

Tenant Design Criteria Manual

180 Queen Street West

April 11, 2006-04-11

INTRODUCTION

The Tenant Design Criteria Manual is prepared to assist Tenants in the design and construction of leasehold improvements before, during and after the substantial completion of the base building project. Revisions, as the nature of the project's site conditions change, will be supplemented.

The manual contains information about procedures and requirements established by the Landlord for Tenants who undertake improvements within the leased premises; it also outlines the basic design specifications for the building. The information provided here applies as a general rule and should be made available to the Tenant's designers and contractors, who are urged to acquaint themselves thoroughly with the material herein, as it will form the basis of the Landlord's approval of all Tenant submissions.

The Landlord's approval of all drawings is for the purpose of obtaining information about the intended design and use of the premises and the impact such design and use may have on the base building systems, structurally, electrically and mechanically.

By giving such approval the Landlord is not agreeing with your consultants design accuracy, only approving or disapproving of the impact on the base building systems.

It is recommended that the Tenant and/or designer visit the site to inspect and verify all site conditions prior to commencement of design work.

The Landlord reserves the right to amend or add to the information in the manual at any time and the Tenant is obliged to abide by such changes upon notification thereof. All costs associated with the compliance shall be at the Tenant's expense.

This manual is intended to reflect only standard conditions or situations and does not amend the formal Lease agreement, which is to govern in the event of any inconsistencies.

Permission to deviate from the criteria contained herein must be obtained in writing. Notes on drawings in conflict with the design criteria have no validity.

SECTION I

INFORMATION, PROCEDURES AND REGULATIONS

1.1 TENANT CO-ORDINATION

The primary functions of the Tenant Co-ordinator, as the Landlord's representative, are:

- To provide guidance and assistance to Tenants during both the design and construction phases of their leasehold improvements;
- To review and comment upon all Tenant submissions before work begins with the leased premises;
- To provide liaison between and among the Landlord, Landlord's contractor and consultants, the Tenant's contractor and designer.

All questions, comments and submissions relative to Tenant Co-ordination should be addressed to:

HUGH KERR / DAVID HOUSE
GWL Realty Advisors Inc.
33 Yonge Street, Suite 830
Toronto, Ontario
M5E 1G4

Telephone: (416) 359-2929
Fax: (416) 359-1199

or

BRUCE WILHELM
GWL Realty Advisors Inc.
330 University Avenue
Toronto, ON
M5G 1R8

Telephone: (416) 552-3982
Fax: (416) 204-2351

1.2 LANDLORD'S BASE BUILDING CONSULTANTS:

STRUCTURAL CONSULTANTS

Yolles Partnership Inc.
163 Queen Street East, Suite 200
Toronto, Ontario
M5A 1S1

Telephone: (416) 363-8123
Fax: (416) 363-0341
Contact: Mr. Zoran Tanasijevic

TELECOMMUNICATIONS

Mulvey & Banani International Inc.
44 Mobile Drive
Toronto, Ontario
M4A 2P2

Telephone: (416) 751-2520
Fax: (416) 751-1430
Contact: Mr. Zdravko Crne

MECHANICAL CONSULTANTS

The Mitchell Partnership Inc.
285 Yorkland Boulevard
Willowdale, Ontario
M2J 1S5

Telephone: (416) 499-8000
Fax: (416) 499-7446
Contact: Mr. Reg Callaghan

ELECTRICAL CONSULTANTS

Mulvey + Banani International Inc.
44 Mobile Drive
Toronto, Ontario
M4A 2P2

Telephone: (416) 751-2520
Fax: (416) 751-1430
Contact: Mr. Nick Manesis

ARCHITECTS

KPMB Architects
322 King Street West, 3rd Floor
Toronto, Ontario
M5V 1J2

Telephone: (416) 977-5104
Fax: (416) 598-9840
Contact: Mr. Chris Couse

FIRE LIFE SAFETY CONSULTANTS

Leber Rubes Inc.
2300 Yonge Street, Suite 2100
Toronto, Ontario
M4P 1E4

Telephone: (416) 515-9331
Fax: (416) 515-1640
Contact: Mr. Rick Mori

FIRE LIFE SAFETY SYSTEMS CONTRACTOR

Simplex Grinnell
2400 Skymark Ave.
Mississauga, Ontario
L4W 5K5

Telephone: (905) 212-4620/4633
Fax: (905) 212-4601
Contact: Mr. Dave Hutchings

SPRINKLER CONTRACTOR

Urban Mechanical
36 Greensboro Drive
Etobicoke, Ontario
M9W 1E1

Telephone: (416) 240-8830
Fax: (416) 240-8846
Contact: Mr. John McKinnon

AIR BALANCING CONTRACTOR

AIR VELOCITIES
James McCurdy
P 905-279-4433
F 905-270-1460

1.3 REGULATORY BODIES:

The Tenant is required to design and construct its improvements in accordance with the all-applicable codes, by-laws and the directives of all governing authorities. The Tenant is also required to secure its own Building Permit and all other approvals required by law.

Department of Building & Inspections
City Hall - Ground Floor, Submission Desks
100 Queen Street West
Toronto, Ontario
M5H 2N2

Telephone: 416 338-0338

1.4 TENANT DESIGN AND WORKING DRAWINGS:

To assist the Tenant in the production of working drawings, the Property Manager can provide the Tenant with available drawings of the leased premises indicating the major elements of the base building structure and systems. Any additional drawings or information the Tenant may reasonably require for this purpose may be obtained through the Property Management Office or by surveying existing site conditions.

1.4.1 Tenant Consultants

- a) The Tenant shall engage all the Architects, Engineers and Certified Designers, collectively with the Tenant Consultants to prepare dimensioned construction drawings and specifications, which are necessary for the construction of the Tenant's leasehold improvements. The Landlord, during his review process, will use the base-building Consultants. The cost of which would be borne by the Tenant. The Landlord, from time to time, may require the Tenant to produce additional or more detailed drawings or information, which in the Landlord's opinion may be necessary to identify and describe the nature of the intended improvements.
- b) The Tenants shall inform itself regarding the by-law and code requirements as well as this Construction Standard, before preparing the plans and specifications.
- c) By giving approval to such plans, the Landlord and his consultants do not waive the Tenant's responsibility to ensure that any and all Tenant improvements meet the requirements of the Lease, this Design Criteria Manual or the code (OBC or other applicable building code or bylaws governed by the Authorities having Jurisdiction.. Further, any construction deficiencies, H.V.A.C., airflow problems, etc., are the responsibilities of the Tenant and their respective Contractor. The Landlord's review of the drawings is only to ensure that the Tenant's design does not impede the building's systems or aesthetics.

1.4.2 Approval of Tenant Drawings Submission of Preliminary Drawings

- a) The Tenant shall submit two (2) prints of his preliminary drawings and one (1) digital set showing the proposed office layout for the preliminary approval of the Landlord, which will be given within 15 business days of receipt of the submitted drawings. The preliminary drawings will be checked from the standpoint of physical compatibility and any problems encountered shall be returned to the Tenant for resolution. If required, the Tenant shall revise his preliminary drawings and resubmit them showing the proposed resolution of the Landlord's concerns for approval. The Tenant shall provide total heating and cooling capacity calculations for verification to base building capacity.

Submission of Final Plans and Specifications

- b) The Tenant shall submit one (1) digital and two (2) copies of complete working drawings and specifications for final approval by the Landlord, which will be given within 5 business days of receipt of the submitted drawings in accordance with the Construction Procedures contained in the Lease and prior to the commencement of the fixturing period. Electrical, mechanical and structural drawings must be signed and sealed by the engineer responsible for the design.

Tenant drawings shall consist of:

Floor Plans

Floor plans should have a drawing scale of 1:100 (metric) or 1/8" = 1'-0" (imperial) minimum and should show:

- a) The locations of all major fixed elements within the leased premises dimensionally related to grid lines and demising partitions;
- b) Room names and uses;
- c) The locations and layouts of rooms with unusual loading concentrations (for example, centralised filing areas, libraries);
- d) Materials and finishes throughout the premises;
- e) The number of people to occupy suite including all heat load calculations for the determination of H.V.A.C. requirements.
- f) Where the leased premises occupy less than a full floor, plans must be included of the entire floor showing the location of the leased premises and their relationship to the elevator lobby, exits, washrooms, etc. A complete fan system air balance must be performed as part of the retrofit scope of work for any partial or full floor occupancy.

Telephone and Power Outlet Plan

At not less than 1:100 or 1/8" = 1'-0" scale indicate with dimensions, location of all telephone and power outlets.

Reflected Ceiling/Lighting Plans

Floor plans should have a drawing scale of 1:100 (metric) or 1/8" = 1'-0" (imperial) minimum should show:

- a) Lighting, layout, ceiling pattern, air transfer ducts, materials and suspension-system details;
- b) The locations of any sound baffles above the ceiling;
- c) The locations of any access panels required to service building systems.
- d) The locations of any air transfer ducts through full height partition. Cross talk silencers are required for all tenant and corridor demising walls.

Elevations, Sections and Details a suitable scale to indicate partition details, baffles, doors, signage, etc.

Room Finish, Door and Hardware Schedule - Two copies of the hardware schedule must be submitted to indicate all elements including keying which must be to building standard.

Complete Mechanical, Electrical, Sprinkler, Building Automation and Life-Safety System Drawings at 1:100 or 1/8" scale, showing all work that is an alteration/addition to the base building system and all parts of the base building system that remain unchanged. Tie-ins and extensions to base building security, fire alarm, and communication systems must also be clearly shown.

Structural Drawings must only be supplied when modifications to the structure are anticipated or floor loading is anticipated to exceed design loading. These must be created by the Landlord's Structural Engineer or co-ordinated by the Landlord. The Landlord's contractor shall perform these structural modifications/ structural reviews and co-ordinated by the Landlord at the Tenant's expense.

Specifications must be submitted with the final set of working drawings describing the quality and performance standards for all of the Tenant work.

