TENANT DESIGN CRITERIAMANUAL AND GENERAL INFORMATION 145 KING STREET WEST, TORONTO

#### **145 KING STREET WEST**

#### **Table of Contents**

SECTION 1.0	GENERAL INFORMATION	1
1.1	Introduction	1
1.2	Tenant Coordination	
1.3	Amendments by Landlord	
1.4	Base Building Construction	2
1.5	Tenant Design Consultants	
1.6 1.7	Tenant Design and Working Drawings.	
1.8	Insurance	
1.9	Lien Protection	
1.10	Appointment of Contractors	7
1.11	Commencement of Construction	
1.12	Completion of Tenant's Construction	
1.13	Construction Checklist	9
1.14	Landlord Charges	9
SECTION 2.0	POLICIES REGARDING TENANT WORK	10
2.1	Public/Construction Safety	
2.2	Emergency Contact	
2.3	Temporary Hoarding	
2.4	Temporary Services	
2.5	Temporary Building Protection	
2.6	Freight Elevator Use	
2.7	Work Areas	
2.8	Garbage Removal	
2.9	Working Hours	
2.10	Temporary Fire Protection	
2.11	Security	
2.12	Access and Deliveries	
2.13	Parking	
2.14	Damage	
2.15	Floor Loading	
2.16	Noise	
2.17	Landlord's Access to Premises	
2.18	Work Conflict	
2.19	Material Handling	
2.20	Access Panels	
2.21	Roof Work/Access	
2.22	Testing and Tie-Ins	
2.23	Powder-Actuated Devices	
2.24	Drilling or Cutting	
2.25	Hot Work	
2.26	Fasteners	The second
2.27	Electrical Power Shutdown	

1. 1月月二月二

2.28	Air System Shutdown	18
2.29	Water System Shutdown	18
2.30	Carpet Laying	18
2.31	Plumbing	18
2.32	Ductwork	18
2.33	Air Balancing	19
2.34	Air Conditioning Units	19
2.35	Fire stopping	19
2.36	Fireproofing Material	20
2.37	Daily Clean Up	20
2.38	Stairwell Doors	20
2.39	Pre-occupancy Cleaning	20

#### SECTION 3.0 BUILDING DESIGN INFORMATION

22

3.1	General	
3.2	Office Floor Exits	
3.3	Cross-Over Floors	
3.4	Floor Load Capacity	
3.5	Office Finishes	
	3.5.1 Floors	
	3.5.2 Interior Walls	23
	3.5.3 Ceilings	
	3.5.5 Retail Perimeter Walls	
	3.5.6 Elevator Lobbies and Corridors	
	3.5.7 Doors and Frames	
3.6	Hardware	
3.7	Window Coverings	
3.8	Signage	
3.9	Elevators/Escalators	
3.10	Mechanical Systems	
3.11	Fire Protection	
3.12	Supplementary Condenser Water	
3.13	Meters – Water	
3.14	Plumbing and Drainage	
3.15	Electrical Systems	
	3.15.1 Lighting	
	3.15.2 Power	
3.16	Telephone and Communications	
3.17	Meters – Electrical	
3.18	Security Systems	
3.19	Fire Alarm Systems	
3.20	Emergency Power Systems	
SECTION 4.0	BUILDING CONSTRUCTION DETAILS	33 34 36
List of Base Bui	Iding Consultants	
List of Base Bui	Iding Contractors/Trades	37

List of base building contractors, mades	
Project Completion Checklist	38
Enclosures	
Floor Plans	The second second
Deflected Colling Diana	Contraction of the local division of the loc

#### Reflected Ceiling Plans Details

APPENDIX 'A'	TENANT GREEN DESIGN GUIDE	43
SCHEDULE 1	LEED CI SUMMARY	53

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1

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100

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#### SECTION 1.0 GENERAL INFORMATION

### **1.1 Introduction**

This Manual contains general information, procedures and requirements which have been established by QuadReal Property Group LP, as Agent for the Landlord (the "Landlord") to assist Tenants in the design and construction of their improvements within the Leased Premises and to notify them of the design specifications for the building. While this Manual is intended to reflect the general case, specific written agreements between the Landlord and any Tenant will override the provision contained herein to the extent there is a conflict and in the absence of such documentation, the provisions of the Manual will apply.

Designers, space planners and/or contractors should be made aware that certain areas of the building house Asbestos Containing Materials (ACM). Before commencing work, contractors should contact building management for a complete listing of the areas. A designated substances survey (DSS) must be performed, at the tenants expense, and provided to the Landlord prior to any work commencing. This survey must be performed by Pinchin Environmental (contact information below in "List of Base Building Consultants")

Designers or space planners should obtain, from the Tenant, a copy of Schedule "C" of the lease outlining Landlord's and Tenant's Work prior to proceeding with any Tenant Work.

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

All drawings, including but not limited to space plans, architectural, structural must be approved by the Landlord prior to the commencement of any Tenant Work. Mechanical and electrical drawings must be provided by base building engineer.

# **1.2 Tenant Coordination**

The Landlord shall appoint a Tenant Coordinator whose primary function is:

- to provide guidance and assistance to Tenants throughout the design and construction of their improvements within the Leased Premises.
- to review, comment upon and approve all Tenant submissions prior to commencement of work within the Leased Premises.
- to be the liaison between the Landlord and Tenant, and its contractor and designer.

All questions, comments and submissions relative to Tenant coordination are to be addressed to:

#### **QuadReal Property Group Limited Partnership**

102 - 145 King Street West Toronto, Ontario M5H 1J8

Telephone: (416) 673-7555 Facsimile: (416) 216-6389

# **1.3 Amendments by Landlord**

The Landlord reserves the right, from time to time, to add or amend the information procedures and regulations contained herein. Any such additions or amendments will affect any Tenant work undertaken after the addition or amendment has been issued.

# **1.4 Base Building Construction**

The Landlord will provide the Tenant with drawings of the Leased Premises indicating the major elements of the base building structure and systems to assist the Tenant in the production of working drawings. Additional drawings or information which the Tenant may reasonably require for this purpose may be obtained from the Tenant Coordinator at the Tenant's expense.

# **1.5 Tenant Design Consultants**

The Tenant, at its own expense, shall retain qualified professional consultants, which consultants shall be subject to approval by the Landlord.

The Landlord encourages the use of its own base building consultants because of their familiarity with the base building design. Engineering drawings produced by non-base building consultants will be reviewed by the base building consultants at the Tenant's expense. All changes recommended by the Landlord or its consultants must be included in the final specifications and drawings. When non-base building engineering consultants are used, the Landlord will commission the base building consultants to conduct site inspections of all work, with such inspections to be at the Tenant's expense.

All architectural, structural, mechanical and electrical changes or any other modifications by the Tenant must be approved in advance by the Landlord and recorded on the building file drawings.

Mechanical and electrical information will be maintained on building file drawings by the base building consultants. When Tenant-initiated engineering work is undertaken by consultants, the Tenant shall pay to the Landlord the additional costs in connection with the necessary transfer of information from the Tenant drawings to the building file drawings.

# **1.6 Tenant Design and Working Drawings**

The Landlord will provide the Tenant with drawings of the Leased Premises indicating the major elements of the base building structure and systems to assist the Tenant in the production of working drawings (These drawings will indicate the Leased Premises lines). Additional drawings or information which the Tenant may reasonably require for this purpose may be obtained from the Landlord's Tenant Coordinator.

The Tenant is responsible for the production of accurate and complete working drawings for the proposed construction within the Leased Premises. Although the Landlord will supply the Tenant with certain drawings as described above, neither the Landlord nor the Tenant Coordinator shall be responsible for same and the Tenant must verify the as-built condition prior to commencement of the Tenant design.

The Tenant must submit to the Landlord for written approval two sets of full size hard copy drawings as well as a digital copy for review of all work proposed for the Leased Premises prior to going for permit. A Landlord review for approval will be provided and such approval may be subject to changes requested by the Landlord. For the purpose hereof, the drawings finally approved by the Landlord shall be the "Approved Drawings". Any revision to the Approved Drawings must be submitted to the Landlord for its prior approval. Tenant and design team must allow up to 15 days for landlord review process from when drawings are received.

