PROPERTY CONDITION ASSESSMENT REPORT

The best property inspection experience available.

PREPARED BY:
John Mika

FOR THE PROPERTY AT:
Sample Report
Minneapolis, MN

PREPARED FOR:
SAMPLE REPORT

INSPECTION DATE:
Wednesday, October 21, 2015

Minnesota Inspections, LLC.
7620 Pioneer Creek Rd
Independence, MN 55359

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Minnesota Inspections, LLC.

January 20, 2016

Dear Sample Report,

RE: Report No. 1480, v.2
Sample Report
Minneapolis, MN

Thank you for choosing us to perform your inspection. The inspection itself and the attached report comply with the requirements of the Standards of Practice of our national Association. This document defines the scope of a inspection.

Clients sometimes assume that a inspection will include many things that are beyond the scope. We encourage you to read the Standards of Practice so that you clearly understand what things are included in the inspection and report.

The report has been prepared for the exclusive use of our client. No use by third parties is intended. We will not be responsible to any parties for the contents of the report, other than the party named herein .

The report is effectively a snapshot of the structure, recording the conditions on a given date and time. Inspectors cannot predict future behavior, and as such, we cannot be responsible for things that occur after the inspection. If conditions change, we are available to revisit the property and update our report.

Again, thank you for choosing us to perform your inspection.

Sincerely,

John Mika
on behalf of
Minnesota Inspections, LLC.

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INTRODUCTION

This report is an unbiased opinion of the conditions found at the property and is intended to help the client make informed decisions regarding the purchase and repair of the property.

SCOPE

While a property inspection does not address issues such as code compliance and building permits, we encourage you to have someone search the history of the home with the local building department to determine whether all appropriate permits have been applied for and signed off. Your legal advisers may be able to help with this.

A property inspection analyzes hundreds of features from all systems of a structure. Our focus is on functional items, and we pay particular attention to those components that are expensive to correct, or may create a significant safety problem in the structure. As we look for these major items, we will come across some lesser items as well. As a courtesy, those are documented for you. However, please do not misinterpret this as an exhaustive list of all minor defects in the home. That is not the intent of the inspection.

PRIORITY ITEMS

Items that require immediate action affect life safety, the immediate condition of the structure or are items whose operation was not confirmed during the inspection. The buyer may want to request that these items are addressed by the seller prior to closing.

OUR PHILOSOPHY

Our inspection philosophy separates components that are functional from those that are not. Where components are found to be functional, no recommendations will be offered. Where defects are noted, we will recommend improvements with a time frame. In some cases, components may be functional but clearly near the end of their life cycle. Those circumstances are included in the report as well.

Priority Maintenance Items

Roofing

General

• The EPDM roof membranes were reported to be 20+ years old and near the end of the membranes expected useful lives. The sellers reported that the roofs have been maintained annually. The roofs are performing adequately overall with minor to moderated defects observed. Continuing annual maintenance will likely prolong the roofs performance, however, budget reserves should be established for roof replacement.

Location: 960-962

Task: Budget replacement

SLOPED ROOFING \ Asphalt shingles

Condition: • Granule loss

Typical granule loss consistent with roof age.

Implication(s): Chance of water damage to contents, finishes and/or structure

Location: Front Entries

Task: Monitor

SLOPED ROOFING \ Metal

Condition: • Rust
Clean and paint roof surface.
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Rear Entries
Task: Repair
Time: Less than 2 years

SLOPED ROOF FLASHINGS \ Roof/sidewall flashings

Condition: • Loose, damaged, patched, open seams
Open seam.
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: 962
Task: Repair
Time: Less than 1 year

FLAT ROOFING \ Rubber single ply

Condition: • Near end of life expectancy
The main roofs were reported to be 20+ years old.
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: 960-962
Task: Budget replacement

Condition: • Openings at seams or flashings
Implication(s): Chance of water damage to contents, finishes and/or structure
Task: Repair
Time: Less than 1 year

Condition: • Wrinkles, ridges, fishmouths
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Various
Task: Repair
Time: Regular maintenance

Condition: • Patched
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Various
Task: Budget replacement

Condition: • Debris/oil on roof
Cement blocks were placed directly on the roof membrane.
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: 960
Task: Remove
Time: Less than 1 year

Condition: • Taut, tenting
Roof is aging with minor tenting observed. Recommend annual service to prolong life of roof .
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: 960-962
Task: Repair
Time: Annually

Exterior

General
• Areas or rot were observed at the shed siding. Missing fascia board on the south side of the shed.
Location: Shed
Task: Repair
Time: Discretionary

• The buildings exterior finishes were generally in fair to good condition.
Task: Comment - no recommendations

ROOF DRAINAGE \ Downspouts
Condition: • Downspouts end too close to building
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Rear
Task: Improve
Time: Less than 1 year

WALLS \ Soffits and fascia
Condition: • Interior materials used for exterior finishes.
Location: Front
Task: Below current standards

Condition: • Rot or insect damage
Implication(s): Material deterioration | Chance of water damage to contents, finishes and/or structure | Cosmetic defects
Task: Repair or replace

Condition: • Paint or stain needed
Implication(s): Cosmetic defects | Chance of water damage to contents, finishes and/or structure | Shortened life expectancy of material
Location: Entries
Task: Repair or replace

WALLS \ Flashings and caulking
Condition: • Caulking missing or ineffective
Missing at front and rear entry framing details. Caulk is also beginning to shrink in a small number of areas. Monitor and repair as necessary.
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Various

Task: Repair
Time: Less than 1 year

WALLS \ Stucco and EIFS
Condition: • Cracked
A small number of minor cracks were observed in various areas of the buildings. There is a potential for moisture penetration. Seal cracks and voids.
Implication(s): Chance of water damage to contents, finishes and/or structure | Material deterioration
Location: Various
Task: Repair
Time: Less than 1 year

Condition: • Bulging
The middle area between 960 near the roof.
Implication(s): Material deterioration | Chance of water damage to contents, finishes and/or structure | Cosmetic defects
Location: 962
Task: Repair
Time: Less than 1 year

Condition: • No drip screed
Missing throughout the buildings. It is important to keep all voids sealed to prevent moisture intrusion.
Implication(s): Material deterioration | Chance of water damage to contents, finishes and/or structure
Location: Throughout
Task: Below current standards

EXTERIOR GLASS \ Glass (glazing)
Condition: • Cracked
Implication(s): Cosmetic defects
Location: Front Hall 962
Task: Repair
Time: Less than 1 year

EXTERIOR GLASS \ Exterior drip caps
Condition: • Missing
Implication(s): Chance of water damage to contents, finishes and/or structure
Task: Below current standards

EXTERIOR GLASS \ Storms and screens
Condition: • Torn or holes
Tear, holes and general damage observed at various screens.
Implication(s): Chance of pests entering building
Location: Various
Task: Repair
Time: Less than 1 year

LANDSCAPING \ Lot grading
Condition: • Improper slope
Settled areas and areas of flat grade observed near foundations. Window sills were at or below grade. Evidence of significant moisture intrusion on interior basement walls.
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: 960-962
Task: Improve
Time: Immediate

LANDSCAPING \ Driveway
Condition: • Improper slope or drainage
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: South & West
Task: Improve
Time: Less than 1 year

LANDSCAPING \ Walkway
Condition: • Cracked or damaged surfaces
Implication(s): Trip or fall hazard
Location: Various
Task: Repair
Time: Discretionary

Condition: • Improper slope or drainage
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Rear and Middle
Task: Repair
Time: Immediate

Condition: • Uneven (trip hazard)
Implication(s): Physical injury
Location: Rear & Middle
Task: Repair
Time: Immediate

LANDSCAPING \ General
Condition: • Trees or shrubs too close to building
Implication(s): Chance of water damage to contents, finishes and/or structure | Chance of pests entering building | Material deterioration
Location: Various
Task: Improve
Time: Less than 1 year

Structure

FOUNDATIONS \ Foundation
Condition: • Typical minor settlement
Task: Monitor

Condition: • Cracked
Minor to moderate cracks were observed. Poor grading and water damage are contributing factors. The cracks are not an immediate structural concern however grading improvements and mortar repair or crack sealing are recommended to prevent further damage and moisture intrusion.
Implication(s): Chance of water damage to contents, finishes and/or structure | Weakened structure
Location: 960-962
Task: Repair
Time: Less than 1 year

Condition: • Cracked horizontally
A horizontal crack was observed on the east wall. Poor grading and water damage are contributing factors. The crack is not an immediate structural concern however grading improvements and mortar repair or crack sealing are recommended to prevent further damage and moisture intrusion. The wall was checked with a level and no lateral movement was observed.
Implication(s): Chance of structural movement
Location: 962
Task: Repair
Time: Less than 1 year

Condition: • Spalling, crumbling or broken material
Roof footing.
Implication(s): Chance of structural movement | Weakened structure
Location: 960 Front Exterior Entry
Task: Repair
Time: Less than 1 year

FLOORS \ Columns or piers
Condition: • Rot
Minor rot was observed at the column near the stairs.
Implication(s): Weakened structure
Location: 962 Basement
Task: Monitor

FLOORS \ Joists
Condition: • Split or damaged
Implication(s): Chance of structural movement | Weakened structure
Location: 962 Basement West Wall
Task: Repair
Time: Less than 1 year

Electrical

SERVICE BOX, GROUNDING AND PANEL \ Panel wires
Condition: • Double taps
Double tapped single pole breaker.
Implication(s): Fire hazard
Location: 960 Unit 1 Panel
Task: Repair
Time: Immediate

DISTRIBUTION SYSTEM \ Wiring - installation
Condition: • Extension cord used as permanent wiring
Provide additional outlets or wiring, if needed, and remove extension cords.
Implication(s): Fire hazard | Electric shock
Location: 960 Unit 2
Task: Improve
Time: Immediate

DISTRIBUTION SYSTEM \ Lights
Condition: • Improper closet lighting
Provide a globe or replace the fixture to reduce the risk of fire when items in the closet have the potential to come into contact with or have little clearance from hot exposed bulb.
Implication(s): Fire hazard
Location: Throughout Dining Room Closets
Task: Repair or replace
Time: Immediate

DISTRIBUTION SYSTEM \ Outlets (receptacles)
Condition: • Inoperative
Implication(s): Equipment inoperative
Location: Throughout Exterior
Task: Repair
Time: Less than 1 year

Condition: • Ungrounded
Implication(s): Electric shock
Location: 962 Unit 3 Kitchen
Task: Below current standards

Condition: • No GFCI (Ground Fault Circuit Interrupter)
Current standards require GFCI protection for all bathroom receptacles, all garage and accessory buildings, all receptacles in unfinished basements (except permanently installed burglar or fire alarms), all receptacles serving kitchen countertops, receptacles within 6' of sinks, receptacles within 6' of showers or tubs, receptacles serving laundry areas, all receptacles serving crawlspace at or below grade, all exterior receptacles (except those serving snow melting or de-icing equipment) ,outlets supplying dishwashers, hydro massage tubs, and must be readily accessible.
These standards may be enforced by the local building official when outlets are changed or added.

Implication(s): Electric shock
Location: Various
Task: Below current standards

Condition: • Test faulty on Ground Fault Circuit Interrupter (GFCI)
The GFCI did not trip when tested.
Implication(s): Electric shock
Location: 960 Unit 3 & 4 Bathrooms, Unit 4 Kitchen
Task: Repair
Time: Immediate

Condition: • No AFCI (Arc Fault Circuit Interrupter)
Current standards require AFCI protection for all 120v 15Amp & 20Amp branch circuits supplying power to outlets in the following areas: Family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sun rooms, recreation rooms, closets, hallways & similar rooms. Also required for kitchen and laundry areas. Also required for devices (switches) in all areas above. Not required on individual circuit for central station alarm in RMC, IMC, EMT or steel-armored cable (type AC or MC) with metal junction boxes.
Local building official may require upgrades to any wiring that is extended, modified or replaced.
Implication(s): Fire hazard
Location: Throughout
Task: Below current standards

DISTRIBUTION SYSTEM \ Outlets (receptacles) - number or location
Condition: • Too few outlets
Implication(s): Nuisance
Task: Below current standards

DISTRIBUTION SYSTEM \ Smoke detectors
Condition: • Missing
Implication(s): Fire hazard
Location: 9960 Unit 2 & 4 Hall. 962 Unit 2 Hall
Task: Provide
Time: Immediate

Condition: • Inoperative
Implication(s): Fire hazard
Location: 960 Unit 4 Bedroom. 962 Unit 1 & 3 Hall, Unit 2 Bedroom
Task: Repair or replace
Time: Immediate

DISTRIBUTION SYSTEM \ Carbon monoxide (CO) detectors
Condition: • Inoperative
Implication(s): Health hazard
Location: 960 Unit 2
Task: Repair or replace
Time: Immediate

Heating

GAS HOT WATER BOILER \ Venting system
Condition: • Poor slope
There is a potential for carbon monoxide to enter the building. Poor slope at connection to the chimney.
Implication(s): Hazardous combustion products entering home
Location: 960
Task: Repair
Time: Immediate

GAS HOT WATER BOILER \ Pipes
Condition: • Potential asbestos. Recommend further assessment by an environmental professional.
Location: 960 & 962 Basement
Task: Further evaluation
Time: Discretionary

CHIMNEY AND VENT \ Masonry chimney
Condition: • Loose, missing or deteriorated mortar
Implication(s): Material deterioration
Location: Throughout
Task: Repair
Time: Less than 1 year

CHIMNEY AND VENT \ Masonry chimney cap
Condition: • Cracked
Implication(s): Shortened life expectancy of material | Chance of water damage to contents, finishes and/or structure
Location: 960
Task: Repair
Time: Less than 1 year

Insulation and Ventilation

ATTIC/ROOF \ Insulation
Condition: • Amount less than current standards
Flat roofs may require additional insulation at the time of roof replacement to meet current code standards of R-30.
Implication(s): Increased heating and cooling costs
Location: Attic/Roof Space
Task: Improve
Time: Discretionary

FOUNDATION \ Interior insulation
Condition: • None
Implication(s): Increased heating costs
Task: Improve
Time: Action recommended but not required

Plumbing

General

• Older fixtures were present throughout the apartments.
Task: Budget replacement

SUPPLY PLUMBING \ Shut off valve

Condition: • Damaged handle
Missing.
Implication(s): Difficult to service | Physical injury
Location: 962 Basement
Task: Repair
Time: Less than 1 year

SUPPLY PLUMBING \ Supply piping in building

Condition: • Poor pressure or flow
Below average at some fixtures. Old, rusting galvanized supply feeds are suspect.
Implication(s): Reduced water pressure and volume
Location: Various
Task: Monitor

Condition: • Galvanized steel
Implication(s): Reduced water pressure and volume
Location: Feeds to apartments
Task: Monitor

WASTE PLUMBING \ Drain piping - performance

Condition: • Leak
Implication(s): Sewage entering the building
Location: 960 Unit 4 Kitchen
Task: Repair
Time: Immediate

Condition: • Rust
Implication(s): Sewage entering the building
Location: Various
Task: Monitor

WASTE PLUMBING \ Drain piping - installation

Condition: • Nonstandard materials and patches
Missing stainless steel sleeve at rubber union connections.
Implication(s): Sewage entering the building | Chance of water damage to contents, finishes and/or structure
Location: 960 Basement
Task: Replace
Time: Less than 1 year

WASTE PLUMBING \ Floor drain
Condition: • Missing cleanout plug. There is a potential for sewer gas to entre the building.
Location: 960 Basement
Task: Repair
Time: Immediate

Condition: • Corrosion/rust.
Location: Throughout
Task: Monitor

FIXTURES AND FAUCETS \ Basin, sink and laundry tub
Condition: • Cracked
Location: 962
Task: Budget replacement

Condition: • Air gap defective
Less than 1 inch air gap from the spill line of tub.
Implication(s): Contaminated drinking water
Location: 960 Basement
Task: Improve
Time: Less than 1 year

FIXTURES AND FAUCETS \ Faucet
Condition: • Drip, leak
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: 960 Unit 4
Task: Repair
Time: Immediate

FIXTURES AND FAUCETS \ Toilet
Condition: • Cross connection
Valve is required to be located 1' above overflow pipe. Provide air gap. Visit http://www.ci.bloomington.mn.us/handouts/53/53ytoilet.pdf for illustration. Flush valves should be anti siphon type.
Implication(s): Contaminated drinking water
Location: 960 Unit 3
Task: Improve
Time: Less than 1 year

FIXTURES AND FAUCETS \ Bathtub
Condition: • Cross connections
Hand held shower unit falls below spill line of tub. Shorten hose, remove or provide backflow prevention.
Implication(s): Contaminated drinking water
Location: 960 Unit 2
Task: Improve
Time: Less than 1 year

FIXTURES AND FAUCETS \ Hose bibb
Condition: • Inoperative
Implication(s): Equipment inoperative
Location: Exterior Wall
Task: Further evaluation

Condition: • Backflow prevention missing
Lack of backflow prevention devices has the potential to contaminate water supply. Provide on all threaded faucets and hose bibs.
Implication(s): Contaminated drinking water
Location: Throughout
Task: Provide
Time: Less than 1 year

GAS SUPPLY \ Gas piping
Condition: • Rust
Implication(s): Fire or explosion
Task: Monitor

Condition: • No drip leg (dirt pocket)
Implication(s): Equipment not operating properly
Location: Gas Clothes Dryer and Stoves
Task: Below current standards

Interior

General
• Fire extinguisher inspection tags expired
Location: Throughout
Task: Inspect annually
Time: Immediate

• Apartment interiors were generally in fair to poor condition. Extensive improvements are recommended to stabilize the units and improve marketability.
Location: Throughout
Task: Improve
Time: Ongoing

FLOORS \ General
Condition: • Worn
The floors were generally in poor condition with damaged, stained and worn surfaces, stained carpet and cracked grout observed. The floors were in fair to good condition in unit 3 @ both 960 & 962.
Implication(s): Cosmetic defects
Location: Various
Task: Repair or replace

Time: Action recommended but not required

WALLS \ General
Condition: • Damaged
Damaged wall tiles
Implication(s): Cosmetic defects
Location: Various
Task: Repair
Time: Discretionary

Condition: • Typical flaws
Patches, minor damage and previous repairs observed.
Implication(s): Cosmetic defects
Location: Various
Task: Comment

CEILINGS \ General
Condition: • Missing fire protection
Location: 962 Basement
Task: Repair
Time: Less than 1 year

Condition: • Typical flaws
Typical minor cracks or previous repairs.
Implication(s): Cosmetic defects
Location: Various
Task: Comment

WINDOWS \ Glass (glazing)
Condition: • Safety glass not installed
Implication(s): Physical injury
Location: Throughout Bathrooms & Staircases
Task: Below current standards

WINDOWS \ Hardware
Condition: • Inoperable
Window locks did not latch.
Implication(s): System inoperative or difficult to operate
Location: Various
Task: Repair
Time: Less than 1 year

Condition: • Broken
Window locks.
Implication(s): System inoperative or difficult to operate | Cosmetic defects
Location: 960 Unit 2. 962 Unit 1

Task: Repair
Time: Less than 1 year

DOORS \ Doors and frames
Condition: • Loose
Location: 960 Unit 4
Task: Repair
Time: Less than 1 year

DOORS \ Hardware
Condition: • Loose
Entry door hinge loose.
Implication(s): Equipment failure
Location: Front 960 Unit 2
Task: Repair
Time: Immediate

CARPENTRY \ Cabinets
Condition: • Older and worn
Location: Throughout
Task: Budget replacement

STAIRS \ Fire safety
Condition: • Drywall missing or incomplete on underside of stairs
Implication(s): Increased fire hazard
Location: Basements
Task: Provide
Time: When remodelling

STAIRS \ Height
Condition: • Headroom - less than ideal
Less than 6'-8". Typical in older buildings.
Implication(s): Physical injury
Location: Throughout Basement & First Floor Staircase
Task: Below current standards

STAIRS \ Treads
Condition: • Run under 10"
Location: Basements
Task: Below current standards

Condition: • Rise excessive
Over current standard of 7 3/4".
Implication(s): Trip or fall hazard
Location: Basements
Task: Below current standards

STAIRS \ Handrails
Condition: • Does not return to wall
Location: Throughout
Task: Below current standards

Condition: • Too low
Too low. Current standards are between 34" and 38".
Implication(s): Fall hazard
Location: Throughout
Task: Below current standards

STAIRS \ Guardrails
Condition: • Too low
Below current minimum of 36"
Implication(s): Fall hazard
Location: Second Floor
Task: Improve
Time: Less than 1 year

Condition: • Missing
Implication(s): Fall hazard
Location: Basements
Task: Provide
Time: Less than 1 year

BASEMENT \ Wet basement - evidence
Condition: • Efflorescence
Grading improvements and mortar repair or crack sealing are recommended to prevent further damage and moisture intrusion.
Implication(s): Cosmetic defects | Chance of water damage to contents, finishes and/or structure
Location: Throughout
Task: Repair
Time: Immediate

Condition: • Stains
Grading improvements and mortar repair or crack sealing are recommended to prevent further damage and moisture intrusion.
Implication(s): Cosmetic defects | Chance of water damage to contents, finishes and/or structure
Location: Throughout
Task: Repair
Time: Immediate

BASEMENT \ Wet basements - vulnerability
Condition: • Poor grading
Implication(s): Chance of water damage to contents, finishes and/or structure
Task: Improve

Time: Immediate

APPLIANCES \ Range
Condition: • Knobs broken
Difficult to turn gas on or off.
Implication(s): System inoperative or difficult to operate
Location: 962 Unit 1
Task: Repair
Time: Immediate

Condition: • Anti-tip device missing
Implication(s): Physical injury
Location: Kitchens
Task: Below current standards

APPLIANCES \ Dryer
Condition: • Dryer vent material not smooth wall
Could not confirm vent meets UL2158A rating. Replace with smooth ridged metal.
Implication(s): Fire hazard | Equipment ineffective
Location: 962
Task: Replace
Time: Less than 1 year

This concludes the Summary section.

The remainder of the report describes each of the structures systems and also details any recommendations we have for improvements. Limitations that restricted our inspection are included as well.

The suggested time frames for completing recommendations are based on the limited information available during a pre-purchase inspection. These may have to be adjusted based on the findings of specialists.

Repairs and Improvements - Approximate Costs

Description

Sloped roofing material: • Asphalt shingles • Metal

Flat roofing material: • Synthetic rubber

Probability of leakage: • Medium

Limitations

Roof inspection limited/prevented by: • Lack of access (too high/steep)

Inspection performed: • From ground with pole mounted camera

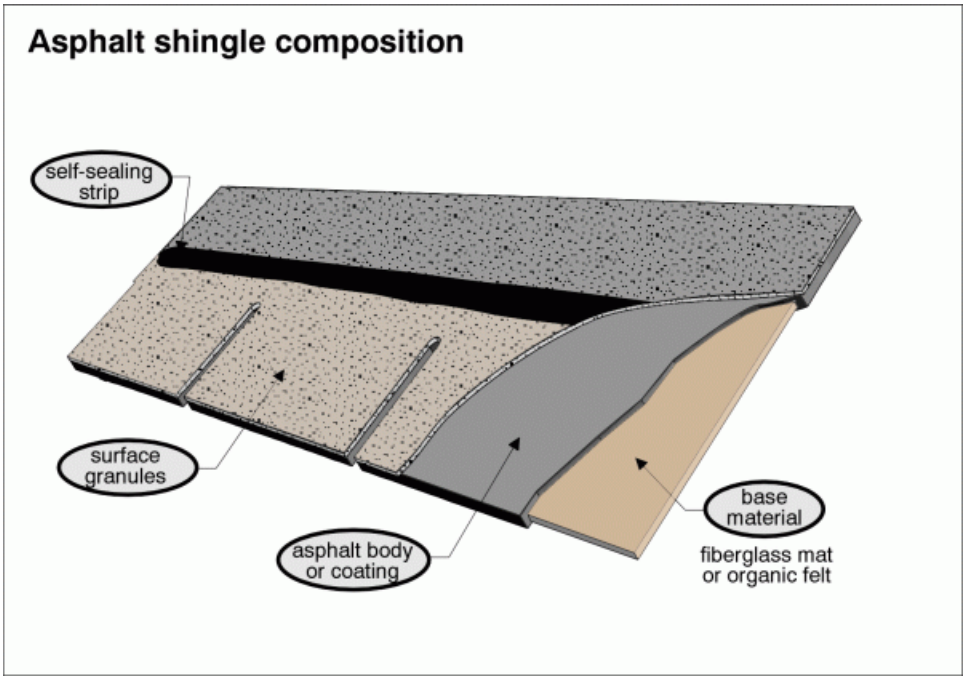
Recommendations

General

1. • The EPDM roof membranes were reported to be 20+ years old and near the end of the membranes expected useful lives. The sellers reported that the roofs have been maintained annually. The roofs are performing adequately overall with minor to moderated defects observed. Continuing annual maintenance will likely prolong the roofs performance, however, budget reserves should be established for roof replacement.
Location: 960-962
Task: Budget replacement

SLOPED ROOFING \ Asphalt shingles

2. Condition: • Granule loss
Typical granule loss consistent with roof age.
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Front Entries
Task: Monitor



SLOPED ROOFING \ Metal

3. Condition: • Rust
Clean and paint roof surface.
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Rear Entries
Task: Repair
Time: Less than 2 years

1. *Rust*

SLOPED ROOF FLASHINGS \ Roof/sidewall flashings

4. Condition: • Loose, damaged, patched, open seams

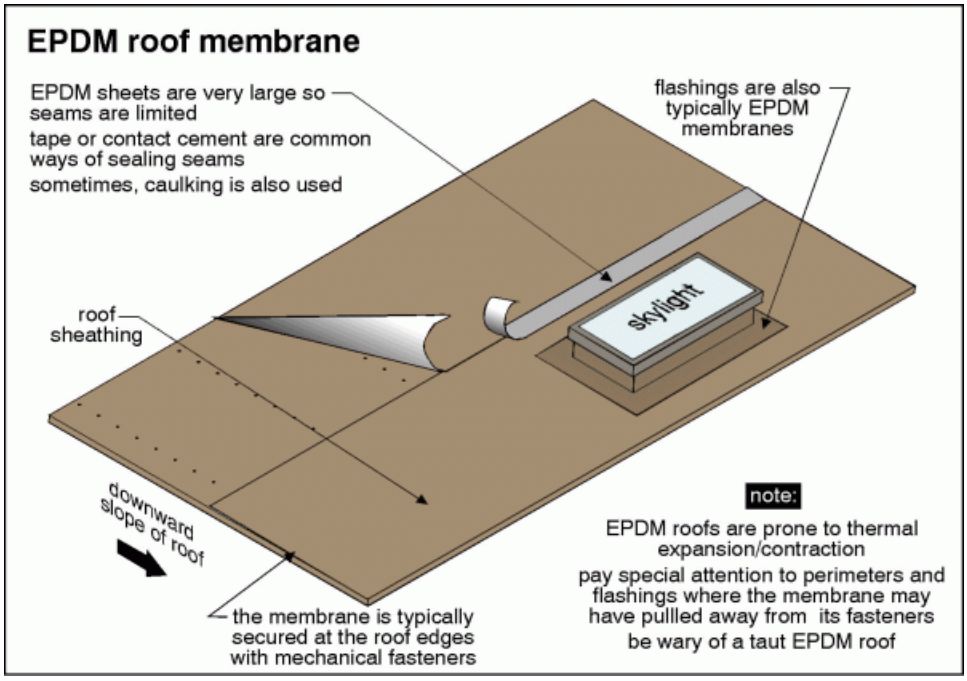
Open seam.
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: 962
Task: Repair
Time: Less than 1 year

2. *Loose, damaged, patched, open seams*

FLAT ROOFING \ Rubber single ply

5. Condition: • Near end of life expectancy
The main roofs were reported to be 20+ years old.
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: 960-962
Task: Budget replacement

6. Condition: • Openings at seams or flashings
Implication(s): Chance of water damage to contents, finishes and/or structure
Task: Repair
Time: Less than 1 year



7. Condition: • Wrinkles, ridges, fishmouths
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Various
Task: Repair
Time: Regular maintenance

3. *Wrinkles, ridges, fishmouths*

8. Condition: • Patched
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Various
Task: Budget replacement

4. *Patched*

5. *Patched*

9. Condition: • Debris/oil on roof

Cement blocks were placed directly on the roof membrane.

