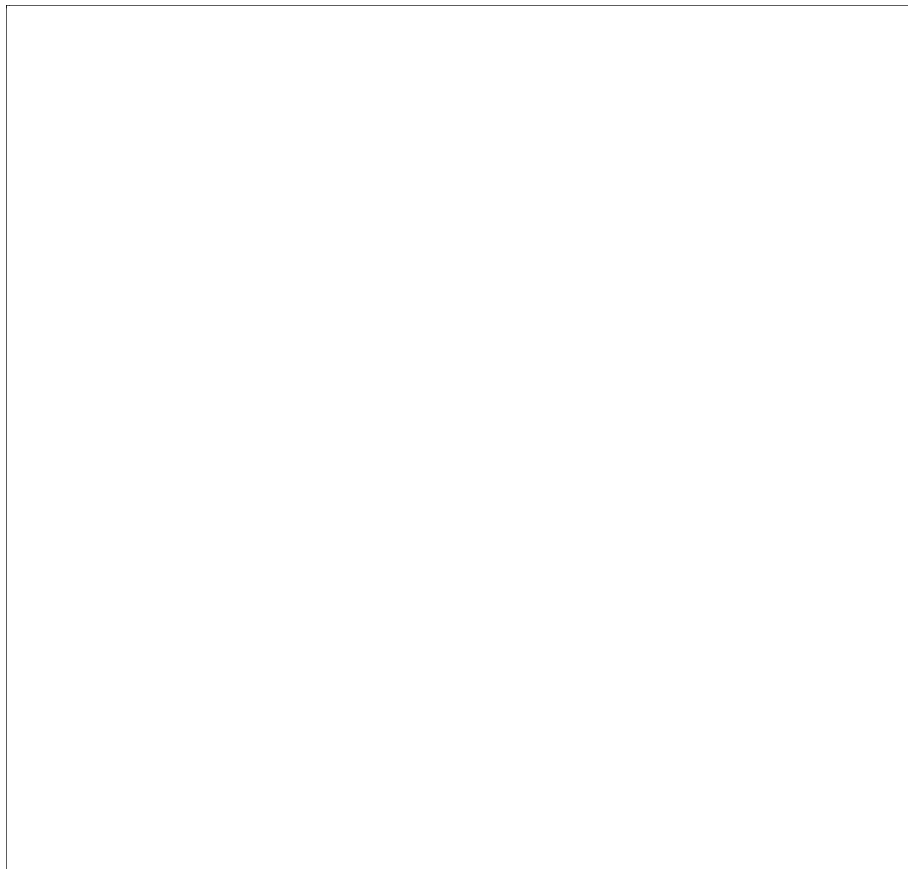


**SENIORS' LODGE UPGRADING
DESIGN STANDARDS**

February 1996

A guide standard for space requirements, building elements
and systems for the Seniors' Lodge Upgrading Program.



Alberta Public Works, Supply and Services
Property Development

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This Design Standards document is a joint effort of APWSS Property Development's Capital Projects Division and Technical Resources and Standards Division. It is intended to provide a standard of technical design that is appropriate to and consistent with the Seniors' Lodge Upgrading Program. This program provides for capital upgrading to repair deterioration, to upgrade life safety systems and to enable efficient facility operation.

The condition of existing lodges has been assessed and recommendations made for upgrading, with associated costs. Consultants may use these recommendations as a basis for establishing scope of work for each lodge. They should use criteria included in this document, as well as their own professional judgment, to identify additional conditions requiring upgrading. Consultants should notify the project team of such conditions.

These Design Standards are based on consideration of basic physical principles, knowledge of materials, experience with the technical design, construction, operation and maintenance of buildings generally, and on cost. They are believed to be a valuable resource recommended for use by the project team. The project team includes the lodge foundation, APWSS project manager, consultants and an Alberta Municipal Affairs representative.

The designer may find that a guideline or requirement, though normally applicable, is not appropriate for a specific project. In such cases, the project team should be notified and an alternative proposed that is consistent with the standards provided in this document. Where the guidelines do not address a technical design issue, it is the designer's responsibility to do so.

Introduce innovative designs or products only after thorough consideration of potential benefits and risks, and consultation among project team members. Project team members consulted should include those with expertise in the operation and maintenance of the facilities for which innovative designs or products are being considered.

This document includes some references to codes and regulations. Designs are also required to comply with applicable codes and regulations that are not referenced.

APWSS welcomes comment on the Seniors' Lodge Upgrading Program and this document. Please direct any questions or comments to:

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The Program is not intended to increase the size of the resident units or amenity areas. Increases in area to kitchen, service spaces and corridors may be considered for functional reasons, for example to provide dry goods storage, cooler and freezer capacity, and to meet health and life safety requirements.