The design of each Leased Premises will determine the appropriate nature and depth of working drawing detail and the Landlord may find it necessary to request certain additional or expanded information, for the purpose of definition or clarification, before approval is given. The following is a general list of items of information to be included in the working drawings;

- 1. Floor Plans:
  - a. Drawing scale of 1/8'' = 1'0'' (metric 1:100)
  - b. Locations of all major fixed elements within the Leased Premises dimensionally related to grid lines and demising partitions
  - c. Locations and layouts of rooms and unusual loading concentrations, such as centralized filing areas, vaults, etc.
  - d. Location of power and telecommunications outlets
  - e. Location and details of fire systems
  - f. Locations and details of supplementary HVAC systems
  - g. Location of plumbing fixtures
  - h. Furniture plan with room names or uses
  - i. Furniture set back from perimeter induction units to be maintained at a minimum of 12 inches
  - j. Floor and wall materials and all finishes throughout the Leased Premises
  - k. Location of interfloor stairs, if any (subject to prior approval by the Landlord's Structural Engineer)

- I. Where the Leased Premises occupy less than a full floor, a drawing of the entire floor showing the location of the Leased Premises and its relationship to the elevator, lobby, exits and washrooms
- 2. Reflected Ceiling/Lighting Plan:
  - a. Drawing scale of 1/8'' = 1'0'' (metric 1:100)
  - b. Lighting layout, zoning, controls, ceiling pattern, materials and suspension system definition (segregation, suite to suite, must be maintained)
  - c. Types and wattage of any proposed special light fixtures
  - d. Locations of any sound baffles above the ceiling
  - e. Location of any access panels required to service building systems
  - f. Location of sprinkler heads and relocated heads (if applicable)
  - g. JCI and/or Encillium required for zoning programming at Tenant's expense
- 3. Construction details, at suitable scales, indicating all methods of construction.
- 4. Complete electrical, mechanical, sprinkler, building automation and life safety system drawings, at a scale of 1/8" = 1'0"(metric 1:100), should show and should indicate work which is an alteration to, or addition to, the base building work as well as base building work which remains unchanged. Indicate tie-ins and extensions to the base building security and communications systems, plumbing systems and HVAC systems.

Heat generating equipment and their output calculations (including heat gain/loss) will be required on mechanical drawings. Fixtures and equipment (e.g., VAV boxes, reheat coils, thermostats) must be compatible with those of the base building.

5. Structural drawings, at suitable scales [minimum 1/8" = 1'0" (metric 1:100)], where special conditions warrant the production of such drawings, e.g., openings in floors slabs, floor depressions, floor reinforcement for vaults and filing systems. X-ray results of any floor slab (produced by a radiographer in conjunction with the base building Structural Engineer), where the Tenant intends to core-drill or saw cut, must be provided as part of the final drawings for Landlord's review.

Hardware Schedule (two copies) must be submitted.

6.

7.

Architectural, mechanical and electrical specifications.

### **1.7 Permits**

Tenant's design and construction work must comply with all municipal by-laws and regulatory Government agencies, and the Tenant must obtain all necessary permits and approvals from all the appropriate authorities, prior to the commencement of construction of the Leased Premises. The Tenant must provide the Landlord with copies of such permits and approvals prior to commencement of Tenant's construction.

The Tenant must correct immediately any work which does not meet with the approval of the Toronto Building Inspector, notwithstanding the fact that the Tenant's drawings have been approved previously by the appropriate authorities and the Landlord. Any revisions to the Approved Drawings requested by such authorities must be brought to the attention of the Landlord immediately. If the Tenant delays the required correction, the Landlord will make the correction at the Tenant's expense.

# **1.8 Insurance**

The Tenant and its contractor(s) must provide, to the Landlord, evidence of their insurance coverage for (i) Tenant's Insurance as required in the Lease, and (ii) Contractor's Insurance as amended from time to time by Landlord, prior to the undertaking of any construction in the Leased Premises and/or any other areas requiring access within the building. Insurance coverage for any one occurrence shall be no less than Five Million Dollars (\$5,000,000) as stated in the Lease, and 2748355 Canada Inc., 145 King Street West Holdings Inc., QuadReal Property Group Limited Partnership, QuadReal Property Group G.P Inc., and their respective successors and assigns as additional insured.

## **1.9 Lien Protection**

The Tenant shall protect the Landlord against the placing of liens under the Construction Lien Act by Tenant's contractors, subcontractors or suppliers, in accordance with Tenant's obligations set out in the Lease.

# **1.10** Appointment of Contractors

The Tenant is required to engage its own contractors for the purpose of carrying out its construction of its premises. All Tenant contractors, subcontractors:

- a. are subject to approval by the Landlord;
- b. must be in good standing with the Ontario Workers' Compensation Board;
- c. must utilize the base building Mechanical & Electrical Engineers, fire alarm, lighting automation, building automation, sprinkler and air balancing subcontractors for base building work involving these trades; and
- d. must comply with the terms of the Occupational Health and Safety Act

### **1.11 Commencement of Construction**

The Tenant must carry out all construction work in strict accordance with the Approved Drawings.

Construction may proceed only after the Tenant has:

- a. submitted acceptable evidence of insurance coverage to the Landlord;
- b. WSIB Clearance Certificate
- c. an all trades list with emergency contact numbers
- d. posted all required permits on site, and provided Landlord copies;
- e. received Approved Drawings and Written Notice from the Landlord to proceed with construction;
- f. designated substances survey (DSS) must be provided to the Landlord, at the tenant's expense as per the Ontario Regulation 490 09. This survey must be performed by Pinchin Environmental (contact information listed below in "List of Base Building Consultants");
- g. make available on the Leased Premises, two sets of Prints of the Approved Drawings for the duration of the construction period for reference by the Landlord's authorized representatives;

- h. executed the Agreement to Lease for the Leased Premises;
- i. submitted a schedule showing the timetable for the progress and completion of Tenant's Work;
- j. Notice of Project
- k. white construction paper is to cover all visibility to construction area

# **1.12 Completion of Tenant's Construction**

Forthwith, after completion of Tenant Work, the Tenant must submit to the Landlord:

- a. a qualified certificate from the Tenant's architect or designer, addressed to the Landlord, stating that all work, including that of the mechanical and electrical divisions, has been completed as per the Approved Drawings;
- b. a full set of architectural, mechanical and electrical "as-built" drawings. Further, the Landlord requires copies of all permits and certificates issued by authorities having jurisdiction over all or any part of the Tenant's leasehold improvement work;
- c. an executed Statutory Declaration by a signing officer of the Tenant stating that all monies owing have been paid to its contractor(s) and that no liens have been registered against the Landlord's property;
- d. provide a copy of the certificate from the Building Department confirming all permits have been closed

All elements of the base building, such as, but not limited to, light fixtures, doors and frames, hardware, etc., that the Tenant removes with the approval of the Landlord, shall remain the property of the Landlord and must be delivered and turned over to the Landlord, unless otherwise noted for disposal.

At the completion of construction, the Leased Premises must be left clean and in a "move-in" condition, all to the satisfaction of the Landlord.

# **1.1 Construction Checklist**

Following construction, the Tenant, through its contractor/consultant, must complete the Construction Checklist forming part of this manual.

# **1.2 Landlord Charges**

The Tenant shall pay to the Landlord with respect to the conduct of Tenant's Work the following:

- a. a fee per square foot, or percentage of construction costs, of the Rentable Area of the Leased Premises, as set out in the Lease, payable before construction begins, as an agreed compensation to the Landlord for the cost of general supervision, indirect and overhead expenses for such facilities and services as waste disposal containers, fire protection, light, heat, water, power, security, etc. during normal working hours.
- b. the reasonable cost to the Landlord of any special services, additional to the foregoing, provided to the Tenant, including special supervision, the provision of hoisting and other vertical transportation for workmen and materials and any other special services, the cost of which can be reasonably allocated as a direct expense relating to the Tenant's Work. All such charges to be paid as invoiced to the Tenant. The Landlord will add to these charges an administrative fee of 15%.

If the Tenant employs structural, mechanical or electrical consultants, other than those designated by the Landlord, the Tenant will be invoiced for the review of their drawings and specifications.