The Tenant is responsible for obtaining all necessary permits and approvals, from the Building Department, Health Department, Fire Marshall, the Ministry of Labour and any other governing authority having Jurisdiction. The Tenant shall submit copies of the building permit and any other required permits or approvals with the Landlord, prior to the commencement of the Tenant's construction.

The Landlord shall engage, at the Tenant's expense, the Landlord's contractors, for any mechanical, electrical, fire alarm, sprinkler, security, controls and balancing modifications or additions to the base building systems.

Upon completing its review the Landlord shall return the drawings stamped and endorsed with its approval along with all comments and required corrections of the Landlord and his Consultants. The Tenant shall revise his drawings to include all the comments and corrections and provided the Landlord with a revised set of prints prior to commencing the Tenant work. Unapproved drawings shall be revised to conform to the Landlord's requirements by the Tenant and resubmitted to the Landlord for approval. The Landlord shall not be obligated to change or extend any of the dates contained in the Lease as a result of the drawings being rejected by the Landlord or its Consultants.

1.4.3 After Approval of Tenant Drawings

Documents required prior to commencement of construction

- a) Landlord written acceptance of Tenant drawings/specifications.
- b) Copies of Addenda.
- c) Copy of Building Permit/or application.
- d) Worker's Compensation Board Clearance Certificate from general contractor.
- e) Certificates of Insurance in accordance with lease documents.
- f) Two sets of construction drawings and specifications plus one (1) set of sepias.
- g) List indicating General and Subcontractors' contact names and telephone numbers for after hours emergency use.
- h) Waiver of liability from all Contractors' staff.

Documents during Construction

- a) Copies of all site-meeting minutes.
- b) Copies of all Contemplated Changes at time of issuance to Contractors.
- c) Copies of all Architect or Designer's site visit reports.
- d) Copies of all site reports from authorities having jurisdiction.

Documents following the Completion of Work

- a) Complete set of Consultant approved "As-Built" Drawings of the installation in AutoCAD 2002 or 2004 format. Provide reproducible sepias as well as CAD diskette or CD-ROM.
- b) Letter from Tenant's Designer/professional Consultant that the installation has been completed in accordance with the contract drawings and specifications and authorities having jurisdiction.
- c) Confirmation from Tenant that all surplus base building equipment/material that is to remain the property of the Landlord has been delivered to the Landlord in working order.

1.5 TENANT CONTRACTOR(S) REQUIREMENTS:

1.5.1 The Tenant is required to engage its own Contractors for the purpose of carrying out its leasehold improvement work. All Tenant Contractors are:

- Subject to approval by the Landlord.
- Must be in good standing with the provincial Workers' Compensation Board
- Must utilise the base building automation, fire alarm/sprinkler and controls subcontractors for any leasehold improvements involving work from these trades.

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1.5.2 The Tenant shall engage his Contractors to execute the Tenant leasehold improvements.

1.5.3. The Tenant Contractors are subject to the following conditions:

- a) The Landlord reserves the right to approve all construction work carried out by the Tenant's contractors to ensure its compliance with approved drawings and building standards.
- b) Insurance: The Tenant and their Contractors shall, prior to commencement of construction furnish evidence that they are adequately and properly covered by insurance, according to the following terms:
 - i) GWL Realty Advisors Inc. and The Canada Life Assurance Company, Great West Life Assurance Company and all Contractors and Subcontractors and trades of those insured, engaged in or connected with the construction within the Property are listed as additional named insured is listed on all policies;
 - ii) A Comprehensive General Liability policy be in force with a limit to any one occurrence of \$5,000,000.00. The policy shall contain a cross liability clause and shall be extended to include non-owned automobiles and blanket contractual liability, in accordance with of the Lease.
 - iii) An "all risk" of physical loss or damage policy be provided covering the total contract price for the Tenant's work, in accordance with the Lease.
 - iv) An automobile policy be in force covering all owned vehicles, with a \$1,000,000.00 combined single limit liability for bodily injury and property damage.
 - v) All Policies of insurance relating to Tenant work must be in amounts and in form and with insurers acceptable to the Landlord, including an undertaking by the insurers to give at least thirty (30) days written notice of cancellation or material changes to the policy holder and the Landlord.
 - vi) Evidence of the existence of insurance covered referred to in this section must be submitted to the Landlord by means of a Certificate of Insurance from the Tenant's or the Contractor's insurers or by a certified copy of the actual policy documents before commencement of Tenant's construction.
 - vii) The Tenant and their Contractor shall indemnify, defend and hold the Landlord harmless from all claims and hereby assumes all risk of damage to property or injury to persons in, upon or about the premises from any cause arising from the Tenant's construction.

Protection

The Tenant shall undertake to protect the Landlord and its interests against the placing of liens under the Construction Lien Act by the Tenant's Contractors and suppliers, and to discharge forthwith at its own expense any liens registered against the building and lands which arise as a result of the Tenant's work.

Permits

Tenant's design and construction work must comply with all applicable by-laws. The Tenant must obtain all necessary permits and approvals from the appropriate government authorities before construction begins within the leased premises.

A copy of all permits must be delivered to the Landlord through the Tenant. The Tenant must correct immediately any work that does not meet with the approval of the building inspector, even though the Tenant's drawings may have been approved previously by the appropriate government authorities and the Landlord. Any revisions to the approved drawings requested by such authorities must be brought to the attention of the Landlord immediately. Should the Tenant unduly delay the required corrections, the Landlord may make the corrections at the Tenant's expense.

A copy of the permit drawings will be available at the Landlord's request.

Approved Drawings

A set of prints of the reviewed drawings must be kept on the leased premises for the duration of the construction period, so as to be available for reference purposes to the Landlord's authorised representatives.

Construction Schedule

The Tenant must provide the Landlord prior to starting with a construction schedule outlining the start-up date, and completion date. The Landlord will also require a complete list of the Tenant's contractors and sub-trades, which will be listed on a contractor access form and registered with site security.

Existing Finishes

Tenant contractors must adequately protect all building finishes and carpets to prevent any damage. Damage to building finishes caused by Tenant contractors will be repaired by the Landlord at the Tenant's expense.

1.6 COMMENCEMENT OF TENANT'S IMPROVEMENTS:

The Tenant shall have obtained all necessary approvals and permits from all regulatory bodies having Jurisdiction over Tenant's work and evidence of all such approvals and permits shall have been provided to the Landlord.

The Landlord in writing shall have approved the Tenant's Contractors and Subcontractors.

The Tenant shall have furnished proof of insurance.

1.6.1 Inspection of Tenant Premises

- a) Prior to commencement of any Tenant work. The Tenant, his agents, and GWL Realty Advisors Inc. shall perform an inspection of the Tenant floors, including floors above and below the rented area.
- b) A signed letter shall be issued confirming acceptance of Tenant area and any damages or deficiencies shall be indicated at that time. No claims shall be considered for any items not identified on the acceptance letter.
- c) The Landlord shall issue written notice to the Tenant advising that all the conditions prerequisite to the commencement of Tenant work have been complied with to the satisfaction of the Landlord. This notice shall be presented to the Tenant contractor before he will be permitted access to the premises to begin the Tenant work.

1.6.2 Inspection of Tenant's Work In Progress

- a) The Landlord and its Agents, Architects, Engineers, and Consultants shall have unlimited access to the Tenant's premises for the purpose of inspecting the Tenant Work In Progress. The Landlord or its Architects, Engineers or Consultants may note deficiencies in the Tenant work which shall be corrected by the Tenant immediately.
- b) The Tenant contractor may be issued revisions to the documents outlining regulations and procedures for Tenant contractors and subcontractors on the job site, from time to time as site conditions warrant.
- c) After completion of Tenant work another inspection shall be made between GWL Realty Advisors Inc. and the Tenant for both Tenant areas and floors immediately above and below Tenant floors. The Landlord's Contractor at the Tenant's expense shall repair any damages caused by the Tenants Contractor in the execution of the Tenant work.

1.7 SECURITY CONTROL:

1.7.1 Keys

- a) Access into the Tenant's leased premises should be agreed upon by and arranged between the contractor and its client. Only designated Contractor personnel will be issued common area keys. These keys will be held at the Management Office and must be signed out and in on a daily basis. Re-keying costs for keys that are lost will be the responsibility of the Tenant. These costs will vary depending on the particular key lost.
- b) All Tenant construction personnel must check in and out with site security at all times.

1.7.2 Working Hours

Work other than hoisting of materials shall be carried out in the leased premises from 7:30 a.m. to 5:30 p.m., Monday to Friday. Any work needing to be done at other times must be specifically agreed upon, and arranged with the Landlord with the tenant providing a minimum of 48-hour written notice.

Hoisting of any materials and/or equipment must be booked with the Property Management office at least 24 hours ahead of time to ensure the service elevator has been converted from a regular passenger cab to a protected service cab.

All work not contained within the demising walls and exposed to the public must be enclosed by full height, one side plywood boarding painted to match the Landlord's standard colour. No work is to proceed in areas exposed to the public during rush hours, these hours being the generally accepted business hours of 8:00 a.m. to 6:00 p.m.

1.8 PUBLIC SAFETY:

- 1.8.1 It is the Tenant's responsibility to ensure that the Tenant's Contractor observes and complies with all applicable construction/safety regulations. Any additional safety regulations imposed by an authorised representative of the Landlord must also be complied with, immediately and fully. Should failure to comply result in any construction delay, the Tenant will be held responsible for all resulting costs.
- 1.8.2 The Tenant shall ensure that the Contractor and his Subcontractors observe and enforce all construction safety measures as contained in the requirements of any federal/provincial legislature, regulations, municipal by-laws and requirements and the requirements of all other Authorities having jurisdiction which may pertain to construction of the work.
- 1.8.3 In the event of any conflict between any municipal by-laws, provincial or federal legislation, the provision that sets out the most onerous or stringent requirement shall apply.

