

MILLENNIUM TOWER

Aspen Properties would like to welcome you to Millennium Tower.

We offer this Building Connectivity Guide as a reference tool, we hope you find the information contained in this manual helpful and informative. If you require assistance in any area, please contact us at 403.216.2660.

Aspen Properties will provide all reasonable protection to properties under their management and in the event of any emergencies, will do all it can to ensure safety and protection of human life.

DISCLAIMER

Information in this handbook has been prepared to provide tenants with a convenient source of connectivity information relevant to Millennium Tower.

While every effort has been made to ensure the accuracy of the information contained herein, Aspen Property Management assumes no responsibility for any errors, omissions, and/or revisions to this information.

This handbook is confidential and proprietary to Aspen Property Management. It is released solely for the purposes of communicating policies and procedures for Millennium Tower. Copying or use for any other purpose is strictly prohibited.

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ASPEN ADMINISTRATION CONTACTS

General Inquiries:	403.216.2660 or apl@aspenproperties.ca
Website:	www.aspenproperties.ca
Aspen Fax:	403.216.2661
Property Manager: Courtney Cote	Phone: 403.781.8504 Email: ccote@aspenproperties.ca
Assistant Property Manager: Kimberley Ferguson	Phone: 403.781.8507 Email: kferguson@aspenproperties.ca
Assistant Property Manager: Eric So	Phone: 403.216.5696 Email: eso@aspenproperties.ca
Operations Manager Dwayne Couronne	Phone: 403.781.8502 Email: dcouronne@aspenproperties.ca
Aspen Security (24/7):	403.781.8506
Aspen Security (EMERGENCY):	403.230.2250

CONCIERGE CONTACT INFORMATION

Millennium Tower 403.781.8506	Aspen Management Office Suite 1800, 140 - 4 th Avenue Calgary AB, T2P 3N3
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BUILDING HOURS

Millennium Tower is open to the public Monday to Friday from 6:00 a.m. to 6:00 p.m.

ACCESS AND SECURITY PROCEDURES

SECURITY

Millennium Tower has security personnel available 24 hours, seven days a week to safeguard the building. A building access card reader system is in place to secure Millennium Tower after hours, from 6:00 pm to 6:00 am.

Should you notice any suspicious activity or require assistance, please call the Aspen security at 403.781.8506. In the event of a power outage, 403.230.2250 will reach security via an analogue phone line.

SECURITY CLEARANCES

Security Clearances are used to authorize a contractor's access into Millennium Tower and tenant office space. A security clearance request must be submitted two business days in advance for approval by Aspen. Security will not permit access or allow work to proceed unless an approved Security Clearance is on file.

To submit a Security Clearance, go to our website at www.aspenproperties.ca under Tenant Resources.

Make sure to include as many details as your can and to ensure to below are provided,

- Purpose of the Work
- Type of work that will be conducted
- Estimated time needed to complete work
- Affected locations for the work
- Access requirements

LOADING DOCK

The loading dock is located on the ground floor and can be accessed from 4th Street SW.

The loading dock area is exclusive to vehicles making deliveries, as this area needs to be kept clear. Any vehicles parked in the loading dock that are not immediately delivered will be towed.

Aspen reserves the right to place time restrictions for delivery at the loading dock. After-hours deliveries and moves must be arranged through our website at www.aspenproperties.ca under Tenant Resources. – A Security Clearance and an Elevator Booking will be required. Additional security charges may apply.

The maximum height of the loading dock is 13' 2".

ACCESS TO EXISTING TENANT SPACE

- Several riser closets for the building are located within tenant suites, tenant approval is required. Access can be arranged through Aspen Property Management. A security clearance request must be completed and a minimum of two (2) business days' notice is required.
- Costs incurred by adjacent tenants, for security, repairs, or cleaning will be borne by the Landlord and charged back to the tenant/contractors, inclusive of a 15% administration fee.
- The Landlord will not provide access to occupied tenancies without written authorization from that tenant, obtained by Aspen Property Management. Contractors are not to go directly to any occupied tenants for approval of access.

OPERATIONS AND INSTALLATION PROCEDURE IN THE BUILDING

- All scopes of work must be submitted via a Security Clearance Request and formally approved by Management prior to arriving onsite
- Two (2) business day's notice is required for Freight and Loading Dock Access
- All tradesmen shall enter the loading dock only
- Equipment installations can be completed during normal business hours, any drilling must be completed after hours

X-RAY, CORING, CUTTING AND CHIPPING

- All x-raying, coring, cutting and chipping requires prior approval from the Landlord. If such work is deemed necessary and acceptable to the Landlord and the Landlord's Structural Engineers, x-ray and drilling etc. shall be carried out after regular building hours by the tenant's contractor at the tenant's cost
- Provide a drawing showing the location and size of the proposed opening(s). Drawing shall be submitted to the base building Structural Consultant for structural review and comment prior to any further action
- Contractors are responsible for all fees associated with reviews by the Structural Consultant. Contact the Aspen Property Management for the Base Building Consultant contact information. Depending on the complexity of the coring, cutting or chipping, periodic site inspections by the Structural Consultant may also be required
- Make arrangements with the Operations Manager prior to x-raying, to ensure public safety. ***A minimum of (3) three business days notice is required prior to coring as well as prior to completing any hookups after coring is complete***
- All slab penetrations must be fire stopped and water sealed to maintain the integrity of the slab.