# SECTION 2.0 POLICIES REGARDING TENANT WORK

# 2.1 Public/Construction Safety

It is the Tenant's responsibility to ensure that its contractors and subcontractors observe and comply with all applicable construction safety regulations required by the Occupational Health and Safety Act and the requirements of the by-laws of the Province of Ontario. Any additional safety regulations which may be imposed by an authorized representative of the Landlord must also be complied with immediately and fully. The Tenant contractors shall provide and maintain adequate first aid facilities on site during the construction period.

#### 2.2 **Emergency Contact**

The Tenant's construction manager or designated contractors are required to post, on the Leased Premises and with the Landlord's Tenant Coordinator, all names and telephone numbers of each contractor's emergency contacts.

#### 2.3 **Temporary Hoarding**

The Tenant is responsible to enclose the premises with a suitable temporary hoarding prior to commencement or undertaking of any construction on the business or retail storefront of the premises. The hoarding shall be supplied, installed and painted to the Landlord's standard design criteria, all to the expense of the Tenant. Signage for the hoarding will be supplied by the Landlord, at the Tenant's expense. No additional signage shall be permitted on writing the hoarding unless approved for in by the Landlord.

All hoarding shall be drywall, painted white with professional signage.

Hoarding encroaching corridors must be approved by the Landlord and must not impede with the regulated fire egress corridor widths.

The Tenant or its contractor **must** notify the Tenant Coordinator five business days in advance so that arrangements for the construction of the hoarding can be made.

Hoardings may be removed by either the Tenant's contractor or the Landlord at the Tenant's expense. Notice must be given to the Landlord 48 hours prior to the removal, regardless of who is designated to remove the hoarding.

When the business or storefront is not being changed, a hoarding is not necessary. In the event that the premise does not remain fully operational during construction, all windows and doors shall be covered on the inside with paper supplied by the Landlord, unless otherwise approved for in writing by the Landlord.

### 2.4 Temporary Services

The Tenant is responsible for the distribution of temporary services within the Leased Premises during the construction period. Exposed electrical cords are not permitted outside the Leased Premises. Washrooms available for use by contractors will be designated by the Landlord's Tenant Coordinator. The Tenant will be responsible for all cleaning supplies and repair of all damages caused to the Leased Premises by the Tenant's contractors.

# 2.5 Temporary Building Protection

The Tenant and its construction manager, and/or designated contractor, is responsible to undertake precautions for the control of dust and debris created by the construction process within the Leased Premises. Precautions must be undertaken to prevent dust and debris from being carried over into any other building areas including the building's H.V.A.C. air handling systems, vertical mechanical and electrical service shafts and elevator shafts.

Dust shield enclosures and filter systems must be installed at all return air and transfer air openings during the construction period to prevent the transfer of dust.

Appropriate trapper matting material must be placed at exit and entrances to construction areas including elevator lobbies in order to control dust transfers caused by construction.

Special consideration must be given to prevent dust from penetrating the elevator shafts during the construction process.

If the Tenant's contractor fails to perform the controls necessary in preventing/limiting transfer of dust caused by the construction of the Tenant's Leased Premise, the Landlord will undertake and maintain, at the expense of the Tenant, the appropriate process as deemed necessary.

# 2.6 Freight Elevator Use

Due to the heavy demand for hoisting materials and equipment, a 48 hour advance reservation will be required. Hoisting time **will not** be available during normal business hours (6:00 a.m. to 6:00 p.m.) and will be provided after hours at the Tenant's expense, or as otherwise specified by the Landlord.

# 2.7 Work Areas

All construction materials, tools, equipment and work benches must be kept within the Leased Premises throughout the construction period. All public lobbies, washrooms and stairs shall be kept clean of construction materials and debris. If the public washrooms are used by the Tenant's contractors, such contractors will be responsible for cleaning and/or repair of damages. Any damage will be repaired by the Landlord at the Tenant's expense.

# 2.8 Garbage Removal

The Tenant shall ensure that its contractors and subcontractors, including telephone companies, remove daily all garbage and debris in proper containers from the Leased Premises. If it becomes necessary, due to inaction by the Tenant's contractors, that the Landlord has to remove the Tenant's garbage or construction debris, the Tenant will be charged for the cost of such service. Construction disposal bins are allowed to remain in the receiving/loading area only during the following off-business hours subject to the Landlord's written approval:

#### Monday to Friday: 6:00 p.m. to 6:00 a.m. All hours Saturdays, Sundays and Holidays.

Contractors are responsible for placing plywood sheeting between disposal bins and the ground. Containers will be removed by the Landlord at the expense of the Tenant if left after the designated allotted time, as further defined above.

After removal of the disposal bins from the designated areas, the contractor shall restore the area to a tidy broom-swept condition with no materials left within or around the designated container area. In the event that the area is left in an

untidy condition, the Landlord will undertake the cleanup at the Tenant's expense.

Arrangements for placement of the disposal bins **must** be made through the Landlord's Tenant Coordinator. The loading/receiving facility is not to be used as a workshop area (no welding, sawing, pipe fitting, or any other kind of construction work may be done there). If the contractor fails to undertake the appropriate provisions, the Landlord will complete the necessary restoration at the Tenant's expense.

## 2.9 Working Hours

The Tenant's Work **shall** be carried out in the Leased Premises from 6:00 p.m. to 7:00 a.m., Monday through Friday. Any work which is required to be carried out at times other than those listed above will require written approval from the Landlord. All work on life safety, sprinklers and standpipe systems **must** take place between the hours of 7:00am and 5:00pm., Monday to Friday. The Management office must have written notice minimum (48) hours, before work will be performed. All costs incurred would be the responsibility of the tenant.

Note: Landlord reserves the right to adjust working hours at its discretion.

## 2.10 Temporary Fire Protection

The Tenant and Tenant's contractor shall provide operable fire extinguishers in the Leased Premises throughout the construction period (no base building extinguishers are to be utilized).

# 2.11 Security

The Tenant is responsible for the physical security of the Leased Premises and the contents thereof throughout the construction period.

Note: The Landlord assumes no responsibility for any loss or theft.

# 2.12 Access and Deliveries

Personnel access and material deliveries to the Leased Premises are to be only by routes designated by the Landlord. The handling of items which require special treatment due to weight or dimension must be reviewed and arranged with the Landlord. All construction personnel will be required to sign in and out daily at the security desk.

No deliveries of construction materials are permitted through the building common areas during normal designated business hours as defined herein.

Delivery trucks and contractors' trucks will be permitted access to receiving areas for the purpose of unloading and loading materials **only** up to a maximum of 20 minutes. **Absolutely** no parking will be permitted in the designated receiving areas. Lack of cooperation will result in vehicles being towed at the Tenant's risk and expense.

All carts being used by the Tenant's contractors for job site deliveries must have rubber wheels. Landlord's equipment (such as trucks, bins, dollies, etc.) **may not** be used by contractors. Arrangements for handling items, weighty or bulky enough to require special treatment, must be made with the Landlord's Tenant Coordinator.

# 2.13 Parking

All parking by the Tenant's contractors is the responsibility of the contractors. The Landlord makes no representation that any such parking will be available. Under no circumstances are vehicles to impede or block access to the receiving/loading area.

## 2.14 Damage

The Tenant's contractor shall protect all finishes to base building elements and the Tenant shall reimburse the Landlord for the cost of making good any damages.

# 2.15 Floor Loading

The Tenant must not overload the structure. Drywall may not be stacked higher than 610 mm or twenty-four inches (24").

#### 2.16 Noise

Work such as coring and drilling **may not** be carried out during normal business hours (7:00 a.m. to 6:00 p. m.)

#### 2.17 Landlord's Access to Premises

The Landlord shall have access to the Leased Premises at all times for the purpose of completing, correcting or inspecting any work, undertaken by the Tenant's contractors.

# 2.18 Work Conflict

The Tenant's contractors work shall be performed in a manner that will not interfere or conflict with any activities of the Landlord.

# 2.19 Material Handling

- a. All service elevator bookings and use of the receiving/loading area shall be coordinated through the Landlord's Tenant Coordinator during normal business hours. Service elevator bookings must be made no less than 48 hours in advance subject to scheduling.
- b. All materials shall be delivered through the receiving/loading area. Workmen are required to use the elevators designated by the Landlord.
- c. Elevator floors, walls and ceilings must be protected from damage during transportation of material. Elevator pads, or appropriate cladding, will be provided by the Landlord. Any additional protection required to prevent damage shall be provided for by the Tenant or Tenant's contractor, subject to the Landlord's approval.

