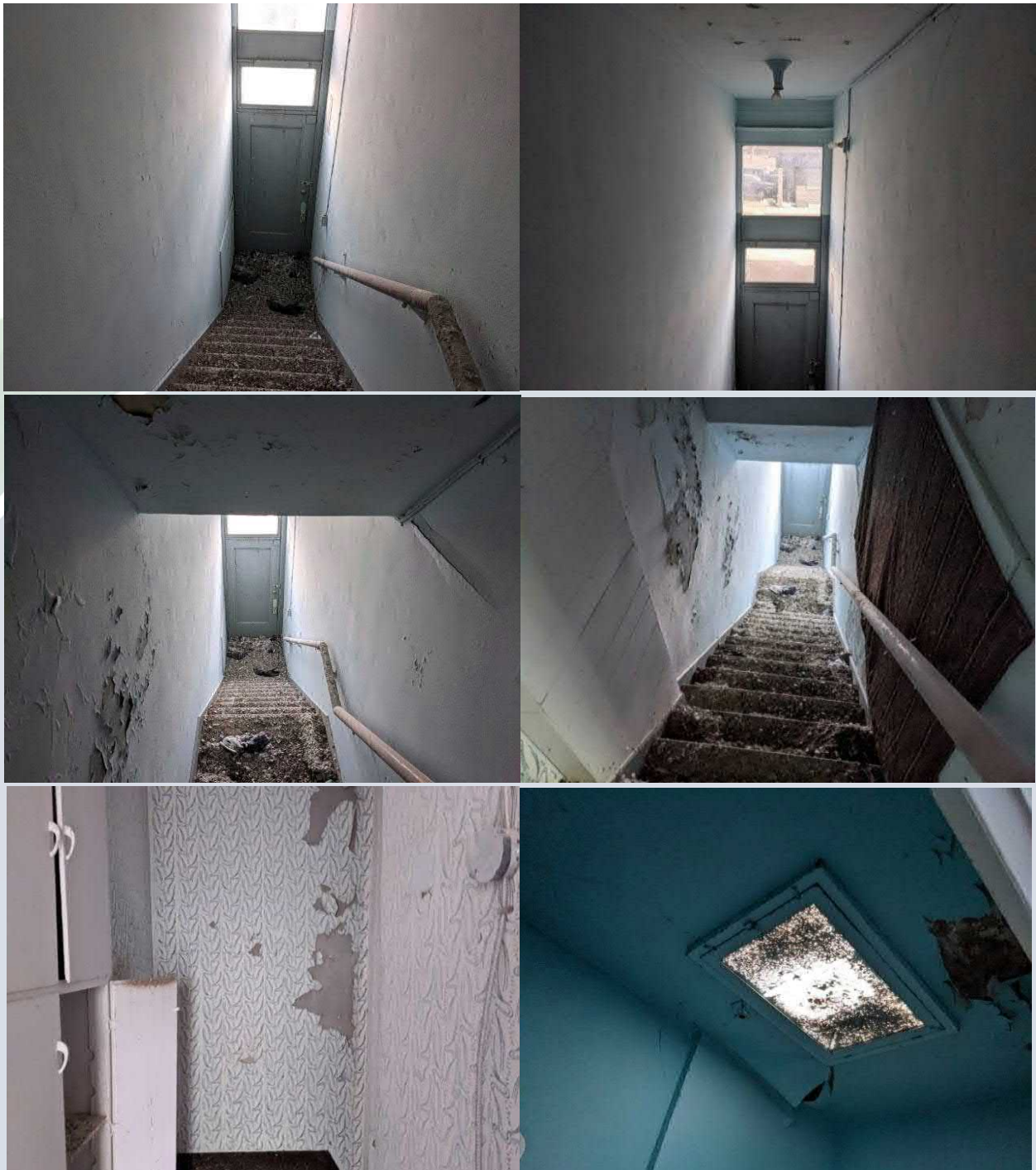
Appendix B: Site Photographs



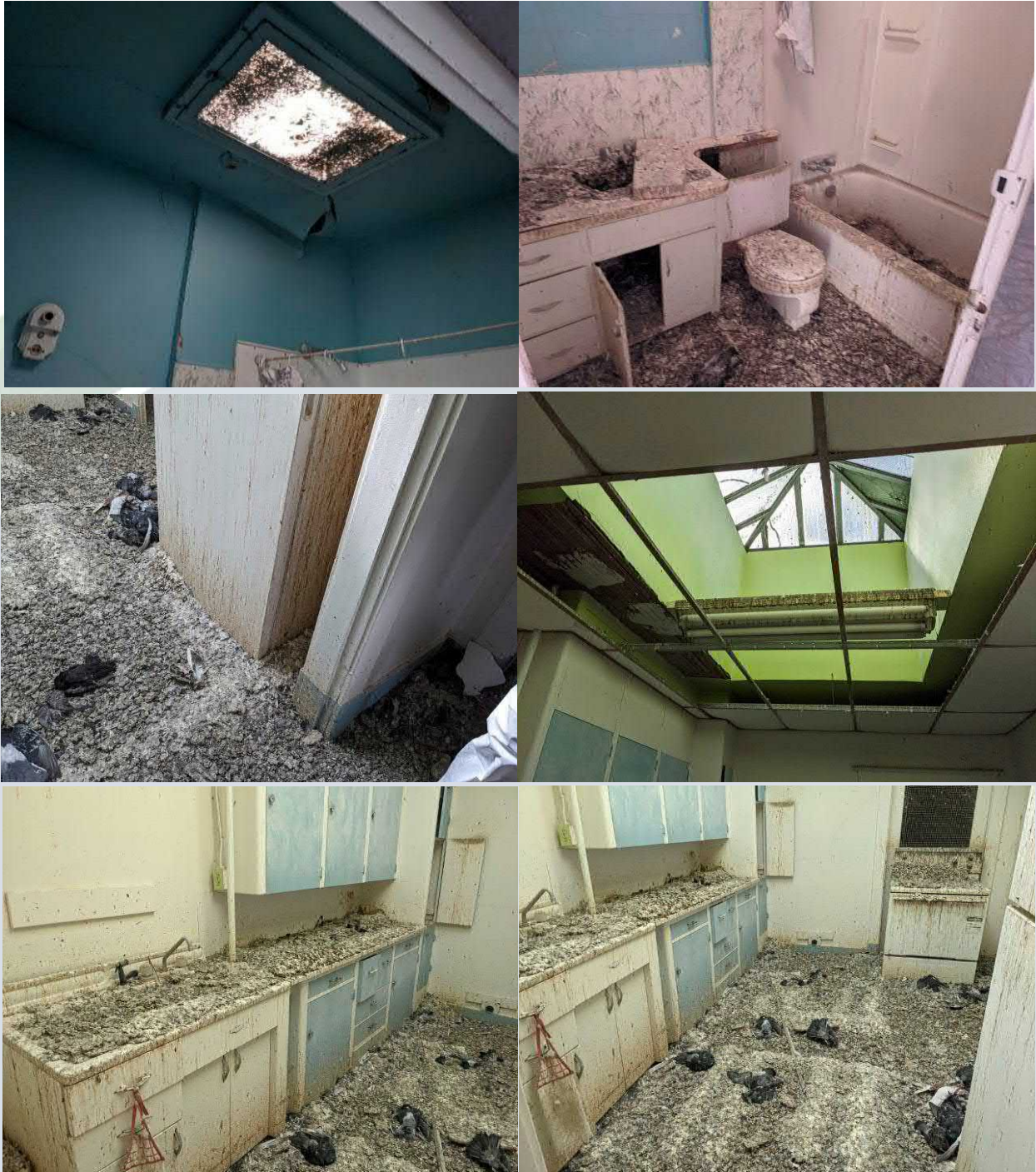
Appendix B: Site Photographs



Appendix B: Site Photographs



Appendix B: Site Photographs



Appendix B: Site Photographs



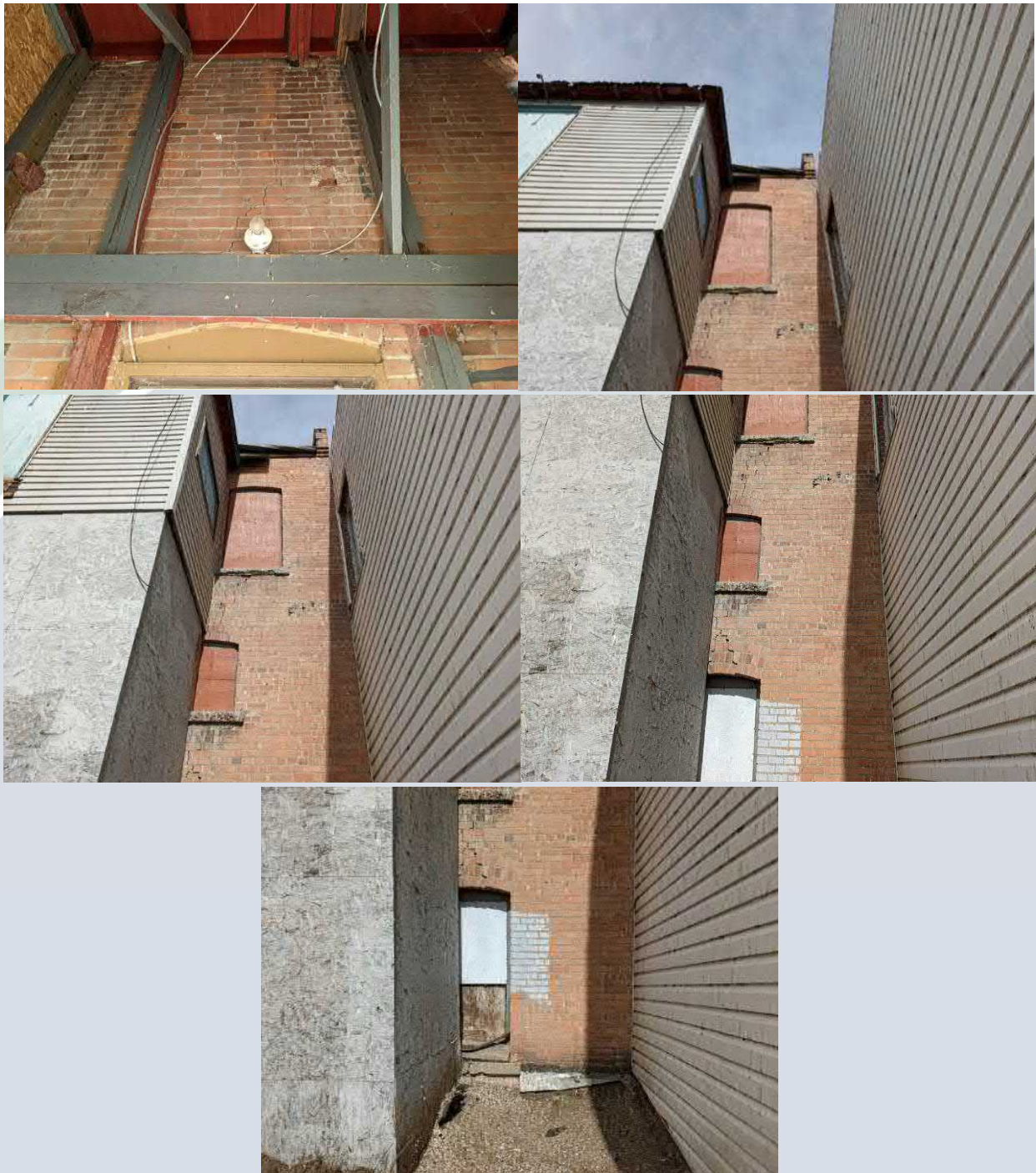
Appendix B: Site Photographs



Appendix B: Site Photographs



Appendix B: Site Photographs



APPENDIX C:

EXISTING BUILDING DRAWINGS

LIST_OF_DRAWINGS

STRUCTURAL	
S1.0	3D SCHEMATIC VIEWS
S2.1	FLOOR PLANS
S2.2	PLANS
S3.0	SECTIONS
S3.1	SECTIONS



3D_ISOMETRIC_VIEW

TOWN OF BASSANO

FORMER STILES BUILDING ASSESSMENT

1446-013-00



NOTES:

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED (i.e. 1:1000 etc) ARE BASED ON 22"x34" FORMAT DRAWINGS