Implication(s): Chance of water damage to contents, finishes and/or structure

Location: 960

Task: Remove

Time: Less than 1 year

6. *Debris/oil on roof*

10. Condition: • Taut, tenting

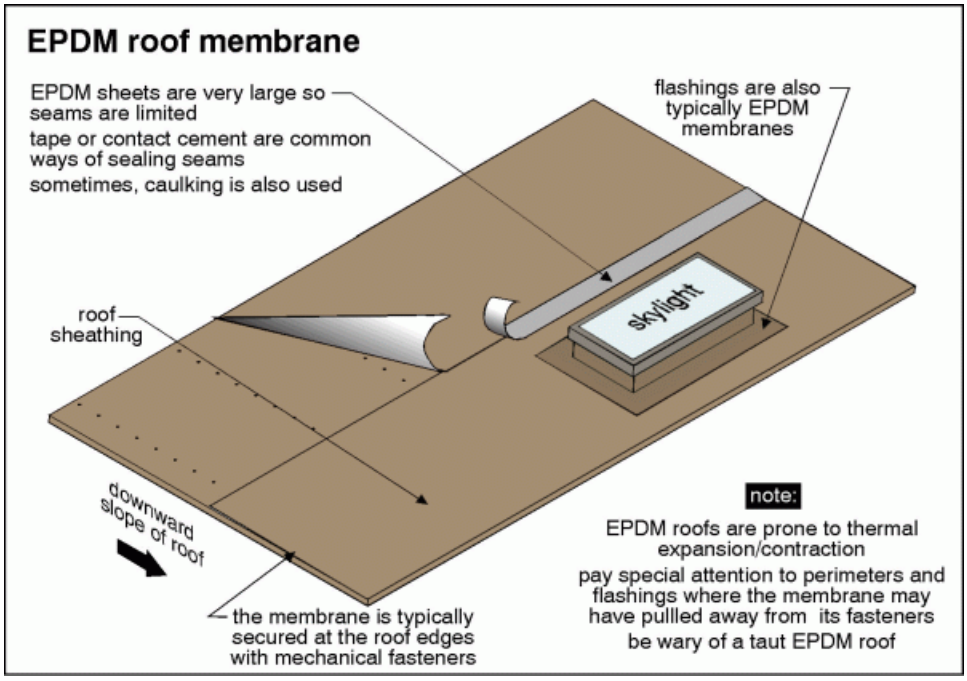
Roof is aging with minor tenting observed. Recommend annual service to prolong life of roof .

Implication(s): Chance of water damage to contents, finishes and/or structure

Location: 960-962

Task: Repair

Time: Annually



7. *Taut, tenting*

8. *Taut, tenting*

Description

General: • 962 Elevations:

9.

10.

11.

12.

General: • Parking lot elevations:

13.

14.

General: • 960 Elevations:

15.

16.

17.

18.

Gutter & downspout material: • Galvanized steel

Gutter & downspout type: • Eave mounted

Gutter & downspout discharge: • Above grade

Lot slope: • Towards building

Wall surfaces: • Stucco/EIFS

Soffit and fascia: • Wood

Driveway: • Asphalt • Concrete • Gravel

Walkway: • Concrete

Limitations

Inspection limited/prevented by: • New finishes/paint/trim

Upper floors inspected from: • Ground level

Exterior inspected from: • Ground level

Recommendations

General

11. • Areas or rot were observed at the shed siding. Missing fascia board on the south side of the shed.
Location: Shed
Task: Repair
Time: Discretionary

19.

20.

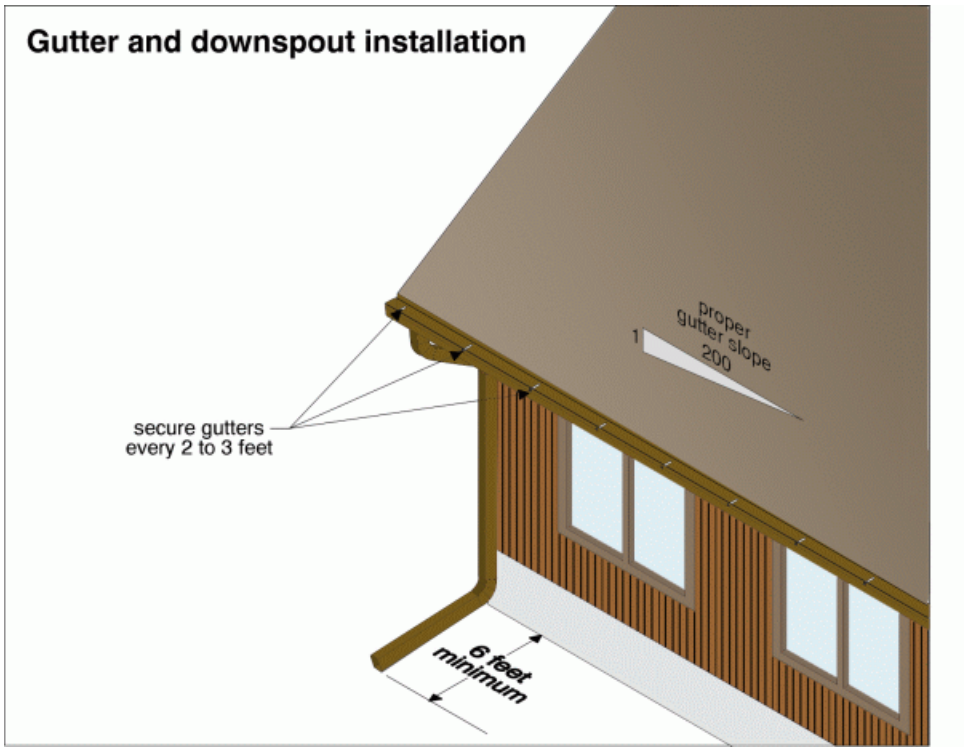
21.

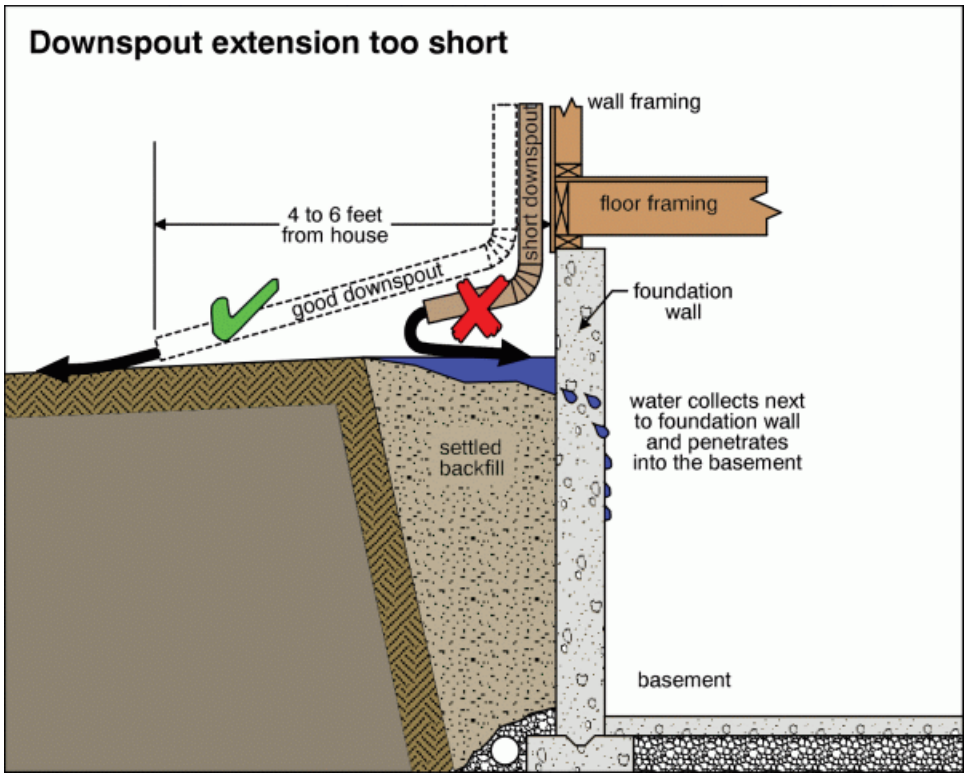
12. • The buildings exterior finishes were generally in fair to good condition.
Task: Comment - no recommendations

ROOF DRAINAGE \ Downspouts

13. Condition: • Downspouts end too close to building
Implication(s): Chance of water damage to contents, finishes and/or structure

Location: Rear
Task: Improve
Time: Less than 1 year





22. *Downspouts end too close to building*

23. *Downspouts end too close to building*

WALLS \ Soffits and fascia

14. Condition: • Interior materials used for exterior finishes.

Location: Front

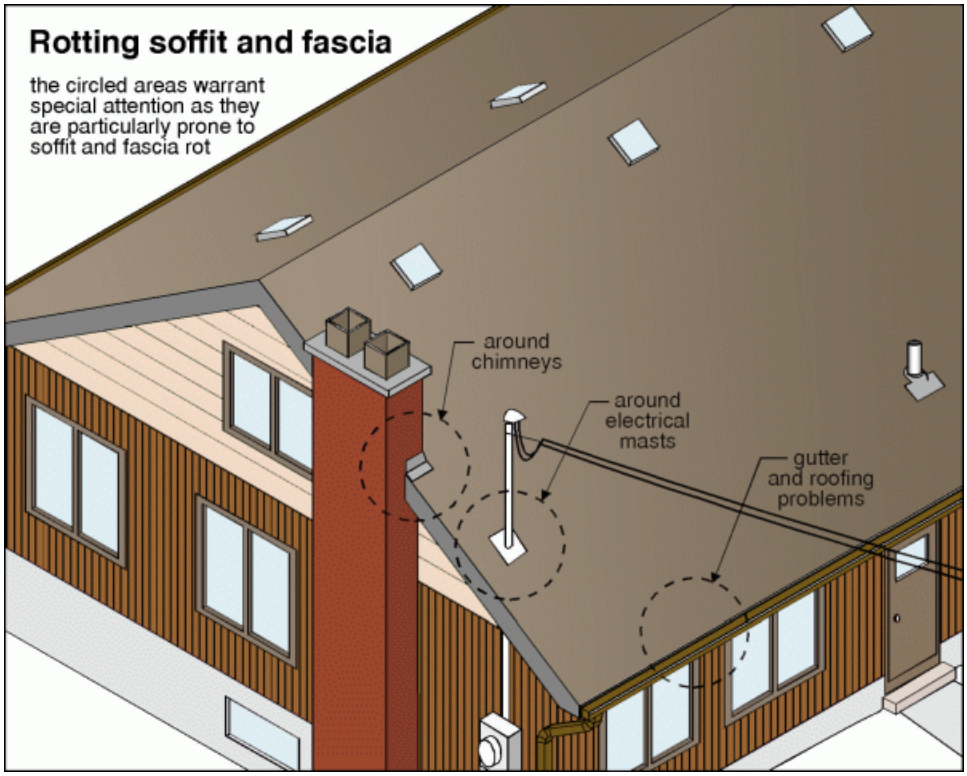
Task: Below current standards

24.

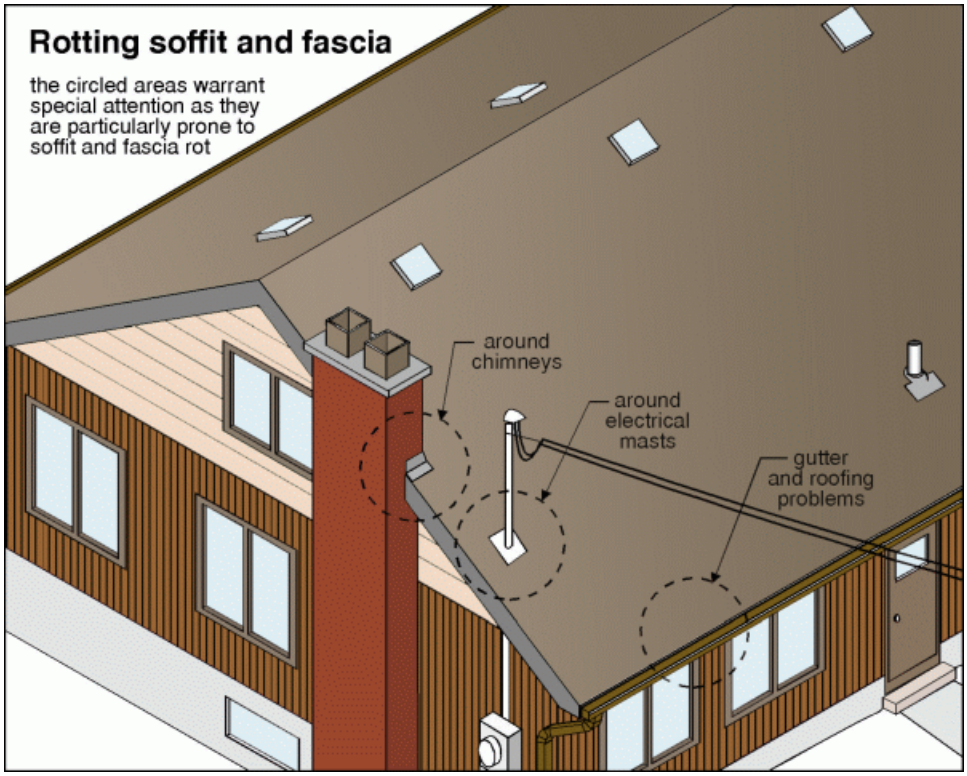
15. Condition: • Rot or insect damage

Implication(s): Material deterioration | Chance of water damage to contents, finishes and/or structure | Cosmetic defects

Task: Repair or replace



16. Condition: • Paint or stain needed
Implication(s): Cosmetic defects | Chance of water damage to contents, finishes and/or structure | Shortened life expectancy of material
Location: Entries
Task: Repair or replace



25. *Paint or stain needed*

26. *Paint or stain needed*

27. *Paint or stain needed*

WALLS \ Flashings and caulking

17. Condition: • Caulking missing or ineffective

Missing at front and rear entry framing details. Caulk is also beginning to shrink in a small number of areas. Monitor and repair as necessary.

Implication(s): Chance of water damage to contents, finishes and/or structure

Location: Various

Task: Repair

Time: Less than 1 year

28. *Caulking missing or ineffective*

29. *Caulking missing or ineffective*

30. *Caulking missing or ineffective*

31. *Caulking missing or ineffective*

WALLS \ Stucco and EIFS

18. Condition: • Cracked

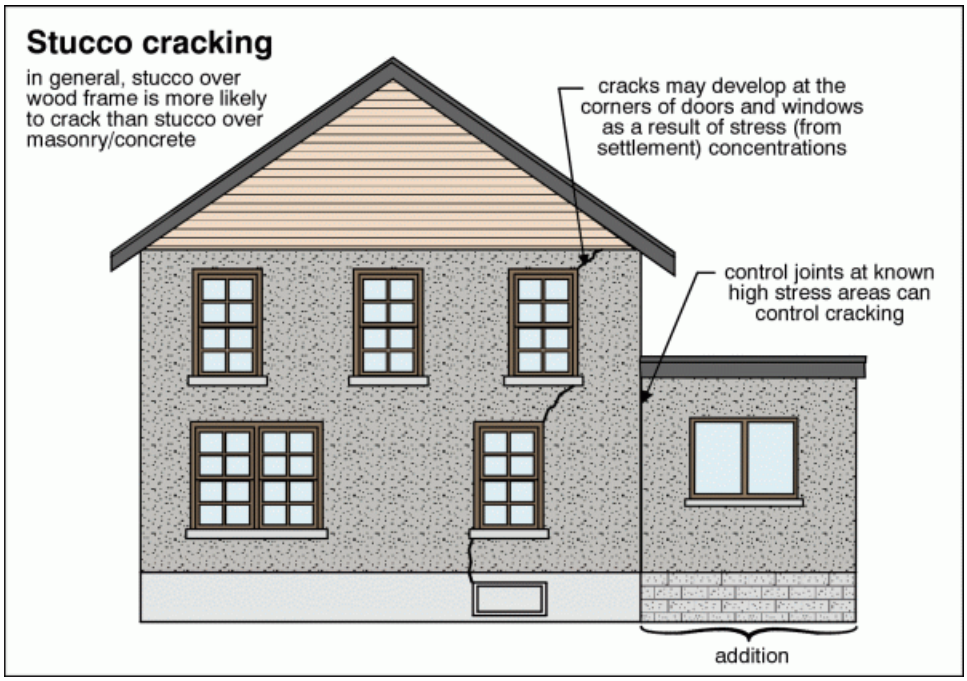
A small number of minor cracks were observed in various areas of the buildings. There is a potential for moisture penetration. Seal cracks and voids.

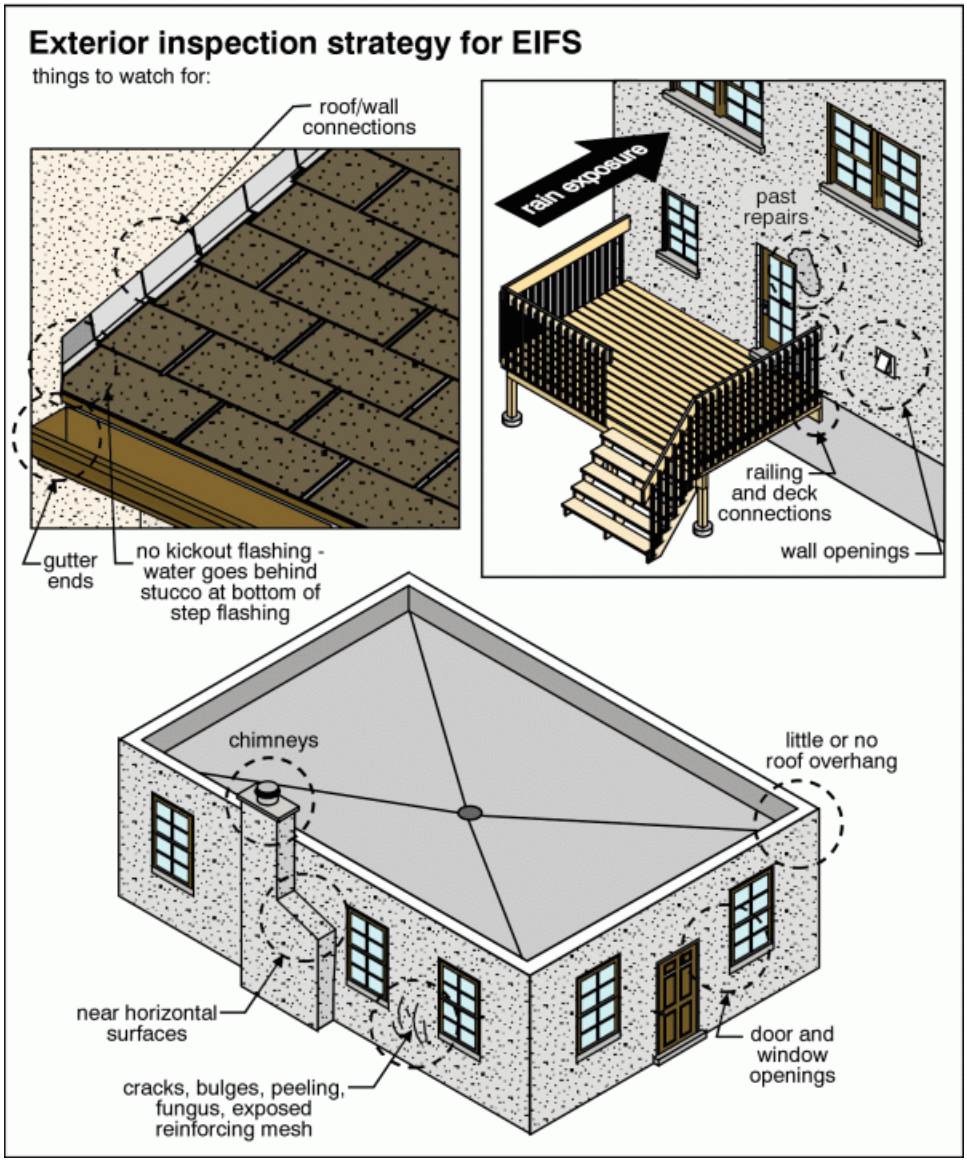
Implication(s): Chance of water damage to contents, finishes and/or structure | Material deterioration

Location: Various

Task: Repair

Time: Less than 1 year




Exterior inspection strategy for EIFS
things to watch for:
roof/wall connections
gutter ends
no kickout flashing - water goes behind stucco at bottom of step flashing
rain exposure
past repairs
railing and deck connections
wall openings
chimneys
little or no roof overhang
near horizontal surfaces
cracks, bulges, peeling, fungus, exposed reinforcing mesh
door and window openings

32. *Cracked*

33. *Cracked*

34. *Cracked*

35. *Cracked*

19. Condition: • Bulging

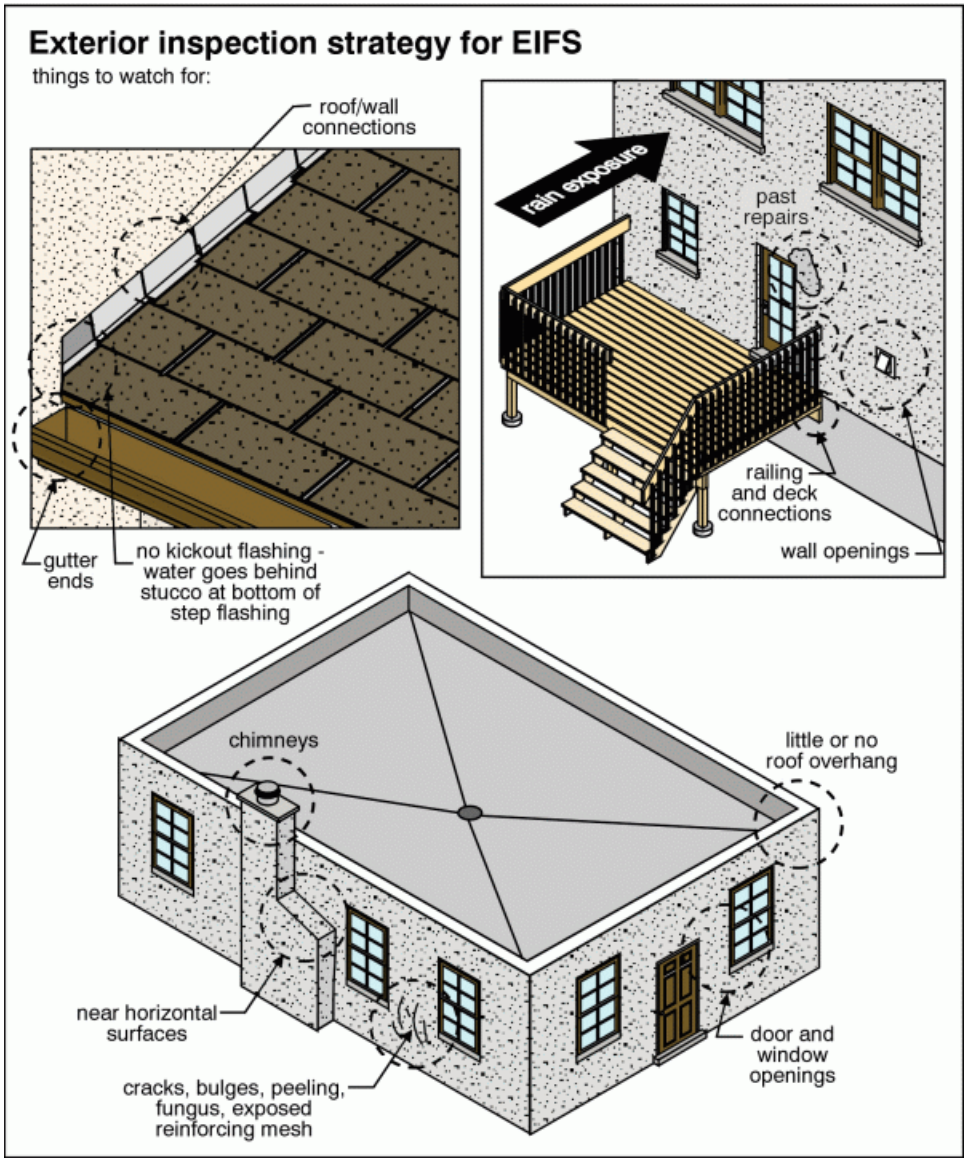
The middle area between 960 near the roof.

Implication(s): Material deterioration | Chance of water damage to contents, finishes and/or structure | Cosmetic defects

Location: 962

Task: Repair

Time: Less than 1 year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no kickout flashing - water goes behind stucco at bottom of step flashing
chimneys
little or no roof overhang
near horizontal surfaces
door and window openings
cracks, bulges, peeling, fungus, exposed reinforcing mesh

36. *Bulging*

37. *Bulging*

38. *Bulging*

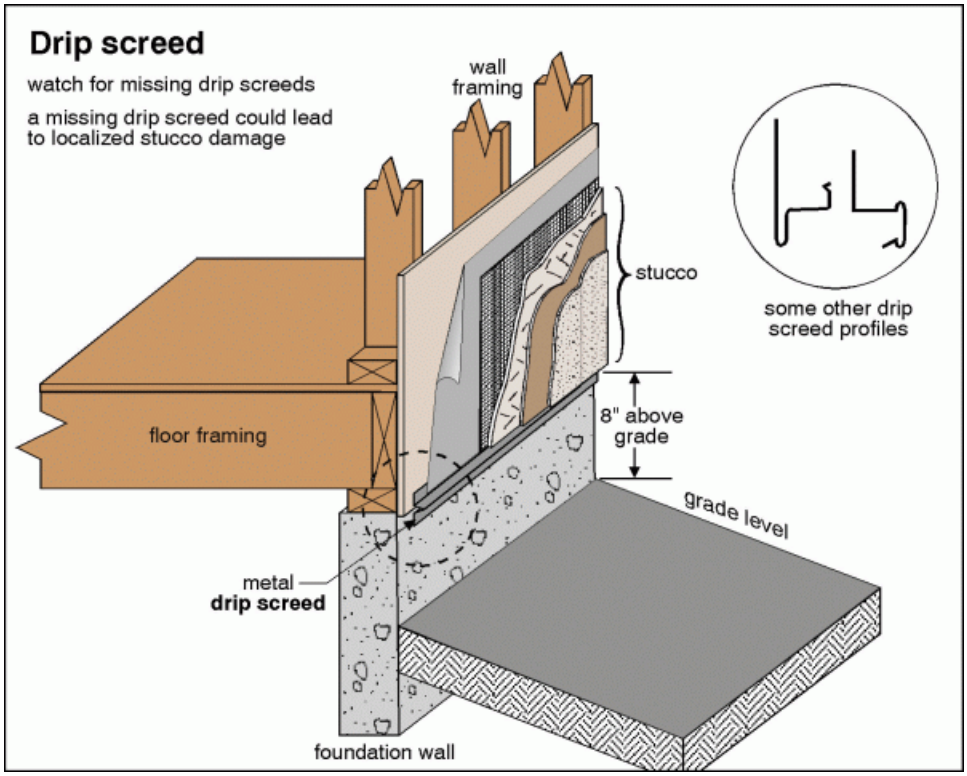
20. Condition: • No drip screed

Missing throughout the buildings. It is important to keep all voids sealed to prevent moisture intrusion.

Implication(s): Material deterioration | Chance of water damage to contents, finishes and/or structure

Location: Throughout

Task: Below current standards



EXTERIOR GLASS \ Glass (glazing)

21. Condition: • Cracked
Implication(s): Cosmetic defects
Location: Front Hall 962
Task: Repair
Time: Less than 1 year

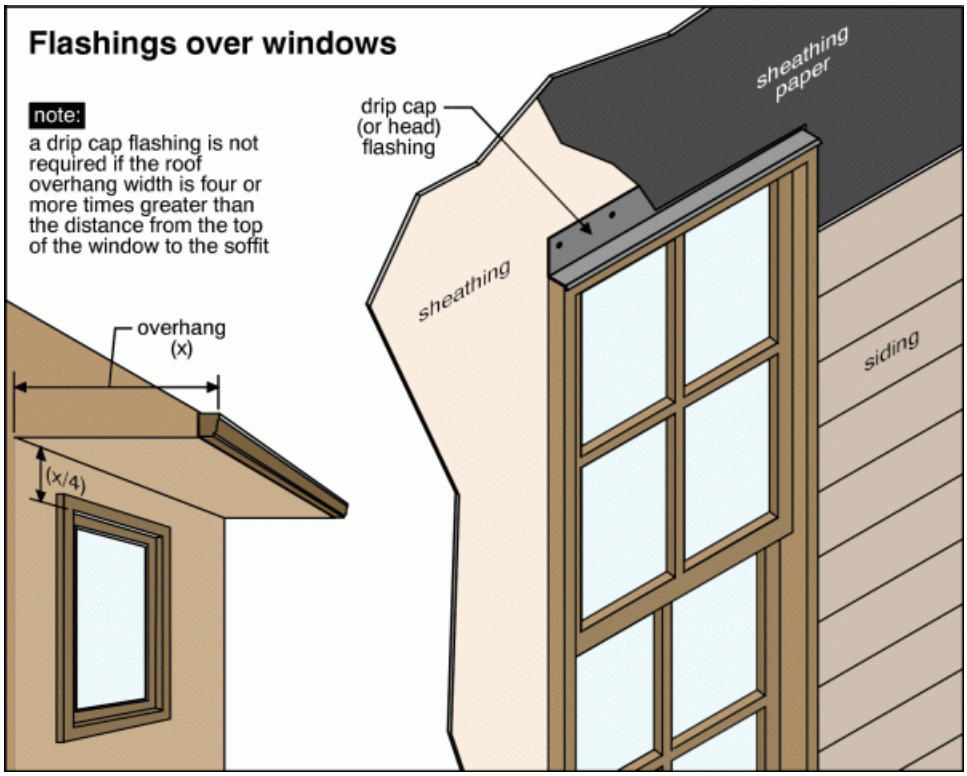
39. *Cracked*

EXTERIOR GLASS \ Exterior drip caps

22. Condition: • Missing

Implication(s): Chance of water damage to contents, finishes and/or structure

Task: Below current standards



EXTERIOR GLASS \ Storms and screens

23. Condition: • Torn or holes

Tear, holes and general damage observed at various screens.