The number of existing resident units within the lodge will normally not be increased. Increases in the number of residents units will only be considered outside the scope of this program and when funded by the lodge foundation.

Alberta Building Code Requirements

Joint consultation between Alberta Public Works, Supply and Services and Alberta Labour, Fire Safety has resulted in the document called "Fire Safety Considerations for Existing Senior Citizen Lodges". All of these requirements have been incorporated into this standards document and are noted by an asterisk * and footnote. The intent of the document is not to address all code requirements, but rather to highlight some areas commonly affected. It is not the intent of the program, nor is it a requirement, to upgrade to completely meet current codes, but to make the building safer and more efficient. Consultant are advised to involve local fire and building authorities having jurisdiction in determining the extent of compliance required.

Building classification is Group A2 for the central core area and Part 9 Group C for resident wings.

The major objective is to provide an acceptable degree of life safety from fire in existing senior citizen lodges.¹

Every lodge must have an accepted fire safety plan.*

Specification

The APWSS Master Specification contains additional standards in the form of design guidelines, specification requirements, standard detail drawings, etc. Use of the Master Specifications is mandatory, to the extent that it responds to program and project needs and requirements.

Standards

Understand and include standards related to life safety, referenced in applicable codes, and quality standards referenced in APWSS master specifications. Use design standards published by recognized professional organizations, except where overruled by these Program Standards.

* Fire Safety Considerations for Existing Senior Citizen Lodges.

CIRCULATION/ACCESSIBILITY

Barrier Free Access

Ensure that barrier free access ramp is provided at the main entrance and at least one other entrance to the lodge.

Design requirements for barrier free access to and within the lodge should meet where possible the requirements specified in the "Barrier-Free Design Guide" by Alberta Labour.

The requirements for barrier free access should be familiar to those operating senior citizen lodges. Should additional information be necessary contact Client Services of Alberta Labour.*

Exits

Each floor area except existing basements must be served by no fewer than two exits. The travel distance to an exit is not to exceed 30 m where the building is not sprinklered and 45 m where the building is sprinklered.*

COMMON SPACES

Public Washrooms

Provide a minimum of one wheelchair accessible public washroom in close proximity to the main common area of the Lodge.

RESIDENTS' SPACES

Resident Bathrooms

Provide wheelchair accessible bathrooms in resident rooms , only when requested by the Lodge Foundation, up to a maximum of 10 per cent of the total units. Requirements to be reviewed by the lodge foundation to determine total number.

SPECIAL PURPOSE SPACES

Kitchen and Service Space

Kitchen shall be large enough to function efficiently.
Provide minimum 3 m x 3 m dry goods storage on main floor.
Provide adequate walk-in cooler and freezer units on main floor.

Laundry

Provide separate facility and resident laundry areas as required by lodge foundation.

Provide an area for linen storage located in close proximity to the facility laundry area , or as directed by the foundation.

* Fire Safety Considerations for Existing Senior Citizen Lodges.

Assisted Tub Room	Tub room should be large enough to allow for wheel chair circulation to three sides of the tub and function efficiently. Tub room to include an assisted bath, w.c., sink, (shower with grab bars, hand shower and seat optional), and towel and locked storage for chemical.
Hair Care Room	When space for hair care has been requested space designs should include hair cutting chair, hair washing sink, storage space, mirror and special attention to electrical requirements. Hair care area may be part of another room serving more than one function.
General Note	Requirements may vary depending on local conditions. Utilize existing floor area whenever possible.

A SUBSTRUCTURE

A10 FOUNDATION

A1010 Standard Foundation

Building and foundation to be structurally sound with no evidence of unstable conditions.

Structural elements to be free of any deterioration due to corrosion, moisture, etc. which may impair their load carrying capacity.

Crawl space foundation walls shall be insulated, minimum RSI 1.23 and all penetrations sealed.

B SHELL

B10 SUPERSTRUCTURE

B1010 Floor Construction

Load capacities to satisfy the Alberta Building Code.

Floor systems to be free of squeaks to the extent possible.

All floor structural components to be free of damage or intolerable deflection, cracks or other visible signs of distress. Structural elements to be free of any deterioration due to corrosion, moisture, etc. which may impair their load carrying capacity.

The basement floor area (ceiling between basement and main floor) should be separated from the remainder of the building with a fire separation that provides a fire-resistance rating of at least 45 minutes.*

B1020 Roof Construction

Load capacities to satisfy the Alberta Building Code.

All roof structural components to be free of visible signs of distress. Structural elements to be free of any deterioration due to corrosion, moisture, etc. which may impair their load carrying capacity.

Each lodge to be accessed to determine location of existing fire walls, and if they are acceptable in providing the required attic fire barrier.

* Fire Safety Considerations for Existing Senior Citizen Lodges.

