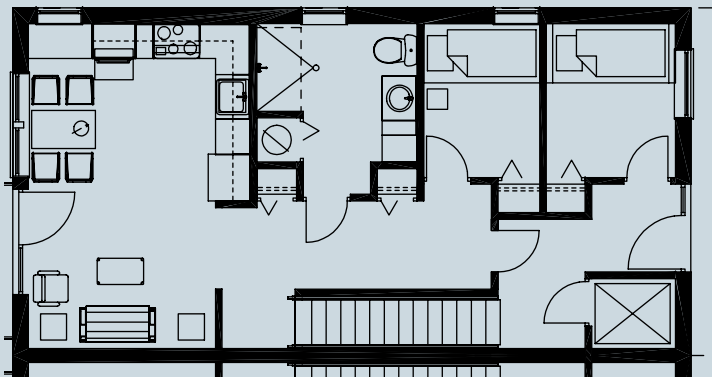


POCKET PLANNER



HOMES THAT ADAPT



Canada 





CMHC—HOME TO CANADIANS

Canada Canada Mortgage and Housing Corporation (CMHC) has been Canada's national housing agency for more than 65 years.

Together with other housing stakeholders, we help ensure that the Canadian housing system remains one of the best in the world. We are committed to helping Canadians access a wide choice of quality, environmentally sustainable and affordable housing solutions that will continue to create vibrant and healthy communities and cities across the country.

For more information, visit our website at **www.cmhc.ca**

You can also reach us by phone at 1-800-668-2642 or by fax at 1-800-245-9274.

Outside Canada call 613-748-2003 or fax to 613-748-2016.

Canada Mortgage and Housing Corporation supports the Government of Canada policy on access to information for people with disabilities. If you wish to obtain this publication in alternative formats, call 1-800-668-2642.

1. INTRODUCTION

Thinking of building or buying a FlexHouse? This Pocket Planner will help you visualize, plan and realize your FlexHouse. In it you will find:

- the **Practical Planning** section, which gives you critical details and measurements for planning a successful FlexHouse; and
- the **Contacts section**, which allows you to note the names and numbers of people working on your house.

Keep this Pocket Planner with you at all times throughout your planning and construction phases. It's small, but you'll find it a big help when building or buying your new FlexHouse.

WHAT IS FLEXHOUSING™ ?

A new approach to design developed in 1995 by the people at Canada Mortgage and Housing Corporation, FlexHousing™ is a new and forward-thinking approach to building based on the principles of: adaptability, accessibility, affordability and Healthy Housing™.

FlexHousing™ designs adapt to changes in a family's lifestyle with rooms that can change in size and function and (adjustable) fixtures to suit everyone's needs. Living spaces are made accessible and functional for all family members no matter what their physical abilities or special requirements. FlexHouses are affordable, especially over time, since there will be no need for costly moving or renovation expenses.

If you would like more information about FlexHousing, call 1-800-668-2642 or contact your local CMHC office.

THE FLEXHOUSING™ CONCEPT

The key to FlexHousing is that it is easily adapted to meet specific needs rather than relying on custom designs. Housing should continue to provide the initial occupants and subsequent occupants with accessibility, safety, security, ease-of-operation, convenience, comfort, and access to in-home services, as their needs and preferences change over time.

So that a dwelling will be flexible enough to meet a broad range of individual needs, over time, certain features should be incorporated at the time of construction. These would include features that

would be difficult to retrofit, such as rooms designed to permit easy change of use, barrier-free access, space for manoeuvrability, and wide doorways. Provisions should also be made during construction to simplify the later introduction of additional features that may be required. For example, reinforcing bathroom walls to support grab bars, and wiring the home to be compatible with home automation systems, etc.

FlexCheck

(the short check list of FlexHousing™ features)

Parking:

- ☐ width at least 2800 mm (9 ft.), preferred 3350 mm (11 ft.).
- ☐ short, level or gently sloped pathway to entrance

Entrances:

- ☐ all approaches are level or slope gently
- ☐ entrances are covered, have level landing 1500 mm square (5 ft. square), and adequate lighting
- ☐ step to cross threshold is no more than 13 mm high (1/2 in.)