Implication(s): Chance of pests entering building

Location: Various

Task: Repair

Time: Less than 1 year

40. *Torn or holes*

41. *Torn or holes*

LANDSCAPING \ Lot grading

24. Condition: • Improper slope

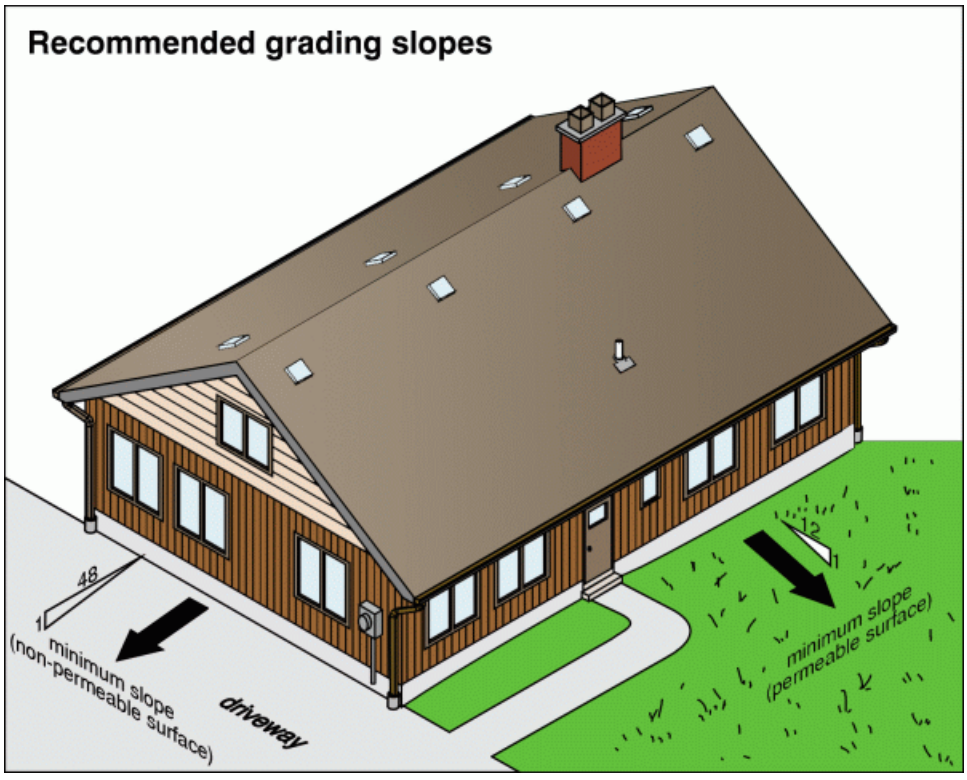
Settled areas and areas of flat grade observed near foundations. Window sills were at or below grade. Evidence of significant moisture intrusion on interior basement walls.

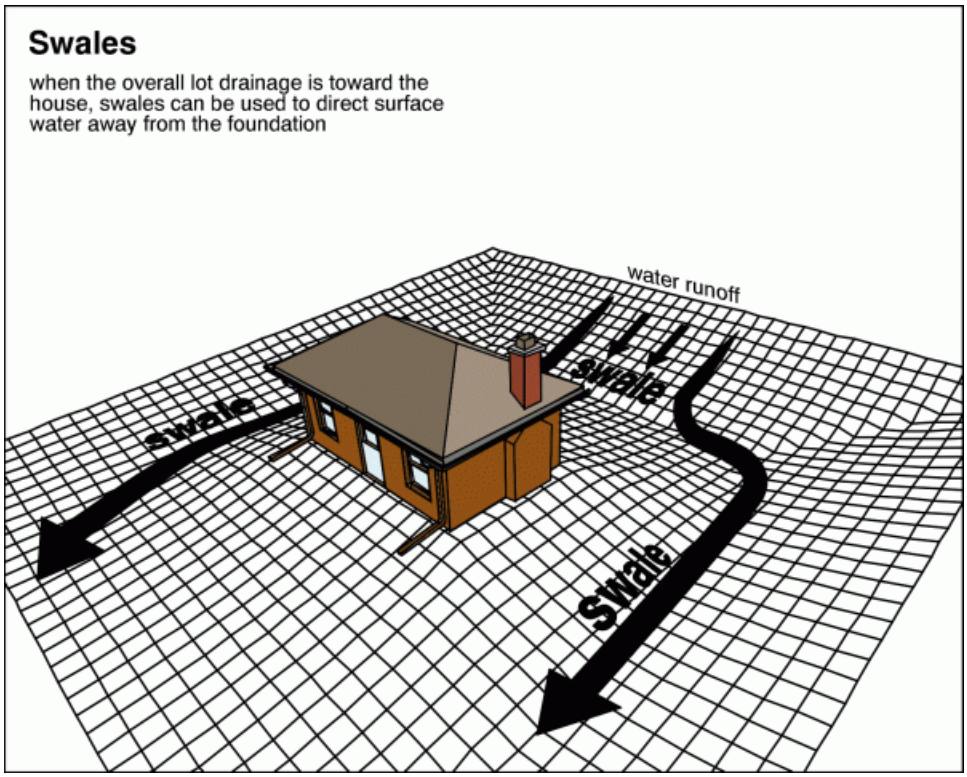
Implication(s): Chance of water damage to contents, finishes and/or structure

Location: 960-962

Task: Improve

Time: Immediate



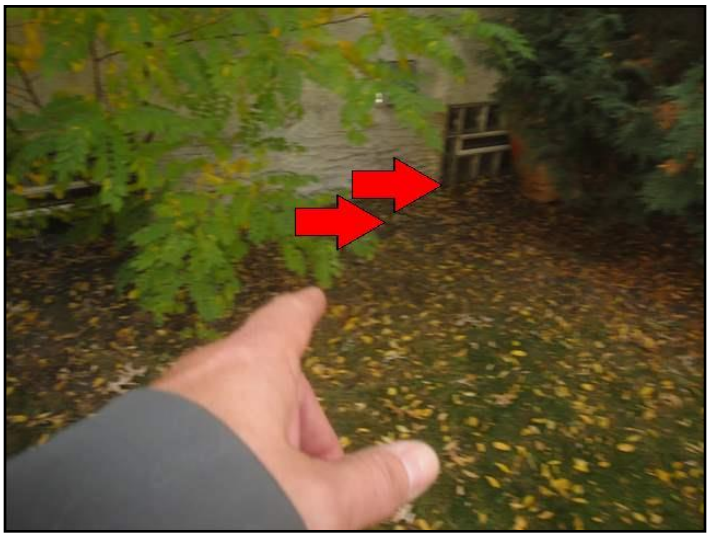


42. *Improper slope*

43. *Improper slope*

44. *Improper slope*

45. *Improper slope*



46. *Improper slope*

LANDSCAPING \ Driveway

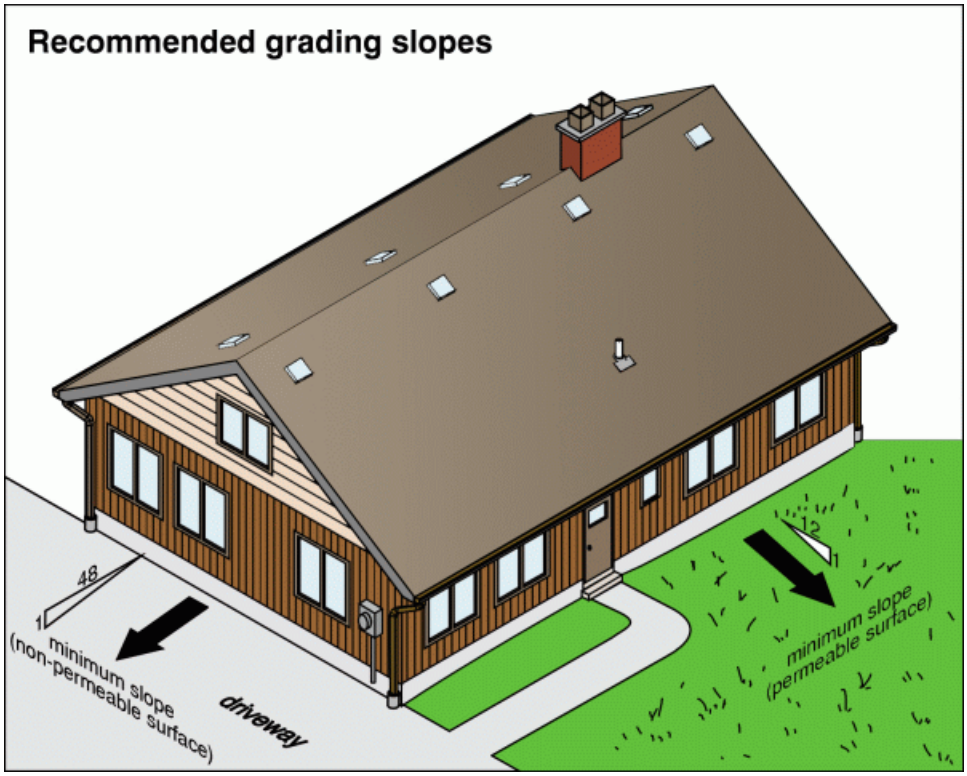
25. Condition: • Improper slope or drainage

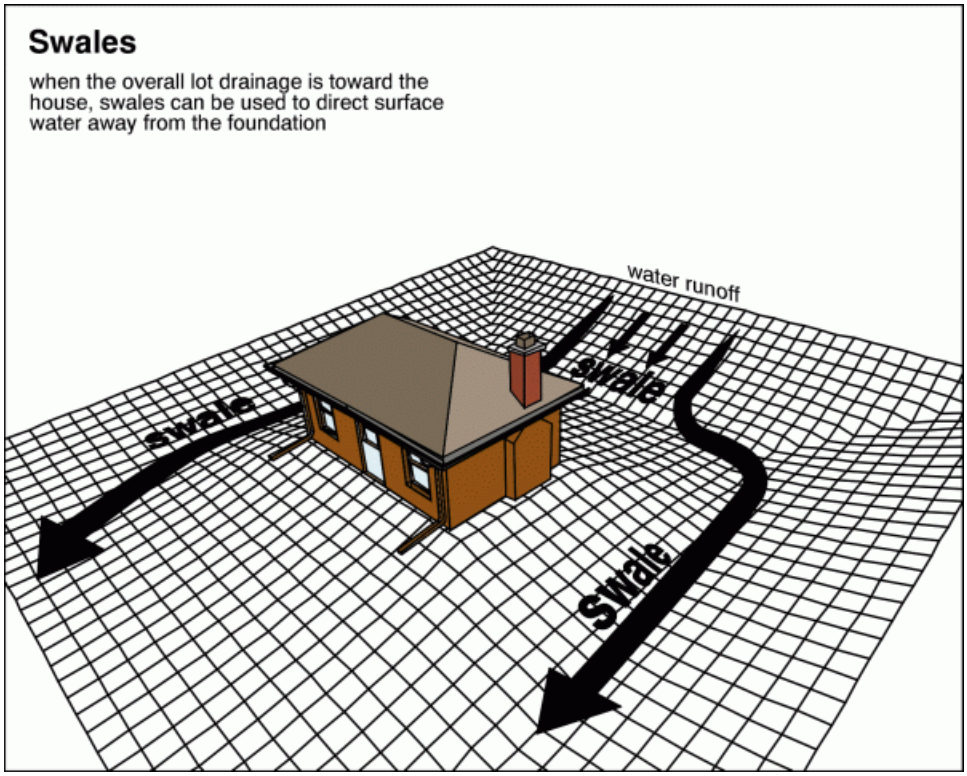
Implication(s): Chance of water damage to contents, finishes and/or structure

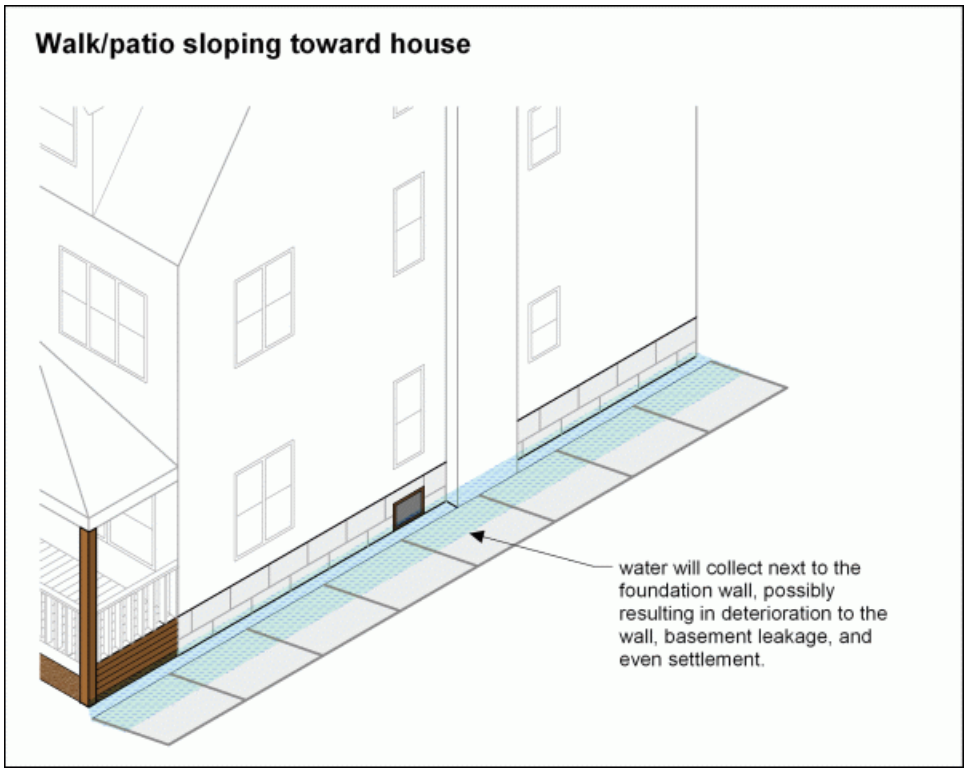
Location: South & West

Task: Improve

Time: Less than 1 year


Recommended grading slopes
48
1
minimum slope
(non-permeable surface)
driveway
12
1
minimum slope
(permeable surface)


Swales
when the overall lot drainage is toward the house, swales can be used to direct surface water away from the foundation
water runoff
swale
swale
Swale



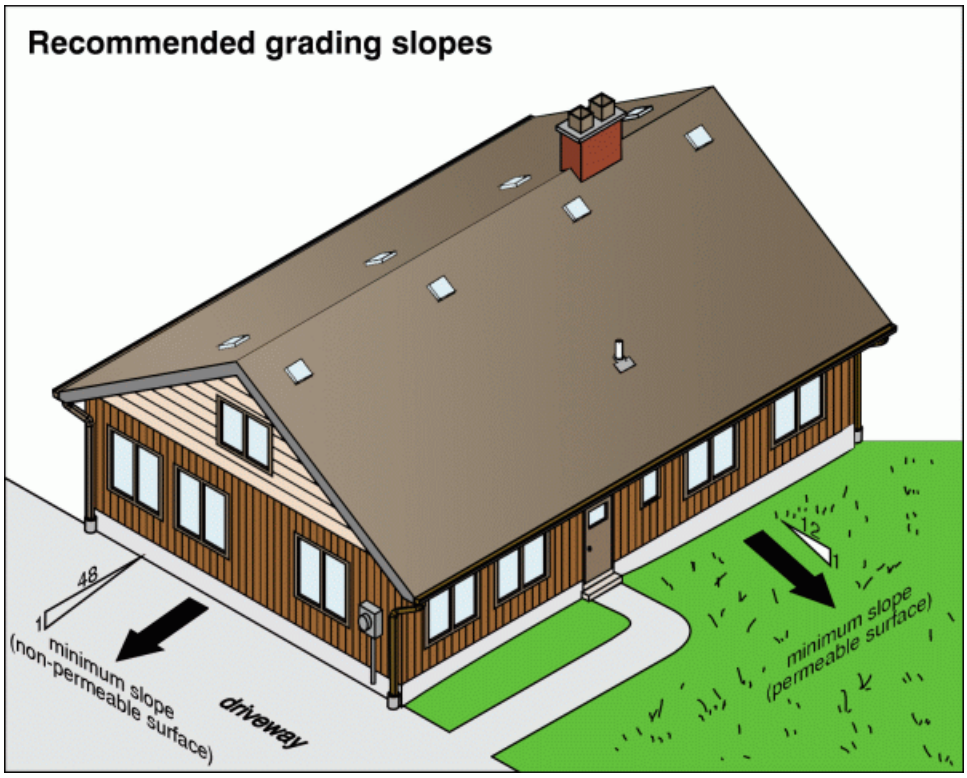
47. *Improper slope or drainage*

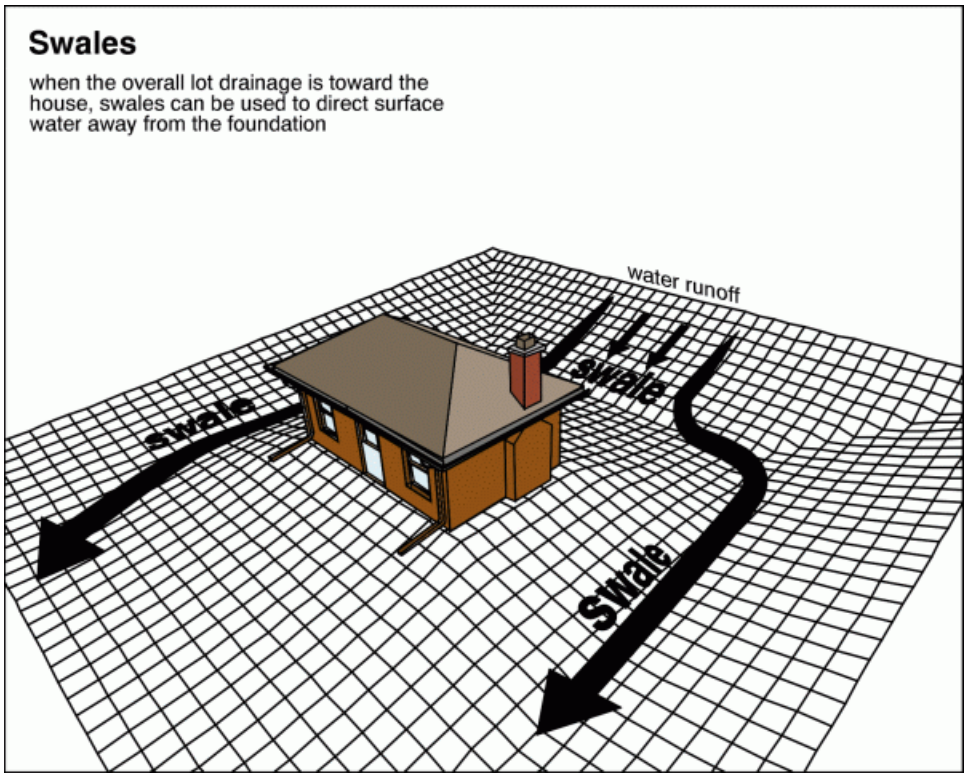
LANDSCAPING \ Walkway

26. Condition: • Cracked or damaged surfaces
Implication(s): Trip or fall hazard
Location: Various
Task: Repair
Time: Discretionary

48. *Cracked or damaged surfaces*

27. Condition: • Improper slope or drainage
Implication(s): Chance of water damage to contents, finishes and/or structure
Location: Rear and Middle
Task: Repair
Time: Immediate




Swales
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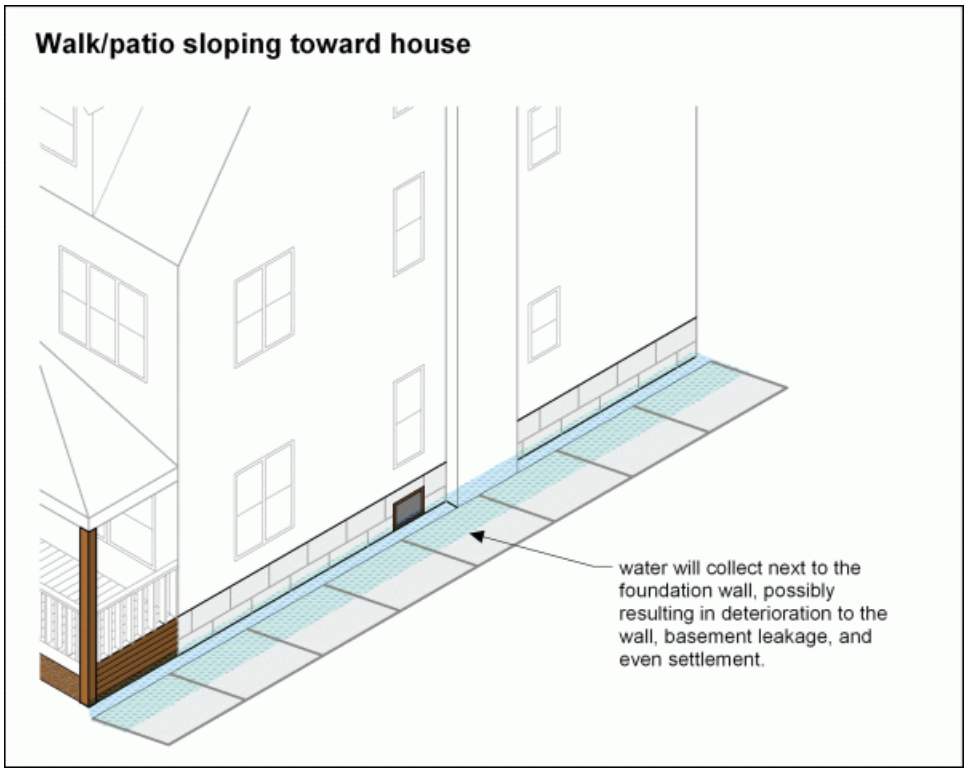
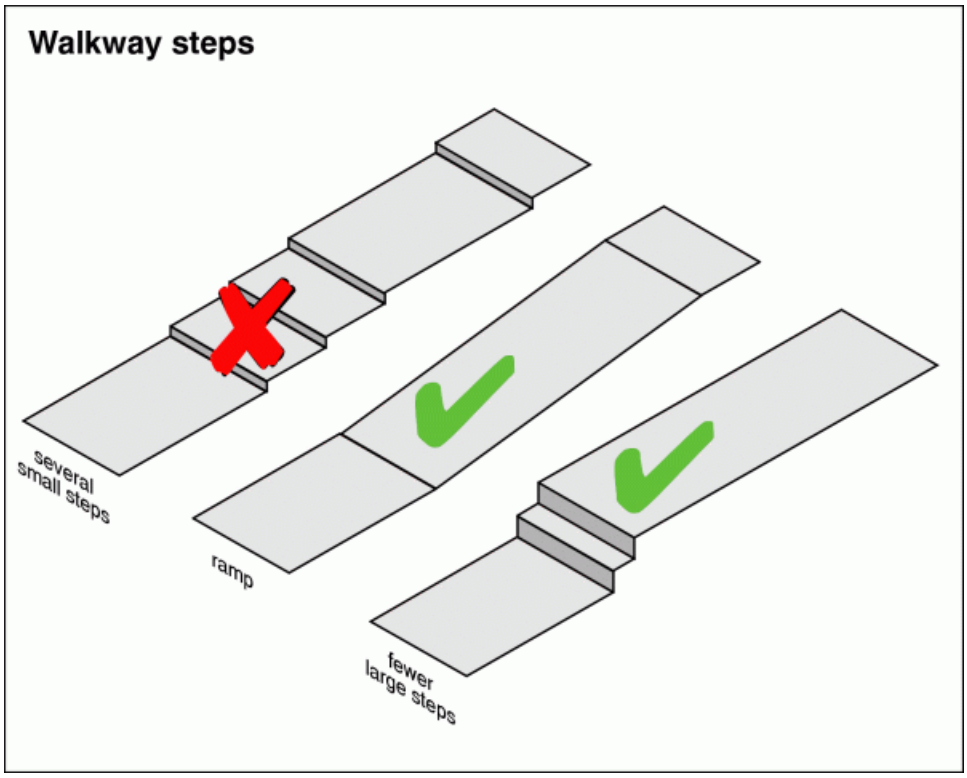
water runoff
swale
swale
Swale


Walk/patio sloping toward house
water will collect next to the foundation wall, possibly resulting in deterioration to the wall, basement leakage, and even settlement.

49. *Improper slope or drainage*

50. *Improper slope or drainage*

28. Condition: • Uneven (trip hazard)
Implication(s): Physical injury
Location: Rear & Middle
Task: Repair
Time: Immediate



51. *Uneven (trip hazard)*

52. *Uneven (trip hazard)*

LANDSCAPING \ General

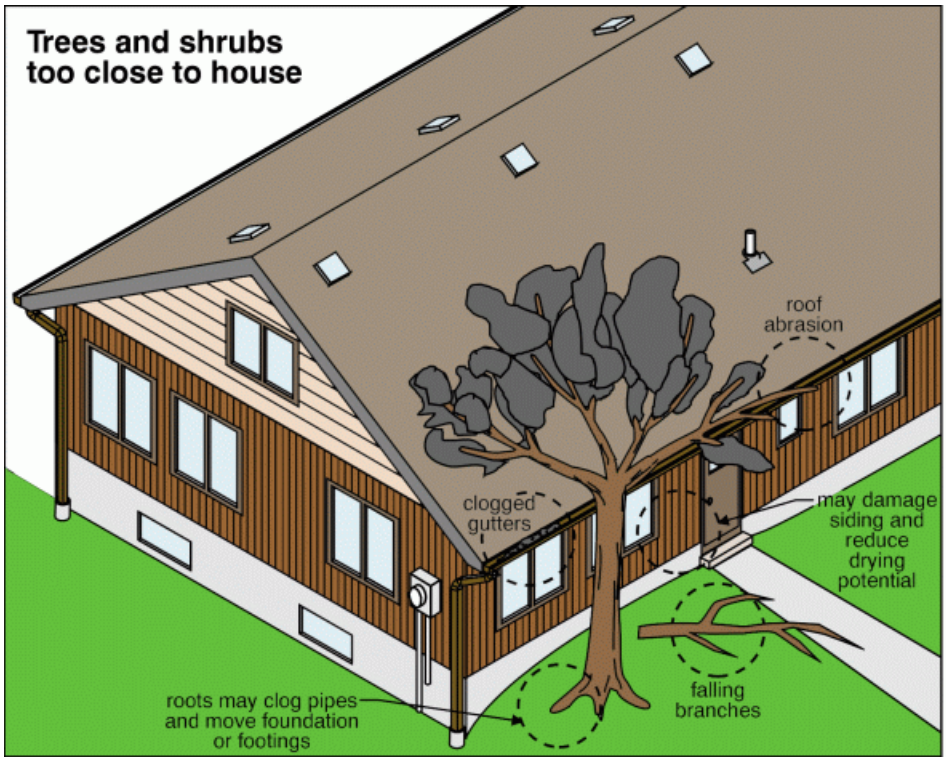
29. Condition: • Trees or shrubs too close to building

Implication(s): Chance of water damage to contents, finishes and/or structure | Chance of pests entering building | Material deterioration

Location: Various

Task: Improve

Time: Less than 1 year



53. *Trees or shrubs too close to building*

54. *Trees or shrubs too close to building*

Description

Configuration: • Basement

Foundation material: • Masonry block

Floor construction: • Joists • Wood columns • Wood beams • Subfloor - plank

Exterior wall construction: • Wood frame

Roof and ceiling framing: • Rafters/roof joists • Plank sheathing

Party walls: • None in attic

Limitations

Inspection limited/prevented by: • Wall, floor and ceiling coverings • Carpet/furnishings • Insulation

Attic/roof space: • Inspected from access hatch

Percent of foundation not visible: • 50 %

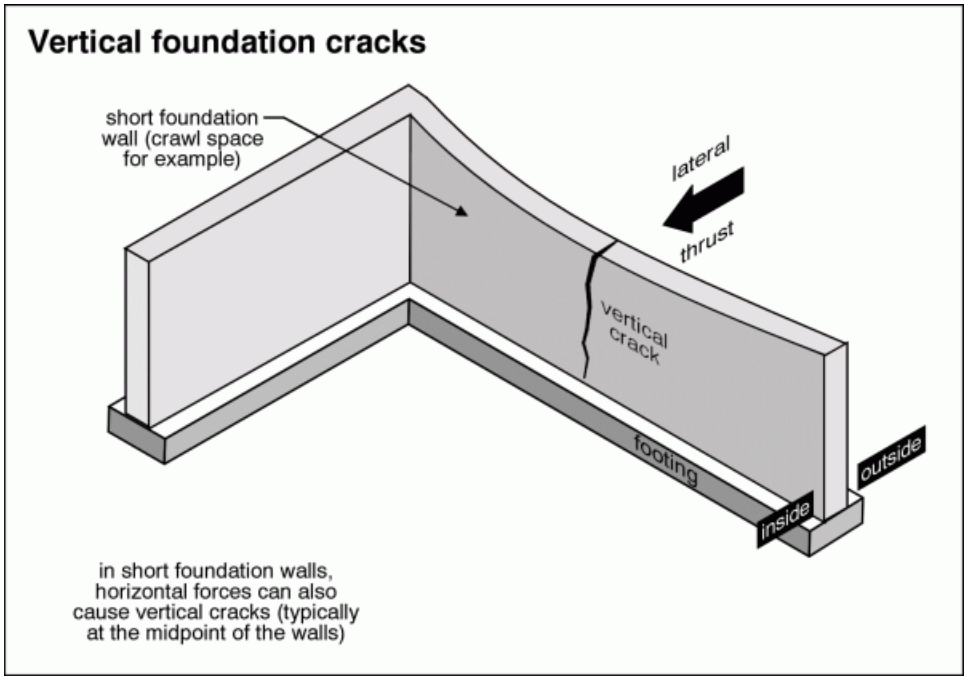
Not included as part of a building inspection: • Sheds or accessory structures.