B1020 Roof Construction

Attic spaces require fire stopping into compartments not greater than 300 m², or 20 m in any dimension. Attic separations should be aligned with other separations below. In existing facilities it is usually difficult to subdivide attic spaces if they were not originally subdivided. In these cases it would be acceptable to have the concrete block wall form the necessary attic fire barrier for the two residential wings, without providing additional separations.*

B20 EXTERIOR ENCLOSURE

The intent is to minimize discomfort of the lodge residents and to provide a reasonably energy efficient building. The primary approach to the wall system is to minimize air leakage. Upgrading of the insulation is not usually practical or cost effective. A thermographic scan of the building may be considered where there are reported high energy consumption or serious discomfort problems.

It is probably not economical to increase the insulation thickness due to questionable air seal completeness (electrical or mechanical through drywall), thermal bridging of trusses etc. The impact of adding insulation could be negative if condensation occurs in the construction.

B2010 Exterior Walls

All exterior wall assemblies shall be made structurally sound and require minimal maintenance for the next ten years.

Painting stucco is acceptable to address minor cosmetic cracking. Ensure paint is suitable for the type of existing stucco. Major cracking or delamination of stucco from backup wall should be investigated to determine cause, and problem corrected.

If full replacement of exterior finish is necessary, the preferred solution would be to remove existing cladding to sheathing (replacement of sheathing may also be necessary depending on type and condition), install an air seal and insulation on the exterior of the structure. Rainscreen design would be the preferred method but other options could be considered. Details for tie-in to windows, doors, roof, and foundation should be similar.

Increasing insulation values is usually insufficient justification for retrofitting cladding.

Soffit, Fascia and Eavestroughs

When replacing soffits and fascias prefinished aluminum should be considered as a low maintenance material.

Eavestroughs and rain water leaders shall be in good condition and sized for the area of roof to be drained.

Provide splash pads to drain water away from building. Keep splash pads and draining water clear of all walkways and pedestrian travel.

* Fire Safety Considerations for Existing Senior Citizen Lodges.

B2020 Exterior Windows

Windows shall require replacement if not in overall good condition, not operable, or showing frame deterioration.

Refer to the Data Sheets prefacing APWSS master specification Section 08640, Residential Windows, for information and guidance relative to design, drawing and specification decisions.

When considering cladding of existing wood framing, consult with APWSS Building Sciences Branch.

When replacing or adding windows consider orientation, ventilation, height above floor, location of mullions for best view, and privacy.

B2030 Exterior Doors

Ensure exterior doors are operable, in good condition and have good weather seal. When replacing doors, use low-maintenance materials.

When upgrading main entrances for barrier-free access, consider the following three options:

- Low energy door operator, as specified in APWSS master specification Section 08745.
- Automatic swinging entrance doors, as specified in APWSS master specification, Section 08460, Automatic Entrance Doors.
- Automatic sliding entrance doors, as specified in APWSS master specification, Section 08460, Automatic Entrance Doors.

Low energy operators are intended for manual activation, do not require additional safety devices, and are considerably cheaper than automatic doors.

Sliding doors require more width than swinging doors, but are preferable for safety and energy consumption considerations. Consult with lodge foundation to determine requirements.

When automatic entrance doors are selected, consult with Specifications and Standards Branch for access to APWSS master specification Sections.

Doors used to exit the building must be readily operable without requiring keys, special devices or specialized knowledge of the door opening mechanism.*

* Fire Safety Considerations for Existing Senior Citizen Lodges.

B30 ROOFING

B3010 Roof Coverings

Repair or replace deteriorated areas of roofing not expected to last 10 years. This may be achieved by repairing or replacing damaged areas. Consideration should be given to an air seal, insulation and roofing system approach, especially when the similar approach is used on the exterior walls.

When replacing built-up roof - Stramit (Sloped), consult with APWSS Building Sciences Branch.

When replacing built-up roof - Wood Deck (Sloped):

Remove existing roof membrane, gravel and insulation (only if wet).

Determine insulation value.

If insulation is wet replace to match existing.

If insulation is dry add 25 mm fiber board.

Apply roofing system.

When replacing built-up roof - Plywood Deck (Flat):

See APWSS Master Specification for Built-up Roof on Uninsulated Wood Deck Section 07501.

Either 2 ply SBS membrane or 4 ply asphalt and gravel are acceptable roofing systems.

B3020 Ventilation

Increasing attic ventilation may result in more interior moisture leaking into and condensing on cold attic surfaces. If increasing ventilation, consider measures to reduce air leakage into attic spaces, particularly if humidification will be upgraded.

Coordinate ventilation requirements with the type of roofing systems being used.

C INTERIORS

C10 INTERIOR CONSTRUCTION

Walls and ceilings of storage rooms and janitors' closets should provide a fire separation with a fire-resistance rating of at least 45 minutes.*

In buildings that are completely sprinklered, corridors, rooms and suites can be separated by fire separations without a fire-resistance rating.*

* Fire Safety Considerations for Existing Senior Citizen Lodges, Fire Separations.