1.8.4 The Tenant must ensure that its Contractor and Subcontractors:

- a) Comply with, but not limited to all ordinances, the requirements of all Acts and Regulations with respect to health and safety including Occupational Health and Safety Act, RSO 1980 Chapter 321 (as amended) and Regulations for Construction Projects (as amended) made thereunder; and Workplace Hazardous Material Information System (WHMIS) Regulation, Ontario Regulation 644/88 including the following:
- b) Before commencement of work and throughout Contract, maintain on site and readily accessible to all those who may be exposed to hazardous materials, a list of all hazardous materials proposed for use on Site or Workplace together with current Material Safety Data Sheets (MSDS).
- c) Ensure hazardous materials used and/or supplies on site are labelled in accordance with WHMIS requirements.
- d) Provide detailed written procedures of safe handling, storage and use of such hazardous materials including special precautions, safe clean up and disposal procedures. Conform to Environmental Protection Act for disposal requirements.
- e) Ensure that those who handle and/or are exposed to or are likely to handle or be exposed to, hazardous materials are fully instructed and trained in accordance with WHMIS requirements.

1.9 EMERGENCY CONTACT:

The Tenant and its Contractors are required to inform the Property Management Office of names and telephone numbers for emergency contact in case of an emergency having to do with the Tenant's premises after hours.

1.10 TEMPORARY SERVICES:

The Tenant's contractor is responsible for the distribution of temporary power and telephone service within the leased premises during the construction period. The Tenant will be responsible for all cleaning and repair of all damages. Common areas and washrooms used by the Tenant's contractor will be the responsibility of the Tenant.

1.10.1 Power

Temporary power shall be made available by the Landlord in base-building electrical/telephone rooms and shall be charged to the Tenant's account on a pro-rata/Square foot basis. Tenants are required to install; at their sole expense, Measurement Canada Approved Meter Manager™ Electronic Submeters supplied by the Landlords recommended supplier.

Electronic Submeters for electricity measurement are required for all tenant electrical services, including receptacle power, mechanical units, lighting and supplementary air conditioning units, etc, unless otherwise stipulated by Property Management.

1.10.2 Telephone

- a) The main telephone service to the base building basement communication entrance room is through Bell Canada and the Landlord must approve any other communication requirements or alternate service providers in writing.
- b) The Tenant and its Contractors requiring the use of a telephone must make arrangements to have telephone service installed within the premises. The Tenant and its Contractors will not have access to the Landlord's telephone.

1.10.3 Heat

Tenant's Contractors are to supply the necessary temporary heating units. Hook up and disconnect to the building supply line will be done by the base building mechanical trade to the Tenant's account. A consumption rate for recorded use will also be applicable to the Tenant's account.

1.10.4 Loading Dock and Deliveries

The loading dock for 180 Queen Street West is located at 17 St. Patrick Street. The facility is normally open for regular service from 8:00 A.M. to 4:00 P.M., Monday to Friday (Statutory and designated holidays excluded). Dock regulations are clearly posted and shall be followed or privileges may be suspended or withdrawn. No parking of trade vehicles is permitted. The Landlord and Property Management assumes no responsibility for breakage, damage, theft or personal injury however caused.

All deliveries of materials to the leased premises and construction site must be booked through the Management Office giving at least 48 hours notice. Large deliveries must be made before 8:00 A.M. or after 6:00 P.M., Monday to Friday or from 6:00 A.M. to 6:00 P.M. on weekends and/or Statutory Holidays.

1.10.5 Service Elevator

The service elevator is located directly off of the loading dock facilities. The elevator cannot be taken out of normal service between 8:00 A.M. to 6:00 P.M., Monday to Friday. Booking of the service elevator is on a first come, first served basis and arrangements must be made providing 48 hours written notice through the Property Management Office.

The rated load for the service elevator at 180 Queen Street is 3,500 pounds. For single piece loads exceeding 75% of its rated capacity, special arrangements may be made through the Property Management Office and/or the Elevator Contractor. Any costs incurred as a result will be at the Tenant's expense.

Building personnel may be required to be on hand to supervise and the cost of same will be at the Tenant's expense. Trades are not to utilise regular passenger elevators and are restricted to the use of the service elevator only.

1.10.6 Work Areas

All construction materials, tools, equipment and workbenches must be kept within the leased premises throughout the construction period. All public lobbies, corridors, washrooms and stairs shall be kept clear of construction materials at all times.

1.10.7 Garbage

- a) Corridors, exits, freight elevator lobbies and common areas must be kept clear at all times. Removal of all construction garbage is the responsibility of the Tenant's Contractor. Arrangements must be made for service elevator time to remove construction debris to the loading dock. Because of limited space, the Contractor must immediately remove debris from the site by whatever means possible.
- b) For clarity, removal of Tenant's construction debris will be scheduled between the hours of 6:00 PM to 6:00 AM. Bins will only be accepted on site during these hours. Booking of the service elevator for down loading must be co-ordinated through the Property Management Office with a minimum of forty-eight (48) hours' notice. The Tenant's contractor is responsible for the most efficient use of the service elevator at the Landlord's discretion. A building security representative may be required, at the discretion of Management, after hours and the cost of it will be charged to the Tenant.

1.11 TEMPORARY FIRE PROTECTION DEVICES:

Operable fire extinguishers must be kept on the leased premises throughout the construction period and these extinguishers must be sufficient in number and of suitable type to combat a potential fire in the work area. Any Contractors working with an open flame must provide their own fire extinguishers in an operable condition. Base building extinguishers are not to be removed from cabinets. Approval from Building Management must be obtained before any work of this nature is undertaken.

1.12 SECURITY OF LEASED PREMISES:

The Tenant is fully responsible for the physical security of the leased premises and the contents thereof throughout the construction period and occupancy. The Tenant's Contractor(s) shall be restricted to the enclosed leased area for all work and storage of all construction materials, tools and equipment.

1.13 FASTENINGS:

Tenant contractors are not permitted to mechanically fasten to window frames, fire-rated walls or exterior walls containing structural air/vapour barriers. Clips must be used to fasten interior partitions to the ceiling grid, screws are not permitted.

1.14 PROTECTION OF BASE BUILDING ELEMENTS:

- 1.14.1 Windowsill enclosures shall not be used as a step or for storage of materials, etc. Repairs for damages shall be the responsibility of the Tenant.

1.14.2 Mechanical and Electrical Room

The Tenant shall be responsible for cleaning and making good any damages to the Mechanical and Electrical rooms. In particular, floor drains shall not be used for dumping of liquid garbage, etc.

1.14.3 Ceiling Grid

Base building construction has erected the ceiling grid to typical floor ceilings. The Tenant shall be responsible for any damages to this grid due to Tenant work.

1.14.4 Stairs and Access Areas

The Tenant is responsible for cleaning and making good damages to stairs and areas used for access during Tenant work. Note: stairs, lobbies, and corridors damaged must be made good. Tenant Contractors shall not wedge fire doors in stairs open. The Landlord, at the Tenant's expense, shall repair any damages to elevator cabs, doors or frames.

1.15 ACCESS PANELS:

Access panels in wall, ceiling and floor construction must be provided by the Tenant at its own expense and as directed by the Landlord to permit necessary access to equipment or services. The Contractor is to co-ordinate on site the location, number of panels etc. with the Building Management Office.

1.16 TIE-INS:

The Tenant must obtain the Landlord's permission in writing before installing any tie-ins mechanical, fire protection or life/safety systems, controls, and before testing any such tie-ins. Where any tie-ins are made to existing services i.e., domestic water, sanitary, etc. provisions for future accessibility and isolation must be made, and are the responsibility of the Tenant or their contractor. At the sole expense of the Tenant, the Landlord's fire safety consultant shall be retained to verify any and all fire system alterations. An addendum certificate must be provided to the Property Management Office.

1.17 FIRE ALARM:

1.17.1 Sprinkler System

All revisions to the base building sprinkler system must be approved by the Landlord or authorized personnel. The sprinkler control valve will be closed and the sprinkler line drained down each day until all Tenant revisions on each floor are completed. All sprinkler systems components must be able to be made operable at the end of each day. The Landlord must be contacted forty-eight (48) hours in advance of any proposed sprinkler work, and before commencing work on the site. **All precautions must be taken to ensure false fire alarms do not take place.** Charges will be levied against the Tenant's account (\$500 per alarm), etc. Sprinkler work requiring isolation of occupied areas must be completed during normal business hours (9:00 AM to 5:00 PM, Monday to Friday). The contractor must provide a fire

watch person for occupied areas in accordance with the building fire plan. Work outside of these hours must be scheduled with the Building Management Office.

After completion of all Tenant work the system must be water pressure tested at 150 p.s.i. for two hours. The Landlord's base building engineering consultant must witness the test and send the test certificate to the Property Management Office. The sprinkler system will be reactivated once all tests have been approved. The Tenant is responsible to ensure that the relocation or addition of heads conforms to all applicable N.F.P.A. standards, I.A.O. Requirements and to all authority requirements.

- a) A temporary smoke detection system must be installed in the event that the sprinkler system and building smoke detection system becomes inoperable at the end of each day.
- b) A full set of approved hydraulic calculations and drawings must be forwarded to the Property Management Office from the sprinkler contractor prior to any work commencement.

1.17.2 Fire Alarm and Devices

All work performed on the base-building fire alarm system shall be performed by the base-building fire alarm contractor unless otherwise approved by the Landlord. All costs associated with this work shall be borne by the tenant.

Arrangements must be made with the Property Management Office prior to performing any work on the fire alarm system. Only building personnel are allowed to isolate the fire alarm panel when modifying, installing and/or relocating any alarm devices (i.e. pull stations, communication speakers, fire alarm bells, etc.). The Tenant will be charged \$500.00 per alarm should the Tenant's contractor inadvertently cause an alarm. The Fire Alarm System must be in an operable condition at the end of each day before 5:00 P.M.

1.18 DRILLING OR CUTTING WORK:

The Tenant's contractors may not drill or cut openings of any type in any part of the base building structure. Where such work is deemed to be necessary, it must be approved in writing by the Landlord and the Building Structural Engineer, carried out at the Tenant's expense outside regular office hours. X-ray of slabs is required. All hammer drilling must be done before 7:30 AM or after 6:00 PM. All hole locations shall be submitted in drawings, accompanied by the X-rays for review and approval by the Property Management Office prior to drilling.