Recommendations

FOUNDATIONS \ Foundation

30. Condition: • Typical minor settlement
Task: Monitor

31. Condition: • Cracked
Minor to moderate cracks were observed. Poor grading and water damage are contributing factors. The cracks are not an immediate structural concern however grading improvements and mortar repair or crack sealing are recommended to prevent further damage and moisture intrusion.
Implication(s): Chance of water damage to contents, finishes and/or structure | Weakened structure
Location: 960-962
Task: Repair
Time: Less than 1 year



55. *Cracked*

56. *Cracked*

57. *Cracked*

58. *Cracked*

59. *Cracked*

60. *Cracked*

61. *Cracked*

32. Condition: • Cracked horizontally

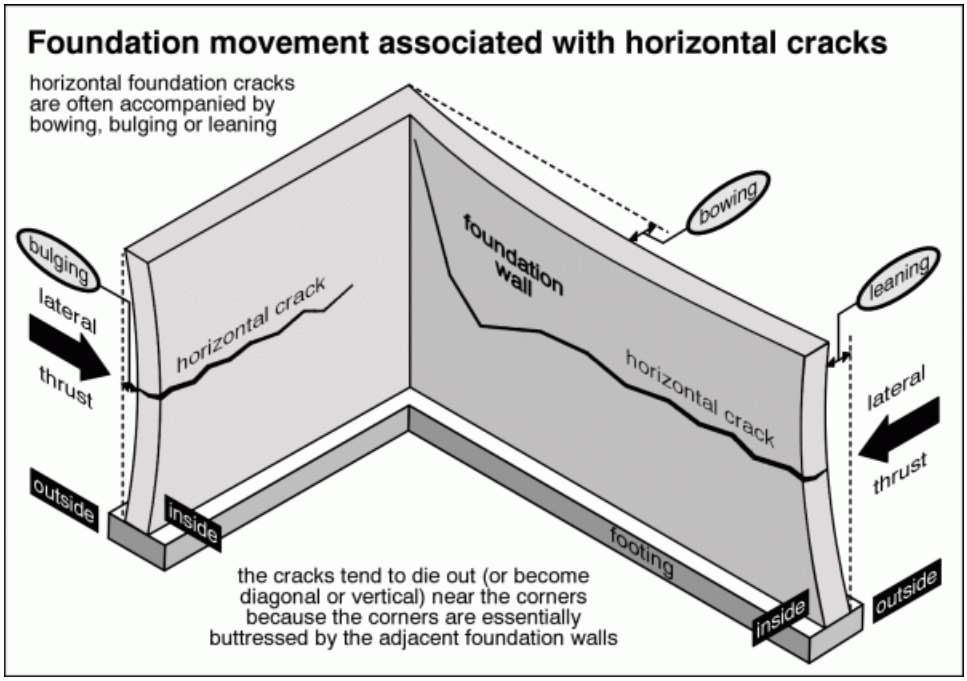
A horizontal crack was observed on the east wall. Poor grading and water damage are contributing factors. The crack is not an immediate structural concern however grading improvements and mortar repair or crack sealing are recommended to prevent further damage and moisture intrusion. The wall was checked with a level and no lateral movement was observed.

Implication(s): Chance of structural movement

Location: 962

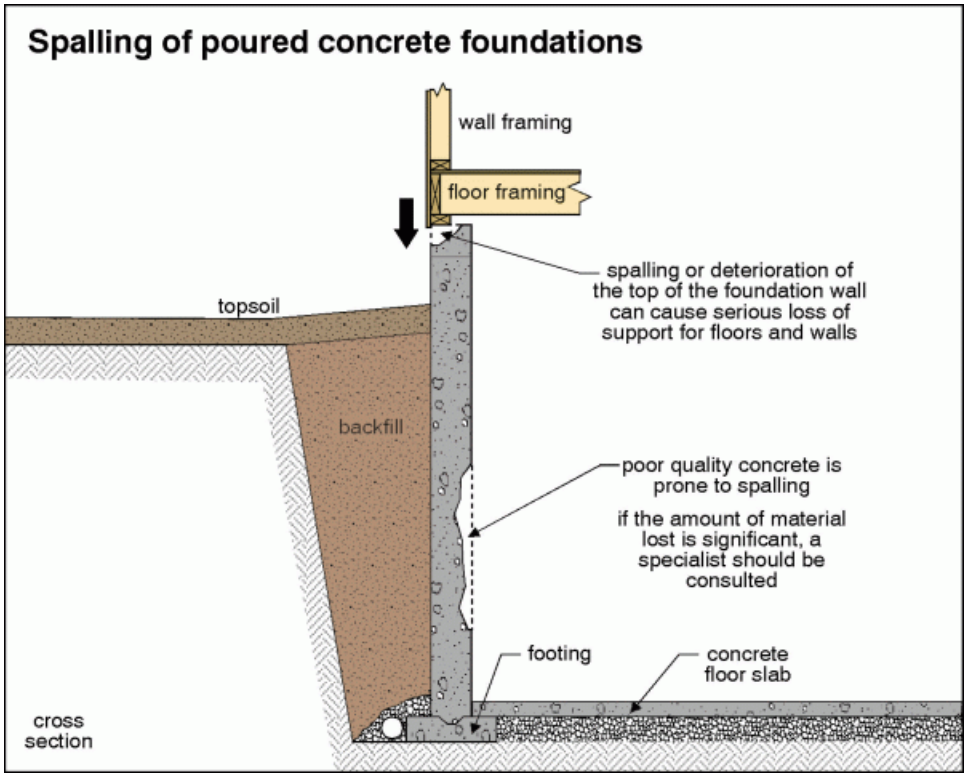
Task: Repair

Time: Less than 1 year



62. *Cracked horizontally*

33. Condition: • Spalling, crumbling or broken material
Roof footing.
Implication(s): Chance of structural movement | Weakened structure
Location: 960 Front Exterior Entry
Task: Repair
Time: Less than 1 year



63. *Spalling, crumbling or broken material*

FLOORS \ Columns or piers

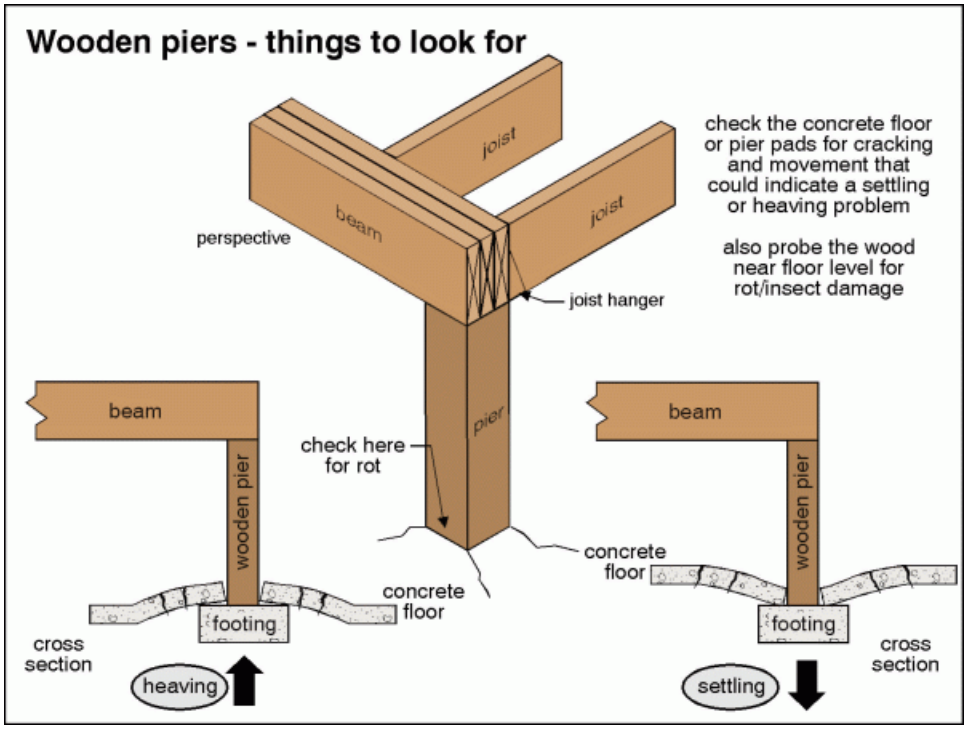
34. Condition: • Rot

Minor rot was observed at the column near the stairs.

Implication(s): Weakened structure

Location: 962 Basement

Task: Monitor



64. *Rot*

FLOORS \ Joists

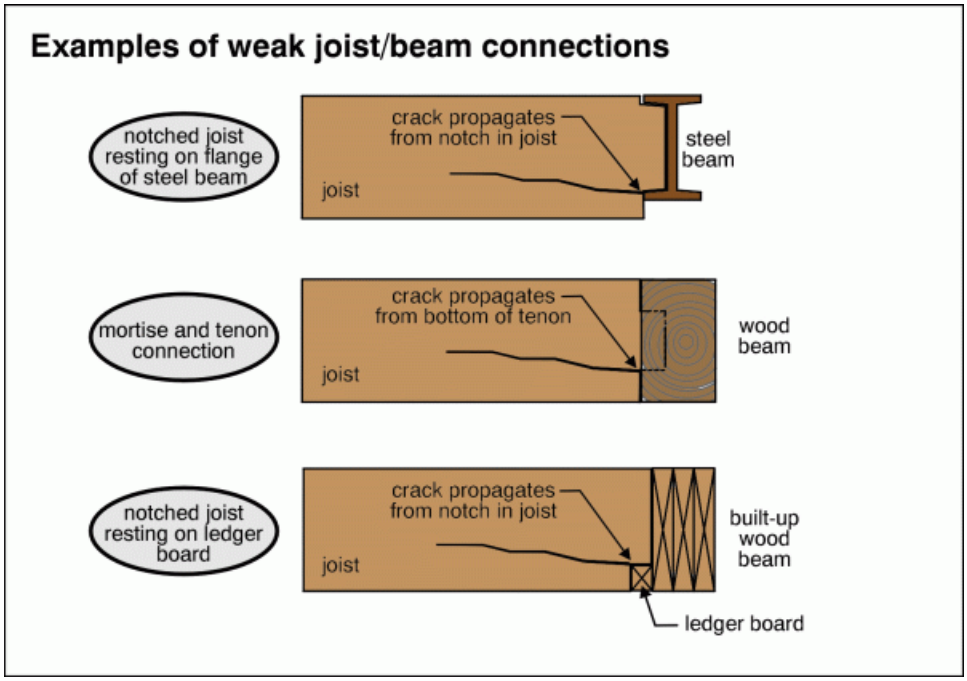
35. Condition: • Split or damaged

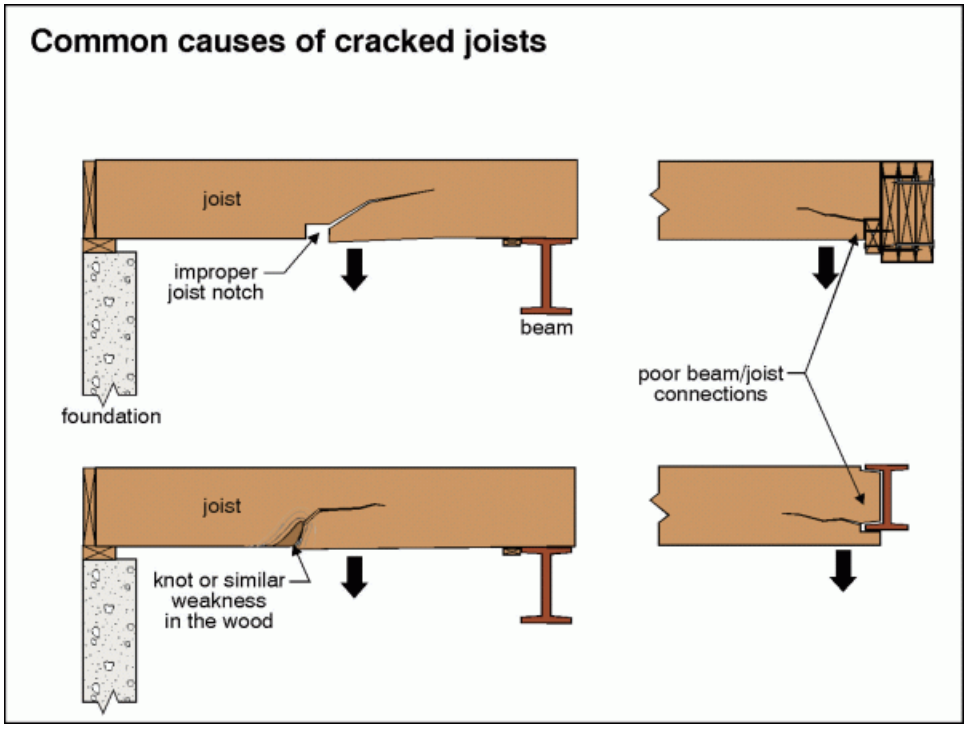
Implication(s): Chance of structural movement | Weakened structure

Location: 962 Basement West Wall

Task: Repair

Time: Less than 1 year





65. *Split or damaged*

Description

General: • Typical meters and panels:

66.

General: • Central or common area fire alarms were present but not tested.

Service entrance cable and location:

• Underground copper

960

• Underground aluminum

962

Service size:

• 100 Amps (240 Volts)

Individually metered services.

Main disconnect/service box rating: • 100 Amps

Main disconnect/service box type and location: • Breakers - basement

System grounding material and type: • Copper - water pipe

Distribution wire material and type: • Copper - non-metallic sheathed • Copper - conduit

Type and number of outlets (receptacles): • Grounded - minimal • Grounded - upgraded • Ungrounded - minimal

Circuit interrupters: Ground Fault (GFCI) & Arc Fault (AFCI): • GFCI - bathroom • GFCI - kitchen

Smoke detectors: • Present

Carbon monoxide (CO) detectors: • Present

Limitations

General: • Central fire or security alarms are not tested.

Panel covers: • A limited number of panels were opened to observe wire types.

System ground: • Continuity not verified • Quality of ground not determined

Circuit labels: • The accuracy of the circuit index (labels) was not verified.

Recommendations

SERVICE BOX, GROUNDING AND PANEL \ Panel wires

36. Condition: • Double taps

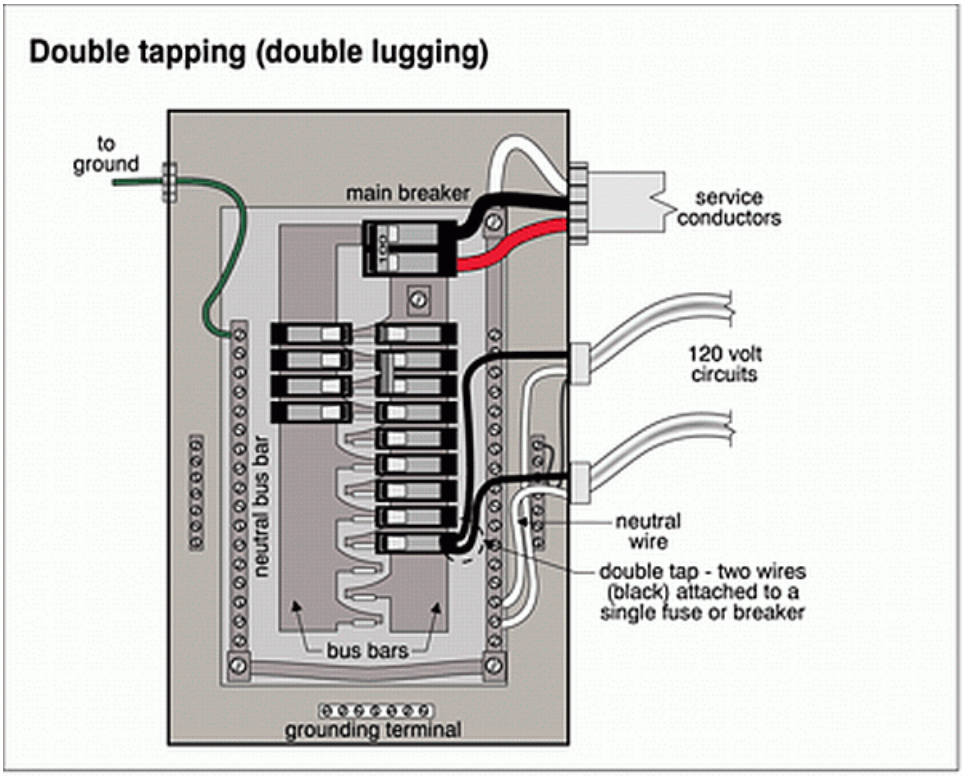
Double tapped single pole breaker.

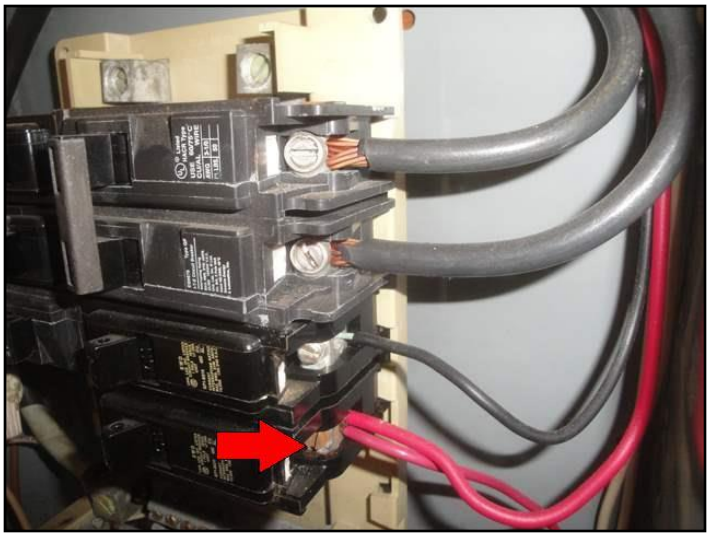
Implication(s): Fire hazard

Location: 960 Unit 1 Panel

Task: Repair

Time: Immediate





67. *Double taps*

DISTRIBUTION SYSTEM \ Wiring - installation

37. Condition: • Extension cord used as permanent wiring

Provide additional outlets or wiring, if needed, and remove extension cords.

Implication(s): Fire hazard | Electric shock

Location: 960 Unit 2

Task: Improve

Time: Immediate

68. *Extension cord used as permanent wiring*

DISTRIBUTION SYSTEM \ Lights

38. Condition: • Improper closet lighting

Provide a globe or replace the fixture to reduce the risk of fire when items in the closet have the potential to come into contact with or have little clearance from hot exposed bulb.

Implication(s): Fire hazard

Location: Throughout Dining Room Closets

Task: Repair or replace
Time: Immediate

69. *Improper closet lighting*

70. *Improper closet lighting*

DISTRIBUTION SYSTEM \ Outlets (receptacles)

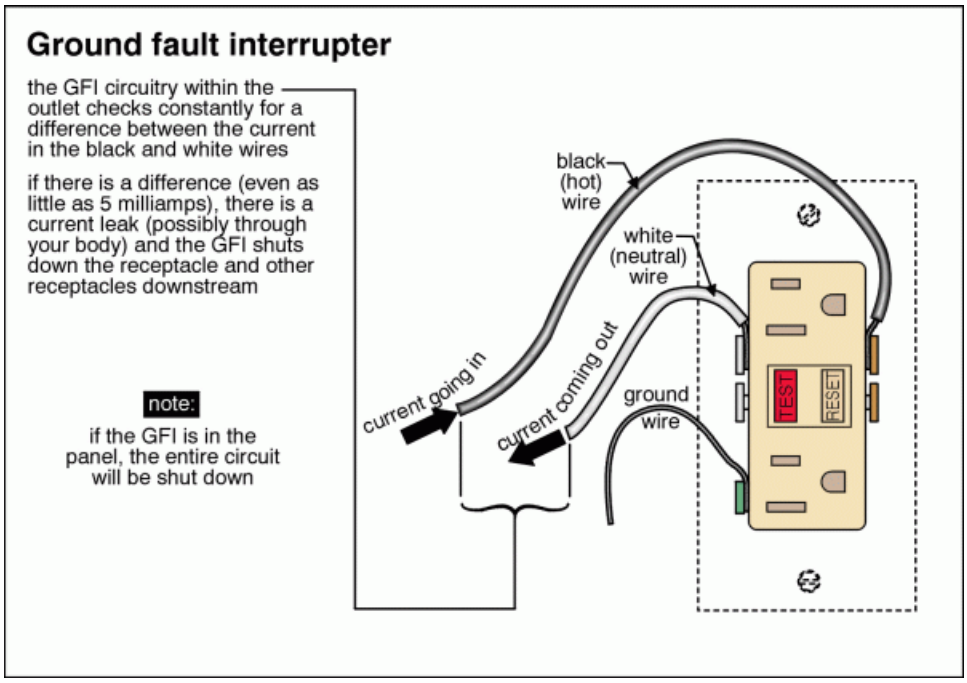
39. Condition: • Inoperative
Implication(s): Equipment inoperative
Location: Throughout Exterior
Task: Repair
Time: Less than 1 year

71. *Inoperative*

72. *Inoperative*

40. Condition: • Ungrounded
Implication(s): Electric shock
Location: 962 Unit 3 Kitchen
Task: Below current standards

41. Condition: • No GFCI (Ground Fault Circuit Interrupter)
Current standards require GFCI protection for all bathroom receptacles, all garage and accessory buildings, all receptacles in unfinished basements (except permanently installed burglar or fire alarms), all receptacles serving kitchen countertops, receptacles within 6' of sinks, receptacles within 6' of showers or tubs, receptacles serving laundry areas, all receptacles serving crawlspace at or below grade, all exterior receptacles (except those serving snow melting or de-icing equipment) ,outlets supplying dishwashers, hydro massage tubs, and must be readily accessible.
These standards may be enforced by the local building official when outlets are changed or added.
Implication(s): Electric shock
Location: Various
Task: Below current standards



42. Condition: • Test faulty on Ground Fault Circuit Interrupter (GFCI)
The GFCI did not trip when tested.
Implication(s): Electric shock
Location: 960 Unit 3 & 4 Bathrooms, Unit 4 Kitchen
Task: Repair
Time: Immediate

43. Condition: • No AFCI (Arc Fault Circuit Interrupter)
Current standards require AFCI protection for all 120v 15Amp & 20Amp branch circuits supplying power to outlets in the following areas: Family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sun rooms, recreation rooms, closets, hallways & similar rooms. Also required for kitchen and laundry areas. Also required for devices (switches) in all areas above. Not required on individual circuit for central station alarm in RMC, IMC, EMT or steel-armored cable (type AC or MC) with metal junction boxes.
Local building official may require upgrades to any wiring that is extended, modified or replaced.
Implication(s): Fire hazard

Location: Throughout
Task: Below current standards

DISTRIBUTION SYSTEM \ Outlets (receptacles) - number or location

44. Condition: • Too few outlets
Implication(s): Nuisance
Task: Below current standards

DISTRIBUTION SYSTEM \ Smoke detectors

45. Condition: • Missing
Implication(s): Fire hazard
Location: 9960 Unit 2 & 4 Hall. 962 Unit 2 Hall
Task: Provide
Time: Immediate

73. *Missing*

74. *Missing*

75. *Missing*

46. Condition: • Inoperative
Implication(s): Fire hazard
Location: 960 Unit 4 Bedroom. 962 Unit 1 & 3 Hall, Unit 2 Bedroom
Task: Repair or replace
Time: Immediate

DISTRIBUTION SYSTEM \ Carbon monoxide (CO) detectors

47. Condition: • Inoperative
Implication(s): Health hazard
Location: 960 Unit 2
Task: Repair or replace
Time: Immediate

Description

General: • boiler and water heater installations:

76.

Fuel/energy source: • Gas

System type: • Boiler

Heat distribution: • Radiators

Approximate capacity:

• 60,000 BTU/hr

Each

Efficiency: • Conventional

Exhaust venting method: • Natural draft

Approximate age:

• New

7 of 8 units were new.

• 28 years

Utica unit in 962

Typical life expectancy: • Boiler (cast iron) 25 to 50 years

Main fuel shut off at: • Meter • Basement

Failure probability:

• Medium

Older Utica unit.

• Low

Exhaust pipe (vent connector): • Single wall

Chimney/vent: • Masonry

Chimney liner: • Metal

Combustion air source: • Outside

Mechanical ventilation system for home: • None

Limitations

Inspection prevented/limited by: • Chimney interiors and flues are not inspected • Top of chimney too high to see well

Safety devices: • Not tested as part of a building inspection

Warm weather: • Prevents testing heating effectiveness

Zone, boiler and radiator valves: • Not tested as part of a building inspection

Heat loss calculations: • Not done as part of a building inspection

Heat exchanger: • Only a small portion visible

Recommendations

GAS HOT WATER BOILER \ Venting system

48. Condition: • Poor slope

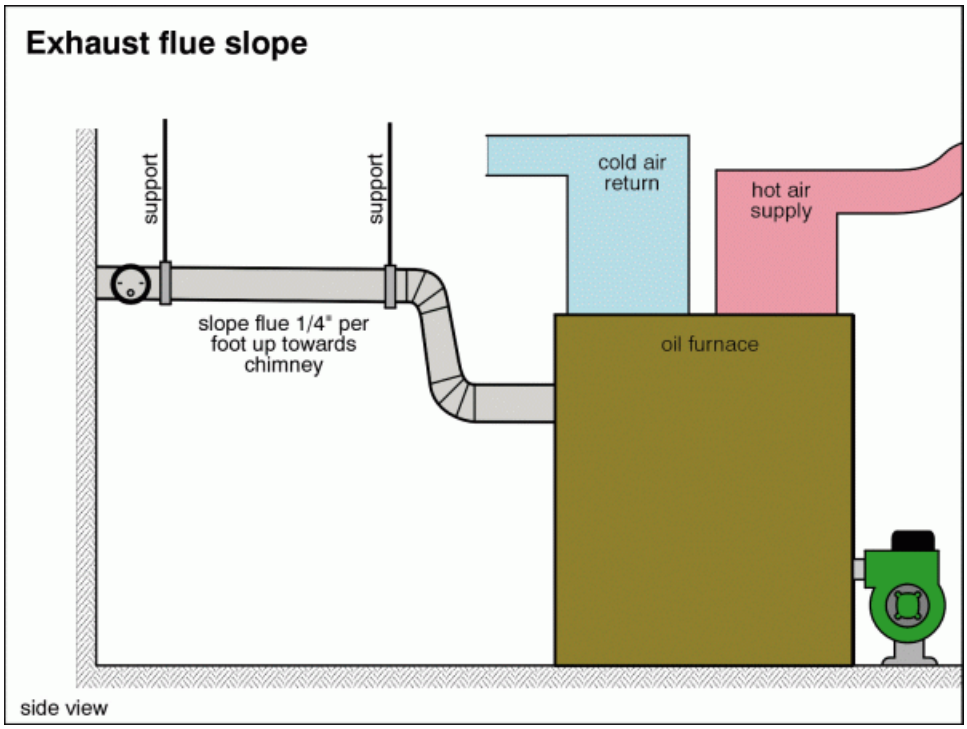
There is a potential for carbon monoxide to enter the building. Poor slope at connection to the chimney.

