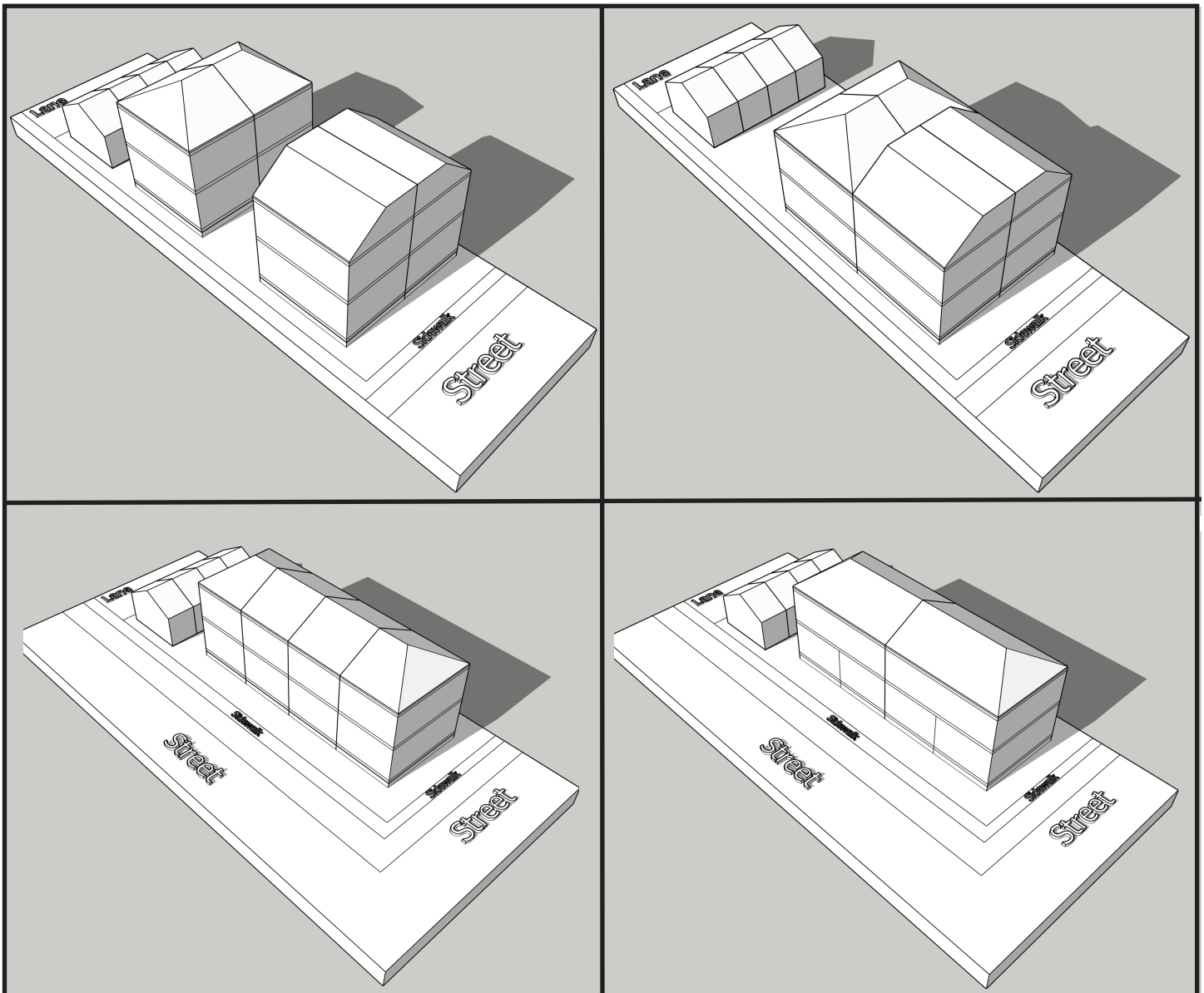


## Guide to a Complete Application

This guide is provided to improve the level of understanding, quality of applications and promote completeness to avoid delays in building permit processing for most buildings with stacked dwelling units. This does not limit design options or provide advice on compliance with the National Building Code – 2023 Alberta Edition. Further documents or details may be required depending on the application.

This guide focuses on sites with stacked dwelling configurations. This guide is relevant for a site with the following features:

- Buildings that contain dwelling units entirely or partially above other dwelling units.
- One of the buildings may not face a street.
- A garage building that serves all units and is located at the rear of the lot next to the lane.
- Secondary suites are not included.



Illustrations show a variety of stacked dwelling unit layouts and a detached garage.

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### GENERAL REQUIREMENTS

NBC(AE) refers to the [National Building Code – 2023 Alberta Edition](#). The 2015 Part 9 User's Guide can be accessed [here](#). "AHJ" refers to the Authority Having Jurisdiction. NECB refers to the National Energy Code of Canada for Buildings. "ASHRAE" means American Society of Heating and Air-Conditioning Engineers. Requirements can change when the next NBC(AE) is in force. Owner, professionals, designers and contractors must comply with all requirements of the NBC(AE), NECB, ASHRAE, the Alberta Safety Codes Act and associated regulations. Wherever a Section, Subsection or Article appears without the NBC(AE) Prefix in the following tables, it is assumed to be DIVISION B of the current NBC(AE), e.g., NBC(AE) Division B, #.#.#.#.

SUPPLIED

YES NO

### FEES

### Notes

- Fees are calculated based on the permit/projects Prevailing Market Value (PMV).
- Use the online [Multi-family Low Rise Value Calculator](#) to calculate prevailing market value.
- Maximum one building per permit (see [Advisory for Building Permit Requirements for Multiple Buildings](#)):
  - Exception is the detached garage.
  - Detached garage to be included in rear building's permit.
- A Partial Permit can be applied for at the time of permit application (See [Partial Permit FAQ](#)).

- Application is considered incomplete until the fees are paid in full. However, a review for a partial permit can proceed without fees being paid in full.
- The minimum 25% (or \$10,000 deposit for Building Permits with fees over \$10,000) needs to be paid for any partial permit review to occur.
- Partial permit cannot be issued until fees are paid in full.

### DRAWING SETS REQUIRED

### Notes

#### NBC(AE) Division C, 2.2.2.1. General Information Required

- Provide the following complete drawing sets:
  - Architectural
  - Structural
  - Mechanical
  - Electrical
  - Sprinkler, if required
- Separate out each building for each permit:
  - Exclude or grey out other buildings/permits from the current drawings sets for clarity.
  - A detached garage is allowed to be included on the permit of the building closest to it, or its own permit.