1.19 WELDING AND ANY OPEN FLAME WORK:

Open flames for welding, cutting or other purposes are not permitted without the prior consent of the Landlord. Proposed work of this nature must be approved by Base Building Operations in writing with at least 48 hours notice before the work is to be done. An operational fire extinguisher must be available in the immediate vicinity of the work, in addition to those already present. The Tenant Contractor shall co-ordinate shut off or covering of the smoke detectors with Building Operations. Should the Tenant's Contractor neglect to notify Operations regarding the above-noted work and a fire alarm is activated, resulting in a false

alarm, the Tenant contractor will be charged with all associated costs plus a fine of \$500.00 per occurrence.

1.20 WATER SYSTEM SHUTDOWNS:

All requests for water system shutdowns (fire, line, domestic, water, etc.) must be submitted in writing for approval at least forty-eight (48) hours before the shutdown date to the Property Management Office.

1.21 CARPET INSTALLATION:

Carpets may not be glued to the floor, except when a "quick-release" type of glue is used and the Landlord's approval has been obtained. Installation of all carpet within the Tenant's premises must be completed after normal business hours.

1.22 PLUMBING:

Where plumbing is removed from Tenant premises, all water supply, drain lines and vent connections must be removed from the ceiling spaces back to the core riser and properly capped. Installation of water meter(s) will be required on all incoming lines to the Tenant's premises servicing any kitchens, private washrooms and HVAC equipment. Washroom fixtures must be approved for compliance to the 20% water reduction program in accordance with Leed compliance. Tenants are required to install; at their sole expense, Measurement Canada Approved Meter Manager™ Electronic Submeters supplied by the Landlords recommended supplier.

Electronic Submeters for electricity measurement are required for all tenant electrical services, including receptacle power, mechanical units, lighting and supplementary air conditioning units, etc, unless otherwise stipulated by Property Management.

1.23 DAILY CLEAN-UP:

Contractors must ensure that corridors are left free of debris and must remove dirt and marks from corridor walls, floors, doors, etc., on daily basis. Where special cleaning is required to maintain the corridor's neat appearance, such cleaning will be done at the Tenant's expense.

1.24 COMPLETION OF WORK:

1.24.1 At the completion of work, the Tenant must provide the Landlord with a complete set of "as-built" sepia drawings. An Ontario Hydro Certificate of Approval must also be submitted.

- 1.24.2 All elements of the base building, such as, but not limited to, light fixtures, ceiling tiles, doors and frames, hardware etc., that the Tenant removes with the approval of the Landlord remain the property of the Landlord and must be delivered over to him.
- 1.24.3 At the completion of construction the leased premises must be left clean and in a "move-in" condition. The Landlord's cleaning contractor may be retained at the Tenant's expense to complete this work.
- 1.24.4 In addition to the foregoing obligations, Tenants are also responsible for ensuring, before premises are occupied or re-occupied, that the following areas and/or items are cleaned:
- light fixtures and lenses
 - ceiling and ceiling tiles
 - floor tiles and carpets
 - corridor walls and doors immediately adjacent to the leased premises
 - interior side of perimeter window frames (sills, jambs, headers)
 - lint screens and coil (cleaning shall be carried out by the Landlord's base building cleaners and charged to the Tenant's account)
 - interior side of all perimeter exterior windows and any partition glass installed within the leased premises.
 - all service rooms
 - venetian blinds (cleaning of the blinds shall be carried out by the base building cleaning company, and charged to the Tenant's account)
 - The filters for the floor air-handling unit must be replaced following construction.

1.25 STATUTORY DECLARATION FORM:

The Tenant and its General Contractor must complete and execute a Statutory Declaration Form protecting the Landlord against any and all liens, charges or claims for any work performed or material furnished.

1.26 AIR BALANCING REPORT:

The Tenant must engage through the Landlord, ***the Landlord's air balancing Contractor*** to provide an air balancing report upon completion of all leasehold improvement work including all expansions and new renovations. The report must be done at the Tenant's expense and must be reviewed by the Landlord's consultant. A complete floor fan system air balance must be performed as part of the retrofit scope of work for any partial or full floor occupancy.

1.27 DAMAGE:

- 1.27.1 Once a floor has been handed over to a Tenant's General Contractor, the Contractor is responsible for the floor. All floor deficiencies will be confirmed in writing with mutual acceptance to be in perfect condition unless, prior to start of any work, an inspection by the Contractor and a Representative of the Landlord determines otherwise.

1.27.2 If during the construction period, should the Tenant's contractor or other forces working for the Tenant cause damage to the premises or public areas of the building, the Landlord, at its option, will carry out repairs at the Tenant's expense.

1.28 CONSTRUCTION NOISE:

Work such as coring, chipping and drilling MUST be carried out during non-business hours with the Landlord's approval in advance. The Landlord reserves the right to request any work involving noise levels that are sufficient to result in the disruption of surrounding Tenant's quiet enjoyment of their leased Premises, be immediately stopped and reschedule to an after hours time frame. Under no circumstances will the Landlord be held accountable for any cost increases incurred by the Tenant or his Contractor for alternate scheduling of the associated work.

1.29 SITE MEETINGS:

The general contractor is to arrange and record at regular intervals during construction, site meetings to include representatives of the Tenant, General Contractor, Sub-trades and Property Management, in order to deal with any problems, alter or arrange schedules and update work progress, etc.

1.30 SPECIAL LANDLORD'S CHARGES: PAYABLE BY TENANT:

In cases of specialized construction or renovation where the Landlord provides special facilities, equipment or services, special charges may be levied. The Property Management Office will inform the Tenant of such costs, whenever possible, before the costs are incurred.

1.31 LANDLORD SUPERVISION FEES: PAYABLE BY TENANT:

The Property Management Office will provide the Tenant with a schedule of the fees that will be charged to the Tenant for the Landlord's supervision of leasehold improvement work depending upon the size and complexity of the project. Charges at the time of this manual's printing are subject to the contemplated Lease Agreements.

1.32 AMENDMENTS TO LEASEHOLD IMPROVEMENT AREA:

The foregoing information, procedures and regulations may be amended from time to time by the Landlord. After receiving notification of such changes, Tenants must comply with any new requirements.

SECTION II

FINISHES, SYSTEMS AND STANDARDS

2.1 FINISHES:

2.1.1 Lay-in tile Acoustical Ceilings and Core Areas

Office area finished ceilings are lay-in acoustic panels, in a t-bar suspension system (The main and cross tees are CGC DX/DXL 24 –15/16”, part No. 902620), using an approximate module of 1525mm X 1525mm. The base building tile specification CGC Radar, 22822, 508mm X 1525 X 19mm nominal size, flame spread 25, smoke developed 10, fuel contributed 15. During initial fit-up of the building, all cut ceiling tiles will be installed on the floor and full tiles will be left in cartons for installation by the Tenant's Fit-up Contractor. All future vacant space is fully equipped with installed tiles. The Contractor is responsible for supplying and replacing all tiles soiled or broken during tenant construction programs.

Typical elevator lobby areas, perimeter drywall ceiling band (c/w radiant panel system) and core washrooms are finished with drywall and prime painted white.

2.1.2 Concrete Floors

Office area floors and typical floor elevator lobbies are clean trowled concrete ready to accept carpet installations.

2.1.3 Core, Columns and Perimeter Walls

Core walls, perimeter walls, and perimeter square columns are clad with drywall and prime painted white. All round structural columns (Sonotube formed) are left as exposed concrete.

2.1.4 Perimeter Curtain Wall Glazing Systems and Precast Punched Windows

Fastening directly to the curtain wall mullions or punched window glazing components is strictly forbidden. Painting of window glazing frames is not permitted. The Landlord will permit double sided tape to be used to achieve acoustical sound rating between rooms where partitions meet perimeter window mullions.

2.1.5 Perimeter Ceiling Radiation Panels

The office floors are equipped with a radiant panel system that provides heating to the perimeter glazing and wall envelope systems. The radiant panels are positioned in a perimeter drywall band and are factory finish painted white. The radiant panels must not be removed, cut, painted or disturbed. Access to perimeter radiant panel control valves in the ceiling area must be maintained.

2.1.6 Doors and Frames

Entrances to electrical rooms, janitor rooms, washrooms, stairways, etc. will be hollow metal doors in pressed steel frames, painted to base building standard.

Exiting is to be in accordance with the Ontario Building Code. Cross over floor corridors are located on floors 3,8 and 13.

2.2 MECHANICAL SYSTEMS:

2.2.1. Heating, Ventilating and Air Conditioning Systems

The building ventilation design is based on the ASHRAE 62 standard of 10 l/s per person and assumes an occupancy rate of one person per 9.8 sq.m. for typical office floors. **All ground floor retail spaces are atypical from standard office floors and are to be reviewed with the Landlord and Mechanical engineer on a case by case basis to confirm available system capacities and operations.**

A single compartmental air handling unit located within a fan room on each office floor draws a mixture of return air from the floor through the adjacent ceiling space return air plenum and tempered makeup air from the on floor constant volume air terminal. The unit consists of filter, chilled water coil, variable speed fan and inlet and outlet silencers and delivers conditioned air to a ring duct main in the ceiling space of the floor served at the line of separation of the perimeter and interior zone. Air delivery rates vary from perimeter to interior zones, but the average delivery rate to the floor is approximately 1 cfm/sf.

There are 20 exterior VAV zones and 13 interior VAV zones (including the lobby)

Individual ceiling space mounted DDC controlled VAV terminals meter the flow of conditioned air to each zone or room in response to electronic space temperature input signals. Ring duct static pressure is controlled by compartmental unit fan speed modulation. In perimeter zones terminals are sequenced with radiant panel control valves. Supply air delivery to the space is through light troffer diffusers in the core and perimeter boot diffusers. Compartment unit supply air temperature is controlled to maximize space airflow by setpoint reset to ensure full flow at the VAV terminal with the greatest cooling demand.

