



MODULAR HOUSING ASSOCIATION PRAIRIE PROVINCES MODULAR-BUILT SINGLE FAMILY AND MULTI-FAMILY HOMES AND BUILDINGS



MODULAR-BUILT

What is a Modular-Built?

- The term **modular** describes a method of constructing a home or other building in large sections, away from the final destination, under climate controlled conditions.
- The type of home constructed is determined by the building code to which it complies. The design criteria determines whether the structure type is single detached, a multi-family, single level or multi-storey.
- Both modular-built and site-built are methods of construction. Therefore, homes commonly described as bungalows, town-homes, duplex's, two storey, etc., can be **site-built, modular constructed** or **using a combination of both construction methods.**
- All site-built and modular constructed homes must fully comply with the Alberta Building Code (ABC). Modular-built homes are certified to the Alberta Building Code using a comprehensive factory inspection process.
- When a modular-built home leaves the manufacturing facility it will possess both an Alberta Municipal Affairs approval label certifying the home meets or exceeds the Alberta Building code applicable to the area where the home will be sited, as well as the National Certification Standard.

CERTIFICATION PROCESS FOR MODULAR BUILDERS IN ALBERTA

- Every MHA member modular builder must have a quality assurance (QA) program in place that meets the requirements of the CSA standard A277-01 which is the Procedure for Certification of Factory-Built Housing.
- The Quality Assurance (QA) program includes a check of the design process ensuring that it meets the technical requirements for the various codes and standards.
- In order to be certified nationally, the modular builder must request a quotation to a national certification agency (CSA, Intertek or Quality Auditing Institute (QAI)).
- The certification agency will issue an application - once the application is activated, a site visit to audit the QA program and inspect the building during the rough in stage of the electrical and plumbing. A findings letter is then issued to the builder including further compliance actions required if necessary, and notes if a written response is required,
- The final inspection of the building is conducted by the certification agency confirming the builder knows and operates within the requirements of the CSA A277-01 standards.
- If the process meets the Quality Assurance (QA) program, the report is completed and a Certificate of Compliance is issued. If not, a follow up inspection and a second finding letter may be sent to the builder, which will also require written response.
- Ongoing follow up inspections are required to continue as a certified builder and to ensure the QA program is followed and any newly adopted codes are being met.

MHA Prairie Provinces - Northern Alberta
Economic Development

3

CERTIFICATION LABEL

Certification to CSA Standards provides for:

- Certification of the modular builder's quality control program
- Certification to the codes and standards
- Auditing of the builder's quality control program (on average, 4 times per year)
- Inspection of the final product confirming the builder's inspections.

The *Certification Mark* includes:

- Modular builder's name and address
- Model Identifier
- Serial Number
- Year of Manufacture
- Ground snow load and design snow load
- Thermal resistance of insulation and outdoor design temperature for heat loss calculations
- Factory installed appliances with make, model and energy source
- Complete electrical rating of circuitry (voltage, frequency, input current).

All modular-built homes must meet the stringent standards set by the National Building Code in addition to Provincial Building Codes.

Builders and the certification process ensure the applicable standards are met or exceeded.

MHA Prairie Provinces - Northern Alberta
Economic Development

4



MODULAR- BUILT MANUFACTURERS

- Modular construction consists of a logical and efficient work progression with a skilled & stable work force, an energy efficient design and construction consistency.
- The unique building process allows for greater efficiencies throughout the construction process. Modular construction offers superior waste management and an environmentally friendly construction process.
- Buildings are constructed in a climate controlled production environment. Weather is never a concern!
- The manufacturing facilities' quarterly inspection process ensures the homes meet both Canadian Standards Association (CSA) requirements and Alberta Municipal Affairs (AMA) labeling standards.

MODULAR-BUILT MANUFACTURERS

- Factory building provides for economies of scale which allow homes to be built more efficiently lending to a more affordable construction process.
- R20 wall insulation and sheeting is standard. High quality siding is added to the exterior or the customer can request an alternative exterior. Insulation can be upgraded based on the final location of the home.
- The environmentally controlled factory construction limits construction delays due to weather, protects against vandalism, and offers waste management & environmentally friendly construction process.
- The initially quoted price is generally the final cost. The cost could change if a modification is requested. No interim financing and no progress payments are required.
- All homes come with a 1-year warranty to correct any material or installation defects (as required by CMHC) and up to a 10-year structural warranty.