Note: The Tenant's contractor is responsible for cleaning elevators and/or damage caused to the elevator finishes or protective padding.

## 2.20 Access Panels

The Tenant must provide access panels of sufficient size in wall or ceiling construction as directed by its engineering consultants or the Landlord, to permit necessary access to equipment and/or electrical/mechanical services.

## 2.21 Roof Work/Access

Under no circumstances will the Tenant and/or contractor enter onto the roof without first obtaining permission from the Landlord. All roof openings **will be** carried out by the Landlord's designated roofing contractor at the expense of the Tenant. The Tenant is to provide, to the Landlord, all sleepers and/or curbs, as required, for installation by the Landlord's designated contractor.

Note: Please refer to List of Base Building Contractors/Trades for the Landlord's designated contractor.

# 2.22 Testing and Tie-Ins

The Tenant must obtain the Landlord's written approval prior to undertaking any tie-ins to base mechanical, electrical, fire protection and life safety systems.

#### 2.23 Powder-Actuated Devices

Powder-actuated tools, such as "Ramset" and "Hilti" **are not** permitted for use in securing fasteners which support ceiling suspension systems or equipment suspended from the underside of concrete slabs or steel deck structures.

# 2.24 Drilling or Cutting

The Tenant's contractors are not permitted to drill or cut openings of any description in any part of the base building structure without the prior written approval of the Landlord. If such work is acceptable to the Landlord and the Landlord's structural engineers, it will have to be carried out after regular working hours by the Tenant's contractor at the expense of the Tenant. Any work of this type will require x-ray inspection of the building structure or floor slab by the Landlord's designated x-ray inspection firm prior to cutting or drilling

at Tenant's expense. All x-rays and cores must be examined by the Landlord's designated representative prior to proceeding with the work and turned over to the Landlord's Tenant Coordinator on completion.

Any damage to cast-in electrical wiring will be repaired by the Landlord's contractor at the Tenant's expense.

Note: Special attention <u>must</u> be given during any drilling operation in regard to cutting of structural reinforcing bar. Please refer to List of Base Building Contractors/Trades for the Landlord's designated x-ray inspection contractor.

## 2.25 Hot Work

No open flames for welding, soldering, cutting or other purposes are permitted without a hot work permit and prior written approval of the Landlord. If pressurized gas cylinders are used, the Tenant's contractor shall ensure that their use is in accordance with requisite safety provisions and requirements. An operational fire extinguisher and fire blanket must be available (and provided by the contractor) in the immediate vicinity of the work. All open flame work must be performed outside regular business hours.

#### 2.26 Fasteners

The Tenant's contractors are not permitted to mechanically fasten to curtain walls, window frames, or walls which may contain vapor barriers or special fire rated structures. Clips in lieu of screws must be used to fasten interior walls and partitions to the ceiling grid.

### 2.27 Electrical Power Shutdown

All requests for electrical power shutdowns must be made in writing and submitted for approval four (4) weeks prior to the required shutdown.

Note: All shutdowns are subject to the Landlord's written approval.

# 2.28 Air System Shutdown

All requests for air system shutdowns must be submitted for approval at least 48 hours before the shutdown date. A Tenant's request for extra air conditioning will take precedence over a contractor's request for a shutdown.

Note: All shutdowns are subject to the Landlord's written approval.

#### 2.29 Water System Shutdown

All requests for water system shutdowns (fire line, chilled, heating, condenser, standpipe, sprinkler, domestic water, etc.) must be submitted for approval at least five business days before the shutdown date.

Note: All shutdowns are subject to the Landlord's written approval.

# 2.30 Carpet Laying

Carpets may not be glued to the floor, except where a "quick-release" type of glue is used and Landlord's written approval has first been obtained.

Note: The Landlord reserves the right to approve other methods of application.

# 2.31 Plumbing

Where plumbing is removed from the Leased Premises, all water supply, drain lines and vent connections must be removed from within the ceiling space back to the core riser, and properly capped, all to the satisfaction of the Landlord.

Note: The Landlord must provide a letter of acceptance approving the make good.

# 2.32 Ductwork

When the ductwork distribution system is altered in the Leased Premises, the ductwork that is not to be used must be removed from within the ceiling space, capped and sealed, all to the satisfaction of the Landlord.

Note: The Landlord must provide a letter of acceptance approving the make good.

# 2.33 Air Balancing

The Tenant must provide the Landlord with an air balance report upon completion of all leasehold improvement work. The report must be completed by the Landlord's designated balancing company, at the Tenant's expense, and must be reviewed by the Landlord's consultant prior to final submission to the Landlord's Tenant Coordinator.

Note: Please refer to List of Base Building Contractors/Trades for the Landlord's designated balancing contractor.

# 2.34 Air Conditioning Units

Where air conditioning units are disconnected so that Tenant Work may take place, the units must be fully serviced by the Tenant before being reconnected to the building system. Notice of such disconnections must be submitted in writing to the Landlord's Tenant Coordinator. After the work is completed, the mechanical systems (chilled, heating and condenser) must be flushed (both new and used lines) and samples must be provided to the Landlord.

# 2.35 Fire stopping

The Tenant's contractor must ensure that all fireproofing is reinstated where access is required between building fire separations. The replacement material and method for reinstallation must meet the applicable building code requirements. A CSA-ULC approved material (i.e., "Fire stop") must be used to seal all core and floor penetrations. All pipes passing through a floor penetration must be sleeved, caulked and waterproofed. If the Tenant's contractor fails to undertake the appropriate provisions, the Landlord will complete the work at the Tenant's expense.

# 2.36 Fire proofing Material

All fireproofing material that is removed from steel decks and beams (if applicable) must be replaced with a suitable and approved fireproofing material. The replacement material must be installed in accordance with applicable building and fire codes. In no case may the original level of protection be reduced.

Note: The Landlord reserves the right to request, from the Tenant, an independent inspection of the fireproofing by a qualified consultant at the Tenant's expense.

# 2.37 Daily Clean Up

The Tenant must ensure that corridors are left free of debris and dirt and marks are removed from corridor walls, floors, doors etc., on a daily basis. If this work is not completed by its contractor, the Landlord will provide this service at the Tenant's expense.

Drains, including janitor's sink, may not be used to dispose of materials such as drywall, concrete or paint, which may clog or hamper flow through the drainage system. Contractors must make arrangements to dispose of such materials offsite. If the drainage system becomes clogged or restricted, the Landlord may undertake, at the Tenant's expense, a full cleanup program.

# 2.38 Stairwell Doors

All stairwell doors and fire doors must be kept closed at all times. This **must** be strictly adhered to. Egress pathways must always be maintained and must be kept clean and clear of debris.

# 2.39 Pre-occupancy Cleaning

Prior to occupancy, the Tenant is responsible for ensuring that the following areas and/or items are cleaned:

- light fixtures and lenses
- ceiling grid and ceiling tiles
- floor tiles and carpets

- corridor walls and doors immediately adjacent to the Leased Premises
- perimeter radiation and/or induction units and/or fan coils (inside and out)
- interior and perimeter supply air diffusers
- return and exhaust air grilles
- lint screens and coil (cleaning shall be carried out by the Landlord's base building cleaners and charged to the Tenant's account)
- inside faces of all exterior glazing including window frames and mullions, and inside faces of all interior partition glazing
- electrical trench header ducts, including those adjacent to the Leased Premises (if applicable)
- all service/utility rooms
- Venetian blinds (cleaning of the blinds shall be carried out by the base building contractor)

To avoid possible conflict with the building's cleaning contracting staff, all contractors shall employ the company that is currently cleaning the project to perform post-construction cleaning.

If the Tenant fails to have the required pre cleaning undertaken by its contractor, the Landlord will provide this service at the Tenant's expense.

21

## SECTION 3.0 BUILDING DESIGN INFORMATION

### 3.1 General

The following information, procedures and regulations may be amended or added to from time to time by the Landlord, and the Tenant must abide by such changes and additions upon notification. All Tenant Work must conform to the base building specification.