Any addition or relocation of thermostats, ductwork, VAV boxes, diffusers etc. deemed necessary to accommodate the Tenants floor plan and cooling loads shall be the responsibility of the Tenant.

Air must move laterally through the office area to the core area fan rooms, return shafts and smoke shafts. If partitions extend to the underside of the structure, openings and air transfer ducts must be provided for the free movement of air.

The office floors will be heated at the perimeter by hot water running through finished radiant ceiling panels, thermostatically controlled with approximately 18 perimeter zones. Perimeter thermostats modulate heating and cooling in sequence. Hot water supply and return risers are located in perimeter column enclosures with piping runouts in the ceiling space. Radiation control valves provided at one per column bay are thermostatically modulated in sequence with their corresponding VAV terminal to maintain room temperature.

The washroom exhaust system is sized for 50 l/s per fixture with an allowance for future Tenant exhaust. Exhaust is drawn from lighting coves above the w.c's and is made up through crossover ducts to the lighting coves over the basins from the adjacent ceiling space outside the core. General exhaust includes a vertical duct shaft in the compartmental room with a runout to draw air from the Tenant ceiling space.

The Tenant shall not directly utilize the base building exhaust system to accommodate any special room use i.e., smoking room.

The design criteria for office space is as follows:

- In winter 21.0°C (72°F) with max 30% relative humidity at outside conditions of minus 24.0°C (-5°F)
- In summer 24°C (75°F) with 50% relative humidity at outside conditions of 32°C (90°F) dry bulb and 24.0°C (75°F) wet bulb temperature.
- Ventilation rate (outside air capacity) will be 1.02L/s/sq.m of occupied area and assumes an occupancy rate of one person per 9.8sq.m.
- If additional information is required from the base building mechanical engineer, the Tenant's engineers will be supplied with information about air supply quantities, which the Tenant design shall not exceed.

2.2.2 New Equipment Installation

The base building is equipped with a heat rejection system consisting of a single fluid cooler piped to reject the heat of a closed loop tenant cooling water system. There are 65 mm diameter valved and capped connections at the core of each floor available for Tenant use. The base building mechanical Engineer can provide information on available capacities.

Should a Tenant require supplemental cooling continuously i.e. computer room, an independent system should be installed at the Tenant's sole expense subject to the written approval of the Landlord. Electrical and water meters are required to be installed at the Tenant's expense. Tenants are required to install; at their sole expense, Measurement Canada Approved Meter Manager™ Electronic Submeters supplied by the Landlords recommended supplier.

Electronic Submeters for electricity measurement are required for all tenant electrical services, including receptacle power, mechanical units, lighting and supplementary air conditioning units, etc, unless otherwise stipulated by Property Management.

2.2.3 Plumbing and Drainage

Plumbing into the main domestic cold water supply and connections to the sanitary drain and vent risers are provided at the core to allow for the addition of a limited number of facilities in the leased premises, subject to the Landlord's approval. Tenants requiring hot water must provide their own hot water tanks and water meters must be installed for consumption charges. Tenants are required to install; at their sole expense, Measurement Canada Approved Meter Manager™ Electronic Submeters supplied by the Landlords recommended supplier.

Electronic Submeters for electricity measurement are required for all tenant electrical services, including receptacle power, mechanical units, lighting and supplementary air conditioning units, etc, unless otherwise stipulated by Property Management.

2.2.4 Fire Protection

A combined sprinkler and standpipe fire protection service is provided from the new incoming main service and is served by dual fire pumps located in a fire service room in the loading level.

All glazed walls within the limiting distance to the property line are equipped with a separately zoned window sprinkler system with heads located on the inside only of the glass to maintain the required fire separation to the property line.

New standpipes serve 2-valve fire hose cabinets at each level and a dedicated sprinkler riser serves supervised sprinkler services to each floor. Flow switches in each runout annunciate an alarm at the Fire Alarm Control Panel. Pressure reducing valves are provided as required to ensure maximum 690-kPa-system pressure at the topmost outlet.

Sprinkler coverage is light hazard on office floors, ordinary hazard in all other spaces. Systems are hydraulically sized for coverage described with extended coverage sprinkler heads. On each floor a hydraulically designed open plan sprinkler system is provided. In addition, three fire hose cabinets containing portable fire extinguishers are provided within 5m of each stair exit.

ULC listed electric driven dual fire pumps are provided in the incoming service room to meet NBC pressure requirements on the upper floors. Pressure reducing valves are provided at all hose cabinets to limit pressure.

Any changes or alterations to the base building sprinkler system must be approved by the Landlord's base building engineers and base building sprinkler Contractor at the Tenant's expense.

2.2.5. Smoke Evacuation System

An active smoke evacuation system is provided within the project capable of evacuating one floor at a time on a signal from the Central Alarm & Control Facility (CACF).

The office tower is equipped with a smoke exhaust system designed to exhaust six air changes per hour from the largest floor area in the building. The fan will be located at the top of the make up air shaft. During a requirement for smoke exhaust, all equipment connected to the shaft will be isolated using smoke dampers, a large dedicated smoke exhaust damper on the fire floor will open and the smoke exhaust fan will start.

Smoke detectors and annunciation speakers are base building standards.

In the event of a fire all elevators automatically return to the ground level. The service elevator will be used for emergency use. A voice paging system covers all areas of the building. Emergency telephones and pull stations are located at the entrance to all stairwells.

2.3 ELECTRICAL SYSTEMS:

Emergency Power

A standby diesel-electric generator set is located at the Mechanical Room Penthouse Level of the office building. The generator shall automatically service the life safety needs of the building in case of utility source power failure. The generator is rated 1000kW standby at 347/600V. Automatic transfer switches are provided to transfer the emergency loads from utility sources to generator power.

The generator will support the following loads: emergency egress lighting, exit lighting, fire alarm system, security system, firefighter's elevator, smoke management system, fire pumps, sump pumps and sewage pumps.

Exit Lighting

Illuminated L.E.D. type exit signs will be provided at all means of egress and paths leading to such means. Power supply to these will be from the emergency power system described above. Any additional exit lights are to match base building standards that are added under the tenant design program.

Emergency Lighting

Selected lighting fixtures will be connected to normal/emergency system so that on failure of utility source power they will provide a minimum of 10 lux average illumination along all means of egress and paths leading to same. The typical floor office areas are provided in open plan layout to meet this requirement. Tenant electrical engineers are responsible for revising and reconfiguring emergency feeds to lighting on emergency power circuits.

Building essential services are connected to an emergency power generator system. Each floor has a minimum coverage of emergency lighting. The Tenant must connect to this system and may install additional emergency lighting, with prior approval from the Landlord.

Fire Alarm and Detection Systems

A computerized zoned, non-coded, modified, two stage system has been provided. This system is designed to fully integrate with other life safety, sprinkler, security, and smoke management systems. The Landlord must approve all changes to the base building fire alarm system.

The system employs fully programmable addressable devices, each with their own unique address allowing the building operators to specifically identify the detector in alarm. The primary means of detection/suppression is the automatic sprinkler system; however, in certain critical areas the following types of early warning detection supplement this system: Electrical & Telecommunication Rooms - smoke detector, stairwells - photo-electric smoke detectors every 3rd floor, elevator shafts - thermal detectors at top and bottom, air handling systems - duct mounted air sampling smoke detectors (minimum two locations per floor).

ENERGY

State of the art components are utilized to minimize energy consumption wherever practical throughout the complex, namely high efficiency light sources and lighting fixtures with electronic ballasts. A computerized low voltage lighting control system along with occupancy sensors in enclosed spaces or limited use areas (i.e. storage areas, washrooms etc.) is provided to conserve energy, mainly in washrooms and storage rooms.

POWER TO TENANT SPACES, TYPICAL FLOOR OFFICES

Power to Tenant space is provided from a 347/600V volt, 4-pole bus duct riser. Bus ducts rise through electrical rooms on each floor. All hydro usage is metered and charged back directly to the Tenant. Tenants are required to install; at their sole expense, Measurement

Canada Approved Meter Manager™ Electronic Submeters supplied by the Landlords recommended supplier.

Electronic Submeters for electricity measurement are required for all tenant electrical services, including receptacle power, mechanical units, lighting and supplementary air conditioning units, etc, unless otherwise stipulated by Property Management.

All ground floor retail spaces are atypical from standard office floors and are to be reviewed with the Landlord and Mechnacial engineer on a case by case basis to confirm available system capacities and services supplied.

A bus duct mounted cable tab box is provided on each typical floor to feed a splitter trough. One 347/600 volt lighting panel is provided for the base building lighting system, fed from the splitter trough.

Typical floor power distribution for receptacle loads is provided by means of 126 cct. receptacle panel fed from 60 kVA distribution transformer and splitter box.

Space for a future service is available on the bus duct cable tap off box and at the splitter trough at each floor.

Power capacities have been provided as follows:

3.7 watts/ft² for lighting.

3.1 watts/ft² for electronic equipment and plug-in loads.

This total of 6.8 watts/ft² is exclusive of power required for HVAC and elevator services.

A ceiling distribution system consisting of junction boxes for power, for each net usable 112 m² (1200 ft²) is provided on the office floors. Each power junction box contains six (6) 15A 120V circuits.

All base building distribution transformers are of the harmonic reduction type equal to Mirus Harmony 1. All new transformers to match existing. Provide transient voltage surge suppression at all new panelboards.

The telephone and electrical rooms, which are provided on each floor, are intended only for base communications and electrical services and are not accessible to the Tenant. Any space of this nature, which the Tenant requires for its own equipment or use, must be provided within the leased premises. The Tenant shall carry out arrangements for telephone and communications services directly with the system supplier. Under no condition shall these rooms be used for storage of materials. Fire proofing through floor slab openings is required and shall conform to building standard detail.

LIGHTING DESIGN

Typical Floors:

The office floors are provided with 347 Volt, fluorescent T-8 lamps and electronic ballasts c/w 3 " deep parabolic louvre fixtures. The fixtures will permit air-handling troffers to be mounted onto to deliver airflow. Average maintained illumination level of 500 lux. All new fixtures of this type are to match existing from the same supplier.

