

Midwest
Environmental
Consulting, L.L.C.



July 26, 2012

Rennie Smith
All Phase Companies, Inc.
404A St. Croix Trail North
Lakeland MN 55043

RE: HUD Lead-Based Paint Inspection and Risk Assessment at the Single Family Residential Property, 677 East York Avenue, St. Paul, Minnesota (All Phase Phone: 651-436-2930)

Dear Rennie Smith:

At your request, Midwest Environmental Consulting, L.L.C. (MEC) performed a HUD lead-based paint inspection and risk assessment of the single family residential located at 677 East York Avenue, St. Paul, Minnesota on July 19, 2012 and July 23, 2012.

Andrew Myers, Environmental Project Manager with MEC and licenced lead risk assessor (MN LR #578) performed all field work associated with this project. MEC credentials can be found in Appendix A.

The purpose of this project was to determine whether lead-based paint or other lead hazards are present on the interior or exterior surfaces of the residential property. This report contains the results of the HUD lead-based paint inspection and risk assessment.

The inspection was conducted following the Housing and Urban Development (HUD) "Guidelines for the Evaluation and Control of Lead-Based Paint in Housing," using the October 1997 revised Chapter 7 protocols. The sampling criteria used are those outlined in the HUD Standards 24 CFR Part 35 et al, "Requirements for Notification Evaluation and Education of Lead-Based Paint Hazards in Federally Owned Residential Property and Housing Receiving Federal Assistance." Also included, is an evaluation for lead dust hazards and bare soil hazards as part of the risk assessment.

According to HUD protocol, if the first 5 of a building component are identified as positive for lead-based paint, the remaining like components are assumed to be lead-based paint containing.

SITE DESCRIPTION

The single family property located at 677 East York Avenue, St. Paul, Minnesota is a two story wood framed structure on a stone and concrete basement and foundation.

The original structure was constructed in approximately 1888. The north addition was added at a later date. The original structure walls and ceilings are primarily plaster with some areas of drywall including the basement level. The newer north addition has primarily drywall walls & ceilings. The original structure has most of its original vintage millwork including doors and windows. The newer north addition has 1970's vintage doors and windows. The exterior entry doors are newer metal clad door systems.

The floors are a combination of hardwood, carpet, sheet vinyl and ceramic tile. The basement has mostly unfinished concrete floors. The exterior is vinyl low maintenance siding with metal clad soffit, fascia & trim. Some original wood millwork is exposed. There is a newer painted wood deck and handicap ramp on the front and east side of the property. There is a detached garage and a storage shed on the north end of the property.

The property is currently vacant.

Bare soil was observed and a bare soil samples were collected.

RESULTS OF PAINT INSPECTION

MEC used a paint inspection sampling strategy as described in the HUD *Guidelines* (1995 and revised Chapter 7 in October 1997). The results of portable X-Ray Fluorescence (XRF) spectrum analysis of representative building components in each functional area or room are shown in Appendix B. Results are organized and shown in actual sequence of analysis. All tests were made using a Niton® XLp 303A X-Ray Fluorescence Spectrum Analyzers (Serial # 26848).

XRF analytical results in Appendix B, in the column labeled "Results" represent lead concentrations per square centimeter of painted surface (mg/cm^2).

HUD regulations 24 CFR Part 35 et al, the HUD *Guidelines* and the Minnesota Department of Health (MDH) define the paint action level as lead concentrations at or above the level of $1.0 \text{ mg}/\text{cm}^2$ when measured with a portable XRF instrument (0.5% by weight when measured by laboratory methods).

The lead-based paint risk assessment protocol described in the HUD *Guidelines* and the EPA regulations rely on evaluation of surface coatings meeting the definition of poor, planned renovations, presence of dust and soil above current EPA and Minnesota Department of Health (MDH) Standards.

Tests are performed on each test combination. A test combination consists of unique combinations of substrate, color, building component, and location.

XRF results are classified as positive or negative. A positive classification indicates that lead is present on the testing combination at or above the HUD standards. It's important to note that the limited inspection of surfaces tested only applies to those surface areas tested and does not meet the requirements of a full HUD lead-based paint inspection and those surface areas not tested would be assumed to contain lead-based paint.

Appendix B includes a record of XRF calibration checks. Those checks were performed on thin films supplied by the XRF manufacturer; they contain known concentrations of lead. The graphs in that appendix show the variation of quality control with time. The assays in the table of raw data (Appendix B) that are labeled "Calibrate" indicate that they are for quality control. Additional quality control data and information are available to you upon request.

Side A: South, faces York Avenue and residential properties
 Side B: West, adjoins residential property
 Side C: North, faces alley and residential property
 Side D: East, adjoins residential property

Specific building components determined to have a lead concentration above the action level of (1.0 mg/cm²) are listed below:

LOCATION	COMPONENT
Front Entry	Painted wood door & door components
Front Entry	Painted wood baseboard
Front Entry	Painted wood stringer
1 st Floor Living Room	Painted wood casing
1 st Floor Living Room	Painted wood door components
1 st Floor Living Room	Painted wood window components
1 st Floor Dining Room	Painted wood door components
1 st Floor Dining Room	Painted wood baseboards
1 st Floor Dining Room	Painted wood window components
1 st Floor Kitchen	Painted wood closet door components
1 st Floor Kitchen	Painted wood closet baseboards

1 st Floor Kitchen	Painted wood closet window components
1 st Floor, Bathroom 1	Ceramic floor
1 st Floor, Bathroom 1	Ceramic walls
1 st Floor, front SE Bedroom	Painted wood door components (including closet door)
1 st Floor, front SE Bedroom	Painted wood window components
1 st Floor, front SE Bedroom	Painted wood closet shelf & shelf supports
1 st Floor, front SE Bedroom	Painted wood closet chair rails
1 st Floor, front SE Bedroom	Painted plaster walls
Exterior	Painted wood window components
Stairway to 2 nd Floor	Painted wood window components
Stairway to 2 nd Floor	Painted wood baseboards
2 nd Floor Hall	Painted wood baseboards
2 nd Floor Hall	Painted wood doors & door components (including closet door)
2 nd Floor Bathroom	Painted wood door & door components (including closet)
2 nd Floor Bathroom	Painted wood baseboards
2 nd Floor Bathroom	Painted wood window components
2 nd Floor Bathroom	Painted plaster walls & ceiling (including closet)
2 nd Floor Bathroom	Bathtub
2 nd Floor, front bedroom	Painted wood doors & door components (including closet door)
2 nd Floor, front bedroom	Painted wood baseboards
2 nd Floor, front bedroom	Painted plaster closet walls
2 nd Floor, front bedroom	Painted wood window components
2 nd Floor, west bedroom	Painted wood door components (including closet door)
2 nd Floor, west bedroom	Painted wood baseboards

3 rd Floor, back bedroom	Painted wood attic door & door components
3 rd Floor, back bedroom	Painted wood attic window
3 rd Floor, back bedroom	Painted wood attic stair
Exterior	Painted wood door & door components
Exterior	Painted wood porch ceiling & trim
Exterior	Metal soffit & corner trim (depth index indicates lead beneath the metal surface)
Exterior	Metal window components (depth index indicates lead beneath the metal surface)
Exterior	Painted wood window components
Exterior	Metal drip board
Throughout	All original vintage interior millwork including windows, door, baseboards, etc

Also included in Appendix B of this report is a rating of the condition of paint on components (column titled "Condition"). Comments on the condition include:

Intact: good condition; **Fair:** less than 2 square feet of damage to large interior surface, i.e., wall, less than 10 square feet of damage to large exterior surface, i.e., outside walls, or less than 10% damage to small surface areas, i.e., baseboards, trim, etc.; **Poor:** more than 2 square feet of damage on large interior surfaces, more than 10 square feet of damage to large exterior surface areas, or more than 10% damage to small surface areas.

RESULTS OF LEAD RISK ASSESSMENT

The risk assessment portion of this investigation involved two major phases: collecting information about the property through use of a visual inspection of the dwelling; and reviewing paint test data, and visual assessment notes in order to determine the type, location, and number of samples needed to further identify lead hazards at the property. These samples may consist of paint, dust, soil, and water.

- The date of construction of the residence is approximately 1888 with a newer addition added at a later date.
- The property is currently a single family structure.
- Interior walls & ceilings are primarily plaster in the original structure and drywall

- in the newer addition.
- Window systems are primarily original vintage double hung wood windows on the original structure with newer vintage windows on the newer addition.
- The exterior siding is vinyl. The exterior trim is clad with aluminum.
- There is a detached garage and a shed on the property.
- Bare soil was observed.
- The property is currently vacant.

Visual Inspection

MEC conducted an inspection of painted and varnished surfaces on the interior and exterior of the residence. Emphasis was placed on chewable surfaces within 5 feet of the ground or floor.

The results of the visual inspection indicate that the interior and the exterior of the structure is mainly in poor condition with some components in fair or intact condition.

Please note, however, the condition report within the XRF table for painted or varnished surfaces found to be fair or poor, that were below the 1.0 mg/cm² action level.

Environmental Sampling Plan

Based on the location of lead-based paint, deteriorated lead-based paint, and information gathered during the visual inspection, MEC formulated the following environmental sampling plan to identify other lead hazards on this property. Water samples were not collected as they were not part of the scope of work for this project. Bare soil was observed and bare soil samples were collected.

Samples were collected and delivered to EMSL Laboratory (ELLAP 163162), Minneapolis, Minnesota where they were prepared and analyzed using current appropriate protocols for lead. Laboratory results for environmental samples may be found in Appendix C.

Analytical results are reported below for each sample and compared to standard action levels that have been identified for this project.

SAMPLE # DATE	LOCATION	RESULT	PROJECT ACTION LEVEL
502/0712D-W1 7/19/12	Stair 1, floor adj. entry	150 µg/ft ²	40 µg/ft ²

502/0712D-W2 7/19/12	Living Room, Side A, floor under right window	<10 µg/ft ²	40 µg/ft ²
502/0712D-W3 7/19/12	Living Room, Side A, left window stool	4,400 µg/ft ²	250 µg/ft ²
502/0712D-W4 7/19/12	Bedroom 2, Side B, floor under window	<10 µg/ft ²	40 µg/ft ²
502/0712D-W5 7/19/12	Bedroom 2, Side B, left window stool	<40 µg/ft ²	250 µg/ft ²
502/0712D-W6 7/19/12	Bedroom 5, Side B, floor under left window	110 µg/ft ²	40 µg/ft ²
502/0712D-W7 7/19/12	Bedroom 5, Side B, left window trough	5,300 µg/ft ²	400 µg/ft ²
502/0712D-W8 7/19/12	Mud Room, Side B, floor adj. entry door	54 µg/ft ²	40 µg/ft ²
502/0712D-W9 7/19/12	Blind Field Blank	<10 µg/ft ²	40 µg/ft ²
502/0712D-S1 7/19/12	Bare Soil Foundation	720 ppm	100 ppm
502/0712D-S2 7/19/12	Bare Soil Yard Area	170 ppm	100 ppm

* Unit Abbreviations: µg/ft² = micrograms per square foot ppm=parts per million

Dust wipe samples and a bare soil sample were collected from the residence, however, water and sodium rhodizonate swabs were not collected as part of this project.

RECOMMENDATIONS

Lead-based paint or lead hazards were found during the inspection and risk assessment of the property including painted wood window components; painted wood door components; painted wood baseboards; under metal cladding on exterior windows & trim; and on closet shelving materials.

According to HUD protocol, if the first 5 of a building component are identified as positive for lead-based paint, the remaining like components are assumed to be lead-based paint containing.

At the request of the City of St. Paul, only abatement options are provided for lead hazards identified during this evaluation. Abatement options can include removal of building components to the substrate and replacement with new lead free products; enclosure of building components under dust tight barriers; encapsulation; or removal of coatings to the substrates and re-coating with lead free coatings.

Front Entry:

Painted wood door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood baseboards: In poor condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Varnished wood stringer: In poor condition.

- Option 1: Remove stringer using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

1st Floor Living Room:

Painted wood casing: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

1st Floor Dining Room:

Painted wood door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood baseboards: In poor condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

1st Floor Kitchen:

Painted wood closet door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood closet baseboards: In poor condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood closet window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

1st Floor, Bathroom 1:

Ceramic tile floor: In intact condition.

- Option 1: Include into an Operation & Maintenance Plan with ongoing monitoring. Do not use harsh abrasives for cleaning as these may abrade the surfaces.
- Option 2: Remove ceramic tile floor system using Lead Safe Work Practices and replace with lead free products.
- Option 3: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.

Ceramic tile walls: In intact condition.

- Option 1: Include into an Operation & Maintenance Plan with ongoing monitoring. Do not use harsh abrasives for cleaning as these may abrade the surfaces.
- Option 2: Remove ceramic tile wall system using Lead Safe Work Practices and replace with lead free products.
- Option 3: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.

1st Floor, Front SE Bedroom:

Painted wood door & door components (including closet door): In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work

Practices and replace with new lead free window components.

- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood closet shelf, shelf supports & chair rail: In poor condition.

- Option 1: Remove components using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted plaster closet walls: In poor condition.

- Option 1: Remove wall systems using Lead Safe Work Practices and replace with new lead free products.
- Option 2: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Stairway to 2nd Floor:

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood baseboards: In poor condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

2nd Floor Hallway:

Painted wood baseboards: In poor condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood doors & door components (including closet door): In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

2nd Floor Bathroom:

Painted wood baseboards: In poor condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted plaster walls & ceiling (including closet): In intact condition.

- Option 1: Remove wall & ceiling systems using Lead Safe Work Practices and replace with new lead free products.
- Option 2: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance

Plan with ongoing monitoring.

- Option 4: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Bathtub: In poor condition.

- Option 1: Remove tub using Lead Safe Work Practices and replace with new lead free products.
- Option 2: Enclose under a lead free tub surround using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.

2nd Floor Front Bedroom:

Painted wood doors & door components (including closet door): In intact condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood baseboards: In intact condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted plaster closet walls: In intact condition.

- Option 1: Remove wall systems using Lead Safe Work Practices and replace with new lead free products.
- Option 2: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.

- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

2nd Floor, West Bedroom:

Painted wood doors & door components (including closet door): In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood baseboards: In poor condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

3rd Floor, Back Bedroom:

Painted wood attic door & door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood attic window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood stair: In poor condition.

- Option 1: Remove stair riser system using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrate using Lead Safe Work Practices

and re-coat with lead free coatings.

Exterior:

Painted wood doors & door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood deck/ramp ceiling: In poor condition.

- Option 1: Remove ceiling system using Lead Safe Work Practices and replace with new lead free products.
- Option 2: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood exposed trim: In poor condition.

- Option 1: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.
- Option 3: Remove support using Lead Safe Work Practices and replace with new lead free products.

Metal window, fascia, soffits, trim & drip board: In intact to poor condition.

- Option 1: Repair any damaged metal cladding. Include into an Operation & Maintenance Plan with ongoing monitoring. (The metal cladding is already an enclosure). Ensure that seams are maintained in a sealed condition with elastomeric caulk.
- Option 2: Remove fascia & soffit & drip board components using Lead Safe Work Practices and replace with new lead free products.
- Option 3: Remove coatings under cladding to bare substrate and re-coat with lead free coatings.

Throughout:

Please note that all original vintage millwork, including windows, doors, baseboards, etc. throughout this property should be considered to contain lead-based paint above defined action levels.

Painted wood interior millwork, In poor condition.

- Option 1: Remove components to raw opening using Lead Safe Work Practices and replace with new lead free window systems.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Lead Dust:

Dust was identified as a lead hazard on window and floor surfaces tested. All floors and window systems should be cleaned and made smooth and cleanable. If planned renovation or work activity will disturb lead coated surfaces, lead safe work practices should be followed, which include requirements for clean up of the work area and clearance testing.

Bare Soil:

Bare soil was observed and a bare soil sample was collected and found to be above the MDH standard of 100 parts per million.

- Abatement Option 1: Removal of bare soil and replacement with new soil of 25 parts per million of lead or less.
- Abatement Option 2: Covering bare soil with asphalt, concrete or other impervious coating.

When qualified contractors are performing the planned renovation/remodeling activities, precautions should be properly done to minimize the potential for lead-based paint contamination to the workers, occupants and the environment.

DISCUSSION

The mere presence of lead-coated surfaces does not create a lead hazard. Maintenance of lead containing coatings will prevent lead from becoming a hazard. Lead-based paint above the action level of 1.0 mg/cm² was found on surfaces tested.

Because exterior surfaces are to be remediated and lead-coatings are present, covering the ground and providing adequate protection to soil is very important. Bare soil was found to be above defined action levels.

Dust wipe samples collected found lead dust levels above the action levels on floor and window surfaces tested as defined by MDH, HUD and EPA in the sampling locations tested. Contractors will be required to clean all floor systems and window surfaces throughout the complex for lead hazards in dust following and as a part of the planned restoration.

The preceding lead reduction recommendations include different ways to treat each lead hazard that was identified by the risk assessment/inspection. The most effective treatments are considered abatement and require little or no ongoing maintenance to

preserve a lead safe environment. The less effective treatments are called interim controls and these treatments require an increased amount of ongoing maintenance to preserve a lead safe environment.

If no lead dust, soil, or lead-based paint is found, then no monitoring is required.

If no hazards are found, but lead-based paint is found, then reevaluation should occur every three years, and an owner's visual survey should occur annually.

If lead dust, soil, or lead-based paint hazards are found to be present, choosing the option with removal of all lead-based paint will result in no monitoring requirements. If abatement options are chosen that include enclosure, then no re-evaluation is required, but the owner should conduct visual surveys every year to ensure the enclosure has not failed. If the interim control options (stabilize and paint) are chosen, then re-evaluation should occur after the first year and then every two years after that. Visual surveys by the owner should occur annually.

If lead dust levels are found to be more than ten times the standard levels, then reevaluation after interim control measures should occur six months after the hazard reduction.

In general, all painted surfaces should be monitored. A negative result does not necessarily indicate that no lead is present in that surface, but rather indicates that any lead present in that surface does not rise above the 1.0 mg/cm² threshold in the areas tested. Therefore, all painted surfaces should be maintained in accordance with the Minnesota Department of Health standards.

ROUGH ESTIMATED COSTS:

- Work site preparation for interior, approximately \$75.00 to \$250.00 per room.
- Window replacement, approximately \$150.00 and up, depending on style.
- Exterior preparation approximately \$35.00 to \$75.00 per component (i.e., windows, doors), removal or enclosure.
- Work area cleaning: \$0.15 to \$0.35 per square foot.
- Paint stabilization: \$0.20 to \$0.65 per square foot.
- Removal: Paint - chemical stripper: \$0.65 to \$1.50 square foot.
- Soil Remediation:

- a. Clean-up of visible exterior paint chips: \$0.90 to \$1.35 square foot.
- b. Seed and tack grass: \$0.45 to \$0.75 square foot.
- c. Sod: \$1.25 to \$3.30 square foot.
- d. Regrade at foundation and sod: \$3.00 to \$5.00 square foot.
- e. Mulch - 4": \$0.50 to \$0.90 square foot.
- f. Concrete: \$4.50 to \$8.00 square foot.
- g. Replace soil: \$42.00 to \$65.00 cubic yard.

If work is going to be performed on these surfaces, individuals and/or contractors should be informed of the results of testing. At a minimum, the person(s) performing the work should follow the requirements of the Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1926.62, Lead in the Construction Industry.

For the protection of the occupants and workers, and because of the use of federal funds, you are required by the HUD rules to use qualified firms who are knowledgeable about the hazards associated with lead. Supervisor should be licensed and workers will be required to be licenced or certified, as MEC understands the scope of work.

Please maintain a copy of the lead inspection/risk assessment report for your records and provide a copy of the report to any contractors that may be involved in any future renovations or remodeling projects.

A copy of this lead inspection/risk assessment summary must be provided to purchasers or lessees (tenants) of this property under Federal Law (24 CFR Part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract.

The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet approved by the U.S. Environmental Protection Agency and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards.

It has been our pleasure to provide this service to you and your organization. Please contact me if you have questions relating to any aspect of this work.

Respectfully submitted,



Andrew Myers
Environmental Services Project Manager



Greg A. Myers
Environmental Services Director

APPENDIX A
INSPECTOR CREDENTIALS

Minnesota Department of Health

has authorized

Midwest Environmental Consulting, LLC
125 Railroad Ave SW
Mora, Minnesota 55051

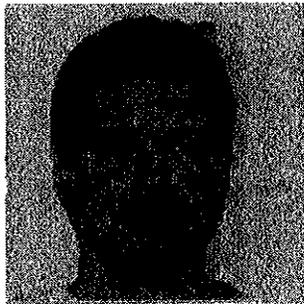
in accordance with Minnesota Statutes, section 144.9505 and Minnesota Rules, part 4761.2200,
to practice in the State of Minnesota as a

Certified Lead Firm

License No: LF551
Expires 03/28/2013

This certificate is nontransferable.


Linda B. Bruemmer, Director
Division of Environmental Health



**LEAD
Risk Assessor**

Licensed by:
State of Minnesota
Department of Health

License No. LR578
Expires 08/26/2012

Andrew J Myers
210 2nd St N
New Prague, MN 56071

Janet A. Benson
Director, Env. Health Div.

Andrew J. Myers

has completed the Minnesota-Approved Lead Training course entitled:

Lead Risk Assessor Refresher Training

August 25, 2011

given by

Midwest Environmental Consulting, L.L.C.

145 - 2nd Avenue SE, Cambridge, MN 55008

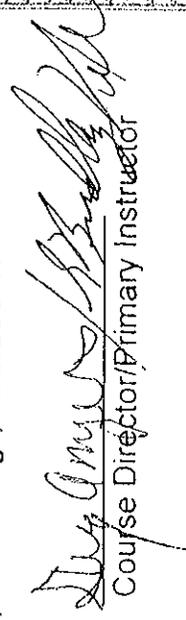
Phone: 763.691.0111

SUCCESSFULLY PASSED THE EXAMINATION ON August 25, 2011, IN Cambridge, MINNESOTA

IDENTIFICATION NUMBER: MEC/LRAR 0847

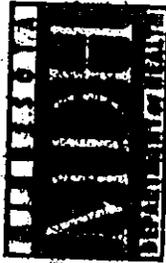
Expiration Date: August 25, 2012

MDH Permit Number: RAR-006


Course Director/Primary Instructor

Approved by the State of Minnesota under Minnesota Rules, parts 4761.2000 to 4761.2700.





I-0031

Lead Inspector Independent Examination

121 East Seventh Place, Suite 220 • St. Paul • Minnesota 55101 • (651) 215-0700

This certifies that

Andrew Myers

has successfully passed the required independent examination for:

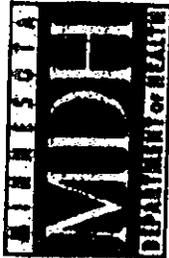
Lead Inspector

March 22, 2001
Morris, Minnesota

This certificate is nontransferable.

Jan K. Malcom
Commissioner

Patricia A. Bloomgren, Director
Division of Environmental Health



RA-0239

Lead Risk Assessor Independent Examination

121 East Seventh Place, Suite 220 • St. Paul, Minnesota 55101 • (651) 215-0700

This certifies that

Andrew Myers

has successfully passed the required independent examination for:

Lead Risk Assessor

June 26, 2001

Minneapolis, Minnesota

This certificate is nontransferable.

Jan K. Malcom
Commissioner

A handwritten signature in cursive script that reads "Patricia A. Blaugher".

Patricia A. Blaugher, Director
Division of Environmental Health

Andrew J. Myers

has completed the Minnesota-Approved Lead Training Course

Initial Lead Inspector Training
March 12-14, 2001

given by

Midwest Environmental Consulting, LLC
145 - 2nd Avenue SE, Cambridge, MN 55008

SUCCESSFULLY PASSED THE EXAMINATION ON MARCH 14, 2001, IN MORNING, MINNESOTA

IDENTIFICATION NUMBER: MECA II 0243
Expiry Date: March 14, 2002
SDH# Permit No. LF-003

Andrew J. Myers
Course Director

Andrew J. Myers

has completed the Minnesota-Approved Lead Training course entitled:

Lead-Based Paint Risk Assessor Training

June 25-26, 2001

given by

Midwest Environmental Consulting, L.L.C.
145 - 2nd Avenue SE, Cambridge, MN 55008

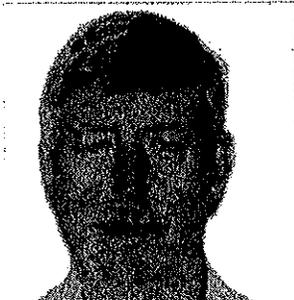
• SUCCESSFULLY PASSED THE EXAMINATION ON JUNE 26, 2001, IN MINNEAPOLIS, MINNESOTA

IDENTIFICATION NUMBER: **MSC/LPA 0111**

Expiration Date: **June 26, 2002**

BOB PATRICK, F.P.A.T. 802

Andrew J. Myers
Course Director



MDHI LEAD
Risk Assessor

Licensed by:
State of Minnesota
Department of Health

License No. LR284
Expires 08/25/2012

Greg A Myers
19667 Salmonson River Rd
Mora, MN 55051

Frank B. Baumgartner
Director, Env. Health Div.

Greg A. Myers

has completed the Minnesota-Approved Lead Training course entitled:

Lead Risk Assessor Refresher Training

August 25, 2011

given by

Midwest Environmental Consulting, L.L.C.

145 - 2nd Avenue SE, Cambridge, MN 55008

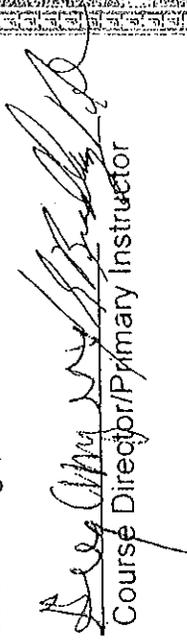
Phone: 763.691.0111

SUCCESSFULLY PASSED THE EXAMINATION ON August 25, 2011, IN Cambridge, MINNESOTA

IDENTIFICATION NUMBER: MEC/LRAR 0843

Expiration Date: August 25, 2012

MDH Permit Number: RAR-006



Course Director/Primary Instructor

Approved by the State of Minnesota under Minnesota Rules, parts 4761.2000 to 4761.2700.





RA-0040

Lead Risk Assessor Independent Examination

121 East Seventh Place, Suite 220 • St. Paul • Minnesota 55101 • (651) 215-0700

This certifies that

Greg Myers

has successfully passed the required independent examination for:

Lead Risk Assessor

October 25, 1999

St. Paul, Minnesota

This certificate is nontransferable.

Director, Division of Environmental Health

Jan K. Malcolm, Commissioner



Midwest Center for Occupational Health & Safety

Program in Continuing Education - Occupational Health

6410 Jackson Street
St. Paul, MN 55107
(612) 221-3992
18-48

This certifies that

Greg Myers

attended this continuing education course offered by Midwest Center for Occupational Health & Safety

Lead Risk Assessment

April 24 - 25, 1997

SUCCESSFULLY PASSED THE EXAMINATION ON APRIL 25, 1997 IN ST PAUL, MN.

- 2.0 Maintenance of certification points from the American Board of Industrial Hygiene.
- Designed to meet the requirements of the Minnesota Board of Nursing for 19.2 (50 minutes) contact hours.
- This course offers 1.6 Continuing Education Units (CEUs) from the Midwest Center for Occupational Health and Safety.

1.001 Sponsored Educational Resource Center
A National Institute of Environmental Health Sciences
1 U.S. EPA Regional Lead Training Center
A General Electric (GE) Training Organization

James J. Gno
Course Director

Return this certificate for your records

THIS CERTIFIES THAT

Greg Myers

has completed the EPA Sponsored Lead Training course entitled
Lead Inspector Training

February 2, 1994 to February 4, 1994
given by the

**Midwest Center for
Occupational Health & Safety**

Program in Continuing Education
An EPA Regional Lead Training Center



Successfully passed the examination on February 4, 1994 in St Paul, MN
Designed to meet the requirements of the MN Board of Nursing for 25
contact hours

3.0 Maintenance of certification points from the American Board of
Industrial Hygiene

Approval has been granted for 12 contact hours for continuing education by
the MN Board of Registration as an Environmental Health Specialist/Sanitarian

This course offers 2.4 Continuing Education Units (CEUs) from the Midwest
Center for Occupational Health and Safety

ST. PAUL, MINNESOTA, IL-199

Midwest Center for Occupational Health and Safety



Certificate of Achievement

This is to certify that

GREG MYERS

*has successfully completed the Manufacturer's Training Course
for the NITON XL Spectrum Analyzer*

*The two-day course covered radiation safety and monitoring,
L x-ray measurement technology, and
machine maintenance of the XL Lead-in-Paint Detector*

94855

Certificate Number

June 15-16, 1995

Course Dates

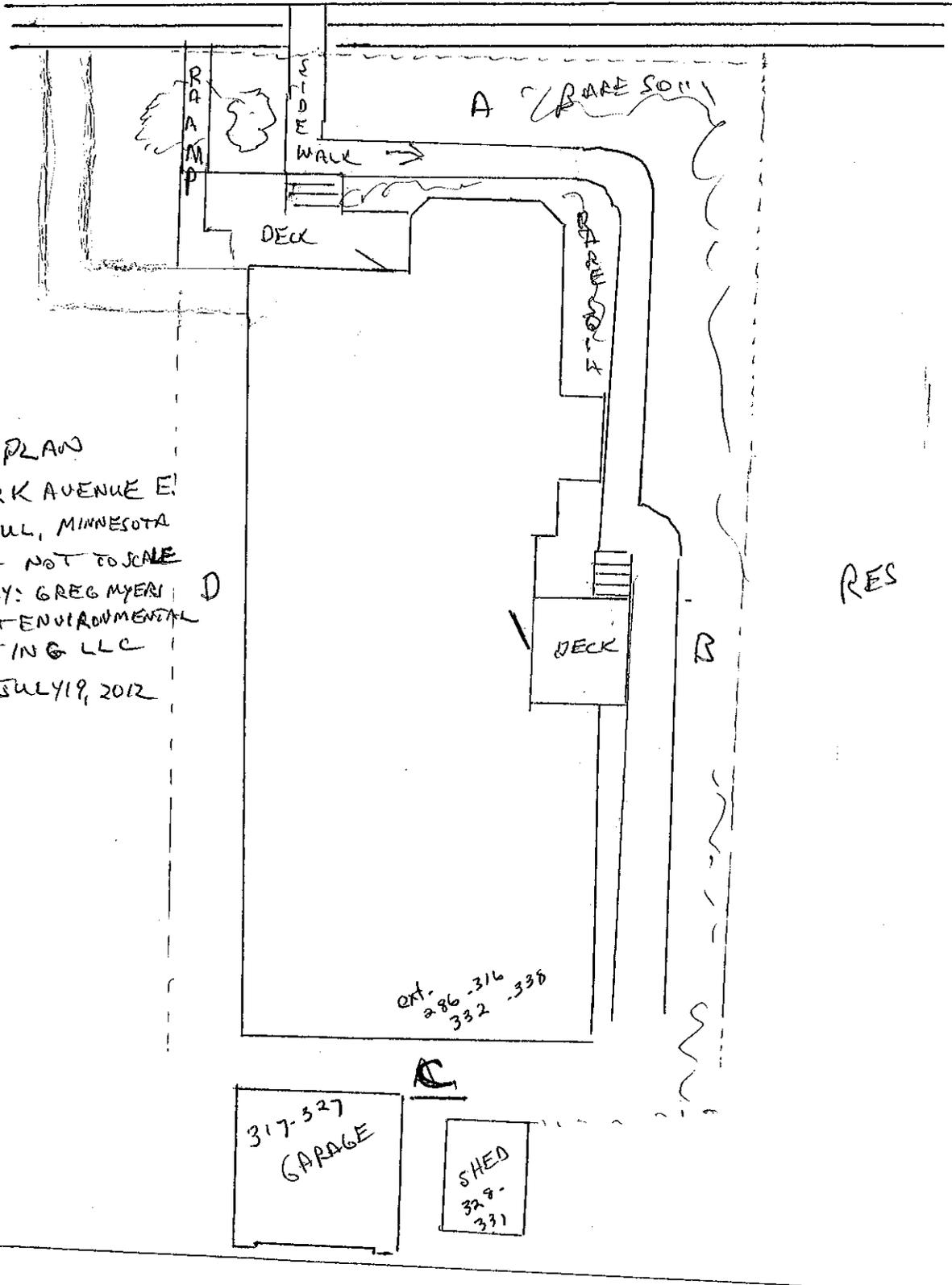
Director of Training
President & CEO - NITON

APPENDIX B

**XRF TEST RESULTS
SAMPLING MAPS
DATA PAGES
CALIBRATION DATA**

RES

YORK AVENUE EAST



RES

RES

SITE PLAN
 677 YORK AVENUE E
 ST. PAUL, MINNESOTA
 SKETCH NOT TO SCALE
 DRAWN BY: GREG MYER D
 MIDWEST ENVIRONMENTAL
 CONSULTING LLC
 DATE: JULY 19, 2012

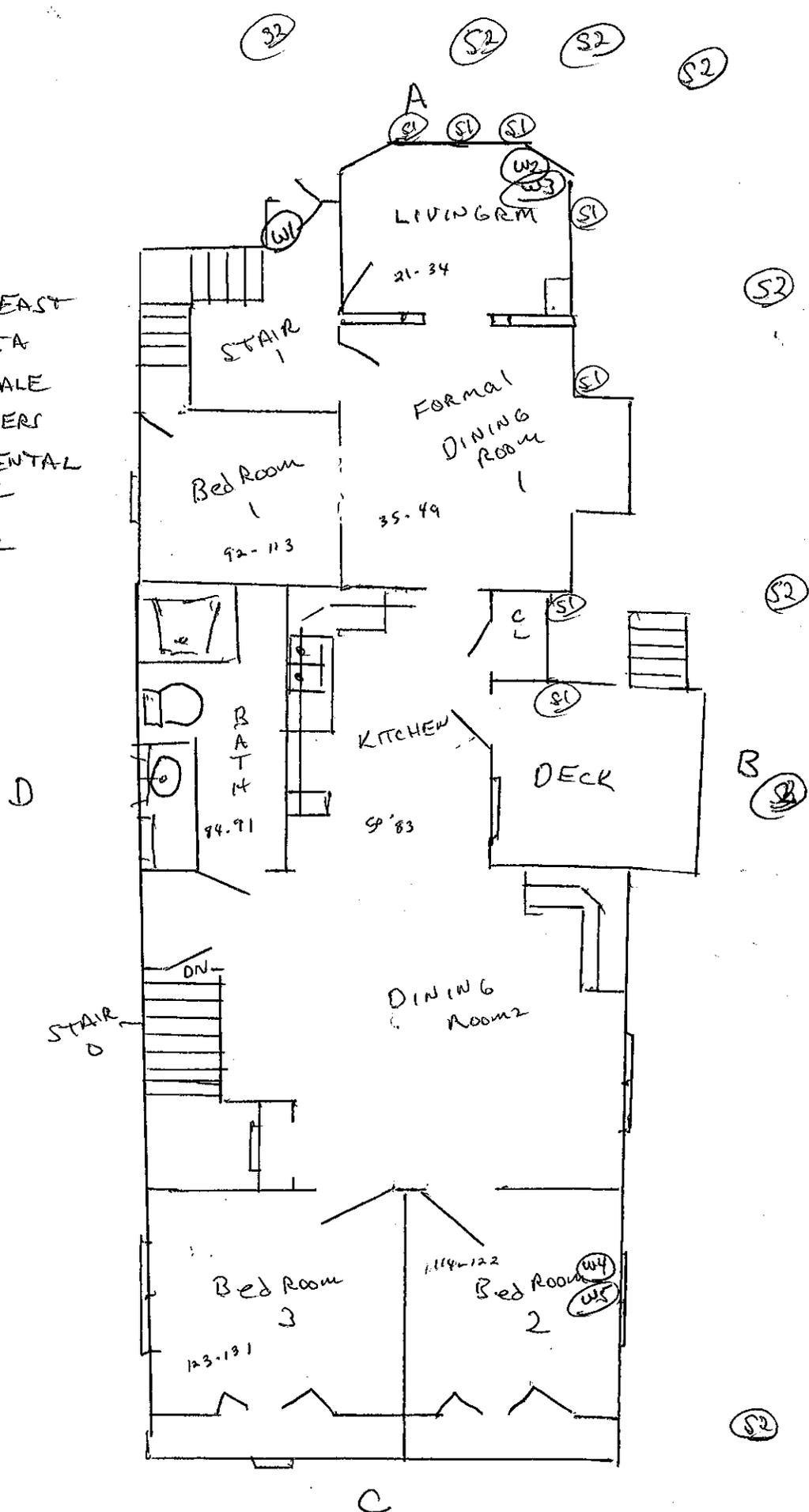
317-327
 GARAGE

SHED
 329-
 331

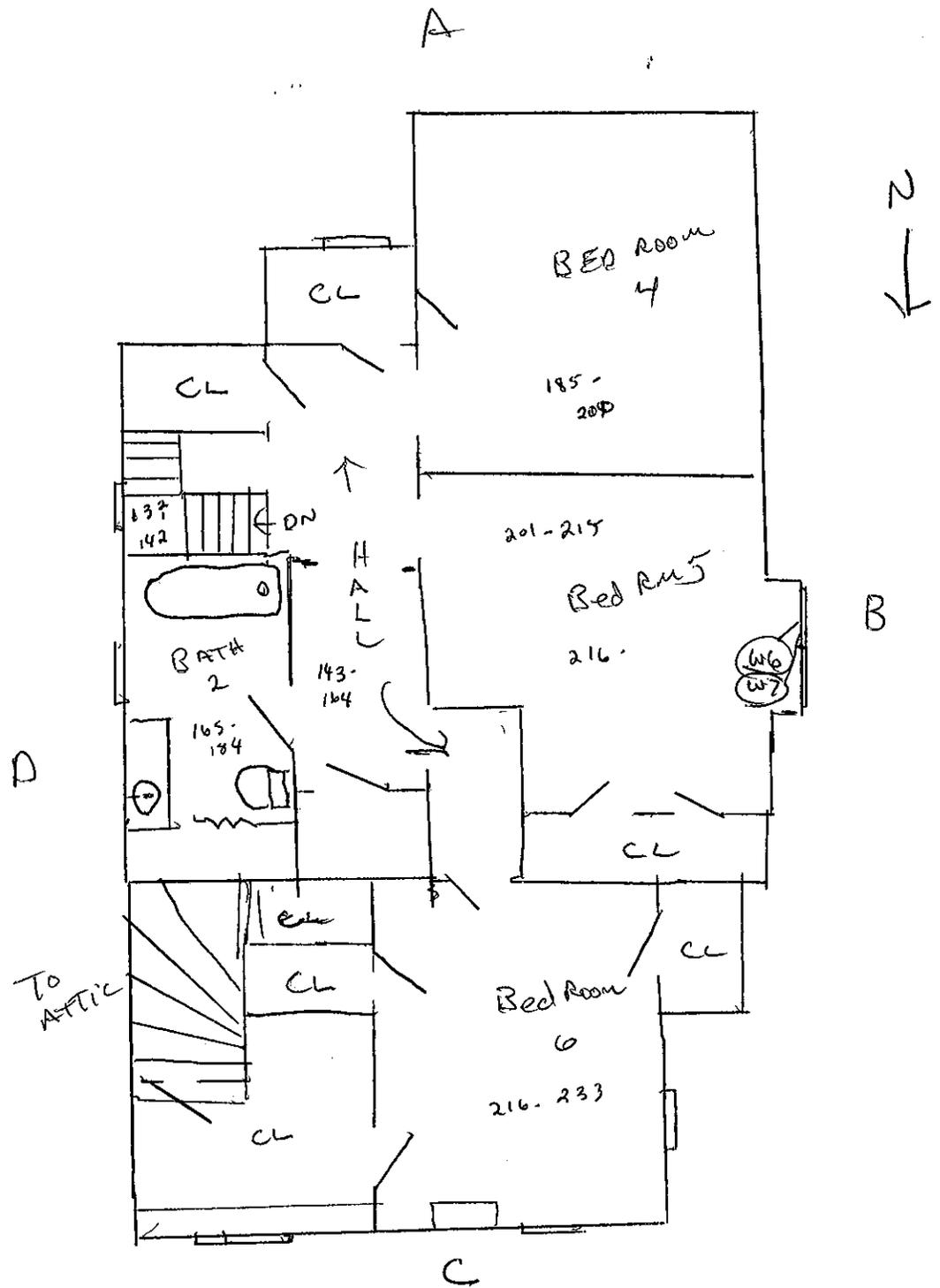
ALLEY

RES

FIRST FLOOR
 677 YORK AVENUE EAST
 ST. PAUL, MINNESOTA
 SKETCH NOT TO SCALE
 DRAWN BY: GREG MYERS
 MIDWEST ENVIRONMENTAL
 CONSULTING LLC
 DATE: JULY 19, 2012



W 9 = FIELD BLANK

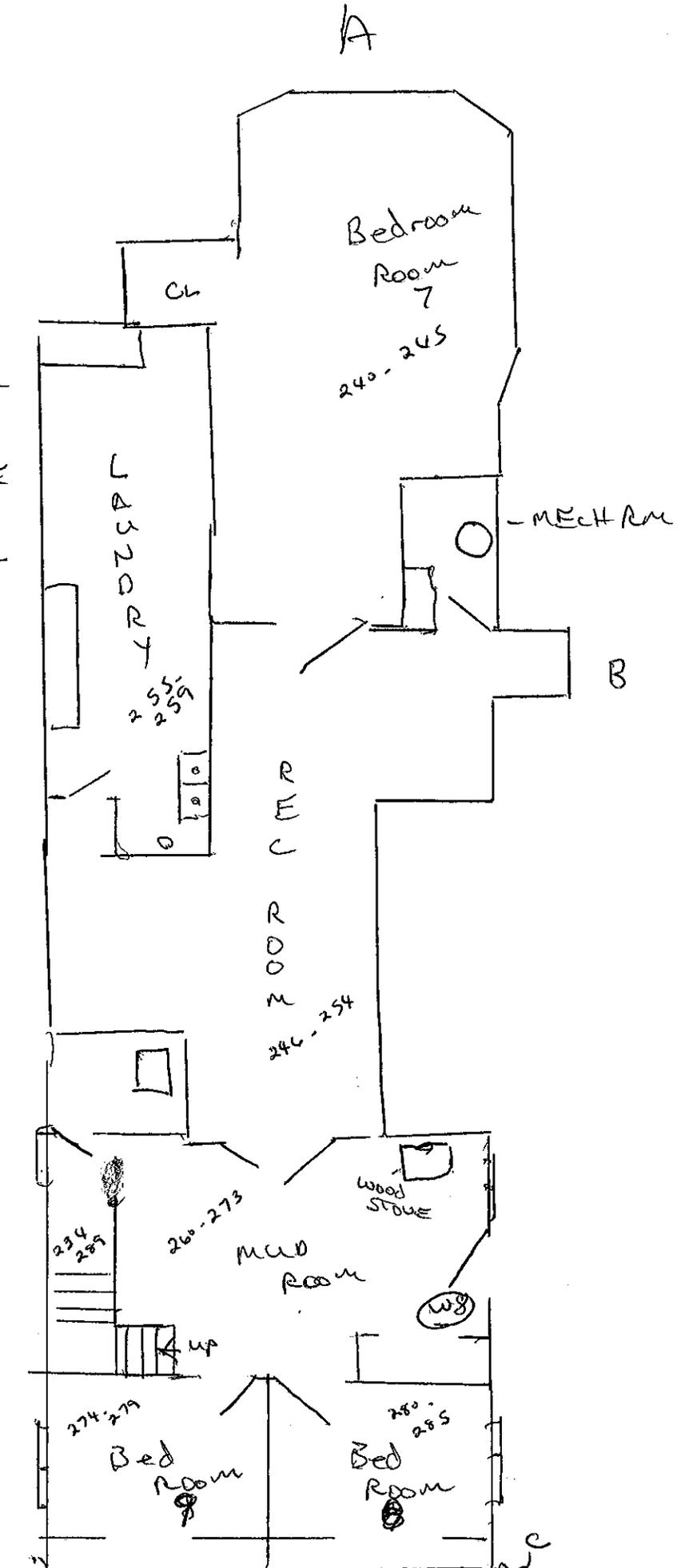


SECOND FLOOR
 677 YORK AVENUE East
 ST. PAUL, MINNESOTA
 SKETCH NOT TO SCALE

DRAWN BY: GREG MYERS
 MIDWEST ENVIRONMENTAL
 CONSULTING LLC
 DATE: JULY 19, 2012

BASEMENT LEVEL
 677 YORK AVENUE EAST
 ST. PAUL, MINNESOTA
 SKETCH NOT TO SCALE
 DRAWN BY: Greg Myers
 MIDWEST ENVIRONMENTAL
 CONSULTING LLC
 DATE: JULY 19, 2012