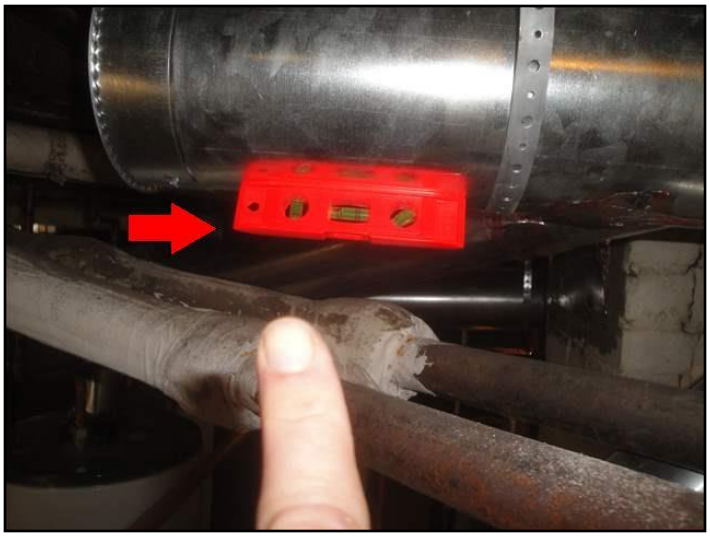
Implication(s): Hazardous combustion products entering home

Location: 960

Task: Repair

Time: Immediate





77. *Poor slope*

GAS HOT WATER BOILER \ Pipes

49. Condition: • Potential asbestos. Recommend further assessment by an environmental professional.
Location: 960 & 962 Basement
Task: Further evaluation
Time: Discretionary

78.

79.

80.

CHIMNEY AND VENT \ Masonry chimney

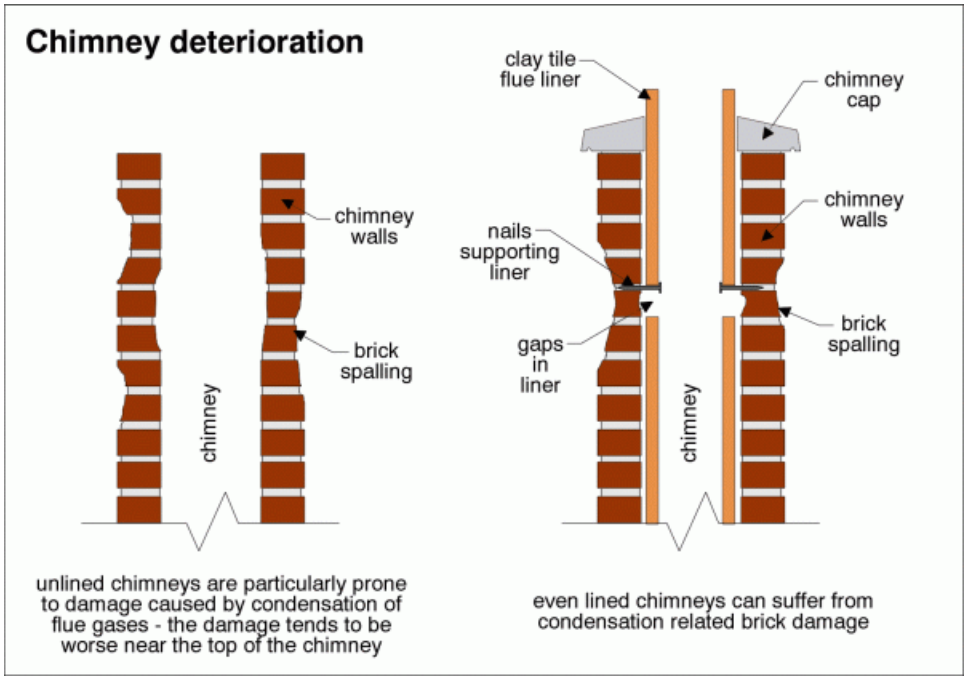
50. Condition: • Loose, missing or deteriorated mortar

Implication(s): Material deterioration

Location: Throughout

Task: Repair

Time: Less than 1 year



81. *Loose, missing or deteriorated mortar*

CHIMNEY AND VENT \ Masonry chimney cap

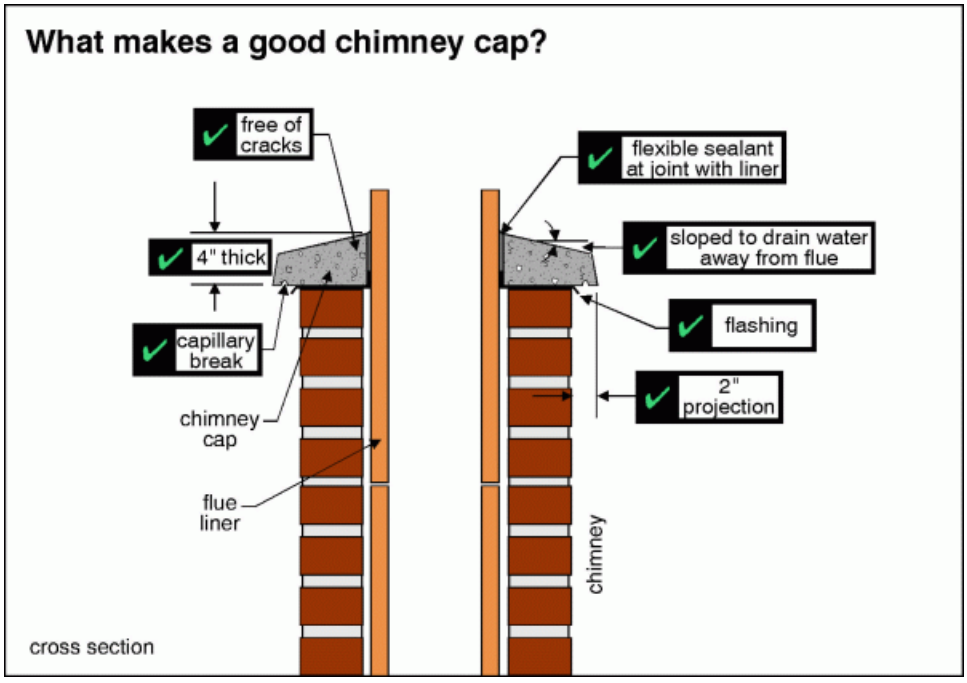
51. Condition: • Cracked

Implication(s): Shortened life expectancy of material | Chance of water damage to contents, finishes and/or structure

Location: 960

Task: Repair

Time: Less than 1 year



82. *Cracked*

Description

General: • No central cooling was present. Tenants provided window units.

Limitations

Heat gain calculations: • Not done as part of a building inspection

Window unit: • Window A/C excluded from inspection

Description

Attic/roof insulation material:

• Glass fiber

Loose fill.

Attic/roof insulation amount/value:

• Not determined

Approximately 6 inches in roof space. The presence of roof deck insulation was not determined.

Attic/roof ventilation: • Wall vents

Attic/roof air/vapor barrier: • None found

Wall insulation material: • Likely upgraded - Patched stucco was observed.

83.

84.

85.

Wall insulation material: • Not determined

Foundation wall insulation amount/value: • None found

Limitations

Inspection prevented by no access to: • Wall space

Attic inspection performed: • From access hatch

Roof ventilation system performance: • Not evaluated

Recommendations

ATTIC/ROOF \ Insulation

52. Condition: • Amount less than current standards

Flat roofs may require additional insulation at the time of roof replacement to meet current code standards of R-30.

Implication(s): Increased heating and cooling costs

Location: Attic/Roof Space

Task: Improve

Time: Discretionary

FOUNDATION \ Interior insulation

53. Condition: • None

Implication(s): Increased heating costs

Task: Improve

Time: Action recommended but not required

Description

Water supply source: • Public

Service piping into building: • Copper

Supply piping in building: • Copper • Plastic • Galvanized steel

Main water shut off valve at the: • Meter

Water flow and pressure: • Functional • Below average

Water heater fuel/energy source: • Gas

Water heater type: • Conventional

Tank capacity: • 40 gallons

Water heater approximate age:

• 1 year
962
• 2 years
962
• 8 years
960 & 962
• 9 years
960
• 11 years
960
• 20 years
960
• 22 years
962

Typical life expectancy: • 8 to 12 years

Water heater failure probability:

• High
Older units.
• Medium
Older units.
• Low
Newer units.

Waste disposal system: • Public

Waste and vent piping in building: • ABS plastic • Cast Iron • Galvanized steel

Floor drain location: • Near laundry area • Near heating system

Gas piping: • Steel • Copper

Limitations

Items excluded from a building inspection: • Water quality • Isolating/relief valves & main shut-off valve • Concealed plumbing • Tub/sink overflows • Water treatment equipment • Water heater relief valves are not tested

Recommendations

General

54. • Older fixtures were present throughout the apartments.
Task: Budget replacement

86.

87.

SUPPLY PLUMBING \ Shut off valve

55. Condition: • Damaged handle
Missing.
Implication(s): Difficult to service | Physical injury
Location: 962 Basement
Task: Repair
Time: Less than 1 year

88. *Damaged handle*

SUPPLY PLUMBING \ Supply piping in building

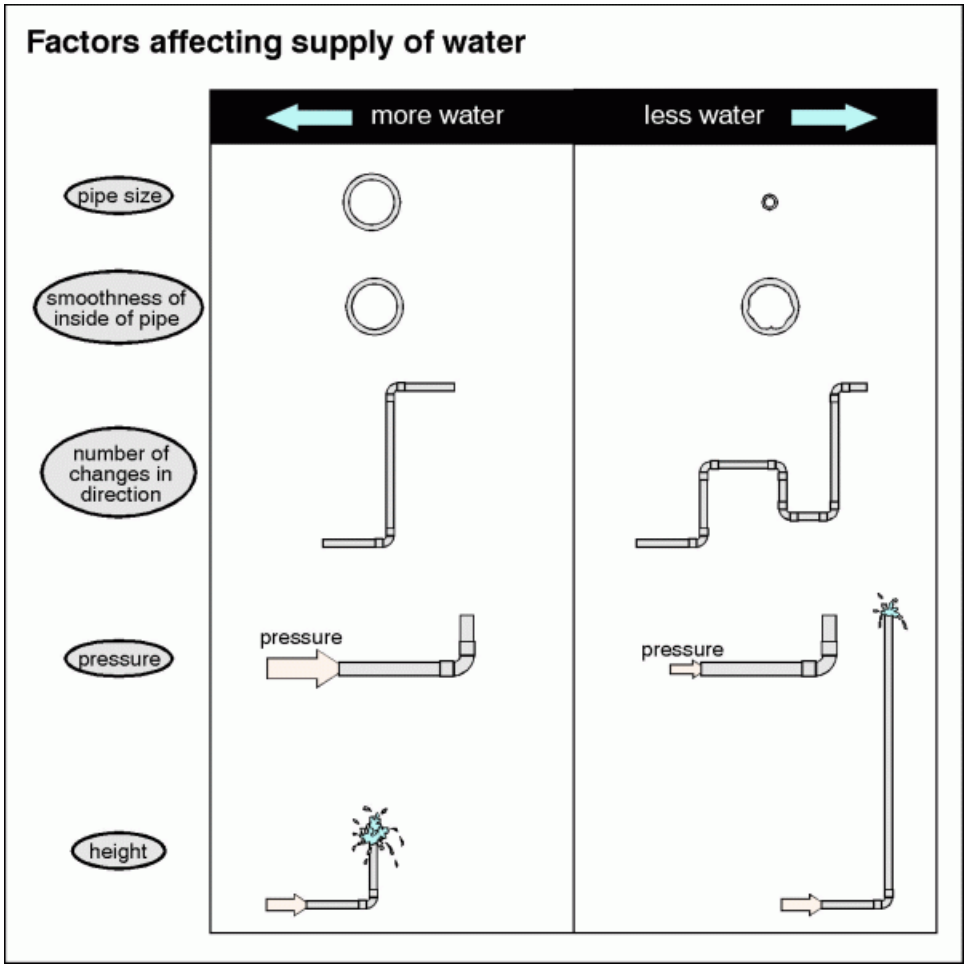
56. Condition: • Poor pressure or flow

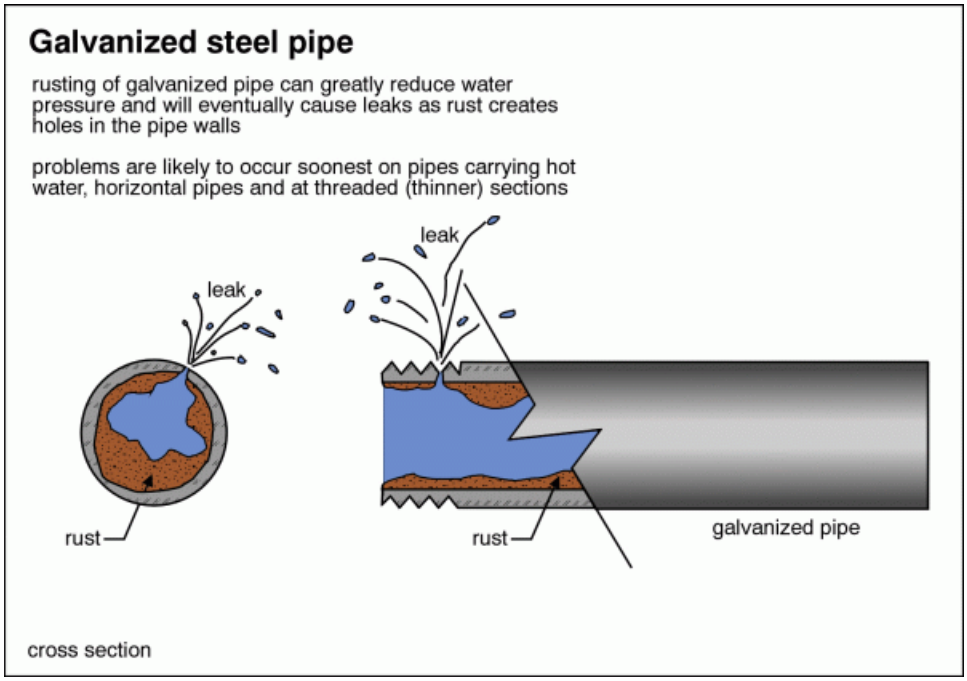
Below average at some fixtures. Old, rusting galvanized supply feeds are suspect.

Implication(s): Reduced water pressure and volume

Location: Various

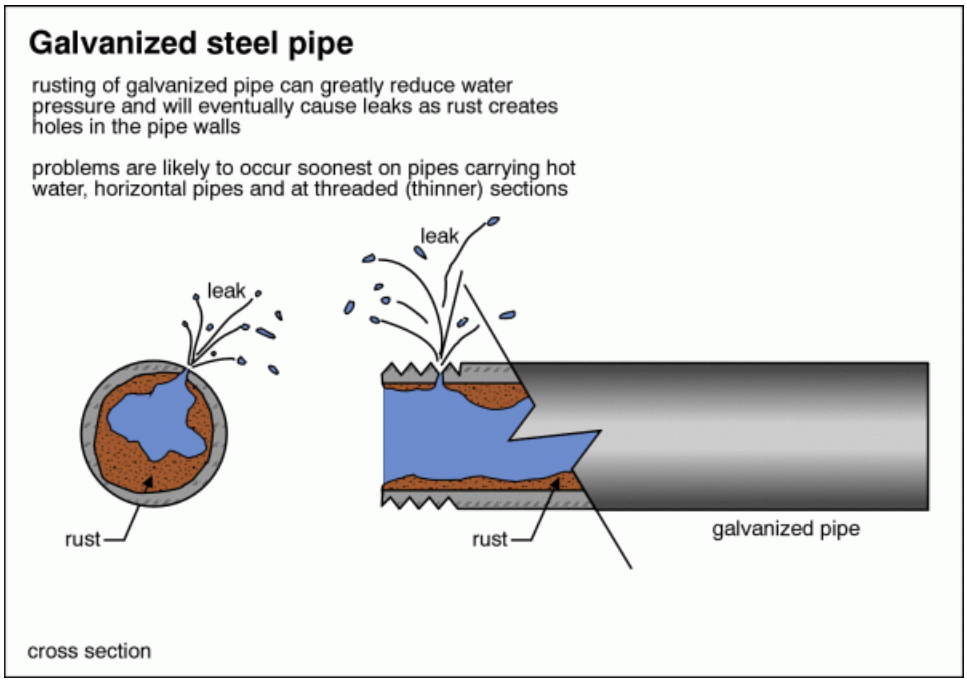
Task: Monitor


Factors affecting supply of water
more water
less water
pipe size
smoothness of inside of pipe
number of changes in direction
pressure
pressure
pressure
height


Galvanized steel pipe
rusting of galvanized pipe can greatly reduce water pressure and will eventually cause leaks as rust creates holes in the pipe walls
problems are likely to occur soonest on pipes carrying hot water, horizontal pipes and at threaded (thinner) sections
leak
leak
rust
rust
galvanized pipe
cross section

89. *Poor pressure or flow*

57. Condition: • Galvanized steel
Implication(s): Reduced water pressure and volume
Location: Feeds to apartments
Task: Monitor



90. *Galvanized steel*

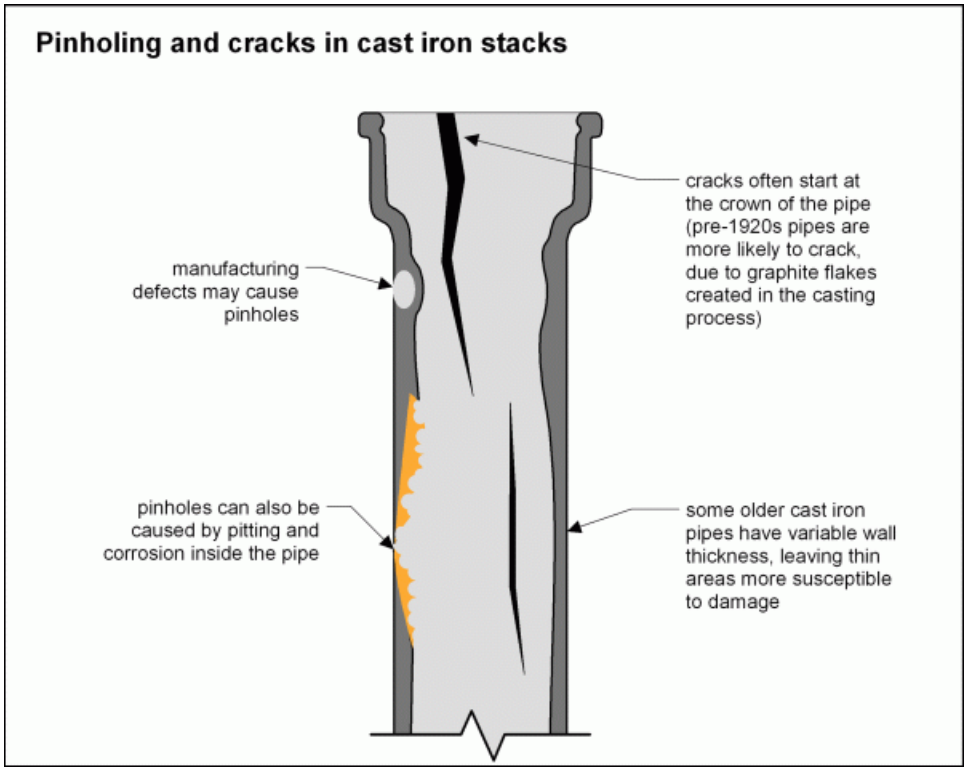
WASTE PLUMBING \ Drain piping - performance

58. Condition: • Leak
Implication(s): Sewage entering the building
Location: 960 Unit 4 Kitchen
Task: Repair
Time: Immediate

91. *Leak*

59. Condition: • Rust
Implication(s): Sewage entering the building

Location: Various
Task: Monitor



92. *Rust*

93. *Rust*

WASTE PLUMBING \ Drain piping - installation

60. Condition: • Nonstandard materials and patches
Missing stainless steel sleeve at rubber union connections.
Implication(s): Sewage entering the building | Chance of water damage to contents, finishes and/or structure
Location: 960 Basement
Task: Replace

Time: Less than 1 year

94. *Nonstandard materials and patches*

WASTE PLUMBING \ Floor drain

61. Condition: • Missing cleanout plug. There is a potential for sewer gas to entre the building.
Location: 960 Basement
Task: Repair
Time: Immediate

95.

62. Condition: • Corrosion/rust.
Location: Throughout
Task: Monitor

FIXTURES AND FAUCETS \ Basin, sink and laundry tub

63. Condition: • Cracked
Location: 962

Task: Budget replacement

96.

64. Condition: • Air gap defective
Less than 1 inch air gap from the spill line of tub.
Implication(s): Contaminated drinking water
Location: 960 Basement
Task: Improve
Time: Less than 1 year

97. *Air gap defective*

FIXTURES AND FAUCETS \ Faucet

65. Condition: • Drip, leak

Implication(s): Chance of water damage to contents, finishes and/or structure

Location: 960 Unit 4

Task: Repair

Time: Immediate

98. *Drip, leak*

FIXTURES AND FAUCETS \ Toilet

66. Condition: • Cross connection

Valve is required to be located 1' above overflow pipe. Provide air gap. Visit http://www.ci.bloomington.mn.us/handouts/53/53ytoilet.pdf for illustration. Flush valves should be anti siphon type.

Implication(s): Contaminated drinking water

Location: 960 Unit 3

Task: Improve

Time: Less than 1 year

99. *Cross connection*

FIXTURES AND FAUCETS \ Bathtub

67. Condition: • Cross connections

Hand held shower unit falls below spill line of tub. Shorten hose, remove or provide backflow prevention.

Implication(s): Contaminated drinking water

Location: 960 Unit 2

Task: Improve

Time: Less than 1 year

100. *Cross connections*

FIXTURES AND FAUCETS \ Hose bibb

68. Condition: • Inoperative

Implication(s): Equipment inoperative

Location: Exterior Wall

Task: Further evaluation

69. Condition: • Backflow prevention missing

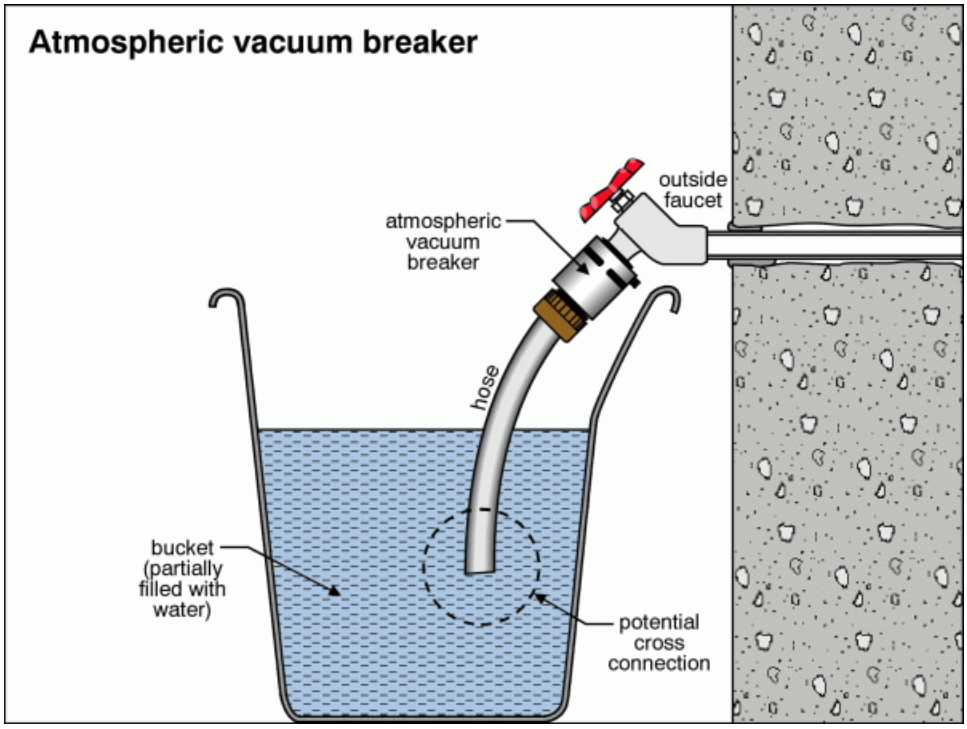
Lack of backflow prevention devices has the potential to contaminate water supply. Provide on all threaded faucets and hose bibs.

Implication(s): Contaminated drinking water

Location: Throughout

Task: Provide

Time: Less than 1 year



101. *Backflow prevention missing*

102. *Backflow prevention missing*

GAS SUPPLY \ Gas piping

70. Condition: • Rust
Implication(s): Fire or explosion
Task: Monitor

71. Condition: • No drip leg (dirt pocket)
Implication(s): Equipment not operating properly
Location: Gas Clothes Dryer and Stoves
Task: Below current standards

Description

General: • Apartments inspected:

960 Units 2,3,4
963 Units 1,2,3

Major floor finishes: • Carpet • Hardwood • Resilient • Ceramic

Major wall and ceiling finishes: • Plaster/drywall • Paneling

Windows: • Fixed • Single/double hung • Vinyl

Glazing: • Double

Exterior doors - type/material: • Hinged • Wood

Evidence of basement leakage: • Present

Limitations

Inspection limited/prevented by: • Carpet • Storage/furnishings • New finishes/paint • Storage in closets/cupboards

Not included as part of a building inspection: • Carbon monoxide detectors, security systems, central vacuum

Cosmetics: • No comment offered on cosmetic finishes

Appliances: • Self-cleaning features on ovens not tested • Effectiveness of dishwasher drying cycle not tested • Appliances are not moved during an inspection

Percent of foundation not visible: • 50 %

Basement leakage: • Cannot predict how often or how badly basement will leak

Recommendations

General

72. • Fire extinguisher inspection tags expired
Location: Throughout
Task: Inspect annually
Time: Immediate

103.

73. • Apartment interiors were generally in fair to poor condition. Extensive improvements are recommended to stabilize the units and improve marketability.
Location: Throughout
Task: Improve
Time: Ongoing

104.