A safety chain must secure all electrical fixtures.

Washrooms:

Cove mounted fluorescent with T-8 lamps and electronic ballasts. Supplemented with compact fluorescent downlights.

Stairwells:

Lensed fluorescent luminaries at each landing and mid landing.

Exit Lighting:

Energy efficient LED type at all exits and where required by code.

TELECOMMUNICATIONS INFRASTRUCTURE

A complete communications empty raceway system is provided for this facility. The raceway system is terminated in the main communication room, located in the loading level, permitting modem connection to off-site networks.

The building entrance facility at the loading level will permit both fibre optic and copper based telecommunication carrier services to enter the building from multiple service providers. The Main Telecommunications Room will be connected to a building communications pathway riser system servicing all floors of the building for vertical transport of the building backbone cabling requirements by the Tenant and its Service Provider (Communications Vendor). The Tenant is responsible for installing all necessary communication cabling and equipment from the incoming service entrance and its floor.

An in-ceiling distribution system is provided on the typical floors consisting of a 50mm zone conduit for each net useable 84m² (900 ft²) of office space. Ground floor retail areas to be reviewed on case by case basis.

All wiring in the ceiling (e.g. telephone and data communication lines) must be completely enclosed in conduit or it must be fire rated plenum cable.

SECURITY SYSTEM

The security system for the office building has a fully integrated intelligent distributed Architecture approach utilizing a central control with fully stand alone remote processing units located throughout the project.

The system will automatically control card access readers, electro-magnetic locks, strikes, door contacts and be connected to the fire alarm system. The system will also be designed to allow for off-site monitoring from a recognized central station.

Computerized card access control will allow the building operator to restrict movement or access to any part of the building to only those with authorization.

Card readers are provided in the base building at critical points including all exterior main entrance doors, loading dock, elevators, parking garage entrance and other critical areas restricted to the public. All **typical floor** exit stair doors are roughed in for future access

control and monitoring devices.

CCTV surveillance occurs at critical points including public areas, loading areas, building main entrances and secured parking area. All surveillance monitoring occurs at the front lobby security desk.

BUILDING LIGHTING CONTROL

A microprocessor based lighting control and energy monitoring system is provided to control all lighting in the office building. Points will control exterior lights, parkade lighting, ground floor, and typical office floor lighting in the system. Tenant's electrical designers will be required to co-ordinate any lighting changes and/or additions with the base building lighting control system

In addition to the low voltage lighting control system, occupancy sensors are provided for all public and office core washrooms and storage rooms.

Master low voltage light switches are required to be installed to control all lighting within the leased premises. The cost of supplying additional fixtures will be at the Tenant's expense.

TENANT METERING

A central microprocessor based electronic metering system is provided to allow accurate distribution of utility costs. Meters will be incorporated into any Tenant fit-up design program at the Tenant's expense. Tenants are required to install; at their sole expense, Measurement Canada Approved Meter Manager™ Electronic Submeters supplied by the Landlords recommended supplier.

Electronic Submeters for electricity measurement are required for all tenant electrical services, including receptacle power, mechanical units, lighting and supplementary air conditioning units, etc, unless otherwise stipulated by Property Management.

2.4 STRUCTURAL SYSTEMS:

A general description of the structure is provided to the Tenant by means of copies of selected working drawings. Such additional drawings or information as the Tenant may reasonably require may be obtained from the Property Management Office. Office floors have been generally designed to handle 75 pounds per square foot live load (3.8kN/m²). There is also a partition allowance of 20lbs/sq.ft (1.0kNm²). Unusually heavy loading situations, such as central filing areas, storage areas, vaults, safes, etc., must be specifically indicated, and details of projected floor loading supplied as part of the working drawings the Tenant submits to the Landlord. Plans for such unusual situations are subject to the Landlord's prior approval and structural engineer's review.

2.5 STANDARDS:

2.5.1 Door Hardware

All door locks installed by the Tenant, on both entrance and interior doors, must be keyed to the building master and sub-master keying system using building standard door hardware. The system allows complete freedom to the Tenant with respect to locking arrangements for its offices, while providing access to each office at all times for both normal cleaning and emergency situations.

The Property Management Office must be involved with all proposed keying changes or additions. Outside locksmiths or lock manufacturers are not permitted to change the keying of any locks. The Landlord's locksmith, at the Tenant's expense, must be engaged for the final keying. Keying can only be performed at the factory.

It is advisable that the Tenant contact the Property Management Office before purchasing a hardware system to ensure that it is compatible with the base building system, Corbin Mul-T-Lock

2.5.2 Security Card Access Systems

The Property Management Office must be notified before the installation of any card-access system. Any Tenant door equipped with a card reader must have a building master key override.

The base building security card access system (Simplex) may be utilized by the Tenant for any or all entrance and interior doors. The Tenant will be responsible to obtain any required permits and licences from government authorities having Jurisdiction and for the installation of any required additional life safety devices (i.e. pull stations).

In the event that magnetic locking devices are to be installed, each must be tied into the master key override switch located in the Fire Control Room and to ensure all locks have been verified.

All costs associated with the installation will be at the Tenant's expense and at the sole discretion of Property Management Office, a nominal administration fee for card programming and reports requested may be applicable. Please contact the Property Management Office for further information.

2.5.3 Venetian Blinds

All windows are provided with horizontal venetian blinds, which may not be removed. They form an integral component of the overall HVAC system as they contribute to mitigating heat build-up thus reducing energy costs.

2.5.4 Signage

Tenant identification signs in ground floor lobby directories, elevator lobbies and on the Tenant entrance doors must be in accordance with the Landlord's design criteria for such items as style, location and size. Please note that no signs will be permitted to be installed on any corridor demising walls, whatsoever. The cost of all signs will be at the Tenant's expense.

King Products has been engaged by the Landlord to provide an electronic lobby directory in the main lobby of the building. Typical floor lobby directory boards will be provided at each

floor. The Property Manager will arrange for production of required tenant signage incorporation on to the typical floor lobby directory slats at the Tenant's expense.

All requests for signs must be submitted in writing to the Property Management Office indicating the exact wording and spelling required. Requests should be submitted approximately one month prior to the actual move-in date.

SECTION III

TENANT / CONTRACTORS' RESPONSIBILITY

3.1 MECHANICAL:

3.1.1 Labour, Materials & Fees

Provide all labour and new materials for the complete installation of the systems. Ensure that complete installation meets with the approval of all authorities having jurisdiction in accordance with all codes, etc.

Arrange and pay for all permits and fees required for this installation.

Use materials that are C.S.A., U.L.C. , code approved and C.G.A. or Ontario Hydro certified for the intended application.

Comply with the intent of the base building specifications.

Comply with the requirements as outlined in the Landlord's "Design Criteria Manual".

3.1.2 Examine the Site

Examine the site and be familiar with all the conditions covered by these specifications. Extras will not be allowed for failure to properly evaluate conditions.

Take field dimensions prior to any installation.

3.1.3 Compliance With Codes

Comply with all latest relevant codes and local regulations having jurisdiction including O.B.C., N.B.C., N.F.P.A. 13, C.G.A. 149.1, C.S.A., O.W.R.A. 675/85, Canadian Plumbing Code, Ontario Hydro Code.

3.1.4 Debris & Clean Up

Keep premises clean as work progresses, avoid accumulation of debris, ensure that during construction all open vents are sealed and any controls (thermostats etc.) are covered. On completion of the work, clean up and remove from site all scrap materials resulting from the work. Clean all equipment prior to final inspection.

3.1.5 Co-ordination & Co-operation

Co-ordinate the work with all trades to ensure work may progress without delay. Arrange the schedule of all work in co-operation with the General Contractor.

Co-ordinate the work with all trades and co-operate to ensure services do not conflict with the other services and / or structure.

Make allowances for such items as offsets to accommodate actual field conditions. Refer to structural and architectural drawings (or site visit) for further building information.

Mechanical Contractor shall indicate in red ink on an extra set of white prints all changes and deviations from locations on plans as job progresses. On completion of the work provide the landlord with two sets of completed drawings showing location of all equipment, piping, ducting etc.

3.1.6 Warranty

Guarantee all work, equipment and materials for one (1) year from substantial completion of the contract (A/C unit compressors – five (5) years).

Ensure that all equipment is properly guaranteed by the manufacturer.

3.1.7 Shop Drawings

Submit shop drawings of all fixtures and equipment (including wiring diagrams) to the Landlord for approval. Approval of shop drawings is gratuitous and does not relieve the contractor of his responsibilities.

3.1.8 Cutting and Patching

Provide cutting and patching for work. Arrange to provide for the making good to finishes and include for the cost of this work.

3.1.9 Wiring

All power wiring: Electrical Specifications
24 volt wiring only: Electrical Specifications

Include for all necessary starters, disconnects, transformers and relays etc.

Ensure co-ordination between trades to avoid gaps and overlaps and to ensure all equipment is operational.

3.1.10 Demonstration

Allow for demonstration of all equipment to the Landlord and the Landlord's operating staff.

3.1.11 Miscellaneous

Provide structural steel support members as necessary to hang equipment, fans, ductwork, and piping from the building structure. Paint all miscellaneous bare metal one coat grey oxide primer.

3.1.12 Alternatives

Assume full responsibility that the equipment offered as an alternative is suitable for the space allocated, and for any additional costs to any part of the work resulting from the use of an alternate.

No deviation from plans and specifications will be allowed unless written approval and consent is first obtained from the Landlord.

3.1.13 Maintenance & Operating Instructions

Provide two copies of manufacturers' maintenance and operating instructions for all equipment.

Present the instruction in indexed three ring hard cover binders, with spine label project indicator, and index sheet. Including all shop drawings, permits, warranty details, certificates, contractor names, and telephone number lists for all project trades in this manual.

3.1.14 Interruption of Services

Any interruptions of the base building systems shall be co-ordinated with the Landlord for the time and duration and shall strictly adhere to the Landlord's instructions in this regard.