MHA Prairie Provinces - Northern Alberta
Economic Development

7

MODULAR-BUILT

- Modular buildings are designed to be placed on basements, crawl spaces, pilings or other approved foundations in compliance with the Alberta Building Code (ABC).
- Alternatively, buildings may incorporate steel or wood longitudinal sub-frame rails which have been designed for placement on permanent surface foundation systems.
- The CSA Z240.10.1 National Standard surface foundation is designed to support this type of building.
- The choice of foundations is based on soil specifications and must be approved by the local building inspector.

MHA Prairie Provinces - Northern Alberta
Economic Development

8

TYPES OF CONSTRUCTION

- In Alberta, the industry constructs *modular buildings* ranging in form from:
 - single family detached
 - town homes, duplexes
 - specialized multi-family complexes such as seniors residences
 - apartment style buildings of up to four stories in height
 - a range of low rise non-residential structures for commercial and other applications.

MHA Prairie Provinces - Northern Alberta
Economic Development

9

PARK MODELS TRAILERS FOR RECREATION

- "Park Model Trailers" are not typically certified to the CSA Z241 standard, are technically not governed by the Alberta Building Code, or any other province-wide regulation.
- However, if a local safety codes officer believes a Park Model Trailer is being used as a dwelling unit on a full-time, long-term basis, then the safety codes officer can require that the Park Model Trailer meet the requirements for a modular home, which means that the Park Model Trailer would have to comply with the CSA A277 standard and meet Part 9 of the ABC.
- Certain municipalities may permit Park Model Trailers, but the municipalities set the guidelines, which would typically be based on the nature of the use of the unit, i.e. at a lake for a limited window of time during the summer.
- Municipalities have the discretion to make the distinction between whether a factory-built home has to comply with the ABC modular home requirements, or whether the factory-built home can be permitted to serve as a Park Model Trailer (i.e. doesn't have to meet the ABC requirements).

MHA Prairie Provinces - Northern Alberta
Economic Development

10

PARK MODELS FOR RECREATION

- Park Models are available in two different classes: the **Park Model Trailer 102** which is built to RV specifications, the CSA Z-240 Standard, or the **Park Model Recreational Unit**, which is designed for seasonal use, generally in just one location, and built to the CSA Z-241 Standard.
- **Park Model Trailer 102** is designed to be towed by a heavy-duty tow vehicle (auto, van, pick-up truck, etc.) but is of restricted size and weight so that it does not require a special highway movement permit. The maximum width when being towed is 2.6 meters (102 inches).
- Designed for infrequent towing, it is **not** fitted with a 12-volt system for fixtures and appliances. Once on site in the set-up mode it must be connected to the local utilities.
- This recreational vehicle is built on a single chassis mounted on wheels. It usually has one or more slide-outs, but when in set-up mode the gross trailer area does not exceed 37.2 sq. meters (400 sq. feet). It conforms to the **CSA Z-240** Standard for RVs.

MHA Prairie Provinces - Northern Alberta
Economic Development

11

PARK MODEL RECREATIONAL UNIT

- **Park Model Recreational Unit** It is built on a single chassis mounted on wheels, which may be removed and returned to the factory.
- The unit is designed to facilitate occasional relocation, with living quarters for a temporary residence or seasonal use, and must be connected to those utilities necessary for the operation of installed fixtures and appliances.
- It has a gross floor area, including lofts, not exceeding 50 square meters (approximately 540 sq. feet) in the set-up mode and has a width greater than 2.6 meters (8' 6") in the transit mode.
- Park Model units always require a special tow vehicle and a special permit to move on the road as the width of the unit is greater than 2.6 meters. It conforms to the **CSA Z-241** Standard for RVs.
- **NOTE:** This definition has been developed by a joint industry task force of manufacturers, dealers, campground owners and the Canadian Standards Association and is the basis for the CSA Z-241 Standard for Park Model Recreational Units.

MHA Prairie Provinces - Northern Alberta
Economic Development

12

MODULAR-BUILT RETAIL SALES CENTRES

- Retail Sales Centres are situated throughout the Province and develop relationships with consumers.
- Retail Sales Centres ensure customers receive local support when purchasing a home or building. Sales Centers display a selection of homes in a variety of designs and budgets and can provide assistance with:
 - the selection of interior and exterior design options
 - energy efficiency options
 - land development and site planning can be assisted by the Retailers and Developers
 - provide long term service and warranty using proprietary factory trained service personnel.
- Financing assistance is offered through a selection of financial institutions familiar with Modular building and CMHC's products.
- MHA Retail Sales Centre members must have a provincial business license and provide bonding insurance.
- MHA has developed a standard Home Sales Agreement for the members' use.
- MHA offers a nationally accredited training program specific to the modular building industry as well as other sales training programs.