D



Site: All Phase Companies - 677 E. York Ave., St. Paul MN												
Date: July 23, 2012												
XRF: Xlp 303A, Serial # 26846												
ID	Date	Time	Location	Material	Condition	Color	Notes	Moisture	Lead	Radon		
677 York	7/23/2012	11:34	calibrate					5.94	1.08	0.02	48.36	AM
677 York	7/23/2012	11:38	calibrate					1.1	1.1	< LOD	11.53	1.13
677 York	7/23/2012	11:39	calibrate					1	1	0.7	24.03	1.05
677 York	7/23/2012	11:39	calibrate					1.1	1.1	< LOD	16.5	1.11
677 York	7/23/2012	11:45	front entry	WOOD	POOR	varnish		15.5	10.1	13.5	5.03	2.03
677 York	7/23/2012	11:46	front entry	WOOD	POOR	BROWN		10.7	9.4	10.7	4.53	1.91
677 York	7/23/2012	11:46	front entry	WOOD	POOR	BROWN		14.3	10.1	14.3	5.03	2.05
677 York	7/23/2012	11:46	front entry	WOOD	POOR	BROWN		14.4	7.6	14.4	4.52	2
677 York	7/23/2012	11:47	front entry	WOOD	POOR	varnish		< LOD	< LOD	< LOD	4.54	1
677 York	7/23/2012	11:47	front entry	WOOD	POOR	varnish		14.3	10.1	14.3	8.57	1.72
677 York	7/23/2012	11:48	front entry	WOOD	POOR	varnish		0.1	0.1	< LOD	4.01	1.1
677 York	7/23/2012	11:48	front entry	WOOD	POOR	varnish		0.08	0.08	< LOD	5	1
677 York	7/23/2012	11:49	front entry	METAL	POOR	BROWN		< LOD	< LOD	< LOD	5.52	1.8
677 York	7/23/2012	11:50	front entry	METAL	POOR	BROWN		< LOD	< LOD	< LOD	8.01	8.49
677 York	7/23/2012	11:50	front entry	PLASTER	INTACT	BEIGE		< LOD	< LOD	< LOD	7.53	1
677 York	7/23/2012	11:51	front entry	PLASTER	INTACT	BEIGE		< LOD	< LOD	< LOD	6.5	1
677 York	7/23/2012	11:51	front entry	PLASTER	INTACT	BEIGE		< LOD	< LOD	< LOD	7.51	1
677 York	7/23/2012	11:52	front entry	PLASTER	INTACT	BEIGE		< LOD	< LOD	< LOD	6.5	5.65
677 York	7/23/2012	11:52	front entry	PLASTER	INTACT	WHITE		< LOD	< LOD	< LOD	1	1
677 York	7/23/2012	11:52	front entry	PLASTER	INTACT	WHITE		< LOD	< LOD	< LOD	5.98	1.56
677 York	7/23/2012	11:52	front entry	PLASTER	INTACT	WHITE		< LOD	< LOD	< LOD	5.5	1.18
677 York	7/23/2012	11:53	LIVING ROOM	PLASTER	INTACT	WHITE		< LOD	< LOD	< LOD	7.53	1.12
677 York	7/23/2012	11:53	LIVING ROOM	PLASTER	INTACT	WHITE		< LOD	< LOD	< LOD	6.49	1.22
677 York	7/23/2012	11:53	LIVING ROOM	PLASTER	INTACT	WHITE		< LOD	< LOD	< LOD	6.03	4.36
677 York	7/23/2012	11:54	LIVING ROOM	PLASTER	INTACT	WHITE		< LOD	< LOD	< LOD	7.01	1
677 York	7/23/2012	11:54	LIVING ROOM	PLASTER	INTACT	WHITE		< LOD	< LOD	< LOD	8.47	1
677 York	7/23/2012	11:55	LIVING ROOM	WOOD	INTACT	varnish		< LOD	< LOD	< LOD	5.02	1.94
677 York	7/23/2012	11:55	LIVING ROOM	WOOD	INTACT	varnish		14.3	10.1	14.3	5.02	1.94
677 York	7/23/2012	11:55	LIVING ROOM	WOOD	INTACT	varnish		< LOD	< LOD	< LOD	5	1
677 York	7/23/2012	11:56	LIVING ROOM	WOOD	POOR	BROWN		13.9	10.1	13.9	4.54	1.88
677 York	7/23/2012	11:56	LIVING ROOM	WOOD	POOR	BROWN		7.1	10.1	2.1	5.03	2.18
677 York	7/23/2012	11:56	LIVING ROOM	WOOD	POOR	BROWN		9.1	9	9.1	5.02	1.73
677 York	7/23/2012	11:57	LIVING ROOM	WOOD	POOR	BROWN		14.4	10.1	14.4	5.03	1.97
677 York	7/23/2012	11:57	LIVING ROOM	METAL	POOR	BROWN		< LOD	< LOD	< LOD	5.03	1.09
677 York	7/23/2012	11:58	LIVING ROOM	METAL	POOR	BROWN		< LOD	< LOD	< LOD	5.54	4.53
677 York	7/23/2012	11:58	DINING RM	METAL	POOR	BROWN		< LOD	< LOD	< LOD	5.06	1
677 York	7/23/2012	11:59	DINING RM	METAL	POOR	BROWN		< LOD	< LOD	< LOD	5.02	1

677 York	37	7/23/2012 11:59	1	DINING RM	DOOR	WOOD	POOR	VARNISH	Neg	< LOD	< LOD	< LOD	5	2.49	AM
677 York	38	7/23/2012 12:00	1	DINING RM	D DOOR CASING	WOOD	POOR	VARNISH	POS	15.6	10.1	15.6	4.51	2.27	AM
677 York	39	7/23/2012 12:00	1	DINING RM	D DOOR CASING	WOOD	POOR	BROWN	POS	11.9	10.1	11.9	4.02	2.14	AM
677 York	40	7/23/2012 12:00	1	DINING RM	D DOOR	WOOD	POOR	BROWN	POS	15.8	10.1	15.8	4.51	2.04	AM
677 York	41	7/23/2012 12:01	1	DINING RM	D BASEBOARD	WOOD	POOR	BROWN	POS	11.5	9.2	11.5	8.05	2.13	AM
677 York	42	7/23/2012 12:01	1	DINING RM	B WINDOW CASING	WOOD	POOR	BROWN	POS	17	9.8	17	11.54	2.06	AM
677 York	43	7/23/2012 12:02	1	DINING RM	B WINDOW SASH	WOOD	POOR	BROWN	POS	17.9	10.1	17.9	4.49	1.89	AM
677 York	44	7/23/2012 12:03	1	DINING RM	A WALL	PLASTER	FAIR	GREEN	Neg	< LOD	< LOD	< LOD	6.01	1	AM
677 York	45	7/23/2012 12:03	1	DINING RM	B WALL	PLASTER	FAIR	GREEN	Neg	< LOD	< LOD	< LOD	6.01	1.48	AM
677 York	46	7/23/2012 12:04	1	DINING RM	C WALL	PLASTER	FAIR	GREEN	Neg	< LOD	< LOD	< LOD	6.01	1	AM
677 York	47	7/23/2012 12:04	1	DINING RM	D WALL	PLASTER	FAIR	GREEN	Neg	< LOD	< LOD	< LOD	5.98	1	AM
677 York	48	7/23/2012 12:05	1	DINING RM	CEILING	PLASTER	POOR	WHITE	Neg	< LOD	< LOD	< LOD	6.99	1	AM
677 York	49	7/23/2012 12:05	1	DINING RM	A CROWN MOLDING	WOOD	INTACT	BROWN	Neg	< LOD	< LOD	< LOD	5.98	1	AM
677 York	50	7/23/2012 12:09	1	KITCHEN	A DOOR CASING	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	5.52	1	AM
677 York	51	7/23/2012 12:09	1	KITCHEN	A DOOR JAMB	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	6.01	1	AM
677 York	52	7/23/2012 12:09	1	KITCHEN	A CABINET	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	5.51	1	AM
677 York	53	7/23/2012 12:10	1	KITCHEN	A BASEBOARD	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	4.51	3.55	AM
677 York	54	7/23/2012 12:10	1	KITCHEN	A WAINSCOTING	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	5.51	1	AM
677 York	55	7/23/2012 12:11	1	KITCHEN	B WINDOW CASING	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	5.52	2.06	AM
677 York	56	7/23/2012 12:11	1	KITCHEN	B WINDOW SASH	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	5.51	1	AM
677 York	57	7/23/2012 12:12	1	KITCHEN	B WINDOW SASH	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	5.98	2.02	AM
677 York	58	7/23/2012 12:12	1	KITCHEN	B BASEBOARD	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	9.52	1.72	AM
677 York	59	7/23/2012 12:13	1	KITCHEN	C DOOR CASING	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	6	1	AM
677 York	60	7/23/2012 12:13	1	KITCHEN	C DOOR	WOOD	FAIR	WHITE	Neg	0.4	0.4	< LOD	5.54	2.15	AM
677 York	61	7/23/2012 12:13	1	KITCHEN	C DOOR	WOOD	FAIR	WHITE	Neg	0.17	0.17	< LOD	5.02	1.54	AM
677 York	62	7/23/2012 12:14	1	KITCHEN	C DOOR BASEMENT	WOOD	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	6.01	1	AM
677 York	63	7/23/2012 12:15	1	KITCHEN	B FLOOR VENT	WOOD	FAIR	BROWN	Neg	< LOD	< LOD	< LOD	8.53	2.22	AM
677 York	64	7/23/2012 12:18	1	KITCHEN	B WALL	CERAMIC	PEELING	WHITE	Neg	< LOD	< LOD	< LOD	10.04	7.52	AM
677 York	65	7/23/2012 12:19	1	KITCHEN	B CLOSET DR	WOOD	INTACT	VARNISH	Neg	< LOD	< LOD	< LOD	6.03	2.83	AM
677 York	66	7/23/2012 12:19	1	KITCHEN	B CLOSET DR JAMB	WOOD	POOR	GREEN	POS	19.7	9.2	19.7	5.01	4.88	AM
677 York	67	7/23/2012 12:20	1	KITCHEN	B CLOSET SHELF	WOOD	POOR	GREEN	Neg	< LOD	< LOD	< LOD	5.49	1	AM
677 York	68	7/23/2012 12:20	1	KITCHEN	B CLOSET SHELF	WOOD	POOR	WHITE	Neg	< LOD	< LOD	< LOD	6.01	1	AM
677 York	69	7/23/2012 12:20	1	KITCHEN	B CLOSET BASEBOARD	WOOD	POOR	BEIGE	POS	11.4	10.1	11.4	4.49	3.93	AM
677 York	70	7/23/2012 12:21	1	KITCHEN	B Cist Window casing	WOOD	POOR	BLUE	Neg	< LOD	< LOD	< LOD	5.01	1	AM
677 York	71	7/23/2012 12:21	1	KITCHEN	B Cist Window casing	WOOD	POOR	BLUE	Neg	< LOD	< LOD	< LOD	9.49	3.24	AM
677 York	72	7/23/2012 12:21	1	KITCHEN	B Cist Window Sash	WOOD	POOR	GREEN	Neg	< LOD	< LOD	< LOD	2.01	1.98	AM
677 York	73	7/23/2012 12:22	1	KITCHEN	B Cist Window Sash	WOOD	POOR	GREEN	POS	14	4.4	5.3	4.99	4.08	AM
677 York	74	7/23/2012 12:22	1	KITCHEN	B Cist Window Trough	WOOD	POOR	WHITE	Neg	0.3	0.3	1	8.49	1.77	AM
677 York	75	7/23/2012 12:22	1	KITCHEN	B Cist Window Trough	WOOD	POOR	WHITE	Neg	0.4	0.4	< LOD	5.49	1.57	AM
677 York	76	7/23/2012 12:23	1	KITCHEN	B Cist Window Trough	WOOD	POOR	WHITE	POS	10	9.6	10	5.02	5.13	AM

677 York	77	7/23/2012 12:23	1	KITCHEN	B	CLOSET WALL	PLASTER	INTACT	BLUE	Neg	< LOD < LOD < LOD	5.98	2.37	AM
677 York	78	7/23/2012 12:24	1	KITCHEN	A	WALL	PLASTER	INTACT	BLUE	Neg	< LOD < LOD < LOD	6	1	AM
677 York	79	7/23/2012 12:24	1	KITCHEN	B	WALL	PLASTER	INTACT	YELLOW	Neg	< LOD < LOD < LOD	2.5	1	AM
677 York	80	7/23/2012 12:25	1	KITCHEN	C	WALL	PLASTER	INTACT	YELLOW	Neg	< LOD < LOD < LOD	6.01	1	AM
677 York	81	7/23/2012 12:25	1	KITCHEN	D	WALL	DRYWALL	INTACT	YELLOW	Neg	< LOD < LOD < LOD	5.53	1	AM
677 York	82	7/23/2012 12:26	1	KITCHEN		CEILING	DRYWALL	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.98	4.59	AM
677 York	83	7/23/2012 12:27	1	KITCHEN		FLOOR	VINYL	INTACT	WHITE	Neg	< LOD < LOD < LOD	9	1	AM
677 York	84	7/23/2012 12:28	1	BATHROOM 1		FLOOR	ceramic	INTACT	BROWN	POS	1.8 1.8 2.7	5.53	1.58	AM
677 York	85	7/23/2012 12:28	1	BATHROOM 1	A	WALL	ceramic	INTACT	WHITE	POS	1.4 1.4 1.8	9.05	2.17	AM
677 York	86	7/23/2012 12:29	1	BATHROOM 1	B	WALL	DRYWALL	INTACT	WHITE	Neg	< LOD < LOD < LOD	6.01	1.19	AM
677 York	87	7/23/2012 12:29	1	BATHROOM 1	C	WALL	DRYWALL	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.01	1	AM
677 York	88	7/23/2012 12:29	1	BATHROOM 1	D	WALL	DRYWALL	INTACT	WHITE	Neg	< LOD < LOD < LOD	7.01	1.46	AM
677 York	89	7/23/2012 12:30	1	BATHROOM 1	C	DOOR	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	6.01	1	AM
677 York	90	7/23/2012 12:30	1	BATHROOM 1	C	DOOR jamb	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.98	1	AM
677 York	91	7/23/2012 12:31	1	BATHROOM 1	C	CABINET	WOOD	INTACT	varnish	Neg	< LOD < LOD < LOD	6.02	1	AM
677 York	92	7/23/2012 12:37	1	BEDROOM front se	B	DOOR	WOOD	POOR	BROWN	POS	10.6 8.7 10.6	4.52	2.74	AM
677 York	93	7/23/2012 12:37	1	BEDROOM front se	B	DOOR casing	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	4.49	1.12	AM
677 York	94	7/23/2012 12:37	1	BEDROOM front se	B	DOOR casing	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	2.49	1.55	AM
677 York	95	7/23/2012 12:38	1	BEDROOM front se	B	DOOR jamb	WOOD	POOR	BROWN	POS	12.2 9 12.2	4.49	2.23	AM
677 York	96	7/23/2012 12:38	1	BEDROOM front se	B	BASEBOARD	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	5.49	2.12	AM
677 York	97	7/23/2012 12:39	1	BEDROOM front se	B	WINDOW casing	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	5.5	2.95	AM
677 York	98	7/23/2012 12:39	1	BEDROOM front se	B	WINDOW sash	WOOD	POOR	BROWN	POS	11.9 8.1 11.9	5	2.24	AM
677 York	99	7/23/2012 12:40	1	BEDROOM front se	B	WINDOW trough	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	5.03	1	AM
677 York	100	7/23/2012 12:41	1	BEDROOM front se	A	CLOSET dr	WOOD	POOR	BROWN	POS	13.5 9 13.5	8.05	1.96	AM
677 York	101	7/23/2012 12:42	1	BEDROOM front se	A	CLOSET dr casing	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	5.01	1	AM
677 York	102	7/23/2012 12:49	1	BEDROOM front se	A	Closet Support	WOOD	POOR	RED	POS	9.1 10.1 9.1	5.02	5.12	AM
677 York	103	7/23/2012 12:50	1	BEDROOM front se	A	CLOSET shelf	WOOD	POOR	RED	POS	6.1 6.4 6.1	8.04	3.22	AM
677 York	104	7/23/2012 12:50	1	BEDROOM front se	A	CLOSET chair rail	WOOD	POOR	RED	POS	3.5 2.2 3.5	5.51	3.06	AM
677 York	105	7/23/2012 12:51	1	BEDROOM front se	A	CLOSET wall	PLASTER	POOR	RED	Null	0.8 0.8 < LOD	3.47	1.93	AM
677 York	106	7/23/2012 12:51	1	BEDROOM front se	A	CLOSET wall	PLASTER	POOR	RED	Neg	0.5 0.5 < LOD	10	3.01	AM
677 York	107	7/23/2012 12:51	1	BEDROOM front se	A	CLOSET wall	PLASTER	POOR	RED	POS	1.3 1.3 1.6	9.46	3.02	AM
677 York	108	7/23/2012 12:52	1	BEDROOM front se	A	WALL	PLASTER	POOR	RED	Neg	< LOD < LOD < LOD	6.01	1	AM
677 York	109	7/23/2012 12:52	1	BEDROOM front se	B	WALL	PLASTER	POOR	RED	Neg	< LOD < LOD < LOD	6.51	1	AM
677 York	110	7/23/2012 12:53	1	BEDROOM front se	C	WALL	PLASTER	POOR	RED	Neg	< LOD < LOD < LOD	10.04	1	AM
677 York	111	7/23/2012 12:53	1	BEDROOM front se	D	WALL	PLASTER	POOR	RED	Neg	< LOD < LOD < LOD	6	1	AM
677 York	112	7/23/2012 12:54	1	BEDROOM front se		CEILING	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.51	1	AM
677 York	113	7/23/2012 12:54	1	BEDROOM front se	D	FLOOR vent	METAL	INTACT	BROWN	Neg	< LOD < LOD < LOD	5.53	1.96	AM
677 York	114	7/23/2012 12:55	1	BEDROOM BACK NW	C	FLOOR vent	METAL	INTACT	BROWN	Neg	< LOD < LOD < LOD	7.57	10	AM
677 York	115	7/23/2012 12:56	1	BEDROOM BACK NW	A	DOOR	WOOD	INTACT	BROWN	Neg	0.4 0.4 < LOD	6.01	2.05	AM
677 York	116	7/23/2012 12:57	1	BEDROOM BACK NW	C	CLOSET DR	WOOD	INTACT	BROWN	Neg	< LOD < LOD < LOD	5.5	1	AM

677 York	117	7/23/2012 12:57	1	BEDROOM BACK NW	C	CLOSET WALL	DRYWALL	INTACT	YELLOW	Neg	< LOD < LOD < LOD	6	1	AM
677 York	118	7/23/2012 12:58	1	BEDROOM BACK NW	A	WALL	DRYWALL	INTACT	BLUE	Neg	< LOD < LOD < LOD	5.01	3.85	AM
677 York	119	7/23/2012 12:58	1	BEDROOM BACK NW	B	WALL	DRYWALL	INTACT	BLUE	Neg	< LOD < LOD < LOD	6.01	1	AM
677 York	120	7/23/2012 12:58	1	BEDROOM BACK NW	C	WALL	DRYWALL	INTACT	BLUE	Neg	< LOD < LOD < LOD	5	1	AM
677 York	121	7/23/2012 12:59	1	BEDROOM BACK NW	D	WALL	DRYWALL	INTACT	BLUE	Neg	< LOD < LOD < LOD	6.01	3.74	AM
677 York	122	7/23/2012 12:59	1	BEDROOM BACK NW		CEILING	DRYWALL	INTACT	WHITE	Neg	< LOD < LOD < LOD	4.99	1	AM
677 York	123	7/23/2012 13:00	1	BEDROOM BACK NE		CEILING	DRYWALL	INTACT	WHITE	Neg	< LOD < LOD < LOD	10.99	3.08	AM
677 York	124	7/23/2012 13:00	1	BEDROOM BACK NE	A	DOOR	WOOD	INTACT	BROWN	Neg	0.16 < LOD < LOD	5.52	1.13	AM
677 York	125	7/23/2012 13:01	1	BEDROOM BACK NE	C	CLOSET DR	WOOD	INTACT	BROWN	Neg	< LOD < LOD < LOD	5	1	AM
677 York	126	7/23/2012 13:01	1	BEDROOM BACK NE	C	CLOSET SHELF	WOOD	POOR	WHITE	Neg	< LOD < LOD < LOD	5.49	1.38	AM
677 York	127	7/23/2012 13:02	1	BEDROOM BACK NE	C	CLOSET WALL	DRYWALL	POOR	YELLOW	Neg	< LOD < LOD < LOD	6.01	1	AM
677 York	128	7/23/2012 13:02	1	BEDROOM BACK NE	A	WALL	DRYWALL	POOR	YELLOW	Neg	< LOD < LOD < LOD	5.51	1	AM
677 York	129	7/23/2012 13:02	1	BEDROOM BACK NE	B	WALL	DRYWALL	POOR	YELLOW	Neg	< LOD < LOD < LOD	5.49	1	AM
677 York	130	7/23/2012 13:02	1	BEDROOM BACK NE	C	WALL	DRYWALL	POOR	YELLOW	Neg	< LOD < LOD < LOD	5.99	1.88	AM
677 York	131	7/23/2012 13:03	1	BEDROOM BACK NE	D	WALL	DRYWALL	POOR	YELLOW	Neg	< LOD < LOD < LOD	6.01	1	AM
677 York	132	7/23/2012 13:05	2	STAIR	D	WINDOW CASING	WOOD	POOR	BROWN	POS	12.7 10.1 12.7	8.02	2.03	AM
677 York	133	7/23/2012 13:05	2	STAIR	D	WINDOW SASH	WOOD	POOR	BROWN	POS	11.9 10.1 11.9	4.53	2.24	AM
677 York	134	7/23/2012 13:05	2	STAIR	D	BASEBOARD	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	4.52	1.84	AM
677 York	135	7/23/2012 13:06	2	STAIR	D	BASEBOARD	WOOD	POOR	BROWN	POS	13.1 10.1 13.1	3.52	2.21	AM
677 York	136	7/23/2012 13:06	2	STAIR	B	HAND RAIL	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	5.5	1.36	AM
677 York	137	7/23/2012 13:07	2	STAIR	B	BALUSTRADE	WOOD	POOR	BROWN	Neg	0.14 < LOD < LOD	5.02	1.15	AM
677 York	138	7/23/2012 13:07	2	STAIR	B	NEWELL POST	WOOD	POOR	BROWN	Neg	0.14 < LOD < LOD	5.49	1.16	AM
677 York	139	7/23/2012 13:08	2	STAIR	B	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	8.02	1	AM
677 York	140	7/23/2012 13:08	2	STAIR	C	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.53	1.5	AM
677 York	141	7/23/2012 13:08	2	STAIR	D	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	8.04	1	AM
677 York	142	7/23/2012 13:09	2	STAIR		CEILING	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	7.03	1	AM
677 York	143	7/23/2012 13:09	2	HALL		CEILING	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.02	2.16	AM
677 York	144	7/23/2012 13:10	2	HALL	B	BASEBOARD	WOOD	POOR	BROWN	POS	12.6 10.1 12.6	4.5	2.07	AM
677 York	145	7/23/2012 13:11	2	HALL	B	DOOR	WOOD	POOR	BROWN	POS	9.8 8.5 9.8	4.54	1.94	AM
677 York	146	7/23/2012 13:11	2	HALL	B	DOOR CASING	WOOD	POOR	BROWN	POS	8.2 7.8 8.2	4.52	1.98	AM
677 York	147	7/23/2012 13:11	2	HALL	C	DOOR CASING	WOOD	POOR	BROWN	POS	12.5 10.1 12.5	4.99	1.94	AM
677 York	148	7/23/2012 13:12	2	HALL	C	DOOR JAMB	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	1.51	1	AM
677 York	149	7/23/2012 13:12	2	HALL	C	DOOR JAMB	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	1.01	1	AM
677 York	150	7/23/2012 13:12	2	HALL	C	DOOR JAMB	WOOD	POOR	BROWN	POS	11.7 9.7 11.7	4.01	1.83	AM
677 York	151	7/23/2012 13:12	2	HALL	C	DOOR	WOOD	POOR	BROWN	POS	13.9 10.1 13.9	4.52	2.07	AM
677 York	152	7/23/2012 13:13	2	HALL	B	DOOR	WOOD	POOR	VARNISH	Neg	< LOD < LOD < LOD	6	1.78	AM
677 York	153	7/23/2012 13:13	2	HALL	C	CLOSET DR	WOOD	POOR	BROWN	POS	13.6 10.1 13.6	4.5	1.83	AM
677 York	154	7/23/2012 13:13	2	HALL	C	CLOSET DR CASING	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	1.99	1	AM
677 York	155	7/23/2012 13:14	2	HALL	C	CLOSET DR CASING	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	5.49	1	AM
677 York	156	7/23/2012 13:14	2	HALL	C	CLOSET DR CASING	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	1.5	1	AM

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Site	Room	Date	Time	Room	Condition	Material	Color	Finish	Notes	Area	Depth					
677 York	157	7/23/2012	13:14	2	HALL	C	CLOSET SHELF	WOOD	POOR	WHITE	Neg	< LOD < LOD < LOD	5.52	1	AM	
677 York	158	7/23/2012	13:15	2	HALL	C	CLOSET SHELF	WOOD	POOR	WHITE	Neg	< LOD < LOD < LOD	5.51	1	AM	
677 York	159	7/23/2012	13:15	2	HALL	C	CLOSET WALL	PLASTER	INTACT	WHITE	Null	< LOD < LOD	5.02	1.75	AM	
677 York	160	7/23/2012	13:15	2	HALL	C	CLOSET WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD	1.2	15.51	1.5	AM
677 York	161	7/23/2012	13:16	2	HALL	A	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	7.01	1	AM	
677 York	162	7/23/2012	13:16	2	HALL	B	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	6.49	2.3	AM	
677 York	163	7/23/2012	13:16	2	HALL	C	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	3.48	1	AM	
677 York	164	7/23/2012	13:17	2	HALL	D	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	7	2.41	AM	
677 York	165	7/23/2012	13:17	2	BATHROOM	B	DOOR	WOOD	POOR	BROWN	POS	11.7 10.1 11.7	8.53	1.92	AM	
677 York	166	7/23/2012	13:18	2	BATHROOM	B	DOOR-CASING	WOOD	POOR	BROWN	POS	9.1 2.4 9.1	5.49	5.6	AM	
677 York	167	7/23/2012	13:18	2	BATHROOM	B	BASEBOARD	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	5.5	1	AM	
677 York	168	7/23/2012	13:19	2	BATHROOM	D	BASEBOARD	WOOD	POOR	BROWN	POS	12.5 10.1 12.5	5.02	2.07	AM	
677 York	169	7/23/2012	13:19	2	BATHROOM	D	WINDOW-CASING	WOOD	POOR	BROWN	POS	9.5 6.7 9.5	4.02	1.81	AM	
677 York	170	7/23/2012	13:19	2	BATHROOM	D	WINDOW-SASH	WOOD	POOR	BROWN	POS	13.1 10.1 13.1	8.53	2.17	AM	
677 York	171	7/23/2012	13:20	2	BATHROOM	D	WINDOW-TROUGH	WOOD	POOR	WHITE	POS	8 4.6 8	5.01	4.98	AM	
677 York	172	7/23/2012	13:20	2	BATHROOM		FLOOR	WOOD	POOR	VARNISH	Neg	< LOD < LOD < LOD	9.01	10	AM	
677 York	173	7/23/2012	13:21	2	BATHROOM	D	CABINET	WOOD	POOR	VARNISH	Neg	< LOD < LOD < LOD	5.5	8.59	AM	
677 York	174	7/23/2012	13:21	2	BATHROOM	C	CLOSET-DR-CASING	WOOD	POOR	VARNISH	POS	6.1 9.5 6.1	4.5	1.85	AM	
677 York	175	7/23/2012	13:22	2	BATHROOM	C	CLOSET SHELF	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	6.01	1.44	AM	
677 York	176	7/23/2012	13:22	2	BATHROOM	C	CLOSET SHELF	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.52	1	AM	
677 York	177	7/23/2012	13:22	2	BATHROOM	C	CLOSET COAT RACK	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.51	1.67	AM	
677 York	178	7/23/2012	13:23	2	BATHROOM	C	CLOSET WALL	PLASTER	INTACT	WHITE	POS	1.4 1.4 1.4	20.47	2.35	AM	
677 York	179	7/23/2012	13:24	2	BATHROOM	A	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD	1.3	19.99	1.74	AM
677 York	180	7/23/2012	13:24	2	BATHROOM	B	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.02	1	AM	
677 York	181	7/23/2012	13:24	2	BATHROOM	C	WALL	PLASTER	INTACT	GREEN	POS	1.5 1.5 1.5	15.96	1.6	AM	
677 York	182	7/23/2012	13:25	2	BATHROOM	D	WALL	PLASTER	INTACT	GREEN	POS	1.4 1.4 1.4	23.03	1	AM	
677 York	183	7/23/2012	13:25	2	BATHROOM	A	TUB	METAL	INTACT	WHITE	POS	19.4 1.6 19.4	1.54	2.06	AM	
677 York	184	7/23/2012	13:26	2	BATHROOM		CEILING	PLASTER	INTACT	WHITE	POS	1.5 1.5 1.5	14.98	1	AM	
677 York	185	7/23/2012	13:27	2	BEDROOM FRONT	D	DOOR	WOOD	INTACT	BROWN	POS	11.6 10.1 11.6	4.02	1.97	AM	
677 York	186	7/23/2012	13:28	2	BEDROOM FRONT	D	DOOR-CASING	WOOD	INTACT	BROWN	POS	8.8 8.5 8.8	4.02	1.7	AM	
677 York	187	7/23/2012	13:28	2	BEDROOM FRONT	D	BASEBOARD	WOOD	INTACT	BROWN	POS	13 10.1 13	5.03	1.92	AM	
677 York	188	7/23/2012	13:28	2	BEDROOM FRONT	D	CLOSET DR	WOOD	INTACT	BROWN	POS	13.3 10.1 13.3	5.02	1.92	AM	
677 York	189	7/23/2012	13:29	2	BEDROOM FRONT	D	CLOSET-DR-CASING	WOOD	INTACT	BROWN	POS	10.5 10.1 10.5	4.51	2.05	AM	
677 York	190	7/23/2012	13:29	2	BEDROOM FRONT	D	CLOSET SHELF	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.51	1	AM	
677 York	191	7/23/2012	13:30	2	BEDROOM FRONT	D	CLOSET WALL	PLASTER	INTACT	WHITE	POS	2 2 2	9.51	1.81	AM	
677 York	192	7/23/2012	13:30	2	BEDROOM FRONT	A	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	7.01	1	AM	
677 York	193	7/23/2012	13:30	2	BEDROOM FRONT	B	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.02	1	AM	
677 York	194	7/23/2012	13:31	2	BEDROOM FRONT	C	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	6.01	3.16	AM	
677 York	195	7/23/2012	13:31	2	BEDROOM FRONT	D	WALL	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	7.48	1	AM	
677 York	196	7/23/2012	13:31	2	BEDROOM FRONT		CEILING	PLASTER	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.02	1	AM	

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Address	Date	Room	Area	Material	Condition	Notes	Color	Area	Height	Volume	Notes	Color	Area	Height	Volume
677 York	197	7/23/2012 13:32	2	BEDROOM FRONT	D	WINDOW SASH	WOOD	INTACT	INTACT	VARNISH	Neg	< LOD < LOD < LOD	6.01	1.31	AM
677 York	198	7/23/2012 13:33	2	BEDROOM FRONT	D	WINDOW CASING	WOOD	INTACT	INTACT	BROWN	POS	10.9 9.2 10.9	8.04	1.67	AM
677 York	199	7/23/2012 13:33	2	BEDROOM FRONT	D	WINDOW TROUGH	WOOD	POOR	POOR	BEIGE	POS	3.9 1.9 3.9	5	2.25	AM
677 York	200	7/23/2012 13:34	2	BEDROOM FRONT	D	FLOOR VENT	METAL	POOR	POOR	BROWN	Neg	< LOD < LOD < LOD	5.53	1	AM
677 York	201	7/23/2012 13:35	2	BEDROOM WEST	D	DOOR	WOOD	INTACT	INTACT	VARNISH	Neg	< LOD < LOD < LOD	4.97	1	AM
677 York	202	7/23/2012 13:35	2	BEDROOM WEST	D	DOOR CASING	WOOD	POOR	POOR	BROWN	POS	11 10.1 11	4.52	1.97	AM
677 York	203	7/23/2012 13:35	2	BEDROOM WEST	D	BASEBOARD	WOOD	POOR	POOR	BROWN	Neg	< LOD < LOD < LOD	5.51	1.15	AM
677 York	204	7/23/2012 13:36	2	BEDROOM WEST	B	BASEBOARD	WOOD	POOR	POOR	BROWN	POS	12.4 10.1 12.4	4.5	1.87	AM
677 York	205	7/23/2012 13:36	2	BEDROOM WEST	C	CLOSET DR	WOOD	POOR	POOR	BROWN	POS	6.5 8.1 6.5	4.5	1.76	AM
677 York	206	7/23/2012 13:36	2	BEDROOM WEST	C	CLOSET DR	WOOD	POOR	POOR	BROWN	POS	7.7 7.7 7.7	4.5	1.65	AM
677 York	207	7/23/2012 13:37	2	BEDROOM WEST	C	CLOSET SHELF	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	4.49	1	AM
677 York	208	7/23/2012 13:37	2	BEDROOM WEST	C	CLOSET SHELF	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	4.01	1	AM
677 York	209	7/23/2012 13:37	2	BEDROOM WEST	C	CLOSET WALL	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	6.49	2.16	AM
677 York	210	7/23/2012 13:38	2	BEDROOM WEST	C	WALL	WOOD	POOR	POOR	WHITE	Neg	< LOD < LOD < LOD	6	1	AM
677 York	211	7/23/2012 13:38	2	BEDROOM WEST	A	WALL	WOOD	POOR	POOR	WHITE	Neg	< LOD < LOD < LOD	5.53	1	AM
677 York	212	7/23/2012 13:38	2	BEDROOM WEST	B	WALL	WOOD	POOR	POOR	WHITE	Neg	< LOD < LOD < LOD	10.54	4.59	AM
677 York	213	7/23/2012 13:39	2	BEDROOM WEST	D	WALL	WOOD	POOR	POOR	WHITE	Neg	< LOD < LOD < LOD	7.51	2.01	AM
677 York	214	7/23/2012 13:39	2	BEDROOM WEST	D	VENT	METAL	POOR	POOR	BROWN	Neg	< LOD < LOD < LOD	5.02	1	AM
677 York	215	7/23/2012 13:40	2	BEDROOM WEST		CEILING	PLASTER	POOR	POOR	WHITE	Neg	< LOD < LOD < LOD	6.5	2.3	AM
677 York	216	7/23/2012 13:41	2	BEDROOM BACK		CEILING	PLASTER	POOR	POOR	WHITE	Neg	< LOD < LOD < LOD	5.98	1	AM
677 York	217	7/23/2012 13:42	2	BEDROOM BACK	B	CLOSET SHELF	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	5.02	1.07	AM
677 York	218	7/23/2012 13:42	2	BEDROOM BACK	B	CLOSET SHELF	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	5.02	2.92	AM
677 York	219	7/23/2012 13:42	2	BEDROOM BACK	B	CLOSET WALL	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	3.48	1	AM
677 York	220	7/23/2012 13:43	2	BEDROOM BACK	B	CLOSET WALL	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	5.97	1	AM
677 York	221	7/23/2012 13:43	2	BEDROOM BACK	D	CLOSET WALL	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	5.02	1	AM
677 York	222	7/23/2012 13:43	2	BEDROOM BACK	D	CLOSET WALL ATTIC	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	9.01	1	AM
677 York	223	7/23/2012 13:44	2	BEDROOM BACK	A	WALL	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	6.97	1	AM
677 York	224	7/23/2012 13:44	2	BEDROOM BACK	B	WALL	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	4.51	1	AM
677 York	225	7/23/2012 13:44	2	BEDROOM BACK	C	WALL	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	7.51	2.47	AM
677 York	226	7/23/2012 13:45	2	BEDROOM BACK	D	WALL	WOOD	POOR	POOR	BLUE	Neg	< LOD < LOD < LOD	10.51	1	AM
677 York	227	7/23/2012 13:45	2	BEDROOM BACK		CEILING	PLASTER	POOR	POOR	WHITE	Neg	< LOD < LOD < LOD	6.97	1	AM
677 York	228	7/23/2012 13:46	3	BEDROOM BACK	A	ATTIC DR	WOOD	POOR	POOR	BROWN	POS	4.7 0.15 4.7	5.52	2.31	AM
677 York	229	7/23/2012 13:46	3	BEDROOM BACK	A	ATTIC DR	WOOD	POOR	POOR	BROWN	POS	20.3 10 20.3	4.49	2.47	AM
677 York	230	7/23/2012 13:47	3	BEDROOM BACK	A	ATTIC WINDOW	WOOD	POOR	POOR	BROWN	POS	10 5.8 10	4.52	2.87	AM
677 York	231	7/23/2012 13:47	3	BEDROOM BACK	A	ATTIC STAIR	WOOD	POOR	POOR	BROWN	POS	1.8 1.8 2.4	5.02	1.42	AM
677 York	232	7/23/2012 13:47	3	BEDROOM BACK	A	ATTIC STAIR	WOOD	POOR	POOR	BROWN	POS	5.5 5.1 5.5	4.5	2.78	AM
677 York	233	7/23/2012 13:48	3	BEDROOM BACK	A	ATTIC WALL	PLASTER	POOR	POOR	WHITE	Neg	< LOD < LOD < LOD	7.51	1.05	AM
677 York	234	7/23/2012 13:49	0	STAIR	A	DOOR	WOOD	POOR	POOR	WHITE	Neg	< LOD < LOD < LOD	5.99	1.35	AM
677 York	235	7/23/2012 13:50	0	STAIR	A	WALL	DRYWALL	INTACT	INTACT	YELLOW	Neg	< LOD < LOD < LOD	5.54	1.5	AM
677 York	236	7/23/2012 13:50	0	STAIR	B	WALL	DRYWALL	INTACT	INTACT	YELLOW	Neg	< LOD < LOD < LOD	6.01	1	AM

677 York	237	7/23/2012 13:50	0	STAIR	C	WALL	DRYWALL	INTACT	YELLOW	Neg	< LOD < LOD < LOD	8.99	2.49	AM
677 York	238	7/23/2012 13:50	0	STAIR	D	WALL	DRYWALL	INTACT	YELLOW	Neg	< LOD < LOD < LOD	6.49	1.85	AM
677 York	239	7/23/2012 13:51	0	STAIR		CEILING	DRYWALL	INTACT	YELLOW	Neg	< LOD < LOD < LOD	5.99	1.18	AM
677 York	240	7/23/2012 13:52	0	BEDROOM FRONT	C	DOOR	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	6.01	1.56	AM
677 York	241	7/23/2012 13:53	0	BEDROOM FRONT	A	WALL	DRYWALL	INTACT	BLUE	Neg	< LOD < LOD < LOD	5	1	AM
677 York	242	7/23/2012 13:53	0	BEDROOM FRONT	B	WALL	DRYWALL	INTACT	BLUE	Neg	< LOD < LOD < LOD	5.52	1.49	AM
677 York	243	7/23/2012 13:53	0	BEDROOM FRONT	C	WALL	DRYWALL	INTACT	BLUE	Neg	< LOD < LOD < LOD	6.48	1	AM
677 York	244	7/23/2012 13:53	0	BEDROOM FRONT	D	WALL	DRYWALL	INTACT	BLUE	Neg	< LOD < LOD < LOD	6.51	1.64	AM
677 York	245	7/23/2012 13:54	0	BEDROOM FRONT		FLOOR	VINYL	INTACT	WHITE	Neg	< LOD < LOD < LOD	7.03	1	AM
677 York	246	7/23/2012 13:55	0	RM 1 front		FLOOR	VINYL	INTACT	WHITE	Neg	< LOD < LOD < LOD	8.51	1	AM
677 York	247	7/23/2012 13:55	0	RM 1 front	A	CLOSET dr	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	8.51	1.57	AM
677 York	248	7/23/2012 13:56	0	RM 1 front	B	WINDOW	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.49	3.99	AM
677 York	249	7/23/2012 13:57	0	RM 1 front	B	Ceiling Sup. Beam	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	5.05	1	AM
677 York	250	7/23/2012 13:57	0	RM 1 front	B	CEILING	WOOD	INTACT	WHITE	Neg	< LOD < LOD < LOD	6.01	1	AM
677 York	251	7/23/2012 13:57	0	RM 1 front	A	WALL	DRYWALL	INTACT	GREEN	Neg	< LOD < LOD < LOD	5.49	1	AM
677 York	252	7/23/2012 13:58	0	RM 1 front	B	WALL	DRYWALL	INTACT	GREEN	Neg	< LOD < LOD < LOD	2.51	1	AM
677 York	253	7/23/2012 13:58	0	RM 1 front	C	WALL	DRYWALL	INTACT	GREEN	Neg	< LOD < LOD < LOD	5.02	1	AM
677 York	254	7/23/2012 13:58	0	RM 1 front	D	WALL	DRYWALL	INTACT	GREEN	Neg	< LOD < LOD < LOD	6.02	1.37	AM
677 York	255	7/23/2012 13:59	0	laundry rm	A	WALL	DRYWALL	POOR	GREEN	Neg	< LOD < LOD < LOD	5.49	1	AM
677 York	256	7/23/2012 13:59	0	laundry rm	B	WALL	DRYWALL	POOR	GREEN	Neg	< LOD < LOD < LOD	5.5	1	AM
677 York	257	7/23/2012 14:00	0	laundry rm	C	WALL	DRYWALL	POOR	GREEN	Neg	< LOD < LOD < LOD	5.53	1	AM
677 York	258	7/23/2012 14:00	0	laundry rm	D	WALL	DRYWALL	POOR	GREEN	Neg	< LOD < LOD < LOD	5.52	1	AM
677 York	259	7/23/2012 14:00	0	laundry rm	D	WINDOW	WOOD	INTACT	GREEN	Neg	< LOD < LOD < LOD	4.52	1	AM
677 York	260	7/23/2012 14:01	0	rm 2 back	D	WINDOW	WOOD	INTACT	GREEN	Neg	< LOD < LOD < LOD	5.02	1.8	AM
677 York	261	7/23/2012 14:02	0	rm 2 back	A	CLOSET dr	WOOD	POOR	BEIGE	Neg	< LOD < LOD < LOD	5.02	3.08	AM
677 York	262	7/23/2012 14:02	0	rm 2 back	C	DOOR	WOOD	POOR	BEIGE	Neg	< LOD < LOD < LOD	5.04	2.91	AM
677 York	263	7/23/2012 14:03	0	rm 2 back	B	DOOR	METAL	POOR	grey	Neg	< LOD < LOD < LOD	5.52	1	AM
677 York	264	7/23/2012 14:03	0	rm 2 back		FLOOR	CONCRETE	POOR	grey	Neg	< LOD < LOD < LOD	8.01	1.78	AM
677 York	265	7/23/2012 14:04	0	rm 2 back	B	DOOR jamb	WOOD	POOR	GREEN	Neg	< LOD < LOD < LOD	5.52	2.34	AM
677 York	266	7/23/2012 14:04	0	rm 2 back	C	CLOSET shelf	WOOD	POOR	BEIGE	Neg	< LOD < LOD < LOD	4.51	1	AM
677 York	267	7/23/2012 14:05	0	rm 2 back	C	CLOSET wall	DRYWALL	POOR	BEIGE	Neg	< LOD < LOD < LOD	4.99	1	AM
677 York	268	7/23/2012 14:05	0	rm 2 back	A	DOOR	WOOD	POOR	BEIGE	Neg	< LOD < LOD < LOD	5.49	1	AM
677 York	269	7/23/2012 14:06	0	rm 2 back	A	WALL	DRYWALL	POOR	BEIGE	Neg	< LOD < LOD < LOD	6.99	1	AM
677 York	270	7/23/2012 14:06	0	rm 2 back	B	WALL	DRYWALL	POOR	BEIGE	Neg	< LOD < LOD < LOD	6.51	1	AM
677 York	271	7/23/2012 14:06	0	rm 2 back	C	WALL	DRYWALL	POOR	BEIGE	Neg	< LOD < LOD < LOD	6.02	1	AM
677 York	272	7/23/2012 14:06	0	rm 2 back	D	WALL	DRYWALL	POOR	BEIGE	Null	< LOD < LOD < LOD	0.5	1	AM
677 York	273	7/23/2012 14:07	0	rm 2 back	D	WALL	DRYWALL	POOR	BEIGE	Neg	< LOD < LOD < LOD	6	2.08	AM
677 York	274	7/23/2012 14:07	0	BEDROOM back nw	A	DOOR	WOOD	POOR	BEIGE	Neg	0.07 < LOD < LOD	5.03	1.04	AM
677 York	275	7/23/2012 14:08	0	BEDROOM back nw		FLOOR	CONCRETE	POOR	grey	Neg	< LOD < LOD < LOD	7.99	2.88	AM
677 York	276	7/23/2012 14:08	0	BEDROOM back nw	C	CLOSET wall	DRYWALL	POOR	WHITE	Neg	< LOD < LOD < LOD	6.98	1	AM