- Upload drawing sets from each discipline together as one PDF.
- Structural drawing sets must include supporting documentation, like:
  - floor joist layouts
  - roof truss layouts
  - tall wall details
  - fire separations
- Mechanical drawing sets must show heating, cooling and ventilation methods.
- Details for penetrations of assemblies required to have a fire-resistance rating.
- Electrical drawings must show clear unambiguous symbols for safety devices like smoke and carbon monoxide alarms.

### PROFESSIONAL INVOLVEMENT

### Notes

#### NBC(AE) Division C 2.4.2. Professional Involvement

- If professional involvement is required, provide the following:
  - Professional Schedules:
    - Coordinating Professional A
    - Architectural B
    - Structural B
    - Mechanical B
    - Sprinkler B (if not included in mechanical)
    - Geotechnical B

- NBC(AE) Division C, 2.4.1.1.(1) has criteria to help determine if a professional Architect or Engineer needs to design the project.
- Typically, full professional involvement is required for design variants with more than four dwelling units per building.
- Professional involvement may be required for some aspects of the design, like sprinkler systems, structural elements and geotechnical.

LICENSING AND WARRANTY	Notes
<ul style="list-style-type: none"> <li>• <a href="#">New Home Buyer Protection Act</a>, Interpretation, Requirement for license or authorization, 2.1(1) and Part 6 – General Provisions, Permits 24(1).</li> <li>• <a href="#">Residential Protection Program RPP</a>: <ul style="list-style-type: none"> <li>◦ Alberta Builder Licensing Program “<b>Certificate of Licence</b>”.</li> <li>◦ Confirmation of Warranty Registration for all units, one of these are required: <ul style="list-style-type: none"> <li>▫ Approved New Home Registration Certificate</li> <li>▫ <b>Approved Rental Use Designation</b>, showing the correct number of units for the project</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Business licence class must be “DEVELOPER” class for any building requiring professional involvement, otherwise “BUILDER” class is acceptable.</li> <li>• The Province of Alberta requires all residential builders to have a builder licence to construct residential projects, including multi-residential. Accordingly, The City of Calgary must check for evidence of the builder licence for any building permits that include residential dwelling units in the scope of work.</li> <li>• Any questions related to builder licensing should be directed to: <a href="mailto:builderlicensing@gov.ab.ca">builderlicensing@gov.ab.ca</a>.</li> <li>• Any questions related to new home warranties should be directed to: <a href="mailto:HomeWarranty.inquiries@gov.ab.ca">HomeWarranty.inquiries@gov.ab.ca</a>.</li> </ul>
GENERAL CONTRACTOR	Notes
<ul style="list-style-type: none"> <li>• General Contractor is required for the permit.</li> <li>• Submit your request to <a href="mailto:contractor.changes@calgary.ca">contractor.changes@calgary.ca</a> with the changes required for any of the following key contacts: <ol style="list-style-type: none"> <li>1. Applicant</li> <li>2. Applicant Contact</li> <li>3. Architect/Engineer</li> <li>4. General Contractor <ul style="list-style-type: none"> <li>▫ See also <a href="#">Manage Your Permit Application</a>.</li> </ul> </li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• At the time of application, indicate your general contractor. If you did not do this, please submit your request to add a General Contractor to the building permit via email to <a href="mailto:contractor.changes@calgary.ca">contractor.changes@calgary.ca</a>.</li> <li>• Only the original applicant, or the owner, is allowed to change the <b>contractor</b> information on a building permit. Please accompany this request with proof of ownership of the subject property if someone other than the original applicant is making the request.</li> </ul>
DEVELOPMENT PERMIT (DP)	Notes
<ul style="list-style-type: none"> <li>• The DP for any given project must be “RELEASED” before the building permit is released. <ul style="list-style-type: none"> <li>◦ The DP file manager can give special permission to release the partial permit.</li> <li>◦ Use Approval must be accepted.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Partial building permits may be released upon written authorization sent directly to the building permit plans examiner from the DP file manager.</li> <li>• Use Approval verifies that your drawings for the building permit match those submitted for the DP. If they do not match a Revised Plan may be required.</li> <li>• Please contact your DP File Manager or the Planning Services Centre at 403-268-5311 for additional information regarding the DP.</li> </ul>
NECB OR 9.36	Notes
<p><b>NBC(AE) Division C, 2.2.2.1. General Information Required</b></p> <ul style="list-style-type: none"> <li>• Submit a completed <a href="#">9.36 Summary Form</a> or</li> <li>• Submit a completed <a href="#">NECB Project Summary Form</a>.</li> </ul>	<ul style="list-style-type: none"> <li>• Submit PDF files, not Excel files.</li> <li>• Provide detailed supporting documentation and reports according to the chosen compliance path.</li> <li>• Architectural drawings must clearly match the assemblies used in all calculations.</li> <li>• See <a href="#">Energy Code for Small Buildings</a> for instructions and information related to energy code compliance.</li> </ul>
DEVELOPMENT SITE SERVICING PLANS (DSSP) OR GRADE SLIPS	Notes
<p><b>NBC(AE) Division C, 2.2.4.6. Information Required on Foundation Drawings</b></p> <ul style="list-style-type: none"> <li>• DSSP must be applied for prior to BP application, see <a href="#">Development Site Servicing Plans</a></li> </ul>	<ul style="list-style-type: none"> <li>• The DSSP is a plan that shows the layout for water, sanitary and storm water servicing. It is reviewed by Water Resources.</li> <li>• If Water Resources determines a DSSP is not required, each unit requires a Grade Slip.</li> </ul>