Primary internal features:

- ☐ main living level contains kitchen, living room, washroom (convertible to 3 piece bathroom), and has space usable as a bedroom
- ☐ some rooms are designed to permit easy change of use
- ☐ stairs, are straight run and at least 1000 mm (40 in.) wide, preferred 1200 mm (48 in.) wide
- ☐ doors provide minimum clear opening width of 810 mm (32 in.) and halls are 1500 mm (60 in.) wide to provide adequate manoeuvring room, particularly at doorways and landings
- ☐ windows have sills no higher than 750 mm (30 in.), and easily operated hardware*
- ☐ doors have easily operated opening and locking hardware*
- ☐ cabinets and counters permit easy height adjustment
- ☐ electrical outlets are at 450 mm height (18 in.), controls and switches are at 1050 mm (42 in.)

* “easily operated” = without the use of tight grasping, pinching or twisting of the wrist.

2. PRACTICAL PLANNING

Your house project is broken down here according to the steps taken in construction: I) The Shell and Site Plan; II) Room-by-Room; and III) The Finishing Touches. Follow these FlexHousing guidelines, discuss every item with your architect or general contractor and decide which items are important and affordable for you.

Remember, FlexHousing is an approach to building homes that are adaptable, accessible and affordable.

I) The Shell and Site Plan

There are two main considerations when designing the structural shell of a FlexHouse and situating it on your property: Adaptability and Accessibility.

A FlexHouse is designed to adapt to meet your changing lifestyle. This can mean expanding from two to three bedrooms, changing the floor plan to include an office, or making other alterations to your living space. Therefore, the main structure, wiring and plumbing should facilitate these changes. In the ideal FlexHouse, some of the partition walls should be simple to move or remove and, therefore, should not be load-bearing.

As for accessibility, a FlexHouse is meant to serve the needs of all members of your family. If you or a relative has mobility difficulties or are in a wheelchair, it is important to consider how to enter and exit your home with ease. Driveways and sidewalks should be gently sloped, if at all, and a garage should be large enough for a wheelchair to move easily around a parked vehicle.

Shell and Site Plan Checklist

- ☐ shell with open floor plan
- ☐ ground floor entry, grade level access
- ☐ stair structure with reinforced wall (straight-run to allow for future installation of a lift)
- ☐ easily moveable or removable partition walls
- ☐ entry easily accessible from garage or driveway (no stairs)
- ☐ garage wide enough to accommodate a wheelchair
- ☐ paved driveway and walk at same level or on gentle slope
- ☐ low window position; sill at a maximum of 750 mm (30 in.) from floor level

II) Room-by-Room

ENTRANCE

Make your entrance way inviting and comfortable with adequate manoeuvring space. Design the porch to protect the entrance and provide sufficient width and depth for strollers and wheelchairs.

Checklist

- ☐ easy-to-operate door locks and lever handles
- ☐ window or peepholes on exterior doors; height considerations for both children and adults
- ☐ good lighting both inside and outside the entrance
- ☐ bevelled no step, no trip, exterior thresholds not exceeding 13 mm (1/2 in.) in height
- ☐ porches protect the entrance and provide sufficient width and depth to open door and accommodate a child's stroller or an adult's wheelchair or walker
- ☐ 1500 mm (60 in.) diameter turning space in front of letter box
- ☐ on the pull side there should be 600 mm (24 in.) clearance along wall at handle edge of door

- ☐ on the push side there should be 300 mm (12 in.) clearance along wall at handle edge of door

CORRIDORS, DOORWAYS AND STAIRS

Corridor and door widths are important to the FlexHouse concept. Make them spacious and wide. A roomy corridor gives the home a relaxed feel, makes the moving of large pieces of furniture easier and gives persons using a wheelchair or walker the room to manoeuvre. In multilevel houses, provision should be made for the future installation of either an inclined stair-lift or a vertical lift.

Checklist

- ☐ corridors' minimum width should be 1500 mm (60 in.)
- ☐ straight-run stairway
- ☐ easy-to-grasp continuous stair handrails
- ☐ reinforced stairway walls to allow future installation of a stair lift
- ☐ vertically aligned closets and appropriate framing to allow future installation of a vertical lift
- ☐ easy-to-grasp door levers
- ☐ easy-to-use door locks

- ☐ doors 860 mm (34 in.) wide provide clear minimum opening of 810 mm (32 in.)
- ☐ exterior sliding doors 1800 mm (72 in.) wide provide clear minimum opening of 810 mm (32 in.)
- ☐ bevelled interior thresholds with maximum height of 13 mm (1/2 in.)
- ☐ in multi-unit buildings provision for automatic door openers on entrance and vestibule doors

KITCHEN

Because of the range of activities carried out in the kitchen, careful planning is important. Consider accessibility, safety, convenience, efficiency and ease of use for all family members, young and old.