FLOORS \ General

74. Condition: • Worn
The floors were generally in poor condition with damaged, stained and worn surfaces, stained carpet and cracked grout observed. The floors were in fair to good condition in unit 3 @ both 960 & 962.
Implication(s): Cosmetic defects
Location: Various
Task: Repair or replace

Time: Action recommended but not required

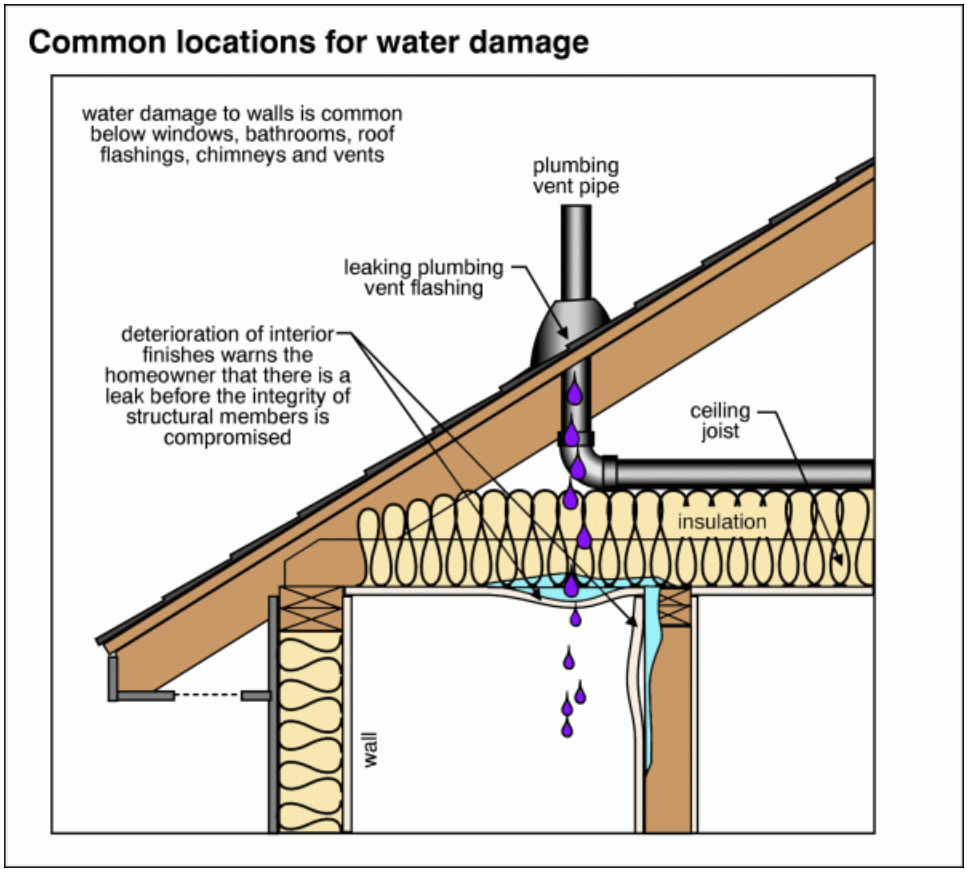
105. *Worn*

106. *Worn*

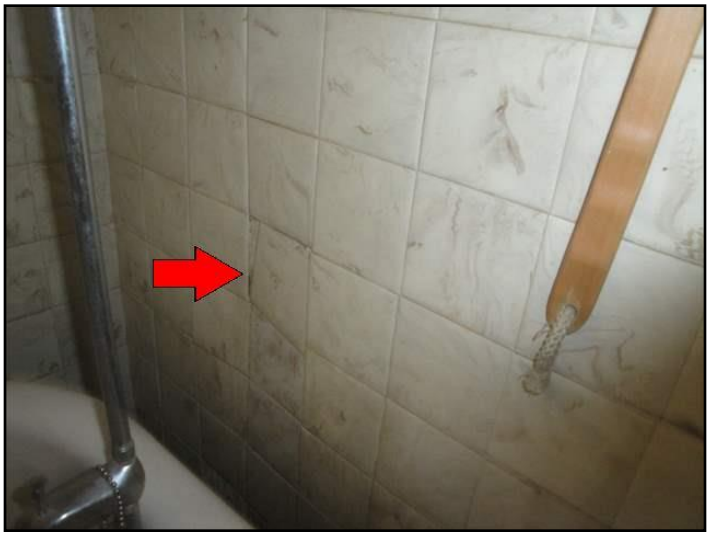
107. *Worn*

WALLS \ General

75. Condition: • Damaged
Damaged wall tiles
Implication(s): Cosmetic defects
Location: Various
Task: Repair
Time: Discretionary



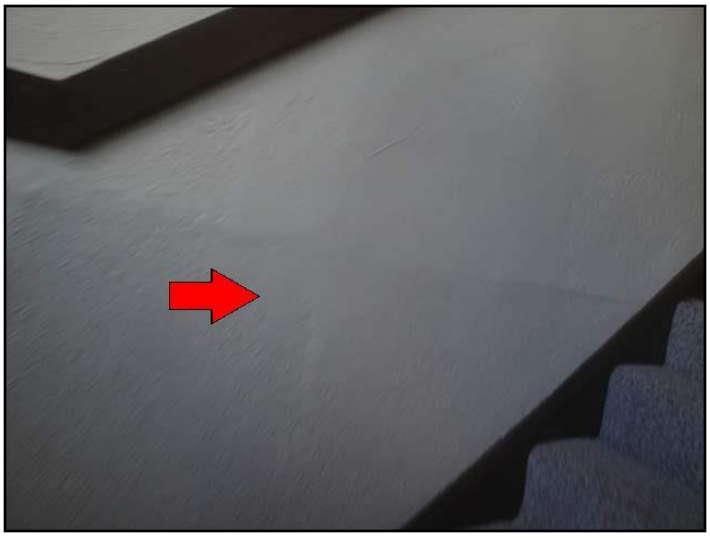
108. *Damaged*



109. *Damaged*

110. *Damaged*

76. Condition: • Typical flaws
Patches, minor damage and previous repairs observed.
Implication(s): Cosmetic defects
Location: Various
Task: Comment



111. *Typical flaws*

112. *Typical flaws*

113. *Typical flaws*

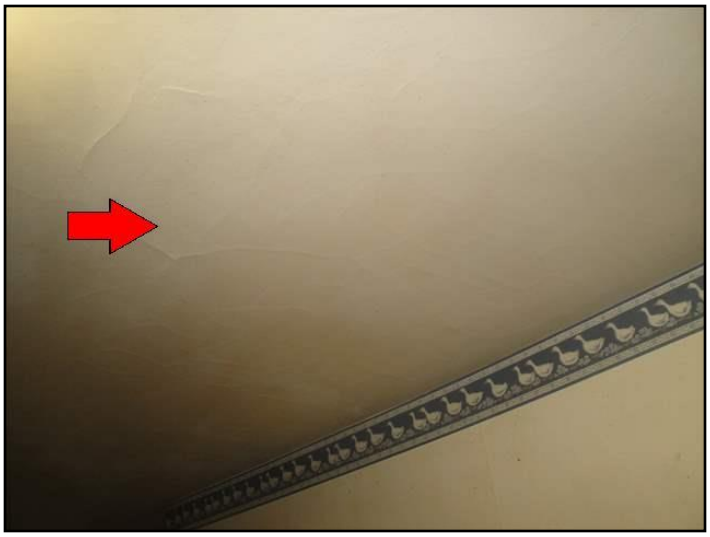
CEILINGS \ General

77. Condition: • Missing fire protection
Location: 962 Basement
Task: Repair
Time: Less than 1 year

114.

78. Condition: • Typical flaws
Typical minor cracks or previous repairs.
Implication(s): Cosmetic defects
Location: Various
Task: Comment

115. *Typical flaws*



116. *Typical flaws*

117. *Typical flaws*

WINDOWS \ Glass (glazing)

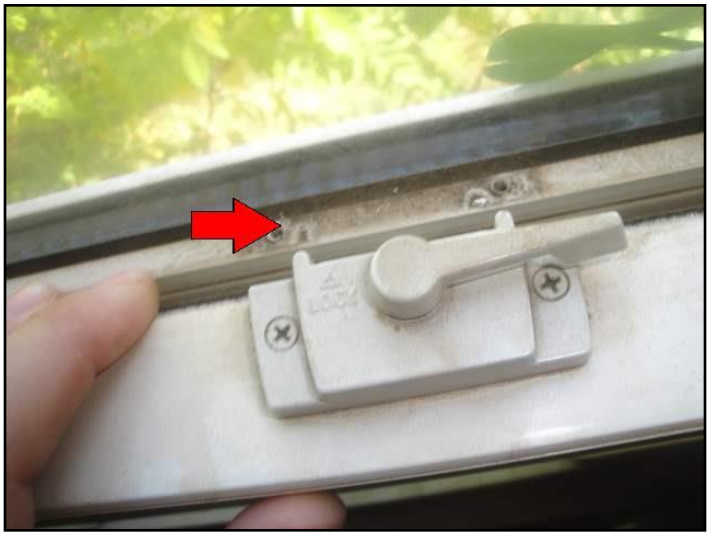
79. Condition: • Safety glass not installed
Implication(s): Physical injury
Location: Throughout Bathrooms & Staircases
Task: Below current standards

118. *Safety glass not installed*

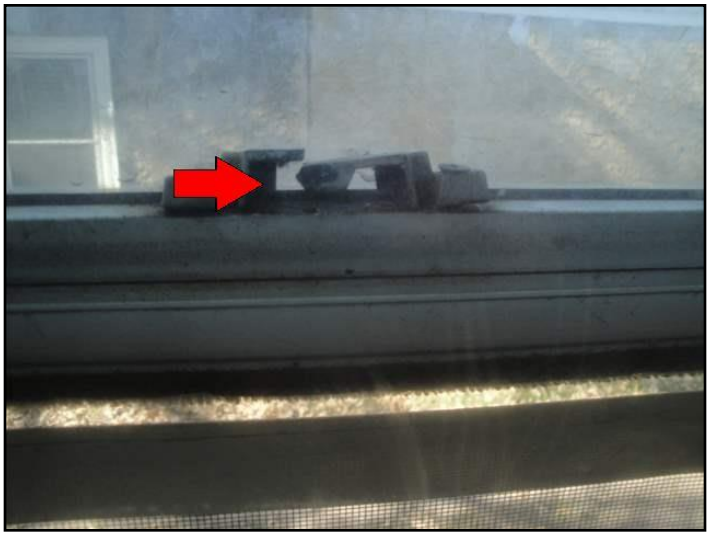
WINDOWS \ Hardware

80. Condition: • Inoperable
Window locks did not latch.
Implication(s): System inoperative or difficult to operate
Location: Various
Task: Repair
Time: Less than 1 year

81. Condition: • Broken
Window locks.
Implication(s): System inoperative or difficult to operate | Cosmetic defects
Location: 960 Unit 2. 962 Unit 1
Task: Repair
Time: Less than 1 year



119. *Broken*



120. *Broken*

DOORS \ Doors and frames

82. Condition: • Loose
Location: 960 Unit 4
Task: Repair
Time: Less than 1 year

121.

DOORS \ Hardware

83. Condition: • Loose
Entry door hinge loose.
Implication(s): Equipment failure
Location: Front 960 Unit 2
Task: Repair
Time: Immediate

122. *Loose*

CARPENTRY \ Cabinets

84. Condition: • Older and worn

Location: Throughout

Task: Budget replacement

123.

124.

125.

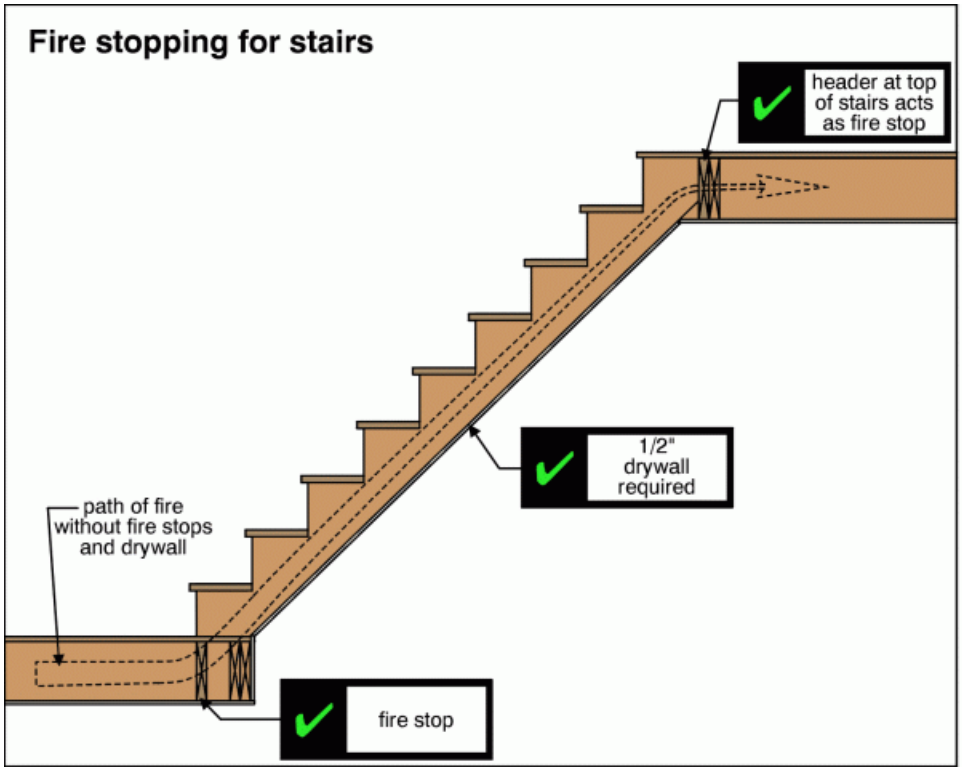
STAIRS \ Fire safety

85. Condition: • Drywall missing or incomplete on underside of stairs

Implication(s): Increased fire hazard

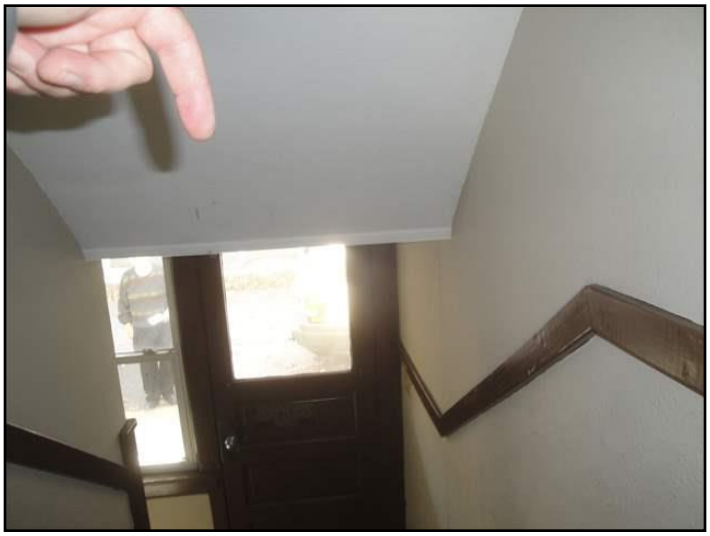
Location: Basements

Task: Provide
Time: When remodelling



STAIRS \ Height

86. Condition: • Headroom - less than ideal
Less than 6'-8". Typical in older buildings.
Implication(s): Physical injury
Location: Throughout Basement & First Floor Staircase
Task: Below current standards



126. *Headroom - less than ideal*

STAIRS \ Treads

87. Condition: • Run under 10"
Location: Basements
Task: Below current standards

88. Condition: • Rise excessive
Over current standard of 7 3/4".
Implication(s): Trip or fall hazard
Location: Basements
Task: Below current standards

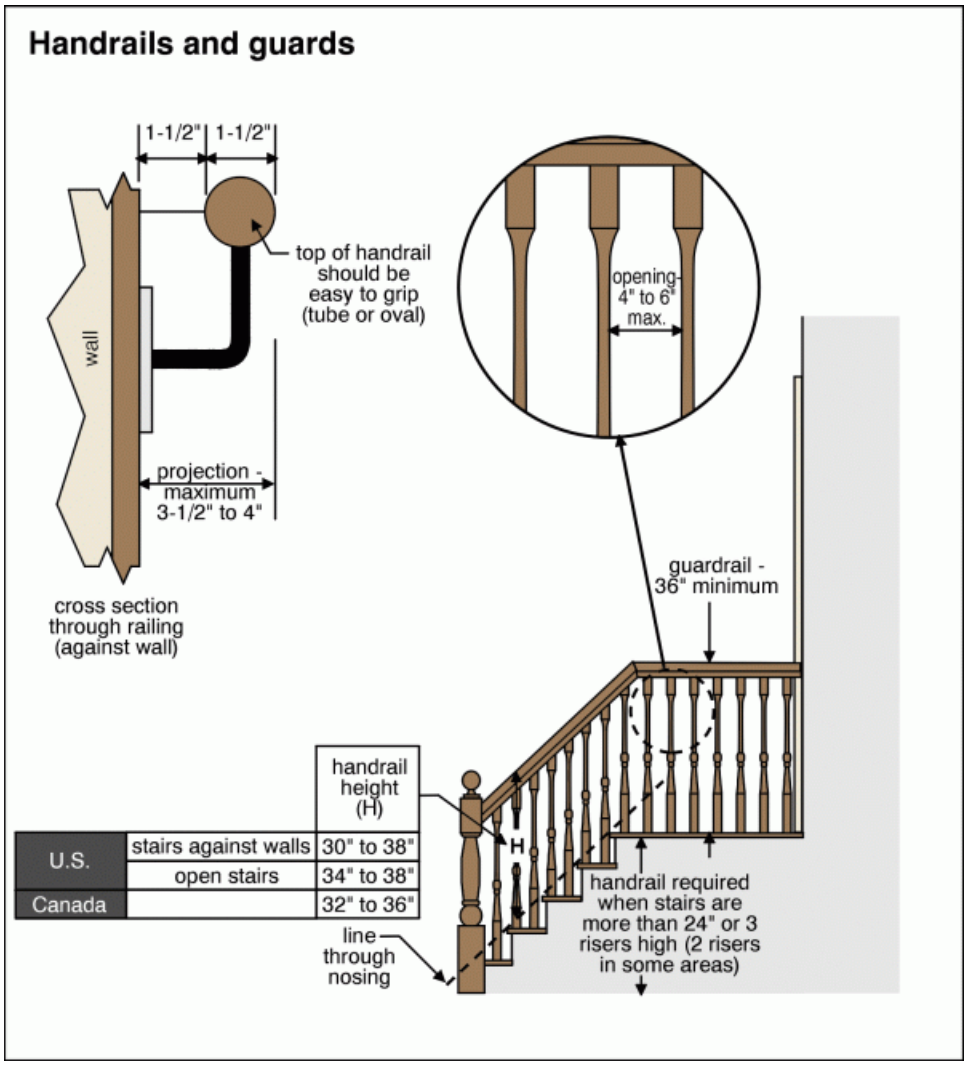
STAIRS \ Handrails

89. Condition: • Does not return to wall
Location: Throughout
Task: Below current standards

90. Condition: • Too low
Too low. Current standards are between 34" and 38".
Implication(s): Fall hazard
Location: Throughout
Task: Below current standards

STAIRS \ Guardrails

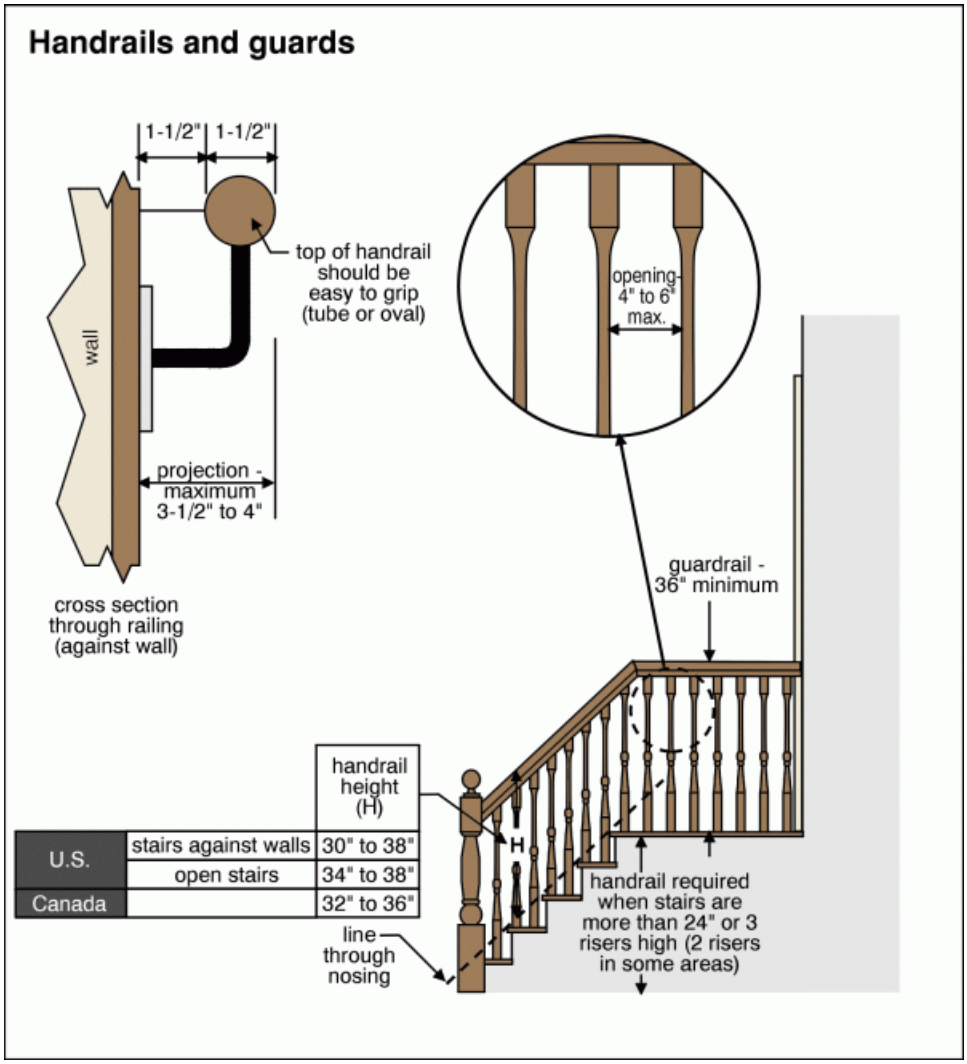
91. Condition: • Too low
Below current minimum of 36"
Implication(s): Fall hazard
Location: Second Floor
Task: Improve
Time: Less than 1 year



127. *Too low*

128. *Too low*

92. Condition: • Missing
Implication(s): Fall hazard
Location: Basements
Task: Provide
Time: Less than 1 year



129. *Missing*

BASEMENT \ Wet basement - evidence

93. Condition: • Efflorescence

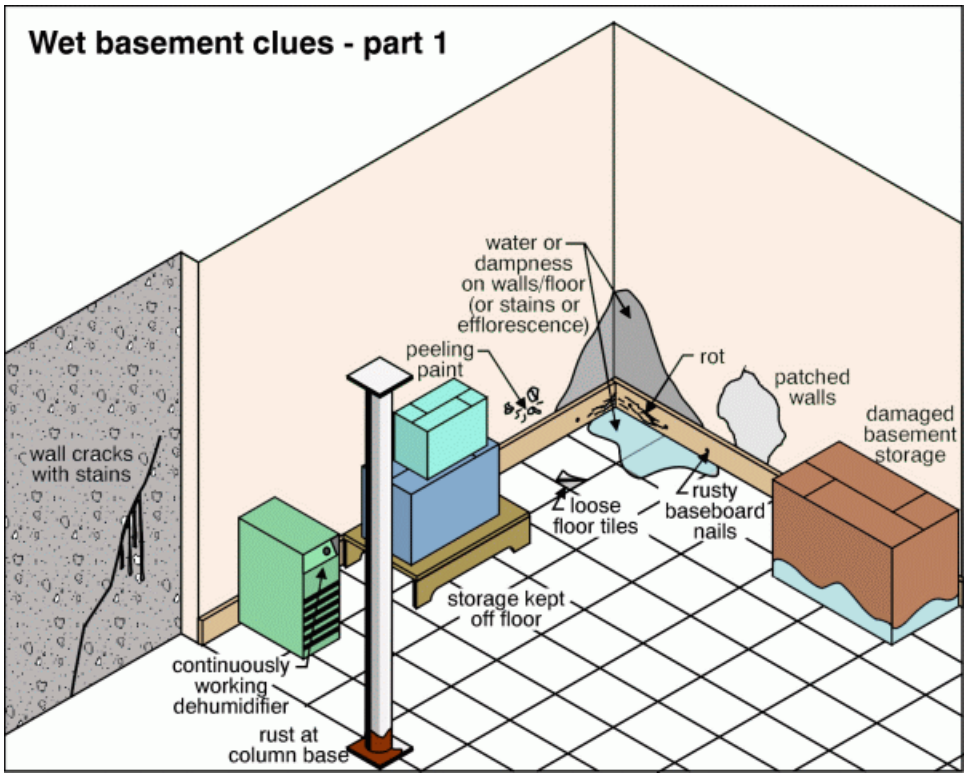
Grading improvements and mortar repair or crack sealing are recommended to prevent further damage and moisture intrusion.

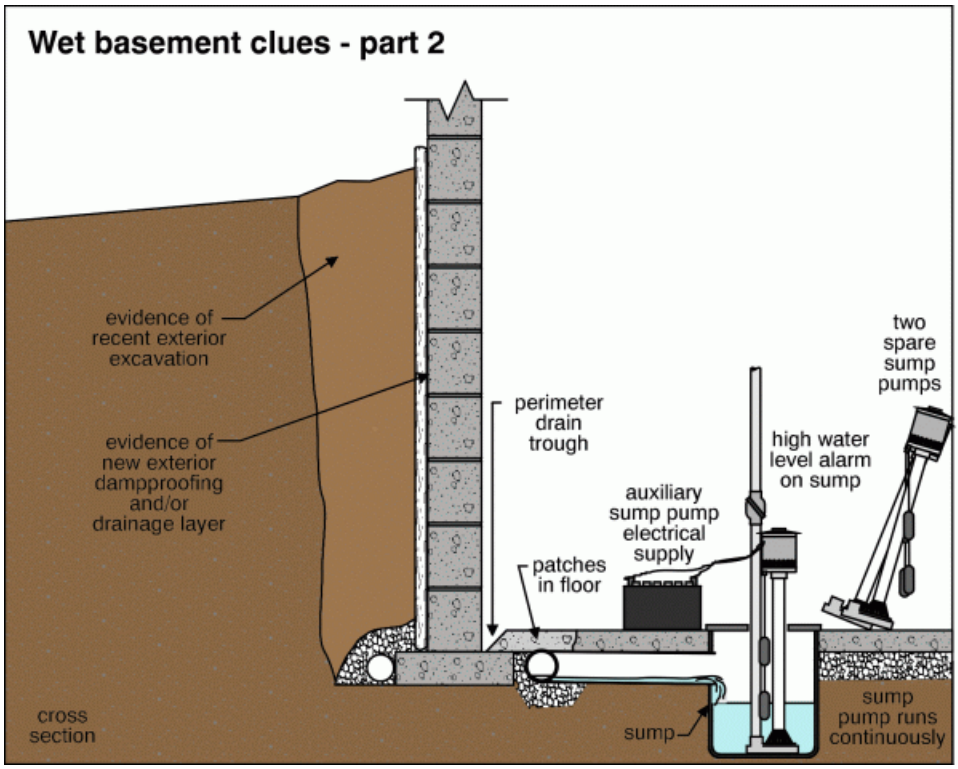
Implication(s): Cosmetic defects | Chance of water damage to contents, finishes and/or structure

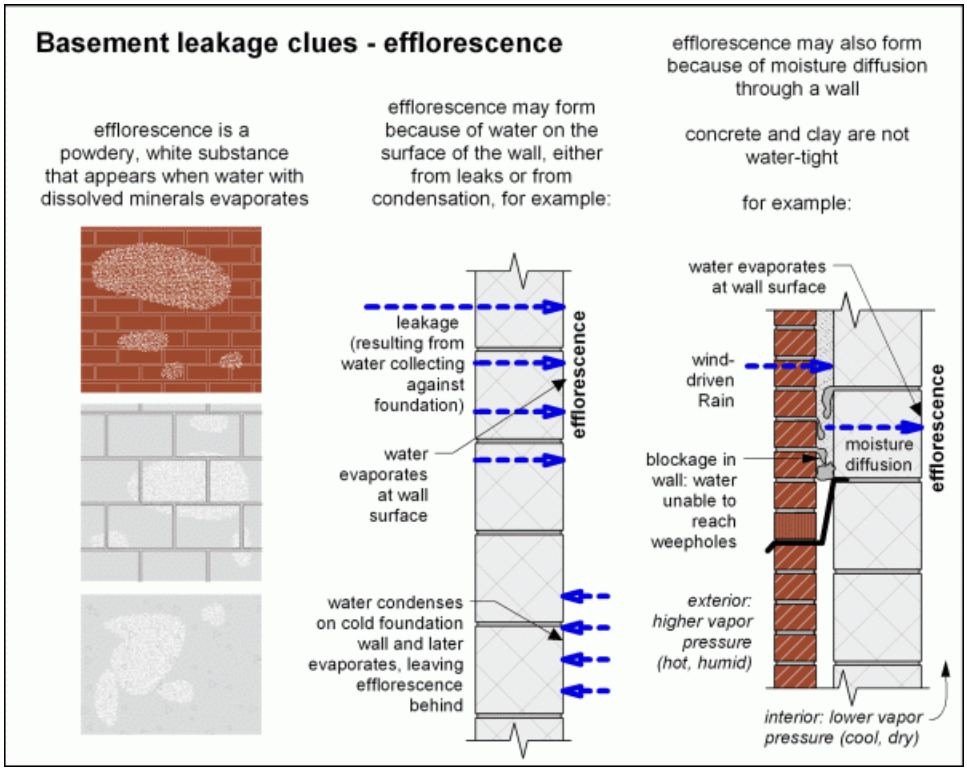
Location: Throughout

Task: Repair

Time: Immediate




Wet basement clues - part 2
evidence of recent exterior excavation
evidence of new exterior dampproofing and/or drainage layer
perimeter drain trough
patches in floor
auxiliary sump pump electrical supply
high water level alarm on sump
two spare sump pumps
sump
sump pump runs continuously
cross section


Basement leakage clues - efflorescence
efflorescence is a powdery, white substance that appears when water with dissolved minerals evaporates
efflorescence may form because of water on the surface of the wall, either from leaks or from condensation, for example:
leakage (resulting from water collecting against foundation)
water evaporates at wall surface
water condenses on cold foundation wall and later evaporates, leaving efflorescence behind
efflorescence
efflorescence may also form because of moisture diffusion through a wall
concrete and clay are not water-tight
for example:
water evaporates at wall surface
wind-driven Rain
blockage in wall: water unable to reach weepholes
moisture diffusion
efflorescence
exterior: higher vapor pressure (hot, humid)
interior: lower vapor pressure (cool, dry)

130. *Efflorescence*

131. *Efflorescence*

132. *Efflorescence*

133. *Efflorescence*

94. Condition: • Stains

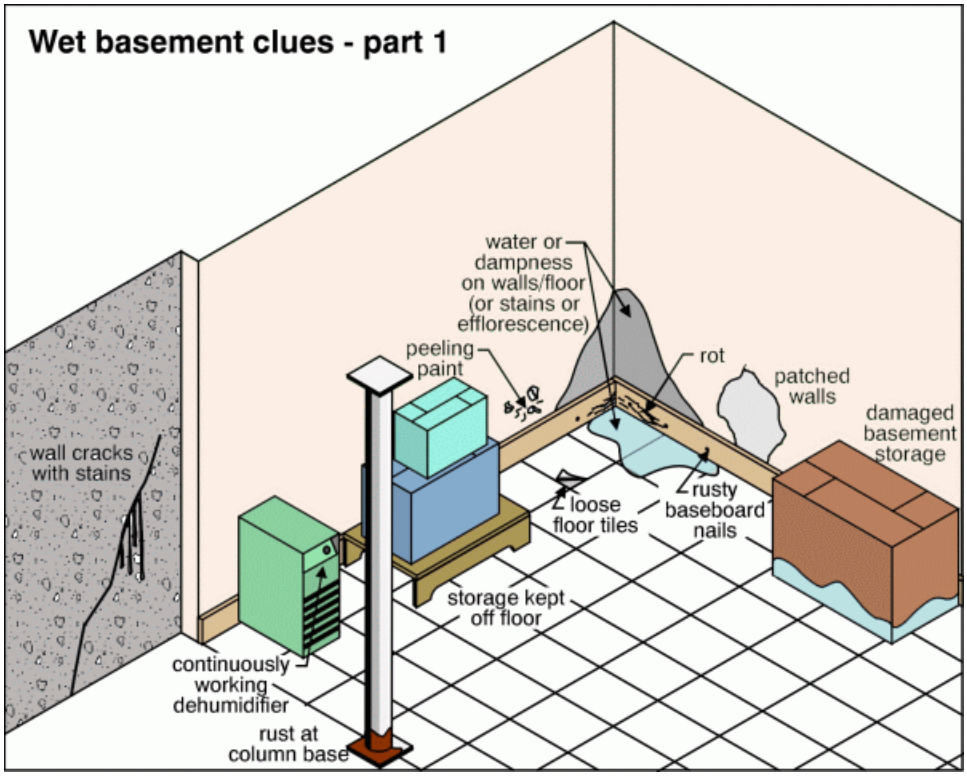
Grading improvements and mortar repair or crack sealing are recommended to prevent further damage and moisture intrusion.