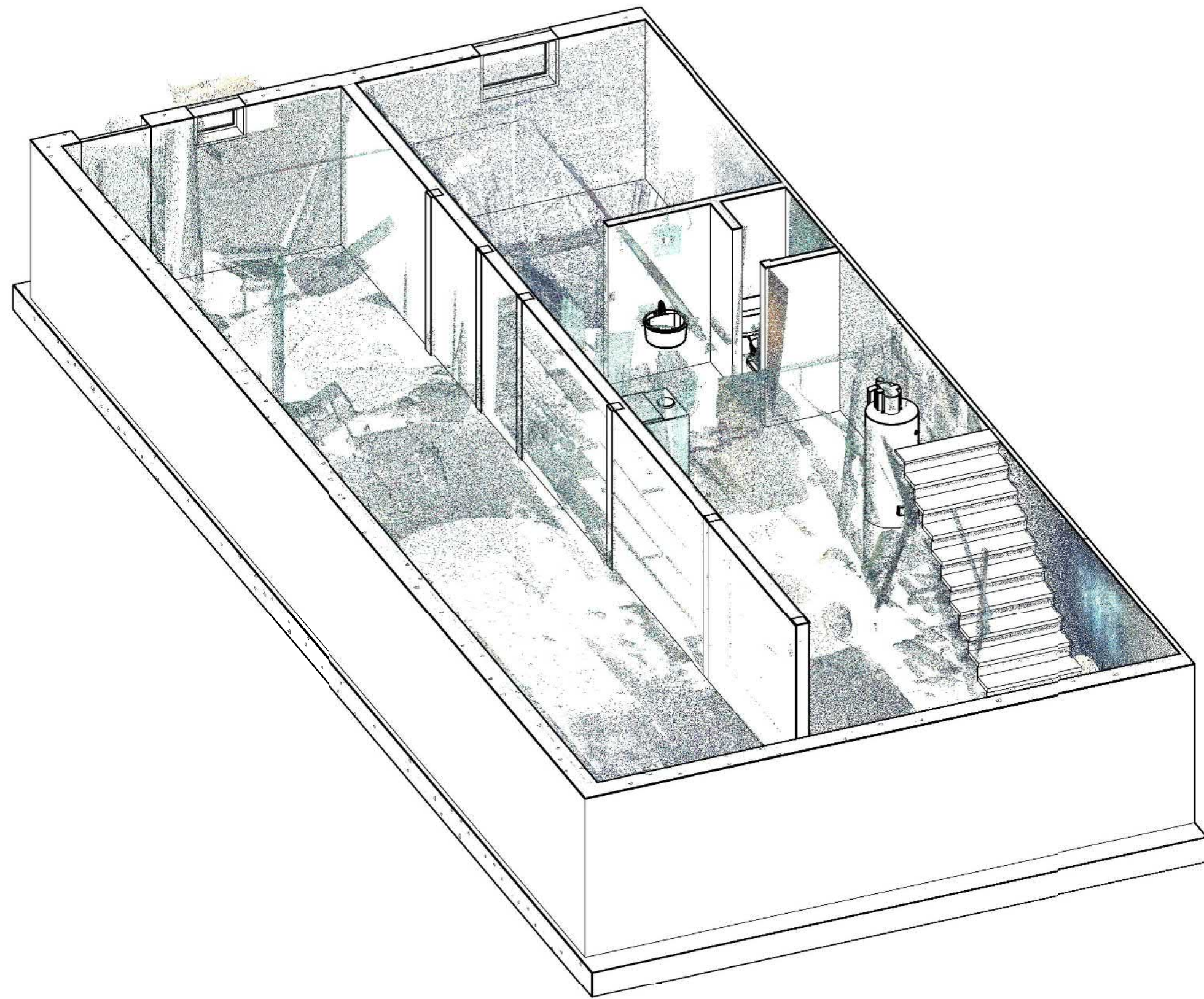
ISSUE	YY-MM-DD	REVISION



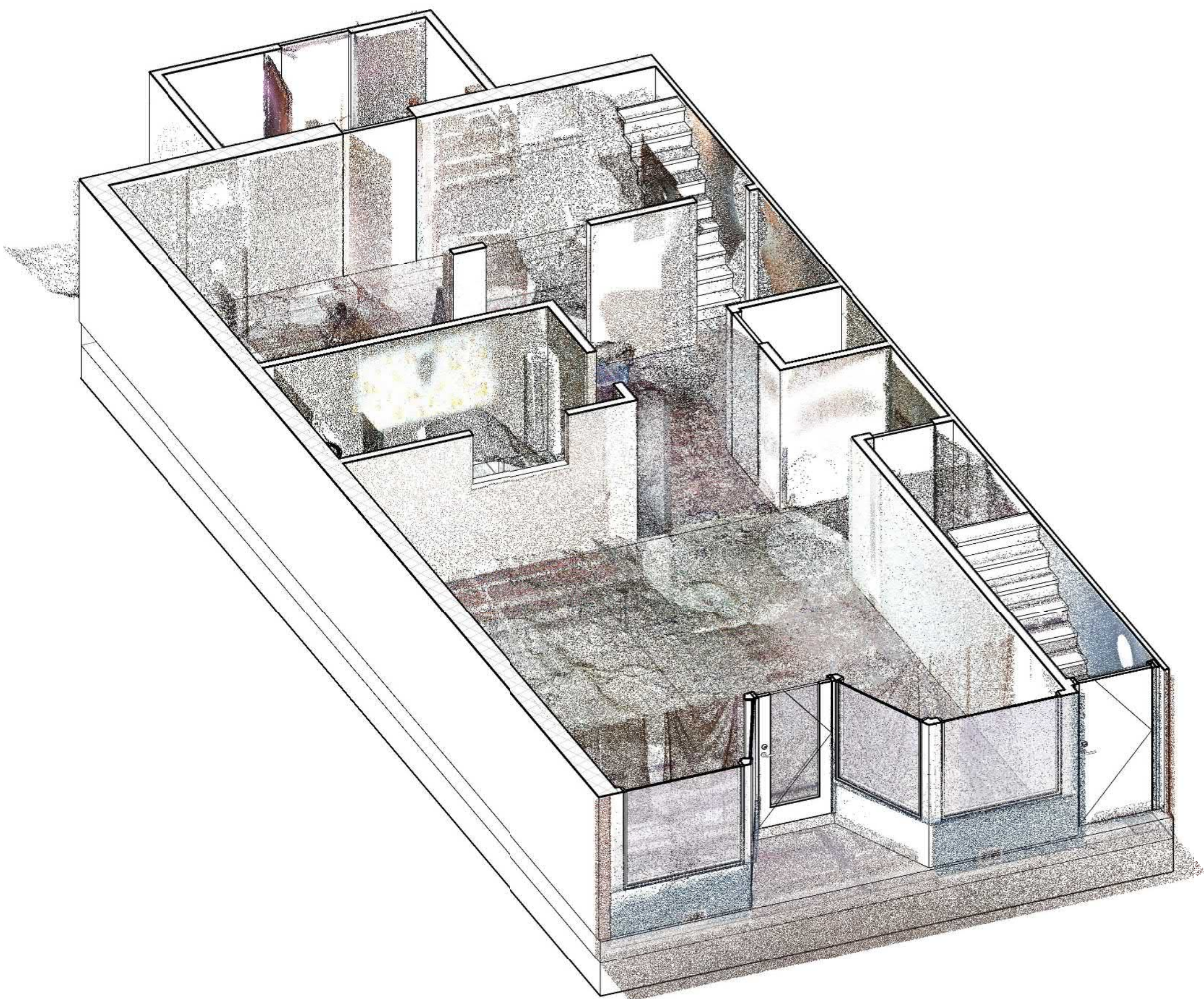
TOWN OF BASSANO

FORMER STILES BUILDING ASSESSMENT
STRUCTURAL
3D SCHEMATIC VIEWS

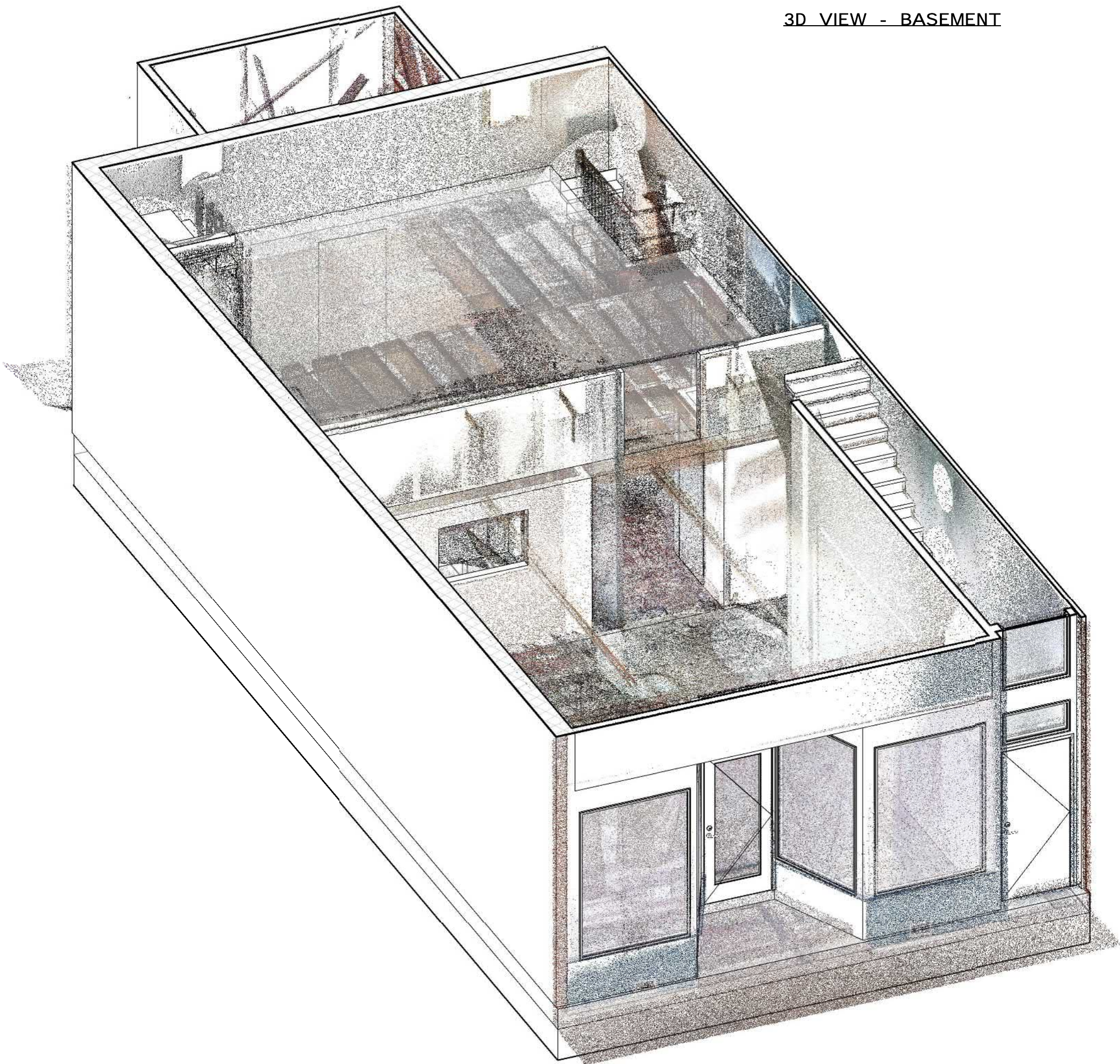
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DRAWN	J.L.G.	SCALE	
DATE	APR 2021	DRAWING	S1.0