#### 3.2 Office Floor Exits

Where full floor tenancies are involved, the Tenant's space planner or interior designer must adhere to Section 3.4.2.3. (1 (a) and (b) of the Ontario Building Code. Layout options should be discussed with the Landlord's Tenant Coordinator.

### 3.3 Cross-Over Floors

As required by Section 3.4.6.16 of the Ontario Building Code, floors 2, 7, 12, 17, 22 and 27 have been designated as crossover floors. Tenant space plan layouts must comply with code requirements for these floors in the building.

# 3.4 Floor Load Capacity

Office floors have been designed to handle 75 pounds per square foot live load, including a 25 pound per square foot partition allowance. Ground floor has been designed for 100 pounds per square foot live load, including partitions. Concourse floor has been designed for 100 pounds per square foot live load, including partitions. An unusually heavy loading situation, such as central filing areas, storage areas, vaults or safes must be specifically indicated and detailed as part of Tenant's working drawing submission to the Landlord and are subject to prior Landlord's approval.

# 3.5 Office Finishes

#### 3.5.1 Floors

All floors are trowelled-finished concrete floors, ready to receive Tenant floor coverings, unless the space was previously occupied.

#### 3.5.2 Interior Walls

Office demising walls, core walls, exterior walls, and columns are taped and sanded drywall and prime painted, unless the space was previously occupied.

#### 3.5.3 Ceilings

The suspended ceiling consists of a 4'8" x 4'8" grid system with non-directional pre-installed lay-in acoustical ceiling panels. Ceiling height is a nominal 8'10" +/-Select Acoustic Supply Inc. (55 Sqft/CT, 27 <sup>3</sup>/<sub>4</sub> x 27 <sup>3</sup>/<sub>4</sub> Cortega LI) Item #MR87397

#### 3.5.4 Perimeter Walls

The perimeter wall consists of granite panels along with pre-finished aluminum mullions and double-glazed windows. The interior of the exterior panes of windows has been treated with a coating of reflective film on the south and west exposures of the building.

#### 3.5.5 Retail Perimeter Walls

The ground floor windows are clear, single-glazed, in aluminum frames.

#### 3.5.6 Elevator Lobbies and Corridors

On multi-Tenant floors in the building, the Landlord will provide the following:

- public corridors will have wall covering to building standard;
  - public corridor partitioning together with corridor finishing, ceiling and lighting;

entrances to Leased Premises to building standard complete with doors, frames, and hardware;

- demising partitions between Leased Premises will be acoustically treated above the ceiling level;
- elevator lobby finishes including walls, ceiling, lighting, sprinklers and air conditioning;
- carpet floor and base in all public corridors including carpet inserts within the elevator lobby;
- granite surrounds at both elevator door frames and elevator lobby floor;
- floor directories and Tenant entrance identification in accordance with the building standard signage (lettering and artwork to be at the Tenant's expense).

#### 3.5.7 Doors and Frames

Entrances to electrical rooms, washrooms, janitor rooms, stairways, etc. will be solid core doors in pressed steel frames, pre-finished to building standard. Stair exit doors will be hollow metal in pressed steel frames with a paint finish. Suite entry doors on multi Tenant floors will be full height solid core stained hardwood veneer; frames stained to match. All base building entrance doors on multi Tenant floors will be provided by the Landlord. Entrances designed by the Tenant are subject to the Landlord's approval. Entrances approved by the Landlord will be installed by the Tenant at the Tenant's expense. No credit will be given for base building entrance doors not being utilized as part of the Tenant's new premises. Where the Building Code requires a tenancy to have a second exit, this shall be a building standard door with matching frame, to be installed at the Tenant's expense.

Ground floor retail Tenant entrances are 3' x 7' glass doors installed as one pair, unless otherwise noted.

Concourse level retail storefronts vary with the storefront design (refer to storefront details).

### 3.6 Hardware

All door locks installed by the Tenant, on both entrance and interior doors, must be keyed to the building master keying system. The system, while allowing complete freedom for the Tenant regarding the locking arrangements for its offices, provides the Landlord access to each office at all times for both normal cleaning and emergency situations.

The Landlord's designated hardware contractor, Reilly's, maintains the master keying system and records of key coding and distribution. Outside locksmiths or lock manufacturers are not permitted to change the keying of any locks, unless otherwise approved by the Landlord in writing.

The Landlord and the Landlord's designated hardware contractor must be notified prior to any installation of a card access system for any suite entrance door.

Note: The Landlord reserves the right, from time-to-time, to re-designate the building's hardware supplier or locksmith. Please refer to List of Base Building Contractors/Trades for the Landlord's designated hardware contractor.

# 3.7 Window Coverings

All windows are provided with 3% openness factor sunscreens, brown valance in a pewter finish. These blinds may not be removed. Tenant may add drapes, provided they are of a type and material that will not interfere with the operation of the perimeter air conditioning system and are hung on the Tenant side of the sunscreens.

## 3.8 Signage

Tenant identification signs in elevator directories, elevator lobbies and adjacent to Tenant entrance doors must be in accordance with the Landlord's design criteria for such items as style, location and size and are at Tenant expense. Detailed drawings of the design parameters for such signage are available from the Landlord's Tenant Coordinator. All requests for signs must be submitted in writing to the Landlord's Tenant Coordinator indicating the exact wording and spelling required. Requests, in writing, are to be submitted approximately two months prior to the actual move in order to facilitate the delivery and installation of the signage.

Note: Please refer to List of Base Building Contractors/Trades for the Landlord's designated signage contractor.

# 3.9 Elevators/Escalators

The main office floors are serviced by two groups of elevators; Low Rise, seven elevator cars, and High Rise, six elevator cars. There is a cross-over floor at the 16th floor between the two groups of elevators. Cars have a handling capacity of 1,588 kg or 3,500 pounds in both Low Rise and High Rise. The Low Rise will travel at 600 f.p.m. and the High Rise at 1,000 f.p.m.

In addition, there is an independent freight elevator with a handling capacity of 1,814 kg or 4,000 pounds serving all levels in the building. It will be available to receive deliveries directly from the ground or main level and loading dock facility to a service vestibule remote from the tenants' reception area. This elevator also serves as an easy access to Tenant storage areas.

Also, there are two shuttle elevators serving the lobby and concourse floors, and all parking levels below grade.

Two escalators also serve the concourse and ground floor level of the retail component.

### 3.10 Mechanical Systems

H.V.A.C.

Office

Each floor is served by a high pressure perimeter induction system and a low pressure interior air system. Induction system units, located on the exterior, provide tempered and conditioned air to the perimeter of each floor through a thermostatically controlled water valve. The interior zone is handled through a central ductwork distribution system which also provides tempered and conditioned air to the building interior through a thermostatically controlled variable air volume, cooling only (V.A.V.) box. Air supply is provided through a ducted slotted light fixture troffer. Return air for both interior and perimeter zones is returned through the slotted light fixture openings to the ceiling space, which acts as a return air plenum.

Each typical floor has thirty-six (36) perimeter thermostatically controlled zone valves which translates to one (1) control zone for each 28 linear feet of perimeter zone and two (2) interior zones and eighteen (18) zones per 900 square feet. A ventilation rate of 25 c.f.m. per person, based on occupancy of one (1) person per 150 square feet. All floors are designed to achieve an excellent NC35 to NC40 sound level.

Provision has been made for capped connections for sanitary, venting and domestic cold water at the core on each floor. The building is fully humidified. (Condenser water is available for limited Tenant cooling requirements.)

#### **Office H.V.A.C. Standard Design Criteria**

 Indoor Design Conditions: Heating 68.5° F - 75° F (20.3° C – 23.9° C)

Cooling 75° F - 80.5° F (23.9° C – 26.9° C) at 55% RH (max.)

• Design Criteria:

Winter 1% ASHRAE Ambient Design Condition Summer 2.5% ASHRAE Ambient Design Condition Occupancy - 1 person/150 square feet

Lighting and Miscellaneous Power - 3.5 W/square foot combined Ventilation Rate 0.17 cfm/sq. ft.