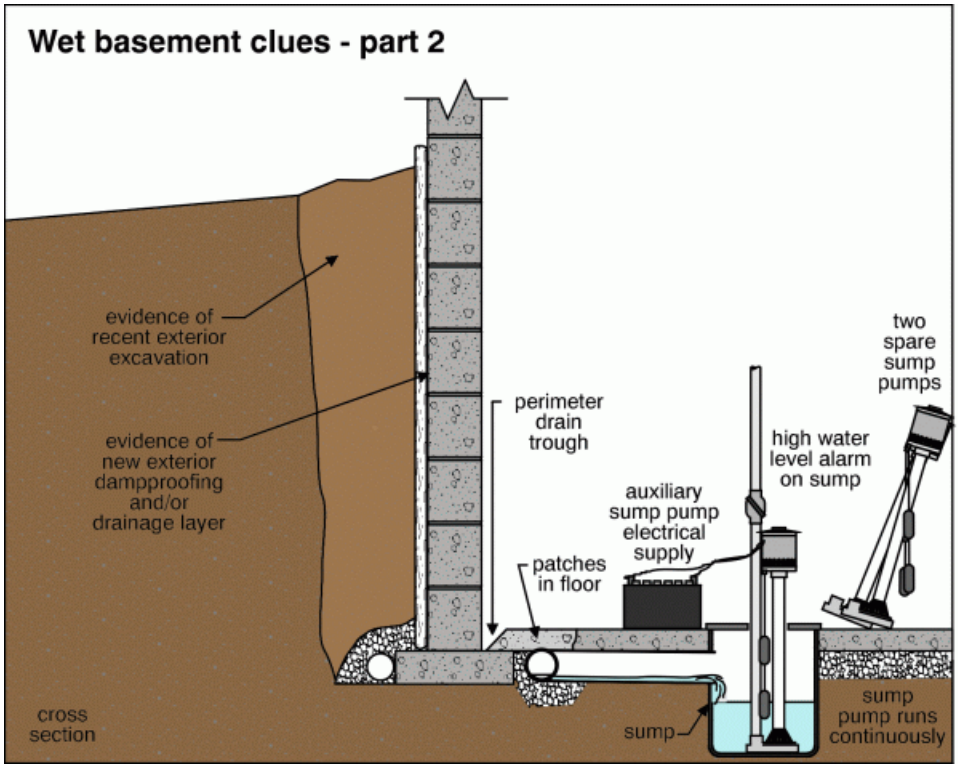
Implication(s): Cosmetic defects | Chance of water damage to contents, finishes and/or structure

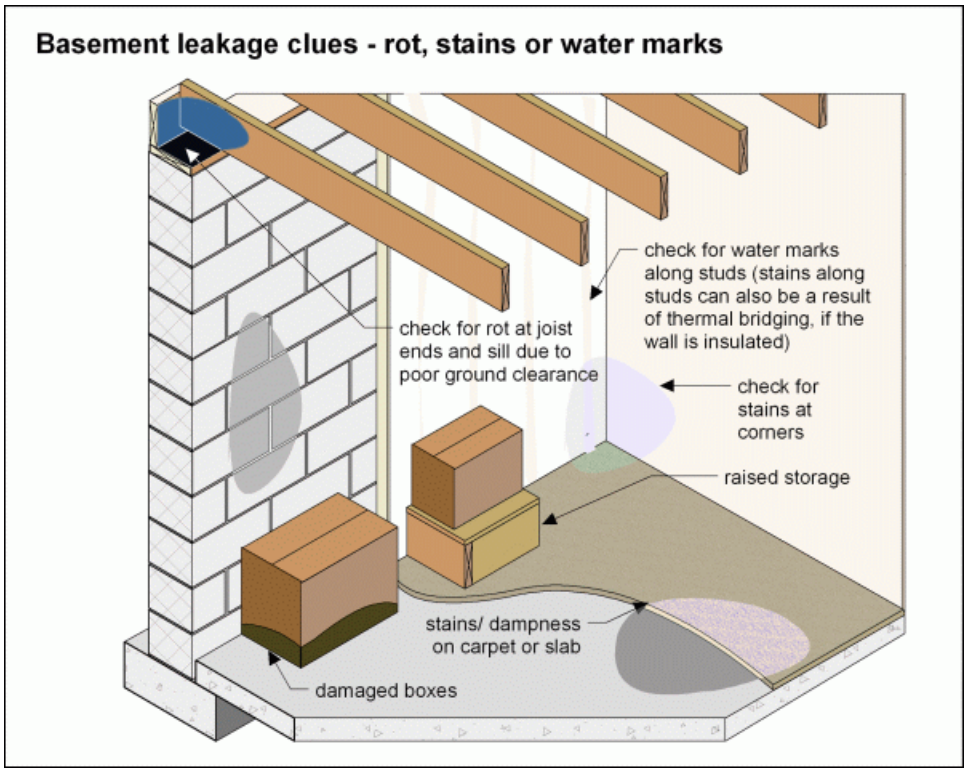
Location: Throughout

Task: Repair

Time: Immediate


Wet basement clues - part 1
water or dampness on walls/floor (or stains or efflorescence)
peeling paint
rot
patched walls
damaged basement storage
wall cracks with stains
loose floor tiles
rusty baseboard nails
storage kept off floor
continuously working dehumidifier
rust at column base


Wet basement clues - part 2
evidence of recent exterior excavation
evidence of new exterior dampproofing and/or drainage layer
perimeter drain trough
two spare sump pumps
high water level alarm on sump
auxiliary sump pump electrical supply
patches in floor
cross section
sump
sump pump runs continuously



134. *Stains*

135. *Stains*

136. *Stains*

137. *Stains*

138. *Stains*

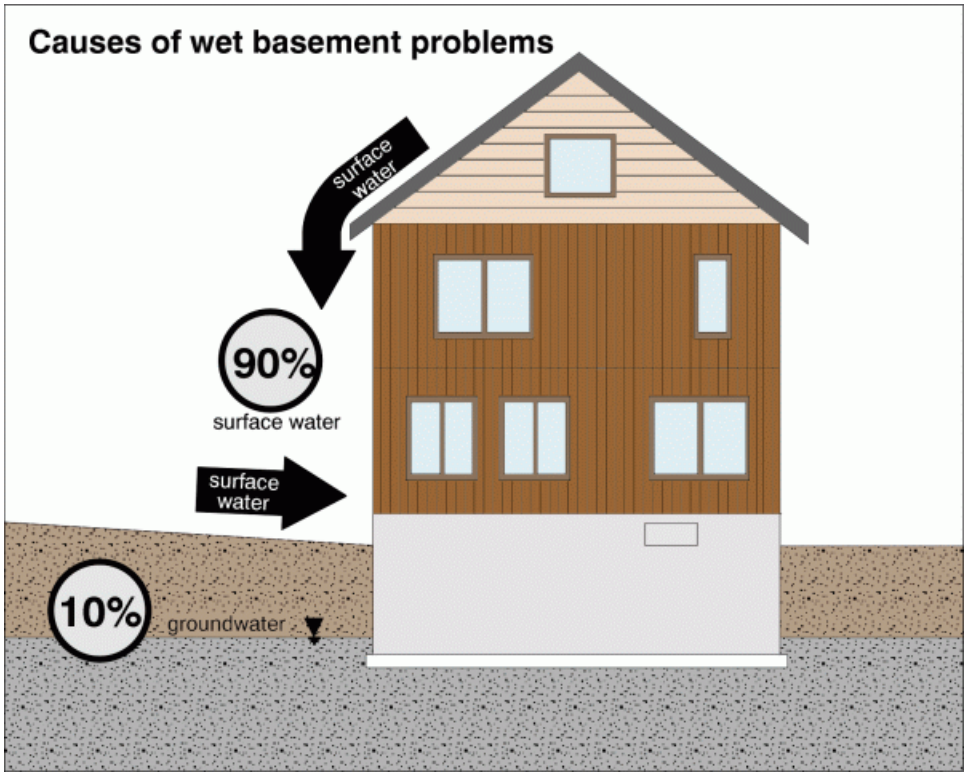
BASEMENT \ Wet basements - vulnerability

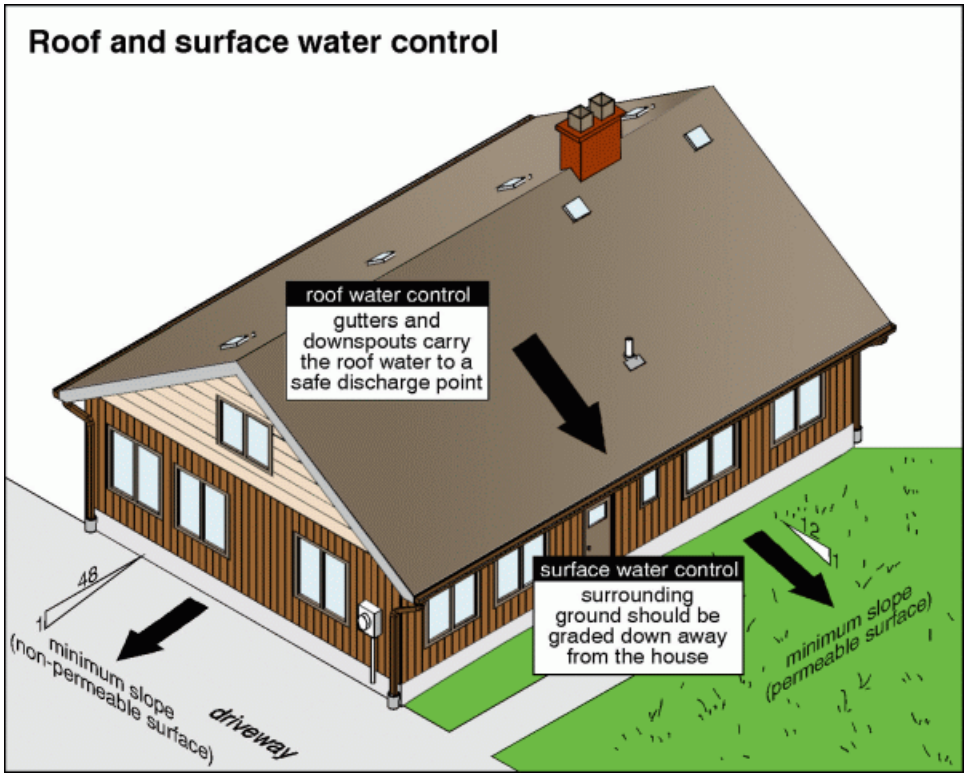
95. Condition: • Poor grading

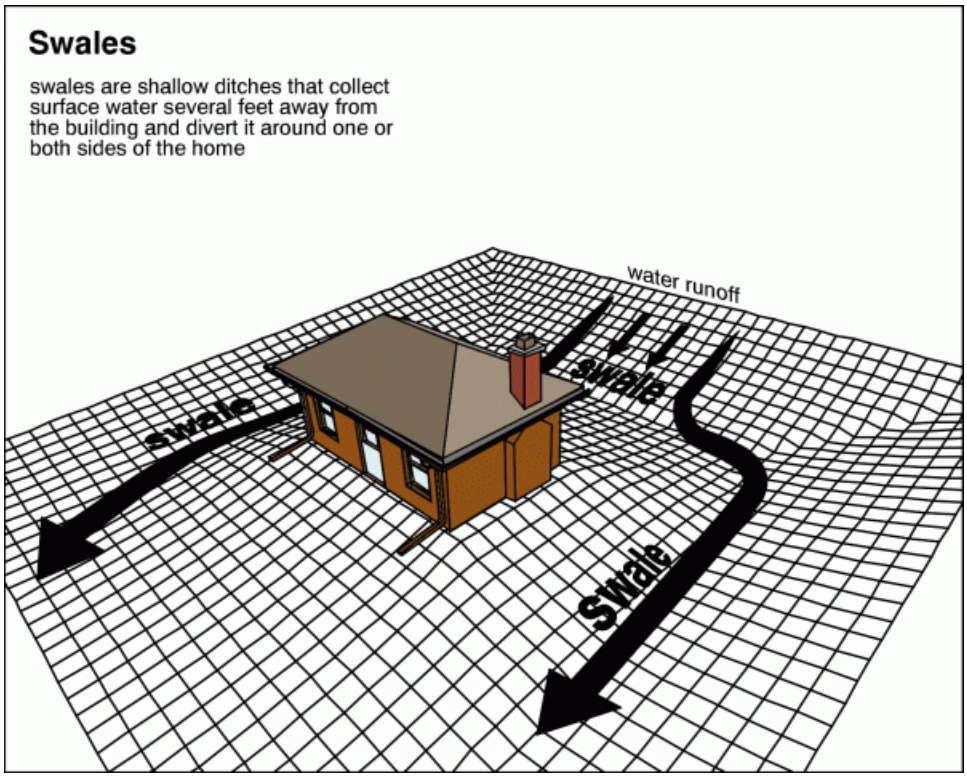
Implication(s): Chance of water damage to contents, finishes and/or structure

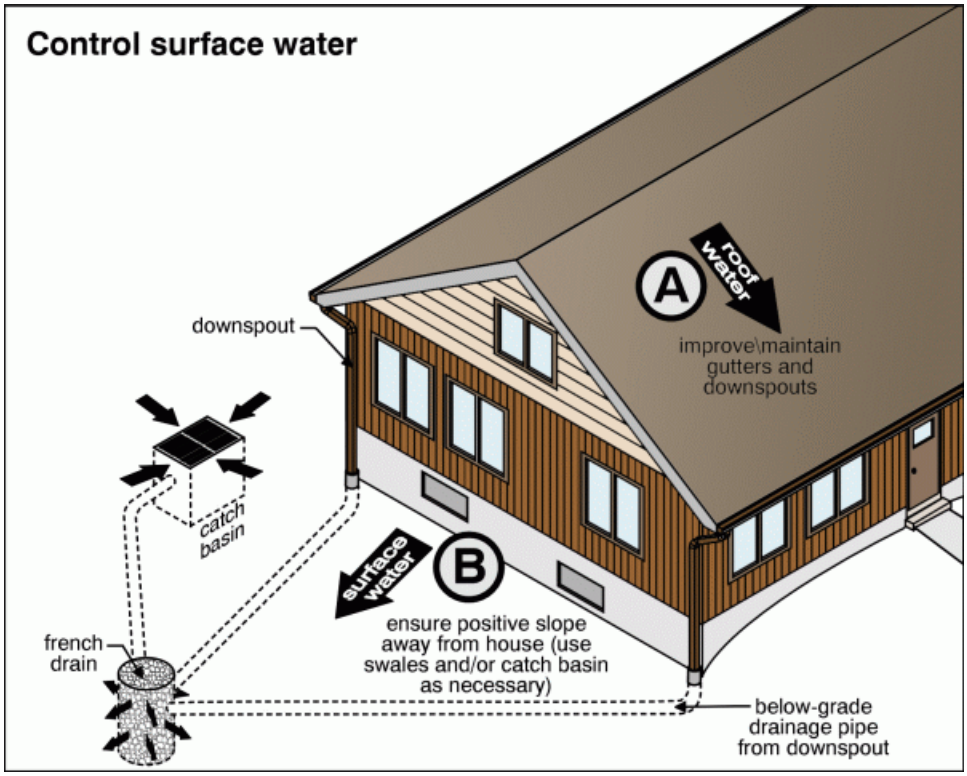
Task: Improve

Time: Immediate


Causes of wet basement problems
surface water
90%
surface water
surface water
10%
groundwater


Roof and surface water control
roof water control
gutters and downspouts carry the roof water to a safe discharge point
surface water control
surrounding ground should be graded down away from the house
48
1
minimum slope (non-permeable surface)
driveway
12
1
minimum slope (permeable surface)


Swales
swales are shallow ditches that collect surface water several feet away from the building and divert it around one or both sides of the home
water runoff
swale
swale
Swale


Control surface water
A
roof water
downspout
improve\maintain gutters and downspouts
catch basin
B
surface water
ensure positive slope away from house (use swales and/or catch basin as necessary)
french drain
below-grade drainage pipe from downspout

APPLIANCES \ Range

96. Condition: • Knobs broken
Difficult to turn gas on or off.
Implication(s): System inoperative or difficult to operate
Location: 962 Unit 1
Task: Repair
Time: Immediate

139. *Knobs broken*

97. Condition: • Anti-tip device missing
Implication(s): Physical injury
Location: Kitchens
Task: Below current standards

APPLIANCES \ Dryer

98. Condition: • Dryer vent material not smooth wall
Could not confirm vent meets UL2158A rating. Replace with smooth ridged metal.
Implication(s): Fire hazard | Equipment ineffective
Location: 962
Task: Replace
Time: Less than 1 year

140. *Dryer vent material not smooth wall*

END OF REPORT

Out-Of-Scope Items

- Identifying capital improvements, enhancements, or upgrades to building components, systems, or finishes. The consultant must be aware of the distinction between repair and replacement activities that maintain the property in its intended design condition, versus actions that improve or reposition the property.
- Removing, relocating, or repositioning of materials, ceiling, wall, or equipment panels, furniture, storage containers, personal effects, debris material or finishes; conducting exploratory probing or testing; dismantling or operating of equipment or appliances; or disturbing personal items or property, that obstructs access or visibility.
- Preparing engineering calculations (civil, structural, mechanical, electrical, etc.) to determine any system's, component's, or equipment's adequacy or compliance with any specific or commonly accepted design requirements or building codes, or preparing designs or specifications to remedy any physical deficiency.
- Taking measurements or quantities to establish or confirm any information or representations provided by the owner or user, such as size and dimensions of the subject property or subject building; any legal encumbrances, such as easements; dwelling unit count and mix; building property line setbacks or elevations; number and size of parking spaces; etc.
- Reporting on the presence or absence of pests such as wood damaging organisms, rodents, or insects unless evidence of such presence is readily apparent and material during the course of the field observer's walk-through survey or such information is provided to the consultant by the owner, user, property manager, etc. The consultant is not required to provide a suggested remedy for treatment or remediation, determine the extent of infestation, nor provide opinions of probable costs for treatment or remediation of any deterioration that may have resulted.
- Reporting on the condition of subterranean conditions, such as soil types and conditions, underground utilities, separate sewage disposal systems, wells; systems that are either considered process-related or peculiar to a specific tenancy or use; or items or systems that are not permanently installed.
- Entering or accessing any area of the premises deemed to potentially pose a threat of dangerous or adverse conditions with respect to the field observer's health or safety, or to perform any procedure, that may damage or impair the physical integrity of the property, any system, or component.
- Providing an opinion on the condition of any system or component, that is shutdown. However, the consultant is to provide an opinion of its physical condition to the extent reasonably possible considering its age, obvious condition, manufacturer, etc.
- Evaluating acoustical or insulating characteristics of systems or components.
- Providing an opinion on matters regarding security of the subject property and protection of its occupants or users from unauthorized access.
- Operating or witnessing the operation of lighting, lawn irrigation, or other systems typically controlled by time clocks or that are normally operated by the building's operation staff or service companies.
- Providing an environmental assessment or opinion on the presence of any environmental issues such as potable water quality, asbestos, hazardous wastes, toxic materials, the location or presence of designated wetlands, mold, fungus, IAQ, etc.
- *Warranty, Guarantee, and Code Compliance Exclusions*—By conducting a PCA and preparing a PCR, the consultant merely is providing an opinion and does not warrant or guarantee the present or future condition of the subject property, nor may the PCA be construed as either a warranty or guarantee of any of the following:
- Any system's or component's physical condition or use, nor is a PCA to be construed as substituting for any system's or equipment's warranty transfer inspection;
- Compliance with any federal, state, or local statute, ordinance, rule or regulation including, but not limited to, fire and building codes, life safety codes, environmental regulations, health codes, zoning ordinances, compliance with trade/design standards, or standards developed by the insurance industry. However, should there be any conspicuous material present violations

observed or reported based upon actual knowledge of the field observer or the PCR reviewer, they should be identified in the PCR;

- Compliance of any material, equipment, or system with any certification or actuation rate program, vendor's or manufacturer's warranty provisions, or provisions established by any standards that are related to insurance industry acceptance/approval, such as FM, State Board of Fire Underwriters, etc.
- *Further Inquiry*—There may be physical condition issues or certain physical improvements at the subject property that the parties may wish to assess in connection with a commercial real estate transaction that are outside the scope of this guide.
- *Out of Scope Considerations*—Whether or not a user elects to inquire into non-scope considerations in connection with this guide is a decision to be made by the user. No assessment of such non-scope considerations is required for a PCA to be conducted in compliance with this guide.
- *Other Standards*—There may be standards or protocols for the discovery or assessment of physical deficiencies associated with non-scope considerations developed by government entities, professional organizations, or private entities, or a combination thereof.

QUALIFICATIONS

John W. Mika – Field Observer, PCR Reviewer, Consultant and Inspector

CERTIFICATIONS/QUALIFICATIONS

- State of Minnesota licensed building contractor: License number BC659325
- 20 year's construction trades experience
- EPA Certified lead-safe firm # NAT-F111676-1
- HUD Green Physical Needs Assessment (GPNA) multi-family housing training
- HUD 203k Loan Consultant – Listed on the HUD 203k consultant roster
- City's of Bloomington, Hopkins and Robbinsdale licensed housing evaluator
- ITA certified home inspector

SELECTED EXPERIENCE

John Mika is the owner of Minnesota Inspections LLC and has completed hundreds of property condition assessments, physical needs assessments and property inspections. He has over 20 year experience as a developer, contractor, project manager and consultant on municipal, industrial, commercial, multi-family and residential projects.

SELECTED CLIENTS

- City of Minneapolis
- City of St. Louis Park
- City of Brooklyn Park
- Culver's Restaurants
- Dalfen America Corp
- Dorsey & Whitney
- Exploratorium - San Francisco Bay Pier 15
- Grey, Plant & Mooty
- McDonald's Restaurants
- Paramount Investment Group
- Waba Financial

Past clients include: Lending institutions, private equity firms, legal firms, municipal entities, national franchises, legal firms, insurance providers and individual investors.

Mr. Mika has also provided expert witness testimony and consulting services pertaining to insurance claims litigation and construction material and installation defects.

MAINTENANCE RECOMMENDATIONS

This Appendix provides maintenance recommendations related to items mentioned in our report. These recommendations are intended to be general and should not be construed as all-inclusive. Maintenance should be undertaken by qualified personnel only.

ELECTRICAL

1. The area in front of electrical panels and disconnects should always be accessible (i.e., no storage or debris).

2. Each circuit should be labeled to identify the area or appliance it controls.

3. Circuit breakers should be manually tripped and reset semi-annually.

4. Dirt deposits on transformers and relays should be cleaned monthly to minimize operating temperature and maintain optimum efficiency.

5. Hardware on all electrical equipment should be checked for looseness semi-annually. Cable connections, fuse clips and circuit breakers are common areas where loose connections can be found.

6. Electrical switches, etc., should not be lubricated unless specified by the manufacturer. The type and grade of lubricant specified should be strictly adhered to. Oil and grease should be kept away from electrical insulation as it may attack this material.

7. Extension cords should not be used as permanent wiring.

8. Electrical modifications should be performed by qualified personnel only.

9. Test buttons on ground fault circuit interrupters should be operated monthly.

10. The main ground fault interrupter should be tested annually.

11. The switchgear internal connections should be checked and retightened annually.

HEATING

1. The heating systems should be serviced annually by a qualified technician.

2. The fans and motors should be lubricated as directed by a serviceperson or the manufacturer.

3. The filters should be inspected monthly and cleaned or replaced as necessary during heating system operation.

4. Electric baseboard heaters should be tested periodically and replaced as necessary. Heating fins should be vacuumed annually.

5. Electric baseboard heaters should be tested periodically and replaced as necessary. Heating fins should be vacuumed annually. Internal wire connectors should be checked for tightness annually. Special service connectors should be used.

AIR-CONDITIONING

1. The air-conditioning system should be inspected and recharged as necessary by a serviceperson, before annual start-up.

2. The fans and motors should be lubricated as directed by a qualified serviceperson or the manufacturer.

3. The outdoor unit should be level. If the supports settle or heave, adjustment should be made by a service person.

4. Debris and vegetation should be kept away from the outdoor (condensing unit) components.

5. An annual oil and refrigerant analysis would be desirable so that operating condition trends can be monitored. Annual oil replacement is advisable.

6. The condenser and evaporator tubes should be mechanically examined every 3 to 5 years.

VENTILATION

1. Exhaust fans should be inspected semiannually.

2. The motors should be cleaned annually, and lubricated as recommended by the manufacturer.

PLUMBING

1. The main shutoff valve for the plumbing system (located in the northwest) should be operated semiannually to ensure that it can be closed in an emergency.

2. Every fall, the inside control valves for outdoor faucets should be closed. The outside pipes should be drained and the exterior faucets left open.

3. The domestic water heater and associated equipment should be serviced annually by a qualified technician.

4. The plumbing fixtures should be inspected monthly for leakage and repairs made promptly.

ROOFING

1. The roof should be inspected semiannually. Particular attention should be paid to the flashings, edges and intersections.