677 York	277	7/23/2012 14:09	0	BEDROOM back nw	D	WALL	INTACT	WHITE	Neg	< LOD < LOD	< LOD	6.01	1	AM	
677 York	278	7/23/2012 14:09	0	BEDROOM back nw	A	WALL	INTACT	WHITE	Neg	< LOD < LOD	< LOD	5.01	1	AM	
677 York	279	7/23/2012 14:09	0	BEDROOM back nw	B	WALL	INTACT	WHITE	Neg	< LOD < LOD	< LOD	5.52	1	AM	
677 York	280	7/23/2012 14:10	0	BEDROOM back ne	A	DOOR	POOR	BEIGE	Neg	0.05 < LOD	< LOD	5.02	1.03	AM	
677 York	281	7/23/2012 14:10	0	BEDROOM back ne	A	WALL	POOR	BLUE	Neg	< LOD < LOD	< LOD	5.49	2.96	AM	
677 York	282	7/23/2012 14:11	0	BEDROOM back ne	B	WALL	POOR	BLUE	Neg	< LOD < LOD	< LOD	5	1.6	AM	
677 York	283	7/23/2012 14:11	0	BEDROOM back ne	C	WALL	POOR	BLUE	Neg	< LOD < LOD	< LOD	5.52	1	AM	
677 York	284	7/23/2012 14:11	0	BEDROOM back ne	D	WALL	POOR	BLUE	Neg	< LOD < LOD	< LOD	5.99	1	AM	
677 York	285	7/23/2012 14:11	0	BEDROOM back ne		FLOOR	POOR	BEIGE	Neg	< LOD < LOD	< LOD	8	2.09	AM	
677 York	286	7/23/2012 14:14		OUTSIDE	D	DOOR	POOR	RED	POS	4	4	4.7	5.02	2.68	AM
677 York	287	7/23/2012 14:15		OUTSIDE	D	DOOR jamb	POOR	RED	POS	15.1	7	15.1	4.49	4.15	AM
677 York	288	7/23/2012 14:15		OUTSIDE	D	COLUMN	POOR	GREEN	Neg	< LOD < LOD	< LOD	5.54	1	AM	
677 York	289	7/23/2012 14:15		OUTSIDE	D	rail	POOR	GREEN	Neg	< LOD < LOD	< LOD	4.02	1	AM	
677 York	290	7/23/2012 14:16		OUTSIDE	D	rail	POOR	RED	Neg	< LOD < LOD	< LOD	5.5	1	AM	
677 York	291	7/23/2012 14:16		OUTSIDE		FLOOR	POOR	BROWN	Neg	< LOD < LOD	< LOD	3.02	1	AM	
677 York	292	7/23/2012 14:16		OUTSIDE		FLOOR	POOR	grey	Neg	< LOD < LOD	< LOD	6.02	1	AM	
677 York	293	7/23/2012 14:17		OUTSIDE		CEILING	POOR	WHITE	POS	25.8	10.1	25.8	4.01	5.06	AM
677 York	294	7/23/2012 14:17		OUTSIDE	D	TRIM	POOR	grey	POS	5.1	5.6	5.1	4.5	3.39	AM
677 York	295	7/23/2012 14:18		OUTSIDE	D	gutter	INTACT	RED	Neg	< LOD < LOD	< LOD	6.01	1.64	AM	
677 York	296	7/23/2012 14:18		OUTSIDE	D	soffit	INTACT	GREEN	Null	< LOD < LOD	< LOD	1.01	10	AM	
677 York	297	7/23/2012 14:19		OUTSIDE	D	soffit	INTACT	GREEN	POS	1.6	0.4	1.6	13.01	10	AM
677 York	298	7/23/2012 14:19		OUTSIDE	D	corner trim	INTACT	GREEN	POS	8.2	1.3	8.2	5.52	10	AM
677 York	299	7/23/2012 14:20		OUTSIDE	D	WINDOW sash	POOR	BEIGE	POS	3.9	2.4	3.9	4.5	2.44	AM
677 York	300	7/23/2012 14:20		OUTSIDE	D	WINDOW sash	POOR	BEIGE	POS	1.5	1.5	2.2	7.54	2.89	AM
677 York	301	7/23/2012 14:22		OUTSIDE	D	WINDOW sill	INTACT	RED	Neg	0.9	0.3	0.9	60	10	AM
677 York	302	7/23/2012 14:22		OUTSIDE	D	WINDOW sill	INTACT	RED	Null	0.5	0.5	1.1	12.55	10	AM
677 York	303	7/23/2012 14:22		OUTSIDE	D	WINDOW sill	INTACT	RED	POS	8.1	1.3	8.1	5.99	10	AM
677 York	304	7/23/2012 14:23		OUTSIDE	D	WINDOW casing	INTACT	GREEN	Neg	< LOD	0.19	< LOD	12.06	10	AM
677 York	305	7/23/2012 14:24		OUTSIDE	D	WINDOW casing	INTACT	GREEN	POS	1.7	0.3	1.7	47.87	10	AM
677 York	306	7/23/2012 14:25		OUTSIDE	D	siding	INTACT	grey	Neg	< LOD < LOD	< LOD	7.53	1	AM	
677 York	307	7/23/2012 14:25		OUTSIDE	B	siding	INTACT	grey	Neg	< LOD < LOD	< LOD	3.98	1	AM	
677 York	308	7/23/2012 14:26		OUTSIDE	C	siding	INTACT	grey	Neg	< LOD < LOD	< LOD	7.5	1.28	AM	
677 York	309	7/23/2012 14:27		OUTSIDE	D	siding	INTACT	grey	Neg	< LOD < LOD	< LOD	6.49	1	AM	
677 York	310	7/23/2012 14:27		OUTSIDE	D	WINDOW	INTACT	GREEN	Neg	< LOD < LOD	< LOD	7.48	2.35	AM	
677 York	311	7/23/2012 14:27		OUTSIDE	D	WINDOW	POOR	RED	Neg	< LOD < LOD	< LOD	5.5	1.23	AM	
677 York	312	7/23/2012 14:28		OUTSIDE	D	drip board	INTACT	GREEN	Null	< LOD < LOD	< LOD	4.49	10	AM	
677 York	313	7/23/2012 14:28		OUTSIDE	D	drip board	INTACT	GREEN	Neg	< LOD < LOD	< LOD	1.5	3.72	AM	
677 York	314	7/23/2012 14:28		OUTSIDE	D	drip board	INTACT	GREEN	POS	3.2	0.9	3.2	6.53	10	AM
677 York	315	7/23/2012 14:28		OUTSIDE	D	TRIM	INTACT	GREEN	POS	4.7	0.9	4.7	6.02	10	AM
677 York	316	7/23/2012 14:29		OUTSIDE	D	down spout	INTACT	GREEN	Neg	< LOD < LOD	< LOD	6.03	2.71	AM	

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677 York	317	7/23/2012 14:29	GARAGE	C	TRIM	WOOD	INTACT	GREEN	Neg	< LOD < LOD < LOD	5.01	1.5	AM
677 York	318	7/23/2012 14:30	GARAGE	C	facia	WOOD	INTACT	GREEN	Neg	< LOD < LOD < LOD	5.01	1.98	AM
677 York	319	7/23/2012 14:30	GARAGE	C	siding	WOOD	INTACT	grey	Neg	< LOD < LOD < LOD	5.51	1	AM
677 York	320	7/23/2012 14:31	GARAGE	C	soffit	WOOD	INTACT	grey	Neg	< LOD < LOD < LOD	5.47	1	AM
677 York	321	7/23/2012 14:31	GARAGE	D	DOOR	WOOD	POOR	BEIGE	Neg	< LOD < LOD < LOD	4.99	1	AM
677 York	322	7/23/2012 14:31	GARAGE	D	DOOR	WOOD	POOR	WHITE	Neg	< LOD < LOD < LOD	5.04	1	AM
677 York	323	7/23/2012 14:32	GARAGE	C	DOOR	WOOD	POOR	WHITE	Neg	< LOD < LOD < LOD	5.02	1	AM
677 York	324	7/23/2012 14:32	GARAGE	C	DOOR	WOOD	POOR	WHITE	Neg	< LOD < LOD < LOD	5.49	1	AM
677 York	325	7/23/2012 14:32	GARAGE	B	siding	WOOD	POOR	grey	Neg	< LOD < LOD < LOD	5	1	AM
677 York	326	7/23/2012 14:33	GARAGE	D	siding	WOOD	POOR	grey	Neg	< LOD < LOD < LOD	2.02	1	AM
677 York	327	7/23/2012 14:33	GARAGE	A	siding	WOOD	POOR	grey	Neg	< LOD < LOD < LOD	4.99	1	AM
677 York	328	7/23/2012 14:33	SHED	A	siding	WOOD	POOR	grey	Neg	< LOD < LOD < LOD	5.52	1	AM
677 York	329	7/23/2012 14:34	SHED	A	TRIM	WOOD	POOR	GREEN	Neg	< LOD < LOD < LOD	5.5	4.21	AM
677 York	330	7/23/2012 14:34	SHED	A	TRIM	WOOD	POOR	GREEN	Neg	< LOD < LOD < LOD	6.01	1.13	AM
677 York	331	7/23/2012 14:34	SHED	A	TRIM	WOOD	POOR	GREEN	Neg	< LOD < LOD < LOD	5.03	1.54	AM
677 York	332	7/23/2012 14:35	OUTSIDE	B	DECK	WOOD	POOR	GREEN	Neg	< LOD < LOD < LOD	6	1	AM
677 York	333	7/23/2012 14:35	OUTSIDE	B	DECK	WOOD	POOR	RED	Neg	< LOD < LOD < LOD	5.51	1	AM
677 York	334	7/23/2012 14:36	OUTSIDE	B	DECK	WOOD	POOR	GREY	Neg	< LOD < LOD < LOD	5.51	1	AM
677 York	335	7/23/2012 14:36	OUTSIDE	B	DECK	WOOD	POOR	BROWN	Neg	< LOD < LOD < LOD	5.49	1.11	AM
677 York	336	7/23/2012 14:37	OUTSIDE	B	WINDOW	METAL	INTACT	GREEN	POS	< LOD < LOD < LOD	31.64	10	AM
677 York	337	7/23/2012 14:37	OUTSIDE	B	DOOR	WOOD	INTACT	GREEN	Neg	< LOD < LOD < LOD	5.5	2.1	AM
677 York	338	7/23/2012 14:37	OUTSIDE	B	DOOR	WOOD	INTACT	GREEN	Neg	< LOD < LOD < LOD	6.48	3.75	AM
677 York	339	7/23/2012 14:38			CALIBRATE				POS	1 1 1	23.53	1.08	AM
677 York	340	7/23/2012 14:39			CALIBRATE				POS	1.1 1.1 1	18.54	1.1	AM
677 York	341	7/23/2012 14:40			CALIBRATE				POS	1 1 0.9	24.57	1.06	AM

Description of Column Titles

- Site:** The sequential number of the site (homes or buildings) inspected on a particular day.
- No:** The sequential XRF sample number for a given site.
- XL No/Map:** The sample number recorded on the maps of a particular site.
- Date:** Date that the XRF sample was analyzed.
- Time:** Time of XRF sample analysis.
- Floor:** The sample location floor level (0 = basement, 1 = first floor, 2 = second floor).
- Room:** The specific location where the sample was analyzed on the site. Calibrate is also recorded in this column when appropriate.
- Side:** Side of the room based on sampling methodology as described earlier in this report. The only four sides that can be designated are **A, B, C, and D**.
- Structure:** This refers to the general building component that the test was performed on. It may also include modifications such as: upper, lower, exterior, interior, right, and left.
- Feature:** Specifies additional information about a structure.
- Condition:** Describes whether the surface being tested is **Intact:** good condition; **Fair:** less than 2 square feet of damage to large interior surface, i.e., wall, less than 10 square feet of damage to large exterior surface, i.e., outside walls, or less than 10% damage to small surface areas, i.e., baseboards, trim, etc.; **Poor:** more than 2 square feet of damage on large interior surfaces, more than 10 square feet of damage to large exterior surface areas, or more than 10% damage to small surface areas.
- Substrate:** Refers to the material that the structure was made of, i.e., wood, concrete, drywall, etc.
- Color:** Color of surface tested.
- Result:** The lead concentration in mg/cm² as determined with L-shell and K-shell X-ray data.
- PbL(mg/cm²):** The lead concentration as determined with L-shell X-ray data.
- RES:** Results: POS - above action level, NEG - below action level.
- PbK:** The lead concentration in mg/cm² on the K-shell X-ray data spectrum.
- PbC:** The combined lead concentration in mg/cm² of the L-shell and K-shell X-ray data spectrum.
- Depth:** This is the index that is a qualitative indication of the depth of the lead in paint. As the number approaches 1, the lead is concentrated close to the top layers of paint. The largest number available for depth index is 10. The greater the number, the more likely interfering elements may have been detected.
- Duration:** The length of the XRF sample analysis in seconds.
- Inspector:** When multiple inspectors are used, this number indicates who sampled at the time indicated.
- Note:** This refers to any notes that were collected during the analysis of the particular sample. Then can be found on the field data sheet titled "Lead-Based Paint Inspection Data Page."

SAMPLING METHODOLOGY

Buildings were systematically inspected for lead-based paints. The **A** side of the building is the side facing the street. Starting from the **A** side, the other sides are lettered consecutively (**B, C, D**), going clockwise around the building.

Inside the unit, each floor was assigned a number starting with **0** for the basement, **1** for the first floor, and **2** for the second floor.

Some rooms that are unique in the building are named on the inspection report. These would include things like pantry, kitchen, halls, bathrooms, and staircases. If there is more than one of a certain type of named room, then they are numbered (e.g., staircases to basements are numbered staircase 1, while staircases to the second floor are labeled staircase 2). Room numbering starts in the **A-D** corner of the building and continues clockwise from that point.

Within each room of the building, each of the sides of the room are named. The naming of walls in a room, for instance, follows the same pattern as that used on the exterior of the building, namely, the street side of each room is labeled **A**, and then clockwise from that wall, walls are labeled **B, C, D**.

APPENDIX C

**LABORATORY RESULTS
CHAIN-OF-CUSTODY**

**EMSL Analytical, Inc.**

14375 23rd Avenue North, Minneapolis, Mn 55447
 Phone/Fax: (763) 449-4922 / (763) 449-4924
<http://www.emsl.com> minneapolislab@emsl.com

EMSL Order: 351204684
 CustomerID: MIDW56
 CustomerPO:
 ProjectID:

Attn: **Greg Myers**
Midwest Environmental Consulting, L.L.C.
125 Railroad Ave SW

Phone: (763) 691-0111
 Fax: (763) 691-0145
 Received: 07/20/12 9:20 AM
 Collected: 7/19/2012

Mora, MN 55051

Project: 602/0712D, 677 E York Ave St. Paul, MN

Test Report: Lead in Dust by Flame AAS (SW 846 3050B*/7000B)

Lab ID:	Analyzed	Area Sampled	RDL	Lead Concentration	Notes
0001	7/20/2012	144 in ²	10 µg/ft ²	150 µg/ft ²	Site: Stair 1, Floor Adj Entry Door Collected: 7/19/2012
<i>Client Sample 502/0712D-W1</i>					
0002	7/20/2012	144 in ²	10 µg/ft ²	<10 µg/ft ²	Site: Living Room Side A, Floor Under Window Right Collected: 7/19/2012
<i>Client Sample 502/0712D-W2</i>					
0003	7/20/2012	36 in ²	1200 µg/ft ²	4400 µg/ft ²	Site: Living Room Side A, Stool Left Collected: 7/19/2012
<i>Client Sample 502/0712D-W3</i>					
0004	7/20/2012	144 in ²	10 µg/ft ²	<10 µg/ft ²	Site: Bed Room 2, Side B, Floor Under Window Collected: 7/19/2012
<i>Client Sample 502/0712D-W4</i>					
0005	7/20/2012	36 in ²	40 µg/ft ²	<40 µg/ft ²	Site: Bed Room 2, Side B Stool Left Collected: 7/19/2012
<i>Client Sample 502/0712D-W5</i>					
0006	7/20/2012	144 in ²	10 µg/ft ²	110 µg/ft ²	Site: Bed Room 5, Side B, Floor Under Window Left Collected: 7/19/2012
<i>Client Sample 502/0712D-W6</i>					
0007	7/20/2012	36 in ²	1600 µg/ft ²	5300 µg/ft ²	Site: Bed Room 5, Side B, Trough Left Collected: 7/19/2012
<i>Client Sample 502/0712D-W7</i>					
0008	7/20/2012	144 in ²	10 µg/ft ²	54 µg/ft ²	Site: Mud Room, Side B, Floor Adj Entry Door Collected: 7/19/2012
<i>Client Sample 502/0712D-W8</i>					
0009	7/20/2012	144 in ²	10 µg/ft ²	<10 µg/ft ²	Site: Bed Room 9, Side A, Floor Adj Closet Collected: 7/19/2012
<i>Client Sample 502/0712D-W9</i>					

Rachel Travis, Laboratory Manager
 or other approved signatory

Reporting limit is 10 ug/wipe. ug/wipe = ug/ft² x area sampled in ft². Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. QC data associated with this sample set is within acceptable limits, unless otherwise noted. The lab is not responsible for data reported in µg/ft² which is dependant on the area provided by non-lab personnel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. * slight modifications to methods applied. "<" (less than) results signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

Samples analyzed by EMSL Analytical, Inc. Minneapolis, Mn AIHA-LAP, LLC ELLAP 163162

Initial report from 07/20/2012 17:33:39

**EMSL Analytical, Inc.**

14376 23rd Avenue North, Minneapolis, Mn 55447
 Phone/Fax: (763) 449-4922 / (763) 449-4924
<http://www.emsl.com> minneapolislab@emsl.com

EMSL Order: 351204684
 CustomerID: MIDW56
 CustomerPO:
 ProjectID:

Attn: **Greg Myers**
Midwest Environmental Consulting, L.L.C.
125 Railroad Ave SW

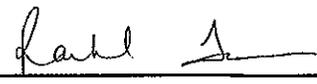
Phone: (763) 691-0111
 Fax: (763) 691-0145
 Received: 07/20/12 9:20 AM
 Collected: 7/19/2012

Mora, MN 55051

Project: 502/0712D, 677 E York Ave St. Paul, MN

Test Report: Lead in Soils by Flame AAS (SW 846 3050B*/7000B)

Lab ID:	Analyzed	RDL	Lead Concentration	Notes
0010	7/20/2012	40 mg/Kg	720 mg/Kg	Site: Bare Soil Foundation Area
<i>Client Sample</i> 502/0712D-S1				<i>Collected:</i> 7/19/2012
0011	7/20/2012	40 mg/Kg	170 mg/Kg	Site: Bare Soil Yard Area
<i>Client Sample</i> 502/0712D-S2				<i>Collected:</i> 7/19/2012


 Rachel Travis, Laboratory Manager
 or other approved signatory

Reporting limit is 40 mg/kg based on the minimum sample weight per our SOP. The QC data associated with these sample results included in this report meet the method QC requirements, unless specifically indicated otherwise. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. Results reported based on dry weight. *slight modification to methods applied. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

Samples analyzed by EMSL Analytical, Inc. Minneapolis, Mn AIHA-LAP, LLC ELLAP 163162

Initial report from 07/20/2012 17:33:39

Test Report PB w/RDL-7.26.0 Printed: 7/20/2012 5:33:39 PM

EST
T-27



Midwest Environmental Consulting, L.L.C.
 125 Railroad Avenue SW • Mora, MN 55051
 763-691-0111 / 320-679-4054
 Fax: 763-691-0145 / 320-679-4442
 Client Address:
 Contact: Greg Myers

CHAIN OF CUSTODY

Project Number: 502/0712 D
 Client: All phase / City of St. Paul
 Project: 677 Estaback Ave St. Paul, MN
 Phone/Fax: _____

6684

Sample ID	Sample Description	Collection Date/Time	Matrix (Vol./Area)	Analysis Requested
502/0712D/w1	Stair 1, Floor edge entry door	07/19/12	1 ft ²	Ab Ag / ft ²
w2	Living Room Side A Floor ^{under window} mplet		1 ft ²	
w3	Living Room Side A, Seat left		2' x 18" ⁴	
w4	Bed Room 2, Side B, Floor window		1 ft ²	
w5	Bed Room 2, Side B, Seat left		2' x 18" ⁴	
w6	Bed room 5, Side B, Floor window left		1 ft ²	
w7	Bed Room 5, Side B, Trough left		2' x 18" ⁴	
w8	Mud room, Side B, Floor, door entry		1 ft ²	
w9	Bed room 9, Side A, Floor adj closet		1 ft ²	
S1	Bare Soil Foundation area		7 Subsample	Ab Total average Disp weights
S2	Bare soil yard area	5:00P	8 Subsamples	

Sampled by: Greg Myers Date: 7/19/12 Time: 2:30P Delivered by: Fed Ex Date: 8/19/12 Time: _____
 Received by: [Signature] Date: 7/24 Time: 4:20 P.M. Delivered by: _____ Date: _____ Time: _____
 Received by Lab: _____ Date: _____ Time: _____ Disposition of Samples: _____
 Notes: Required Fed Blank(s) included only ASTM
Please analyze @ 24 hours turnaround wipes used

AllPhase Companies, Incorporated

404-A St. Croix Trail North, Lakeland, MN 55043
Phone: 651-436-2930 Fax: 651-436-3918

July 25, 2012

Cynthia Carlson Heins
Real Estate Manager
Planning and Economic Development
Suite 1100, 25 West 4th Street
Saint Paul, MN 55102

RE: Asbestos Survey
677 York Ave., St. Paul, MN
1596-12S-A1

Dear Ms. Cynthia Carlson Heins:

AllPhase Companies, Incorporated, (AllPhase) performed an asbestos survey at the above referenced site in connection with a renovation in order to identify Asbestos-Containing Material (ACM), which is a building material that has greater than 1% asbestos. The following report contains the results of the survey performed at the above referenced site.

In summary, 16 samples of building materials were collected and analyzed for asbestos type and amount. Asbestos was detected above 1 percent in **zero of the sixteen samples**. These samples only represent building materials that were collected from the referenced building structure.

The laboratory did not detect asbestos above 0% and less than 1% in the submitted samples.

Friable ACM, is defined by the Asbestos NESHAP, as any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. (Sec. 61.141)

Nonfriable ACM is any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. EPA also defines two categories of nonfriable ACM, Category I and Category II nonfriable ACM, which are described later in this guidance.

"Regulated Asbestos-Containing Material" (RACM) is (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Refer to the asbestos Laboratory Report and chain of custody for other building materials tested and their locations. The following samples detected the presence of asbestos greater than 1%:

None.

This survey is an attempt to identify ACM. However, there is no guarantee that all potential ACM was identified. As a rehabilitation, wall interiors were not assessed. If suspect ACM is discovered during the work and is not listed in this or previous limited surveys, work on that portion of the building should cease, the material wetted and

covered, and an asbestos inspector brought to the site to sample and submit to a certified laboratory the sample to determine its asbestos content. Pending analytical results, an abatement crew should remove the ACM before work continues.

INTRODUCTION

The scope of our services was to conduct an asbestos survey, which includes collecting a small portion of the building materials and submitting the sample to a certified laboratory for analysis by PLM. Analysis only assesses the portion of building material collected and submitted.

- A. Collect bulk samples of suspect ACMs for laboratory analysis.
- B. Analyze the collected samples for asbestos content.

Minnesota requires surveys to be performed by a Minnesota Certified Inspector. This survey was conducted by David Jenkin – Asbestos Inspector #AI8101.

Samples of suspect ACMs were collected by AllPhase by removing a small portion of the suspect material and then placing the individual samples into separate sealed containers.

DISCLAIMERS

Asbestos surveys do not necessarily succeed in identifying all locations and types of ACM on-site. This is because of the variety of locations and the inconsistency of asbestos occurrence in a given building material. Our survey is based solely upon the building materials that were observed and sampled for analysis. Therefore, if unsampled building materials are encountered during the demolition, they should be assessed on a material-by-material basis. If suspect ACM is observed which has not been listed in our evaluation, it should be collected and evaluated by a certified individual and laboratory, respectively. If there is a potential for that material to be ACM, work should stop until the question of asbestos content and/or abatement is resolved in a manner that protects human health and the environment and abides by regulatory guidelines.

Certain building materials are not considered suspect ACM and are not sampled as part of the survey. These materials include but are not limited to wood, concrete (with exceptions), plastics such as polyethylene, polystyrene and polyvinylchloride, fiberglass, rubber (natural and neoprene—black synthetic), foam insulation, metals and glass.

METHODOLOGY

Building materials were analyzed by a NVLAP-accredited laboratory, #101768-0. Laboratory analysis was conducted in accordance with Environmental Protection Agency (EPA) guidelines. The examination for the presence and identification of asbestos fibers in bulk samples is performed in the laboratory using cross-polarized light microscopy and dispersion-staining, particle-identification techniques. Analysis was performed in accordance with EPA 600/M4-82-020 and EPA 600/R-93/116 where applicable. This methodology determines the presence of asbestos varieties, which include Chrysotile, Amosite, Crocidolite, Anthophyllite, Tremolite and Actinolite.

REMARKS

Some of the rules and regulations set by the Environmental Protection Agency (EPA) may apply when the existence of ACMs is confirmed. A complete review of these rules can be found in Part 3 of the Federal Register EPA, 40 CFR Part 61. Summaries of these rules are as follows:

According to §61.145 of NESHAPS, friable ACMs must be removed from the site prior to demolition. This includes materials that were originally non-friable but have become friable—that is, Category I & II material—due to damage or deterioration—for example, floor tile that has significant chipping or cracking. The necessity for the removal of Category I and II material is evaluated on a site-by-site basis.

Disturbing ACM may require that the Minnesota Pollution Control Agency and/or the Minnesota Department of Health be notified prior to activities with asbestos.

The environmental services performed by AllPhase's survey crew and analyst for this project have been conducted in a manner consistent with the degree of care and technical skill exercised by environmental professionals currently practicing in this area under similar budget and time constraints. Recommendations contained in this report represent our professional judgment at the time the project was performed. No other warranty is intended or implied.

A handwritten signature in black ink that reads "David Jenkin". The signature is written in a cursive style with a large, sweeping flourish at the end.

David Jenkin, P.G.
Asbestos Inspector (#AI8101)



Report for:

Mr. David Jenkin, MS
AllPhase Companies, INC
404A St Croix Trail N
Lakeland, MN 55043

Regarding: Project: 677 York Ave.; Asb. Survey
EML ID: 946815

Approved by:

Approved Signatory
Kari Wasmer

Dates of Analysis:
Asbestos-EPA Method 600/R-93/116: 07-23-2012

Service SOPs: Asbestos-EPA Method 600/R-93/116 (EPA-600/M4-82-020 (SOP 01267))

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

Client: AllPhase Companies, INC
 C/O: Mr. David Jenkin, MS
 Re: 677 York Ave.; Asb. Survey

Date of Sampling: 07-16-2012
 Date of Receipt: 07-18-2012
 Date of Report: 07-23-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted: 15

Total Samples Analysed: 15

Total Samples with Layer Asbestos Content > 1%: 0

Location: A1-1, Sheetrk Comp., SW Rm

Lab ID-Version‡: 4218952-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Compound / White Paint	ND
White Joint Compound / Tan Tape	ND
Composite Non-Asbestos Fibrous Content:	20% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 2, Ceil. Text Dng Rm S of Kitch

Lab ID-Version‡: 4218953-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

Location: 3, Sheet Flg, Kitch, Top Layer

Lab ID-Version‡: 4218954-1

Sample Layers	Asbestos Content
Beige Linoleum with Fibrous Backing	ND
Yellow Mastic	ND
Composite Non-Asbestos Fibrous Content:	30% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 4, Sheet Flg, Kitch, Base Layer

Lab ID-Version‡: 4218955-1

Sample Layers	Asbestos Content
Cream Linoleum with Fibrous Backing	ND
Yellow Mastic	ND
Composite Non-Asbestos Fibrous Content:	20% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Moderate

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: AllPhase Companies, INC
 C/O: Mr. David Jenkin, MS
 Re: 677 York Ave.; Asb. Survey

Date of Sampling: 07-16-2012
 Date of Receipt: 07-18-2012
 Date of Report: 07-23-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 5, Ceil Tile, Kitch, 2x2', Type 1

Lab ID-Version‡: 4218956-1

Sample Layers	Asbestos Content
Tan Ceiling Tile with White Surface	ND
Composite Non-Asbestos Fibrous Content:	50% Cellulose 10% Mineral wool
Sample Composite Homogeneity:	Moderate

Location: 6, Ceil Tile, Kitch, 2x2', Type 2

Lab ID-Version‡: 4218957-1

Sample Layers	Asbestos Content
Tan Ceiling Tile with White Surface	ND
Composite Non-Asbestos Fibrous Content:	50% Cellulose 10% Mineral wool
Sample Composite Homogeneity:	Moderate

Location: 7, Ceil Tile, Kitch, 2x2', Type 3

Lab ID-Version‡: 4218958-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Fibrous Content:	45% Cellulose 20% Mineral wool
Sample Composite Homogeneity:	Moderate

Location: 8, Ceil Text, Dng Rm N of Kitch

Lab ID-Version‡: 4218959-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

Location: 9, Ceil Text, NE bdrm, Closet

Lab ID-Version‡: 4218960-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: AllPhase Companies, INC
 C/O: Mr. David Jenkin, MS
 Re: 677 York Ave.; Asb. Survey

Date of Sampling: 07-16-2012
 Date of Receipt: 07-18-2012
 Date of Report: 07-23-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 10, Sheetrk, N Add'n

Lab ID-Version‡: 4218961-1

Sample Layers	Asbestos Content
White Drywall	ND
Composite Non-Asbestos Fibrous Content:	15% Cellulose
Sample Composite Homogeneity:	Good

Location: 11, Window Glazing

Lab ID-Version‡: 4218962-1

Sample Layers	Asbestos Content
White Window Glazing	ND
Sample Composite Homogeneity:	Good

Location: 12, Ceil Text, NW Rm Closet Basement

Lab ID-Version‡: 4218963-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

Location: 13, Sheer Flg, Basement

Lab ID-Version‡: 4218964-1

Sample Layers	Asbestos Content
White Linoleum with Fibrous Backing	ND
Yellow Mastic	ND
Composite Non-Asbestos Fibrous Content:	25% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 14, Ceil Tile, 2x4', Type 4

Lab ID-Version‡: 4218965-1

Sample Layers	Asbestos Content
Tan Ceiling Tile with White Surface	ND
Composite Non-Asbestos Fibrous Content:	45% Cellulose 25% Mineral wool
Sample Composite Homogeneity:	Good

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: AllPhase Companies, INC
C/O: Mr. David Jenkin, MS
Re: 677 York Ave.; Asb. Survey

Date of Sampling: 07-16-2012
Date of Receipt: 07-18-2012
Date of Report: 07-23-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 15a-b, Insul Attic-White Fiber/Gray Cell.

Lab ID-Version‡: 4218966-1

Sample Layers	Asbestos Content
White Insulation	ND
Brown Insulation	ND
Composite Non-Asbestos Fibrous Content:	70% Cellulose 25% Mineral wool
Sample Composite Homogeneity:	Poor

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

07/19/12 ACTIVATED CHARCOAL RADON TEST #6100098

Radon Test Result: 1.9 ±0.3 pCi/L

Test Started 07/13/12 at 12:00 pm

Test Ended 07/16/12 at 12:00 pm

Closed house conditions maintained during test.

Location Basement



JULES ATANGANA

677 YORK

SAINT PAUL, MN 55106-3128

INTERPRETING YOUR TEST RESULT

This radon test was provided to you by MN DEPT OF HEALTH/INDOOR AIR UNIT / 651-201-4601. The US EPA action level for indoor radon is 4.0 pCi/L. The EPA indicates that there is little short-term risk with test results in this range (0.6 to 1.9 pCi/L). However, because radon levels fluctuate daily, as well as seasonally, you may want to retest during another season. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

You may be able to obtain additional information about radon related subjects by calling your **state radon officer at 800-798-9050**. Or call the "Radon Fix-It Line" at 800-644-6999 Monday thru Friday between NOON and 8 pm EST

This test result reflects the amount of radon measured in this sample AFTER it arrived at our laboratory. All analysis computations are automatically adjusted to reflect the length of test, the amount of moisture in the sample, time from the end of test, and the amount of radiation measured. If ALL the test instructions were carefully followed, then it is reasonable to assume this is an accurate assessment of the average level of the radon this sample was exposed to during the time indicated on the test packet.

READ THIS FIRST

This result has been rounded to one-tenth (0.1) of a pCi/L (picoCurie per liter), the most common method of reporting radon in air.

NEXT...PLEASE...READ

everything under the heading

INTERPRETING YOUR TEST RESULT

Your health risk

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

What is a picoCurie

For those interested in the numbers, a picoCurie is 0.000,000,000,001 (one-trillionth) of a Curie, an international measurement unit of radioactivity. One pCi/L means that in one liter of air there will be 2.2 radioactive disintegrations each minute. For example, at 4 pCi/L there will be approximately 12,672 radioactive disintegrations in one liter of air, during a 24-hour period.

Conducting Follow-up Measurements

USEPA protocol describes two general types of radon measurements: short-term tests conducted from 48 hours up to 90 days, and long-term tests that last from 90 to 365 days. Your first test (initial/screening) should be a short-term 'worst-case' screening to see if there is a potential for high exposure to radon. Screening tests should be conducted under closed-building conditions, in the lowest lived-in area in the house, because the highest concentrations of radon will usually be found in a room closest to the underlying soil. Tests made under these conditions are less likely to miss a house with a potential for high concentrations. On the other hand, if the results of worst-case screening tests are very low, there is a high probability that the average annual concentrations in the house are also low.

* Your state has designated a radon officer to assist citizens with questions on radon. Most offer free information on radon and radon reduction techniques, and most keep a list of qualified radon testing and mitigation businesses. Your radon officer can also provide the phone number of your regional USEPA office.

Conducting Follow-up Measurements

The higher your initial (screening) tests, the sooner you should conduct follow-up measurements. The EPA states that you should retest the same location that was tested initially. **For additional or follow-up testing,** make sure at least one test is conducted in the **lowest lived-in level** of the home. Also choose regularly used rooms, such as family rooms, dens, playrooms, or bedrooms. A bedroom on the lower level may be a good choice, because people generally spend the most time in their bedrooms (approximately one-third of the year). If there are children, it may be appropriate to test their rooms or other areas where they spend a lot of time, especially at the lower levels. All short-term follow-up tests **must** be conducted under closed-building conditions. If closed-building conditions cannot be maintained, a long-term measurement conducted under normal living conditions could be used to help estimate average annual exposures.

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If follow-up measurements have **confirmed** that the average annual level of radon is equal to or greater than 4 pCi/L, the USEPA recommends that the building or home be mitigated for radon. Consider also that a future buyer is likely to demand that the building pass a radon test before purchasing.

Variations in Radon Levels: what can affect your test results and why it may be important to conduct confirmation tests.

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weather, indoor radon levels may rise and fall by a factor of two on a daily cycle; for example, from 5 pCi/L to 10 pCi/L in 24 hours. During rapidly changing or stormy weather, the levels may change more dramatically. Because continual changes in radon levels are considered the norm, expose the testing device for as long as is practical, while following the manufacturer's recommendations. This, of course, provides a better overall average of the measurement.

If you are comparing tests, or are averaging a series of tests, bear in mind that any radon test returns only the average of the levels present during a **specific period of time** at the **precise location** of the test. Conditions during a different test period or at a different location in the building are **expected to be different**.

Test results can also vary if the radon test instructions were not carefully followed. A laboratory measuring radon in samples taken outside the lab **must rely on the person conducting the test**. For example, the wrong starting or ending date of a test will significantly affect the calculated result. The location of each radon test can also influence the result. For example, a test placed in the blowing air stream of a fan is likely to collect more radon than it would under normal conditions. Also, three tests conducted in one home, but in three different rooms, **would be expected to have at least slightly different test results**.

Test results from a properly used activated charcoal test will more closely reflect the average radon concentrations over the last three to five days of the test period. This happens because the radon collected by the activated charcoal has a radioactive half-life of only four days. This means, for example, over one-half of the radon collected during the first three days of a seven day test 'died' before the test ended. Seven day exposures of activated charcoal test devices are suggested because this allows the charcoal to equilibrate with its environment, averaging out the peaks and valleys that normally occur in real-life radon levels. Also the aspect of user convenience is considered, because most find it easier to remember to end a test on the same day of the week it was started.

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PERFORMING RADON TESTS FOR A REAL ESTATE TRANSACTION

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Limitation of Liability: While we at Air Chek, Inc. make every effort to maintain the highest possible quality control and include several checks and verification steps in our procedures, we make **NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS** with respect to any item furnished, information supplied or services rendered you by Air Chek, Inc. Before any action is taken on the basis of test results given to you by Air Chek, Inc. we recommend that further testing be done. Neither Air Chek, Inc., nor any of our employees or agents, shall be liable under any claim, charge, or demand, whether in contract, tort or otherwise, for any and all losses, costs, charges, claims, demands, fees, expenses, injuries or damages (including without limitation **INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH ARE EXCLUDED**) of any nature or kind arising out of, connected with, resulting from, or sustained as a result of any item furnished, information supplied, or service rendered to you by Air Chek, Inc.

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The radon test kit(s) used for this report is certified by the NEHA-NRPP, Lab ID: 101138, for use in all fifty states. It is also listed or certified for use in all states that have a radon program.

For technical information, call (828) 684-0893. Office hours are Mon-Fri 8:30 to 5:30 EASTERN
You can reach us by Fax at (828) 684-8498 or write to Air Chek, Inc., Box 2000, Naples, NC 28760
Web Site: <http://www.radon.com> **Email to:** info@radon.com

Radon Test Result: 1.9 ±0.3 pCi/L

Test Started 07/13/12 at 12:00 pm

Test Ended 07/16/12 at 12:00 pm
Closed house conditions maintained during test.

Location Basement



JULES ATANGANA
677 YORK
SAINT PAUL, MN 55164

INTERPRETING YOUR TEST RESULT

This radon test was provided to you by MN DEPT OF HEALTH/INDOOR AIR UNIT / 651-201-4601. The US EPA action level for indoor radon is 4.0 pCi/L. The EPA indicates that there is little short-term risk with test results in this range (0.6 to 1.9 pCi/L). However, because radon levels fluctuate daily, as well as seasonally, you may want to retest during another season. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

You may be able to obtain additional information about radon related subjects by calling your **state radon officer at 800-798-9050**. Or call the "Radon Fix-It Line" at 800-644-6999 Monday thru Friday between NOON and 8 pm EST

This test result reflects the amount of radon measured in this sample AFTER it arrived at our laboratory. All analysis computations are automatically adjusted to reflect the length of test, the amount of moisture in the sample, time from the end of test, and the amount of radiation measured. If ALL the test instructions were carefully followed, then it is reasonable to assume this is an accurate assessment of the average level of the radon this sample was exposed to during the time indicated on the test packet.

READ THIS FIRST

This result has been rounded to one-tenth (0.1) of a pCi/L (picoCurie per liter), the most common method of reporting radon in air.

NEXT...PLEASE...READ

everything under the heading

INTERPRETING YOUR TEST RESULT

Your health risk

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

What is a picoCurie

For those interested in the numbers, a picoCurie is 0.000,000,000,001 (one-trillionth) of a Curie, an international measurement unit of radioactivity. One pCi/L means that in one liter of air there will be 2.2 radioactive disintegrations each minute. For example, at 4 pCi/L there will be approximately 12,672 radioactive disintegrations in one liter of air, during a 24-hour period.

Conducting Follow-up Measurements

USEPA protocol describes two general types of radon measurements: short-term tests conducted from 48 hours up to 90 days, and long-term tests that last from 90 to 365 days. Your first test (initial/screening) should be a short-term 'worst-case' screening to see if there is a potential for high exposure to radon. Screening tests should be conducted under closed-building conditions, in the lowest lived-in area in the house, because the highest concentrations of radon will usually be found in a room closest to the underlying soil. Tests made under these conditions are less likely to miss a house with a potential for high concentrations. On the other hand, if the results of worst-case screening tests are very low, there is a high probability that the average annual concentrations in the house are also low.

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Web Site: <http://www.radon.com> **Email to:** info@radon.com

Neighborhood Energy Connection

Residential Energy Specification

Customer: City of Saint Paul

Auditor: Michael Childs

Address: 677 York Avenue E

Phone: 651-221-4462 x145

104	Replace Furnace with 95% AFUE, Multi-stage, Forced Air Furnace	Remove existing furnace, recycle all metal components and dispose of all other materials in a code legal dump. Install a new ENERGY STAR rated, gas-fired, multi-stage burner, forced air furnace with a minimum AFUE rating of 95%+ and ECM Motor with 2" rise above floor. Connect to existing duct work and gas line. New furnace to be vented with PVC piping per manufacturer's specifications. New furnace will have minimum limited warranties of 20 years on heat exchangers; 5 years on parts. Include auto setback thermostat controls, vent pipe & new shut-off valve. Rework cold air return if necessary to ensure easy access, good fit & easy replacement of air filter. An exterior return air filter box shall be installed on one side, both sides or bottom of new furnace. Seal all exposed duct joints with duct mastic. Remove all existing cloth duct tape prior to installing mastic.	
304	Replace Water Heater with Power Vented .67 EF	Replace water heater with a power-vented water heater with an EF of .67. Include pressure & temperature release valve, discharge tube to within 6" of floor and PVC flue to power vent to exterior.	

310	Replace Central Air Conditioning Unit	Install 16 SEER split system central air conditioning unit, following local building code. Using OEM performance information and industry-approved procedures, confirm that the selected equipment satisfies/meets the load requirements at the system design conditions.	
500	Seal Attic Bypasses	Contractor shall seal all attic bypasses. Bypasses shall be defined as any break in the envelope of a house between a heated living space and an unheated area or exterior. Bypass locations include, but are not limited to, the following areas: chimneys, soil stacks, end walls, dropped ceilings, open plumbing walls, beneath knee walls and around duct work, electrical work and attic access points. Bypasses shall be sealed in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 30 Pascals. Materials to be used for sealing bypasses depend on the size and location of the bypass and meet code requirements. These materials include high quality caulks (20-year life span), polyethylene rod stock, foam, sheetrock, sheet metal, extruded polystyrene and densely packed insulation.	
502	Dense Pack Below Floor and blow above floor to R-50	All bypasses shall be sealed before insulating in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 30 Pascals. Floored attics shall be blown below floor boards using the Dense Pack Method to a minimum density 3.5 lbs/ft ³ . Blow above floorboards to bring below and above total to R-50 or more.	

510	Blow Open Attic to R-50	All bypasses shall be sealed before insulating in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 30 Pascals. Blow insulation to depth indicated on manufacturer's coverage chart, consistently and evenly to R-50. Insulation in the peak attic must be marked with a ruler to measure depth and a sign with the number of bags used and the date of the installation.	
524	Insulate Overhang	Insulate overhang from the exterior on west side of house. Install R-19 batt of insulation in floor cavities and cover with 2" high-density rigid board insulation or dense pack with cellulose insulation. Access holes must be patched, plugged and painted as necessary.	
526	Insulate Above Bay Window	Insulate space above bays to capacity. Insulate floor to capacity. Access holes must be patched, plugged and painted as necessary.	
534	Insulate walk-up attic door and stairway	Insulate door to walk-up attic to R-19, and weather strip. Insulate under stairs and perimeter stair walls.	
610	Wall insulation - Exterior Application: Remove Vinyl Siding, Drill, Dense Pack, Plug and Replace Siding	Siding shall be removed before drilling access holes. Determine cavities are free of hazards and can support dense packing pressures, locate drilling hazards, control dust when drilling from interior. Completely fill each cavity to a consistent density. Dense pack cellulose to a minimum density of 3.5 lbs./ft ³ or dense pack spider fiberglass per manufacturer's instructions. Siding must be replaced without damage and nailed back with appropriate galvanized nails. Follow all applicable Lead Safe Work Practices as per the EPA's RRP Rules.	Insulation method depends on the extent of the rehab work.