The dining and activity areas are treated as being an occupancy within a public corridor, therefore, no corridor fire separation is required. In some facilities the dining and lounging areas will be separated from the other areas by construction having a 1 hour fire resistance rating.*

Except where the building is sprinklered, storage rooms not contained within a suite, for the use of Resident's, are to be sprinklered and separated from the remainder of the building by a fire separation having a fire-resistance rating of not less than 45 minutes.

The mechanical room should provide a fire separation with a fire-resistance rating of at least 1 hour.*

Access panels and openings in fire separation membranes must be protected with rated closures. In some cases the materials used for existing closures will provide a fire protection rating even though the materials are not specifically labelled by a testing agency. In these cases, the existing materials can be considered acceptable in providing an equivalent fire protection rating.*

Corridor fire separations are established by having the walls carry the rating up through the ceiling to the underside of the roof structure, or, by having the rating carried through the ceiling membrane itself. Where the rating is carried in the ceiling membrane, the membrane must be a solid fixed membrane.*

C1010 Interior Partitions

All interior walls shall be sound with all penetrations sealed. Walls with visible signs of cracks, spalling, peeling paint, etc. should be patched, repaired and painted.

Provide STC 50 construction for all new or modified walls separating dwelling residence rooms.

Corridor wall and suite walls should provide a fire separation with a fire-resistance rating of a least 45 minutes. Existing lath and plaster wall construction that is in good repair is considered acceptable in meeting this guideline.*

A 1 hour fire-resistance rating is required between the Group C residential occupancy and the Group A2 assembly and dining area. The existing concrete block walls are considered to meet this standard. The walls must be extended through the ceiling membrane to the underside of the roof structure. If the concrete block walls do not extend to the roof structure, a 1 hour rated gypsum wall board assembly can be used to complete the fire separation.*

* Fire Safety Considerations for Existing Senior Citizen Lodges, Fire Separation.

C1020 Interior Doors

Ensure fire rated doors are provided where required.

Where stairs from a basement enter an exit corridor, all doors leading to the corridor must be fire rated and the corridor should be pressurized. The intent is to create a safe path to exit from the basement.*

When replacing door hardware, use lever type hardware.

Electronic door closers are to be provided on each unit entry door when required.

Doors located in a required fire separation are to provide a fire-protection rating of at least:*

- (i) 20 minutes where the wall rating is 45 minutes, and
- (ii) 45 minutes where the wall rating is 1 hour.

In older structures, solid wood doors and heavy wood frames were used as closures with some covered in metal or gypsum board. These closures may be considered equivalent to a labelled door and frame assembly. Doors that are solid core wood and a minimum of 44 mm thick will be accepted as providing a 20 minute fire protection rating.*

Doors located in a required fire separation are to be equipped with labelled self-closing and latching hardware.*

Hold-open devices are permitted on doors in required fire separations provided they are designed to release upon a signal from a smoke detector installed in accordance with Appendix B of NFPA 80 "Fire Doors and Windows", or by a signal from the building fire alarm system.*

C1030 Interior Specialties

Closet Storage Units

Wire storage closets shall be provided in tenant storage areas which presently do not have adequate storage, or require more.

Interior Identifying Devices

Provide interior residents room signs as required.

* Fire Safety Considerations for Existing Senior Citizen Lodges, Signage and Emergency Power and Fire Separations

Bathing and Resident Lift System Provide at least one assisted bath and lift. Fixed height tub with lift, adjustable height tub, fixed height tubs lift accessible and fixed rotational tub are all acceptable.

Tub and lift requirements should be discussed with lodge foundation and care givers.

C30 INTERIOR FINISHES

When dining and lounging areas are separated from other areas by construction having a 1 hour fire resistance rating, less attention is paid to the flame spread rating requirements of the walls and ceilings.*

In some facilities the lounge areas are sometimes part of the lobby or corridor system. As part of the corridor, unless sprinklered, greater controls will be placed on flame spread ratings.*

The maximum flame-spread rating of interior wall and ceiling finishes is 150.*

In sprinklered buildings the maximum flame-spread rating of interior wall and ceiling finishes in corridors is 150.*

Kitchens and tub rooms walls and ceilings should have impervious finish such as ceramic tile or high quality gloss or epoxy type paint.

Acrylic latex paints should be used, with attention given to the preparation of the existing surfaces.

C3010 Interior Wall Finishes

The maximum flame-spread rating for the interior wall finish of corridors in an unsprinklered building is:⁵

- (i) 75, or
- (ii) 25 on the upper half of the wall and 150 on the lower half of the wall.

C3020 Interior Floor Finishes

Existing carpet and sheet flooring shall have minimum 5 year life expectancy.