### TECHNICAL REQUIREMENTS

CURRENT BUILDING CODE	Notes		
<b>NBC(AE) Division C, 2.2.1.1. Conformance with Administrative Requirements (Building Code in Force)</b> <ul style="list-style-type: none"> <li>Show references to code in force used for this permit scope.</li> </ul>	<ul style="list-style-type: none"> <li>See Division B, 1.3.2.1. Abbreviations of Proper Names like NBC(AE).</li> <li>References to "ABC" or "Alberta Building Code" are not permitted.</li> <li>See advisory for "<a href="#">Transition from NBC(AE) 2019 to NBC(AE) 2023</a>".</li> <li>Please be clear on all drawings about which version of the National Building Code the building is being designed and built to.</li> </ul>		
LOCATION (SITE PLAN, KEY PLAN)	Notes		
<b>NBC(AE) Division C 2.2.2.2 Site Plan</b> <ul style="list-style-type: none"> <li>A Site Plan showing subject buildings in relation to the surrounding buildings and property lines.</li> <li>Limiting Distances for each building.</li> </ul> <b>NBC(AE) Division B, 9.10.20.3. Fire Department Access to Buildings</b> <ul style="list-style-type: none"> <li>Fire Hydrant/Fire Truck/EMS.</li> <li>45 m travel distance to each unit entrance as per <a href="#">Regulations Bulletin RB014-042</a>.</li> </ul>	<ul style="list-style-type: none"> <li>Provide a site plan to a minimum scale of 1:100 showing the location of the buildings on the site and neighbouring buildings. It must include: <ul style="list-style-type: none"> <li>The building address.</li> <li>All dimensions.</li> </ul> </li> <li>Include the limiting distance lines surrounding each building: <ul style="list-style-type: none"> <li>The imaginary property line between <b>buildings</b> on the same site that is the basis for the spatial separation calculation must be shown on a site plan.</li> <li>The imaginary property line does not need to be in the middle of two buildings it can be proposed anywhere between the buildings.</li> </ul> </li> <li>Each fire compartment's exposing building face needs to be calculated separately.</li> <li>Show line of soffits on site plan.</li> <li>Clearly identify soffits required to be non-venting within 1.2 m of property, party wall centerlines or limiting distance lines (9.10.14.5).</li> <li>Soffits are not permitted within 0.45 m of limiting distance or property lines (9.10.14.5.).</li> </ul>		
ARCHITECTURAL DRAWINGS	Notes		
<b>NBC(AE) Division C 2.2.2.1 Architectural Drawings</b> <ul style="list-style-type: none"> <li>Building Code Analysis or Code Summary: <ul style="list-style-type: none"> <li>Building Area</li> <li>Sprinkler Status and Design standard (if required)</li> <li>Total Storeys</li> <li>Number of units</li> <li>Facing Streets Analysis</li> <li>Confirm building designed to 9.10.14.</li> </ul> </li> <li>Construction assemblies/details: <ul style="list-style-type: none"> <li>Fire-resistance ratings (9.10.3.1.)</li> <li>Sound Transmission Class (STC) (9.11.1.1.)</li> <li>Apparent sound transmission class (ASTC) (9.11.1.1.)</li> <li>Unit separation (9.10.9.14.)</li> <li>Fire/Smoke Separation (9.10.9.1.)</li> <li>Energy efficiency (9.36.)</li> </ul> </li> <li>Floor Plans of all floor levels: <ul style="list-style-type: none"> <li>Stair configurations (9.8.)</li> <li>Door sizes</li> <li>Equipment locations</li> </ul> </li> <li>Foundation Plan (Division C, 2.2.4.6.): <ul style="list-style-type: none"> <li>Radon Mitigation details (9.13.4.1.)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Floor plans should be not less than 1:100 scale.</li> <li>Floor plans must include: <ul style="list-style-type: none"> <li>wall locations</li> <li>wall types</li> <li>room names/uses</li> <li>door/window locations</li> <li>egress window function and size</li> <li>unit identification</li> </ul> </li> <li>Floor plan to show location of pipe under basement slab and section detail for radon mitigation (See 9.13.4.3. and <a href="#">Guide for Radon Measurements in Residential Dwellings</a>).</li> <li>A carport serving more than one dwelling unit is considered a garage and will be reviewed under 9.10.14., see 9.35.1.1.</li> <li>A detached garage serving more than one dwelling unit must comply with 9.10.14. references for spatial separation and construction (9.10.14.1.).</li> <li>Storage lockers, mobility storage or other compartments attached to the detached garage must be included in 9.10.14. building assessment details.</li> <li>Firewall is not required as per 9.10.11.2. (see also 9.10.9.14.).</li> </ul>		

<ul style="list-style-type: none"> <li>Elevations: <ul style="list-style-type: none"> <li>Cladding Materials (9.27.) <ul style="list-style-type: none"> <li><a href="#">Canadian Construction Materials Centre</a> (CCMC) if not prescriptive</li> <li>Combustibility requirements (9.10.14.)</li> </ul> </li> <li>Spatial Calculations (9.10.14.) <ul style="list-style-type: none"> <li>Limiting Distances</li> <li>Exposed Building Face Areas</li> <li>Glazing/Unprotected opening Areas</li> <li>Separate fire compartments</li> </ul> </li> </ul> </li> <li>Sections: <ul style="list-style-type: none"> <li>Ceiling Heights, Clearances (9.5.3.1.)</li> <li>Floor/Wall Assemblies (9.10.8.1.)</li> <li>Dimensions: Stairs, handrail, guards, etc. (9.8.)</li> <li>Stud spacing for floors/roof supported (9.23.10.1.)</li> <li>Fire Blocking (9.10.16.)</li> <li>Apparent Sound Transmission Class (9.11.1.1.)</li> </ul> </li> </ul> <p><b>Items of special note</b></p> <ul style="list-style-type: none"> <li>Egress requirements: <ul style="list-style-type: none"> <li>Travel Limits (9.9.9.1.) <ul style="list-style-type: none"> <li>Balcony required or window maximum 7 m to grade</li> <li>1.5 m maximum door to adjacent grade</li> <li>Enclosed exit stair</li> <li>Public Corridor</li> </ul> </li> <li>Egress Windows (9.9.10.1.) <ul style="list-style-type: none"> <li>Clearances/Window wells</li> <li>Side yard clearances (see <a href="#">Advisory A19-004</a>)</li> <li>Projections</li> </ul> </li> <li>Exit Protection: <ul style="list-style-type: none"> <li>Exit stairs (9.9.4.4., <a href="#">Protection of Openings Near Unenclosed Exterior Stairs and Ramps</a>)</li> <li>Exit doors (9.9.4.6.)</li> </ul> </li> <li>Projections: <ul style="list-style-type: none"> <li>Soffits/Eaves, Overhangs (9.10.14.5.)</li> </ul> </li> <li>Ventilation: <ul style="list-style-type: none"> <li>Roof, Soffits (9.19.)</li> <li>Unvented Assemblies (See <a href="#">19-BCV-022</a>)</li> </ul> </li> <li>Carport vs Garage (9.35.1.1.).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Including a sprinkler system in a building may allow for double the glazed openings at the same limiting distance compared to a building without a sprinkler system (9.10.14.4.(7)).</li> <li>Ensure balconies for place of refuge for third storey of dwellings above another suite.</li> <li>Provide spatial separation calculations for every exposing building face on each building that faces an adjacent property line, or another building on the same site, a lane or a street.</li> <li>Cladding and construction requirements of walls near a limiting distance line may be more restrictive when compared to 9.10.15. spatial separation requirements, see 9.10.14.5.</li> <li>Individual windows in an exposed building face may be limited in the size of their unprotected opening area based on the limiting distance of that building face. See 9.10.14.4.(3) and table 9.10.14.4.-B.</li> <li>Projections more than 1 m above ground level may be restricted in their location, see 9.10.14.5.(6).</li> <li>If the only means of egress from a dwelling is provided by an exterior stair with a total rise greater than 600 mm, it is considered an exit stair and may require protection (see 9.9.4.4.).</li> <li>Include wall, floor and roof intersection details showing fire resistance rating continuity. I.e., Type X gypsum.</li> <li>Include eave/soffit details, including elements required to be non-combustible, continuity of fire separations and gypsum support details.</li> <li>Floors within dwelling units must be an assembly with a fire-resistance rating (not a fire separation as per 9.10.9.4.) of 45 minutes, see 9.10.8.1. Exception in 9.10.8.10. does not apply to stacked dwellings.</li> <li>The edge of the floor at the stairs is to be lined with Type 'X' gypsum to maintain continuity of the fire-resistance rating of the floor assembly.</li> <li>Stairs between floor levels do not require protection.</li> <li>Walls, columns and arches supporting floor assemblies must have a fire-resistance rating equal to the assembly being supported, see 9.10.8.3.</li> </ul>	
STRUCTURAL DRAWINGS	NOTES	
<p><b>NBC(AE) Division C 2.2.4.3 Structural Drawings</b></p> <ul style="list-style-type: none"> <li>Structural Plans/Details for any structural designs that are not covered under prescriptive requirements of this code: <ul style="list-style-type: none"> <li>Foundation Wall Lateral Support</li> <li>Tall Walls</li> <li>Party Wall footings</li> <li>Firewalls</li> <li>Engineered Floors, Beams - Layouts &amp; Specifications</li> <li>Engineered Trusses - Layouts &amp; Specifications</li> <li>Some Retaining Walls (see notes)</li> <li>Non-prescriptive Steel beams, brick/stone veneer, etc.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Garage slabs over 55 sq. m. require engineering (see <a href="#">RB014-11</a>).</li> <li>All engineered (non-prescriptive) beams, joists and trusses require engineering using approved software (see <a href="#">BILD article</a>).</li> <li>Joist/truss spans exceeding 12.2 m require specific engineering.</li> <li>Retaining walls with a 1.2 m difference in grade, and other conditions may require specific engineering (see <a href="#">19-BCI-007</a>).</li> <li>Walls supporting a roof plus two floors may require studs spaced maximum 400 mm on center (see 9.23.10.1.).</li> </ul>	