616	Wall insulation - Interior Application: Dense Pack Cellulose	Exterior walls insulated from inside the house shall be drilled through to provide access. Determine cavities are free of hazards and can support dense packing pressures, locate drilling hazards, control dust when drilling from interior. Completely fill each cavity to a consistent density. Dense pack cellulose to a minimum density of 3.5 lbs./ft ³ or dense pack spider fiberglass per manufacturer's instructions. Follow all applicable Lead Safe Work Practices as per the EPA's RRP Rules.	Insulation method depends on the extent of the rehab work.
618	Wall insulation - Interior Application: Fiberglass batt open cavities	Fit batt insulation between studs so that it fills the wall cavity without any gaps, voids, or compression. Call the NEC before sheet rocking.	Insulation method depends on the extent of the rehab work.
620	Wall insulation - Interior Application: Spray foam open cavities	Follow manufacturer's instructions to completely and evenly fill the cavity. Call the NEC for inspection before sheet rocking.	Insulation method depends on the extent of the rehab work.
800	Air Seal Rim Joist	Seal cracks and holes in rim joist using caulk, foam or other air tight materials.	This is in the front portions of the basement.
802	Air Seal and Insulate Rim Joist	Seal cracks and holes in rim joist before insulating. Caulk or foam 3 inches of rigid insulation in place. Or, apply two-part foam evenly and consistently according to manufacturer's instructions to insulate to R-10 around basement rim joist.	This is the back portion of the basement.
1000	Install ENERGY STAR Rated Kitchen Fan	Install an ENERGY STAR rated exhaust fan connected with insulated rigid ductwork into a dampered vent.	
1010	Install ENERGY STAR Rated 2-stage Bathroom Fan	Install an ENERGY STAR rated two-speed bathroom fan .8 sones or less, with a pre-set low-speed of 10-30 CFM and a high-speed boost capability of 70-110 CFM initiated by a wall switch or motion detector. Vent bathroom fan using rigid duct and insulated with fiberglass and vented out with dampered roof vent.	There are two bath fans existing and one is vented through the wall.

1210	Install ENERGY STAR Rated Washing Machine	Connect new ENERGY STAR rated clothes washer sized appropriately for the household. Use braided steel water supply lines and a smooth rubber drain line connected to a 2 inch drain with trap. Remove existing washer, recycle all metal components and dispose of all other materials in a code legal dump.	
1212	Install ENERGY STAR Rated Dishwasher	Install ENERGY STAR rated dishwasher including all alterations and connections to plumbing and electric system. Remove existing dishwasher, recycle all metal components and dispose of all other materials in a code legal dump.	
1214	Install ENERGY STAR Rated Refrigerator	Install ENERGY STAR rated refrigerator sized appropriately for the household. Remove existing refrigerator, recycle all metal components and dispose of all other materials in a code legal dump.	

Home Energy Rating Certificate

677 York Ave E
St Paul, MN 55130



**3 Stars Plus
Confirmed**

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

Energy Efficient

HERS Index: 129

General Information

Conditioned Area: 4017 sq. ft.
Conditioned Volume: 33311 cubic ft.
Bedrooms: 4

House Type: Multi-family, whole building
Foundation: Conditioned basement

Mechanical Systems Features

Heating: Fuel-fired air distribution, Natural gas, 80.0 AFUE.
Cooling: Air conditioner, Electric, 10.0 SEER.
Water Heating: Conventional, Natural gas, 0.57 EF, 50.0 Gal.
Duct Leakage to Outside: RESNET/HERS default
Ventilation System: None
Programmable Thermostat: Heating: No Cooling: No

Building Shell Features

Ceiling Flat: R-19
Vaulted Ceiling: R-22
Above Grade Walls: R-6
Foundation Walls: R-0.0
Slab: R-0.0 Edge, R-0.0 Under

Exposed Floor: R-0
Window Type: S W Op (w/St)

Infiltration:
Rate: Htg: 4375 Clg: 4375 CFM50
Method: Blower door test

Lights and Appliance Features

Percent Interior Lighting: 0.00
Percent Garage Lighting: 0.00
Refrigerator (kWh/yr): 691.00
Dishwasher Energy Factor: 0.46

Range/Oven Fuel: Natural gas
Clothes Dryer Fuel: Natural gas
Clothes Dryer EF: 2.67
Ceiling Fan (cfm/Watt): 0.00

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM/Rate - Residential Energy Analysis and Rating Software v12.99

This information does not constitute any warranty of energy cost or savings.

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Registry ID:

Rating Number:

Certified Energy Rater: Michael Childs

Rating Date: 8/27/12

Rating Ordered For: City of Saint Paul

Estimated Annual Energy Cost

Use	Confirmed		
	MMBtu	Cost	Percent
Heating	341.7	\$3203	61%
Cooling	6.1	\$179	3%
Hot Water	32.8	\$295	6%
Lights/Appliances	50.7	\$1253	24%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$360	7%
Total		\$5290	100%

**This home meets or exceeds the minimum
criteria for all of the following:**

TITLE

Company

Address

City, State, Zip

Phone #

Fax #

Home Energy Rating Certificate

677 York Ave E

St Paul, MN 55130



**5 Stars
Projected Rating**

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

Energy Efficient

HERS Index: 79

General Information

Conditioned Area: 4017 sq. ft.
 Conditioned Volume: 33311 cubic ft.
 Bedrooms: 4

House Type: Multi-family, whole building
 Foundation: Conditioned basement

Mechanical Systems Features

Heating: Fuel-fired air distribution, Natural gas, 95.0 AFUE.
 Cooling: Air conditioner, Electric, 16.0 SEER.
 Water Heating: Conventional, Natural gas, 0.67 EF, 40.0 Gal.
 Duct Leakage to Outside: RESNET/HERS default
 Ventilation System: Exhaust Only: 80 cfm, 15.0 watts.
 Programmable Thermostat: Heating: Yes Cooling: Yes

Building Shell Features

Ceiling Flat: R-50
 Vaulted Ceiling: R-44
 Above Grade Walls: R-13
 Foundation Walls: R-0.0
 Slab: R-0.0 Edge, R-0.0 Under

Exposed Floor: R-29
 Window Type: NFRC .34 / .34

Infiltration:
 Rate: Htg: 2375 Clg: 2375 CFM50
 Method: Blower door test

Lights and Appliance Features

Percent Interior Lighting: 90.00
 Percent Garage Lighting: 0.00
 Refrigerator (kWh/yr): 691.00
 Dishwasher Energy Factor: 0.46

Range/Oven Fuel: Natural gas
 Clothes Dryer Fuel: Natural gas
 Clothes Dryer EF: 2.67
 Ceiling Fan (cfm/Watt): 0.00

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Registry ID:

Rating Number:

Certified Energy Rater: Michael Childs

Rating Date: 8/27/12

Rating Ordered For: City of Saint Paul

Estimated Annual Energy Cost

Projected Rating

Use	MMBtu	Cost	Percent
Heating	207.6	\$1909	52%
Cooling	2.4	\$69	2%
Hot Water	29.3	\$264	7%
Lights/Appliances	43.9	\$1051	29%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$360	10%
Total		\$3653	100%

This home meets or exceeds the minimum criteria for all of the following:

TITLE

Company

Address

City, State, Zip

Phone #

Fax #



CITY OF SAINT PAUL
Christopher B. Coleman, Mayor

375 Jackson Street, Suite 220
Saint Paul, Minnesota 55101-1806

Telephone: 651-266-8989
Facsimile: 651-266-9124
Web: www.stpaul.gov/dsi

Code Compliance Report

August 22, 2012

Housing and Redevelopment Authority of St Paul
25 4th St W Unit 1100
Saint Paul MN 55102-1634

**** This Report must be Posted
on the Job Site ****

Re: 677 York Ave
File#: 12 071585 VB2

Dear Property Owner:

The following is the Code Compliance report you requested on July 26, 2012.

Please be advised that this report is accurate and correct as of the date August 22, 2012. All deficiencies identified by the City after this date must also be corrected and all codes and ordinances must be complied with. This report is valid for 365 days from August 22, 2012. This report may be used in lieu of a Truth in Housing Report required in St Paul Legislative Code 189. This building must be properly secured and the property maintained at all times.

In order to sell or reoccupy this property the following deficiencies must be corrected:

BUILDING **Inspector: Jim Seeger** **Phone: 651-266-9046**

- Remove mold, mildew and moldy or water damaged materials.
- Install handrails (34 inches - 38 inches above each nosing) and guardrails (36 inch minimum) at all stairways, and return hand rail ends into a newel post or wall per attachment.
- Repair or Replace any deteriorated window sash, broken glass, sash holders, re-putty, etc as necessary.
- Provide complete storms and screens, in good repair for all door and window openings.
- Provide functional hardware at all doors and windows
- Exit doors shall be capable of being opened from the inside, easily and without the use of a key. Remove all surface bolts.
- Weather seal exterior doors, threshold and weather-stripping.
- Prepare and paint interior and exterior as necessary. Observe necessary abatement procedures (EPA, MPCA and St. Paul Legislative Code, Chapter 34 for additional information) if lead base paint is present.
- Provide major clean-up of premises.
- Repair siding, soffit, fascia, trim, etc. as necessary.
- Provide proper drainage around house to direct water away from foundation of house.

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BUILDING **Inspector: Jim Seeger** **Phone: 651-266-9046**

- Any framing members that required repair or do not meet code (where wall and ceiling covering is removed, members that are over-spanned, over-spaced, not being carried properly, door and window openings that are not adequately supported, etc.) are to be reconstructed in an approved manner.
- Provide fire block construction as necessary and seal chases in basement ceiling.
- Install Smoke Detectors/Carbon Monoxide Detectors per MN Conservation Code and the MN Dept. of Labor and Industry: Install per code where feasible.
- Provide proper drainage around house to direct water away from foundation of garage.
- Install rain leaders to direct drainage away from foundation.
- Review all applicable codes & policies when replacing windows including egress windows for sleeping rooms.
- Remove trees which are against foundation of home and garage.
- Openings in stair risers must be less than 4 inches.
- Grade must drain away from foundation of dwelling. Maintain 6 inch clearance between wood and soil.
- Remove or repair rear chimney on back of house roof.
- Remove tread cushions from west side deck and steps and from front steps.
- Replace front steps risers not uniform and install handrail at front steps to code.
- Provide ladder for basement front egress window.
- Install tempered glass in front stair sidewall window.
- Remove wood and parts from tree from rear section of house and check for roof damage.
- A building permit is required to correct the above deficiencies.

ELECTRICAL **Inspector: Randy Klossner** **Phone: 651-266-8989**

- Ground the electrical service to the water service with a copper conductor within 5 feet of the entrance point of the water service
- Bond around water meter with a copper wire sized for the electrical service per Article 250 of the NEC
- Properly strap cables in basement
- Repair or Replace all broken, missing or loose light fixtures, switches and outlets, covers and plates
- Install hard-wired, battery backup smoke detector per bulletin 80-1 and other smoke detectors as required by the IRC. Also, Install carbon monoxide detector(s) within 10 feet of all bedrooms
- Remove and or/ re-wire all illegal, improper or hazardous wiring in garage. No access.
- Replace all painted-over receptacles.
- All added receptacles must be grounded, tamper-resistant and be on an Arc-Fault Circuit Interrupter-protected circuit.
- Any open walls or walls that are opened as part of this project must be wired to the standards of the current NEC.
- All buildings on the property must meet the St. Paul Property Maintenance Code (Bulletin 80-1).

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ELECTRICAL **Inspector: Randy Klossner** **Phone: 651-266-8989**

- All electrical work must be done by a Minnesota-licensed electrical contractor under an electrical permit.

PLUMBING **Inspector: Rick Jacobs** **Phone: 651-266-9054**

- Basement - Water Heater - Vent must be in chimney liner (IFGC 501.12)
- Basement - Water Heater - not fired or in service (MPC 2180)
- Basement - Water Meter - meter is removed or not in service (MPC 4715.1700)
- Basement - Water Meter - meter needs repair or is broken
- Basement - Water Meter - raise meter to a minimum 12 inches above floor (MPC 2280)
- Basement - Water Meter - support meter properly (MPC 2280)
- Basement - Water Piping - provide water piping to all fixtures and appliances (MPC 1700)
- Basement - Water Piping - repair or replace all corroded, broken or leaking piping (MPC 4715.1720)
- Basement - Water Piping - run 1 inch water line from meter to first major take off (SPRWS Water Code)
- Basement - Soil and Waste Piping - no front sewer clean out (MPC 1000)
- Basement - Soil and Waste Piping - replace the floor drain cover or clean out plug (MPC 1300)
- First Floor - Sink - Remove drinking fountain connection. Refrigerator water connection is incorrect.
- First Floor - Toilet - remove hand held located by toilet.
- First Floor - Gas Piping - range gas shut off; connector or piping incorrect (IFGC 411 1.3.3)
- First Floor - Tub and Shower - Provide access (MPC 0900)
- First Floor - Tub and Shower - faucet is missing, broken or parts missing (MPC 0200. P.)
- First Floor - Tub and Shower - incorrectly vented (MPC 2500)
- First Floor - Tub and Shower - provide stopper (MPC 1240)
- First Floor - Tub and Shower - waste incorrect (MPC 2300)
- Second Floor - Lavatory - faucet is missing, broken, or parts missing (MPC 0200.P.)
- Second Floor - Tub and Shower - provide anti-scald valve (MPC 1380. Subp. 5)
- Exterior - Piping Vents - vent pipes required (MPC 0200.E.) also verify proper full size vent carried undiminished in size through thru roof with the proper flashing.
- Comments: - Basement fireplace venting and gas are incorrect. Remove any unused waste, vent, water and gas piping to the main and cap or plug to code.
- Obtain plumbing permits prior to commencement of work.

HEATING **Inspector: Maureen Hanson** **Phone: 651-266-9043**

- Clean and Orsat test both furnace burners. Check all controls for proper operation. Check furnace heat exchangers for leaks; provide documentation from a licensed contractor that the heating units are safe.
- Install approved metal chimney liner for south furnace.
- Vent clothes dryer to code
- Provide adequate combustion air and support duct to code

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HEATING **Inspector: Maureen Hanson** **Phone: 651-266-9043**

- Provide support for gas lines to code
- Plug, cap and/or remove all disconnected gas lines
- Provide a window in the bathrooms with an aggregate glazing area of not less than 3 square feet, one-half of which must be operable or provide exhaust system vented to outside. A mechanical ventilation permit is required if an exhaust system is installed.
- All supply and return ducts for warm air heating system must be clean before final approval for occupancy. Provide access for inspection of inside of ducts or provide documentation from a licensed duct-cleaning contractor that the duct system has been cleaned.
- Repair and/or replace heating registers as necessary
- Provide heat in every habitable room and bathrooms
- Install basement fireplace to code or remove and seal all openings.
- Mechanical gas permit is required for the above work.

ZONING

1. This property is in a(n) RT1 zoning district.
2. This property was inspected as a Single Family Dwelling.

Notes:

- See attachment for permit requirements and appeals procedure.
- Most of the roof covering could not be inspected from grade. Recommend this be done before rehabilitation is attempted.

This is a registered vacant building. In order to sell or reoccupy this building, all deficiencies listed on this code compliance report must be corrected in accordance with the Minimum Housing Standards of the St. Paul Legislative Code (Chapter 34) and all required permits must receive final approval within six (6) months of the date of this report. One (1) six-month time extension may be requested by the owner and will be considered if it can be shown that the code compliance work is proceeding and is more than fifty (50) percent complete in accordance with Legislative Code Section 33.03(f).

You may file an appeal to this notice by contacting the City Clerk's Office at 651-266-8688. Any appeal must be made in writing within 10 days of this notice. (You must submit a copy of this notice when you appeal, and pay a filing fee.) If you have any questions regarding this inspection report, please contact Jim Seeger between 7:30 - 9:00 AM at 651-266-9046 or leave a voice mail message.

Sincerely,

James L. Seeger, Code Compliance Officer
Phone: 651-266-9046
JLS:ml

Email: james.seeger@ci.stpaul.mn.us
Attachments

SECTION 00 0101
PROJECT TITLE PAGE

677 YORK AVE. SPECIFICATION

REVIEW SET 3/01/13



**INVEST SAINT PAUL INITIATIVE
NEIGHBORHOOD STABILIZATION PROGRAMS
AND REBUILDING PLAN 2009-2013**

OWNER

The Housing and Redevelopment Authority of Saint Paul, Minnesota
25 West Fourth Street, Saint Paul, MN 55102, Suite 1100
Marty McCarthy
(651) 266-6552
marty.mccarthy@ci.stpaul.mn.us

HRA Scope Writer

Paul Ormseth, LLC
423 Landmark Center, 75 West 5th Street, Saint Paul, MN 55102
Paul Ormseth
(612) 715-5020
paulormseth@gmail.com

HRA Construction Manager

Paul Ormseth, LLC
423 Landmark Center, 75 West 5th Street, Saint Paul, MN 55102
Paul Ormseth
(612) 715-5020
paulormseth@gmail.com

SECTION 00 0110
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PROCUREMENT AND CONTRACTING REQUIREMENTS

Division 00 Procurement and Contracting Requirements

00 0101	Project Title Page
00 0110	Table of Contents
00 4002	HRA Bid Invitation
00 4003	HRA Instructions to Bidders
00 4101	HRA Bid Submission Documents
00 4102	Line Item Bid Sheet

SPECIFICATIONS

Division 01 General Requirements

01 0010	HRA General Requirements
01 2000	Price and Payment Procedures
01 6000	Product Requirements
01 6116	Volatile Organic Compound (VOC) Content Restrictions
01 7000	Execution Requirements
01 7419	Construction Waste Management and Disposal
01 7700	Closeout Procedures and Submittals
01 8113	Sustainable Design Requirements

Division 02 Existing Conditions

02 4100	Demolition
02 8200	Asbestos Remediation
02 8313	Lead Hazard Control Activities

Division 03 Concrete

03 3000	Cast in Place Concrete
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Division 04 Masonry

04 0100	Maintenance of Masonry
04 2300	Glass Unit Masonry

Division 06 Wood, Plastics, and Composites

06 1000	Rough Carpentry
06 2000	Finish Carpentry

Division 07 Thermal and Moisture Protection

07 2113	Rigid Foam Insulation
07 2119	Foamed-In-Place Insulation
07 2126	Blown Insulation
07 2500	Weather Barriers
07 2700	Air Barrier System (sealing of bypasses)
07 3113	Asphalt Shingles
07 4633	Plastic Siding
07 5200	Membrane Roofing
07 6200	Sheet Metal Flashing and Trim

07 7123	Manufactured Gutters and Downspouts
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08 0150	Restoration and Maintenance of Windows
08 1429	Wood Doors
08 1613	Fiberglass Doors
08 3323	Residential Overhead Doors
08 5169	Metal Storm Windows
08 5313	Vinyl Windows
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09 0120	Repair of Plaster and Gypsum Board
09 0160	Hardwood Flooring Restoration
09 2116	Gypsum Board Assemblies
09 3000	Tiling
09 9000	Painting and Coating
09 9723	Concrete and Masonry Coatings
Division 10 Specialties	
10 5623	Closet Storage Shelving
Division 11 Equipment	
11 3100	Residential Appliances
Division 12 Furnishings	
12 1110	Mailbox and House Numbers
12 1111	Bathroom Furnishings
12 3530	Residential Casework
Division 22 Plumbing	
22 3000	Plumbing Equipment
22 4000	Plumbing Fixtures and Piping
Division 23 Heating, Ventilating, and Air-Conditioning	
23 0000	Residential Ventilation
23 5400	Forced Air Furnace and Ducts
23 6213	Forced Air A/C
Division 26 Electrical	
26 0001	Power, Wiring and Devices
26 5101	Lighting
Division 28 Electronic Safety and Security	
28 1600	Intrusion Detection
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31 2200	Grading
Division 32 Exterior Improvements	
32 1313	Concrete Paving
32 9223	Sodding
32 9300	Plants

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**SECTION 00 4002
HRA BID INVITATION**

PART 1 GENERAL

1.01 CONTACT TRANSLATION

- A. In Hmong - Ceeb toom. Yog koj xav tau kev pab txhais cov xov no rau koj dawb, Amy Filice 651-266-6568;
- B. In Spanish - Atención. Si desea recibir asistencia gratuita para traducir esta información, llame a Amy Filice 651-266-6568;
- C. In Somali - Ogow. Haddii aad dooneyso in lagaa kaalmeeyo tarjamadda macluumaadkani oo lacag la' aan wac, Amy Filice 651-266-6568.

1.02 PROJECT SUMMARY

- A. Project description: This is a Residential Renovation project located at 677 York Ave. This project is funded by Neighborhood Stabilization Program through the Housing and Redevelopment Authority of Saint Paul, Minnesota. This project is not required to conform to Federal and/or Little Davis Bacon requirements.

1.03 NOTICE TO PROSPECTIVE BIDDERS

- A. These documents constitute an invitation to bid to General Contractors for the construction of the project described within this bid manual.

1.04 OWNERSHIP INFORMATION

- A. The Owner, The Housing and Redevelopment Authority of Saint Paul, Minnesota, hereinafter, referred to as Owner.
- B. Owner's Project Manager: Marty McCarthy
Address: 25 West Fourth Street, Saint Paul, MN 55102, Suite 1100
Phone Number: (651) 266-6552
Email: marty.mccarthy@ci.stpaul.mn.us

1.05 OWNER'S CONSULTANT(S)

- Owner's Project Specification Consultant: Paul Ormseth, LLC
- 1. Specification Writer's Name: Paul Ormseth
 - 2. Address: 423 Landmark Center, 75 West 5th Street, Saint Paul, MN 55102
 - 3. Phone Number: 612.715.5020
Email: paulormseth@gmail.com
- A. Owner's Construction Manager Consultant: Paul Ormseth, LLC
 - 1. Construction Manager's Name: Becca Hine
 - 2. Address: 423 Landmark Center, 75 West 5th Street, Saint Paul, MN 55102
 - 3. Phone: 612.715.5020
 - 4. Email: paulormseth@gmail.com

1.06 IMPORTANT BID DATES

- A. Bids Issued:
- B. Mandatory Pre-Bid Site Tour:
- C. **BID DUE DATE ON OR BEFORE:**
- D. Bid Delivery Location: The offices of The Housing and Redevelopment Authority of Saint Paul, Minnesota
Address: 25 West Fourth Street, Saint Paul, MN 55102, Suite 1100
Suite: 1100
- E. Public Bid Opening and Location: _____ at the Housing and Redevelopment Authority of Saint Paul, Minnesota
Address: 25 West Fourth Street, Saint Paul, MN 55102, Suite 1100

- F. Executed Contract: Within 30 days of the bid award.
- G. Construction Start Date (Approximate): ASAP after contract execution
- H. Construction Completion Date: 150 days from the time of issued Notice to Proceed.

1.07 RIGHTS RESERVED BY THE OWNER

- A. The owner reserves the right to:
 - 1. Reject all bids received in response to this Bid Invitation, and at the Owner's discretion, issue a new Bid Invitation.
 - 2. Amend any portion of this Bid Invitation and disseminate such amendments to potential bidders in the same manner as the original Bid Invitation (eg newspaper, online posting). Bidders will be responsible for meeting the requirements of all amendments.
 - 3. Waive any minor irregularities in bids received.
 - 4. Disapprove any subcontractor proposed to be used by a bidder based on the subcontractor not being a responsible subcontractor and/or being on a debarment list.
 - 5. Select more than one bidder to perform various elements of the Project.

END OF BID INVITATION

SECTION 00 4003
HRA INSTRUCTIONS FOR BIDDERS

PART 1 GENERAL BID DIRECTIONS

1.01 Each Bidder shall fully inform him / herself and any subcontractors prior to bidding as to all existing conditions and limitations including compliance requirements under which the work is to be performed and shall include in the bid a sum to cover the cost of all items necessary to perform the work as set forth in the Bid Project Manual. The submission of a bid shall be construed as conclusive evidence that the Bidder has made such examination.

1.02 Bid Forms

- A. The Bid Submission forms are available online at <http://www.stpaul.gov/nsp>.
- B. Each bid must be submitted on the Bid Submission forms identified in the provided checklist. It is expected that the Contractor retain a copy of their entire submittal for their records. The copy of the bid submitted must be signed at every place that a signature is requested.

1.03 Corrections

- A. Erasures or other changes in the bid must be dated and initialed over the signature of the bidder.

1.04 Bid Envelope

- A. Place bid in envelope with the contractor name and address in the upper left-hand corner as the return address, and list the property address in the middle of the envelope as the addressee. Seal envelope.

1.05 Interpretations of Scope of Work

- A. Every request for an interpretation shall be in writing, unless otherwise documented by the Specification Writer. Questions will be taken until 3 days before bids are due.
- B. Interpretations will be in the form of an addenda which will be on file at the website, and in the offices of the Specification Writer at least three calendar days before bids are opened.
- C. It shall be the bidder's responsibility to make inquiry as to addenda issued.
 - 1. All such addenda shall become a part of the contract and all bidders shall be bound by such addenda.

1.06 Conflict with Documents

- A. When a conflict arises between the Drawings or the Scope of Work, the Drawings shall govern.

1.07 Materials Approved:

- A. Where items of equipment and material are specifically identified herein by a trade name, model or catalog number, only such specified items may be used in the base bid.
- B. Contractors desiring approval of substitute products may submit data cut sheets and product information for approval during the bidding cycle.
- C. Contractors will be notified only by addendum of additional approved products.
- D. Material identifications made in work specifications are considered as minimal quality for acceptance in bidding and installation.

1.08 Allowances:

- A. The Contractor shall include in the bid proposal the cash allowances listed.
- B. Unless otherwise indicated, the lump sum amount shall be for the material / product.
- C. Labor to install the material / product must be submitted separately.

1.09 Alternates:

- A. The Contractor must submit bids for each alternate listed in the Alternates List.

- B. If pricing is not listed for Alternates the bid may be disqualified.

1.10 Time for Receiving Bids:

- A. Bids are to be delivered to the HRA's office.
- B. Bids received prior to the time of opening will be securely kept.
- C. Bids received by phone or fax will not be considered.
- D. Modification of bids already submitted will be considered if received prior to the hour set for receiving the bids and written confirmation of such modification - with the signature of the bidder - is placed in the mail and postmarked and / or delivered to the HRA prior to the time set for bid opening.

1.11 Opening of Bids:

- A. At the time and place fixed for the opening of bids, every bid received within the time fixed for receiving bids will be opened irrespective of any irregularities.
- B. The opening of the bids will be an "open process" (open to the public).

1.12 Withdrawal of Bids:

- A. Bids may be withdrawn in writing, by phone, or by fax prior to the time fixed for opening; provided that written confirmation of any phoned or faxed withdrawal is placed in the mail and postmarked and / or delivered prior to the time set for bid opening.
- B. Negligence on the part of the bidder in preparing their bid confers no right of withdrawal or modification of his bid after such bid has been opened.

PART 2 BID ANALYSIS PROCESS

2.01 Contractor Selection Date: Earliest Practical Date

- A. This project is funded by the Neighborhood Stabilization Program (NSP), a federal stimulus program created to rehabilitate vacant housing or construct new housing on vacant lots within targeted areas of the City of Saint Paul.
- B. The Housing and Redevelopment Authority of Saint Paul, Minnesota reserves the right to check the qualifications of contractors for each project; previous experience working on projects with the Housing and Redevelopment Authority of Saint Paul, Minnesota, will not automatically deem a contractor qualified.

2.02 Minimum Contractor Qualifications

- A. Please note the following minimum qualifications that apply to all bidders:
 - 1. **Quality Workmanship and Qualifications**
 - a. Three references from jobs with similar work (include on Contractor Qualification form)
 - b. Two financial references (included on Contractor Qualification Form)
 - c. At least 2 years of experience as a General Contractor (HRA will verify--provide GC license number in the bid documents)
 - d. Review of standing with Secretary of State, Federal Excluded Parties list, City of Saint Paul Debarment list, Department of Labor and Industry, Better Business Bureau (HRA will verify)
 - e. Houses with historic features or located within a historic district may require demonstration of quality workmanship for historic renovation at the discretion of HRA staff.
 - 2. **Financial Capacity**
 - a. Demonstrated ability to pay two months of construction costs for each project awarded (these amounts are added together if more than one project is under construction). Financial capacity documentation must be in the name of the General Contractors organization or the principal of that organization.
 - 1) For a 120 day project, the contractor shall demonstrate the ability to pay 50% of bid amount.

- 2) For a 90 day project, the contractor shall demonstrate the ability to pay 65% of the bid amount.
- 3) Demonstration of capacity can be in the form of:
 - (a) Line of credit from banking or lending institution
 - (b) Cash balances from banking or lending institution
3. **Ability to Perform**
 - a. Up-to-date submittals to Affirmative Action, Section 3, and Vendor Outreach programs.
 - b. Adherence to timelines confirmed from professional references.
 - c. Use of certified subcontractors for environmental remediation including:
 - 1) Insulation: contractor must be on Xcel Energy approved contractor list
 - 2) Asbestos: contractor must be certified for asbestos removal by the State of Minnesota
 - 3) Lead: either general contractor or subcontractor must be certified for lead abatement by the State of Minnesota
 - 4) Radon: contractor must be on Minnesota Department of Health approved radon mitigation list.
4. **Bid Award Policy**
 - a. Contractors that meet the criteria for qualification above, yet have not worked with The Housing and Redevelopment Authority of Saint Paul, Minnesota on a Neighborhood Stabilization Program project previously will initially be awarded one house, even if the contractor is low bidder for more than one house.
 - b. Once the contractor demonstrates quality workmanship, financial capacity, and ability to perform timely completion, they may be awarded more than one house at the same time for subsequent bids on a case-by-case basis.
5. **Other Qualifications**
 - a. Each property has its own unique characteristics and challenges. Variables include items relating to environmental conditions, historic nature of structures, etc.
 - b. Depending on the specific property , there may be other qualifications needed by the bidder which will be specified by the HRA in its request for bids.

PART 3 POST AWARD REQUIRMENTS

3.01 CONSTRUCTION CONTRACT REQUIRMENTS

- A. The bidder agrees that, if selected by the HRA, the bidder will enter into a contract with the HRA no later than 30 calendar days from bid award and will submit the following information to the HRA as a condition to entering into that contract; refer to Bid Rehab Manual for attachments:
 1. Certificates of Insurance as required by the Construction Contract and proof of Insurance and Bonding.
 2. Final Sworn Construction Statement Affidavit and Sworn Construction Statement that list contractors, material suppliers, and subcontractors, who will work under the contract and the cost of their work.
 3. Proof of a valid license as a Residential builder in the State of Minnesota and proof of valid licenses as required by the City of Saint Paul for work to be done.
 4. Bidders may be required to submit payment and performance bonds as a condition of the construction contract. Verify with Scope Writer prior to submitting bid.
 5. Proof of compliance with requirements attached for Affirmative Action, Vendor Outreach Program, and Section 3, including an Acknowledgement and Final Section 3 Action Plan.
 6. Construction Schedule must be submitted to the Insert Construction Management Firm Name to enter into the Contract.
- B. Attendance of a Pre-Construction Conference
 1. The selected Contractor and all Subcontractors will be required to attend a Pre-Construction Conference.

2. Time, date, and place of the Pre-Construction Conference will be announced by the Insert Construction Management Firm Name and/or HRA.
- C. Computerized System for Compliance Tracking and Reporting:
 1. The Contractor is required to use the B2Gnow/LCPtracker reporting system. Refer to attachment.

PART 3 WAGE REQUIREMENTS

4.01 The following are wage requirements associated with this Projects

- A. Federal Davis-Bacon and/or Little Davis-Bacon Wages are not required for this project.

END OF SECTION

**SECTION 00 4101
HRA BID SUBMISSION DOCUMENTS**

SECTION 1 GENERAL

1.01 BID SUBMISSION DOCUMENTS, LOCATED AT [HTTP://WWW.STPAUL.GOV/NSP](http://www.stpaul.gov/nsp)

- A. Bid Submittal Checklist
- B. Bid Cover Sheet
- C. Bid Proposal and Non-Collusive Affidavit
- D. Preliminary Section-3 Action Plan
- E. Contractor Application / Statement of Qualifications
- F. Itemized Cost Breakdown and Scope of Work Bid (Section 004102)

END OF SECTION

**SECTION 00 4102
LINE ITEM BID SHEET**

PART 1 MANUAL BID SHEET - LINE ITEM BREAKDOWN OF WORK

DIVISION 01 - GENERAL REQUIREMENTS

01 0010 – HRA General Requirements \$ _____

DIVISION 02 - EXISTING CONDITIONS

02 4100 - Demolition \$ _____

02 8313 - Lead Hazard Control Activities \$ _____

DIVISION 03 - CONCRETE

03 3000 - Cast in Place Concrete \$ _____

DIVISION 04 - MASONRY

04 0100 - Maintenance of Masonry \$ _____

04 2200 - Concrete Unit Masonry \$ _____

04 2300 - Glass Unit Masonry \$ _____

DIVISION 06 - WOOD, PLASTICS AND COMPOSITES

06 1000 - Rough Carpentry \$ _____

06 2000 - Finish Carpentry \$ _____

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

07 2113 - Rigid Foam Insulation \$ _____

07 2119 - Foamed-In-Place Insulation \$ _____

07 2126 - Blown Insulation \$ _____

07 2500 - Weather Barriers \$ _____

07 2700 - Air Barrier System \$ _____

07 3113 - Asphalt Shingles \$ _____

07 4633 - Plastic Siding \$ _____

07 5200 - Membrane Roofing \$ _____

07 6200 - Sheet Metal Flashing and Trim \$ _____

07 7123 - Manufactured Gutters and Downspouts \$ _____

DIVISION 08 - OPENINGS

08 0150 - Restoration and Maintenance of Windows \$ _____

08 1429 - Wood Doors \$ _____

08 1613 - Fiberglass Doors \$ _____

08 3323 - Overhead Garage Door \$ _____

08 5169 - Metal Storm Windows \$ _____

08 5313 - Vinyl Windows \$ _____

DIVISION 09 - FINISHES

09 0120 - Repair of Plaster and Gypsum Board \$ _____

09 0160 - Hardwood Flooring Restoration \$ _____

09 2116 - Gypsum Board Assemblies \$ _____

09 3000 - Tiling	\$ _____
09 9000 - Painting and Coating	\$ _____
09 9723 - Concrete and Masonry Coatings	\$ _____
DIVISION 10 - SPECIALTIES	
10 5623 - Closet Storage Shelving	\$ _____
DIVISION 11 - EQUIPMENT	
11 3100 - Residential Appliances	\$ _____
DIVISION 12 - FURNISHINGS	
12 1110 - Mail Box and House Numbers	\$ _____
12 1211 - Bathroom Furnishings	\$ _____
12 3530 - Residential Casework	\$ _____
DIVISION 22 - PLUMBING	
22 3000 - Plumbing Equipment	\$ _____
22 4000 - Plumbing Fixtures and Piping	\$ _____
DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING	
23 0000 - Residential Ventilation	\$ _____
23 5400 - Forced Air Furnace and Ducts	\$ _____
23 6213 - Forced Air A/C	\$ _____
DIVISION 26 - ELECTRICAL	
26 1001 - Power, Wiring and Devices	\$ _____
26 5101 - Lighting	\$ _____
DIVISION 28 - ELECTRONIC SAFETY AND SECURITY	
28 1600 - Intrusion Detection	\$ _____
DIVISION 31 - EARTHWORK	
31 2200 - Grading	\$ _____
DIVISION 32 - EXTERIOR IMPROVEMENTS	
32 1313 - Concrete Paving	\$ _____
32 9223 - Sodding	\$ _____
32 9300 - Planting	\$ _____

END OF SECTION

SECTION 01 0010
HRA GENERAL REQUIREMENTS

PART 1 GENERAL

1.01 CONTRACTOR'S RESPONSIBILITY

- A. All labor, material, supplies, tools, or other costs or items needed for complete construction of the project, including permits, temporary facilities, safety, security and utilities during construction, are the responsibility of the Contractor.
- B. The General Contractor and each Subcontractor shall inspect the existing conditions that affect its work before starting. Commencing work signifies acceptance of the previous work. All measurements and dimensions indicated in the Drawings and Specifications are to be verified prior to bid submittal and construction.
- C. The General Contractor is responsible for maintenance of the lawn and landscaping, clean up and disposal of fallen leaves and snow removal during the winter. This responsibility begins at the issuance of the notice to proceed and ends with approval of Final Completion.
- C. The General Contractor shall be responsible for the coordination of all subcontractors working on, or furnishing material for use on this project. In addition, the General Contractor shall be responsible for the coordination of all work performed under separate contracts.

1.02 CONTRACTOR'S USE OF PREMISES

- A. During the construction period the General Contractor and its Subcontractors shall have full use of the premises for construction operations, including use of the site. All use of the site shall be under control and supervision of the General Contractor.
- B. General Contractor and its Subcontractors will be limited to construction work between the hours of 7:00 am and 6:00 pm on weekdays and 8:00 am to 4:00 pm on Saturday. Work at any other times will be allowed only with the Owner's and Project Manager's consent.

1.03 MATERIALS & MATERIAL STORAGE

- A. The General Contractor shall provide all materials, hardware, and fixtures required to accomplish the Scope of Work, unless otherwise indicated.
- B. The General Contractor shall use materials specified throughout unless approved in writing by Owner and Project Manager before ordering and installing.
- C. The General Contractor is responsible for verification of all measurements. Materials transported to the job site and stored are the General Contractor's responsibility until installed and accepted by the Owner and Project Manager.
- D. The General Contractor shall deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
- E. Damaged or stolen materials and equipment must be replaced as part of the work at no additional cost to the Owner. Damaged property that is removed shall belong to the General Contractor, unless otherwise stated in writing.

PART 2 PERFORMANCE REQUIREMENTS

2.01 ENERGY and RESOURCE CONSERVATION, see Section 01 8113 SUSTAINABLE DESIGN REQUIREMENTS

PART 3 PRICE AND PAYMENT PROCEDURES

3.01 SCHEDULE OF VALUES

- A. Form to be used: Sworn Construction Statement.

3.02 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.

- B. Execute certification/pay application by signature of authorized officer.
- C. Submit two copies of each Application for Payment to Construction Manager.

PART 4 CONTRACT MODIFICATION PROCEDURES

4.01 HRA WINTER WORK POLICY

- A. The Housing and Redevelopment Authority of the City of St. Paul (HRA) recognizes that there are weather related exterior items that cannot be completed in winter conditions ("Weather Conditional Work"), including but not limited to:
 - 1. Exterior painting
 - 2. Sod
 - 3. Foundation plantings
 - 4. Rain garden installation
 - 5. Concrete sidewalks, steps, landings, curbs, garage slabs, and asphalt driveways
- B. The HRA defines winter conditions as "temperatures consistently below a high of 50 degrees Fahrenheit". Winter conditions are typically in effect from November 15th through April 15th each year, although there is potential for an earlier or later start and end date depending on weather.
- C. In the case of NSP homes where a notice to proceed is issued between October and February, the time parameter of winter conditions could mean that the entire timeline for construction completion (typically 90-120 days) is within winter conditions.
- D. It is the responsibility of the contractor to communicate, to the Owner, the exterior line items in the scope of work that are Weather Conditional Work as a component of the timeline submission required prior to issuance of a notice to proceed.
- E. Contractors are also responsible for ensuring that all Weather Conditional Work is completed within the manufacturer's or industry standards recommended temperature range.
- F. The Contractor is responsible for prioritizing Weather Related Work when winter conditions are not present, in order to complete the house within the construction timeline whenever possible.
- G. The HRA's objective is to ensure that remodeling work on NSP projects is substantially complete within the timeline for construction completion (90-120 days) so that the project can be issued a certificate of occupancy and sold to a new homeowner; the contractor is responsible for ensuring that temporary, structurally sound solutions are implemented when Weather Related Work will effect the ability to secure a Certificate of Occupancy.
- H. In the event that winter conditions are present throughout the 120 day construction contract period, the HRA will escrow 1 and 1/2 times the cost for Weather Conditional Work (150%), to be completed within 30 days of the end of winter conditions.

4.02 SUBSTITUTIONS

- A. Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the General Contractor after award of the Contract are considered to be requests for substitutions.
- B. Submit requests according to procedures required for change-order proposals.
- C. Substitution requests shall include a complete list of changes or modifications needed in the Scope of Work in order to accommodate the proposed substitution.
- D. Provide samples and product data, including drawings and descriptions of products as well as fabrication and installation procedures, where applicable or where requested by the Owner or Project Manager.
- E. Indicate the substitution's effect on the Contractor's Construction Schedule, if any. Indicate cost information, including a proposal of the net change, if any, in the Contract Sum. Acceptance will be in the form of a written Change Order signed by the Owner and Project Manager.

PART 5 COMPLIANCE INFORMATION AND REQUIREMENTS

5.01 See HRA NSP website for compliance requirements.

- A. <http://www.stpaul.gov/nsp>
- B. Review the document labeled: Section II - Compliance Information and Requirements.
 - 1. It contains additional information on:
 - a. Insurance
 - b. B2Gnow/LCP Tracker, Contract Compliance Monitoring System
 - c. Vendor Outreach Program
 - d. Affirmative Action
 - e. Sustainable Green Policy
 - f. Section 3
 - g. Two Bid Policy
 - h. Limited English Policy
 - i. Xcel Energy Participating Contractors' List
 - j. Radon Mitigation Contractors' List

5.02 SECURITY PROCEDURES

- A. General Contractor is responsible for maintaining security of the site, including:
 - 1. locking buildings at the end of each work day;
 - 2. boarding window or door openings;
 - 3. installing security fencing;
 - 4. providing temporary barricades, bracing or railings;
 - 5. and any other work or facilities necessary to maintain a safe and secure site, including compliance with all health, safety, building, and other codes and laws.
- B. Any tools or materials or other property stored on the site prior to installation are the responsibility of the General Contractor and its Subcontractors are responsible for insuring their own such property against loss by theft or other cause.

5.03 JOB CONDITIONS

- A. The General Contractor shall notify the Owner and Project Manager of repair not covered in the Scope of Work that is necessary for satisfactory completion of the Project.
- B. Defects that become evident as work progresses shall be reported not concealed.
- C. Ensure safe passage of all employees during the course of demolition or other persons as necessary by erecting barriers, bracing, or other temporary supports as required.

5.04 SAFETY AND CLEAN UP

- A. The General Contractor must keep the site clean at all times during construction.
- B. In no event can debris be stored outside overnight unless it is inside a dumpster.
- C. All floors are to be picked up and kept broom clean at the end of the work day.
- D. No combustible debris shall be thrown, stored, or burned on the property, adjacent parcels, sidewalks, streets, or alleys.
- E. Debris created from work at the property must be disposed of immediately.
- F. Any debris caused by the General Contractor or its Subcontractor shall be removed from the work area in the General Contractor's containers and disposed of off site by the General Contractor.

PART 6 SPECIAL PROCEDURES

6.01 ASBESTOS ABATEMENT, see Asbestos Remediation Section 02 8200

6.02 VOLATILE ORGANIC COMPOUND CONTENT RESTRICTIONS, see Section 01 6116

6.03 LEAD BASED PAINT, see Lead Hazard Control Activities Section 02 8313

6.04 WASTE MANAGEMENT, see section 01 7419

PART 7 SUBMITTALS

7.01 GENERAL

- A. Coordinate preparation and processing of submittals with performance of construction activities.
- B. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
- C. Prior to submitting any samples and product data, contractor shall review and approve data for compliance with project requirements. Contractor shall stamp data and shop drawings as approved by its entity before submitting to Construction Manager for review.
- D. Submit product data for review in triplicate (one each to be retained by Construction Manager and Owner, and one returned after review to Contractor)
- C. Provide the following submittals required for performance of the Work, including the following:
 - 1. Administrative Submittals.
 - 2. Construction Schedule
 - 3. Samples/Product Data.

7.02 ADMINISTRATIVE SUBMITTALS

- A. Provide as required in the Contract Documents. Such submittals include, but are not limited to, the following:
 - 1. Sworn Construction Statement
 - 2. Required permits.
 - 3. Applications for Payment.
 - 4. Insurance certificates.
 - 5. List of subcontractors.
 - 6. Proof of qualifications for Asbestos and Lead remediation

7.03 CONSTRUCTION SCHEDULE

- A. A construction schedule must be submitted to the Owner and Project Manager with the bid, unless requested otherwise in writing. Construction shall be completed within 120 days of notice to proceed.