#### Retail

The retail floor is served by a low pressure interior air system. Heating, ventilation and air conditioning is supplied to the Leased Premises by means of an interior ceiling ductwork distribution system. A thermostatically controlled water reheat coil located within the zoned distribution duct work provides tempered air to the space through a lay-in ceiling grid diffuser.

#### **Retail H.V.A.C. Standard Design Criteria**

- Indoor Design Conditions: Heating 68.5° F - 75° F (20.3° C - 23.9° C)
- Cooling 75° F 80.5° F (23.9° C - 26.9° C) at 55% RH (max.)
- Design Criteria: Winter 1% ASHRAE Ambient Design Condition Summer 2.5% ASHRAE Ambient Design Condition Lighting and Miscellaneous Power - 5.0 W/square foot combined Ventilation Rate .17 cfm/sg. ft.

### **3.11 Fire Protection**

Each floor is provided with sprinklers, fire hose cabinets and portable fire extinguishers. The placement of Tenant partitions can affect the sprinkler and fire hose coverage. The cost of any modifications to such systems shall be at the expense of the Tenant. All sprinkler changes/modifications must be completed by the Landlord's designated sprinkler contractor.

Any cost associated with the drain down and refilling of the base building sprinkler and fire standpipe system will be at the expense of the Tenant.

Note: Please refer to List of Base Building Contractors/Trades for the Landlord's designated sprinkler contractor.

# 3.12 Supplementary Condenser Water

One set of valved/capped condenser water connections are provided on every floor for future connection of supplementary water-cooled air conditioning equipment. A cooling capacity allowance of 3 tons per floor is available. Provision of all supplementary air conditioning systems, including A/C unit, piping, valves, controls, and metering devices (where required, shall be by the Tenant). Installation of supplementary units must consist of heat exchange between the building's systems and tenanted system.

# 3.13 Meters - Water

Check meters are required on all domestic water services as well as any condenser water systems serving the Tenant's premises. All such meters shall be at the expense of the Tenant. All meters must include remote read-outs in a Landlord approved location

Note: A charge for water usage will be established based on consumption used for each applicable system.

## 3.14 Plumbing and Drainage

#### Office

Plumbing connections into the main domestic cold water supply, sanitary drain and vent risers are provided at the main core to allow for the addition of a limited number of private washrooms, lunch or servery areas in the Leased Premises, subject to the prior approval of the Landlord. Tenants requiring hot water for private washrooms, lunch and servery areas must provide their own electric hot water heating system. All domestic hot water tanks (DHW) must include drip pans (plumb to drain) and leak detection (connected to Building Automation System).

All DHW tank specifications are to be provided to the Landlord for tracking. All DHW tanks are to be replaced every ten (10) years.

#### Retail

Valved and capped cold water supply and vent pipe are stubbed into each retail space. Capped sanitary drain lines are located in close proximity below the floor slab. All ties-ins to the base system shall be at the expense of the Tenant.

### 3.15 Electrical Systems

### 3.15.1 Lighting

#### Office

A lighting arrangement consisting of one light fixture for every 43.4 square feet (retrofitted floors: one for every 90 sf), providing an average maintained illumination level of 60+/- foot candles, at desk height, on an open area basis. Operating voltage for these fixtures is 240 volts.

Fixtures are 27-3/4" x 27-3/4" recessed, fluorescent T8 lamp units containing electronic ballasts. The fixtures are provided with acrylic lenses, which are suitable for replacement with 1-3/8" high aluminum parabolic louver, at Tenant

expense. The fixtures are stock piled on each floor, for installation by the Tenant contractor, to suit tenant interior layout, unless the space was previously occupied. The fixtures are to be hardwired to junction boxes located within the ceiling plenum space. Additions and/or modifications to the base system will be at the Tenant's expense.

#### 3.15.2 Power - Office

High voltage electricity is provided to the 17th floor via Toronto Hydro. From the main electrical room electricity is distributed to 2 electrical rooms on each floor via 2 electrical bus ducts. These panels distribute power to the lighting panels (416/240V) and receptacle panels (120/208V).

Tenants must install separate (for their suite) 120/208V-3 phase 4 wire to circuit breaker panel (or panels) of sufficient capacity for receptacles and miscellaneous power within their own space (up to 1.5 watts per square foot). An additional 2.0 watts per square foot of power is available on the bus duct and may be used for tenant services, by introducing separate transformer and distribution network at the Tenant's expense. Each panel will be sub-metered (see Section 3.17 below). All electrical wiring must be installed in conduit or unless otherwise approved by QuadReal Operations in writing.

Power for disproportionate use (e.g. data centres) must be provided by introducing separate transformer and distribution network at the Tenant's expense (within their own space) so that it can be sub-metered. All electrical wiring must be installed in conduit or unless otherwise approved by the Landlord in writing.

#### Retail

All lighting within retail space is to be provided by the Tenant and fed from the Tenant's own electrical distribution panel to be located within the Tenant space. A 208/120V-3 phase 4 wire service to a disconnect switch within the Tenant space of sufficient capacity to allow a connected load of 7.0 watts per square foot for general lighting and receptacles. Tenants shall be responsible for individual metering of their premises and installing such a meter at their own expense at a location approved by the Landlord.

#### Lighting Control (Office)

To conserve energy, the Landlord has provided a computerized lighting control system which is monitored and controlled by our Building Automation System. The digital thermostats located in the office environment are programmed to turn the lights on. Regular lighting is scheduled for Monday to Friday, 7:00am

Opm. By pushing the button on any thermostat in the office the lights will turn on for one (1) hour. Additions and/or modifications to lighting control must be reviewed by building operations. All programming of lights must be done by our Building Automation System service provider at the Tenant's expense.

## 3.16 Telephone and Communications

#### Office

The Tenant is required to make direct arrangements with a communications system provider, for the installation of telephone service to the Leased Premises. Telephone riser rooms are located on each floor. Both the main telephone room and telephone conduit risers have been sized to provide capacity for most major telephone systems. Telephone riser rooms are not available for installation of Tenant equipment. An under-floor wire way duct distribution system is available for Tenant use, along with provision for the Tenant to install an overhead in ceiling conduit distribution system, at the Tenant's expense. All wiring in the ceiling space (e.g. telephone and data communication), must be enclosed in conduit unless otherwise approved in writing by the Landlord. Space is available in the communications rooms and in the ceiling space for Tenant's fibre optics cable systems for data transmissions.

Note: The Tenant's contractor(s) will be allowed to work within the base building telephone rooms or electrical rooms subject to a Rycom ticket submission and the approval of the Landlord, for the express purpose of providing and connecting feeder cables to the Tenant's premises.

#### Retail

At the Tenant's expense , a conduit is to be provided for a communications service provider, to a point within the premises, as designated by the Landlord.

# 3.17 Meters - Electrical

145 King Street West has a Carma sub-metering system. Tenants must install at their own expense. In-suite electricity costs (both lighting and plug loads) are sub-metered and charged back from all tenants.

Tenants are responsible for installing, at their own expense, sub-meters to measure their in-suite electricity (lighting and plug loads) consumption. As the meters will be integrated into the existing sub-metering system, the following process must be followed:

- 1. **Tenant Electrical Consultant** must provide electrical drawings showing new services, panels and metering points to **QuadReal Operations** for review.
- 1. QuadReal Operations will forward the drawings to the Base Building Energy Accounting Firm (Energy Profiles Limited) and Base Building Sub-metering Vendor (Carma Industries) for review and coordination.
- QuadReal Operations will confirm approval and will provide a budget cost (not to exceed) to Tenant Electrical Consultant who in turn includes the meter cost in the project specification.
- 3. The **Tenant Electrical Contractor** will procure the new meter(s) from the Base Building Sub-metering Vendor (Carma), install it/them, and then arrange for Carma to commission the new meter(s), integrate it/them into the data-collection system and perform a Measurement Canada S-E-04 inspection.

### **3.18 Security Systems**

Provisions have been made to provide the Tenant with a tie-in connection to the base building security system riser located in the main electrical room located on every third floor. The cost of such tie-in will be at the expense of the Tenant. All security card access door systems are to be inspected and verified on site by the Landlord's designated security contractor and signed off by the parties having jurisdiction.

Note: Please refer to List of Base Building Contractors/Trades for the Landlord's designated security contractor.