MECHANICAL DRAWINGS	Notes
<p><b>NBC(AE) Division C, 2.2.6.2. Mechanical Drawings</b></p> <ul style="list-style-type: none"> <li>• Heating, Ventilation and Air Conditioning equipment and systems are to be shown on clear and legible drawings.</li> <li>• Dampers and fire stop flap locations identified and labelled properly, (9.10.13.13.) Fire dampers to conform to 3.1.8.4. and 3.1.8.10.</li> <li>• Plans to adequately address prescriptive requirements for ventilation (9.32.), Heating (9.33) for local design conditions.</li> <li>• Plans to adequately address penetrations of assemblies/membranes with a fire-resistance rating, (9.10.5.1. and 9.10.9.6.).</li> <li>• Openings in wall and ceiling membranes (part of an assembly that is required to have a fire-resistance rating) are properly detailed and dimensioned as required by Appendix D (D-2.3.10.).</li> </ul>	<ul style="list-style-type: none"> <li>• Provide discipline specific drawing set for mechanical (HVAC) if professional involvement is required.</li> <li>• Show all intake and exhaust outlets on the plans/elevations.</li> <li>• Show the location of all required carbon monoxide alarms.</li> <li>• Show details, dimensions, and sizes of membrane/ assembly penetrations for ducts through floors and vertical fire separations.</li> <li>• Show and properly label the locations and types of fire dampers, smoke dampers, fire/smoke dampers and fire stop flaps as required.</li> <li>• Trunk ductwork should not run in unprotected floor joist spaces of an assembly with a fire-resistance rating.</li> <li>• See <a href="#">Best practice guide on fire stops and fire blocks and their impact on sound transmission - NRC Publications Archive - Canada.ca</a>.</li> <li>• Thermal protection may be required above ductwork in an assembly required to have a fire-resistance rating. Show details for materials used, locations and dimensions (see Appendix D-2.3.10.).</li> <li>• Non-ducted return air plenums are not permitted in an assembly required to have a fire-resistance rating.</li> <li>• Mechanical equipment must only serve one dwelling unit. Equipment and ducting located within a dwelling it does not serve may need to be separated from the other dwelling(s) by a one hour fire separation, see 9.10.10.4.</li> </ul>
ELECTRICAL DRAWINGS (Optional – see notes)	Notes
<p><b>NBC(AE) Division C, 2.2.7.2. Electrical Drawings</b></p> <ul style="list-style-type: none"> <li>• Electrical devices and equipment to be clear and legible.</li> <li>• Conformance to prescriptive electrical requirements (9.34) must be demonstrated on the drawings.</li> <li>• Life safety systems are clearly demonstrated on the drawings.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide discipline specific drawing set for electrical if professional involvement is required.</li> <li>• The electrical panel should be located in an accessible location and must have 1 m of clear space in front (see Electrical Code).</li> <li>• Smoke alarm locations must be clear and legible on plans (9.10.19.3.).</li> <li>• Carbon monoxide (CO) alarms must be clear and legible on plans (9.32.3.9.).</li> <li>• Drawings to indicate interconnection of smoke and/or CO alarms within each dwelling as required (9.10.19.5.). Interconnection between separate dwelling units is not required.</li> </ul>
SPRINKLER DRAWINGS (if required)	Notes
<p><b>NBC(AE) Division C, 2.4.1.3 Fire Suppression System Designs</b></p> <ul style="list-style-type: none"> <li>• Sprinkler drawings to be clear and legible showing locations of all equipment, devices, and valves. Drawings to be stamped by a Professional Engineer.</li> <li>• Appropriate NFPA standard to be used and referenced clearly on the drawings. This standard is to be adhered to prescriptively.</li> <li>• Hydraulic calculations to be provided (if required by the standard).</li> </ul>	<ul style="list-style-type: none"> <li>• NFPA 13R is valid for low-rise residential occupancies (semi-detached dwelling with stacked dwellings).</li> <li>• NFPA 13D is not valid for stacked dwellings.</li> <li>• A sprinkler system is required for 9.10.14. houses not facing a street as a prescriptive solution (see 9.10.20.3.).</li> <li>• When using a sprinkler system to address code compliance instead of a prescriptive requirement an <a href="#">Alternative Solution</a> will be required (see Division C, 2.3.1.1.).</li> <li>• Sprinklering to address a building not facing a street as per A-9.10.20.3. does not require an alternative solution.</li> </ul>