2. The roof should be periodically examined for gravel scouring and improved as necessary.

3. The roof drains should be periodically inspected to ensure that they are free of debris.

4. Metal chimneys and vents should be examined annually for corrosion, leaning and loose or missing rain caps.

INTERIOR COMPONENTS

1. Windows should be inspected at least annually for damage resulting from leakage and condensation.

2. Wall and ceiling surfaces should be periodically examined for evidence of roof or plumbing leakage.

EXTERIOR COMPONENTS

1. Exterior masonry should be inspected annually for deteriorated or missing mortar.

2. The caulking and weather stripping should be inspected every fall.

3. The asphalt paving and sidewalks should be visually examined annually for cracks or depressions. Repairs should be made promptly.

GLOSSARY

ABS — A type of black plastic pipe commonly used for waste water lines.
Aggregate — Crushed rock or stone.
Air chamber — A vertical, air filled pipe that prevents water hammer by absorbing pressure when water is shut off at a faucet or valve.
Air-conditioner condenser — The outside fan unit of the air conditioning system. The condenser discharges heat to the building exterior.
Alligatoring — Coarse checking pattern on the surface of a material. Typically caused by ageing, exposure to sun and/or loss of volatiles.
Ampacity — Refers to the how much current a wire can safely carry. For example, a 12-gauge electrical copper wire can safely carry up to 20 amps.
Asphalt — A bituminous material employed in roofing and road paving materials because of its waterproofing ability.
Backfill — The replacement of excavated earth into a trench or pit.
Backflow — A reverse flow of water or other liquids into the water supply pipes, caused by negative pressure in the pipes
Ballast — A transformer that steps up the voltage in a florescent lamp.
Balusters — Vertical members in a railing used between a top rail and bottom rail or the stair treads. Sometimes referred to as pickets or spindles.
Base sheet — Bottom layer of built-up roofing.
Batt — A section of fiberglass or rock-wool insulation.
Bay window — Any window space projecting outward from the walls of a building, either square or polygonal in plan.
Beam — A structural member transversely supporting a load. A structural member carrying building loads (weight) from one support to another. Sometimes called a girder.
Bearing wall — A wall that supports any vertical load in addition to its own weight.
Bird's-mouth cut — A cutout in a rafter where it crosses the top plate of the wall providing a bearing surface for nailing. Also called a heel cut.
Bitumen — Term commonly applied to various mixtures of naturally occurring solid or liquid hydrocarbons, excluding coal. These substances are described as bituminous. Asphalt is a bitumen. *See Asphalt.*
Blocking — Small wood pieces to brace framing members or to provide a nailing base for gypsum board or paneling.
Board and batten — A method of siding in which the joints between vertically placed boards or plywood are covered by narrow strips of wood.
Bottom chord — The lower or bottom horizontal member of a truss.
Brick tie — Metal strips or wires that are inserted into the mortar joints of the brick veneer. Ties hold the veneer wall to the backer wall behind it.
Brick veneer — A vertical facing of brick used to clad a building. Brick veneer is not a load-bearing component.
Building paper — A general term for papers, felts and similar sheet materials used in buildings without reference to their properties or uses. Generally comes in long rolls.
Built-up roof — A roofing composed of three to five layers of asphalt felt laminated with coal tar, pitch or asphalt. The top is finished with crushed slag or gravel. Generally used on flat or low-pitched roofs.
Butt joint — The junction where the ends of building materials meet. To place materials end-to-end or end-to-edge without overlapping.
Cant strip — A triangular shaped piece of lumber used at the junction of a flat deck and a wall to prevent cracking of the roofing which is applied over it.
Cantilever — Any part of a structure that projects beyond its main support and is balanced on it.
Cap flashing — The flashing covering over a horizontal surface to prevent water from migrating behind the base flashing.
Cap sheet — The top layer in modified bitumen roofing.
Casement window — A window with hinges on one of the vertical sides and swings open like a door.
Ceiling joist — One of a series of parallel framing members used to support ceiling loads and supported in turn by larger beams, girders or bearing walls. Can also be roof joists.
Cement — The grey powder that is the "glue" in concrete. Portland cement. Also, any adhesive.
Certificate of Occupancy — Certificate is issued by the local municipality and is required before anyone can occupy and live within the building. It is issued only after the local municipality has made all inspections and all monies and fees have been paid.
CFM (cubic feet per minute) — A rating that expresses the amount of air a blower or fan can move. The volume of air (measured in cubic feet) that can pass through an opening in one minute.
Chase — A framed enclosed space around a flue pipe or a channel in a wall, or through a ceiling for something to lie in or pass through.
Checking — Cracks that appear with age in many large timber members. The cracks run parallel to the grain of the wood. At first superficial, but in time may penetrate entirely through the member and compromise its integrity.
Cleanout — An opening providing access to a drain line. Closed with a threaded plug.
Closed-cut valley — A method of valley treatment in which shingles
from one side of the valley extend across the valley, while shingles from the other side are trimmed 2 inches from the valley centerline. The valley flashing is not exposed.
Collar tie — Nominal one- or two-inch-thick members connecting opposite roof rafters. They serve to stiffen the roof structure.
Column — A vertical structural compression member that supports loads acting in the direction of its longitudinal axis.
Combustion air and ventilation air — The ductwork installed to bring fresh, outside air to the furnace or boiler room. Normally two separate supplies of air are brought in: one high for ventilation and one low for combustion.
Compressor — A mechanical device that pressurizes a gas in order to turn it into a liquid, thereby allowing heat to be removed or added. A compressor is the main component of conventional heat pumps and air conditioners. In an air conditioning system, the compressor normally sits outside and has a large fan (to remove heat).
Concrete board or **cement board** — A panel made out of concrete and fiberglass, usually used as a tile backing material.
Condensate drain line — The pipe that runs from the air conditioning cooling coil to the exterior or internal building drain, ton drain away condensation.
Condensation — The change of water from vapor to liquid when warm, moisture-laden air comes in contact with a cold surface.
Condensing unit — The outdoor component of a cooling system. It includes a compressor and condensing coil designed to give off heat.
Conduit, electrical — A pipe, usually metal, in which wire is installed. The pipe serves to protect the wire.
Control joint — Tooled, straight grooves made on concrete floors or structures to "control" where the concrete should crack (as a result of shrinkage).
Cooling load — The amount of cooling required to keep a building at a specified temperature during the summer, usually 25° C, based on a design outside temperature.

Corbel— To build out one or more courses of brick or stone from the face of a wall. This may be decorative, or serve to support a structural component.
Counterflashing — A metal flashing usually used to cover another flashing and prevent moisture entry.
Course — A row of shingles or roll roofing running the length of the roof. Parallel layers of building materials such as bricks, or siding laid up horizontally.
CPVC — *See PVC.*
Crawlspace — A shallow space below a building, normally enclosed by the foundation walls.
Cricket — A saddle-shaped, peaked construction connecting a sloping roof plane with a wall or chimney. Designed to encourage water drainage away from the chimney or wall joint.
Culvert — Round, corrugated drain pipe (normally 15 or 18 inches in diameter) installed beneath a driveway and parallel to and near the
street.
Cupping — A type of warping that causes boards or shingles to curl up at their edges. Typically caused by uneven drying or loss of volatiles.
Curb — The short elevation of a supporting element above the deck of a roof. Normally a box (on the roof) on which a skylight or piece of mechanical equipment is attached.
Curtain wall — An exterior building wall that is supported entirely by the building structure, rather than being self-supporting or load bearing.
Damper — A metal "door" placed within the ductwork, typically. Used to control flow of air, etc., in the ductwork.
Damp-proofing — The black, tar-like material applied to the exterior of a foundation wall. Used to minimize moisture penetration into the wall.
Deck — The surface, installed over the supporting framing members, to which the roofing is applied.
Dedicated circuit — An electrical circuit that serves only one appliance or a series of electric heaters or smoke detectors.
Dew point — Temperature at which a vapor begins to deposit as a liquid. Applies especially to water in the atmosphere.
Disconnect — A large electrical ON-OFF switch.
Diverter valve — A device that changes the direction of water flow from one faucet to another.
Dormer — A box-like projection from the sloping plane of a roof that frames a window.
Double-hung window — A window with two vertically sliding sashes, both of which can move up and down.
Downspout — A pipe for draining water from roof gutters. Also called a leader.
Drain tile — A perforated, corrugated plastic pipe laid at the bottom of the foundation wall and used to drain excess water away from the foundation. It prevents ground water from seeping through the foundation wall. Sometimes called perimeter drain.
Drip —A groove in the underside of a sill or drip cap to cause water to drop off on the outer edge instead of drawing back and running down the face of the building.
Ducts — Usually round or rectangular metal pipes installed for distributing warm or cold air from the heating and air-conditioning equipment.
Eaves protection — Additional layer of roofing material applied at the eaves to help prevent damage from water backup (typically caused by ice damming).
EIFS —Exterior Insulation Finish System. An exterior cladding system that employs a relatively thin acrylic stucco coating over insulation panels. (Pronounced "ee-fus")
Elbow — A plumbing or electrical fitting that lets you change directions in runs of pipe or conduit.
Evaporator coil — The part of a cooling system that absorbs heat from air passing through it. The evaporator coil is found within the ductwork.
Expansion joint — A joint that allows for building material expansion and contraction caused by temperature changes.
Exposed aggregate finish — A method of finishing concrete which
washes the cement/sand mixture off the top layer of the aggregate — usually gravel. Often used with precast concrete exterior wall finishes.
Exposure — The portion of the roofing or wall cladding material exposed to the weather after installation.
Fascia — a vertical member attached to the ends of the roof structure
and often the backing of the gutter.
Felt — Fibrous material saturated with asphalt and used as an underlayment or part of a built-up roofing system.
Finger joint — A manufacturing process of interlocking two shorter pieces of wood end to end to create a longer piece of dimensional lumber or molding. Often used in jambs and casings and are normally painted (instead of stained).
Fire stop — A solid, tight closure of a concealed space, placed to prevent the spread of fire and smoke through such a space. Includes stuffing wire and pipe holes in the fire separations.
Flashing — (1) Sheet metal or flexible membrane pieces fitted to the joint of any roof intersection, penetration or projection (chimneys, copings, dormers, valleys, vent pipes, etc.) to prevent water leakage. (2) The building component used to connect portions of a roof, deck, or siding material to another surface such as a chimney, wall, or vent pipe. Often made out of various metals, rubber or tar and is mostly intended to prevent water entry.
Flatwork — Common word for concrete floors, driveways, patios and sidewalks.
Flue — The space or passage in a chimney through which smoke, gas, or fumes ascend.
Fluorescent lighting — A fluorescent lamp is a gas-filled glass tube with a phosphor coating on the inside. Gas inside the tube is ionized by electricity which causes the phosphor coating to glow. Normally with two pins that extend from each end.
Footing — A widened, below-ground base of a foundation wall or a poured concrete, below-ground, base used to support foundations or piers.
Forced air heating — a common form of heating with natural gas, propane, oil or electricity as a fuel. Air is heated through a heat exchanger and distributed through a set of metal ducts.
Form — Temporary structure erected to contain concrete during placing and initial hardening.
Foundation — The supporting portion of a structure below the first floor construction, or below grade, including the footings.
Framing — The structural wood, steel or concrete elements of the building.
Framing, balloon — A system of framing a building in which all vertical structural elements of the bearing walls consist of single pieces extending from the top of the foundation sill plate to the roof plate and to which all floor joists are fastened.
Frost line — The depth of frost penetration in soil and/or the depth at which the earth will freeze and swell. This depth varies in different parts of the country.
Furring — Strips of wood or metal applied to a wall or other surface to even it and normally to serve as a fastening base for finish material.
Gable — A sidewall, typically triangular, that is formed by two sloping roof planes.
Gable roof — A type of roof with sloping planes of the same pitch on each side of the ridge. Has a gable at each end.
Gasket — A device used to seal joints against leaks.
GFI or **GFCI** or **Ground Fault Current Interrupter** — A electrical device used to prevent injury in locations where one might be in contact with a grounded surface and an electrical appliance. Most GFIs are located in a receptacle or circuit breaker and can be identified by the presence of a "test" and a "reset" button.

Glued laminated beam (glulam) — A structural beam composed of wood laminations. The laminations are pressure-bonded with adhesives.
Granules — Crushed rock coated with ceramic material, applied to the exposed surface of asphalt roofing products to add color and reduce ultraviolet degradation. Copper compounds added to these help make them algae resistant.
Groundwater — Water from a subsurface water source.
Grout — Mortar made of such consistency (by adding water) that it will flow into the joints and cavities of the masonry work and fill them solid.
Gusset — A flat metal, wood, plywood or similar type member used to provide a connection at the intersection of wood members. Most commonly used at joints of wood trusses. They are fastened by nails, screws, bolts, or adhesives.
Gutter — The trough that channels water from the eaves to the downspouts.
H-beam — A steel beam with a cross section resembling the letter H.
H-clip — Small metal clips formed like an H that fits at the joints of two plywood (or wafer board) sheets to stiffen the joint. Normally used on the roof sheeting.
Header — A beam placed perpendicular to joists and to which joists are attached in framing for around an opening.
Hearth — The fireproof area directly in front of a fireplace. The inner or outer floor of a fireplace, usually made of brick, tile, or stone.
Heat pump — A device that uses compression and decompression of gas to heat and/or cool a building.
Heating load — The amount of heating required to keep a building at a specified temperature during the winter, based on an outside design temperature.
Hip — The external angle formed by the meeting of two sloping sides of a roof.
Honeycombs — The appearance concrete makes when aggregate in the concrete is visible and where there are void areas in the concrete.
Hose bib — An exterior water faucet.
Hot wire — The wire that carries electrical energy to a receptacle or
other device-in contrast to a neutral, which carries electricity away again. Normally the black wire.
HVAC — An abbreviation for Heat, Ventilation, and Air Conditioning.
I-beam — A steel beam with a cross section resembling the letter I.
Ice damming — The buildup of ice and water at the eaves of a sloped roof. Melting snow on the roof refreezes at the roof overhang, causing the damming. Buildings with inadequate attic insulation or ventilation or with large roof projections beyond the exterior walls are more pronto to ice damming.
Irrigation — Lawn sprinkler system.
Jack post — A type of structural support made of metal, which can be raised or lowered through a series of pins and a screw to meet the height required. Typically used as a replacement for an old supporting member in a building.
Joist — One of a series of parallel beams, usually two inches in thickness, used to support floor and ceiling loads, and supported in turn by larger beams, girders, or bearing walls.
Joist hanger — A metal U-shaped item used to support the end of a floor joist and attached with hardened nails to another bearing joist or beam.
Knob-and-tube wiring — A common form of electrical wiring used before the Second World War. When in good condition it may still be functional for low amperage use such as smaller light fixtures.
Lath — A building material of narrow wood, metal, gypsum, or insulating board that is fastened to the frame of a building to act as a base for plaster, shingles, or tiles.
Lattice — An open framework of crisscrossed wood or metal strips that form regular, patterned spaces.
Leader — *See Downspout.*
Ledger — The wood or metal members attached to a beam, studding, or wall used to support joist or rafter ends.
Lintel — A horizontal structural member that supports the load over an opening such as a door or window.
Load-bearing wall — A wall supporting its own weight and some other structural elements of the building such as the roof and floor structures.
Louvre — A vented opening into a room that has a series of horizontal slats and arranged to permit ventilation but to exclude rain, snow, light, insects, or other living creatures.
Mansard roof — A roof with two sloping planes of different pitch on each of its four sides. The lower plane is steeper than the upper, and may be almost vertical.
Masonry — Stone, brick, concrete, hollow-tile, concrete block, or other similar building units or materials. Normally bonded together with mortar to form a wall.
Modified bitumen roof — A roof covering that is typically composed
of a factory-fabricated composite sheet consisting of a copolymer modified bitumen, often reinforced with polyester and/or fiberglass, and installed in one or more plies. The membrane is commonly surfaced with field-applied coatings, factory-applied granules or metal foil. The roofing system may incorporate rigid insulation.
Mortise — A slot cut into a board, plank, or timber, usually edgewise, to receive the tenon (or tongue) of another board, plank, or timber to form a joint.
Mullion — A vertical divider in the frame between windows, doors, or other openings.
Neutral wire — Usually color-coded white, this wire carries electricity from a load back to the service panel.
Newel post — The large starting post to which the end of a stair guard railing or balustrade is fastened.
Nosing — The projecting edge of a molding or drip or the front edge of a stair tread.
On center — The measurement of spacing for studs, rafters, and joists in a building from the center of one member to the center of the next.
Open valley — Method of valley construction in which shingles on both sides of the valley are trimmed along a chalk line snapped on each side of the valley. Shingles do not extend across the valley. Valley flashing is exposed.
Open web steel joist — One of a series of parallel beams, used to support floor and roof loads, and supported in turn by larger beams, girders or bearing walls. Consists of horizontal top and bottom chords, with diagonal and/or vertical web members connecting the chords together.
Oriented Strand Board or OSB — A manufactured 4-foot-by-8-foot wood panel made out of one- to two-inch wood chips and glue. Often used as a substitute for plywood.
P-trap — Curved, U-section of drain pipe that holds a water seal to prevent sewer gasses from entering a building through a fixtures' drain pipe.
Parapet — The portion of an exterior wall that extends above the edge of a roof.
Parging — A thin layer of cement placed over masonry units.
Partition — A wall that subdivides spaces within any story of a building or room.
Paver — Materials (commonly masonry) laid down to make a firm, even surface on the exterior.
Performance bond — An amount of money (usually 10 percent of the total price of a job) that a contractor must put on deposit with a governmental agency as an insurance policy that guarantees the contractors' proper and timely completion of a project or job.

Perimeter drain — Typically 4-inch perforated plastic pipe around the perimeter (either inside or outside) of a foundation wall (before backfill) that collects and diverts ground water away from the foundation.
Pilot light — A small, continuous flame (in a boiler, or furnace) that ignites gas or oil burners when needed.
Pitch — (1) The degree of roof incline expressed as the ratio of the rise, in feet, to the span, in feet. (2) A thick, oily substance commonly obtained from tar, used to seal out water at joints and seams. Pitch is produced from distilling coal tar, wood tar, or petroleum.
Pitch pocket — A container, usually formed of sheet metal, around supporting connections with roof-mounted equipment. Filling the container with pitch, or better yet, plastic roof cement, helps seal out water even when vibration is present. A pitch pocket is *not* the preferred method of flashing a roof penetration.
Plan view — Drawing of a structure with the view from overhead, looking down.
Plate — Normally a horizontal member within a framed structure, such as: (1) sill plate — a horizontal member anchored to a concrete or masonry wall; (2) Sole plate — bottom horizontal member of a frame wall; or (3) top plate — top horizontal member of a frame wall supporting ceiling joists, rafters, or other members.
Plenum — The main supply air or return air duct leading from a heating or cooling unit.
Plumbing stack — A plumbing vent pipe that penetrates the roof.
Ply — A term to denote the number of layers of roofing felt, veneer in plywood, or layers in built-up materials, in any finished piece of such material.
Point load — A point where a bearing/structural weight is concentrated and transferred to another structural member or component.
Portland cement — Cement made by heating clay and crushed limestone into a brick and then grinding to a pulverized powder state.
Post — a vertical framing member usually designed to carry a beam.
Post-and-beam — A basic building method that uses just a few hefty posts and beams to support an entire structure. Contrasts with stud framing.
Power vent — A vent that includes a fan to speed up air flow.
Pressure relief valve — A safety device mounted on a water heater or boiler. The relief valve is designed to release any high pressure in the vessel and thus prevent tank explosions.
Pressure-treated wood — Lumber that has been saturated with a preservative to resist rot.
PVC or **CPVC** — (Polyvinyl choride) A type of white or light gray plastic pipe sometimes used for water supply lines and waste pipe.
Quarry tile — A man-made or machine-made clay tile used to finish a floor or wall. Generally 6 inches by 6 inches by ¼-inch thick .
R value — A measure of insulation's resistance to heat flow. The higher the R value the more effective the insulation.
Rafter — (1) The framing member that directly supports the roof sheathing. A rafter usually follows the angle of the roof, and may be apart of a roof truss. (2) The supporting framing member immediately beneath the deck, sloping from the ridge to the wall plate.
Rafter, hip — A rafter that forms the intersection of an external roof angle.
Rafter, valley — A rafter that forms the intersection of an internal roof angle.
Rake edge — The overhang of an inclined roof plane beyond the vertical wall below it.
Rebar — Reinforcing bar. Ribbed steel bars installed in concrete structures designed to strengthen concrete. Comes in various thicknesses and strength grades. May be epoxy coated to enhance rust resistance.
Refrigerant — A substance that remains a gas at low temperatures and pressure and can be used to transfer heat. Freon is an example.
Register — A grille placed over a supply air or return air duct.
Reglaze — To replace a broken window.
Reinforcing — Steel rods or metal fabric placed in concrete slabs, beams, or columns to increase their strength.
Relief valve — A device designed to open if it detects excess temperature or pressure. Commonly found on water heating or steam producing systems.
Resilient flooring — A durable floor cover that has the ability to resume its original shape.
Retaining wall — A structure that holds back a slope or elevation of land and prevents erosion.
Ridge — The horizontal line at the junction of the top edges of two sloping roof surfaces.
Riser — A vertical member between two stair treads.
Roll roofing — Asphalt roofing products manufactured in roll form.
Romex — A name brand of nonmetallic sheathed electrical cable that is used for indoor wiring.
Roof deck — The surface, installed over the supporting framing members, to which the roofing is applied.
Roof sheathing — The wood panels or sheet material fastened to the roof rafters or trusses on which the shingle or other roof covering is laid.
Roof valley — The "V" created where two sloping roofs meet.
Roofing membrane — The layer or layers of waterproofing products that cover the roof deck.
Run, stair — The horizontal distance of a stair tread from the nosing to the riser.
Saddle — Two sloping surfaces meeting in a horizontal ridge, used between the back side of a chimney, or other vertical surface, and a sloping roof. Used to divert water around the chimney or vertical surface.
Sanitary sewer — A sewer system designed for the collection of waste water from the bathroom, kitchen and laundry drains, and is usually not designed to handle storm water.
Sash — The frame that holds the glass in a window, often the movable part of the window.
Saturated felt — A felt that is impregnated with tar or asphalt.
Scratch coat — The first coat of plaster, which is scratched to form a bond for a second coat.
Scupper — (1) An opening for drainage in a wall, curb or parapet. (2) The drain above a downspout or in a flat roof, usually connected to the downspout.
Sealer — A finishing material, either clear or pigmented, that is usually applied directly over raw wood or concrete for the purpose of sealing the wood or concrete surface.
Seasoning — Drying and removing moisture from green wood in order to improve its usability.
Service equipment — Main control gear at the electrical service entrance, such as circuit breakers, switches, and fuses.
Service lateral — Underground power supply line.
Shake — A wood roofing material, normally cedar or redwood. Produced by splitting a block of the wood along the grain line. Modern shakes are sometimes machine sawn on one side.
Sheathing — (1) Sheets or panels used as roof deck material. (2) Panels that lie between the studs and the siding of a structure.
Short circuit — A situation that occurs when hot and neutral wires come in contact with each other. Fuses and circuit breakers protect against fire that could result from a short.
Sill — (1) The two-by-four or two-by-six wood plate framing member that lays flat against and bolted to the foundation wall (with anchor bolts) and upon which the floor joists are installed. (2) forming the lower side of an opening, as a door sill or window sill.
Skylight — A more or less horizontal window located on the roof of a building.

Slab-on-grade — A type of foundation with a concrete floor which isplaced directly on the soil. In warm climates, the edge of the slab isusually thicker and acts as the footing for the walls. In cold climates,the slab is independent of the perimeter foundation walls.
Sleeper — Usually, a wood member that serves to support equipment.
Soffit — (1)The finished underside of the eaves. (2) A small ceilinglike space, often out of doors, such as the underside of a roof overhang.
Solid waste pump — A pump used to 'lift' waste water to a gravity sanitary sewer line. Usually used in basements and other locations which are situated below the level of the city sewer.
Spalling — The cracking and breaking away of the surface of a material.
Span — The clear distance that a framing member carries a load without support (between structural supports).
Splash block — A pad placed under the lower end of a downspout to divert the water from the downspout away from the building. Usually made out of concrete or fiberglass.
Stair stringer — Supporting member for stair treads. Can be a notched plank or a steel member.
Starter strip — Asphalt roofing applied at the eaves that provides protection by filling in the spaces under the cutouts and joints of the first course of shingles.
Step flashing — Flashing application method used where a vertical surface meets a sloping roof plane.
Storey — That part of a building between any floor or between the floor and roof.
Storm collar — A metal flashing used to seal around a penetration in a roof.
Storm sewer — A sewer system designed to collect storm water, separate from the waste water system.
Storm window — An extra window usually placed outside of an existing one, as additional protection against cold weather, or damage.
Stucco — An outside plaster finish made with Portland cement as its base.
Stud — One of a series of slender wood or metal vertical structural members placed as supporting elements in walls and partitions.
Stud framing — A building method that distributes structural loads to each of a series of relatively lightweight studs. Contrasts with post and-beam.
Sump — Pit or large plastic bucket/barrel inside a basement, designed to collect ground water (storm water) from a perimeter drain system.
Sump pump — A submersible pump in a sump pit that pumps any excess ground water to the storm sewer.
Suspended ceiling — A ceiling system supported by hanging it from the overhead structural framing.
Tempered — Strengthened. Tempered glass will not shatter nor create shards, but will "pelletize" like an automobile window. Required in tub and shower enclosures, for example.
Termites — Insects that superficially resemble ants in size, general appearance, and habit of living in colonies; hence, they are frequently called "white ants." Subterranean termites establish themselves in buildings not by being carried in with lumber, but by entering from ground nests after the building has been constructed. If unmolested, they eat out the woodwork, leaving a shell of sound wood to conceal their activities, and damage may proceed so far as to cause collapse of parts of a structure before discovery.
Terra cotta — A ceramic material molded into masonry units.
Threshold — The bottom metal, concrete, or wood plate of an exterior door frame. They may be adjustable to keep a tight fit with the door slab.
Toenailing — To drive a nail in at a slant. Method used to secure floor joists to the plate. Not acceptable for securing joists flush to a header or beam.
Tongue-and-groove — A joint made by a tongue (a rib on one edge of a board) that fits into a corresponding groove in the edge of another board to make a tight flush joint. Typically, the subfloor plywood is tongue-and-groove.
Top chord — The upper or top member of a truss.
Trap — A plumbing fitting that holds water to prevent air, gas, and vermin from entering into a building.
Tread — The walking surface board in a stairway on which the foot is placed.
Treated lumber — A wood product which has been impregnated with chemicals to reduce damage from wood rot or insects. Often used for the portions of a structure which is likely to be in ongoing contact with soil and water. Wood may also be treated with a fire retardant.
Truss — An engineered and manufactured roof support member with "zig-zag" framing members. Does the same job as a rafter but is designed to have a longer span than a rafter.
Tube-and-knob wiring — *See knob-and-tube wiring.*
UFFI — Urea Formaldehyde Foam Insulation, a foam insulation blown into existing walls. (Pronounced "you-fee")
Ultraviolet degradation — A reduction in certain performance limits caused by exposure to ultraviolet light.
Underlayment — (1) A one-quarter-inch material placed over the subfloor plywood sheathing and under finish coverings, such as vinyl flooring, to provide a smooth, even surface. (2) A secondary roofing layer that is waterproof or water-resistant, installed on the roof deck and beneath shingles or other roof-finishing layer.
UV rays — Ultraviolet rays from the sun.
Valley — The inward angle formed by two intersecting, sloping roof planes. Since it naturally becomes a water channel, additional attention to waterproofing it is desirable.
Vapour barrier — A building product installed on exterior walls and ceilings under the drywall and on the warm side of the insulation. It is used to retard the movement of water vapour into walls and prevent condensation within them. Normally, polyethylene plastic sheeting is used.
Vent — A pipe or duct allowing the flow of air and gases to the outside. In a plumbing system, the vent is necessary to allow sewer gases to escape to the exterior
Vermiculite — A mineral closely related to mica, with the faculty of expanding on heating to form lightweight material with insulation quality. Used as bulk insulation and also as aggregate in insulating and acoustical plaster and in insulating concrete floors.
Water closet — A toilet.
Weather stripping — Narrow sections of thin metal or other material installed to prevent the infiltration of air and moisture around windows and doors.
Weep holes — Small holes in exterior wall cladding systems that allow moisture to escape and air pressure equalization in the cavity space drained by the weep hole.
Wythe — (rhymes with "tithe" or "scythe") A vertical layer of masonry that is one masonry unit thick.
Zone — The section of a building that is served by one heating or cooling loop because it has noticeably distinct heating or cooling needs. Also, the section of property that will be watered from a lawn sprinkler system.
Zone valve — A device, usually placed near the heater or cooler, which controls the flow of water or steam to parts of the building; it is controlled by a zone thermostat.