7.04 SAMPLES, PRODUCT DATA AND SHOP DRAWINGS:

- A. Submit Samples as specified to be physically identical with the material or product proposed.
- B. Samples include partial sections of manufactures or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
- C. Provide product samples, product data and/or shop drawings for the following where included in the scope of work and for any other requirements mentioned in the specifications or drawings:
 - 1. Paint colors
 - 2. Stucco sample
 - 3. Windows
 - 4. Doors and hardware
 - 5. Kitchen cabinets product data and shop drawings
 - 6. Plumbing fixtures
 - 7. Lighting fixtures
 - 8. Stair railings
 - 9. Tile
 - 10. Interior trim samples

11. Exterior trim and siding samples (garage)
12. Window order
13. Sketch site plan showing areas of yard to be disturbed by equipment and location of materials storage.

END OF SECTION

SECTION 01 2000
PAYMENT PROCEDURES

PART 1 GENERAL

1.01 PAYMENT DOCUMENTS

- A. All documents required to create a complete Payment Application can be downloaded from <https://sites.google.com/site/nspconstructiondocs/>
- B. Payment Application form to be used: Application and Certificate for Payment provided by the HRA.
 - 1. Columns A, B, C should not change during the course of construction and should directly relate to the Sworn Construction Statement provided at the start of construction. As draws progress, columns D, E and F change to reflect work completed.
- C. Additional Documents to be submitted with each pay application:
 - 1. Monthly Employment Utilization (MEU) Form
 - 2. Identification of Prime and Subcontractor Form
 - a. An updated Sub ID sheet must be attached to help HR/EEO staff track subcontractor utilization.
 - 3. B2Gnow
 - a. Ensure each subcontractor is logging into the B2Gnow system and logging payments received.

1.02 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement. The Owner will process the payment within 30 days.
- B. Applications for payment must be signed by an authorized officer of the general construction firm
- C. Use data from approved Sworn Construction Statement. Provide dollar value in each column for each line item for portion of work performed .
- D. Submit one signed copy of the Application for Payment, complete with all required attachments, to the Construction Manager.

1.03 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Price or Contract Time, Construction Manager will issue instructions directly to Contractor.
- B. Execution of Change Orders: Construction Manager will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- C. After execution of Change Order, promptly revise Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Price.
 - 1. Change orders shall be listed as lump sums on the bottom of the pay application and referred to on the cover sheet.
 - 2. Include each line item of the change order as a separate line item in the pay application and the amount of the contractor adjustments.

1.04 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Price, previous payments, and sum remaining due.
- B. Additional documents:
 - 1. Final lien waivers from all subcontractors/material providers
 - 2. Monthly Employment Utilization (MEU) Form
 - 3. Project Employment Utilization (PEU) for City Funded Projects
 - 4. Lead Clearance
 - 5. NEC Certificate of Completion

6. Waste Management Plan Report
 7. Permit Sign-offs/Certificate of Code Compliance
 8. Winter Work/Weather Related Work Escrow
 9. Certificate of Substantial/Final Completion
- C. See Section 01 7700 - Closeout Procedures and Submittals, for additional information.

END OF SECTION

**SECTION 01 6000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

- A. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.

2.02 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.

2.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- C. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- D. Substitution Submittal Procedure:
 - 1. Submit two copies of request for substitution for consideration. Limit each request to one proposed substitution.
 - 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 - 3. The Construction Manager will notify Contractor in writing of decision to accept or reject request.

END OF SECTION

SECTION 01 6116
VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS

PART 1 GENERAL

1.01 SUMMARY

- A. Implement the following procedures in an effort to improve indoor air quality during Owner's occupancy.
- B. Construction Indoor Air Quality (IAQ) Management
 - 1. Provide low-emitting products

1.02 DEFINITIONS

- A. VOC-Restricted Products: All products of each of the following categories when installed or applied on-site in the building interior:
 - 1. Adhesives, sealants, and sealer coatings.
 - 2. Carpet.
 - 3. Carpet cushion.
 - 4. Resilient floor coverings.
 - 5. Wood flooring.
 - 6. Paints and coatings.
 - 7. Insulation.
 - 8. Gypsum board.
 - 9. Acoustical ceilings and panels.
 - 10. Cabinet work.
 - 11. Wall coverings.
 - 12. Composite wood and agrifiber products used either alone or as part of another product.
 - 13. Other products when specifically stated in the specifications.
- B. Interior of Building: Anywhere inside the exterior weather barrier.
- C. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- D. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.

PART 2 PRODUCTS

2.01 MATERIALS

- A. All VOC-Restricted Products: Provide products having VOC content of types and volume not greater than those specified in State of California Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions From Various Sources Using Small-Scale Environmental Chambers.
 - 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current GREENGUARD Children & Schools certification; www.greenguard.org.
 - b. Current Carpet and Rug Institute Green Label Plus certification; www.carpet-rug.org.
 - c. Current SCS Floorscore certification; www.scs-certified.com.
 - d. Current SCS Indoor Advantage Gold certification; www.scs-certified.com.
 - e. Product listing in the CHPS Low-Emitting Materials Product List at www.chps.net/manual/lem_table.htm.
 - f. Current certification by any other agencies acceptable to CHPS.
 - g. Report of laboratory testing performed in accordance with CHPS requirements for getting a product listed in the Low-Emitting Materials Product List; report must include laboratory's statement that the product meets the specified criteria.
- B. Adhesives and Joint Sealants: Provide only products having volatile organic compound (VOC) content not greater than required by South Coast Air Quality Management District Rule No.1168.
 - 1. Evidence of Compliance: Acceptable types of evidence are:

- a. Report of laboratory testing performed in accordance with requirements.
 - b. Published product data showing compliance with requirements.
 - c. Certification by manufacturer that product complies with requirements.
- C. Aerosol Adhesives: Provide only products having volatile organic compound (VOC) content not greater than required by GreenSeal GS-36.
- 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current GreenSeal Certification.
- D. Paints and Coatings applied within building waterproof envelope:
- 1. Comply with VOC Content limits (as noted in Criterion 6.1) of Green Seal Standard GS-11 "Paints," First Edition; Standard GC-03 "Anti Corrosive Paints," and MPI GPS-2-8, as follows (in grams/Liter):
 - a. Flat: 50
 - b. Non-flat: 50
 - c. Anti-Corrosive and Anti Rust: 250
 - d. Floor Coatings: 100
- E. Carpet and Adhesive: Provide products having VOC content not greater than that required for CRI Green Label Plus certification.
- 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current Green Label Plus Certification.
 - b. Report of laboratory testing performed in accordance with requirements.
- F. Carpet, Carpet Cushion, and Adhesive: Provide products having VOC content as specified in Section 09 6800.
- G. Carpet Cushion: Provide products having VOC content not greater than that required for CRI Green Label Plus certification.
- 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current Green Label Plus Certification.
 - b. Report of laboratory testing performed in accordance with requirements.
- H. Composite Wood and Agrifiber Products and Adhesives Used for Laminating Them: Provide products having no added urea-formaldehyde resins.
- 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current SCS "No Added Urea Formaldehyde" certification; www.scs-certified.com.
 - b. Published product data showing compliance with requirements.
 - c. Certification by manufacturer that product complies with requirements.
- I. Other Product Categories: Comply with limitations specified elsewhere.

PART 3 EXECUTION

3.01 GENERAL

- A. Incorporate procedures and processes during construction and prior to occupancy as described herein

END OF SECTION

SECTION 01 7000
EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 PROJECT CONDITIONS

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- C. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
- D. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
- E. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
- F. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

PART 3 EXECUTION

3.01 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Construction Manager of any discrepancies discovered.
- C. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:

3.02 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.03 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.

4. Match work that has been cut to adjacent work.
 5. Repair areas adjacent to cuts to required condition.
 6. Repair new work damaged by subsequent work.
 7. Remove samples of installed work for testing when requested.
 8. Remove and replace defective and non-conforming work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Patching:
1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

3.04 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

3.05 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.06 FINAL CLEANING

- A. Use cleaning materials that are nonhazardous.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

3.07 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
- B. Review Section 01 7700 CLOSEOUT PROCEDURES AND SUBMITTALS.
- C. Notify Construction Manager when work is considered ready for Substantial Completion.
- D. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Construction Manager's review.
- E. Notify Construction Manager when work is considered finally complete.
- F. Complete items of work determined by Construction Manager's final inspection.

END OF SECTION

SECTION 01 7419
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. HRA Policy for this project is dependent on diversion of 50 percent, by weight, of potential landfill trash/waste by recycling and/or salvage.
- D. The following recycling incentive programs are mandatory for this project; Contractor is responsible for implementation:

1.02 SUBMITTALS

- A. ACTION SUBMITTALS
 - 1. CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT(CWM) PLAN
 - a. Analysis of estimated job-site waste to be generated, including types and quantities of compostable, recyclable, and salvageable materials.
 - b. Description of means and methods to achieve 50 percent diversion requirement for compostable, recyclable, and salvageable materials, including those that may be donated to charitable organizations.
 - c. Identification of the carpet product's composition as polymer, nylon or polypropylene
 - d. Identification of recycling contractors and haulers proposed for use in the project and locations accepting construction waste materials or entities providing related services.
 - B. FINAL WASTE MANAGEMENT REPORT: General Contractor is responsible to submit at completion of construction and prior to contract close-out, in electronic format.
 - 1. All information required in Waste Management Progress Reports
 - 2. Legible copies of on-site logs, manifests, weight tickets, and receipts.
 - 3. Final calculations, including total amount (by weight or volume) of diverted construction and demolition waste, and the total amount (by weight or volume) of landfilled waste.

PART 3 EXECUTION

2.01 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor and Construction Manager.
- C. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
- D. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.
- E. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
- F. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.
- G. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

2.02 UNACCEPTABLE METHODS OF WASTE DISPOSAL

- A. Burning or incinerating on or off project site
- B. Burying on project site, other than fill.
- C. Dumping or burying on other property, public or private, other than official landfill.
- D. Illegal dumping or burying.

END OF SECTION

SECTION 01 7700
CLOSEOUT PROCEDURES AND SUBMITTALS

PART 1 GENERAL

1.01 SUBMITTALS

- A. All documents required to create a complete Final Payment Application can be downloaded from <https://sites.google.com/site/nspconstructiondocs/>
- B. Notify Construction Manager when work is considered ready for Substantial Completion.
 - 1. Make sure the work is mostly complete and cleaned for inspection.
- C. Substantial Completion Submittals:
 - 1. Project Record Documents: Submit documents listed below to Construction Manager:
 - a. Final Pay Application
 - b. Monthly Employment Utilization (MEU) Form
 - c. Project Employment Utilization (PEU) for City Funded Projects
 - d. Lead-based Paint Hazard Clearance Testing
 - e. Energy Modeling/NEC Compliance Report
 - f. Final Waste Management Report, see Section 01 7419 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
 - g. Permit Closeout/Code Compliance
 - h. Winter Work/Weather Related Work Escrow
 - i. Final Lien Waivers
 - j. Material Allowance Reconciliation Change Order (if necessary).
- D. Notify Construction Manager when work is considered finally completed. All Punch List items shall be completed and approved by Construction Manager and HRA Project Manager.
- E. Final Completion Submittals:
 - 1. Project Record Documents: Submit documents listed below to Construction Manager:
 - a. Building Maintenance Manual and Warranty documents for following:
 - 1) Appliance and building systems
 - (a) HVAC equipment
 - (b) Lighting equipment
 - (c) Kitchen and Laundry Appliance Manuals
 - 2) Water-using equipment and controls installed:
 - (a) Hot water delivery system(s)
 - (b) Clothes washer
 - b. Signed Certificate of Substantial Completion
 - c. Punch List Items Completed

PART 3 EXECUTION

2.01 LEAD-BASED PAINT HAZARD CLEARANCE TESTING

- A. Refer to Section 02 8313 Lead Hazard Control Activities, Quality Assurance for clearance testing requirements.

2.02 ENERGY MODELING

- A. See Section SECTION 01 8113 Sustainable Design Requirements for energy conservation testing requirements.

2.03 OPERATION AND MAINTENANCE MANUALS

- A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.
- B. Prepare data in the form of an instructional manual.

END OF SECTION

SECTION 01 8113
SUSTAINABLE DESIGN REQUIREMENTS

PART 1 GENERAL

1.01 ENERGY AND RESOURCE CONSERVATION

- A. This property is participating in Xcel Energy's Home Performance with Energy Star program.
 - 1. All insulation and HVAC work shall be performed by Xcel Energy's approved contractor list.
 - 2. General Contractors that are on the Home Performance list may choose Subcontractors that are not on the list, but those General Contractors will be responsible for all work completed.
 - 3. General Contractors will be responsible for submitting documentation required of the Home Performance with Energy Star program
- B. The "Residential Energy Specification" provided by the Neighborhood Energy Connection (NEC) (attached in appendix) is a part of the Scope of Work for this property. Contractor shall be responsible for achieving energy improvements outlined by the energy specification and shall coordinate relevant work with the NEC as follows:
 - 1. Refer to energy model that shows the building's projected energy performance, attached in appendix
 - 2. Coordinate with NEC which shall conduct a mid-construction pre-drywall thermal enclosure inspection
 - 3. Coordinate with NEC which shall verify the final performance of the building with performance testing
- C. Energy Efficient Lighting
 - 1. The Owner/Project Manager shall select specific locations of fixtures and switches in each area.
 - 2. All lighting fixtures will be purchased new, unless otherwise indicated.
 - 3. No plastic lighting fixtures are acceptable.
 - 4. No fluorescent tub light fixtures are acceptable in living spaces.
 - 5. Provide Energy Star certified CFL or LED light bulbs for all fixtures.
 - 6. All light fixtures are to have color corrected bulbs.
 - 7. Light bulbs that are viewable within fixtures will be a globe or candelabra style CFL.
 - 8. Provide and install lighting fixtures and switches.
 - 9. Review fixtures with Owner prior to installation.
 - 10. All electrical outlets and cover plates are to be replaced throughout the building.
- D. Energy Efficient Appliances
 - 1. All appliances must be purchased new and be Energy Star certified or high efficiency models when Energy Star certification is not possible.
 - 2. High-efficiency appliances meet the following standards:
 - a. Clothes washers must have a CEE Tier 2 or higher, a minimum Energy Factor of 2.0 or greater, and a water factor 6.0 or less.
 - b. Clothes Dryers must be a minimum 7.0 cubic feet capacity, have a sensor dry system, and have 5 Temperature Levels - High, Medium High, Medium, Low & Ultra Low
 - c. Dishwashers must be CEE Tier 2 or higher, with a minimum Energy Factor of 0.68 or greater, and a maximum annual energy use of 325 kilowatt-hours or less.
- E. New plumbing fixtures should be water conserving fixtures with a faucet flow rate of 2.0 GPM or less and a commode flush rate of 1.3 GPF or less.

PART 3 EXECUTION

3.01 CONSTRUCTION WASTE MANAGEMENT

- A. Comply with Construction Waste Management and Disposal Plan. Section 01 7419

3.02 CONSTRUCTION INDOOR-AIR-QUALITY MANAGEMENT

- A. Change all air filters regularly during construction with filters specified for the specific furnace. Replace all air filters immediately prior to Substantial Completion with the specified permanent filters.

END OF SECTION

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. For complete locations refer to drawings.
- B. At yard, remove per drawings: existing garage and slab, existing shed, all pavement and walkways, all retaining walls, chain link fencing per landscape plan, all existing vegetation
- C. North addition to house (newer one-story structure with walk-out basement). Remove entire structure including foundation and basement slab
- D. At house exterior, remove per drawings: vinyl siding, wood siding and shingles and tar paper underlayments, metal trim & soffits and wood trim substrates, roofing and gutters, miscellaneous wires and attachments, exterior doors, storm windows and doors, windows, decorative eave line at south and west gable ends
- E. At basement, remove per drawings: plumbing piping, both furnaces, hot water heater, laundry sink, damaged duct work, obsolete wiring, accessories, attachments, wood partitions and doors, wood stud furring/walls at exterior foundation walls; insulation; flooring, drywall finishes, ceiling system
- F. At first floor, remove per drawings: kitchen cabinets, flooring in areas to receive new tile flooring, wood framing and walls to allow for new walls and new openings, ceiling finish in entire existing kitchen and bath area, wall finish in entire existing kitchen and bath area, insulation in exterior walls that are opened, bathroom fixtures and cabinetry, all doors and door frames and wood trim except living room archway/columns and wood components at stairway to second floor
- G. At second floor, remove per drawings: all doors and door frames and wood trim, bathroom fixtures and cabinetry, closet shelving and storage components
- H. At attic, remove: loose-laid batt insulation at attic floor and stairway; windows; both brick chimneys, from above roof line to a line level with attic floor
- I. All plumbing fixtures and piping
- J. Throughout house, clean and remove mold (contractor shall determine mold remediation method).

1.01 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.

PART 3 EXECUTION

3.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 3. Protect hardwood floors for possible refinishing later.
 - 4. Provide, erect, and maintain temporary barriers and security devices.
- B. If hazardous materials are discovered during removal operations, stop work and notify Construction Manager and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- C. Perform demolition in a manner that maximizes salvage and recycling of materials. Inform Project Manager of potential strategies to reuse construction material. Only move forward with reusing of construction materials with Project Manager's consent.

3.02 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements
- B. Protect existing utilities to remain from damage.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. For asbestos abatement see Sections 02 8200
- B. Remove existing work as indicated on the drawings and as required to accomplish new work. Refer to drawings for detailed itemization and location of demolition work. Protect existing work to remain.

3.04 DEBRIS AND WASTE REMOVAL

- A. Remove all demolition debris and dispose of legally off site.
- B. See Section 01 7419 Construction Waste Management And Disposal

END OF SECTION

SECTION 02 8313
LEAD HAZARD CONTROL ACTIVITIES

PART 1 GENERAL

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1.01 LOCATIONS

- A. See hazardous materials survey for building components identified as containing lead. Contractor is responsible for abating all components identified in report.
- B. Exterior
 - 1. Painted wood door and door components (replace doors and frames, Section 08 1613)
 - 2. Painted wood porch ceiling and trim (demolish, install new ceiling surface and porch trim components, Section 06 2000)
 - 3. Soffits and corner boards, metal cladding over wood (demolish metal, demolish painted wood substrates, install new metal soffits and new metal wrapped corner boards, Section 07 6200)
 - 4. Painted wood window components (replace windows, Section 08 5313)
 - 5. Metal drip board (demolish, Section 02 4100)
- C. Interior, first floor
 - 1. Doors and frames (replace, Section 08 1429)
 - 2. Door and window casings, baseboard and other painted trim components (demolish, install new trim, Section 06 2000)
 - 3. Living room archway with columns and paneling (encapsulate and paint, Section 09 9000)
 - 4. Wood components at stairway to second floor (encapsulate and paint, Section 09 9000)
 - 5. Ceramic tile at bathroom (demolish, Section 02 4100)
 - 6. Bedroom closet components (demolish, Section 02 4100)
- D. Interior, first floor
 - 1. Doors and frames (replace, Section 08 1429)
 - 2. Door and window casings, baseboard and other painted trim components (demolish, install new trim, Section 06 2000)
 - 3. Bathroom walls and ceiling, including closet (encapsulate and paint, Section 09 9000)
 - 4. Bathtub (demolish, Section 02 4100)
 - 5. Front bedroom closet walls (encapsulate and paint, Section 09 9000)
 - 6. Attic stairway (encapsulate, Section 09 9000)
- E. Soil
 - 1. Soil throughout property (replace top 6", Section 31 2200)

1.02 GENERAL INFORMATION

- A. Projects funded in whole or in part with federal funds must comply with the "Regulation on Lead-Based Paint Hazards in Federally Owned Housing and Housing Receiving Federal Assistance." As a component of Title X, Sections 1012 and 1013, rehabilitation projects receiving more than \$25,000 of federal funds must abate all lead.
- B. Properties built after 1/1/78 and properties needing emergency rehab assistance are exempt from Lead-Based Paint Regulations. of Title X, Sections 1012 and 1013

1.03 PRICE AND PAYMENT PROCEDURES

- A. Provide a price for the appropriate methods of abatement required by this scope of work.

1.04 SUBMITTALS

- A. Project Plan: prepare a written project plan and communicate it to the Construction Manager and Project Manager. Plan shall include:

1. Start-up date and how long the project is expected to last.
 2. Areas to be abated and precautions to take.
 3. A warning to pay attention to the caution signs that are posted by the General Contractor around the project site.
 4. Location of areas that may be restricted.
- B. Test Reports: Indicate Lead Based Paint Clearance.
1. Submitted at final draw

1.05 QUALITY ASSURANCE

- A. Licensed Lead Abatement Supervisor: Only General or Subcontractors who are State licensed to conduct lead hazard reduction work are allowed to bid on projects involving lead hazard reduction work. See Minnesota Statutes 144.9501-144.9512 and Minnesota Rules 4761.2000-4761.2700 for applicable safety precautions, disposal regulations, and other compliance regulations that apply to abatement activities.
- B. Per Minnesota statute, Contractor shall provide a (5) day notification to the Minnesota Department of Health prior to beginning lead abatement activities. During lead abatement, a MN Licensed Lead Abatement Supervisor shall be on site and workers conducting lead abatement shall be MN Licensed Lead Abatement Workers. See the MDH website for additional information:

<http://www.health.state.mn.us/divs/eh/lead/prof/notification.html>

- C. Lead-Based Paint Hazard Clearance Testing
1. Where lead-based paint hazard control or reduction work has been performed by the General Contractor, the General Contractor will contact a certified third party Clearance Technician for clearance testing.
 2. The Clearance Technician will conduct a visual assessment of completed work, take dust samples, have dust samples analyzed, and prepare a Clearance Report.
 3. If sample results fail, Minnesota rules 4761.2670 subpart 2 and subpart 3 must be repeated. If test results of samples fail to meet clearance standards, surfaces must be retreated or re-cleaned at no additional cost to the Owner until clearance standard is met.
 4. When the Clearance Report indicates that clearance standards have been met, and all other requirements of this section have been met, the Construction Manager and Owner will approve the final pay application.
 5. Lead clearance testing is to be paid for by Contractor and included in the contract price.

PART 3 EXECUTION

2.01 ABATEMENT

- A. When the Risk Assessment process determines that a project contains a lead-based paint hazard, comply with the abatement measures defined by:
1. HUD in 24 CFR Part 35 Subpart A through R 35.1325 http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/enforcement/lshr
 2. EPA in 40 CFR 745.227(e). <http://www.gpo.gov/fdsys/pkg/CFR-2011-title40-vol31/pdf/CFR-2011-title40-vol31-sec745-227.pdf>
 3. Minnesota Statutes 144.9501-144.9512 and Minnesota Rules 4761.2000-4761.2700 <http://www.health.state.mn.us/divs/eh/lead/rule.html>
- B. Comply with the abatement methods listed below:
1. Component Replacement: The removal of building components that contain lead-based paint. It is most appropriate for items such as doors, windows, trim, and cabinets.
 2. Paint Removal: The separation of paint from the substrate using safe heat, chemical, or abrasive methods. It may be done on- or off-site. Abrasive methods can create a great deal of dust, are the most hazardous, and require the greatest care and most thorough clean-up.

3. Enclosure: The installation of a barrier (such as gypsum board or paneling) that is mechanically attached to the building component, with all edges and seams sealed to prevent escape of lead-based paint dust. It is most appropriate for large surfaces, such as walls, ceilings, floors, and exteriors.
4. Encapsulation: The application of a liquid or adhesive material that covers the component and forms a barrier that makes the lead-based paint surface inaccessible by relying upon adhesion. It may be appropriate for many kinds of smooth surfaces but it cannot be used effectively on friction surfaces, surfaces in poor condition, or surfaces that may become wet. It also must be compatible with existing paint.
5. Soil Removal: The removal of at least the top six inches of topsoil is adequate for most projects. In areas with heavy contamination, up to two feet may have to be removed, and must be disposed of using proper waste management techniques that comply with local requirements. The maximum lead concentration in replacement soil shall not exceed 200 ug/g. Sod or seeding of new soil should occur.
6. Soil Cultivation: The mixing of low lead soil with high lead soil is an appropriate method if the average lead concentration of the soil to be abated is below 1,500 ug/g. Thorough mixing is required, and pilot testing of various techniques may be needed to ensure that thorough mixing does occur.
7. Paving: The covering of highly contaminated soil with high quality concrete or asphalt. Paving is common in high traffic areas but not appropriate in play areas. The need for uncontaminated replacement soil is eliminated as is waste disposal costs. Paving often turns out to be the most economical recourse, despite its aesthetic disadvantages.

SECTION 03 3000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

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1.01 LOCATIONS

- A. CIP concrete footings at house basement
 - 1. Strip footing at new infill foundation wall at north elevation
 - 2. Pad footings for new basement columns
- B. Garage slab with thickened edge, 4" slab thickness, comply with IRC requirements

1.02 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and ACI 318.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Formwork Design and Construction: Comply with guidelines of ACI 347 to provide formwork that will produce concrete complying with tolerances of ACI 117.
- B. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
 - 1. Form Ties: Cone snap type that will leave no metal within 1-1/2 inches (38 mm) of concrete surface.

2.02 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M Grade 40 (280).

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type I - Normal Portland type.

2.04 CONCRETE MIX DESIGN

- A. Normal Weight Concrete:
 - 1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 3,000 psi (20.7 MPa).

PART 3 EXECUTION

3.01 PREPARATION

- A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.
- B. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.

3.02 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

- A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.

3.03 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304R.

3.04 FLOOR FLATNESS AND LEVELNESS TOLERANCES

- A. Maximum Variation of Surface Flatness:
 - 1. Exposed Concrete Floors: 1/4 inch (6 mm) in 10 ft (3 m).
- B. Correct the slab surface if tolerances are less than specified.

- C. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.05 CONCRETE FINISHING

- A. Repair surface defects, including tie holes, immediately after removing formwork.
- B. Concrete Slabs: Wood float finish to requirements of ACI 302.1R

3.06 CURING AND PROTECTION

- A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

END OF SECTION

**SECTION 04 0100
MAINTENANCE OF MASONRY**

PART 1 GENERAL

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1.01 LOCATIONS

- A. Existing stone foundation walls, above grade exterior surfaces, to 6" below grade.
- B. Existing stone foundation walls, interior surfaces, all masonry visible and accessible in basement after furring walls have been removed.

1.02 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of ACI 530/530.1/ERTA or applicable building code, whichever is more stringent.

PART 3 EXECUTION

2.01 REBUILDING

- A. Cut out damaged and deteriorated masonry with care in a manner to prevent damage to any adjacent remaining materials.

2.02 REPOINTING

- A. Cut out loose or disintegrated mortar in joints to minimum 1/2 inch (6 mm) depth or until sound mortar is reached.
- B. Pre-moisten joint and apply mortar. Pack tightly in maximum 1/4 inch (6 mm) layers. Form a smooth, compact concave joint to match existing.

2.03 CLEANING NEW MASONRY

- A. Verify mortar is fully set and cured.
- B. Clean surfaces and remove large particles with wood scrapers, brass or nylon wire brushes.

END OF SECTION

**SECTION 04 2300
GLASS UNIT MASONRY**

PART 1 GENERAL

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1.01 LOCATIONS

- A. Basement, (2) existing window openings indicated on plan. At south window opening, install glass block 24" high total above new CMU infill.

1.02 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of ACI 530/530.1/ERTA or applicable building code, whichever is more stringent.

PART 2 PRODUCTS

2.01 GLASS UNITS

- A. Hollow Glass Units: Permanently seal hollow unit by heat fusing joint; with joint key to assist mortar bond.

2.02 MORTAR MIXING

- A. Thoroughly mix mortar ingredients in accordance with ASTM C270 in quantities needed for immediate use.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Erect glass units and accessories in accordance with manufacturer's instructions.

END OF SECTION

**SECTION 06 1000
ROUGH CARPENTRY**

PART 1 GENERAL

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1.01 LOCATIONS

- A. For complete locations refer to drawings.
- B. New garage framing, see site plan for location and see 2.05 below
- C. Exterior
 - 1. At first floor, infill opening to north addition (to be demolished) with new exterior frame wall, 2x6 @ 16" o.c. with 1/2" OSB sheathing; window opening in infill wall
 - 2. After removing decorative eave line at south and west gable ends, frame new roof over west bedroom bay as indicated on Sheet 9, West Elevation
 - 3. At front porch, remove center two columns, install new LVL roof beam bearing on two existing corner columns
 - 4. New wood steps at front porch with composite decking
 - 5. At front porch floor, install new composite decking
 - 6. New wood steps and landing at side entry
- D. Basement
 - 1. New steel columns at existing steel beam
 - 2. New 2x4 furring wall at new north foundation wall
 - 3. New basement stairs, modify floor framing to create stairwell
- E. First floor
 - 1. New walls and openings indicated on drawings
- F. Second floor
 - 1. Frame tub enclosure
- G. Attic
 - 1. Infill two window openings.
 - 2. Patch roof framing/sheathing where two chimneys are removed.

PART 2 PRODUCTS

2.01 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Stud Framing (2 by 2 through 2 by 6)
 - 1. Grade: No. 2
- D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16)
 - 1. Grade: No. 2
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Grade: No. 2
 - 2. Boards: Standard or No. 3.

2.03 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel per ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
- B. Joist Hangers: Hot dipped galvanized steel, sized to suit framing conditions. Provide hangers manufactured by Simpson or equal.

1. For contact with preservative treated wood in exposed locations, provide minimum G185 (Z550) galvanizing per ASTM A653/A653M.

C. Building Paper: Water-resistant asphalt saturated building paper.

2.04 FACTORY WOOD TREATMENT

A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

2.05 GARAGE

- A. New garage to be 22'x22' two-car garage with 16'x7' garage door opening. 6/12 gable roof with manufactured roof trusses with 16" overhangs. Siding and trim to match new siding and trim at house. One window and one service door, see window and door schedules.
- B. For overhead door see Section 08 3323; siding and trim specified in Section 07 4620
- C. See Section 03 3000 Cast-in-Place Concrete for garage slab.

2.06 FRONT PORCH DECKING

- A. 1x6 composite decking, UltraDeck Fusion Decking, "Driftwood" color, available from Menards, or equal

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.

3.02 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Install structural members full length without splices unless otherwise specifically detailed.
- C. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AFPA Wood Frame Construction Manual.
- D. Install horizontal spanning members with crown edge up and not less than 1-1/2 inches (38 mm) of bearing at each end.

END OF SECTION

SECTION 06 2000
FINISH CARPENTRY

PART 1 GENERAL

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1.01 LOCATIONS

- A. For complete locations refer to drawings.
- B. House exterior
 - 1. For metal wrapped exterior trim, see Section 07 6200 Sheet Metal
- C. Garage exterior
 - 1. For metal wrapped exterior trim, see Section 07 6200 Sheet Metal
- D. First floor interior
 - 1. Install new paint-grade wood trim throughout
 - a. 1x8 flat MDF baseboard and 3/4 x 3/4 quarter round shoe
 - b. 4/4 x 6 flat poplar door and window casings (rip casing to width of existing casings)
 - c. 5/4 stool detail with rounded edges at all window openings, 4/4 wood apron, match existing dimension
 - 2. Repair wood stair components at stairway to second floor as needed
 - 3. Repair wood vent grates
 - 4. Wood trim cap at top of foundation at new basement stair
 - 5. Continuous handrail at stair to second floor, comply with IRC
 - 6. Continuous handrail at stair to basement, comply with IRC
- E. Second floor interior
 - 1. Install new paint-grade wood trim throughout
 - a. 1x8 flat MDF baseboard and 3/4 x 3/4 quarter round shoe
 - b. 4/4 x 6 flat poplar door and window casings (rip casing to width of existing casings), mitre joint
 - c. 5/4 stool detail with rounded edges at all window openings, 4/4 wood apron, match existing dimension
- F. Miscellaneous adjustments and repairs throughout the house called out on the drawings shall be included in this section line item.

1.02 RELATED SECTIONS

- A. Section 09 9000 Painting and Coating, for trim finish and color.
- B. Section 07 6200 Sheet Metal Trim

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

- A. Quality Grade: Unless otherwise indicated provide products of quality specified by AWI//AWMAC/WI Architectural Woodwork Standards for Premium Grade.

PART 3 EXECUTION

3.01 CARPENTRY STANDARDS

- A. Set and secure materials and components in place, plumb and level.
- B. Use finish nails of sufficient length to penetrate framing 1".

- C. Mitre all lap joints, and break all lap joints over framing.
- D. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch (1 mm). Do not use additional overlay trim to conceal larger gaps.

END OF SECTION

**SECTION 07 2113
RIGID FOAM INSULATION**

PART 1 GENERAL

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1.01 LOCATION

- A. Attic access hatch door shall be insulated to R-44

1.02 Comply with NEC Energy Specifications

PART 2 PRODUCTS

2.01 MATERIALS

- A. Rigid Foam Insulation
 - 1. Extruded Poly Styrene (XPS)

PART 3 EXECUTION

3.01 APPLICATION

- A. Apply insulation in accordance with manufacturer's instructions.

END OF SECTION

**SECTION 07 2119
FOAMED-IN-PLACE INSULATION**

PART 1 GENERAL

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1.01 LOCATIONS

- A. Exterior house walls
 - 1. New infill exterior wall at first floor north elevation
 - 2. Where exterior wall finishes are removed (intention of demolition drawings is that opening of exterior walls is to be minimized)
- B. Basement rim joist per NEC energy specification

1.02 Comply with NEC ENERGY SPECIFICATIONS

PART 2 PRODUCTS

2.01 MATERIALS

- A. Foamed-In-Place Insulation: Medium-density, rigid or semi-rigid, closed cell polyurethane foam; foamed on-site, using blowing agent of water or non-ozone-depleting gas.
 - 1. Closed Cell Content: At least 90 percent.

2.02 ACCESSORIES

PART 3 EXECUTION

3.01 APPLICATION

- A. Apply insulation in accordance with manufacturer's instructions.

END OF SECTION

**SECTION 07 2126
BLOWN INSULATION**

PART 1 GENERAL

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1.01 LOCATIONS

- A. Attic
- B. Attic stairwell walls and under attic stair

1.02 NEC ENERGY SPECIFICATION

- A. Comply with NEC energy specification.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Loose Fill Insulation: ASTM C739, cellulose fiber type, nodulated for pour and bulk for pneumatic placement.
 - 1. R-Value: Attic R-50

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install insulation and ventilation baffle in accordance with ASTM C1015 and manufacturer's instructions.
- B. Place insulation pneumatically to completely fill stud, joist, and rafter spaces.
- C. Pour insulation to completely fill stud, joist, and rafter spaces to a density of 3.5 lbs per cubic foot per cavity.
- D. Completely fill intended spaces. Leave no gaps or voids.

END OF SECTION

**SECTION 07 2500
WEATHER BARRIERS**

PART 1 GENERAL

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1.01 LOCATION

- A. Entire house after existing siding is removed
- B. Garage

PART 2 PRODUCTS

2.01 WEATHER BARRIER ASSEMBLIES

- A. Weather Barrier Membrane: Spunbonded polyolefin, non-woven, non-perforated, weather barrier
 - 1. Manufacturer: DuPont Tyvek HomeWrap or like product to be approved by Owner.
- B. Seam Tape: DuPont Tyvek or like product
- C. Flashing: DuPont Tyvek or like product
- D. Fasteners: DuPont Tyvek or like product

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install weather barrier over exterior face of exterior wall substrate in accordance with manufacturer's recommendations.
- B. Attach weather barrier to studs through exterior sheathing. Secure using weather barrier manufacturers recommended fasteners, spaced 12-18 inches vertically on center along stud line, and 24 inches on center, maximum horizontally.

END OF SECTION

SECTION 07 2700
AIR BARRIER SYSTEM

PART 1 GENERAL

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1.01 Comply with NEC ENERGY SPECIFICATIONS, including insulate rim joist

PART 2 PRODUCTS

2.01 ADHESIVES AND SEALANTS

- A. Comply with VOC requirements in Section 01 6116

PART 3 EXECUTION

3.01 INSTALLATION

- A. Seal attic bypasses. Weatherstrip attic access hatch. Refer to NEC energy specification.
- B. Mechanical work: Seal penetrations from unconditioned spaces with joint sealant and provide flashing. Seal flue openings with flashing and fire-rated joint sealant
- C. Pest Management Measures
 - 1. For openings in the building envelope less than 1/4 inch, including pipe and electrical penetrations, completely seal to avoid pest entry.
 - 2. Install rodent-and corrosion proof screens for openings greater than 1/4 inch

END OF SECTION

**SECTION 07 3113
ASPHALT SHINGLES**

PART 1 GENERAL

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1.01 LOCATIONS

- A. Reroof entire house roof including lower roofs
- B. Roof entire new garage roof

1.03 QUALITY ASSURANCE

- A. Perform Work in accordance with the recommendations of NRCA Steep Roofing Manual.

PART 2 PRODUCTS

2.01 SHINGLES

- A. Asphalt Shingles: Asphalt-coated glass felt, mineral granule surfaced, complying with ASTM D3462; Class A fire resistance.
 - 1. Self-sealing type.
 - 2. Manufacturer: GAF ELK, Timberline 30 Year HD shingles
 - 3. Style: Architectural Shingle.
 - 4. Color: Weathered Wood

2.02 ACCESSORIES

- A. Nails: Standard round wire shingle type, of hot-dipped zinc coated steel, 12 gage, 0.105 inch (2.67 mm) shank diameter, 3/8 inch (9.5 mm) head diameter, of sufficient length to penetrate through roof sheathing or 3/4 inch (19 mm) into roof sheathing or decking.

PART 3 EXECUTION

3.01 INSTALLATION - SHINGLES

- A. Install shingles in accordance with manufacturer's instructions.

END OF SECTION

**SECTION 07 4633
PLASTIC SIDING**

PART 1 GENERAL

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10.01 LOCATIONS

- A. Entire house exterior
- B. Garage exterior

1.02 SUBMITTALS

- A. Color Charts: Where colors are not specified, provide samples of manufacturer's entire color line for selection.

PART 2 PRODUCTS

2.01 MATERIALS

- A. General Requirements:
 - 1. Siding: Comply with ASTM D3679 Class 2
- B. Acceptable Manufacturer: Alside, which is located at: P. O. Box 2010; Akron, OH 44309, OR EQUAL
- C. Horizontal Vinyl Siding Type: Charter Oak XXL double 4-1/2 inch clapboard
 - 1. 4-1/2 inch clapboard profile
 - 2. Each 9 inch wide horizontal siding panel nominally configured as two 4-1/2 inch panels in the clapboard style with 3/4 inch butt height
 - 3. TriBeam panel reinforcement system with double thick rolled over nail hem
 - 4. Length: 25 feet
 - 5. Width: 9 inches
 - 6. Thickness: 0.046 inch
 - 7. Color: As selected by Construction Manager from manufacturers full range of available colors.
- D. Accessories: Provide coordinating accessories made of same material as required for complete and proper installation whether or not specifically shown on the drawings.
- E. Fasteners: Aluminum nails, alloy 5056 or 6110, with minimum tensile strength of 63,000 pounds per square inch (434 MPa); length as required to penetrate framing at least 3/4 inch (19 mm).

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install siding, soffit, and trim in accordance with manufacturer's printed installation instructions .
- B. Attach securely to framing, not sheathing, with horizontal components true to level and vertical components true to plumb, providing a weather resistant installation.

END OF SECTION

SECTION 07 5200
MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 GENERAL

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1.01 LOCATIONS

- A. Existing low slope roof at west window bay at dining room
- B. Existing low slope roof at attic turret

1.02 QUALITY ASSURANCE

- A. Perform work in accordance with NRCA Roofing and Waterproofing Manual and manufacturer's instructions.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- C. Installer Qualifications: Company specializing in performing the work of this section with minimum 5 years experience and approved by manufacturer.

1.03 FIELD CONDITIONS

- A. Do not apply roofing membrane when environmental conditions are outside the ranges recommended by manufacturer.

1.04 WARRANTY

- A. Correct defective Work within a two year period after Date of Substantial Completion.
- B. Provide five year manufacturer's material and labor warranty to cover failure to prevent penetration of water.

PART 2 PRODUCTS

2.01 ROOFING -CONVENTIONAL APPLICATION

- A. Modified Bituminous Roofing: Two-ply membrane, with vapor retarder and insulation.

2.02 ACCESSORIES

- A. Roofing Expansion Joint Flashing: Sheet butyl.
- B. Metal gravel stop

PART 3 EXECUTION

3.01 MEMBRANE APPLICATION

- A. Apply membrane in accordance with manufacturer's instructions.

END OF SECTION

SECTION 07 6200
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

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1.01 LOCATION

- A. Flashings
 - 1. Reroofing of house roof, repair or replace existing roof flashings as required
 - 2. Where low roofs meet house wall, repair and/or replace flashings as needed
 - 3. At attic turret, install new flashing at entire joint where turret walls meet roofline
- B. Exterior trim (see elevation drawings)
 - 1. New metal wrapped fascia, soffit, bargeboards at all roofs
 - 2. New metal wrapped corner boards and string courses
 - 3. New metal wrap at all front porch wood components (see Section 02 8313 Lead Hazard Control Activities for enclosure requirements)
 - 4. New metal soffit at porch ceiling

1.02 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements and standard details, except as otherwise indicated.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Aluminum: ASTM B209 (ASTM B209M); 0.032 inch (0.8 mm) thick; anodized finish of color as selected.
 - 1. Anodized Finish: AAMA 611 AA-M12C22A41 Class I clear anodic coating not less than 0.7 mils (0.018 mm) thick.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
- B. Seal metal joints watertight.

END OF SECTION

**SECTION 07 7123
MANUFACTURED GUTTERS AND DOWNSPOUTS**

PART 1 GENERAL

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1.01 LOCATIONS

- A. House roofs, install new gutters at existing locations.
- B. Locate downspouts and tie to drainage system according to Landscape Plan

1.02 DESIGN REQUIREMENTS

- A. Conform to applicable code for size and method of rain water discharge.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Pre-Finished Aluminum Sheet: ASTM B209 (ASTM B209M); 0.032 inch (0.8 mm) thick.
 - 1. Finish: Plain, shop pre-coated with modified silicone coating.
 - 2. Color: To match the exterior trim.

2.02 COMPONENTS

- A. Gutters: K style profile, seamless, one-piece aluminum gutter and guard, 4" except 5" where upper roof empties into lower roof gutter
- B. Gutter Guard: seamless, one-piece aluminum gutter and guard
- C. Downspouts: SMACNA Rectangular profile.
 - 1. Size: 3X5
- D. Anchors and Supports: Profiled to suit gutters and downspouts.
 - 1. Gutter Supports: Brackets.
 - 2. Downspout Supports: Straps.
- E. Fasteners: Galvanized steel , with soft neoprene washers.

2.03 ACCESSORIES

- A. Splash Blocks: Precast concrete type, size and profiles indicated; minimum 3000 psi (21 MPa) at 28 days, with minimum 5 percent air entrainment.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install gutters, downspouts, and accessories in accordance with manufacturer's instructions.
- B. Where feasible, a minimum of 6' offset extension shall be installed at the ends of all downspouts to divert water away from foundation.
- C. Downspouts shall divert the entire water load in the direction of the rain garden according to the Landscape Plan.

END OF SECTION

SECTION 08 0150
RESTORATION AND MAINTENANCE OF WINDOWS

PART 1 GENERAL

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1.01 LOCATIONS

- A. Living Room south window (fixed picture and fixed transom)

1.02 RELATED SECTIONS

- A. Section 02 8313 Lead Hazard Control Activities
- B. Section 09 9000 Painting and Coating
- C. Section 08 5169 Metal Storm Windows

PART 3 EXECUTION

3.01 WINDOW RESTORATION

- A. Clean and remove loose paint
- B. Lead Hazard Control Activities
 - 1. See Section 02 8313, encapsulate lead paint surfaces
- C. Repair glazing/reglaze as required.
- D. Painting and coating
 - 1. See Section 09 9000 for finishing requirements

SECTION 08 1429
WOOD DOORS

PART 1 GENERAL

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1.01 LOCATIONS

- A. New interior doors per door schedule on drawings.

1.02 SECTION INCLUDES

- A. Wood doors, stile and rail design.
- B. Frames for pre-hung doors.
- C. Hardware for interior doors.

PART 2 PRODUCTS

2.01 INTERIOR WOOD DOORS

- A. Quality Level: Premium Grade, in accordance with AWI/AWMAC/WI Architectural Woodwork Standards.
- B. Wood products that Emit Low or No Formaldehyde
- C. Wood products that Emit Low or No VOC
- D. Interior doors: 1-3/8" thick
 - 1. Wood surface: paint-grade maple or birch, primed and painted
 - 2. Door Type: Four-panel solid and hollow core per door schedule on drawings

2.02 HARDWARE

- A. Interior hardware to be Schlage Andover latchset with knob and Andover Rosette, Satin Nickel
- B. See door schedule for hardware designation for new doors
- C. Submit manufacturer's data before ordering.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and AWI/AWMAC Quality Standards requirements.
- B. Trim door width by cutting equally on both jamb edges.
- C. Trim door height by cutting bottom edges to a maximum of 3/4 inch (19 mm).
- D. Machine cut for hardware.
- E. Coordinate installation of doors with installation of frames and hardware.