Include cost of premium time in tender price for the work outside normal working hours to maintain all mechanical services in operation without disruption to existing Tenants.

3.1.15 Workmanship

Employ a responsible foreman to supervise the work and retain for duration of construction period.

Employ only skilled plumbers, steam fitters, sheet metal workers for the execution of the work. Workmanship shall be first class as regards to durability, efficiency, safety, and neatness of detail.

3.2 PLUMBING:

3.2.1 Piping Materials

Condensate drain piping:

Type 'M' copper.

Heat pump supply and return piping:

Steel pipe 50mm and smaller - schedule 40 electric weld or seamless ASTM specification A-53, 65mm and larger - schedule 40 as above ASTM specification A-53 with butt welding ends. With steel pipe fittings up to and including 50 mm shall be threaded joints malleable iron, 65mm and larger shall be forged steel butt weld.

Copper pipe 50mm and smaller type 'L' hard drawn copper with wrought copper solder type fittings.

All elbows shall be long radius type.

Victaulic and Gustin-Bacon systems are acceptable equals.

- a) Gate valves up to 50mm: Crane 428, Jenking 810, RW/Toyo 293, Newman Hattersley T605.
 - b) Globe Valves up to 50mm: Crane 7, Jenking 1068 RW/Toyo 221, Newman Hattersley 13.
 - c) Ball valves up to 50mm: Crane 915, Jenking 33, RW/Toyo 5044A, Watts B6000, Newman Hattersley 1969AT.
 - d) Flow balancing valves: Armstrong CBV.
- Domestic water piping: Type 'L' copper. Exposed piping in finished areas shall be chrome plated.
- Drain and vent lines: copper DWV or aluminum DWV pipe
- Condensate drain piping: Type 'M' copper.
- Domestic water valves: Crane 438 and 1320
Jenking 310 and 313
RW/TOYO 280A and 281A.
- Shock absorbers: Ancon shok-gard
Enpoco - HT series
Zurn - Shok Trol.

When using solder on potable water piping, use 0.2% maximum lead solder or alternatively use 90/5/5 (tin/silver/antimony) lead free solder.

3.2.2 Piping Supports

Support all piping using Clevis type hangers and riser clamps. Use hangers of the same material as pipe, or insulating inserts between hanger and pipe. Grinnell, Myatt, Economec or equal.

Provide pipe covering protection saddle at each hanger where pipes are insulated.

3.2.3 Escutcheon Plates

Provide escutcheon plates at all walls where pipes are exposed to view.

3.2.4 Unions

Provide unions to connect all piping to equipment to facilitate ease of maintenance.

3.2.5 Pipe Insulation

Insulate all domestic cold water piping and horizontal condensate drain lines with 1" thick fibreglass heavy density pipe insulation with all service jacket (ASJ). Adhere a factory applied vapour barrier jacket lap smoothly and securely at the longitudinal seams with vapour barrier adhesive. Adhere 3" butt joint strips over all end joints to ensure a continuous vapour barrier.

Insulate domestic hot water piping with 1" thick fibreglass heavy density pipe insulation with full service jacket.

Finish all exposed insulation with 6 oz fire retarding canvas.

Clearly label pipe contents on pipe surface (i.e. D.H.W. or D.C.W.) and identify flow direction.

Piping shall be concealed in finished areas and grouped so that valves etc. are accessible through as few access panels as possible.

Run piping parallel to building lines with crossing over kept to a minimum.

Identify all visible piping fully exposed or in accessible spaces (i.e. lay-in ceilings) with legend lettering, direction of flow and field colour band.

<u>Medium</u>	<u>Legend</u>	<u>Legend & Flow Arrow Colour</u>	<u>Field Colour Band</u>
Heat Pump Water Supply	H.P.W.S.	Black	Light Green
Heat Pump Water Return	H.P.W.R.	Black	Light Green
Condensate	Cond.	Black	Black
Cold Water	C.W.	Black	Light Blue
Domestic Hot Water	D.H.W.	Black	Dark Blue
Sanitary Sewer	San.	White	Black
Plumbing Vent Line	Vent	Black	Black
Radiation Heat Supply	HWS	White	Purple
Radiant Heat Return HWR		White	Purple
Condenser Water Supply	CWS	White	Dark Green
Condenser Water Return	CWR	White	Dark Green

3.2.6 Valve Tagging

All valves shall have securely affixed to them a brass plate tag with embossed black numbers.

Prepare for the Landlord a list of valve numbers indicating location and function.

3.2.7 Access Doors

Provide approved access doors to all valves, and etc.

3.2.8 Radiant Panels

Do not cut , disturb or relocate existing base building radiant panels on typical floors

Refer to original base building specification for maintenance, flushing, installation, etc., radiant panels

3.2.9 Drains

Provide Enpoco E-1000-R5-CI-PB-TSP floor drains where shown or as approved by base building mechanical engineer.

All interior floor drains shall be piped and connected to trap seal primers TSP-2.

3.2.10 Cleanouts

Install all floor cleanouts with standard TY branch or Y branch and blend using Enpoco 3000-CI cleanouts with cover to suit floor finish.

3.2.11 Plumbing Alternatives

Enpoco numbers used in drains and cleanouts. Equivalent alternates by Zurn, Ancon or Rototech Smith are acceptable.

3.2.12 Plumbing Vents

Plumbing vents are not necessarily shown on drawings. However, install vent system in accordance with O.W.R.A. 675/85.

3.3 H.V.A.C.

3.3.1 Ductwork

Provide ductwork as indicated on drawings.

Provide all ductwork to "SMACNA" standards. Fabricate all ductwork from galvanized steel to the clear inside dimensions as noted on the drawings, with all flat surfaces cross broken.

Install all ducts free from leaks and seal all holes with 3M #474 tape

Duct thickness as follows:

<i>Maximum Size</i>	<i>Gauge</i>
up to 12"	26
13" to 30"	24
31" and over	22

Where any construction impediment or requirement renders the dimensions impossible, alter ductwork so as to give an effective cross sectional area equal to that originally shown without exceeding an aspect ratio of 4:1. Make changes at no additional cost to the Landlord.

Use bends where possible. Use square elbows c/w turning vanes wherever bends are impractical. Duro Dyne "Durovane Rail" or Hart & Cooley "Ducturn" or equal.

Brace ducts so they do not vibrate or sag. Support horizontal ducts up to 20" wide with 1" x14 ga. galvanised straps passing under ducts, on 8'0" centres. Use angle iron support for ducts over 20" wide or deep.

Provide approved access doors to all balancing and fire dampers, and etc.

Supply and install splitter dampers at all supply air branch take-offs. Dur-Dyne SRP or equal hardware.

Paint inside ductwork black where visible through grilles, etc.

Flexible ducting to be class 1 air duct connectors as listed and labelled by Underwriter's Laboratories of Canada, with flame spread of not more than 25 and smoke development classification of not more than 50.

All round duct through 24" diameter shall be United Sheet Metal spiral lock-seam Uni-seal duct manufactured from galvanized steel meeting ASTM A-527-71 in the following gauges:

<u>Diameter</u>	<u>Metal Thickness</u>
3" - 8"	28 Ga.
9" - 14"	28 Ga.
15" - 24"	26 Ga.

All fittings shall be United Sheet Metal standard, or equal, uniform fittings manufactured from galvanized steel meeting ASTM A-527-71 with continuous weld or standing seam construction in the following gauges:

<u>Diameter</u>	<u>Metal Thickness</u>
3" - 8"	24 Ga.
9" - 14"	24 Ga.
15" - 24"	22 Ga.

3.3.2 Duct Insulation

Insulate ductwork with 1" thick internal neoprene coated fibreglass ductliner where indicated. Adhere with minimum 50 % covering of fire retarding adhesive and supplement with welding pins.

Make provisions for duct liner so that sizes shown on drawings are clear inside dimensions inside the insulation.

Maintain and repair any base building HVAC duct insulation wrap damaged or disturbed during fit-up operations.

3.3.3 Fire Dampers

Provide Ruskin or controlled air ULC rated Type B fire dampers.

Install in accordance with N.F.P.A. 90A rated to suit fire rating of membrane to be protected.

3.3.4 Fans

Provide fans as scheduled on the drawings.

Adjust fans and motors to operate quietly, and make dampers tight to prevent vibration.

Provide fans with spring isolation to give a minimum 95% efficiency.

Provide flexible connections at each fan 24 oz. per yard tensile strength of not less than 500 lbs. with metal to 3" fabric to metal "Grip-Loc" duct connections.

3.3.5 Balancing

Engage the service of the Landlord's balancing contractor to balance and test all air handling systems under this section.

This contractor shall:

Review drawings, specifications, and installed work to ensure that systems may be properly balanced in accordance with drawings. Advise installing contractor of any additional requirements for effective balancing.

Ensure that air handling systems are free from obstructions, that dampers are positioned correctly, that moving equipment is lubricated in accordance with manufacturer's recommendations, and that filters are clean.

Demonstrate that the air handling system's performance is as specified and adjust variable speed pulley's and volume control dampers where necessary. Each diffuser and grille shall supply or exhaust specified quantity with +/-5%.

Tabulate and certify test results on suitable forms and submit to the Landlord for approval record.

Perform this work in accordance with procedures and standards described in SMACNA "Balancing and Adjusting Manual".

3.3.6 Control Dampers

Dampers shall be opposed or parallel blade low leakage type.

Frames to be reinforced extruded aluminum with vinyl jamb and blade seals. Blades to be 6" maximum on centres. Damper actuators shall be oil submerged, spring return, two position 120/1/60 electric type. Bearings to be non-corrosive nylon.

Damper seal shall be designed for minimum air leakage by means of overlapping seals. Dampers to be Nailor Hart, Ruskin or approved equal.

3.3.7 Variable (Constant) Air Volume Valves (V.A.V.)

Refer to schedules for type, capacity and size of variable volume air valves. Install in locations shown on plans. All controls to match existing valves (TAC).

3.3.8 Controls

Provide for new and relocation of existing control components as indicated on drawings.