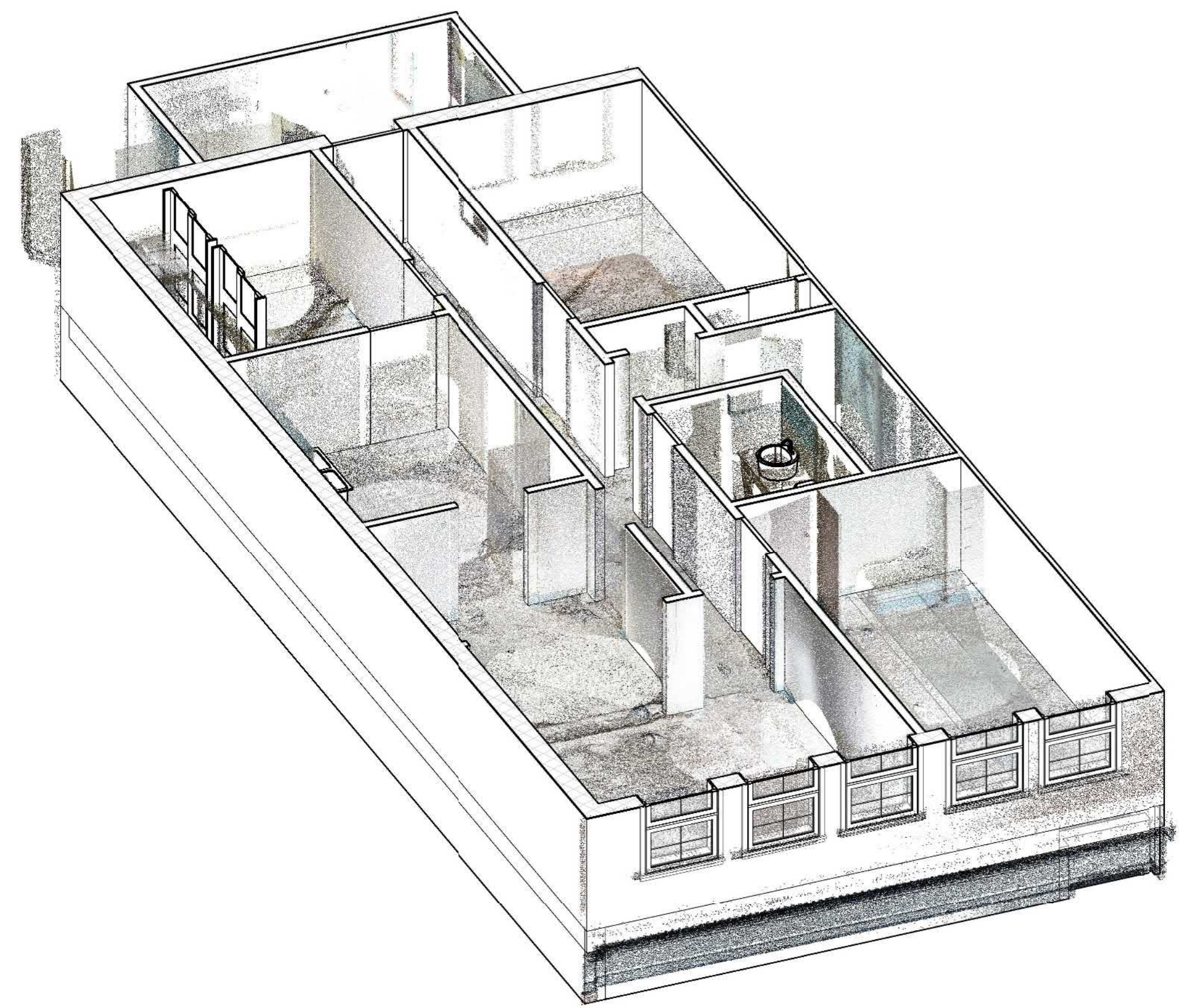
3D_VIEW - BASEMENT



3D_VIEW - MAIN FLOOR

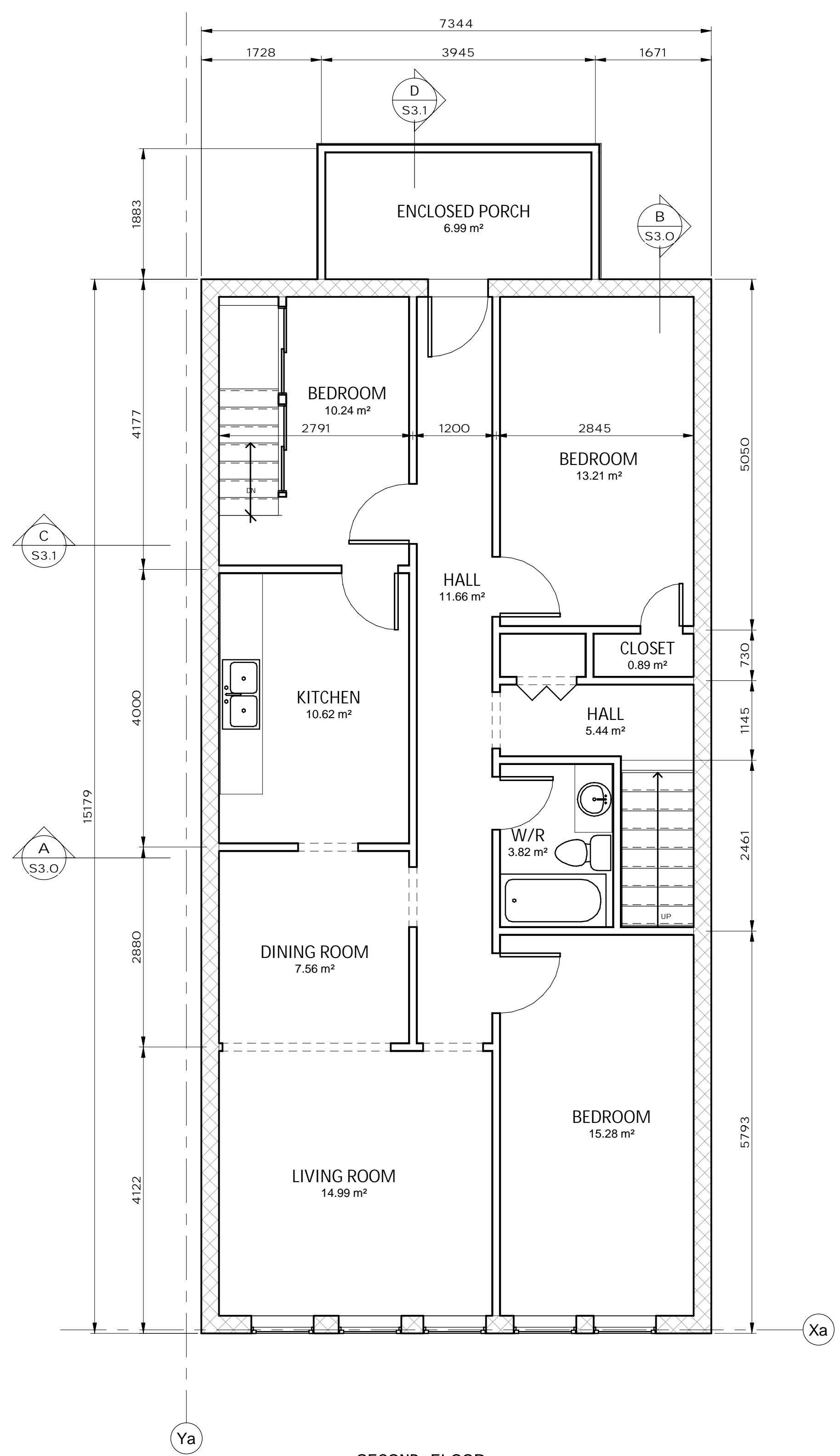
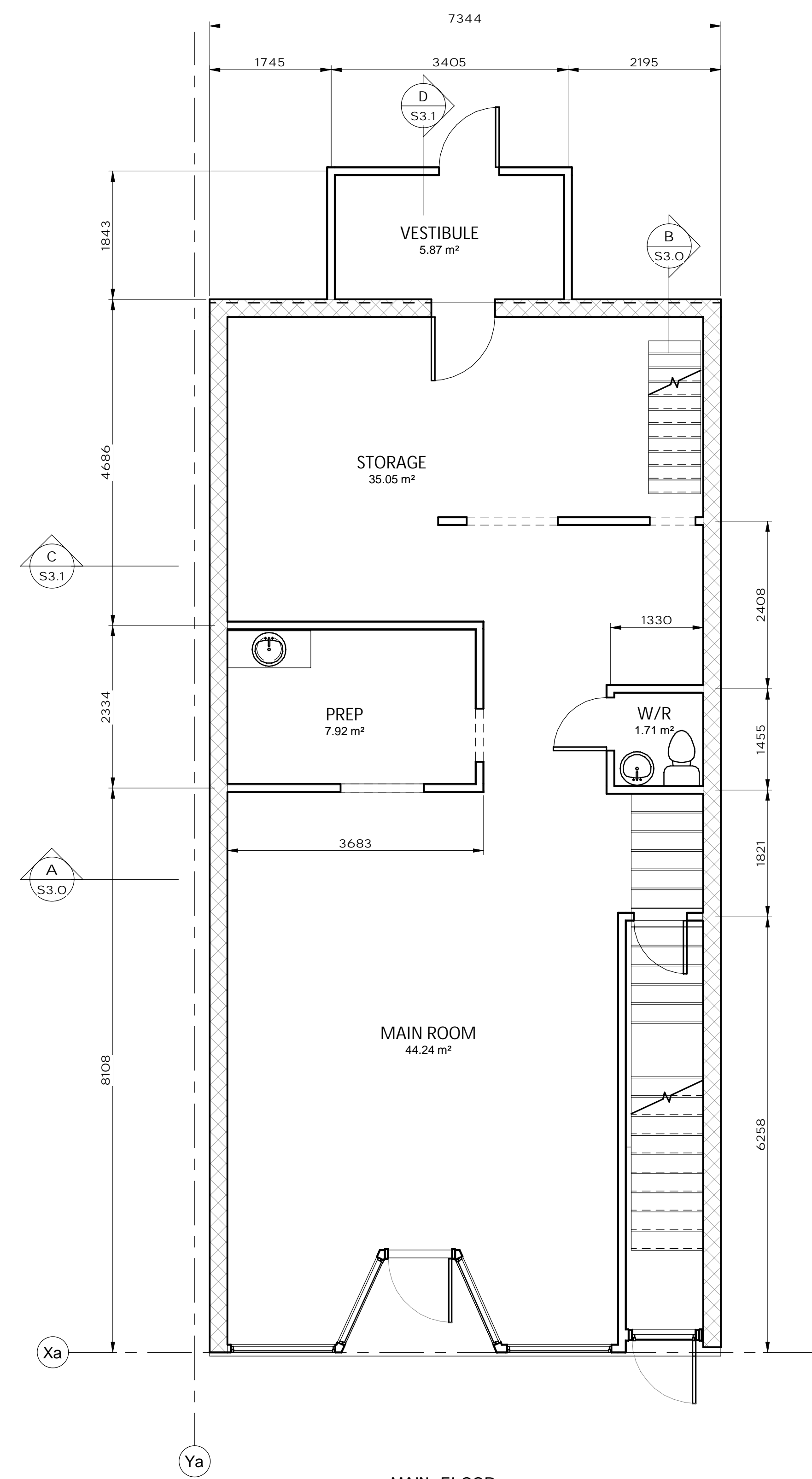
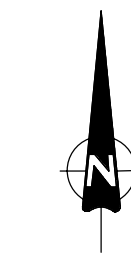


3D_VIEW - MEZZANINE



3D_VIEW - SECOND FLOOR

NOTES:
 1. DRAWINGS ARE CONCEPTUAL TO PROVIDE GENERAL LAYOUT OF THE EXISTING BUILDING AND DO NOT SHOW COMPLETE STRUCTURAL, MECHANICAL OR ELECTRICAL DETAILS.