## MORE RESOURCES

## IMPORTANT DEFINITIONS

## Notes

**NBC(AE) Division A, 1.4.1.2. Defined Terms**

- **9.10.15. Building:** buildings that contain only dwelling units and have no dwelling unit above another dwelling unit, and houses with a secondary suite including their common spaces.
- **9.10.14. Building:** applies to buildings other than those to which Subsection 9.10.15. applies.
- **Limiting Distance:** means the distance from an exposing building face to a property line, the centre line of a street, lane or public thoroughfare, or to an imaginary line between two buildings or fire compartments on the same property, measured at right angles to the exposing building face. NOTE: limiting distance is measured from the outside face of the cladding.
- **Exposing Building Face:** means that part of the exterior wall of a building that faces one direction and is located between ground level and the ceiling of its top storey or, where a building is divided into fire compartments, the exterior wall of a fire compartment that faces one direction.
- **Glazed Opening:** includes windows and glazed portions of doors. The area of glazed openings is measured to the rough opening of the window or door, not to the edges of the glazing.
- **Unprotected Opening:** means any opening other than the one equipped with a closure having the required fire-protection rating, or any part of a wall forming part of the exposing building face that has a fire-resistance rating less than that required for the exposing building face. Unprotected openings include windows, doors and openings for electrical and mechanical services.
- **Dwelling Unit:** means a suite operated as a housekeeping unit, used, or intended to be used by one or more persons and usually containing cooking, eating, living, sleeping and sanitary facilities.
- **Secondary Suite:** means a self-contained dwelling unit located in a building or portion of a building of only residential occupancy that contains only one other dwelling unit and common spaces, and where both dwelling units constitute a single real estate entity. (See Note A-1.4.1.2.(1)).
- **Exit:** means that part of a means of egress, including doorways, that leads from the floor area it serves to a separate building, an open public thoroughfare, or an exterior open space protected from fire exposure from the building and having access to an open public thoroughfare. (See Note A-1.4.1.2.(1)).
- **Street:** means any highway, road, boulevard, square or other improved thoroughfare 9 m or more in width, that has been dedicated or deeded for public use and is accessible to fire department vehicles and equipment.
- NOTE: A lane is not considered a street, and firetrucks will not use lanes for firefighting as there are too many variables such as potholes, garbage cans, overhead wires, etc. The street must meet specific hard surface standards to qualify.
- **Fire-resistance rating:** means the time in minutes or hours that a material or assembly of materials will withstand the passage of flame and the transmission of heat when exposed to fire under specified conditions of test and performance criteria, or as determined by extension or interpretation of information derived therefrom as prescribed in this Code. (See Sentence D-1.2.1.(2) of Appendix D of Division B.)
- **Fire Separation:** means a construction assembly that acts as a barrier against the spread of fire. (See Note A-1.4.1.2.(1).)

- Limiting distance lines do not have to be positioned exactly halfway between buildings. They can be placed by the designer to fit the building spatial calculations. However, they must be consistent from one building permit to the other (between buildings).
- Secondary suites (regardless of their rental status) are intended to exist as part of or under the care and control of the main dwelling and exist with the dwelling as part of a single real estate entity.
- Unprotected openings are calculated differently than glazed openings for spatial considerations.
- 9.10.14. buildings require attention to "unprotected" openings, and 9.10.15. buildings require attention to "glazed" openings.
- A 9.10.15. building can contain only dwelling units, like a house with a dwelling unit or a dwelling unit and a secondary suite.
- A 9.10.14. building can contain multiple occupancies, like a storage garage (F3) and an office (D) or multiple stacked dwelling units not considered secondary suites.
- Exceptions in the NBC(AE) for a house with an attached garage or detached garage serving only one dwelling unit are different from garages serving multiple dwelling units.
- Carports serving more than one dwelling unit (with or without a secondary suite) are considered garages and reviewed as 9.10.14. buildings with near 100 per cent unprotected openings. As such, limiting distance must allow for 100 per cent unprotected openings.

ALTERNATIVE SOLUTIONS	NOTES		
<b>NBC(AE) Division A, 1.2.1.1. Alternative Solutions</b> <ul style="list-style-type: none"> <li>Read carefully and follow the instructions if applying for an alternative solution.</li> <li>An alternative solution requires the application form and supporting documentation.</li> <li>Alternative solutions will be either accepted or denied.</li> <li>Applicants can appeal decisions to the Safety Codes Council.</li> </ul>	<ul style="list-style-type: none"> <li>For aspects of a building's design that do not meet prescriptive requirements of the buildings code or a relevant City of Calgary Standing Posted Variance, or Provincial Standata, the designer and owner may wish to submit a Variance.</li> <li><a href="#">Guide to applying for an alternative solution (variance).</a></li> <li><a href="#">Request for Specific Variance Form.</a></li> </ul>		
HELPFUL TIPS	NOTES		
<b>NBC(AE) Division A, 1.1.1.5. Application of this Code</b> <ul style="list-style-type: none"> <li><a href="#">SPV-003 Restrictions</a> (Standing Posted Variance (SPV) is "CONSTRUCTION OF EXPOSING BUILDING FACE (SPV-003)" for a detached garage.</li> <li>Small (less than 10 sq. m.) accessory buildings which are exempted from the need to comply with the building code cannot be attached to another building. Buildings must be a minimum 3 m apart.</li> </ul>	<ul style="list-style-type: none"> <li>Small accessory buildings less than 10 sq. m. may not be considered "buildings" for building code compliance.</li> <li>SPV-003 does not allow for deviations of the design.</li> <li>Example: Mobility storage lockers, if connected to the garage, do not allow a designer to use SPV-003. The garage building will need to be designed prescriptively to 9.10.14. (which is more restrictive for spatial separations and construction requirements) or a site specific <a href="#">Alternative Solution</a>.</li> </ul>		
<b>NBC(AE) Division B, 9.9.4.4. Protection of Unenclosed exit stairs</b> <ul style="list-style-type: none"> <li>Ensure proper protection of exit stairs.</li> </ul>	<ul style="list-style-type: none"> <li>If the dwelling unit is only served by one door to the exterior, stairs that descend/ascend from that door need protection if over 600 mm to adjacent grade.</li> <li>If the only means of egress from a dwelling is provided by an exterior stair with a total rise greater than 600mm, it is considered an exit stair and may require protection (see 9.9.4.4.).</li> <li>Depending on the grade of the site, some buildings/ dwelling units might have landings below 600 mm whereas others may have landings above 600 mm and if so, 9.9.4.4. must be resolved for units with landings above/ below 600 mm to grade.</li> </ul>		
<b>NBC(AE) Division B, 9.9.9.3. Shared Egress Facilities</b> <ul style="list-style-type: none"> <li>Ensure shared egress (exit stairs, doors, etc.) are compliant.</li> </ul>	<ul style="list-style-type: none"> <li>An alternate means of egress for each dwelling unit may be required if two dwelling units share an exit stairway, public corridor, exterior passageway or balcony.</li> </ul>		