Controls are to be supplied by TAC controls and installed by the base building contractor.

3.4 ELECTRICAL:

3.4.1 General

All work shall be in accordance with the latest edition of the Ontario Hydro Code, Local Inspection, Ontario Building Code, and any other ordinance.

Examine the site and all drawings and specifications of all trades and be familiar with the work of this trade. No allowances will be made for the failure to do so.

All electrical work shall comply with C.S.A. electrical bulletins applicable to tender close. Where specific bulletins are not named they are still considered an integral part of this specification.

Grounding shall be in accordance with the requirements of the Ontario Electrical Code. Provide all grounding required regardless if not shown on the drawings.

Provide all new materials having C.S.A. approval. All workmanship shall be first class in regard to standard practices, safety, accessibility, durability and neatness of detail for acceptance by the Landlord's representative.

Arrange and pay for all permits and inspection fees required for the work of this trade. It is the responsibility of this contractor to submit to the Electrical Inspection Department and/or supply authority any and all drawings and specifications required for permits, fees, approvals, examinations and services.

Provide all cutting and patching required for the work of this trade. All shop painted equipment damaged in transit shall be touched-up to match existing finish.

Avoid accumulation of debris as the work progresses. On completion of the work, clean up and remove from the site all scrap materials resulting from the work of this trade.

Co-ordinate the work of this trade with all other trades on the job so that the work may progress without delay.

Prior to final inspection, clean all electrical equipment. Clean all construction dust and dirt from installed equipment at the conclusion of the job.

Upon completion of the work, provide the final unconditional certificate of acceptance from Ontario Hydro Inspection Department to the Landlord.

Provide a one year guarantee on all materials, and labour from the date of acceptance by the owner.

The Electrical Contractor shall adjust phase loading, such as not to exceed a 10% phase imbalance.

The electrical contractor shall submit shop drawings for power distribution equipment, fire alarm equipment, and all luminaries with associated equipment, i.e. poles, brackets etc. to the Landlord.

The shop drawings shall bear the name of the manufacturer, the manufacturer's catalogue number, and the engineer's designation, along with all pertinent information on each piece of equipment.

All equipment shall be mounted, plumbed true.

The electrical contractor shall obtain one set of blueprints, for 'as built' purposes, and make all necessary revisions on these blueprints to reflect actual on-site changes.

At the end of construction, prior to final inspection by the engineer, the electrical contractor shall submit the as built drawings for review. Final inspection will not be carried out until these drawings are submitted.

The base building specifications shall form an integral part of this specification and shall be strictly adhered to.

The interior design drawings are to be consulted for all locations of devices and mounting instructions. Where device styles, colour, or orientation are specified on the interior design drawings these shall be strictly followed. Where requests by the designer are in conflict with the applicable codes, the Landlord's engineer shall be contacted for a decision.

Tenants are required to install; at their sole expense, Measurement Canada Approved Meter Manager™ Electronic Submeters supplied by the Landlords recommended supplier. Electronic Submeters for electricity measurement are required for all tenant electrical services, including receptacle power, mechanical units, lighting and supplementary air conditioning units, etc, unless otherwise stipulated by Property Management.

3.4.2 Conduits and Raceways

Use TWH or R90 copper conductors C.S.A. approved for the application. Size conductors so that maximum branch circuit voltage drop does not exceed 3%. Minimum conductor size is #12 AWG unless otherwise indicated. Design is based on copper conductors.

All conductors are to be installed in raceways as described below;

- a) Interior exposed surface raceways, branch circuit wiring from panel, concealed in accessible ceilings and walls or in concrete block construction: E.M.T. Raceways.
- b) In metal stud partition walls, branch circuit wiring from panels in suite or tenant occupancies, in concrete block walls for final drops and for final drops to fixtures in ceiling spaces. (Length not to exceed 3 M in this application); Armoured Cable (Bx).

All conduit and wiring is to be concealed in all finished areas.

Minimum raceway size for telephone and communication conductors is 19 mm (3/4 ").

3.5 DEVICES:

3.5.1 Switches

- a) Specification grade rated 15A, 125VAC, single pole, single throw. (3-way or 4-way as noted on drawings).
- b) Spec grade, rated 15A, 240VAC, single pole single throw. (3-way or 4-way as noted on drawings).

Manufacturers: Smith & Stone, Harvey Hubbell, Leviton, Pass & Seymour, Eagle or equal 4.

3.5.2 Receptacles

- a) Spec grade, duplex, rated 15A, 125VAC, EEMAC 5-15R configuration, U-ground.
- b) Isolated ground, duplex, rated 15A, 125VAC, EEMAC 5-15R configuration, insulated, isolated U-ground.
- c) Ground fault interrupting Class A duplex, rated 15A, 125VAC, EEMAC 5-15R configuration, trip at 4-6 MA fault current. C/W push to test and reset buttons.

3.5.3 Cover Plates

- a) Smoothline bakelite, colour to match switches and receptacles. Coverplates to be of the same manufacturer as the devices.

3.5.4 Dimmers

Lutron Nova "T" Series. Wattage as indicated. Provide appropriate wall boxes for corresponding dimmer size. Do not gang dimmers in one outlet box.

Manufacturers: Smith & Stone, Levito, Ideal, Prescolite or equal.

3.5.5 Equipment isolating disconnects

Disconnecting devices to be sized for the current carrying capacities of the equipment to be isolated. Provide number of poles as required by the equipment to be isolated. Type of enclosure as indicated below;

- 1) Dust free or standard - EEMAC Type 1.
- 2) Outdoor or damp location -EEMAC Type 3R.
- 3) for direct exposure to water under pressure - EEMAC Type 4.
- 4) For high dust concentration of non-ignitable dust - EEMAC Type

Manufacturers: Commander, Arrow-Hart, Scepter, F.P.L.. Square D, Westinghouse, or equal.

All devices of the same type, size and rating are to be of the same manufacturer throughout the project.

3.5.6 Service and Distribution

Acceptable manufacturers for the distribution equipment include:
Commander, Federal Pioneer Limited, ITE (Seimens), Square D, Westinghouse.

Label all disconnect switches, starters, and panels to clearly indicated equipment controlled or area serviced. Indicate fuse size and type on all fused disconnects.

Provide circuit breaker panels of the type, with ampere capacity, number of poles, branch breaker capacity etc., as specified in panel schedule. Mounting to be as indicated.

Provide a typed directory card on the inside of the panel door in a metal frame with clear plastic cover.

All branch breakers shall be thermal-magnetic trip indicated, ambient temperature compensated and bolted to the bus-bar.

All surface mounted equipment shall be mounted on 19 mm (3/4") plywood backboard.

3.5.7 Lighting

Provide fixtures complete with all accessories and mounting hardware, and lamps as approved by the Landlord as an equal fixture. Products of equal quality by alternate suppliers are to be approved by the base building engineer.

Extra base building fixtures are available from the Landlord.

3.5.8 Emergency Power

An emergency lighting circuit at 347V, 15A, is provided by the Landlord to power emergency lighting fixtures in the open plan office area, and are located in the ceiling space.

Emergency fixtures are direct wired to the typical floor emergency lighting circuit.

Emergency lighting circuit is fed from an emergency generator. When the generator engages it has a starting time of approximately 8 to 13 seconds.

Exit Fixtures

Provide exit fixtures to match base building exit fixtures style and voltage, each fixture is to be LED illuminated. Acceptable manufacturers are Emergi-Lite or alternates. Extend base building exit fixture circuit from existing exit locations to new locations.

Exit fixture circuit is connected to the building emergency distribution system.

3.5.10 Fire Alarm System

The building fire alarm system is existing and operating. Before performing any changes to the system, alert the Landlord 24 hours in advance to allow the zone to be isolated.

All devices which are disconnected and reconnected to the fire alarm system are to be verified for the operation prior to final inspection. Verification and testing must be performed by the Base Building Fire Alarm Contractor.

All new devices to match existing.

Provide certification of verification on project completion.

Installation to ULC CAN4-5524-M82.

Verification ULC CAN4-5537.

Sequence of operation shall be as designed for the base building.

3.5.11 Telephone / Data / Communications Raceway Systems

Complete system shall consist of outlet box, plaster ring as required, Raceway from outlet box to terminal board in equipment room, pull wire, and coverplates on all outlets not wired by the Tenant. All wire must be FT6 rated.

Arrange required communications service infrastructure risers and equipment with selected telecommunications Vendor. (The base building is serviced by Bell Canada)

Minimum Raceway size is 19 mm (3/4"). Minimum pull wire size is 3 mm (1/8") braided nylon.

3.5.12 Wiring for Other Trades

Provide power wiring for the mechanical trades unless noted otherwise. Provide all starters and disconnect switches as required. L.V. Controls and control wiring is provided by the mechanical contractor.

Verify size, location, and electrical requirements of all mechanical equipment prior to the installation of the related electrical equipment. Maintain all clearances as required for mechanical equipment servicing.

The electrical contractor shall provide all line voltage wiring and terminations of time clocks, controls, transformers etc. required by the mechanical contractor.

3.5.13 General

The Landlord reserves the right, from time to time, to add to or to amend the foregoing information, procedures and regulations.

Regulations and procedures as amended from time to time will affect any Tenant work undertaken after the amendment is issued.

SECTION IV

APPROVED CONTRACTORS

APPROVED CONTRACTORS FOR 180 QUEEN ST. WEST

All contractors to be union affiliated

ELECTRICAL:

R.E.Wilson/ Plan Electric –base building

MECHANICAL:

Urban Mechanical – base building

MECHANICAL (Controls):

TAC

LIFE SAFETY:

Simplex

SPRINKLERS:

Urban Mechanical

SECURITY

Simplex

AIR BALANCING:

Air Velocities

James McCurdy

P 905-279-4433

F 905-270-1460

- > ***Air balancing to be carried in the Mechanical Contractors quote. Only Air Velocities will be allowed to perform balancing. A report by any other Contractor will not be accepted.***
- > ***Verification of the Life Safety System to be completed by Simplex, the cost of which will be charged to the Tenant's account.***