3.02 TOLERANCES

- A. Conform to specified quality standard for fit, clearance, and joinery tolerances.

END OF SECTION

**SECTION 08 1613
FIBERGLASS DOORS**

PART 1 GENERAL

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1.01 LOCATIONS

- A. Front entry door, see schedule on drawings
- B. Side entry door, see schedule on drawings
- C. Garage service door, see schedule on drawings

1.02 SECTION INCLUDES

- A. Fiberglass Entrance Doors

1.03 REFERENCES

- A. American Architectural Manufacturer Association (AAMA)
 - 1. AAMA 1304; Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems.
- B. ASTM International
 - 1. ASTM E283; Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
 - 2. ASTM E330; Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Pressure Difference
 - 3. ASTM E331; Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
 - 4. ASTM E547; Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference

1.04 SUBMITTALS

- A. Refer to Section 01 0010
- B. Product Data: Submit door manufacturer's current product literature, including installation instructions.

1.05 WARRANTY

- A. Manufacturer standard warranty indicating that doors will be free from material and workmanship defects from the date of substantial completion for the time periods indicated below:
 - 1. Door System: 25 Years.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. JELD-WEN Fiberglass Doors; 3305 Lakeport Blvd.; Klamath Falls, OR 97601, USA; Phone 877.535.3462, fax 541.882.3455; website www.jeld-wen.com; or equal
- B. Basis of Design: Doors are based on the JELD-WEN's Smooth Pro Fiberglass.
 - 1. Smooth-Pro, Design SP-40 (4-panel)

2.02 MATERIALS

- A. Stiles and Rails: Engineered wood (laminated veneer lumber), composite capped.

2.03 FIBERGLASS ENTRANCE DOORS

- A. Thickness: 1-3/4 inch
- B. Door Style: Solid
- C. Door Shape: Squared Top
- D. Finish: Paint surface in field, see selection sheet for color

- E. Entry hardware
 - 1. At front door: Schlage Camelot Avanti entry lockset
 - 2. At side door and garage service door: Schlage Camelot entry lever and keyed deadbolt

2.04 PREHUNG HARDWOOD SYSTEMS

- A. Profile: Single Door
- B. Jamb: Solid pine wood.
- C. Width: Custom as required for existing opening
- D. Casing: none (field case)
- E. Hinges: Solid brass concealed-bearing.
 - 1. Size: 4 by 4 square.
 - 2. Finish:
 - 3. Sills: Aluminum

2.05 FABRICATION

- A. Skins are adhered to engineered wood frames with core materials and bonding agents that permanently lock skin to frame.

2.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver doors, materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Store doors as recommended by manufacturer.

PART 3 - EXECUTION

3.01 GENERAL

- A. Install doors in accordance with manufacturer's installation guidelines and recommendations.

3.02 EXAMINATION

- A. Inspect door prior to installation.
- B. Inspect rough opening for compliance with door manufacturer recommendations. Verify rough opening conditions are within recommended tolerances.

3.03 INSTALLATION

- A. Install jamb assembly.
 - 1. Caulk sill along outside edge and ½ inch in from edge of subfloor.
 - 2. Set door unit into center of opening and tack in place.
 - 3. Shim hinge then latch side jambs straight. Inspect jamb for square, level and plumb.
 - 4. Shim and fasten top of unit where sidelight joins door jamb.
 - 5. Fasten hinge side jamb to studs.
 - 6. Verify door opens freely and weatherstrip meets door evenly.
 - 7. Verify door sweep contacts threshold evenly.
 - 8. Fasten latch side jamb to studs.
- B. Caulk outside perimeter of door unit between brickmold and wall face, along front side of threshold, and between jamb sides and threshold.

3.04 PROTECTION

- A. Protect installed doors from damage.

END OF SECTION

SECTION 08 3323
RESIDENTIAL OVERHEAD DOORS

PART 1 GENERAL

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1.01 LOCATION

- A. New garage

1.02 REFERENCES

- B. ANSI/DASMA 108 Standard Method for Testing Sectional Garage Doors and Rolling Doors: Determination of Structural Performance Under Uniform Static Air Pressure Difference
- C. UL: Underwriters Laboratories, Inc.

1.03 DESIGN / PERFORMANCE REQUIREMENTS

- A. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Installer Qualifications: Authorized representative of the manufacturer with minimum five years documented experience.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened labeled packaging until ready for installation.
- B. Protect materials from exposure to moisture until ready for installation.
- C. Store materials in a dry, ventilated weathertight location.
- D. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 WARRANTY

- A. Warranty: 15 years

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturer: Overhead Door Corp or equal, requests for substitutions will be considered in accordance with provisions of Section 01 6000.

2.02 RESIDENTIAL METAL OVERHEAD DOORS

- A. Non-Insulated Steel Sectional Overhead Doors: Traditional Steel Collection 170 Series Non-Insulated Steel Doors by Overhead Door Corporation.

1. Door Assembly: High tensile strength steel construction.
2. Size: 16' x 7'.
3. Panel Thickness: 2 inches nominal.
4. Exterior Steel: Residential grade high strength hot-dipped galvanized steel 26 gauge
5. Window Design: no windows
6. Finish/Color: Two coat baked-on polyester. Color: match House Color No. 2 (trim), submit color options to Construction Manager
7. Hardware: Standard garage door hardware.
8. Bottom fixture - DASHA 103 tamper resistant fasteners.
9. Weatherstripping: Extruded PVC bulb-type strip at bottom.
10. Track: Provide track as recommended by manufacturer to suit loading required and clearances available.
11. Nylon rollers.
12. Electric Opener

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.02 INSTALLATION

- A. Install overhead doors, track and openers in accordance with approved shop drawings and the manufacturer's printed instructions.
- B. Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance.
- C. Anchor assembly to wall construction and building framing without distortion or stress.
- D. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- E. Fit and align door assembly including hardware.

3.03 CLEANING AND ADJUSTING

- A. Adjust door assembly to smooth operation and in full contact with weatherstripping.
- B. Clean doors, frames and glass.
- C. Remove temporary labels and visible markings.

3.04 PROTECTION

- A. Do not permit construction traffic through overhead door openings after adjustment and cleaning.
- B. Protect installed products until completion of project.
- C. Touch-up, damaged coatings and finishes and repair minor damage before Substantial Completion.

END OF SECTION

SECTION 08 5169
METAL STORM WINDOWS

PART 1 GENERAL

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1.01 LOCATIONS

- A. Provide new storm windows at existing south living room picture window and transom

1.02 SECTION INCLUDES

- A. Aluminum Storm Windows

1.03 REFERENCE STANDARDS

- A. AAMA/WDMA/CSA 101/I.S.2/A440 - Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors; American Architectural Manufacturers Association; 2008.

PART 2 PRODUCTS

2.01 SYSTEM DESCRIPTION

- A. Fixed sash; clear glass; pocketed head, jamb and sill; butt-joint corners and tubular frame design, double wool pile weatherstripping.
- B. Finish
 - 1. Prefinished color: White

2.02 MANUFACTURERS

- A. Larson Manufacturing Company; Product, Larson Gold Series: www.lasondoors.com

PART 3 EXECUTION

3.01 PREPARATION

- A. Remove existing storm window frames entirely. Clean out and prepare existing window frame to receive new storm window.

3.02 INSTALLATION

- A. General: Install per manufacturers written instructions.
- B. Set frame in continuous bead of silicone sealant. Set frame plumb, level, and true to line, without warp or rack of frames and panels. Fasten to window frame with long screws.

3.03 ADJUSTING

- A. Adjust operating panels, screens, and hardware for a tight fit at contact points and weatherstripping for smooth operation and weathertight closure.
- B. Reinstall or replace windows whose parts cannot be removed and reinstalled easily and that do not operate smoothly.

3.04 CLEANING

- A. Clean Up: Clean units and glass after installation. Remove and dispose of debris from installation.

END OF SECTION

**SECTION 08 5313
VINYL WINDOWS**

PART 1 GENERAL

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1.01 LOCATIONS

- A. New windows per drawings and window schedule

1.01 PERFORMANCE REQUIREMENTS

- A. Performance Requirements: U-Value not to exceed .35

PART 2 PRODUCTS

2.01 COMPONENTS

- A. Windows: Extruded, hollow, tubular, ultra-violet resistant polyvinyl chloride (PVC) with integral color; factory fabricated; with vision glass, related flashings, anchorage and attachment devices.
 - 1. Performance Requirements: AAMA/WDMA/CSA 101/I.S.2/A440 R15.
 - 2. Configuration: casement (approved for egress at new bedroom windows)
 - 3. Color: White
- B. Insect Screens: 14/18 mesh, steel strands.
- C. Fasteners: Stainless steel.

2.02 ADHESIVES AND SEALANTS

- A. VOC content not to exceed the following [g/L; less water and less exempt compounds]:
 - 1. Multipurpose Construction Adhesives: 70 g/L
 - 2. Structural Glazing Adhesives: 100 g/L

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install window units in accordance with manufacturers instructions.
- B. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.
- C. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.
- D. Insulate any voids between the window frame and the rough opening with foam insulation.

3.02 ADJUSTING

- A. Adjust hardware for smooth operation and secure weathertight closure.

3.03 APPLICATIONS

- A. Water Management: Walls, Exterior Windows
 - 1. Provide weather-resistive barrier/housewrap
 - 2. Provide pathway for liquid water to exit exterior wall assembly
 - 3. Provide pan flashing, side flashing, and head flashing

END OF SECTION

SECTION 09 0120
REPAIR OF PLASTER AND GYPSUM BOARD SURFACES

PART 1 GENERAL

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1.01 LOCATIONS

- A. Throughout; as needed following improvements at all new work
- B. Throughout, where repair and patching is needed at existing conditions

1.02 SUMMARY

- A. This section covers surface repairs of plaster and gypsum board surfaces. Existing house finishes are veneer plaster over gypsum board.
- B. Finish surface type should match existing surfaces
- C. All repair work to be even and seamless and match adjacent surfaces.

PART 2 PRODUCTS

2.01 ACCESSORIES

- A. Galvanized metal lath
- B. Joint Compound
- C. Plaster
- D. Plastic Tarps

PART 3 EXECUTION

3.01 REPAIR

- A. Walls and Ceilings: Repair interior surface(s) so that finish surface is even and properly prepared for finish application.
 - 1. Protect adjacent finished surfaces by covering with plastic or tarps.
 - 2. Install galvanized metal lath over area of back up as required. May also secure with screws and insert piece of gypsum board in areas to be patched.
 - 3. Before applying scratch coats, dampen areas to reduce absorption from joint compound/plaster.
 - 4. Apply finish coat and bring to thickness flush with surrounding surface.
 - 5. The interior temperature must be no less than a minimum 60 degrees during this work.

END OF SECTION

SECTION 09 0160
HARDWOOD FLOORING RESTORATION

PART 1 GENERAL

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1.01 LOCATIONS

- A. Existing wood flooring throughout first and second floors

1.01 RELATED SECTIONS

- B. See Section 01 6116 Volatile Organic Compound Content Restrictions

PART 2 PRODUCTS

PART 3 EXECUTION

3.01 RESTORATION

- A. Remove paint from stair treads and risers to the second floor as per section 02 813.
- B. Restore hardwood floors: Counter sink all nails and fill holes. Remove the quarter round molding and protect the wall molding with painters tape. Drum sand and edge floor finishing with 120 grit sandpaper to completely remove the existing finish. Vacuum and wipe floor with slightly water dampened rag, until no dust is present.
- C. Apply a coat of Minwax Low-VOC Water Based Polyurethane base coat followed by 3 coats of Minwax Low-VOC Water Based polyurethane for floors.
 - 1. Product may not exceed 250 grams of VOC per Liter

END OF SECTION

SECTION 09 2116
GYPSUM BOARD INSTALLATION

PART 1 GENERAL

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1.01 LOCATIONS

- A. New gypsum board finishes at remodeled spaces on the first floor
- B. New gypsum board finishes at second floor tub enclosure
- C.. For patching and repair, see Section 09 0120 Repair of Plaster and Gypsum Board Surfaces

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.

2.02 BOARD MATERIALS

- A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
 - 2. Thickness:
 - a. Vertical Surfaces: 1/2 inch
 - b. Ceilings: 5/8 inch

2.03 ACCESSORIES

- A. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.
 - 1. Tape: 2 inch (50 mm) wide, creased paper tape for joints and corners, except as otherwise indicated.
 - 2. Ready-mixed vinyl-based joint compound.
 - 3. Powder-type vinyl-based joint compound.
 - 4. Chemical hardening type compound.

PART 3 EXECUTION

3.01 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

3.02 JOINT TREATMENT

- A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 - 1. Level 4: Walls and ceilings to receive paint finish or wall coverings

END OF SECTION

**SECTION 09 3000
TILING**

PART 1 GENERAL

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1.01 LOCATIONS

- A. Tile flooring at kitchen, side entry, first floor bathroom

1.02 FIELD CONDITIONS

- A. Do not install adhesives in an unventilated environment.
- B. Maintain ambient and substrate temperature of 50 degrees F (10 degrees C) during installation of mortar materials.

PART 2 PRODUCTS

2.01 TILE

- A. Floor tile, see selection sheet

2.03 GROUT MATERIALS

- A. Standard Grout: Any type specified in ANSI A118.6 or A118.7.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Install tile in accordance with applicable requirements of ANSI A108.1 through A108.13, manufacturer's instructions, and The Tile Council of North America Handbook recommendations.
- B. Caulk all inside corners in lieu of grout.

**SECTION 09 9000
PAINTING AND COATING**

PART 1 GENERAL

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1.01 LOCATIONS

- A. Lead abatement, encapsulate:
 - 1. Living Room south window interior and exterior
 - 2. Wood components at stairway from first floor to second floor
- B. Exterior, paint per selection sheet
 - 1. Fiberglass entrance doors, frame and casing, exterior and interior
- C. Interior, paint per selection sheet
 - 1. First floor: ceilings, walls, doors, window jambs and casings, door casings, base trim
 - 2. Stairwell to basement: walls, ceiling (leave stair treads and risers unfinished)
 - 3. Stairway to second floor: walls and ceiling, wood stairway components
 - 4. Second floor: ceilings, walls, doors, window jambs and casings, door casings, base trim

1.02 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.03 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Paints and Coatings: Sherwin Williams Low VOC or any manufacturer listed in MPI Approved Products List (at www.paintinfo.com) approved by Project Manger.
- B. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- C. See material and color selections

2.02 VOC REQUIREMENTS

- A. See requirements in Section 01 6116 Volatile Organic Compound (VOC) Content Restrictions

2.03 PAINT SYSTEMS

- B. Primer coat at bare wood surfaces and new drywall surfaces, primer manufacturer to be same as paint manufacturer.
- C. Provide Premium Grade systems (2 top coats) as defined in MPI Architectural Painting Specification Manual, except as otherwise indicated.
- D. Where a specified paint system does not have a Premium Grade, provide Custom Grade system.
- E. Where sheen is not specified or more then one sheen is specified, sheen will be selected later by Construction Manager from the manufacturer's full line.
- F. Refer to Materials and Colors Selection Sheet for color and sheen
- G. Provide smooth texture throughout.

PART 3 EXECUTION

3.01 SCOPE -- SURFACES TO BE FINISHED

- A. At locations indicated, paint all exposed surfaces except where indicated not to be painted or to remain natural; the term "exposed" includes areas visible through permanent and built-in fixtures when they are in place.
- B. Paint the surfaces as follows:
 - 1. If a surface, material, or item is not specifically mentioned, paint in the same manner as similar surfaces, materials, or items, regardless of whether colors are indicated or not.
 - 2. Paint surfaces behind movable equipment and furnishings the same as similar exposed surfaces.
 - 3. Paint surfaces to be concealed behind permanently installed fixtures, equipment, and furnishings, using primer only, prior to installation of the permanent item.
 - 4. Paint back sides of access panels and removable and hinged covers to match exposed surfaces.
 - 5. Paint surfaces impacted by new work, paint entire wall when patching work performed.
- C. Do not paint or finish the following items:
 - 1. Items fully factory-finished unless specifically noted; factory-primed items are not considered factory-finished.
 - 2. Items indicated to receive other finish.
 - 3. Items indicated to remain naturally finished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.

3.02 APPLICATION

- A. Apply products in accordance with manufacturer's instructions and as specified or recommended by MPI Manual, using the preparation, products, sheens, textures, and colors as indicated.
- B. Do not apply finishes over dirt, rust, scale, grease, moisture, scuffed surfaces, or other conditions detrimental to formation of a durable coating film; do not apply finishes to surfaces that are not dry.
- C. Use applicators and methods best suited for substrate and type of material being applied and according to manufacturer's instructions.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate; provide total dry film thickness of entire system as recommended by manufacturer.
- E. Apply finish to completely cover surfaces with uniform appearance without brush marks, runs, sags, laps, ropiness, holidays, spotting, cloudiness, or other surface imperfections.

END OF SECTION

SECTION 09 9723
CONCRETE AND MASONRY COATINGS

PART 1 GENERAL

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1.01 LOCATIONS

- A. Basement floor, throughout
- B. Interior of basement foundation walls, throughout, DryLock by ULG, or like product

PART 2 PRODUCTS

2.01 MATERIALS

- A. Coatings - General: Provide complete systems formulated and recommended by manufacturer for the applications indicated, in the thicknesses indicated.

PART 3 EXECUTION

3.01 CLEANING

- A. Prior to coating, hand wash all surfaces

3.01 PRIMING

- A. Apply primer to all surfaces, unless specifically not required by coating manufacturer. Apply in accordance with coating manufacturer's instructions.

3.02 COATING APPLICATION

- A. Apply coatings in accordance with manufacturer's instructions, to thicknesses specified.
- B. Apply in uniform thickness coats, without runs, drips, pinholes, brush marks, or variations in color, texture, or finish. Finish edges, crevices, corners, and other changes in dimension with full coating thickness.

END OF SECTION

SECTION 10 5623
CLOSET STORAGE SHELVING

PART 1 GENERAL

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1.01 LOCATIONS

- A. Closet rods and shelving at closets on first and second floors
- B. Coat hooks at side entry

1.02 SECTION INCLUDES

- A. Wall mounted wire closet shelving.
- B. Accessories.

PART 2 PRODUCTS

2.01 SHELVING APPLICATIONS

- A. Shelf Depth: 12 inches, unless otherwise indicated.
- B. Coat Closet:
 - 1. Wall-to-wall shelf with integral hanger rod.

2.02 MATERIALS

- A. Wire Shelving: Factory-assembled coated wire mesh shelf assemblies for wall-mounting, with all components and connections required to produce a rigid structure that is free of buckling and warping.
 - 1. Construction: Cold-drawn steel wire with average tensile strength of 100,000 psi (690 MPa) resistance welded into uniform mesh units, square, rigid, flat, and free of dents or other distortions, with wires trimmed smooth.
 - 2. Coating: PVC or epoxy, applied after fabrication, covering all surfaces.
 - 3. PVC Coating: 9 to 11 mils thick.
 - 4. Epoxy Coating: Non-toxic epoxy-polyester powder coating baked-on finish, 3 to 5 mils thick.
 - 5. Standard Mesh Shelves: Cross deck wires spaced at 1 inch (25.4 mm).
 - 6. Close-Mesh Shelves: Cross deck wires spaced at 1/2 inch (12.7 mm).
 - 7. Shelf and Rod Units: Integral hanging rod at front edge of shelf.
 - 8. Free-Sliding Hanging Rod: Integral hanging rod that permits uninterrupted sliding of
 - 9. hangers the full width of the shelf.
- B. Mounting Hardware: Provide manufacturer's standard mounting hardware; include support braces, wall brackets, back clips, end clips, poles, and other accessories as required for complete and secure installation; factory finished to match shelving.
- C. Fasteners: As recommended by manufacturer for mounting substrates.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions, with shelf surfaces level.
- B. Cap exposed ends of cut wires.
- C. Install back clips, end clips at side walls, and support braces at open ends. Install intermediate
- D. Support braces as recommended by manufacturer.
- E. Mounting Heights: confirm with Construction Manager prior to installation

END OF SECTION

**SECTION 11 3100
RESIDENTIAL APPLIANCES**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. At kitchen, provide and install:
 - 1. Range
 - 3. Microwave vent hood
 - 4. Dishwasher
 - 5. Refrigerator
- B. At first floor laundry, provide:
 - 1. Washer
 - 2. Dryer
- C. Ducting
 - 1. Provide code-compliant ducting for vent hood to exterior of home
 - 2. Provide code-compliant ducting for dryer to exterior of home
- D. Comply with appliance specifications in NEC energy specification

1.03 QUALITY ASSURANCE

- A. Electric Appliances: Listed and labeled by UL and complying with NEMA standards.
- B. Gas Appliances: Bearing design certification seal of AGA.

PART 2 PRODUCTS

2.01 RESIDENTIAL APPLIANCES All are manufactured by Frigidaire, white finish

Refrigerator	Frigidaire FFHT2126LW
Range	Frigidaire FFGF3023LW
Microwave hood	Frigidaire FFMV162LW
Dishwasher	Frigidaire FGHD2465NW
Washer	Frigidaire FAFW3801LW
Dryer	Frigidaire FAQG7001LW

PART 3 EXECUTION

3.01 INSTALLATION

- A. All appliances shall be uncrated, cleaned, installed and readied for use.
- B. Installation shall include all cord attachments, wiring, plumbing, and natural gas supply piping necessary for appliance operation.
- C. Install in accordance with manufacturer's instructions.
- D. Anchor built-in equipment in place.

END OF SECTION

**SECTION 12 1110
HRA MAIL BOX AND HOUSE NUMBERS**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. One set of house numbers and mailbox at front entrance, location as directed by Construction Manager
- B. One set of house numbers at garage, above door facing alley

PART 2 PRODUCTS

2.01 Mailbox

- A. Gibraltar Mailboxes, Designer Lockable Wall Mount Mailbox or similar, submit for approval by Construction Manager.

2.02 Address Numbers

- A. 2 sets of (3), black, flush mount, metal

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

END OF SECTION

**SECTION 12 1111
BATHROOM FURNISHINGS**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. Provide all new bathroom accessories at each bathroom, including 2 towel bars, toilet paper holder and shower curtain rod.

PART 2 PRODUCTS

2.01 TOWEL BARS

- A. Install a metal bath set comprised of two 24" towel bars and toilet paper holder
- B. See selection sheet for manufacturer and model

2.02 SHOWER CURTAIN ROD

- A. Install a shower curtain rod using wall anchors.
- B. See selection sheet for manufacturer and model

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

END OF SECTION

**SECTION 12 3530
RESIDENTIAL CASEWORK**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. All new kitchen cabinets and countertops per drawings
- B. New bathroom vanity at each bathroom

1.02 SUBMITTALS

- A. Shop Drawings: Indicate casework locations, large scale plans, elevations, clearances required, rough-in and anchor placement dimensions and tolerances, and color sample.

1.03 QUALITY ASSURANCE

- A. Products: Complying with KCMA A161.1 and KCMA Certified.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. The HRA has approved Shrock Select, Medallion or Mid-Continent

2.02 COMPONENTS

- A. Cabinets per 1.01 above, per drawings and selection sheet
- B. Cabinet Construction: Plywood sides and bases.
- C. Door and Drawer Fronts: Solid wood.
- D. Drawer Box Construction: Plywood with dovetail joinery
- E. Kitchen countertop: plastic laminate over particle board, integral back splash, per drawings and selection sheet

2.03 HARDWARE

- A. Hardware: see Materials and Selection Sheet

2.04 FABRICATION

- A. Shop assembles casework for delivery to site in units easily handled and to permit passage through building openings.
- B. Fabricate corners and joints without gaps or inaccessible spaces or areas where dirt or moisture could accumulate.

2.05 FINISHES

- A. Exposed To View Surfaces: Stain, seal, and varnish - see Materials and Selection Sheet

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install casework, components and accessories in accordance with manufacturer's instructions.
- B. Set casework items plumb and square, securely anchored to building structure.

END OF SECTION

**SECTION 22 3000
PLUMBING EQUIPMENT**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. Remove existing water heater in basement and replace with new side-vented water heater, per NEC energy specification.
- B. Provide new vent opening through the new CMU infill at west basement window and patch around opening as required to seal wall
- C. Upgrade of water meter. Contact: Northern Water Works (888) 497-4171. There is no cost to the contractor for purchase or installation of water meter. Include contractor's labor cost to coordinate Northern Water Works to install the meter.

1.02 SUBMITTALS

- A. Manufacturer's product data

PART 2 PRODUCTS

2.01 RESIDENTIAL WATER HEATER

- A. New 40 gallon water heater complying with NEC energy specification.

PART 3 EXECUTION

3.01 WATER HEATER INSTALLATION

- A. Install equipment in accordance with manufacturer's instructions, as required by code, and complying with conditions of certification, if any. Provide all required piping, equipment and accessories.
- B. Hot water heater shall be installed by a contractor whose principal occupation is the sale and installation of plumbing, heating, and/or air conditioning equipment and shall be installed in compliance with all applicable codes.
- C. Provide new gas piping from shut-off valve to fixture.
- D. Provide water piping with backflow prevention.
- E. Provide side vent with power vent.
- F. Provide electrical outlet.
- G. Discharge tube shall be directed to the drain.
- H. Recycle the existing HWH.

END OF SECTION

SECTION 22 4000
PLUMBING FIXTURES AND PIPING

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. At basement, provide and install:
 - 1. Utility sink with washing machine hookup
- B. At kitchen, provide and install:
 - 1. New sink and faucet
- C. At two bathrooms, provide and install:
 - 1. Toilet
 - 2. Lav (integral vanity countertop)
 - 3. Lav faucet
 - 4. New shower enclosure and controls at first floor bathroom
 - 5. New tub/shower enclosure and shower controls at second floor bathroom
- D. All new supply and waste piping throughout house. Connect waste lines to existing cast iron drain at basement slab.
- E. Backflow preventer at exterior hose bib.
- F. Gas piping for appliances and new furnace.

PART 2 PRODUCTS

2.01 PRODUCTS

- A. Refer to selection sheet for fixture selections

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install new fixtures with trap, easily removable for servicing and cleaning.
- B. Install new PVC or ABS waste and vent piping
- C. Install flexible PEX piping with a minimum number of couplings to new fixtures. Install mechanical connectors and shut off valves for each fixture.
- D. Six pipe to 1990 CABO minimums per table 2406.5
- E. Include clothes washer hook up.
- F. Furnish and install all water piping and shut-off valves necessary to complete work.
- G. Seal around plumbing penetrations in all exterior surfaces, surfaces that border on unconditioned spaces, between floors, and throughout the exterior of the building.
- H. Clean out basement floor drain at end of construction period and verify operation and function. Install new drain cover.

END OF SECTION

**SECTION 23 0000
RESIDENTIAL VENTILATION**

PART 1 GENERAL

\$ _____

- 1.01 A. Refer to NEC energy specification

PART 2 PRODUCTS

2.01 BATHROOM VENT FAN/LIGHT FIXTURE:

- A. All vent fans shall be energy star rated ceiling mounted fan/light fixtures rated for a minimum 100 watt exterior ducted vent fan capable of a minimum of 80 CFM
- B. Product: NuTone QTREN080FLT or like product to be approved by the Project Manger
- C. Switch: Light and fan shall use same switch with a time delay for fan such as the EFI/Light Time Delay Switch Part # 5100.505 or equipped with a humidistat sensor.
- D. Ducting: Install 4" metal duct and vent to the exterior ideally through a gable end using a 4" hooded vent with damper.
 - 1. All duct seams shall be sealed with duct mastic. Insulate duct work with vinyl or foil faced R-6 minimum duct insulation.
 - 2. Repair any damage to the ceiling installation or air seal fan/light assembly to the ceiling with low VOC caulk.

2.02 DUCT ASSEMBLIES

- A. Low Pressure Supply (Heating Systems): 1/2 inch w.g. (125 Pa) pressure class, galvanized steel.
- B. Low Pressure Supply (System with Cooling Coils): 1/2 inch w.g. (125 Pa) pressure class, galvanized steel.
- C. General Exhaust: 1/2 inch w.g. (125 Pa) pressure class, galvanized steel.
- D. Kitchen Cooking Hood Exhaust: 1/2 inch w.g. (125 Pa) pressure class, galvanized steel.

2.03 DUCTWORK FABRICATION

- A. Fabricate and support in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated.
- B. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.
- C. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.
- D. Fabricate continuously welded round and oval duct fittings in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible.

2.04 KITCHEN HOOD EXHAUST DUCTWORK

- A. Fabricate in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, SMACNA Kitchen Ventilation Systems and Food Service Equipment Fabrication & Installation Guidelines and NFPA 96.

END OF SECTION

SECTION 23 5400
FORCED AIR FURNACE AND DUCTS

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. Comply with NEC energy specification
- B. New furnace per NEC energy specification
- C. Repair and/or replace supply and return ducting as required
- D. Repair floor registers at first floor

1.02 SUBMITTALS

- A. Product Data: Provide rated capacities, weights, accessories, electrical nameplate data, and wiring diagrams.
- B. Product data indicating Heating, Cooling equipment and Ducts are in compliance with Air Conditioning Contractors of America (ACCA) Manuals, Parts J, S, and D. Alternate Compliance paths are as Follows:
 - 1. ASHRAE Handbooks

PART 2 PRODUCTS

2.01 GAS FIRED FURNACES

- A. See NEC specification
- B. Units: Self-contained, packaged, factory assembled, pre-wired unit consisting of cabinet, supply fan, heating element, controls, air filter, humidifier, and accessories; wired for single power connection with control transformer.
 - 1. Safety certified by CSA in accordance with ANSI Z 21.47.
 - 2. Venting System: Direct.
 - 3. Combustion: Sealed
 - 4. Air Flow Configuration: Upflow.
 - 5. Heating: Natural gas fired.
- C. Performance:
 - 1. HVAC contractor will be responsible to determine heat load using Manual J.
- D. Cabinet: Steel with baked enamel finish, easily removed and secured access doors with safety interlock switches, glass fiber insulation with reflective liner.
- E. Primary Heat Exchanger:
 - 1. Material: Hot-rolled steel
 - 2. Shape: Tubular type.
- F. Secondary Heat Exchanger:
 - 1. Material: Aluminized steel.
 - 2. Coating: Polypropylene.
- G. Gas Burner:
 - 1. Atmospheric type with adjustable combustion air supply,
 - 2. Gas valve, two stage provides 100 percent safety gas shut-off; 24 volt combining pressure regulation, safety pilot, manual set (On-Off), pilot filtration, automatic electric valve.
 - 3. Electronic pilot ignition, with electric spark igniter.
- H. Supply Fan: Centrifugal type rubber mounted with direct drive with adjustable variable pitch motor pulley.
- I. Motor: Refer to Section 22 0513; 1750 rpm two-speed, permanently lubricated, hinge mounted.
- J. Air Filters: 1 inch (25 mm) thick glass fiber, disposable type arranged for easy replacement.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with NFPA 90A.
- B. Install gas fired furnaces in accordance with NFPA 54.
- C. Provide vent connections in accordance with NFPA 211.
- D. The Contractor shall have all HVAC ducting cleaned by a professional duct cleaning company after all interior repairs are completed.

END OF SECTION

**SECTION 23 6213
FORCED AIR A/C**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. New air-conditioning equipment for forced air system, per NEC energy specification

1.02 SUBMITTALS

- A. Product Data: Provide rated capacities, weights specialties and accessories, electrical nameplate data, and wiring diagrams. Include equipment served by condensing units in submittal, or submit at same time, to ensure capacities are complementary.
- B. Design Data: Indicate pipe and equipment sizing.

PART 2 PRODUCTS

2.01 MANUFACTURED UNITS

- A. Units: Self-contained, packaged, factory assembled and pre-wired units suitable for outdoor use consisting of cabinet, compressors, condensing coil and fans, integral sub-cooling coil, controls, liquid receiver, wind deflector, and screens.

2.02 CASING

- A. House components in welded steel frame with galvanized steel panels with weather resistant, baked enamel finish.

2.03 CONDENSER COILS

- A. Coils: Aluminum fins mechanically bonded to seamless copper tubing. Provide sub-cooling circuits. Air test under water to 425 psig (2900 kPa), and vacuum dehydrate. Seal with holding charge of nitrogen.

2.04 FANS AND MOTORS

- A. Weatherproof motors suitable for outdoor use, single phase permanent split capacitor or 3 phase, with permanent lubricated ball bearings and built in current and thermal overload protection.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Provide piping for refrigeration system as required.
- B. Provide connection to refrigeration piping system and evaporators. Refer to Section 23 2300. Comply with ASHRAE Std 15.
- C. Provide concrete pad for mounting outside condenser unit.

END OF SECTION

SECTION 26 0001
POWER, WIRING AND DEVICES

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. Entire house shall comply with St. Paul Bulletin 80-1
- B. Remove all obsolete low voltage wiring and devices throughout house
- C. At kitchen and laundry, provide all new concealed wiring, receptacles and switches.
- D. Replace all existing smoke and CO detectors and provide hard wired smoke and CO detectors to meet code.
- E. All new receptacle and switch devices and cover plates throughout the house.
- F. Electrical service and wiring for new water heater, furnace, exhaust fans and kitchen and laundry appliances.
- G. (2) all new weatherproof outlets, near front door and at rear of house
- H. Underground power supply to garage, for lighting and garage door opener.
- I. All new exhaust fans in bathrooms per NEC energy specification
- J. Install one location of each at first floor: cable, phone, network Cat5
- K. Index all circuits at existing panel
- L. New wall switches where new lighting is indicated
- M. New 100 amp electrical service, meter, load center at north wall of house after addition is removed

1.02 SUMMARY OF BULLETIN 80-1 (Property Maintenance Code)

- A. All hazardous, improper and/or illegal wiring shall be removed or required to comply with the present Electrical Code. This will include other buildings on the property such as garages, sheds, etc.
- B. Minimum size for all new services for single residential occupancies shall be 100 ampere, 240 Volt.
- C. No additions or extensions will be allowed on an existing ampere services.
- D. The Following are minimum requirements for new service installation:
 - 1. **Electrical outlets required:** Every habitable room 120 square feet or less in area, of a dwelling or dwelling unit of a multiple dwelling shall contain at least two separate and remote duplex outlets. Additional outlets shall be required for each additional 80 square feet or fraction thereof. Most new outlets must be Arc-Fault Circuit Interrupters (AFCI) protected according to Section 210.12 of the 2008 National Electrical Code.
 - 2. **In Kitchens:** Three separate and remote duplex outlets shall be required. At least one of the required duplex outlets shall be supplied by a separate twenty ampere circuit. Any receptacle installed above the counter top shall be of the Ground Fault Circuit Interrupter (GFCI) type, replace outlets that do not meet GFCI requirements.
 - 3. **Every public hall, water closet compartment, bathroom, laundry room and furnace room must contain at least one electric light fixture.** In addition to the light fixture, every bathroom and laundry room must have at least one duplex outlet. The required duplex outlet in each laundry room must be on a separate twenty ampere circuit. The required duplex outlet in each bathroom must be of the (GFCI) type. Any existing outlets in any bathroom must be converted to a GFCI-protected outlet or removed. The required GFCI outlet in the bathroom must be immediately adjacent to the sink. If a bathroom is added or gutted as part of the update, a 20 ampere circuit will be required per NEC 210.11(C)(3).

4. **Every common hall and inside stairway** in every residential structure or dwelling unit shall be adequately lit with an illumination of at least five lumens per square foot in the darkest portion of the normally traveled stairs and passageways.
5. **All exterior exits and entryways** are required to be illuminated a minimum of one footcandle at grade level for security.
6. **Exterior lighting** at garages is required to be adequate so as to not endanger health or safety. An average of one footcandle at the pavement is required. Exterior lighting must be in conformance with other city codes.
7. **Basement:** One lighting outlet is required for each 200 square feet of floor space. At least one of the required basement lighting outlets shall be switched from the head of the stairs.
8. **Smoke Detectors:**
 - a. All single-family dwelling shall have a hard-wired (120 volt electrical, not battery) battery-backup smoke detector installed near (not in) the bedrooms. If there are legal bedrooms on more than one level, the detector shall be installed on the level that has the greater number of bedrooms. If there are an equal number of bedrooms on more than one level, the detector shall be installed on the upper level near the bedrooms.
 - b. If the project includes building construction that requires a Building Permit, additional hard wired interconnected and/or battery-type smoke detectors are required per the Building Code.
9. **Metallic Light Fixtures (Luminaries):** If within five feet horizontally or eight feet vertically of grounded surfaces (metallic piping, concrete floor, etc.) must be grounded.
10. **Residential Closet Lights:** All closet lights must either be a florescent fixture (luminaries) or an enclosed incandescent fixture of the types required by the present Electrical Code. Fixtures must not be directly over the storage area in a closet; they must either be moved or eliminated and blanked off.
11. **Service conduits run in outside walls:** If a 100-ampere service is changed from fuses to circuit breakers, the meter is already outside, and the existing conduit is run in the outside wall, the conduit may be re-used. If the service is an upgrade (increase in amperage), conduit in the wall may not be re-used.

1.02 SECTION INCLUDES:

- A. Electrical work to meet requirements of Bulletin 80-1 reproduced above.
- B. Overhead Garage Door Opener: see Section 08 3323
- C. Certify Electrical Distribution: Electrician shall inspect all exposed wiring, motors, fixtures and devices for malfunction, shorts and hosing code compliance. Non-functioning and dangerous equipment and wiring shall be replaced
- D. Install new electrical to garage
- E. Provide switching for three exterior outdoor lights
- F. New electrical wiring, outlets, lighting and switching at kitchen to meet current electrical code.

PART 2 PRODUCTS

2.01 APPLICATIONS

- A. Conduit and Cable: Provide materials that meet code requirements.
- C. Devices and Cover plates: Provide all White devices. Provide heavy duty residential grade devices.
- D. Smoke/CO Detectors: Hard wired w/ battery-back up type units
- E. Doorbell system: Repair existing or provide a new system containing a low voltage transformer, power connection, buzzer and front door button.

- F. Equipment Wiring: Provide the correct power supply on separate circuit, with over current protection including all connectors for the water heater, boiler, microwave, refrigerator, dishwasher
- G. Bathroom Vent Fan/Light Fixture: comply with NEC specification
 - 1. Switch: Light and fan shall use same switch with a time delay for fan such as the EFI/Light Time Delay Switch Part # 5100.505 or equipped with a humidistat sensor.
 - 2. Ducting: Install 4" metal duct and vent to the exterior, verify location with project manager, using a 4" hooded vent with damper.
 - a. All duct seams shall be sealed with duct mastic. Insulate duct work with vinyl or foil faced R-6 minimum duct insulation.
 - b. Repair any damage to the ceiling installation or air seal fan/light assembly to the ceiling with low VOC caulk.
- H. GFCI Receptacles: Verify required locations throughout.

2.02 MATERIALS

- A. All materials shall be UL approved and/or National Electrical Code rated.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Building Codes: The extent of electrical work indicated in the Scope of Work is stated generally to indicate end result of work. The Contractor is responsible for making a thorough inspection of the site to determine the full extent of work required to achieve the end results. All electrical work must meet current building code requirements and must pass City of Saint Paul field inspection. Any work that does not meet codes or pass inspection must be corrected to the satisfaction of the city inspector at no additional cost to the Owner.
- C. Remove and dispose of all abandoned wiring and devices. Modify existing wiring and devices as indicated.
- D. All new wiring, when passing through living areas, shall be concealed.
- E. All receptacles and switches to be white, replace beige and other
- F. All new outlet covers and switch plates to be white
- G. All drilling, cutting and fastening shall be neat and true, and shall not critically damage framing members.
- H. All patching shall match the surrounding surface.

END OF SECTION

**SECTION 26 5101
LIGHTING**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. Exterior
 - 1. Ceiling light at front porch
 - 2. Wall-mount light at side door
 - 3. Garage security light
- B. Basement
 - 1. (4) new porcelain ceiling fixtures
 - 2. Light at basement stairs, switched from top and bottom
- C. First floor
 - 1. (6) ceiling lights: living room, dining, kitchen, front entry hallway, bedroom, side entry
 - 2. Pendant at kitchen sink and sconce at kitchen east wall
 - 3. Wall-mount light at bathroom sink
 - 4. Light at stairs to second floor, switched from top and bottom
- D. Second floor
 - 1. (4) ceiling lights: each bedroom, bathroom
 - 2. Wall-mount light at bathroom sink
- E. Compact fluorescent bulbs per NEC energy specification
- F. See selection sheet for lamp fixture information

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- C. Wire mold and surface mount boxes for receptacles.
- D. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.

END OF SECTION

**SECTION 28 1600
INTRUSION DETECTION**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. Provide and install a security system, to include a minimum of hardwired control panel with cellular transmitter (no phone line required), 2 hardwired keypads, two (2) Door sensors, motion detector, low temperature monitoring and siren.
- B. Include a monthly monitoring service at a rate not to exceed \$50/month.
- C. Contracts for monitoring must be month to month, not an extended period.
- D. Monitoring shall begin upon completion of construction and be paid by Owner.

1.02 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.
- B. Products: Furnish products listed and classified by Underwriters Laboratories Inc. as suitable for purpose specified and indicated.

PART 2 PRODUCTS

2.01 ALARM CONTROL PANEL

- A. Control Panel: Modular construction with surface wall-mounted enclosure.
- B. Power supply: Adequate to serve control panel modules, remote detectors, and alarm signaling devices. Include battery-operated emergency power supply with capacity for operating system in standby mode for 24 hours.

2.02 INITIATING DEVICES

- A. Magnetic Switches:
- B. Motion Detectors:

2.03 SIGNAL DEVICES

- A. Alarm Bells: NFPA 72, electric single stroke, 8 inch (200 mm) bell with operating mechanism behind dome. Sound Rating: 81 dB at 10 feet (3 M).

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Use 18 AWG minimum size conductors for detection and signal circuit conductors. Install wiring in cable.
- C. As soon as System is installed contact HRA Project Manager Marty McCarthy at marty.mccarthy@ci.stpaul.mn.us to inform him to apply for a security permit.

3.02 CLOSEOUT ACTIVITIES

- A. Demonstrate normal and abnormal modes of operation, and required responses to each.

END OF SECTION

**SECTION 31 2200
GRADING**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. After north addition is removed, fill basement excavation and slope at retaining wall with imported soil complying with lead requirements
- B. Lead abatement: remove top 6" of soil at entire property and replace with new soil having 25 parts per million lead or less
- C. Regrade around house and garage ensuring code-compliant drainage at foundations per IRC
- D. Grade soil adjacent to front porch to ensure 30" max. floor height above grade

PART 3 EXECUTION

3.01 ROUGH GRADING

- A. When excavating through roots, perform work by hand and cut roots with sharp axe.

3.02 FINISH GRADING

- A. Build up ground slope at foundation wall using clean fill.
- B. New fill shall have an approximate slope of $\frac{1}{4}$ " per foot and extend away from the foundation wall approximately five feet.
- C. Remove roots, weeds, rocks, and foreign material while spreading.
- D. Vigorously tamp or roll new fill to achieve settled depth.
- E. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of sub grade.

END OF SECTION

**SECTION 32 1313
CONCRETE PAVING**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. New concrete walks per landscape drawing
- B. Garage apron

PART 2 PRODUCTS

2.01 PAVING ASSEMBLIES

- A. Concrete Sidewalks: 3,000 psi (20.7 MPa) 28 day concrete, 4 inches (100 mm) thick

2.02 FORM MATERIALS

- A. Wood form material, profiled to suit conditions.

PART 3 EXECUTION

3.01 FORMING

- A. Place and secure forms to correct location, dimension, profile, and gradient.

3.02 COLD AND HOT WEATHER CONCRETING

- A. Follow recommendations of ACI 305R when concreting during hot weather.
- B. Follow recommendations of ACI 306R when concreting during cold weather.

3.03 FINISHING

- A. Sidewalk Paving: Light broom, texture perpendicular to direction of travel with troweled and radiused edge: 1/4 inch (6 mm) radius.

END OF SECTION

**SECTION 32 9223
SODDING**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. New sod at areas of yard indicated on the landscape plan
- B. New sod at all existing bare spots
- C. Resod all areas impacted by construction activities or grading

PART 2 PRODUCTS

2.01 MATERIALS

- A. Sod: TPI, Certified Turf grass Sod quality; cultivated grass sod; type indicated in plant schedule on Drawings; with strong fibrous root system, free of stones, burned or bare spots; containing no more than 5 weeds per 1000 sq ft (100 sq m). Minimum age of 18 months, with root development that will support its own weight, without tearing, when suspended vertically by holding the upper two corners.