Where replacing carpet, use APWSS Master Specification Section 09682, Carpet (Senior' Lodge Upgrading).

When replacing sheet goods, use residential type in resident's washrooms, commercial grade in public areas, and kitchen and non-slip flooring in commercial laundry, and assisted bath areas. Refer to APWSS master specification resilient flooring Section 09650 for guide information relating to grade and type.

* Fire Safety Considerations for Existing Senior Citizen Lodges, Flame Spread Rating and Fire Separations.

C3030 Interior Ceiling Finishes

All ceiling penetrations are to be sealed, including electrical boxes.

Smooth painted ceiling finish is acceptable. Sprayed texture finished can be used in the residents' bedrooms, corridors and common areas. Do not use sprayed texture in high humidity areas.

When replacing ceiling finish in the dining and lounge areas, use a sound absorptive finish with a minimum Noise Reduction Coefficient (NRC) of 0.60.

The maximum flame-spread rating for the interior ceiling finish of a corridor is 25.*

D SERVICES

D20 PLUMBING SYSTEMS

D2010 Plumbing Fixtures

Replace all plumbing fixtures that are chipped, cracked or stained.

Replace toilet ballcock assemblies as required.

Replace all plumbing brass that is deteriorated or has no replacement parts available.

Replace sump pumps having less than 10 years life expectancy as required to ensure a reliable system.

D2020 Domestic Water Distribution

Main water service should be of adequate size and free of leaks. If replacing the service, use copper piping.

Replace all hot water storage tanks having less than 10 years life expectancy and those that are in a deteriorated state.

Replace existing water heaters having less than 10 years life expectancy with new gas-fired units.

Consider the use of high capacity gas-fired water heater with a separate gas-fired booster for the kitchen if both existing tank and heater require replacement.

Replace domestic water circulating pumps having less than 10 years life expectancy.

If replacement of steel or galvanized piping (H.W., C.W., H.W.R) is required, replace with copper piping.

Identify all piping in mechanical rooms, according to the applicable master specification.

* Fire Safety Considerations for Existing Senior Citizen Lodges, Flame Spread Rating.

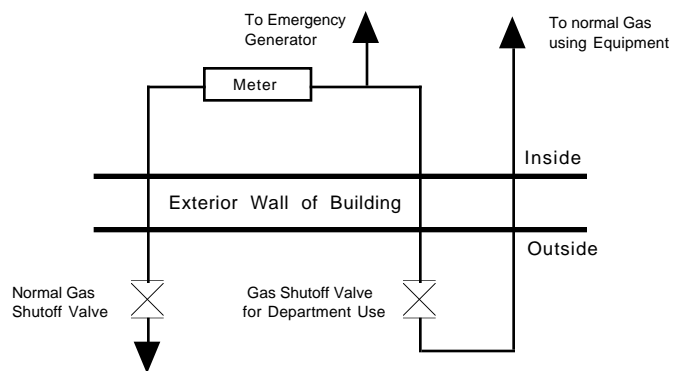
Install suitable backflow prevention according to local bylaws and the Alberta Plumbing Code.

D2030 Sanitary Waste System

Replace leaking cast iron sewer pipe with DWV PVC pipe. Correct continual sanitary drain plugging conditions where they exist.

D2050 Natural Gas Systems

Where the building has a natural gas fired emergency generator as a power supply source, the supply piping to the generator should be modified to the same standards that are permitted under the Guideline for Upgrading Existing Medical Care Facilities.* As per the following schematic layout:



D30 HVAC SYSTEMS

Where stairs from a basement enter an exit corridor, the corridor should be pressurized. The intent is to create a safe path to exit from the basement.*

D3010 Fuel Supply Systems

Ensure gas meter installation conforms to gas utility ventilation guidelines.

D3020 Heat Generation Systems

Replace existing boilers, having less than 10 years life expectancy, with two natural draft, steel or copper tube boilers each sized at 60 to 70 per cent of total capacity required. Boilers to have indoor and outdoor reset controller.

Replace existing heating water circulation pump(s) having less than 10 years life expectancy with two new pumps piped in parallel configuration. Use pumps with mechanical seals.

Replace all water level controls, zone control and isolation valves, and air vents having less than 10 years life expectancy. Replace deteriorated piping and radiation as required.

Replace all air (furnace) systems serving resident units, with hot water heating system.

* Fire Safety Considerations for Existing Senior Citizen Lodges, Signage and Emergency Power.