## **3.19 Fire Alarm Systems**

Provisions have been made to provide the Tenant with a tie-in connection to the base building fire alarm system riser located in the main electrical room located on each floor. The cost of such tie-in will be at the expense of the Tenant. All fire alarm systems to be inspected and verified on site by the Landlord's designated fire alarm service contractor and signed off by the parties having jurisdiction.

Note: Please refer to List of Base Building Contractors/Trades for the Landlord's designated fire alarm service contractor.

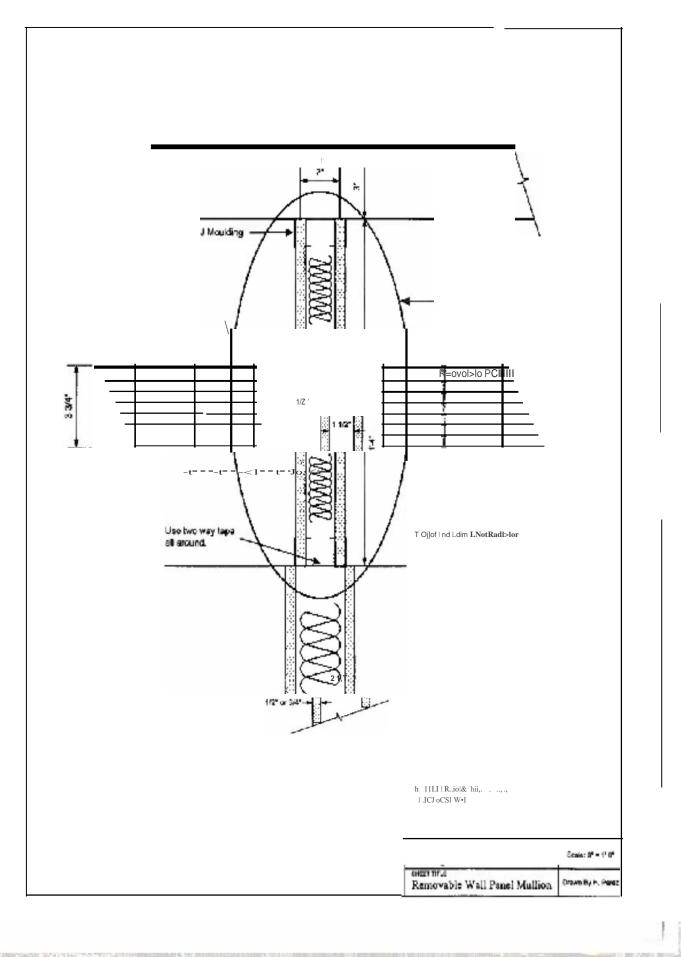
## **3.20 Emergency Power Systems**

Provisions have been made to provide the Tenant with a tie-in connection to the base building emergency power system riser, located within the designated electrical rooms, for emergency lighting and exit lighting. The cost of connecting into the emergency system will be at the expense of the Tenant. All connected loads to be approved in writing by the Landlord's designated representative.

# SECTION 4.0 BUILDING CONSTRUCTION DETAILS

Building Construction Details to be provided by the Landlord's Tenant Coordinator on Request.

34



35

Apa and

## List of Base Building Consultants 145 KING STREET WEST

Tenants may retain the Landlord's Architects or Consultants, under direct contractual arrangement, for the production of working drawings. If, however, Tenants choose to retain other than the Base Building Consultants to do their design work, the Landlord will have their drawings checked by the Base Building Consultants in order to ensure compatibility with the buildings systems. The cost of this review will be Charged back to the Tenants account.

## **BASE BUILDING CONSULTANTS**

#### ARCHITECTS

Webb Zerafa Menkes Housden Partnership 4211 Yonge Street, Suite 500 Toronto, Ontario M2P 2A9 Telephone: 416-961-4111

#### MECHANICAL & ELECTRICAL CONSULTANT

Smith and Anderson Consulting Engineering 4211 Yonge Street, Suite 500 Toronto, Ontario, M5J 1A7 Telephone: 416.487.8151

HIDI Group Gordon Baker Road, Suite 200 Toronto, Ontario, M2H 3N5 Telephone: 416.364.2100

#### STRUCTURAL

Stephenson Engineering 2550 Victoria Park Ave., Suite 602 Toronto, Ontario M2J 5A9 Telephone: 416.635.9970

#### ENVIRONMENTAL

Pinchin Environmental Ltd. 2470 Milltower Court Mississauga, Ontario L5N 7W5 Telephone: 905.363.1401

#### ABATEMENT

I & I Construction 70 Newkirk Road Unit 6, Richmond L4C3G3 Telephone: 905.884.1290

> Alliance Environmental 589 Middlefield Road, Unit 14 Scarborough, Ontario, M1V 4Y6 Telephone: 416.298.4500

#### ARCHITECTUAL DESIGN

Ray Inc 128 Sterling Road Toronto, Ontario, M6R 2B7 Telephone: 416.538.1335

Sandbox (Mandatory for concourse tenants) 1800 O'Connor Drive, Suite 302 Toronto, Ontario, M4A 1W9 Telephone: 416.706.7748

Biggs & Narciso Construction 181 Bentley Street, Unit 14 Markham, Ontario, L3R 3Y1 Telephone: 905.470.8788

#### **Base Building Contractors**

Tenants are encouraged to retain Landlords approved building contractors under direct contractual arrangement, for maintenance and repairs to their own equipment. These Contractors have been screened by the landlord for appropriate insurance coverage and WSIB certificates.

#### **GENERAL CONTRACTORS**

**Telio Construction Inc.** 300 New Toronto Street Toronto, Ontario, M8V 2E8 Telephone: 416.253.9000

**Mform Construction Group Inc.** North Queen Street, Suite 200 Toronto, Ontario, M8Z 2C9 Telephone: 416.239.7979

#### **ELECTRICAL CONTRACTORS**

**Campbell & Kennedy** 242 Applewood Crescent, Unit 11 Concord, Ontario Phone: 905.761.8550

#### Guild Electric Limited 470 Midwest Road Toronto, Ontario, M1P 4Y5 Telephone: 416.288.8222

#### FIRE ALARM SYSTEM (Mandatory)

Johnson Controls 2400 Skymark Avenue Mississauga Ontario, L4W 5K5 Telephone:-905.212.4620

#### SUB-METERING (Mandatory)

**Carma Industries Inc.** 1 Dundas Street West, Suite 2500 Toronto, Ontario M5G 1Z3 Telephone: 416.260.4264

## DOOR/LOCKS (Mandatory)

Reilly Lock Limited 54 Bartor Road Toronto, Ontario, M9M 2G5 Telephone: 416.256.7222

Note: Landlord reserves the right to change contractors/trades at its discretion.

#### MECHANICAL CONTRACTORS

**City Core Mechanical Services** 813 Brock Road, Unit 5 & 6 Pickering, Ontario, L1W 3L8 Telephone: 905.420.2043

Modern Niagara Building Services 695 Flint Road Toronto, Ontario, M3J 2T7 Telephone: 416.748.3882

### SPRINKLER CONTRACTORS

**Onyx Fire Protection** 42 Shaft Road Toronto, Ontario, M9W 4M2 Phone: 416.674.5633

Classic Fire Protection

645 Garyray Drive. North York, Ontario, M9L 1P9 Telephone: 416.740.3000

## HVAC CONTROLS (Mandatory)

Johnson Controls Ltd. 56 Leek Crescent Richmond Hill, Ontario, L4B 1H1 Telephone:1.866.468.1484

## AIR/WATER BALANCING

**Design Test and Balance Company** 70 East Beaver Creek Road, Unit 35 Richmond Hill, Ontario L4B 3B2 Telephone: 905.886.6513

## DATA/ELEC. RISER MANAGEMENT (Mandatory)

Rycom Corporation Customercare@rycom.com 1.877.792.6687 905.264.4800

37

## **Project Completion Checklist**

TENANT:		
PROJECT:		
BUILDING:		
PROJECT DATE:		

The Tenant must ensure that all the following applicable items are confirmed upon completion of construction. It is the responsibility of the Tenant to verify, through its contractors/consultants that all engineering related items are completed in accordance with this document and the Landlord's Approved Drawings and specifications.