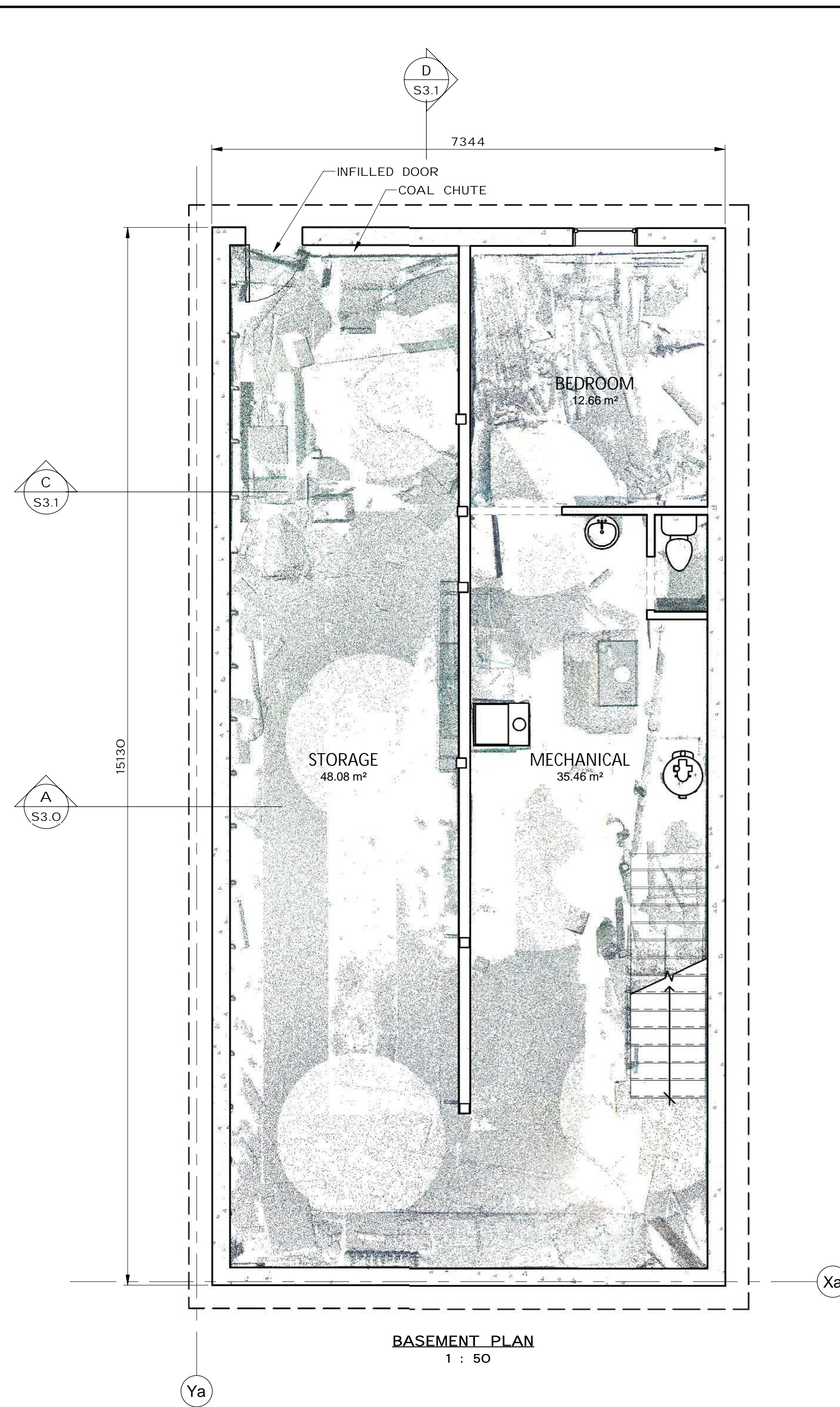
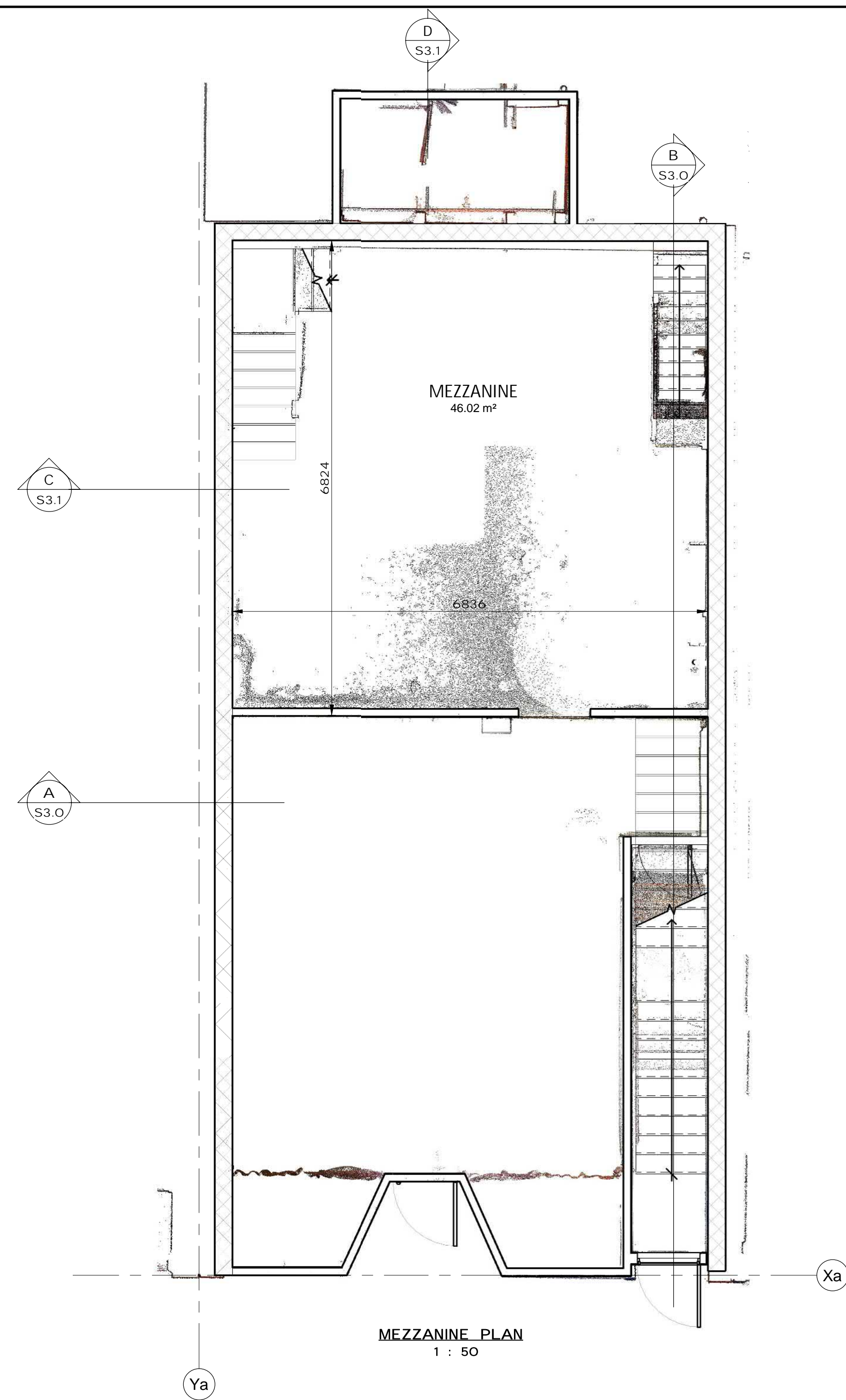
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1	21-04-22	FOR REPORT
ISSUE	YY-MM-DD	REVISION