	<p>Replace flues and breeching that are in poor condition.</p> <p>Replace damaged or missing insulation as required.</p>
Combustion Air	<p>Review and upgrade the combustion air and relief air according to Alberta Building Code requirements.</p>
D3030 Heat Rejection System	<p>Consider provision of air conditioning to kitchen if local conditions warrant.</p>
D3040 HVAC Distribution Systems	<p>Replace all leaking isolation valves. Consider adding isolation valves where necessary.</p> <p>Install fire dampers in existing ductwork where it passes through fire-rated walls.</p> <p>Clean all supply, return and exhaust ductwork that is not to be replaced.</p> <p>Provide a separate kitchen make-up air unit. Noise level in kitchen area not to exceed RC 45.</p> <p>Replace existing hallway pressurization make-up air units, evaporative coolers and other ventilation systems having less than 10 years life expectancy. Size units and modify ductwork as required to provide ventilation according to the 1990 Alberta Building Code and ASHRAE Standard 62-1989.</p> <p>Re-pipe to provide, on hot water heating systems, individual room thermostat zone control capability.</p> <p>Replace all excessively noisy washroom exhaust and range hood fans with units that have a maximum sound rating of 4.0 sones for exhaust fans and 7.0 sones for range hoods.</p> <p>Provide mechanical ventilation into crawlspace.</p> <p>Consider provision of humidification to make-up air system. Discuss with lodge foundation.</p>
D3060 HVAC Controls	<p>Replace pneumatic thermostats having less than 10 years' life expectancy.</p> <p>Replace existing control compressors and air dryers having less than 10 years life expectancy with new duplex unit complete with air dryers.</p> <p>When replacing control systems, electric or pneumatic systems are acceptable. Note that electric systems are preferred by most lodges for ease of operation and lower maintenance costs .</p>

* Fire Safety Considerations for Existing Senior Citizen Lodges, Other Items.

D40 FIRE PROTECTION SYSTEM

D4010 Fire Protection Sprinkler Systems

The owner may wish to consider installing a residential sprinkler system as a method of compensation for existing construction. If sprinklering is elected, then it should be installed in conformance with NFPA 13R "Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height".*

An engineering assessment of water supply capabilities should be performed to determine reliability based on the design criteria.*

Where sprinkler systems or standpipe and hose systems exist, or are being incorporated as an upgrading feature, the water supply for the systems must be determined to ensure there is sufficient quantity and pressure.*

D4030 Fire Protections Specialties

A minimum of a 40 BC rated portable fire extinguisher is to be installed in the kitchen area.*

Upgrade, modify, replace kitchen exhaust hood, exhaust fan and exhaust ductwork to conform to 1990 Alberta Building Code and NFPA 96.

Upgrade kitchen exhaust fire suppression system to NFPA96 where unsafe or when work in the lodge involves modifications to existing fire suppression system.

D50 ELECTRICAL SYSTEMS

D5010 Electrical Service and Distribution

Assess the capacity of existing service to handle renovation requirements by calculations based on 50 VA/m² and by on site measurement if required. Do not size service for major future loads such as air conditioning. Consult the local electrical utility to determine consumption. Replace main service distribution switchboard and panelboards which are obsolete and spare parts are no longer available.

Replace existing single phase service with 3 phase service only if extensive mechanical renovations using several three phase motors and circuit additions are required. Balance 3 phase service using existing 1 phase panelboards and feeders.

Provide a new panelboard for all new circuit additions, only as required.

Service panels and distribution panels are to be located in accessible locations and if located in publicly accessible locations provided with a lockable panelboard cover.

* Fire Safety Considerations for Existing Senior Citizen Lodges, Other Items.

Provide an electrical single line or riser diagram showing new and existing electrical distribution.

Review existing protection and control for existing electrical distribution. Ensure priority tripping for all main feeders and minimize nuisance tripping on existing overloaded circuits. Ensure there are no overloaded circuits.

Where ground fault protection is provided on services and feeders, ensure ground fault tripping is coordinated with downstream protection to prevent nuisance tripping due to minor ground faults.

D5020 Lighting and Branch Wiring

Assess wiring system indicating circuit ampacities and conduit sizing. Update existing panelboard directories.

Review existing grounding methods and revise if necessary in compliance with current code requirements. All outlets must be grounded.

When replacing wiring, conduit must be used for main feeders serving mechanical systems and new panelboards, and in exposed locations. Crawl space is not considered exposed. Armoured cable may be used for feeders, 100 amps and larger where building construction dictates.

Repair as necessary, existing wiring termination's located in ceiling junction boxes.

Replace existing wiring showing signs of insulation failure. Make allowance in contract documents for correcting wiring deficiencies identified by electrical contractor.

Use AC-90 cable only in short lengths for final connections to luminaries and motors.

Lighting Systems
General

Design to maximize the energy efficiency of the lighting system. Do not exceed 25 W/m².

Design to IES recommended minimal adjusted to meet the requirements of the occupants age (over 60 years).

Interior Lighting

As a general guideline design for a minimum of 600 lx with increased lighting provided for areas requiring higher contrast using at least 750 lx.

Utilize a mix of fluorescent and incandescent types for two-level lighting and for aesthetic considerations in common areas such as resident's rooms, dining rooms and lounges.