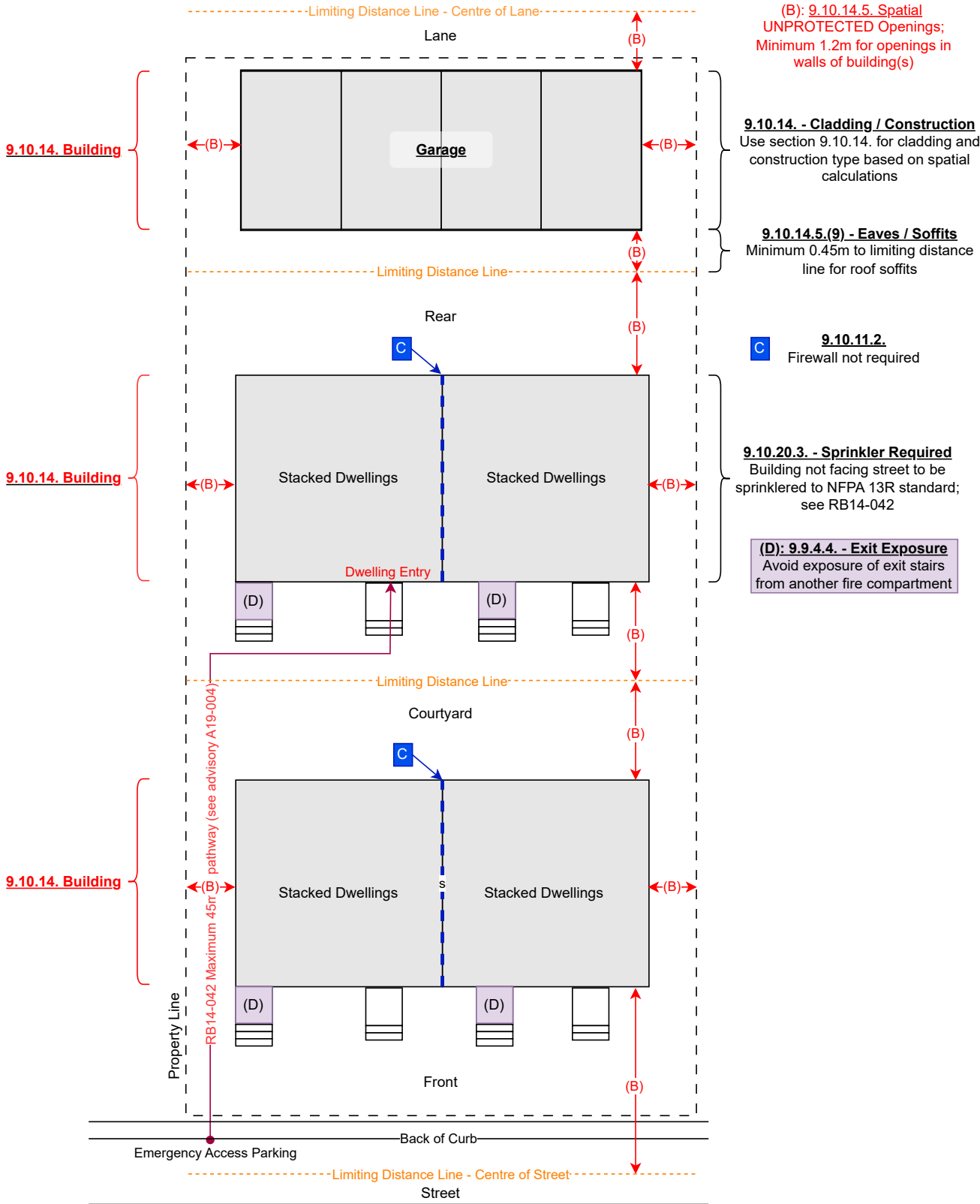
<p><b>NBC(AE) Division B, 9.10.9.6. General Requirements for Penetrations of Fire Separations</b></p> <ul style="list-style-type: none"> <li>• Penetrations of a required fire separation or a membrane forming part of an assembly required to be a fire separation shall be sealed by a firestop system.</li> <li>• Firestop system must have an F rating not less than the required fire-resistance rating for the fire separation.</li> <li>• Firestop system must be tightly fitted or cast in place, provided the penetrating item is made of steel, ferrous, copper, concrete or masonry, or sealed to maintain the integrity of the fire separation. (See Note A-9.10.9.6.(1).)</li> </ul> <p><b>NBC(AE) Division B, 9.10.9.7. Piping Penetrations</b></p> <ul style="list-style-type: none"> <li>• See this article for details. Provide evidence of compliance.</li> </ul> <p><b>NBC(AE) Division B, 9.10.9.8. Penetrations by Outlet Boxes or Service Equipment in Concealed Spaces</b></p> <ul style="list-style-type: none"> <li>• See this article for details. Provide evidence of compliance.</li> </ul> <p><b>NBC(AE) Division B, 9.10.9.9. Penetrations by Raceways, Sprinklers and Fire Dampers</b></p> <ul style="list-style-type: none"> <li>• See this article for details. Provide evidence of compliance.</li> </ul>	<ul style="list-style-type: none"> <li>• A floor assembly requiring a fire-resistance rating that is pierced by a duct or pipe must be protected.</li> <li>• For examples see Appendix D-2.3.10. and section 10 of the best practice guide (see below).</li> <li>• See section 10, "Best Practice for Fire Stops for Mechanical Service Penetrations" of <a href="#">Best practice guide on fire stops and fire blocks and their impact on sound transmission (canada.ca)</a>.</li> <li>• All penetrations of fire separations or a membrane forming part of a fire separation must meet one of the three general requirements as specified in 9.10.9.7, 9.10.9.8. and 9.10.9.9.</li> <li>• If the fire-resistance rating of a ceiling assembly is determined based on the membrane only and not of the complete assembly, the ratings must be determined from Table D-2.3.12., provided there are no openings (D-2.3.10. and D-2.3.11.) located within the ceiling membrane.</li> <li>• Electrical outlet boxes, air diffusers, recessed cabinets or other facilities piercing the membrane should be limited in size, tightly fitted and must not coincide with openings on the other side of the assembly. Provide details to illustrate spacing and offset.</li> <li>• Piping, conduits, ducts, wiring and chimneys that penetrate a fire-separation must be fire stopped with fire-resisting material.</li> <li>• Provide details and identify ULC listed firestopping systems proposed.</li> </ul>	
<p><b>NBC(AE) Division B, 9.10.9.13. Separation of Residential Occupancies</b></p> <ul style="list-style-type: none"> <li>• Residential occupancies shall be separated from all other major occupancies by a fire separation having a fire-resistance rating of not less than one hour.</li> <li>• A major occupancy classified as a residential occupancy shall be separated from other major occupancies classified as mercantile or medium-hazard industrial occupancies by a fire separation having a fire-resistance rating of not less than two hours.</li> </ul> <p><b>NBC(AE) Division B, 9.10.9.18. Separation of Storage Garages</b></p> <ul style="list-style-type: none"> <li>• A storage garage shall be separated from other occupancies by a fire separation with a fire-resistance rating depending on the number of motor vehicles being stored.</li> </ul>	<ul style="list-style-type: none"> <li>• Dwelling units require a fire separation between units of one-hour.</li> <li>• Occupancies adjacent to a residential occupancy (Group C) such as a storage garage (Group F3), or mercantile (Group E) space within the building require a two-hour fire separation.</li> <li>• A dwelling/suite overtop a storage garage (with five or fewer motor vehicles) requires a one-hour fire separation at all assembly interfaces between the occupancies, see 9.10.9.18.</li> <li>• Storage garages with six or more motor vehicles requires a fire separation of 1.5 hours, see 9.10.9.18.</li> <li>• An airtight air barrier system is required between a storage garage and a residential occupancy, see 9.10.9.18. and 9.25.3.</li> <li>• An exception is given if there are only two dwelling units in a building with a mercantile (Group E) occupancy, in this case only one hour fire separation is required.</li> <li>• Fire separations with a minimum one-hour fire-resistance rating are much more common in buildings with stacked units so consideration should be given to constructing all fire separations with one-hour fire-resistance rating to avoid errors or confusion.</li> </ul>	
<p><b>NBC(AE) Division B, 9.10.14.1. Application</b></p> <ul style="list-style-type: none"> <li>• Buildings other than those to which Subsection 9.10.15. applies.</li> <li>• A part 9 building that either contains occupancies other than dwelling units or has a dwelling unit above another dwelling unit.</li> <li>• A building in which dwelling units may be partially or wholly stacked.</li> </ul>	<ul style="list-style-type: none"> <li>• Does not apply to houses with a secondary suite, see 9.10.15.1.</li> <li>• Does not apply to detached carports conforming to Section 9.35. that serve not more than one dwelling unit or a house with a secondary suite.</li> </ul>	