TOWN OF BASSANO
 FORMER STILES BUILDING ASSESSMENT
 STRUCTURAL
 FLOOR PLANS

DESIGNED	C.P.V.	JOB	1446-013-00
DRAWN	J.L.G.	SCALE	1 : 50
DATE	APR 2021	DRAWING	S2.1



NOTES:

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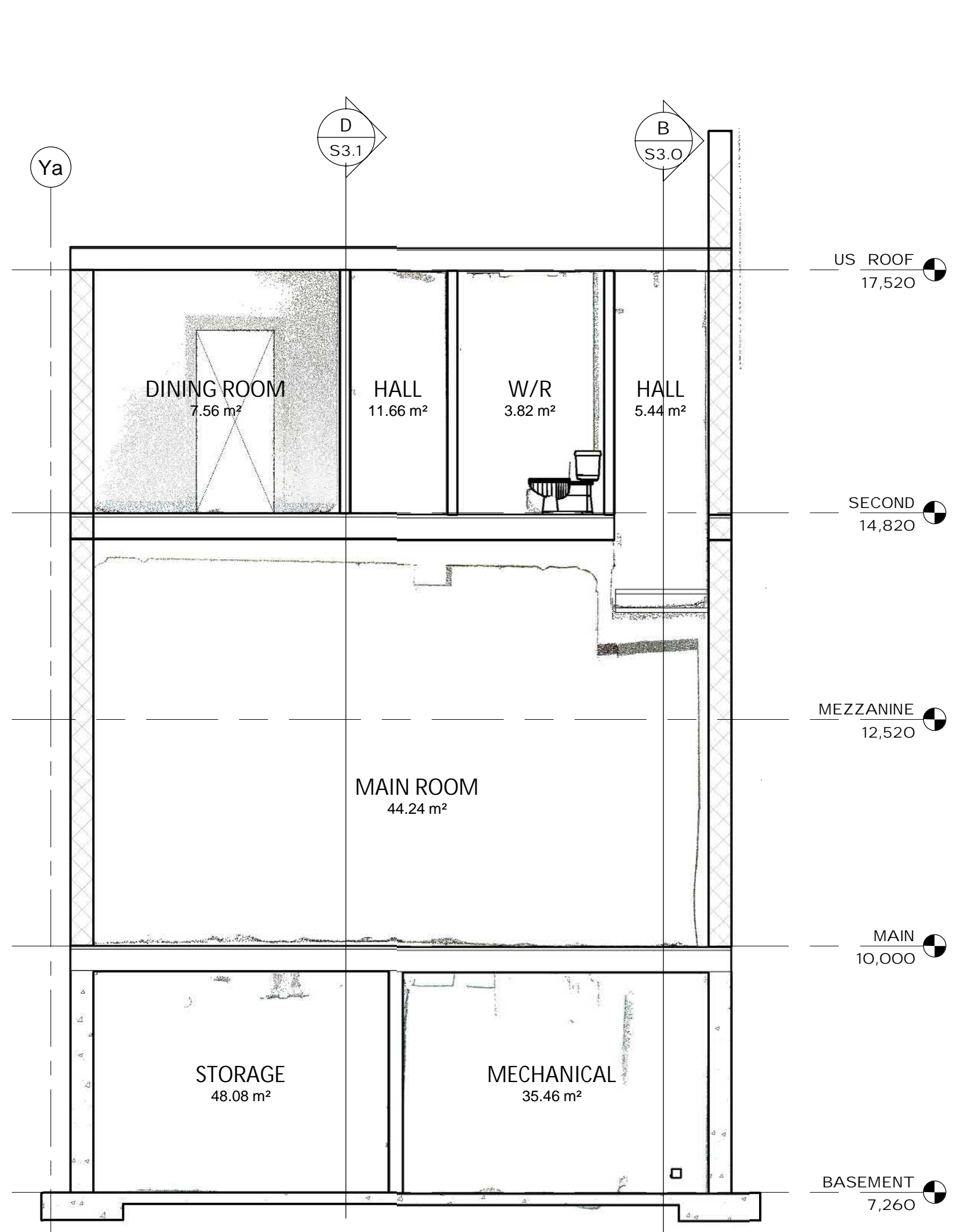
1	21-04-22	FOR REPORT
ISSUE	YY-MM-DD	REVISION