When upgrading, specify lighting components which match existing building types and are locally available.

Utilize existing systems by relamping and replacement of defective lenses and diffusers with energy efficient types.

- Do not use styrene diffusers.
- Do not use breaker switching.
- Do not use U-shaped lamps.

The following minimum light levels in lux for replacing or upgrading lighting systems are recommended.

<u>Location</u>	<u>Light/Level (lux)</u>
Office and Admin	650
Games and Lounge	650 - 800
Living Room	550
Dining Room	550 - 650
Corridors	800
Library	800
Kitchen	800 - 1100
Service Rooms	550
Resident Rooms	550 - 800
Resident Bathrooms	550 - 800

Use florescent light ballasts with Type A noise rating.

Emergency Lighting

Provide additional units as required by code and sized for existing remote lamps and lamps in exit signs.

Specify battery chargers with overcharge protection and float charge features.

Emergency lighting is required to illuminate the floor or tread level of:

- (i) exits,
- (ii) access to exit in an open floor area, and
- (iii) public corridors.

A 30 minute power supply is required for the emergency lighting.*

Exit Lighting

Provide additional exit signs, compatible with existing, as required by code.

An exit door is required to have an exit sign placed over it when the exit serves a building more than two storeys in height or has an occupant load greater than 150. It is recommended that senior lodges have all exits and the direction to exits clearly marked and illuminated continuously while the building is occupied.*

* Fire Safety Considerations for Existing Senior Citizen Lodges, Signage and Emergency Power.

Use either thick series signs with A-line lamps and diodes or LED signs.

D5030 Communication and Security Systems

Fire Alarm System

The basic components of a fire alarm system are:*

- (i) Smoke detectors located in all corridors,
- (ii) Smoke detectors located at the top of all stair shafts,
- (iii) Smoke alarms located in each suite or dwelling,
- (iv) Fire detectors in storage rooms (not within dwelling units), mechanical rooms (not within dwelling units), janitor rooms, rooms where hazardous products are used or stored and at the top of elevator and dumbwaiter shafts,
- (v) Duct-type smoke detectors in every recirculating air handling system,
- (vi) A manual pull station on every floor area near every required exit,
- (vii) Audible signal appliances that can be heard throughout the floor area in which they are installed, and
- (viii) The fire alarm system requires electrical supervision and annunciation.

Fire alarm systems are required to be installed in conformance with CAN/ULC-S524-M, "Standard for the Installation of Fire Alarm Systems".*

Fire alarm systems are to be tested in conformance with CAN/ULC-S537-M, "Standard for the Verification of Fire Alarm Systems".* Verification to include new and existing fire alarm system.

Fire alarm systems are to be maintained in conformance with CAN/ULC-S536-M, "Standard for the Inspection and Testing of Fire Alarm Systems".*

A practice applied in senior citizen lodges is to install a system smoke detector in every resident room. This practice is above the requirement of the Code and is considered as enhancing the safety measures in the building.*

Fire detectors are not required in storage rooms less than 1 m unless the room is a janitor's closet or used for the storage of hazardous substances. A clothes closet not more than 800 mm in depth is not considered a storage room.*

* Fire Safety Considerations for Existing Senior Citizen Lodges, Fire Alarm System.

Where a new fire alarm system is being installed, it must meet the requirements of the current Building Code. Consideration should be given to having visual signal appliances installed in conformance with CAN/ULC-S526, "Standard for Visual Signal Appliances". The owner may elect to install visual signal appliances to an existing fire alarm system to enhance the safety measures in the building.*

Use bells for audible signals unless site conditions dictate otherwise.

When required, provide new control panel compatible with existing devices and to allow for upgrades to the system.

Each resident room should contain a stand alone, 115 V smoke alarm and a system smoke detector. The system detector is connected to a wedge type lamp in the corridor which provides a clearly recognizable light when the detector is activated.

Emergency Call System Provide emergency call system. Hardwired or wireless remote systems are acceptable, depending on lodge requirements.

Provide door monitoring and control to all exterior exits. Ensure keyed reset switch is located at each door.

Public Address System Provide intercom and public address system to corridors and common areas.

Telephone System Provide telephone outlet to each resident room and to common areas as required for the lodge.

Television System Provide lodge with the option of having TV provided from antenna distribution system and/or from cable TV system, for example individual home run coaxial wiring from each resident's room.

E EQUIPMENT AND FURNISHINGS

E10 EQUIPMENT

E1010 Commercial Equipment Existing laundry and kitchen equipment shall have a minimum 5 year life expectancy.

* Fire Safety Considerations for Existing Senior Citizen Lodges, Fire Alarm System.