CITY OF CALGARY ADVISORIES AND BULLETINS	Notes	
<p>The City of Calgary offers advisories and bulletins to provide clarification on the application of the NBC(AE) and other Provincial codes. An advisory is an interpretation of a code or municipal regulation.</p> <ul style="list-style-type: none"> <li>• <a href="#">City of Calgary Building Advisories, Bulletins and Variances.</a></li> </ul>	<ul style="list-style-type: none"> <li>• Relevant advisories, bulletins and variances:</li> <li>• <a href="#">Protection of openings near unenclosed exterior stairs and ramps.</a></li> <li>• <a href="#">Construction of Exposing Building Face - SPV-003</a></li> <li>• <a href="#">Firefighting access for Part 9 buildings.</a></li> </ul>	
ADDITIONAL INFORMATION		
<ul style="list-style-type: none"> <li>• Copies of all currently in force Codes and Standards are published on-line in PDF file format by the Government of Alberta at the following location:</li> <li>• <a href="https://www.alberta.ca/building-codes-and-standards">https://www.alberta.ca/building-codes-and-standards</a></li> </ul>		
EXAMPLE GRAPHICS INFORMATION	Notes	
<ul style="list-style-type: none"> <li>• See addendum to this document for example graphics illustrating some key elements of this document.</li> <li>• Example graphics are for reference and illustrative purposes only and are not intended to be a design guide or a comprehensive guide to an acceptable design.</li> </ul>	<ul style="list-style-type: none"> <li>• Figure 1 – Example – Middle Courtyard Semi-Detached Stacked Dwellings.</li> <li>• Figure 2 - Stacked Dwelling Diagram.</li> <li>• Figure 3 - Stacked Dwelling Diagram.</li> <li>• Figure 4 &amp; 5 - Assembly with Fire-Resistance Rating Diagram.</li> </ul>	

## Addendum

Figure 1 – Example – Middle Courtyard Semi-Detached Stacked Dwellings.



## Addendum

Table 1 – Diagrams illustrating stacked occupancy separation characteristics and penetrations.

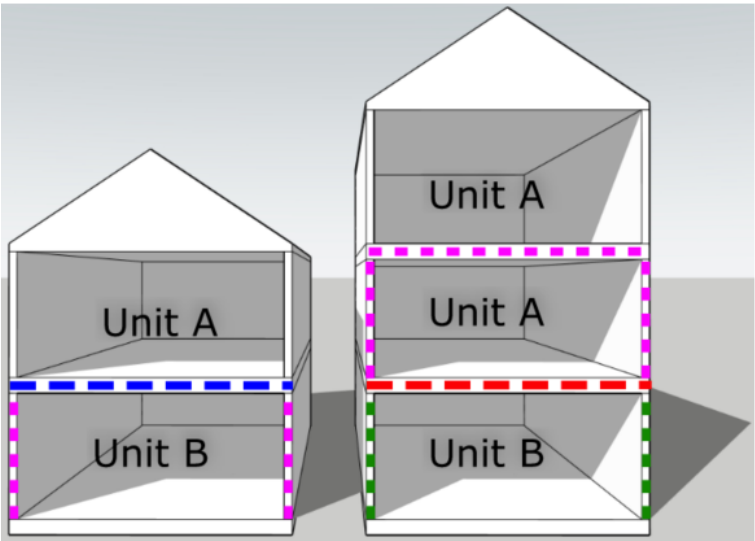


Figure 2 - Stacked Dwelling Example Diagram

### Stacked Dwellings Example 1

- 45-minute **fire separation** required between dwellings (single storey).
- 60-minute **fire separation** required between dwellings when two storeys or more, see 9.10.9.16.(3).
- Interior Floors within the same unit are required to be a 45-minute fire-resistance rated assembly.
- Loadbearing walls, columns, arches and beams supporting a fire separation are required to also be fire-resistance rated assemblies (not necessarily a fire separation) with the same rating as the element they support.
- Exceptions apply for secondary suites (9.10.15.), which are not the subject of this guide.