Checklist

- ☐ in a parallel kitchen, plan a minimum width of 1200 mm (48 in.), in a U-shaped kitchen, 1500 mm (60 in.)
- ☐ non-slip flooring
- ☐ task lighting over sink, stove and work surfaces

- ☐ pull-out work boards, one close to a wall-mounted oven
- ☐ some electrical switches and outlets at front of counters
- ☐ pressure-balanced, temperature regulating faucets
- ☐ easy-to-use faucets (e.g., lever type)
- ☐ counters and sink in modules which can be adjusted separately in height; or work surfaces at various heights
- ☐ rounded corners on counters provide safety
- ☐ create or plan for open space under sink and cook-top to permit use while seated—680 mm high by 750 mm wide by 250 mm deep (27.2 in. x 30 in. x 10 in.)
- ☐ optional roll-out cabinet to provide additional storage and workspace
- ☐ accessible shelves in upper cabinets (e.g., through adjustable height cabinets or pull-down shelving)
- ☐ use colour-contrast in cabinets and counters for people with poor vision
- ☐ tactile and colour-contrasted controls

BATHROOM

Consider safety features which will benefit all family members. A large bathroom is attractive, easier to clean, functional for your children (who tend to use the room in twos and threes) and wheelchair accessible. Be sure to provide adequate manoeuvring space and easy access to the toilet, sink, bathtub and shower.

Checklist

- ☐ non-slip flooring
- ☐ outward opening door
- ☐ tub with free-space along entire length
- ☐ shower with no threshold
- ☐ wall reinforcement to provide grab bars near toilet and in bath and shower
- ☐ pressure-balanced, temperature regulating faucets
- ☐ easy-to-use faucets (e.g., lever type)
- ☐ modular vanity which permits height changes
- ☐ rounded corners on counters provide safety
- ☐ standard-height toilet

- ☐ adjustable-height shower head
- ☐ mirror usable when standing or sitting
- ☐ sitting knee clearance under basin
- ☐ good-quality non-glare lighting

LIVING AND DINING AREAS

Living and dining areas should be large enough to accommodate normal furnishings and provide adequate space for traffic. If space is limited, consider combining living room and dining areas. As food and drink are often carried to these rooms, there should be no changes in floor level or texture.

Checklist

- ☐ easy passage from kitchen to dining area
- ☐ level floor with uniform surface texture
- ☐ extra electrical outlets to accommodate changing technology

BEDROOMS

At least one bedroom should have enough space to accommodate a double bed and normal furnishings while providing room for traffic flow and turning space for a person using a wheelchair. The bedrooms should be located to allow convenient access to a bathroom. Space on ground entry level may be used as a bedroom if necessary.

Checklist

- ☐ minimum 1500 mm (60 in.) on two sides of a double bed
- ☐ switched outlets for light control (near bed)
- ☐ telephone jack near bed
- ☐ closet rods usable from seated or standing position

LAUNDRY FACILITIES

In a house with more than one level, the laundry area should be located on the same floor as, and close to, the bathroom and bedrooms. If the laundry is to be initially located in the basement, provisions should be made for its future relocation to the main floor by providing easily adaptable space and electrical and plumbing connections.

Checklist

- ☐ laundry facilities on main or upper floor
- ☐ clear floor space of 750 mm (30 in.) by 1200 mm (48 in.) in front of each laundry appliance
- ☐ appropriate task lighting
- ☐ front-loading washer and dryer
- ☐ controls easy to reach and operate
- ☐ plumbing and electrical provisions for relocating laundry facilities to main floor

BALCONY

In most multiunit buildings, the balcony is the only outdoor living area directly available for private use. Make it accessible by persons using walkers or wheelchairs. Ensure that the balcony floor is level with the adjoining room.