PART 3 EXECUTION

3.01 LAYING SOD

- A. Moisten prepared surface immediately prior to laying sod.
- B. Lay sod immediately after delivery to site to prevent deterioration.
- C. Lay sod smooth and tight with no open joints visible, and no overlapping; stagger end joints 12 inches (300 mm) minimum. Do not stretch or overlap sod pieces.
- D. Water sodded areas immediately after installation. Saturate sod to 4 inches (100 mm) of soil.

3.02 MAINTENANCE

- A. General Contractor is responsible for the maintenance of sod until project closeout.

END OF SECTION

**SECTION 32 9300
PLANTS**

PART 1 GENERAL

\$ _____

1.01 LOCATIONS

- A. Quantities, types and locations indicated on the landscape plan

PART 2 PRODUCTS

2.01 PLANTS

- A. Plants: Species, size and quantity identified in Landscape Plan, grown in climatic conditions similar to those in locality of the work.

2.02 MULCH MATERIALS

- A. Mulching Material: Hardwood species wood shavings, free of growth or germination inhibiting ingredients.

PART 3 EXECUTION

3.01 RAINGARDEN INSTALLATION

- A. Remove 18 inches of soil leaving compacted 1 to 3 side slopes rising to finished grade.
- B. Deeply till and break apart basin floor
- C. Add 2 inches of leaf compost and till into soil.
- D. Finish rain garden by hand grading a flat, level basin and 3 to 1 side slope, as indicated on Landscape Plan.
- E. Add 3 inches of shredded hard wood mulch, as with slopes
- F. Install edging as indicated on Landscape Plan.
- G. Ensure that downspout runoff enters the rain garden.

3.02 PLANTING

- A. Set plants vertical according to the Landscape Plan.
- B. Saturate soil with water when the pit or bed is half full of topsoil and again when full.

3.03 MAINTENANCE

- A. Provide maintenance through project close-out. Owner will pay for water.

END OF SECTION

	Location	Description	Manufacturer / Model	Finish / Sheen	Color	Notes
Lighting	Front Porch	Ceiling Mount	Westinghouse Lighting 6682300			
	Side Entry	Wall Mount	Van Buren Outdoor fixture, by Patriot		Black	Available at Menards
	Garage	Security	300 Watt DualBrite Motion Security Light		Black	Available at Menards
	Basement	Ceiling	Porcelain			(4) new
	Basement stairs	Flush Mount	Twin Pack, 15"		Brushed Nickel	Available at Menards
	Living Ceiling	Flush Mount	Carlton by Royce Model RFM5209ES		Pewter Finish	
	Dining Ceiling	Flush Mount	Carlton by Royce Model RFM5209ES		Pewter Finish	
	Kitchen Ceiling	Flush Mount	Carlton by Royce Model RFM5209ES		Pewter Finish	
	Kitchen pendant	Pendant	Carlton by Royce Model RMP5209ES1		Pewter Finish	
	Kitchen wall	Sconce	Carlton by Royce Model RV5209ES1		Pewter Finish	
	Side entry ceiling	Flush Mount	Twin Pack, 15"		Brushed Nickel	Available at Menards
	First floor bath ceiling	Flush Mount	Carlton by Royce Model RFM5209ES		Pewter Finish	
	First floor bath vanity	Sconce	Carlton by Royce Model RV5209ES1		Pewter Finish	
	Bedroom 1	Flush Mount	Twin Pack, 15"		Brushed Nickel	Available at Menards
	Stairs to second floor	Flush Mount	Twin Pack, 15"		Brushed Nickel	Available at Menards
	Bedroom 2,3,4	Flush Mount	Twin Pack, 15"		Brushed Nickel	Available at Menards
	Second floor bath ceiling	Flush Mount	Carlton by Royce Model RFM5209ES		Pewter Finish	
	Second floor bath vanity	Sconce	Carlton by Royce Model RV5209ES1		Pewter Finish	
Outlet and switch plate covers				White		
Plumbing Fixtures	Laundry	Laundry Utility Sink	Single bowl, 24"		White	Fiberglass
	Laundry	Laundry Faucet	74998 by Moen		Chrome	
	Kitchen	Kitchen Sink	2212 by Moen		Stainless	Available at Menards
	Kitchen	Kitchen Faucet	7825 by Moen		Chrome	Available at Menards
	Bathroom 1&2	Vanity top with integral lav	RCXX22SPW by Imperial Marble		White	XX=31 at Bath 1, XX=37 at Bath 2
	Bathroom 1&2	Lav faucet	CA84003CBN by Moen		Nickel	
	Bathroom 1&2	Toilet	Cadet Flowise by American Standard		White	
	Bathroom 1&2	Towel bar	DN6818 by Moen		Nickel	
	Bathroom 1&2	Toilet paper holder	DN6808 by Moen		Nickel	
	Bathroom 1&2	Shower rod			Nickel	
	Bathroom 1	Shower enclosure	Acrylic 36 x 36			
	Bathroom 1	Shower system	82008CBN by Moen		Nickel	Available at Menards
	Bathroom 2	Tub/shower enclosure	Acrylic 32 x 60 with integral surround			
	Bathroom 2	Tub faucet, shower, controls	82008CBN by Moen		Nickel	Available at Menards
Casework	Kitchen	Cabinets per drawings	Schock, Medallion or Midcontinent	Maple, natural		Full overlay 5-piece door, flat drawer
	Kitchen	Door hardware	Pull H63 by Schrock		Brushed Nickel	
	Kitchen	Drawer hardware	Pull H63 by Schrock		Brushed Nickel	
	Kitchen	Countertops	1755-1 by Wilsonart		Canyon Black	
	Bathroom 1	Vanity 30"	MDW-3021 by Pace	Maple, natural		
	Bathroom 2	Vanity 48"	MDW-48 by Pace	Maple, natural		
	Bathroom 1&2	Medicine cabinet	SMC-2530	Maple, natural		
	Bathroom 1&2	Cabinet hardware	Pull H63 by Schrock		Brushed Nickel	

Interior Finishes	Ceilings Throughout	Ceiling paint	Sherwin Williams Low VOC	Flat	Ceiling White	
	Painted trim	Trim paint	Sherwin Williams Low VOC	Satin	Pure White SW7005	
	Living Room & Dining Room	Wall paint	Sherwin Williams Low VOC	Egg shell	Nacre SW6154	
	Kitchen	Wall paint	Sherwin Williams Low VOC	Satin	Bittersweet Stem SW7536	
	Side entry and basement stair	Wall paint	Sherwin Williams Low VOC	Satin	Nacre SW6154	
	Bath 1	Wall paint	Sherwin Williams Low VOC	Satin	Bittersweet Stem SW7536	
	Bedroom 1	Wall paint	Sherwin Williams Low VOC	Egg shell	Nacre SW6154	
	Entry hall, stairs, 2 nd floor hall	Wall paint	Sherwin Williams Low VOC	Egg shell	Nacre SW6154	
	Bedroom 2, 3, 4	Wall paint	Sherwin Williams Low VOC	Egg shell	Nacre SW6154	
	Second floor bath	Wall paint	Sherwin Williams Low VOC	Satin	Bittersweet Stem SW7536	
	Closets	Wall paint	Sherwin Williams Low VOC	Egg shell	Nacre SW6154	
	Floors Basement	Concrete floor paint			Gray	
	Walls Basement- exterior	Masonry	DryLock			
Tile & Carpet	First floor tile flooring	Ceramic tile	Florim Istone		Walnut	Available at Menards
Exterior Finishes	Both house and garage:					
	Body	Color 1	Vinyl siding selection		TBD	
	Door and Window Trim	Color 2 (trim)	Aluminum wrap/ vinyl windows		White	
	Doors	Color 3	Sherwin Williams Low VOC		TBD	
	Roof	Shingles	GAF Elk Timberline 30 yr HD		Weatherwood	
	Gutters/Downspouts	Prefinished Aluminum			White	

Neighborhood Energy Connection

Residential Energy Specification

Customer: City of Saint Paul

Auditor: Michael Childs

Address: 677 York Avenue E

Phone: 651-221-4462 x145

104	Replace Furnace with 95% AFUE, Multi-stage, Forced Air Furnace	Remove existing furnace, recycle all metal components and dispose of all other materials in a code legal dump. Install a new ENERGY STAR rated, gas-fired, multi-stage burner, forced air furnace with a minimum AFUE rating of 95%+ and ECM Motor with 2" rise above floor. Connect to existing duct work and gas line. New furnace to be vented with PVC piping per manufacturer's specifications. New furnace will have minimum limited warranties of 20 years on heat exchangers; 5 years on parts. Include auto setback thermostat controls, vent pipe & new shut-off valve. Rework cold air return if necessary to ensure easy access, good fit & easy replacement of air filter. An exterior return air filter box shall be installed on one side, both sides or bottom of new furnace. Seal all exposed duct joints with duct mastic. Remove all existing cloth duct tape prior to installing mastic.	
304	Replace Water Heater with Power Vented .67 EF	Replace water heater with a power-vented water heater with an EF of .67. Include pressure & temperature release valve, discharge tube to within 6" of floor and PVC flue to power vent to exterior.	

310	Replace Central Air Conditioning Unit	Install 16 SEER split system central air conditioning unit, following local building code. Using OEM performance information and industry-approved procedures, confirm that the selected equipment satisfies/meets the load requirements at the system design conditions.	
500	Seal Attic Bypasses	Contractor shall seal all attic bypasses. Bypasses shall be defined as any break in the envelope of a house between a heated living space and an unheated area or exterior. Bypass locations include, but are not limited to, the following areas: chimneys, soil stacks, end walls, dropped ceilings, open plumbing walls, beneath knee walls and around duct work, electrical work and attic access points. Bypasses shall be sealed in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 30 Pascals. Materials to be used for sealing bypasses depend on the size and location of the bypass and meet code requirements. These materials include high quality caulks (20-year life span), polyethylene rod stock, foam, sheetrock, sheet metal, extruded polystyrene and densely packed insulation.	
502	Dense Pack Below Floor and blow above floor to R-50	All bypasses shall be sealed before insulating in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 30 Pascals. Floored attics shall be blown below floor boards using the Dense Pack Method to a minimum density 3.5 lbs/ft ³ . Blow above floorboards to bring below and above total to R-50 or more.	

510	Blow Open Attic to R-50	All bypasses shall be sealed before insulating in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 30 Pascals. Blow insulation to depth indicated on manufacturer's coverage chart, consistently and evenly to R-50. Insulation in the peak attic must be marked with a ruler to measure depth and a sign with the number of bags used and the date of the installation.	
524	Insulate Overhang	Insulate overhang from the exterior on west side of house. Install R-19 batt of insulation in floor cavities and cover with 2" high-density rigid board insulation or dense pack with cellulose insulation. Access holes must be patched, plugged and painted as necessary.	
526	Insulate Above Bay Window	Insulate space above bays to capacity. Insulate floor to capacity. Access holes must be patched, plugged and painted as necessary.	
534	Insulate walk-up attic door and stairway	Insulate door to walk-up attic to R-19, and weather strip. Insulate under stairs and perimeter stair walls.	
610	Wall insulation - Exterior Application: Remove Vinyl Siding, Drill, Dense Pack, Plug and Replace Siding	Siding shall be removed before drilling access holes. Determine cavities are free of hazards and can support dense packing pressures, locate drilling hazards, control dust when drilling from interior. Completely fill each cavity to a consistent density. Dense pack cellulose to a minimum density of 3.5 lbs./ft ³ or dense pack spider fiberglass per manufacturer's instructions. Siding must be replaced without damage and nailed back with appropriate galvanized nails. Follow all applicable Lead Safe Work Practices as per the EPA's RRP Rules.	Insulation method depends on the extent of the rehab work.

616	Wall insulation - Interior Application: Dense Pack Cellulose	Exterior walls insulated from inside the house shall be drilled through to provide access. Determine cavities are free of hazards and can support dense packing pressures, locate drilling hazards, control dust when drilling from interior. Completely fill each cavity to a consistent density. Dense pack cellulose to a minimum density of 3.5 lbs./ft ³ or dense pack spider fiberglass per manufacturer's instructions. Follow all applicable Lead Safe Work Practices as per the EPA's RRP Rules.	Insulation method depends on the extent of the rehab work.
618	Wall insulation - Interior Application: Fiberglass batt open cavities	Fit batt insulation between studs so that it fills the wall cavity without any gaps, voids, or compression. Call the NEC before sheet rocking.	Insulation method depends on the extent of the rehab work.
620	Wall insulation - Interior Application: Spray foam open cavities	Follow manufacturer's instructions to completely and evenly fill the cavity. Call the NEC for inspection before sheet rocking.	Insulation method depends on the extent of the rehab work.
800	Air Seal Rim Joist	Seal cracks and holes in rim joist using caulk, foam or other air tight materials.	This is in the front portions of the basement.
802	Air Seal and Insulate Rim Joist	Seal cracks and holes in rim joist before insulating. Caulk or foam 3 inches of rigid insulation in place. Or, apply two-part foam evenly and consistently according to manufacturer's instructions to insulate to R-10 around basement rim joist.	This is the back portion of the basement.
1000	Install ENERGY STAR Rated Kitchen Fan	Install an ENERGY STAR rated exhaust fan connected with insulated rigid ductwork into a dampered vent.	
1010	Install ENERGY STAR Rated 2-stage Bathroom Fan	Install an ENERGY STAR rated two-speed bathroom fan .8 sones or less, with a pre-set low-speed of 10-30 CFM and a high-speed boost capability of 70-110 CFM initiated by a wall switch or motion detector. Vent bathroom fan using rigid duct and insulated with fiberglass and vented out with dampered roof vent.	There are two bath fans existing and one is vented through the wall.

1210	Install ENERGY STAR Rated Washing Machine	Connect new ENERGY STAR rated clothes washer sized appropriately for the household. Use braided steel water supply lines and a smooth rubber drain line connected to a 2 inch drain with trap. Remove existing washer, recycle all metal components and dispose of all other materials in a code legal dump.	
1212	Install ENERGY STAR Rated Dishwasher	Install ENERGY STAR rated dishwasher including all alterations and connections to plumbing and electric system. Remove existing dishwasher, recycle all metal components and dispose of all other materials in a code legal dump.	
1214	Install ENERGY STAR Rated Refrigerator	Install ENERGY STAR rated refrigerator sized appropriately for the household. Remove existing refrigerator, recycle all metal components and dispose of all other materials in a code legal dump.	

Home Energy Rating Certificate

677 York Ave E
St Paul, MN 55130



**3 Stars Plus
Confirmed**

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

Energy Efficient

HERS Index: 129

General Information

Conditioned Area: 4017 sq. ft.
 Conditioned Volume: 33311 cubic ft.
 Bedrooms: 4
 House Type: Multi-family, whole building
 Foundation: Conditioned basement

Mechanical Systems Features

Heating: Fuel-fired air distribution, Natural gas, 80.0 AFUE.
 Cooling: Air conditioner, Electric, 10.0 SEER.
 Water Heating: Conventional, Natural gas, 0.57 EF, 50.0 Gal.
 Duct Leakage to Outside: RESNET/HERS default
 Ventilation System: None
 Programmable Thermostat: Heating: No Cooling: No

Building Shell Features

Ceiling Flat: R-19 Exposed Floor: R-0
 Vaulted Ceiling: R-22 Window Type: S W Op (w/St)
 Above Grade Walls: R-6 **Infiltration:**
 Foundation Walls: R-0.0 Rate: Htg: 4375 Clg: 4375 CFM50
 Slab: R-0.0 Edge, R-0.0 Under Method: Blower door test

Lights and Appliance Features

Percent Interior Lighting: 0.00 Range/Oven Fuel: Natural gas
 Percent Garage Lighting: 0.00 Clothes Dryer Fuel: Natural gas
 Refrigerator (kWh/yr): 691.00 Clothes Dryer EF: 2.67
 Dishwasher Energy Factor: 0.46 Ceiling Fan (cfm/Watt): 0.00

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM/Rate - Residential Energy Analysis and Rating Software v12.99

This information does not constitute any warranty of energy cost or savings.

© 1985-2012 Architectural Energy Corporation, Boulder, Colorado.

Registry ID:

Rating Number:

Certified Energy Rater: Michael Childs

Rating Date: 8/27/12

Rating Ordered For: City of Saint Paul

Estimated Annual Energy Cost

Use	Confirmed		
	MMBtu	Cost	Percent
Heating	341.7	\$3203	61%
Cooling	6.1	\$179	3%
Hot Water	32.8	\$295	6%
Lights/Appliances	50.7	\$1253	24%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$360	7%
Total		\$5290	100%

**This home meets or exceeds the minimum
criteria for all of the following:**

TITLE

Company

Address

City, State, Zip

Phone #

Fax #

Home Energy Rating Certificate

677 York Ave E

St Paul, MN 55130



**5 Stars
Projected Rating**

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

Energy Efficient

HERS Index: 79

General Information

Conditioned Area: 4017 sq. ft.
 Conditioned Volume: 33311 cubic ft.
 Bedrooms: 4

House Type: Multi-family, whole building
 Foundation: Conditioned basement

Mechanical Systems Features

Heating: Fuel-fired air distribution, Natural gas, 95.0 AFUE.
 Cooling: Air conditioner, Electric, 16.0 SEER.
 Water Heating: Conventional, Natural gas, 0.67 EF, 40.0 Gal.
 Duct Leakage to Outside: RESNET/HERS default
 Ventilation System: Exhaust Only: 80 cfm, 15.0 watts.
 Programmable Thermostat: Heating: Yes Cooling: Yes

Building Shell Features

Ceiling Flat: R-50
 Vaulted Ceiling: R-44
 Above Grade Walls: R-13
 Foundation Walls: R-0.0
 Slab: R-0.0 Edge, R-0.0 Under

Exposed Floor: R-29
 Window Type: NFRC .34 / .34

Infiltration:
 Rate: Htg: 2375 Clg: 2375 CFM50
 Method: Blower door test

Lights and Appliance Features

Percent Interior Lighting: 90.00
 Percent Garage Lighting: 0.00
 Refrigerator (kWh/yr): 691.00
 Dishwasher Energy Factor: 0.46

Range/Oven Fuel: Natural gas
 Clothes Dryer Fuel: Natural gas
 Clothes Dryer EF: 2.67
 Ceiling Fan (cfm/Watt): 0.00

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM/Rate - Residential Energy Analysis and Rating Software v12.99

This information does not constitute any warranty of energy cost or savings.

© 1985-2012 Architectural Energy Corporation, Boulder, Colorado.

Registry ID:

Rating Number:

Certified Energy Rater: Michael Childs

Rating Date: 8/27/12

Rating Ordered For: City of Saint Paul

Estimated Annual Energy Cost

Projected Rating

Use	MMBtu	Cost	Percent
Heating	207.6	\$1909	52%
Cooling	2.4	\$69	2%
Hot Water	29.3	\$264	7%
Lights/Appliances	43.9	\$1051	29%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$360	10%
Total		\$3653	100%

This home meets or exceeds the minimum criteria for all of the following:

TITLE

Company

Address

City, State, Zip

Phone #

Fax #



CITY OF SAINT PAUL
Christopher B. Coleman, Mayor

375 Jackson Street, Suite 220
Saint Paul, Minnesota 55101-1806

Telephone: 651-266-8989
Facsimile: 651-266-9124
Web: www.stpaul.gov/dsi

Code Compliance Report

August 22, 2012

Housing and Redevelopment Authority of St Paul
25 4th St W Unit 1100
Saint Paul MN 55102-1634

**** This Report must be Posted
on the Job Site ****

Re: 677 York Ave
File#: 12 071585 VB2

Dear Property Owner:

The following is the Code Compliance report you requested on July 26, 2012.

Please be advised that this report is accurate and correct as of the date August 22, 2012. All deficiencies identified by the City after this date must also be corrected and all codes and ordinances must be complied with. This report is valid for 365 days from August 22, 2012. This report may be used in lieu of a Truth in Housing Report required in St Paul Legislative Code 189. This building must be properly secured and the property maintained at all times.

In order to sell or reoccupy this property the following deficiencies must be corrected:

BUILDING **Inspector: Jim Seeger** **Phone: 651-266-9046**

- Remove mold, mildew and moldy or water damaged materials.
- Install handrails (34 inches - 38 inches above each nosing) and guardrails (36 inch minimum) at all stairways, and return hand rail ends into a newel post or wall per attachment.
- Repair or Replace any deteriorated window sash, broken glass, sash holders, re-putty, etc as necessary.
- Provide complete storms and screens, in good repair for all door and window openings.
- Provide functional hardware at all doors and windows
- Exit doors shall be capable of being opened from the inside, easily and without the use of a key. Remove all surface bolts.
- Weather seal exterior doors, threshold and weather-stripping.
- Prepare and paint interior and exterior as necessary. Observe necessary abatement procedures (EPA, MPCA and St. Paul Legislative Code, Chapter 34 for additional information) if lead base paint is present.
- Provide major clean-up of premises.
- Repair siding, soffit, fascia, trim, etc. as necessary.
- Provide proper drainage around house to direct water away from foundation of house.

Re: 677 York Ave
August 22, 2012
Page 2

BUILDING **Inspector: Jim Seeger** **Phone: 651-266-9046**

- Any framing members that required repair or do not meet code (where wall and ceiling covering is removed, members that are over-spanned, over-spaced, not being carried properly, door and window openings that are not adequately supported, etc.) are to be reconstructed in an approved manner.
- Provide fire block construction as necessary and seal chases in basement ceiling.
- Install Smoke Detectors/Carbon Monoxide Detectors per MN Conservation Code and the MN Dept. of Labor and Industry: Install per code where feasible.
- Provide proper drainage around house to direct water away from foundation of garage.
- Install rain leaders to direct drainage away from foundation.
- Review all applicable codes & policies when replacing windows including egress windows for sleeping rooms.
- Remove trees which are against foundation of home and garage.
- Openings in stair risers must be less than 4 inches.
- Grade must drain away from foundation of dwelling. Maintain 6 inch clearance between wood and soil.
- Remove or repair rear chimney on back of house roof.
- Remove tread cushions from west side deck and steps and from front steps.
- Replace front steps risers not uniform and install handrail at front steps to code.
- Provide ladder for basement front egress window.
- Install tempered glass in front stair sidewall window.
- Remove wood and parts from tree from rear section of house and check for roof damage.
- A building permit is required to correct the above deficiencies.

ELECTRICAL **Inspector: Randy Klossner** **Phone: 651-266-8989**

- Ground the electrical service to the water service with a copper conductor within 5 feet of the entrance point of the water service
- Bond around water meter with a copper wire sized for the electrical service per Article 250 of the NEC
- Properly strap cables in basement
- Repair or Replace all broken, missing or loose light fixtures, switches and outlets, covers and plates
- Install hard-wired, battery backup smoke detector per bulletin 80-1 and other smoke detectors as required by the IRC. Also, Install carbon monoxide detector(s) within 10 feet of all bedrooms
- Remove and or/ re-wire all illegal, improper or hazardous wiring in garage. No access.
- Replace all painted-over receptacles.
- All added receptacles must be grounded, tamper-resistant and be on an Arc-Fault Circuit Interrupter-protected circuit.
- Any open walls or walls that are opened as part of this project must be wired to the standards of the current NEC.
- All buildings on the property must meet the St. Paul Property Maintenance Code (Bulletin 80-1).

Re: 677 York Ave
August 22, 2012
Page 3

ELECTRICAL **Inspector: Randy Klossner** **Phone: 651-266-8989**

- All electrical work must be done by a Minnesota-licensed electrical contractor under an electrical permit.

PLUMBING **Inspector: Rick Jacobs** **Phone: 651-266-9054**

- Basement - Water Heater - Vent must be in chimney liner (IFGC 501.12)
- Basement - Water Heater - not fired or in service (MPC 2180)
- Basement - Water Meter - meter is removed or not in service (MPC 4715.1700)
- Basement - Water Meter - meter needs repair or is broken
- Basement - Water Meter - raise meter to a minimum 12 inches above floor (MPC 2280)
- Basement - Water Meter - support meter properly (MPC 2280)
- Basement - Water Piping - provide water piping to all fixtures and appliances (MPC 1700)
- Basement - Water Piping - repair or replace all corroded, broken or leaking piping (MPC 4715.1720)
- Basement - Water Piping - run 1 inch water line from meter to first major take off (SPRWS Water Code)
- Basement - Soil and Waste Piping - no front sewer clean out (MPC 1000)
- Basement - Soil and Waste Piping - replace the floor drain cover or clean out plug (MPC 1300)
- First Floor - Sink - Remove drinking fountain connection. Refrigerator water connection is incorrect.
- First Floor - Toilet - remove hand held located by toilet.
- First Floor - Gas Piping - range gas shut off; connector or piping incorrect (IFGC 411 1.3.3)
- First Floor - Tub and Shower - Provide access (MPC 0900)
- First Floor - Tub and Shower - faucet is missing, broken or parts missing (MPC 0200. P.)
- First Floor - Tub and Shower - incorrectly vented (MPC 2500)
- First Floor - Tub and Shower - provide stopper (MPC 1240)
- First Floor - Tub and Shower - waste incorrect (MPC 2300)
- Second Floor - Lavatory - faucet is missing, broken, or parts missing (MPC 0200.P.)
- Second Floor - Tub and Shower - provide anti-scald valve (MPC 1380. Subp. 5)
- Exterior - Piping Vents - vent pipes required (MPC 0200.E.) also verify proper full size vent carried undiminished in size through thru roof with the proper flashing.
- Comments: - Basement fireplace venting and gas are incorrect. Remove any unused waste, vent, water and gas piping to the main and cap or plug to code.
- Obtain plumbing permits prior to commencement of work.

HEATING **Inspector: Maureen Hanson** **Phone: 651-266-9043**

- Clean and Orsat test both furnace burners. Check all controls for proper operation. Check furnace heat exchangers for leaks; provide documentation from a licensed contractor that the heating units are safe.
- Install approved metal chimney liner for south furnace.
- Vent clothes dryer to code
- Provide adequate combustion air and support duct to code

Re: 677 York Ave
August 22, 2012
Page 4

HEATING **Inspector: Maureen Hanson** **Phone: 651-266-9043**

- Provide support for gas lines to code
- Plug, cap and/or remove all disconnected gas lines
- Provide a window in the bathrooms with an aggregate glazing area of not less than 3 square feet, one-half of which must be operable or provide exhaust system vented to outside. A mechanical ventilation permit is required if an exhaust system is installed.
- All supply and return ducts for warm air heating system must be clean before final approval for occupancy. Provide access for inspection of inside of ducts or provide documentation from a licensed duct-cleaning contractor that the duct system has been cleaned.
- Repair and/or replace heating registers as necessary
- Provide heat in every habitable room and bathrooms
- Install basement fireplace to code or remove and seal all openings.
- Mechanical gas permit is required for the above work.

ZONING

1. This property is in a(n) RT1 zoning district.
2. This property was inspected as a Single Family Dwelling.

Notes:

- See attachment for permit requirements and appeals procedure.
- Most of the roof covering could not be inspected from grade. Recommend this be done before rehabilitation is attempted.

This is a registered vacant building. In order to sell or reoccupy this building, all deficiencies listed on this code compliance report must be corrected in accordance with the Minimum Housing Standards of the St. Paul Legislative Code (Chapter 34) and all required permits must receive final approval within six (6) months of the date of this report. One (1) six-month time extension may be requested by the owner and will be considered if it can be shown that the code compliance work is proceeding and is more than fifty (50) percent complete in accordance with Legislative Code Section 33.03(f).

You may file an appeal to this notice by contacting the City Clerk's Office at 651-266-8688. Any appeal must be made in writing within 10 days of this notice. (You must submit a copy of this notice when you appeal, and pay a filing fee.) If you have any questions regarding this inspection report, please contact Jim Seeger between 7:30 - 9:00 AM at 651-266-9046 or leave a voice mail message.

Sincerely,

James L. Seeger, Code Compliance Officer
Phone: 651-266-9046
JLS:ml

Email: james.seeger@ci.stpaul.mn.us
Attachments

677 York Ave. Renovation

City of Saint Paul Neighborhood Stabilization Program

REVIEW SET 3/01/13

I hereby certify that this drawing, specification or report was prepared by me or under my direct supervision and that I am a duly registered architect under the laws of the State of Minnesota.

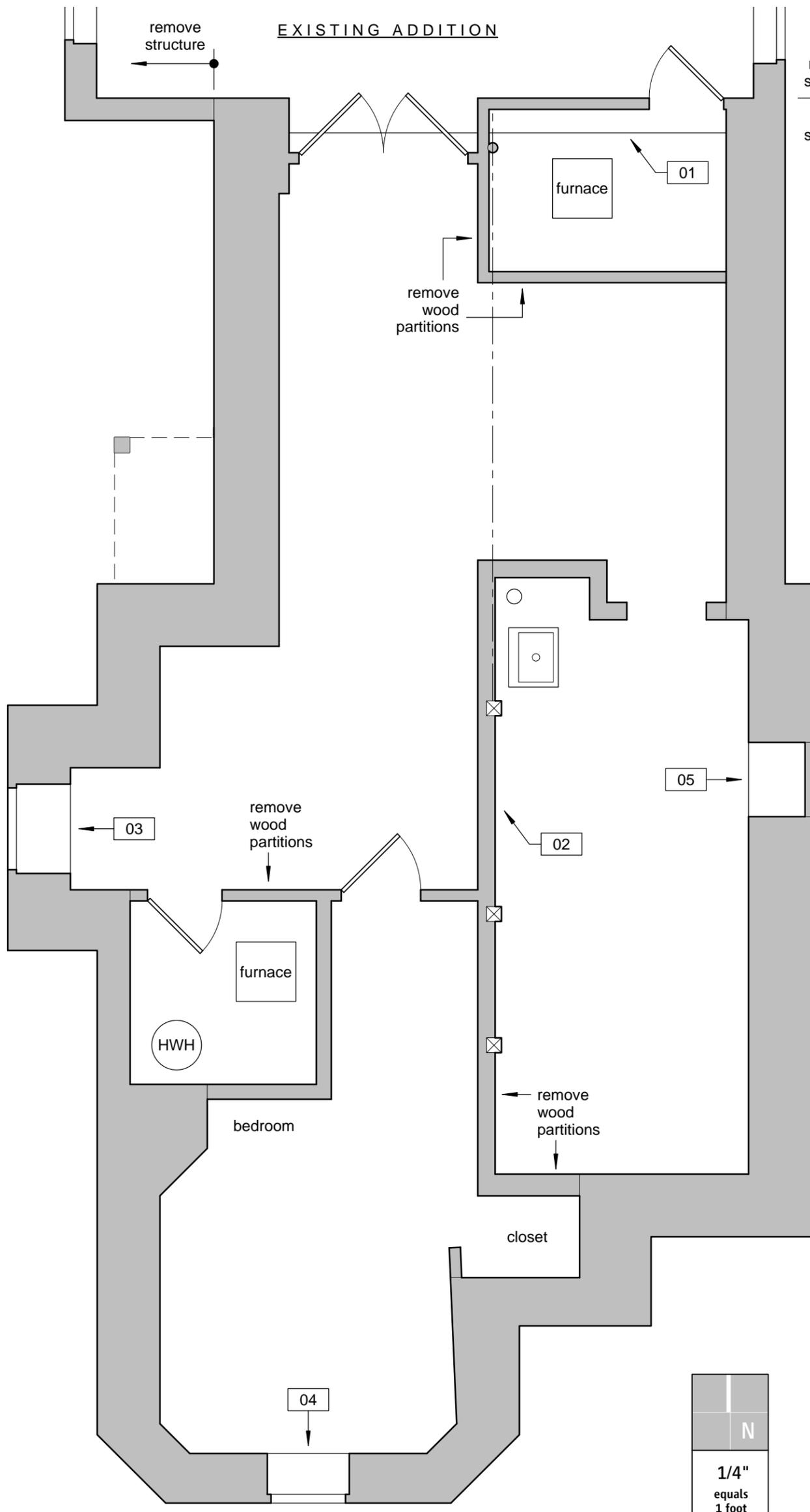
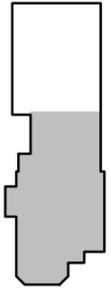
Lic. No. 25731 Date

Drawing Index

- 01 Basement Demolition South
- 02 Basement Demolition North
- 03 First Floor Demolition South
- 04 First Floor Demolition North
- 05 Second Floor Demolition
- 06 Basement Plan
- 07 First Floor Plan
- 08 Second Floor Plan
- 09 Elevations
- 10 Elevations

Paul Ormseth, LLC

423 Landmark Center St. Paul, MN 55102 (651) 298-6789



BASEMENT GENERAL DEMOLITION

Abatement

- ___ Abate asbestos hazards, Section 02 8200
- ___ Abate lead hazards, Section 02 8313

Remove:

- ___ plumbing piping
- ___ both furnaces
- ___ hot water heater
- ___ laundry sink and laundry shelving
- ___ damaged duct work
- ___ obsolete wiring, accessories, attachments
- ___ wood partitions and doors
- ___ wood stud furring/walls at exterior foundation walls
- ___ insulation
- ___ flooring
- ___ drywall finishes
- ___ ceiling system

Cleaning

- ___ Sweep and vacuum entire basement
- ___ Wash all surfaces throughout
- ___ Remediate mold throughout (contractor is responsible for determining mold abatement method)

BASEMENT KEY NOTES

Remove:

- ___ 1 Concrete slab and existing footing and excavate for new strip footing
- ___ 2 Wood non-load bearing partition, retain structural wood posts
- ___ 3 Existing window
- ___ 4 Existing egress window and egress well
- ___ 5 Existing infill at window opening

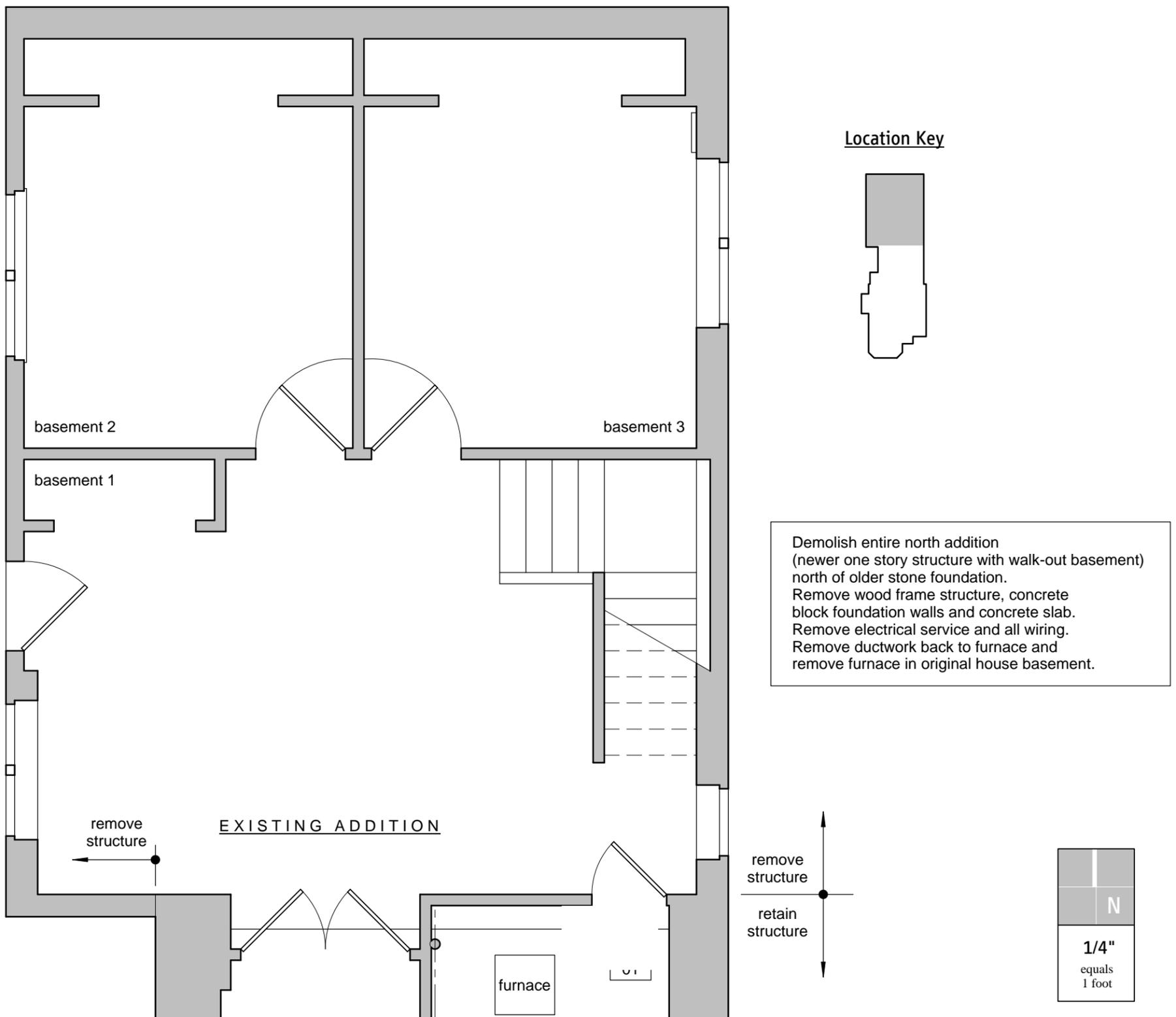
677 York Avenue Renovation
South Basement Demolition Plan
REVIEW SET 3/01/13
Sheet 1

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#	Location	Profile	Approx. opening size	Notes	
1	First floor	Double hung	28 x 81	Existing to remain	
2		Fixed			
3		Double hung	28 x 81		
4		Double hung	26 x 81		
5		Double hung	34 x 81		
6		Double hung	34 x 81		
7		Double hung	26 x 81		
8		Double hung	mulled pair 30" x 54"		New opening, 96" head height
9		Double hung	32 x 81		Egress
10	Second floor	Double hung	30 x 72	Egress	
11		Double hung	30 x 72	Egress	
12		Double hung	30 x 72	Egress	
13		Double hung	30 x 72	Egress	
14		Double hung	21 x 39		
15		Double hung	31 x 63	Casement if DH not egress size	
16		Double hung	31 x 63	Egress	
17		Double hung	31 x 63		
18		Double hung	32 x 72	Tempered	
19		Double hung	30 x 67	Tempered	
20	Double hung	30 x 72			
21	Attic	Double hung	not measured	Turret window	
22		Double hung	not measured	Turret window	
G	Garage	Slider	24" h. x 36" w.		