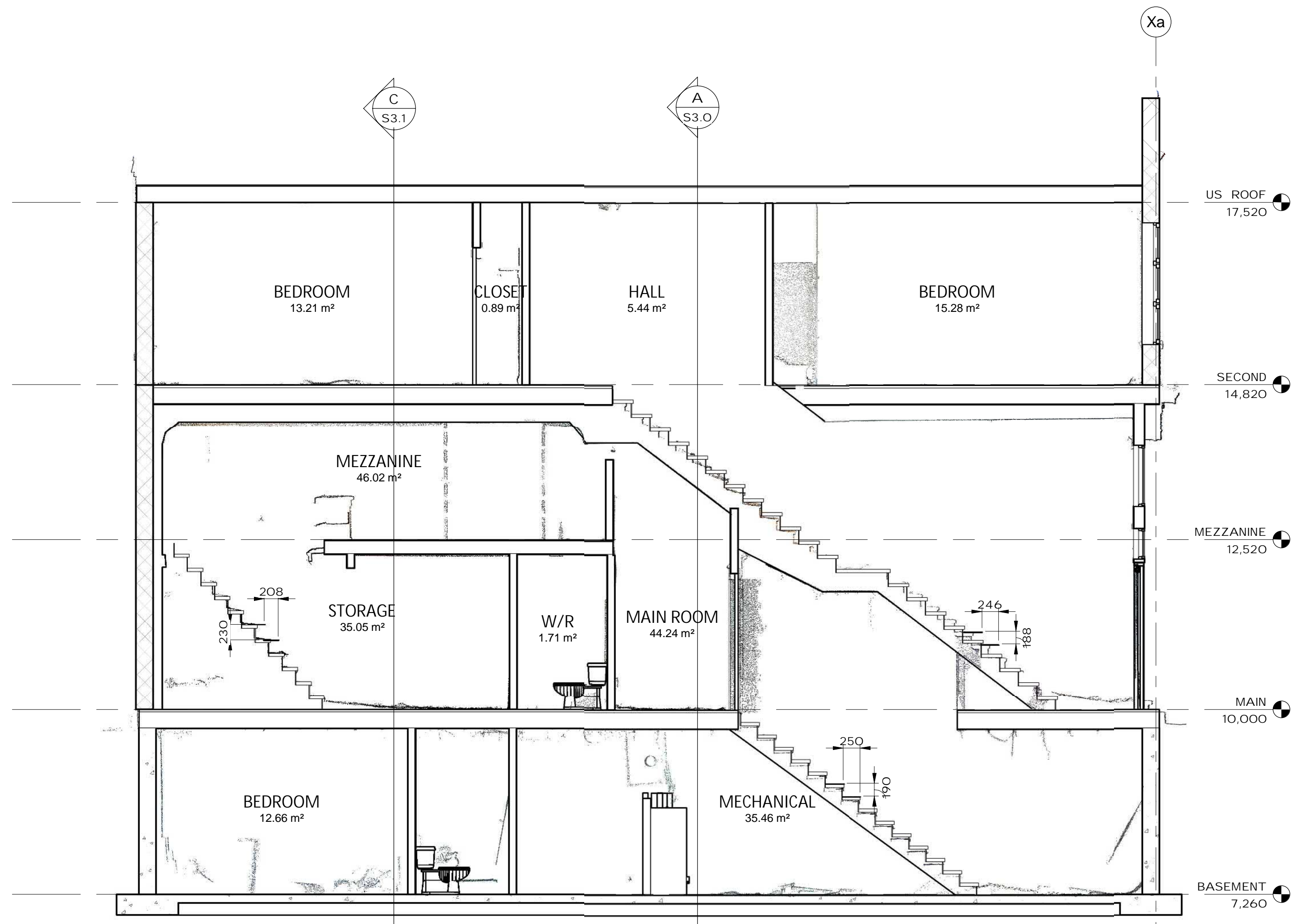
TOWN OF BASSANO

FORMER STILES BUILDING ASSESSMENT
STRUCTURAL
PLANS

DESIGNED	C.P.V.	JOB	1446-013-00
DRAWN	J.L.G.	SCALE	1 : 50
DATE	APR 2021	DRAWING	S2.2



A
S2.1
1 : 50



B
S2.1
1 : 50

NOTES:

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED (i.e. 1:1000 etc) ARE BASED ON 22"x34" FORMAT DRAWINGS

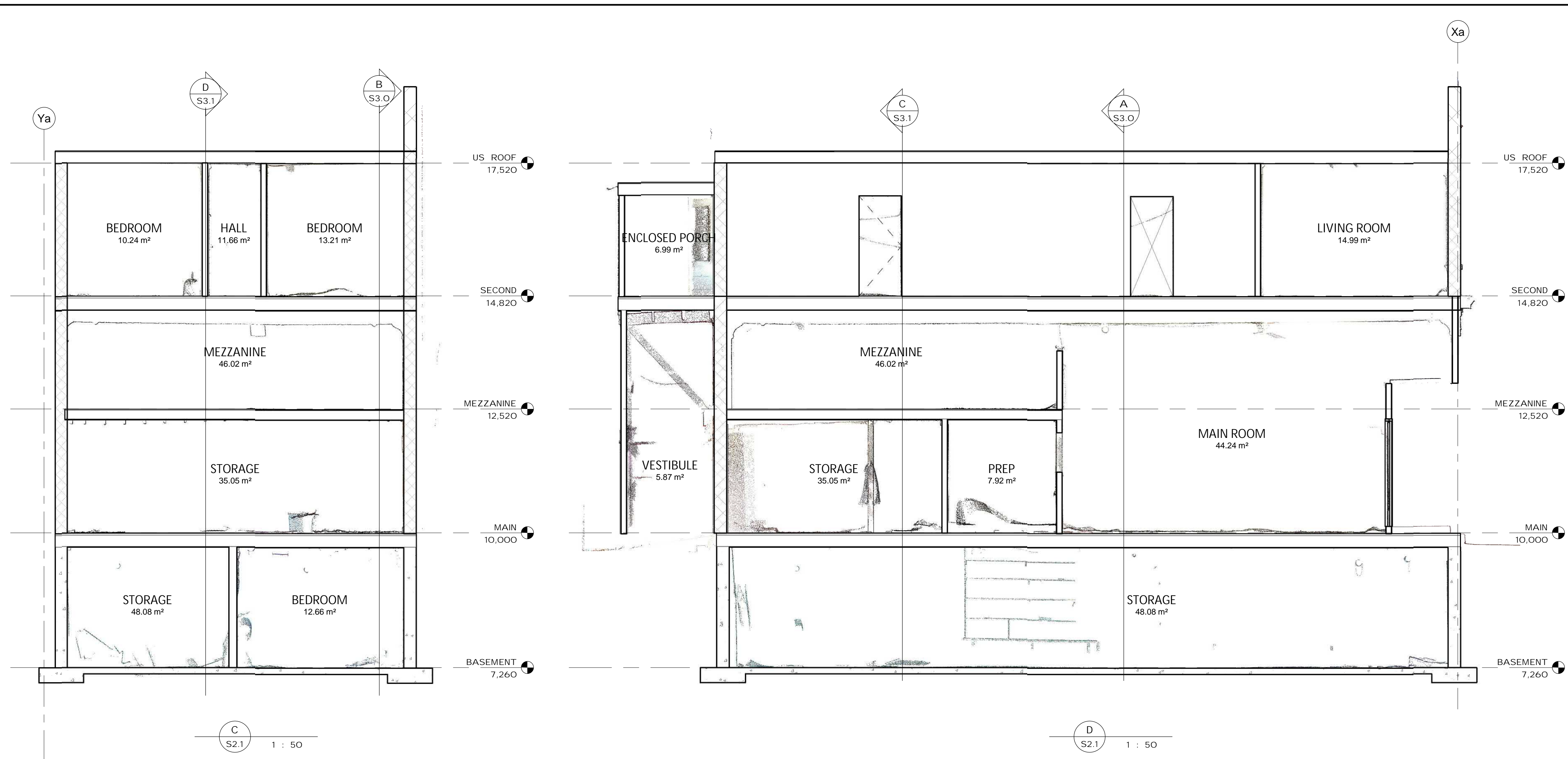
1	21-04-22	FOR REPORT
ISSUE	YY-MM-DD	REVISION



TOWN OF BASSANO

FORMER STILES BUILDING ASSESSMENT
STRUCTURAL
SECTIONS

DESIGNED	C.P.V.	JOB	1446-013-00
DRAWN	J.L.G.	SCALE	1 : 50
DATE	APR 2021	DRAWING	S3.0



NOTES:

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1	21-04-22	FOR REPORT
ISSUE	YY-MM-DD	REVISION



TOWN OF BASSANO

FORMER STILES BUILDING ASSESSMENT
STRUCTURAL
SECTIONS

DESIGNED	C.P.V.	JOB	1446-013-00
DRAWN	J.L.G.	SCALE	1 : 50
DATE	APR 2021	DRAWING	S3.1