Suggested minimum equipment requirements are as follows:

Kitchen

Commercial cooking equipment should be installed in conformance with NFPA 96, "Standard for the Installation of Equipment for the Removal of Smoke and Grease-Laden Vapours from Commercial Cooking Equipment".*

Commercial equipment:

- Range with burner and griddle arrangement and oven
- Microwave oven
- Vegetable steamer or convection oven
- Dishwasher
- Garbeurator
- Food mixer
- Toaster
- Reach-in refrigerator case
- Warming table

Laundry

Commercial type washer and dryer for facility's laundry.
Residential type washer and dryer for resident's laundry.

Requirements may vary depending on local conditions. Actual equipment to be discussed with the lodge foundation.

E20 FURNISHINGS

E2010 Fixed Furnishings All cabinetry and counter tops to be sound, serviceable and should meet health codes and standards. All hardware shall be suitable for use by the elderly.

Countertops and vanities should be constructed to avoid unnecessary outside sharp corners.

E2020 Movable Furnishings All furniture shall be sound and free of structural defects and torn or badly worn fabric.

Repair or replace on a selective basis, only unserviceable pieces.

* Fire Safety Considerations for Existing Senior Citizen Lodges, Commercial Cooking Equipment.

F OTHER BUILDING CONSTRUCTION

F20 SELECTIVE DEMOLITION

F2020 Hazardous Components and Abatement

Amount of asbestos present in the lodge to be determined. All asbestos in an unhealthful condition or any asbestos that will be disturbed or altered during renovations to be removed.

Any and all other hazardous materials that are required to be removed shall be disposed of according to regulatory requirements.

Remove asbestos only on equipment being removed, replaced or retrofitted.

Use appropriate asbestos abatement procedures for removing asbestos. APWSS will provide procedures for dealing with hazardous materials upon request.

Replace insulation as required, to match existing thermal performance.

In buildings where asbestos or unknown fibrous material is present, someone familiar with the asbestos abatement programs should be contacted to assess the situation and determine a course of action. Please contact Client Service staff of the Alberta Labour to establish the proper protocol.*

G BUILDING SITEWORK

G20 SITE IMPROVEMENTS

G2010 Roadway and Parking Lots

Access roads and parking areas on the lodge property shall not create hazardous conditions for example large potholes. Graveled surfaces **are** acceptable. Maintain minimum grade of 2 per cent for gravelled surfaces.

Provide barrier free parking as required by the lodge foundation.

G2030 Pedestrian Paving

Exits and walkways are to be serviced by safe, hard surfaced walkways from the building. Maintain minimum grade of 1 per cent for concrete and asphalt surfaces.

Provide protective coating to walks or public use where de-icing agents will be used.

* Fire Safety Considerations for Existing Senior Citizen Lodges, Asbestos.

Exterior Ramps and Steps

Exterior stairs and ramps shall be sound and serviceable with railings as required by code.

G2050 Landscaping

Retain as many trees on site as feasible, protecting trees and their roots by hoarding. Maintain existing grades to minimum distances of the drip lines of trees, or provide tree wells to compensate for the change in grade.

Conform grading work to an overall surface drainage plan for the area. Ensure proper site drainage away from the building.

Consider ease of maintenance in all design aspects including:

- In turf areas, provide distances between trees and other features to accommodate cost effective mowing equipment.
- Space all plants at no less than 60 per cent of mature spread.
- Provide mulches for dry areas under building overhangs; do not design these areas for plants.

Irrigation

Provide exterior hose bibs on building for every 50 m along building walls.

G50 SITE ELECTRICAL UTILITIES

G5020 Site Lighting Systems

Ensure adequate lighting is provided. Replace defective fixtures with vandal proof units.

Provide photocell or time clock control for exterior and perimeter exterior luminaries.

Design exterior lighting levels to reflect the 24 hour operation of the facility.

Use low maintenance energy-efficient sources, for example high pressure sodium. For low usage entry and exit locations use inexpensive incandescent luminaires controlled by infrared motion detectors with daylight, duration and sensitivity adjustments.

Select luminaire types, control, and placement to prevent offensive light spill onto neighboring properties and adjacent residents rooms. Cut off luminaries are preferred.

Parking Lot
Receptacles

Provide the following power control for car block heater outlets for installations serving:

- More than 5 and up to 10 parking stalls:
Use receptacles with built-in thermostatic control designed to de-energize the receptacle when outside temperature is above -10 degrees Celsius.
- More than 10 but less than 40 parking stalls:
Provide thermostatic controlled contactors designed to shut off all power to outlets when outside temperature is above -10 degrees Celsius.

Provide timer to cycle energized outlets 20 minutes on and 20 minutes off.

Provide for adequate mechanical protection of receptacles using rigid preformed posts anchored to soil to prevent heaving and parking lot rails designed to withstand minor vehicle impacts.

Requirements for the number of parking plug-ins to be determined with lodge foundation.

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