Checklist

- ☐ bevelled no step, no trip, exterior threshold no higher than 13 mm (1/2 in.)
- ☐ exterior sliding doors are 1800 mm (72 in.) wide to ensure a minimum 810 mm (32 in.) opening

- ☐ minimum balcony clear width of 1500 mm (60 in.)
- ☐ balcony enclosure should not unduly restrict view from seated position
- ☐ adequate lighting switches inside
- ☐ exterior electrical outlet

STORAGE SPACE

Inadequate storage space is the bane of many homeowners. How much storage space do you use currently? Is it sufficient for your lifestyle? These are important questions to resolve.

Checklist

- ☐ storage spaces and closets easily accessible by all family members
- ☐ 200 lux light in general storage; switch located on outside of storage area
- ☐ electrical outlet in general storage
- ☐ shelving and hanger rods with adjustable heights

III) Finishing Touches

WINDOWS

Place windows at a height that allows outdoor views from a seated position. To take full advantage of the sun in winter, place the majority of window openings on the south wall; the house should be appropriately positioned on the site's north-south axis. Also, shop for energy-efficient windows.

Checklist

- ☐ easily operated windows
- ☐ opening mechanisms that are easy to grasp and operate
- ☐ locking mechanisms that are accessible and easy to operate
- ☐ sills not higher than 750 mm (30 in.) above floor level
- ☐ window-opening mechanism at 1050 mm (42 in.) from floor level and at a minimum of 300 mm (12 in.) from wall corner

ELECTRICAL OUTLETS AND CONTROLS

Electrical and mechanical system controls, such as breaker panels, should be in easily accessible locations. They should also be easy to operate and reachable from both sitting and standing positions.

Checklist

- ☐ light switches at 1050 mm (42 in.) from floor level
- ☐ electrical outlets at 450 mm (18 in.) from floor level
- ☐ control panels, thermostat controls at 1200 mm (48 in.) from floor level
- ☐ telephone and cable jacks at 450 mm (18 in.) from floor, close to electrical outlet

HEATING AND AIR CONDITIONING

The ability to control indoor air temperature, humidity, movement and freshness is important for the comfort and health of the occupants. It can be particularly important for older people and those who are sensitive to their environment.

Checklist

- ☐ heating system with easy access to main unit and controls
- ☐ ventilating system or air-to-air heat exchanger
- ☐ air-filtering system
- ☐ air movement and humidity control system
- ☐ temperature control by room or zone

HOME AUTOMATION

Many current and emerging technologies can give you greater control over your home environment in the areas of safety, security, convenience and comfort. It is more cost efficient to install wiring while the house framing is open, eliminating costs and trouble at a later date.

Checklist

- ☐ full wiring for current or future automation
- ☐ telephone jacks and electrical outlets for computers in rooms that may later serve as an office
- ☐ security systems for fire and theft

HEALTHY HOUSING FEATURES

As a FlexHouse addresses issues of occupant health (mobility, air quality, brightness and accessibility), it is only natural that considerations extend to choices of healthy materials. Consult your contractor on the following choice of materials and appliances.

(See Healthy Housing Practical Tips pamphlet — 60916)

Checklist

- ☐ materials (wood, insulation, drywall, paint and sealants)
- ☐ low-volume toilets and faucets
- ☐ energy-efficient appliances
- ☐ energy-efficient windows
- ☐ solar energy and heating
- ☐ rigid board insulation
- ☐ rainwater cisterns for domestic water and garden use