- ■ ■ ■ ■ 60 Minute Fire Separation
- ■ ■ ■ ■ 60 Minute Fire-Resistance Rating
- ■ ■ ■ ■ 45 Minute Fire Fire Separation
- ■ ■ ■ ■ 45 Minute Fire-Resistance Rating

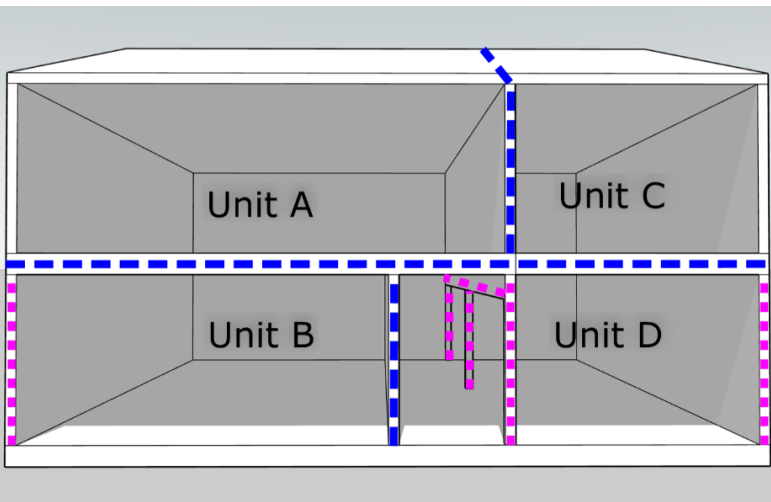
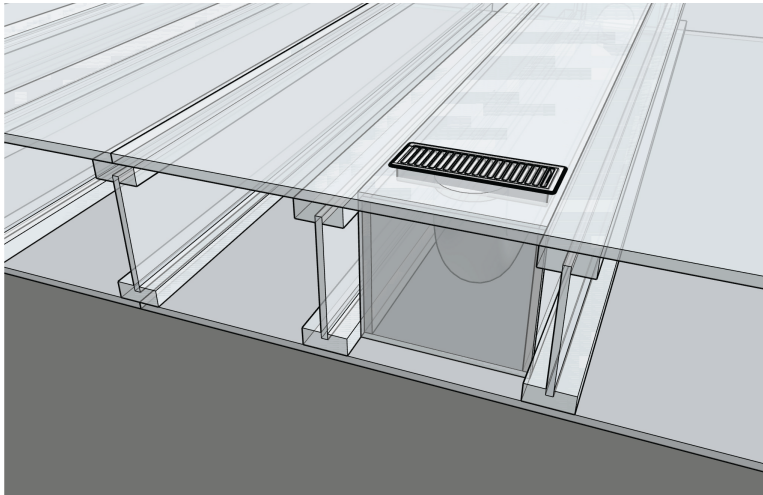


Figure 3 - Stacked Dwelling Example Diagram

### Stacked Dwellings Example 2

- 45-minute **fire separation** required between dwellings. This includes all walls and floors where they separate dwellings, see 9.10.9.16.(1).
- 60-minute **fire separation** required between dwellings if any unit is two storeys or more, see 9.10.0.16.(3).
- Loadbearing walls, columns, arches and beams supporting the fire-rated assembly or fire separation are also required to be fire rated assemblies (not necessarily a fire separation) with the same rating as the element they support.

- ■ ■ ■ ■ 60 Minute Fire Separation
- ■ ■ ■ ■ 60 Minute Fire-Resistance Rating
- ■ ■ ■ ■ 45 Minute Fire Fire Separation
- ■ ■ ■ ■ 45 Minute Fire-Resistance Rating



## Maintaining the fire-resistance rating

- There are many methods to maintain the fire-resistance rating of the assembly with duct penetrations. Please see 9.10.5.1.(3), appendix D-2.3.12., and [Best practice guide on fire stops and fire blocks and their impact on sound transmission \(canada.ca\)](#) for more details.
- Figures 4 & 5 illustrate an example of joist space lined with rated gypsum to enable a non-combustible duct to enter a joist space while maintaining the **fire-resistance rating**.
- Fire dampers may be an option in a **fire separation**, see 9.10.9.9.(5) (not shown).

Figure 4 - Assembly with Fire-Resistance Rating Diagram

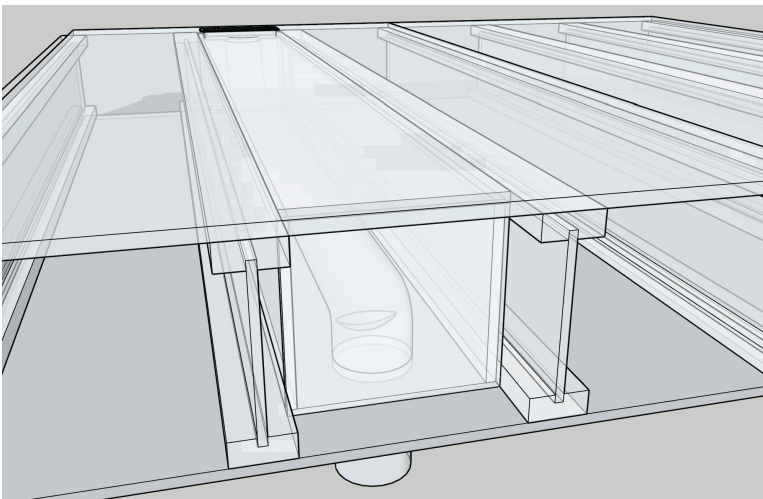


Figure 5 - Assembly with Fire-Resistance Rating Diagram

Provided for illustrative purposes only and is not intended to be a design guide or a comprehensive guide to an acceptable design.