MHA Prairie Provinces - Northern Alberta
Economic Development

13

MODULAR-BUILT RETAIL SALES CENTRES

- When a home / building is placed on a site, the local building inspector ensures the home has both AMA and CSA labels. (No other interior inspection is required)
- Retail Sales Centres occasionally face concerns due to restrictions contained within some municipal land use bylaws.
 - Zoning Regulations (restrict use of moved in structures) The MHA has developed an Architectural Compatibility Guideline
 - Density
 - Lot coverage (single level structures use more space)
 - Currently not allowed attached housing and two story within a land lease community.

MHA Prairie Provinces - Northern Alberta
Economic Development

14

MODULAR-BUILT HOMES COMMUNITIES AND DEVELOPMENT

- Placement in Land-Lease Communities vs. placement on owned land
 - Cost Savings (do not have to pay for land up front)
 - Lifestyle Protection (Communities can be developed for a specific demographic)
 - Leasing means residents usually pay lower property taxes
 - Privately owned communities are able to maintain control of maintenance – professional management
 - Many communities offer recreational facilities which can speed up building a network for new residents

MHA Prairie Provinces - Northern Alberta
Economic Development

15

MODULAR-BUILT HOMES COMMUNITIES AND DEVELOPMENT

- Communities can ensure a high standard within the community through the enforcement of maintenance standards and strong community guidelines.
- Guidelines ensure that each home and home site is kept in excellent condition.
- The enforcement of these rules and guidelines creates a proud and pleasant appearance throughout the community for both the tenants and management.

MHA Prairie Provinces - Northern Alberta
Economic Development

16

MODULAR-BUILT HOMES TRANSPORTING

- Modular –built homes sometimes incorporate longitudinal beams for both
 - Support when transporting
 - Support when placing the home on a foundation.
- Types of Equipment
 - Tridem dolly
 - Trombone trailer
 - Roller systems
 - Lift systems.
- Safety / Safety record
 - Low incidents of transportation related damage.
- Training
 - Craning
 - Site Protection
 - Rolling
 - Assembly .
- The MHA ensures all US Homes transported into Alberta meet Alberta Transportation requirements.

MHA Prairie Provinces - Northern Alberta
Economic Development

17

BENEFITS OF MODULAR-BUILT

- All modular-built homes and buildings produced by MHA members are constructed with wood, which is the most environmentally friendly building material available.
- Precision framing jigs are used in factories to ensure modular structures are square and true.
- Climate controlled factories ensure building materials are installed dry and remain dry, reducing the potential for mold and other moisture related performance & durability degradation.
- Continuous air/vapour barrier application and precision insulation system result in a tighter, better insulated building envelope, further improving durability and energy efficiency.
- Homes are fully inspected and Labeled for Alberta Building Code (ABC) and CSA Standards compliance in the factory. Inspection at the building site is limited to the minimal amount of work required to ready the building for occupancy.

MHA Prairie Provinces - Northern Alberta
Economic Development

18

BENEFITS OF MODULAR-BUILT

- Buildings leave the factory near completion limiting the potential for theft and vandalism as well as construction debris at the work site.
- Minimal onsite work required reducing intrusion to neighbourhood resulting in safer neighbourhoods, less impact on the surrounding environment, not as many contractors driving into neighbourhood.
- Buildings leave factories with all wood framing fire protected by installed gypsum board. With increasing incidences of 'framing stage' fires at project sites, this protection can measurably reduce the number of fires and the cost of 'course of construction insurance'.
- Reduced field time required to complete buildings for occupancy results in lower interim financing costs.
- Only rarely does the purchase price quoted for a modular building differ from the final purchase cost.

MHA Prairie Provinces - Northern Alberta
Economic Development

19



QUESTIONS

Modular Housing Association Prairie Provinces

P.O. Box 3538 Station Main

Sherwood Park, Alberta T8H 2T4

Phone: (780) 429-1798 Fax: (780) 429-1871

Cellular: (780) 686-8687

Email: mha@shawlink.ca

Website: www.mhaprairies.ca



MHA Prairie Provinces - Northern Alberta
Economic Development

20