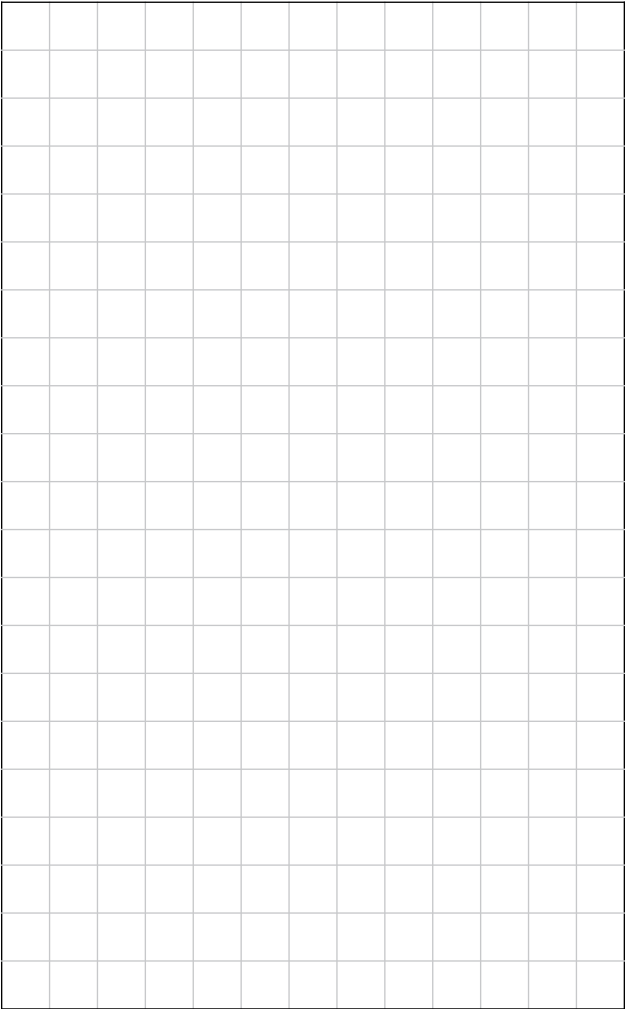
GARDEN

Paths, sidewalks and decks should be clear of obstructions, have non-slip surfaces and be easily accessible from the house. Elderly family members will appreciate planters at various and accessible heights.

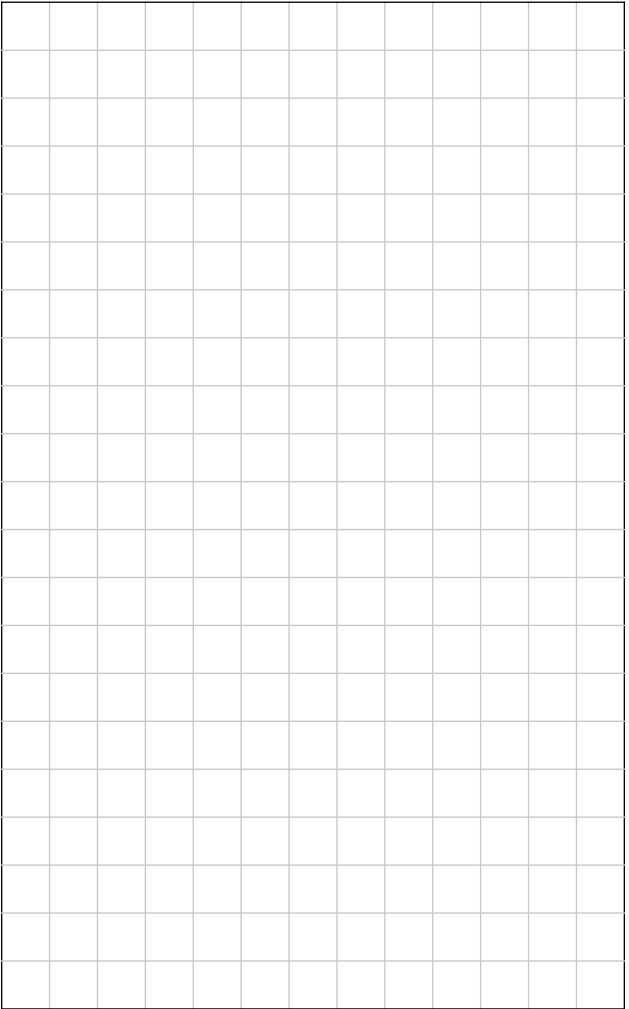
Checklist

- ☐ easy access to house; bevelled, no step, no trip, threshold
- ☐ non-slip paths and decks
- ☐ level walkways with little or no slope
- ☐ planters at various and accessible heights
- ☐ ample clear space for patio furniture and traffic

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3. CONTACT NUMBERS

CMHC – Regional Office _____

Architect _____

Banker _____

City Engineer/Planner _____

City Building Inspector _____

Surveyor _____

Developer _____

General Contractor _____

Sub-trades _____

Foundation _____

Carpenter _____

Electrician _____

Plumber _____

Roofer _____

Other _____

Building Materials Supplier _____

Equipment Rental _____

Insurance Company _____

Neighbours _____

Canadian Housing Information Centre

1-800-668-2642



POCKET PLANNER

CMHC offers financial assistance through its renovation programs that can be used for renovation of existing housing that incorporates FlexHousing™ principles. To learn more about these financial assistance programs, call 1-800-668-2642 or visit www.cmhc.ca

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