- The tenant and tenant’s contractor assume all risks in coring, cutting, drilling or chipping the floor slab. The Landlord, at the tenant’s expense, will repair structural elements or cast in slab services damaged by the contractor
- Should the x-ray & coring procedures not have been followed by the tenant and the necessary approvals not have been obtained, the Tenant must bear any, and all expenses associated with the following:
 - i. Determination if the integrity of the structure has been compromised;
 - ii. Design by Structural Engineer of any remedial measures necessary to restore structural integrity through a method of external reinforcement;
 - iii. Implementation of such remedial measures.

PATHWAY SPECIFICATIONS:

- Existing communications BMS, wireless internet switches, antennas or any other base building communications are not to be damaged, relocated, or used without Landlord approval
- Electrical/telecom rooms are to be kept clean and free of debris
- Communication cabling, including but not limited to, voice, data and network must be run in conduit or corelon on the vertical runs in the assigned telecom piping and in the cable tray at floor level. Cabling runs from the cable tray are to be run in conduit or fastened in the ceiling space using J Hooks. Contactors are not to use any existing HVAC or other to fasten free air cabling
- Base Building Access Control Contractor will need to be contacted if access control services are required. Contact Aspen Property Management

TELECOM EQUIPMENT ROOM SPECIFICATIONS: LOCATION AND PROCEDURE

An approved Security Clearance is required for access to telecom rooms. All work completed must be inspected by our Operations Team prior to the contractor leaving the site.

Providers have designated areas in each telecom room please contact Aspen Property Management to confirm the allotted location for your installation.

PROJECT CLOSEOUT REQUIREMENTS:

- Contractors are to take all waste materials with them and properly dispose of.
- Contractors must provide network mapping if they are modifying any risers or terminations.

BUILDING SCHEMATICS

UPON REQUEST

CABLING REQUIREMENTS AND NETWORK INSTALLATIONS

FIBRE OPTIC CABLING:

- When Multimode fibre is used a minimum requirement of OM3 fibre, connectors and bulkheads are to be installed.
- When Single Mode fibre is used a minimum requirement of OS2 fibre, connectors and bulkheads are to be installed.
- All riser rack mounted fibre to be in 4U rack mount riser housings to be, unless otherwise specified.
- All riser rack mounted fibre to be spliced in 1U rack mount riser splice housings, unless otherwise specified.
- A minimum bend radius of 10x the fibre optic cables diameter is to be adhered to at all times.
- LC type mechanical splice type connectors with a maximum of 3.5dB loss are to be used with an LC bulkhead adapter, unless otherwise specified.
- All fusion splices done on fibre to have a maximum loss of 0.3dB.
- When cleaving fibre, all bare fibre cut-offs must be properly stored and disposed of.
- All fibre to be run in a conduit system from riser to premise, unless an armored cable has been specified.
- All riser fibre to adhere to a 40% conduit fill ratio on all vertical riser conduits.
- All horizontal fibre to adhere to a 40% conduit fill ratio and not to exceed 360* of bends between junction boxes or pull locations.
- All corelon for multimode fibre optic cables to be orange in colour and not to exceed a maximum 40% fill ratio.
- All corelon for singlemode fibre optic cable to be grey in colour and not to exceed a maximum 40% fill ratio
- All conduit to be painted orange for multimode, grey for singlemode, painted on the end of each side of conduit (connectors), and on box covers. Coloured duct tape to be acceptable for marking conduits as well.
- Fibre optic colour code to be used at all time; blue, orange, green, brown, slate, white, red, black, yellow, violet, pink, aqua.
- All fibre optic cabling must be tested to a minimum general standard using an OTDR.
- All fibre optic cables, panels, and connectors to be labelled per project or as specified.
- Risers to be left clean and tidy at the end of every installation, or daily as needed.

COPPER CABLING INCLUDING CAT 6, 6A:

- Minimum of Category 6 FT4 cabling to be used for all vertical riser cabling unless otherwise specified.
- All cabling to be terminated on unloaded riser rack mounted 48 port patch using the correct RJ45 connector.
- All cabling to be done in the TIA/EIA 568A colour code unless otherwise specified.
- All cabling to be installed in conduit at a maximum capacity of 40% fill ratio per conduit unless otherwise specified.
- All cabling that is installed in a riser conduit using a pull string, must be installed with a replacement pull string for future use, unless the fill ratio has been met.
- All cabling that is run “free air” to be supported every meter by a Velcro strap or J-hook of an appropriate size.
- All fasteners on copper cabling to be Velcro straps.
- All cabling to be tested at the appropriate and matching test limits, using a permanent link adapter, unless otherwise specified.
- Cabling is to be properly labelled on both sides of the cable end, patch panel, wall outlet and surface mount box, using a machine printed label.
- All risers to be left clean and tidy at the conclusion of an installation or at the end of a work day as needed.