677 York Avenue Renovation

North Basement Demolition Plan

REVIEW SET 3/01/13

Sheet 2

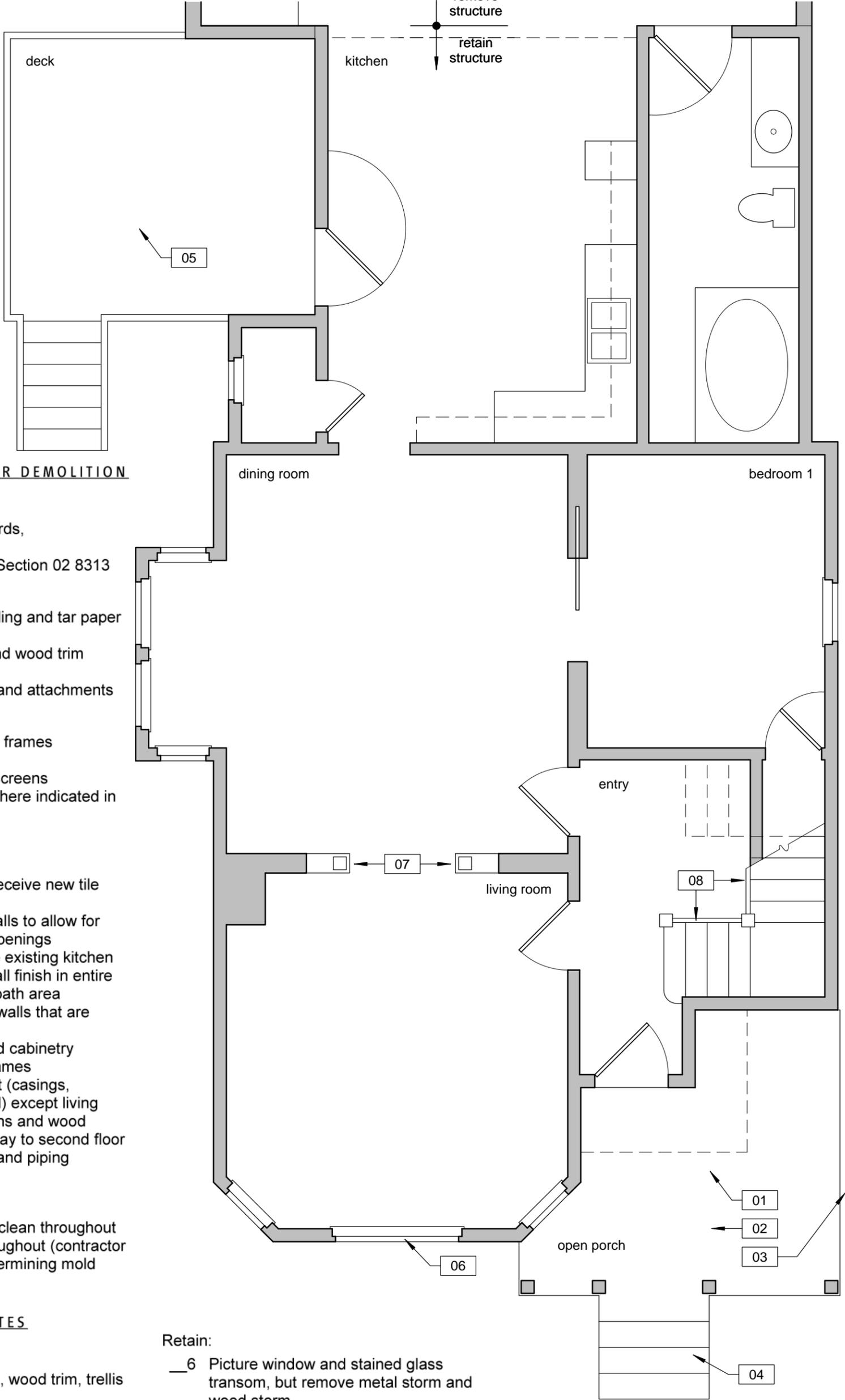
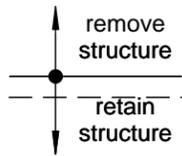
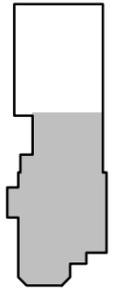
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Location Key



GENERAL FIRST FLOOR DEMOLITION

Abatement

- ___ Abate asbestos hazards, Section 02 8200
- ___ Abate lead hazards, Section 02 8313

Remove at exterior:

- ___ Vinyl siding, wood siding and tar paper underlayments
- ___ Metal trim & soffits and wood trim substrates
- ___ Miscellaneous wires and attachments

Remove at openings:

- ___ All exterior doors and frames
- ___ Storm doors
- ___ Storm windows and screens
- ___ All windows except where indicated in key notes

Remove at interior:

- ___ Kitchen cabinets
- ___ Flooring in areas to receive new tile flooring
- ___ Wood framing and walls to allow for new walls and new openings
- ___ Ceiling finish in entire existing kitchen and bath area and wall finish in entire existing kitchen and bath area
- ___ Insulation in exterior walls that are opened
- ___ Bathroom fixtures and cabinetry
- ___ All doors and door frames
- ___ Wood trim throughout (casings, baseboards, chair rail) except living room archway/columns and wood components at stairway to second floor
- ___ All plumbing fixtures and piping
- ___ All light fixtures

Cleaning

- ___ Sweep, vacuum and clean throughout
- ___ Remediate mold throughout (contractor is responsible for determining mold abatement method)

DEMOLITION KEY NOTES

Remove at exterior:

- ___ 1 Wood porch ceiling, wood trim, trellis skirt
- ___ 2 Porch flooring (expose joists)
- ___ 3 Wood ramp
- ___ 4 Wood stairs
- ___ 5 Deck including decking, railing, structure, footings, stair

Retain:

- ___ 6 Picture window and stained glass transom, but remove metal storm and wood storm
- ___ 7 Archway woodwork between living room and dining room, including paneling but remove casing around opening, both sides
- ___ 8 Wood stairway components

677 York Avenue Renovation
South First Floor Demolition Plan
REVIEW SET 3/01/13
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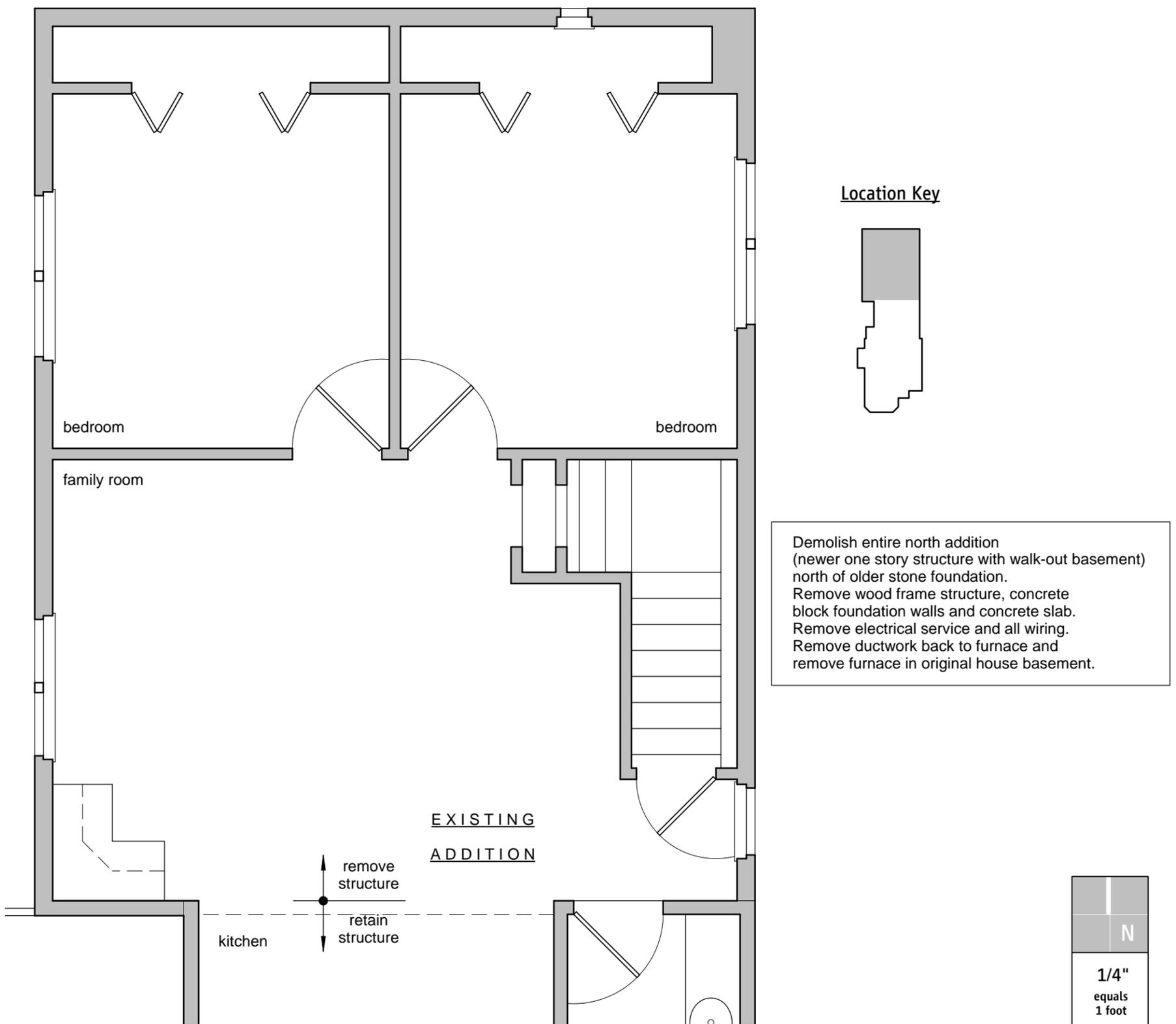
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Door Schedule

#	Size	Existing opening	Type	Hardware	Notes
1	3-0 7-0	widen	New fiberglass entry	Entry	Paint
2	2-8 6-8	no	New fiberglass entry	Entry	Paint
3	2-8 6-8	infill partial	New 4-panel solid core	Privacy latchset	Paint
4	2-2 6-3	yes	New 4-panel hollow core	Dummy handle	Paint, ball catch
5	2-8 6-8	no	New 4-panel solid core	Privacy latchset	Paint
6	2-8 6-8	no	New 4-panel solid core	Privacy latchset	Paint
7	2-8 6-8	no	New 4-panel solid core	Latchset	Paint
8	2-4 6-8	yes	New 4-panel hollow core	Dummy handle	Paint, ball catch
9	2-6 6-8	yes	New 4-panel solid core	Latchset	Paint
10	2-8 6-8	yes	New 4-panel hollow core	Latchset	Paint
11	2-8 6-8	yes	New 4-panel solid core	Latchset	Paint
12	2-8 6-8	yes	New 4-panel solid core	Latchset	Paint
13	2-8 6-8	yes	New 4-panel hollow core	Dummy handle	Paint, ball catch
14	2-8 6-8	yes	New 4-panel hollow core	Dummy handle	Paint, ball catch
15	2-4 6-8	yes	New 4-panel solid core	Privacy latchset	Paint
16	2-4 6-8	yes	New 4-panel hollow core	Dummy handle	Paint, ball catch
17	2-8 6-8	yes	New 4-panel solid core	Latchset	Paint
18	2-0 6-8	yes	New 4-panel hollow core	Dummy handle	Paint, ball catch
19	2-6 6-8	yes	New 4-panel hollow core	Dummy handle	Paint, ball catch
20	2-6 6-8	yes	New 4-panel solid core	Latchset	Paint
21	2-6 6-8	yes	New 4-panel solid core	Latchset	Paint
G	2-8 6-8	no	New fiberglass entry	Entry	Garage, paint

Verify all existing opening sizes before ordering



677 York Avenue Renovation

North First Floor Demolition Plan

REVIEW SET 3/01/13

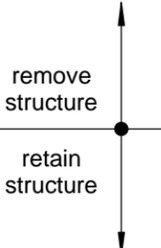
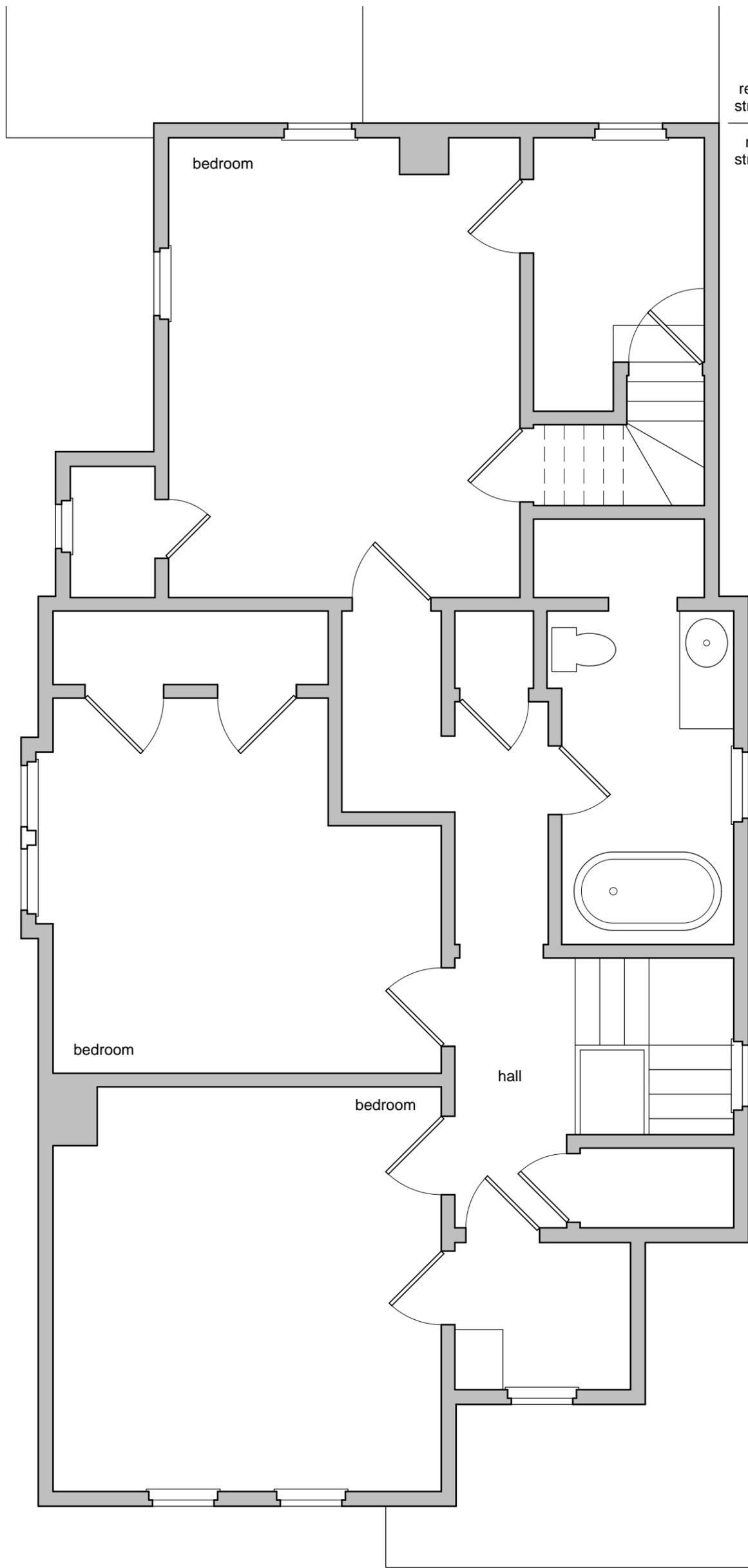
Sheet 4

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GENERAL 2nd FLOOR DEMOLITION

Abatement

- Abate asbestos hazards, Section 02 8200
- Abate lead hazards, Section 02 8313

Remove at exterior:

- Vinyl siding, wood siding and tar paper underlayments
- Metal trim & soffits and wood trim substrates
- Roofing and gutters
- Miscellaneous wires and attachments

Remove at openings:

- Storm windows and screens
- All windows, including attic

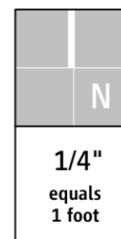
Remove at interior:

- Bathroom fixtures and cabinetry
- All doors and door frames
- Wood trim throughout (casings, baseboards, chair rail) except wood components at stairway to second floor
- Closet shelving and storage components
- All plumbing fixtures and piping
- All light fixtures

Cleaning

- Sweep, vacuum and clean throughout
- Remediate mold throughout (contractor is responsible for determining mold abatement method)

Location Key



677 York Avenue Renovation

Second Floor Demolition Plan

REVIEW SET 3/01/13

Sheet 5

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BASEMENT GENERAL WORK

Abatement

- Abate asbestos hazards, Section 02 8200
- Abate lead hazards, Section 02 8313

Exterior

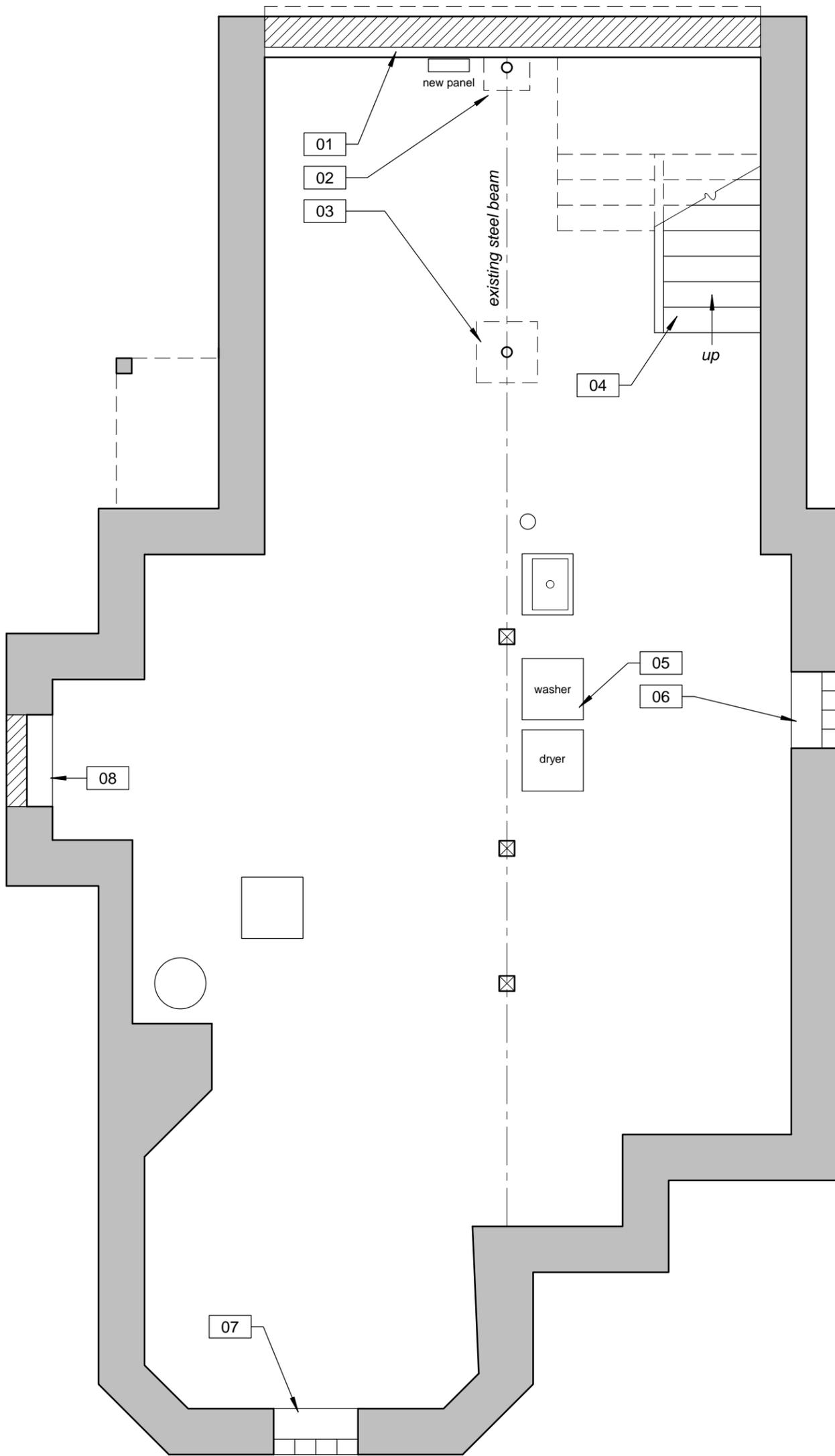
- Repair foundation, Section 04 0100

Interior

- Patch and repair interior surface of masonry walls throughout, 04 0100
- Patch and repair existing concrete slab throughout, 04 0100
- Insulate rim joist, Section 07 2700
- Paint masonry walls and slab floor, Section 09 9000
- New forced air furnace and air conditioner, Section 23 5400 and 23 6213
- Repair and/or replace existing forced air ducts
- New plumbing system, Section 22 4000
- New electrical service, meter, load center
- Electrical system: comply with City of St. Paul Bulletin 80-1 and see additional work items listed in Section 26 0001

Exterior

- 1 New CMU foundation wall infill at opening into existing addition. 12" block with 8" x 20" concrete footing. Waterproofing and footing drain per IRC, drain to daylight. 2x4 interior furring wall with foam insulation and drywall finish.
- 2 New 18" x 18" x 10" pad footing and new steel pipe column supports existing beam bearing, bolted connection
- 3 New 24" x 24" x 12" pad footing and new steel pipe column supports existing beam bearing at mid-span, bolted connection.
- 4 New basement stair. Header opening in floor framing and frame new wood stair with dimensions per IRC. OSB treads and risers, unfinished. Handrail per IRC.
- 5 New washer and dryer. Route dryer vent ducting to vent outlet in new glass block infill at east window.
- 6 Glass block infill at existing opening
- 7 Glass block infill 24" high with CMU infill below. Waterproof and backfill at exterior where egress well is to be removed.
- 8 CMU infill at existing window opening; vent new furnace and hot water heater through block infill.



Location Key

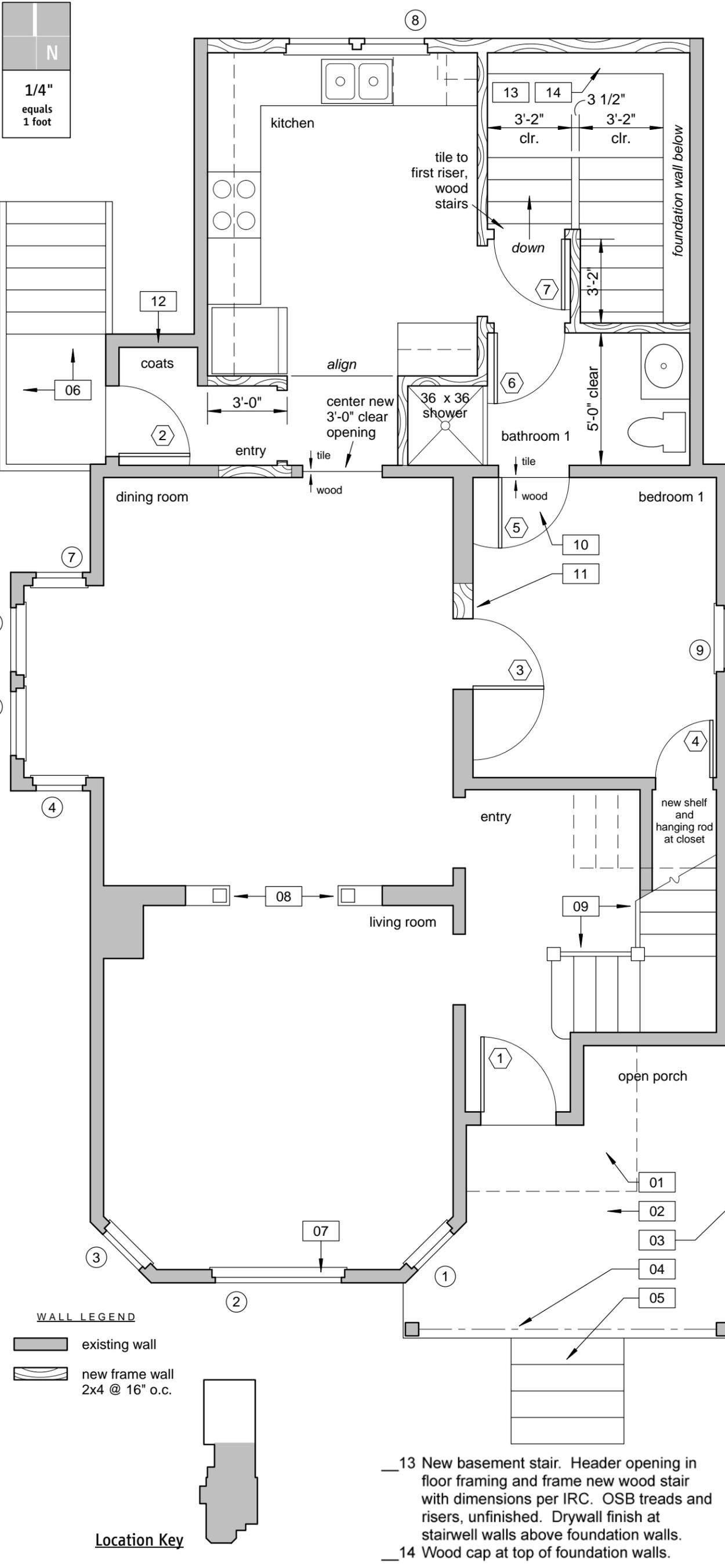


677 York Avenue Renovation
Basement Plan
REVIEW SET 3/01/13
Sheet 6

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FIRST FLOOR GENERAL WORK

Abatement

- Abate asbestos hazards, Section 02 8200
- Abate lead hazards, Section 02 8313

Exterior

- Repair foundation, Section 04 0100
- New siding, Section 07 4633
- New metal wrapped window and door casings, Section 07 6200
- New metal wrapped trim, soffits, fascias, bargeboards, Section 07 6200

Openings

- New windows per window schedule
- Exterior doors per door schedule

Interior

- Frame new walls, infills, openings and furring as indicated by wall legend, Section 06 1000
- Insulate opened walls with spray foam insulation, Section 07 2119
- Existing wall insulation to remain in unopened walls, no work
- New gypsum board finishes at new framing and where finishes are removed, Section 09 2116
- Repair and patch remaining plaster and gypsum board, Section 09 0120
- Interior doors per door schedule
- Refinish existing hardwood flooring
- New tile flooring in kitchen, bath, side entry, Section 09 3000
- New painted wood trim throughout (except see key notes for retained trim): baseboards, window and door casings
- At all stairs, new continuous handrail complying with IRC, Section 06 2000
- Paint walls, trim, ceilings throughout, Section 09 9000
- New kitchen and bath cabinets, Section 12 3530
- Repair ductwork and ensure balanced air flow throughout house, repair and reinstall grilles, Section 23 5400 and 23 6213
- New bathroom fan, Section 23 0000
- New plumbing system and fixtures, Section 22 4000
- Electrical system: comply with City of St. Paul Bulletin 80-1 and see additional work items listed in Section 26 0001

FIRST FLOOR KEY NOTES

Exterior

- 1 New composite decking at porch floor
- 2 New metal soffit ceiling
- 3 Porch floor max 30" above adjacent grade so that no guardrail is required, adjust grades as needed
- 4 Eliminate two columns and frame new beam at roof edge to span from corner post to corner post. (2) ply 9 1/2" LVL. New metal wrap at existing columns and porch fascia and soffit.
- 5 New wood framed stoop with composite decking and steel pipe handrail.
- 6 New wood stoop. Two new concrete post footings. Frame stair and landing with treated lumber, decking to be composite decking. Install wood guardrail and stair handrail per IRC.

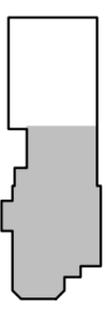
Interior

- 7 Fixed picture window and transom to be retained, encapsulate and paint interior and exterior, repair and reglaze sashes
- 8 Repair paneling at archway, encapsulate and paint, new wood casings around opening
- 9 Encapsulate and paint wood stairway components (trim color)
- 10 New door opening
- 11 Infill doorway for new swinging door
- 12 Install board with five coat hooks

WALL LEGEND

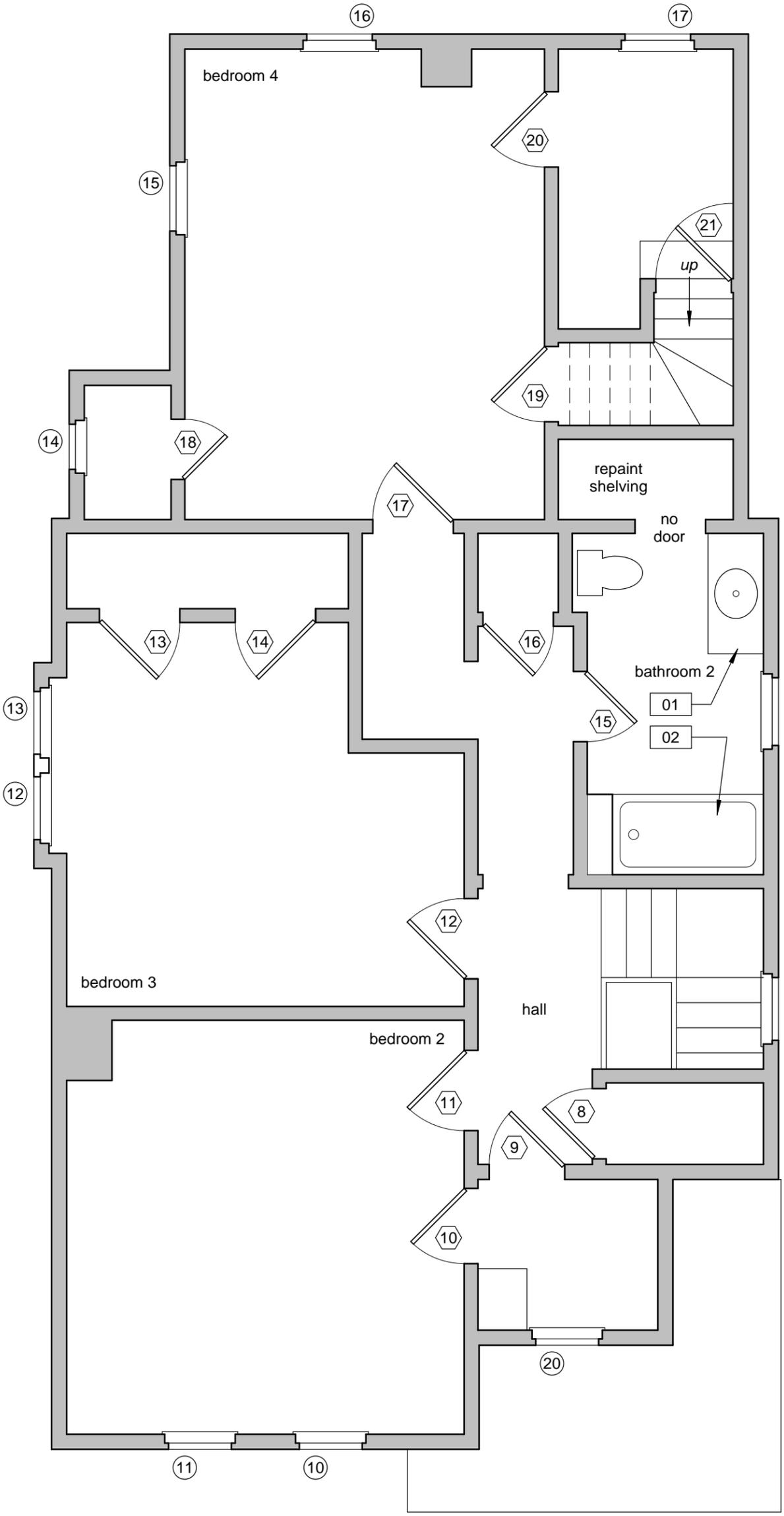
- existing wall
- new frame wall 2x4 @ 16" o.c.

Location Key



- 13 New basement stair. Header opening in floor framing and frame new wood stair with dimensions per IRC. OSB treads and risers, unfinished. Drywall finish at stairwell walls above foundation walls.
- 14 Wood cap at top of foundation walls.

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First Floor Plan		
REVIEW SET 3/01/13		
Sheet 7		

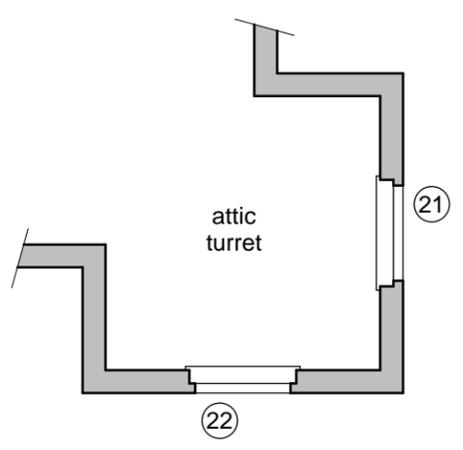


SECOND FLOOR GENERAL WORK

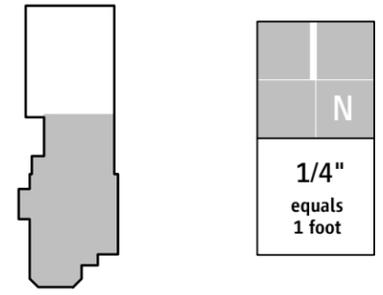
- Abatement**
- Abate asbestos hazards, Section 02 8200
 - Abate lead hazards, Section 02 8313
- Exterior**
- New siding, Section 07 4633
 - New metal wrapped window and door casings, Section 07 6200
 - New metal wrapped trim, soffits, fascias, bargeboards, Section 07 6200
- Openings**
- New windows per window schedule
- Interior**
- Frame new wall at bathroom tub/shower
 - Existing wall insulation to remain in unopened walls, no work
 - New gypsum board finishes at new framing, Section 09 2116
 - Repair and patch plaster and gypsum board, Section 09 0120
 - Interior doors per door schedule
 - Refinish existing hardwood flooring
 - New painted wood trim throughout: baseboards, window and door casings
 - Paint walls, trim, ceilings throughout, Section 09 9000
 - New bath vanity, Section 12 3530
 - Closet shelf and hanging rod at (3) bedroom closets
 - Repair ductwork and ensure balanced air flow throughout house, repair and reinstall grilles, Section 23 5400 and 23 6213
 - New bathroom fan, Section 23 0000
 - New plumbing system and fixtures, Section 22 4000
 - Electrical system: comply with City of St. Paul Bulletin 80-1 and see additional work items listed in Section 26 0001

SECOND FLOOR KEY NOTES

- 1 New 48" vanity
- 2 New acrylic tub/shower unit, framed in at west end



Location Key



677 York Avenue Renovation
Second Floor Plan
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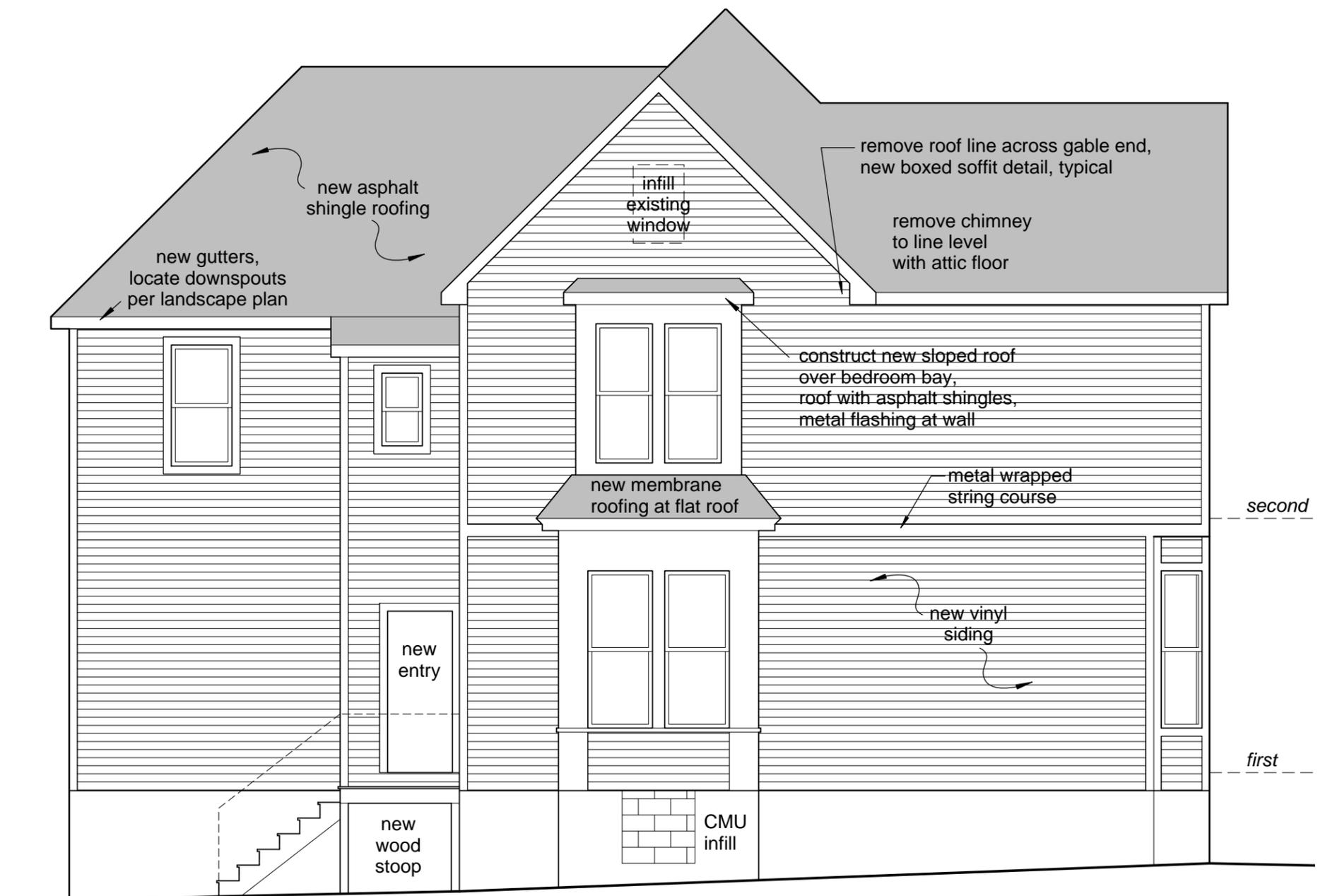
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3/16"
equals
1 foot

South Elevation



West Elevation

677 York Avenue Renovation

Exterior Elevations

REVIEW SET 3/01/13

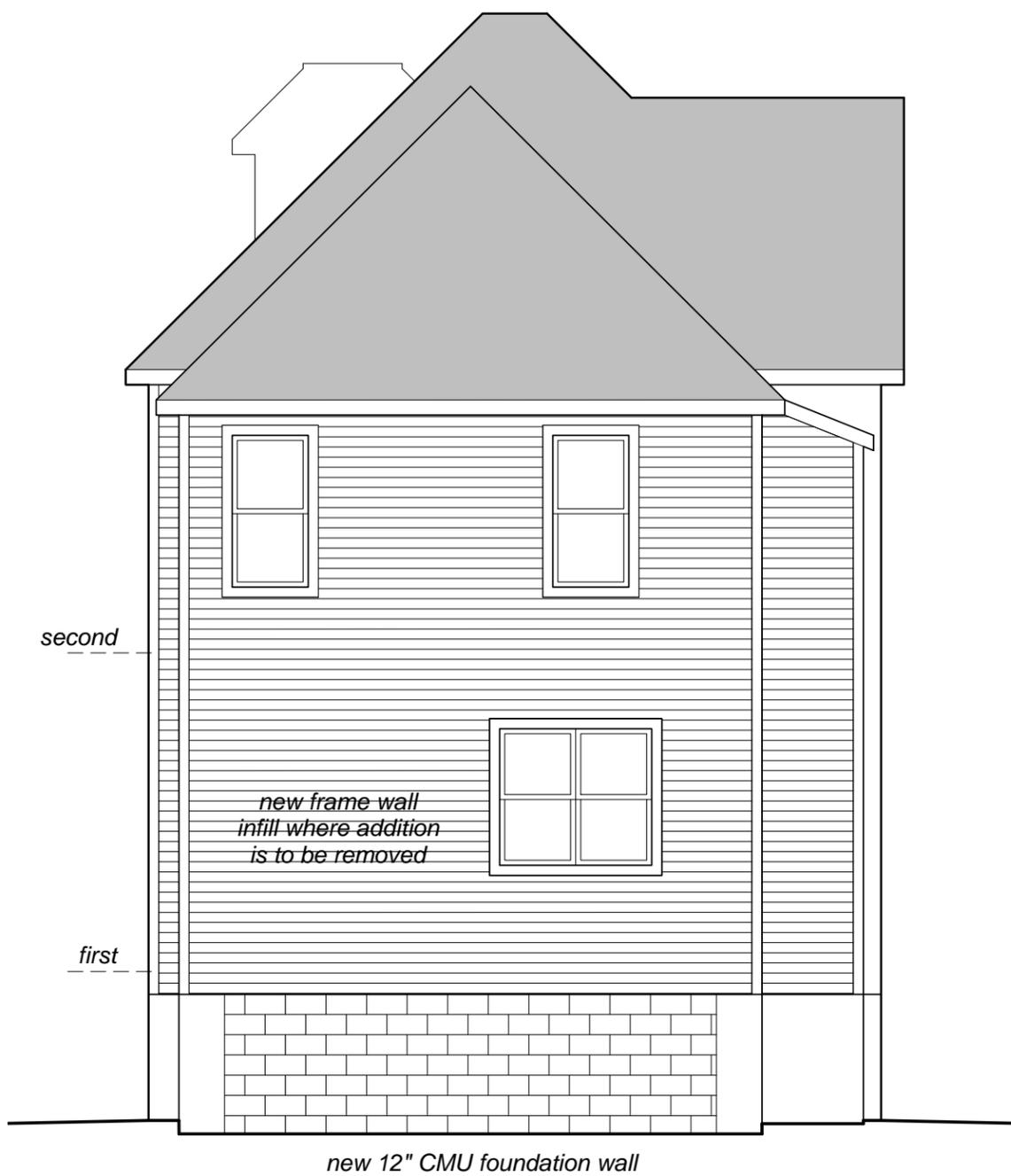
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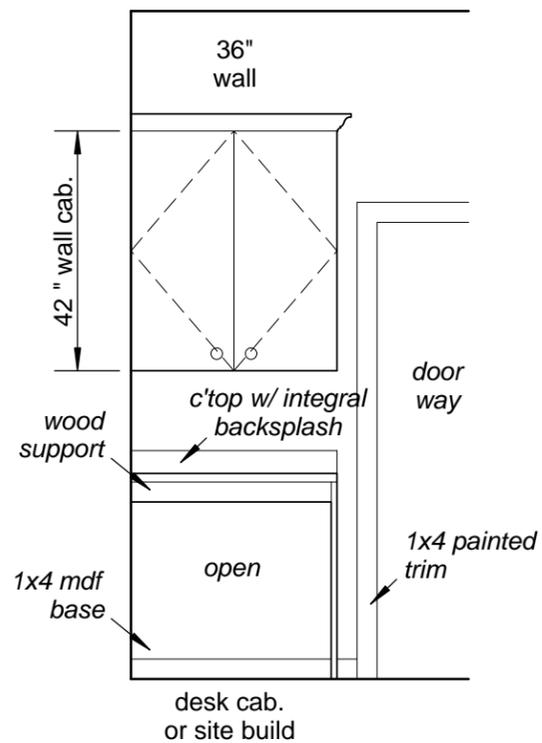
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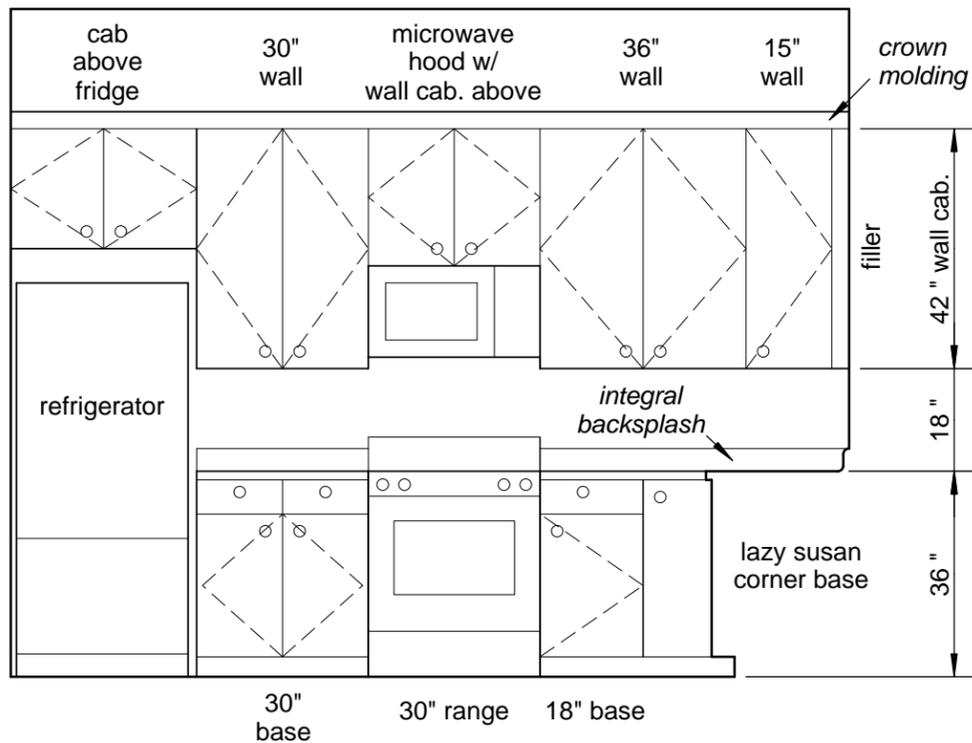
North Elevation

Scale: 3/8" = 1'-0"



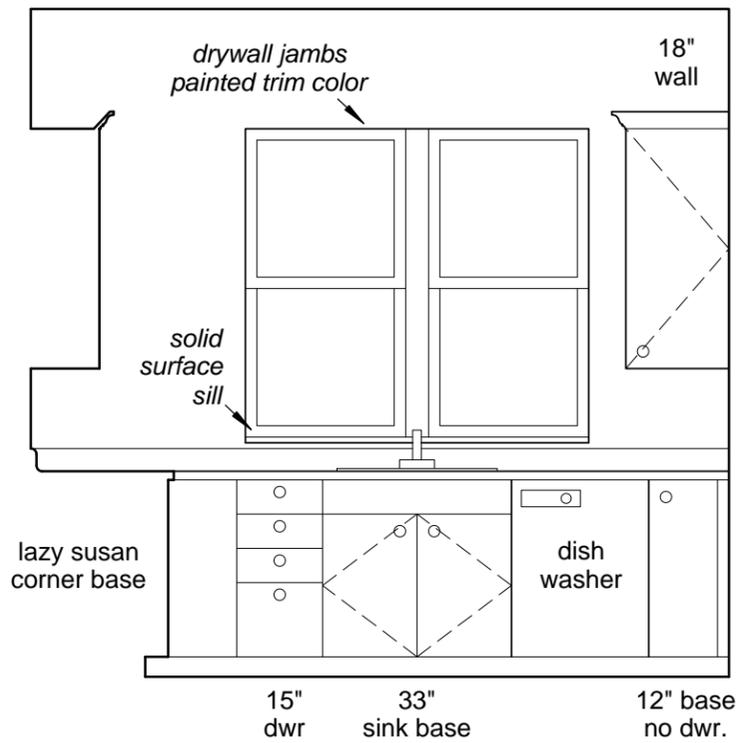
Kitchen Message Center

Scale: 3/8" = 1'-0"



Kitchen West

Scale: 3/8" = 1'-0"



Kitchen North

Scale: 3/8" = 1'-0"

677 York Avenue Renovation

South Elevation and Kitchen Elevations

REVIEW SET 3/01/13

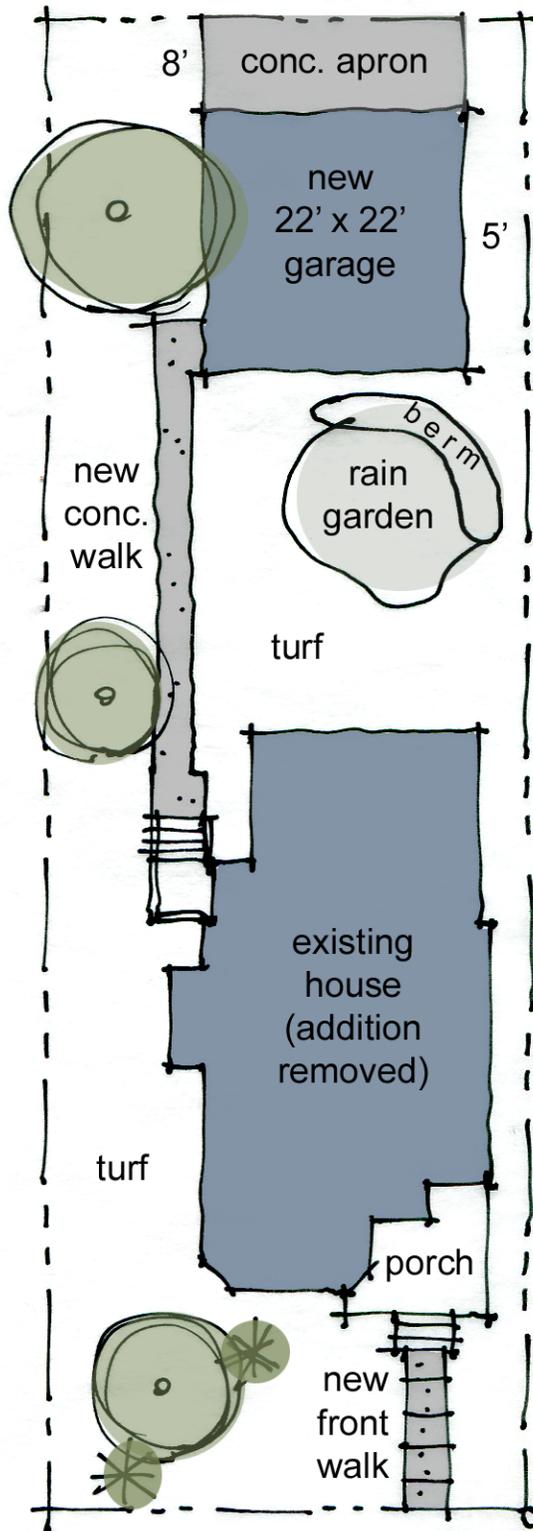
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Site demo includes removal of:

- Garage, shed, house addition, retaining walls, paving
- Soils per lead abatement
- Wood ramp at front entry
- All chain link fencing if on property
- Shade trees per forestry