#### 1. Induction/Radiation Units (if applicable)

In accordance with the Manual, all induction/radiation units must be thoroughly cleaned and finishes repaired/restored to base building standard in accordance with the Manual. Further, all cleaning must be performed by the building cleaning company at the expense of the Tenant.

YES  $\Delta$  NO  $\Delta$ 

# 2. Variable Air Volume/Reheat/Induction/Radiation Controls (if applicable)

Engineering drawings and specifications must ensure that all variable air volume/reheat/induction/radiation unit controls are calibrated and checked by the base building controls contractor. Drawings must also note the "static pressure" of the controls.

YES  $\triangle$  NO  $\triangle$ 

## 3. Low Voltage and Master Light Switching (if applicable)

All low voltage light switching is to be controlled by a central system, and master light switch on each floor.

YES  $\triangle$  NO  $\triangle$ 

#### 4. Emergency Lighting

Emergency lighting must comply with building code requirements and be available throughout the Leased Premises, including the elevator lobby.

YES  $\Delta$  NO  $\Delta$ 

### 5. Emergency Exit Lighting

Emergency exit lighting must be provided throughout the Leased Premises as required by the building code. All new and relocated exit signs must be replaced with the new standard green running man pictogram exit signs.

#### YES $\Delta$ NO $\Delta$

### 6. Electrical Header Duct (if applicable)

The main electrical header duct, including the sections adjacent to the Leased Premises, must be inspected to ensure that screws, clips, gaskets, edging, etc., are replaced and positioned properly.

#### YES $\triangle$ NO $\triangle$

## 7. Electrical and Mechanical Room

These rooms must be left tidy and clean with all equipment installed properly including appropriate firestopping (if required, cleaning and repairs will be performed at the tenant's expense).

YES  $\triangle$  NO  $\triangle$ 

#### 8. Fire Hose Cabinets

Check to see that all extinguishers are fully charged (pressurized water, five pound dry chemical, ABC type), located in the hose cabinets and that fire hoses are connected properly and in good condition.

#### YES $\Delta$ NO $\Delta$

#### 9. Sprinkler Testing and Verification

Conduct a 200 p.s.i. water test at the end of the construction following any sprinkler work. This test is to be witnessed by the base building engineering consultants and report submitted to the Landlord's Tenant Coordinator.

YES  $\triangle$  NO  $\triangle$ 

#### 10. Provide Air Balance Reports

The Tenant must provide the Landlord's Tenant Coordinator with one (1) digital copy of an air balance report upon completion of construction. The balancing report must be done by the contractor approved by the Landlord at the Tenant's expense and must be reviewed by the Landlord's consultant prior to submission.

#### YES $\Delta$ NO $\Delta$

#### 11. Provide "As-Built" Drawings

A complete set of engineering "as-built" drawings are to be submitted to the base building engineering consultants. Two (2) sets of blackline prints of these drawings are to be submitted to the Landlord's Tenant Coordinator. One set of architectural "as-built" drawings are also to be sent to the Landlord's Tenant Coordinator.

YES  $\triangle$  NO  $\triangle$ 

#### **1.** Provide Product Catalogue Maintenance Manuals

Two complete sets of product/maintenance manuals are to be submitted to the Landlord's Tenant Coordinator on completion of the project.

### $\mathsf{YES} \ \Delta \quad \mathsf{NO} \ \Delta$

### 2. Provide Life Safety Verification Report

Two (2) copies of fire alarm verification report are to be submitted to the Landlord's Tenant Coordinator prior to Tenant occupancy of the floor, verifying the location, operation and supervision of the following:

a)	smoke detectors (duct and surface):	YES $\Delta$	NO $\Delta$
b)	heat detectors (core area rooms);	YES $\Delta$	NO $\Delta$
c)	firemen's handsets;	YES $\Delta$	NO $\Delta$
d)	fire alarm speakers;	YES $\Delta$	NO $\Delta$
e)	fire alarm pull stations;	YES $\Delta$	NO $\Delta$
f)	fire alarm bells;	YES $\Delta$	NO $\Delta$
g)	sprinkler flow switch and supervised value;	$YES\ \Delta$	NO $\Delta$

All devices and components are to be verified per National Standard of Canada (CAN/ULS.S537.M86). Upon completion of final hookup, fire alarm company personnel must verify proper annunciation of all life safety devices at the EVAC, EVIT and fire alarm panels. Fire alarm company personnel must verify that sound pressure levels in all areas of the floor are:

a) fire alarm or alert signals at least 15dBA above the equivalent sound level of 5dBA above the maximum sound level having a duration of at least sixty seconds, whichever is greater, measured 1500 millimetres above the floor, but not less than 90 dBA.

#### YES $\triangle$ NO $\triangle$

 b) for voice communication, at least 9dBA above equivalent sound level of 3dBA above the maximum sound level having a duration of at least sixty seconds, whichever is greater, measured 1500 millimetres above the floor, but not less than 85dBA.

#### YES $\triangle$ NO $\triangle$

The Landlord's Tenant Coordinator and The Building Security Safety Coordinator? are to be notified forty eight (48) hours prior to testing.

## 3. Provide Communication Cabling Verification

A letter of verification on type of cabling used in part for the Tenant's communication system fit up must be submitted on completion of the installation by the installing contractor. The cabling installation must conform to building code requirements as set out in the Ontario Building Code and approved by Rycom Corporation.

#### YES $\Delta$ NO $\Delta$

All the above items are to be completed prior to Tenant occupation and a signed copy returned to the Landlord's Tenant Coordinator.

The Landlord will perform the above work at the Tenant's expense if any applicable items are not complied with.

Tenant:	Date:			
Authorized				
Approved By:	Date:			

QuadReal Property Group Limited Partnership

# Appendix "A"

# **TENANT GREEN DESIGN GUIDE**

# for Commercial Interiors

# **Table of Contents**

- Introduction
- Our Commitment
- Why a Green Design
- Getting Started
- Energy Efficiency
  - o Water
  - o Lighting
  - Heating Ventilation and Air Conditioning
  - Equipment and Appliances
  - Energy Measurement
  - Construction and Commissioning
- Environmentally Friendly Interiors
  - Floor Materials
  - Walls, Wallcovering, and Paint
  - o Furniture
  - Millwork
- During Construction or Renovations
  - Waste Management
  - Indoor Environment
- Information and Resources
- Taking it to the Next Level

Schedule 1 – LEED CI Summary

# Introduction

This Tenant Green Design Guide is supplemental to and is intended to be read and used in conjunction with the buildings' Tenant Design Criteria Manual.

This guide contains general information, procedures and recommendations designed to assist tenants in the design and construction of their improvements within their premises with the ultimate goal of being environmentally responsible and economically profitable and creating a healthy workplace for all employees.

<u>The Lease and any other agreement(s)</u> between the tenant and landlord of the building shall govern and take precedence over any information included in the Tenant Design Criteria Manual and this Tenant Green Design Guide.



# **Our Commitment**

We are committed to strategically develop and continually improve environmental best practice with regard to our managed properties and the impact they have on the communities in which we do business. ForeverGreen is the foundation of our Responsible Property Management principles. These principles embody the elements of sound property management practices with social and environmental principles of sustainability.

We seek the involvement of stakeholders, including our clients, employees, tenants and suppliers, in our efforts to reduce green house gas emissions, increase waste diversion and assist us in reducing the environmental footprint of the properties that QuadReal Property Group manages.

This commitment takes many forms, including the development of a culture of conservation and sustainability through appropriate and effective communication. We offer education programs to staff and we engage tenants in conservation practices and stewardship as well as inform all parties on the use of effective waste, energy and utilities management principles, all of which are incorporated in this Green Design Guide.

You play an important role in our building and we want you to know about our commitment to Responsible Property Management. Please visit our website for more information about our ForeverGreen promise and for a listing of all of our buildings that have been certified "Green" or have received industry related awards and recognition.

# Why a Green Design?

It is well documented that more than 30% of the total energy produced and 60% of the electricity generated is consumed by buildings annually. Additionally, a typical North American commercial construction project generates up to 1.13 kilograms or 2.5 pounds of solid waste per square foot of occupied floor space.

A Green Design not only has a positive impact on public health and the environment, it reduces operating costs, enhances employer organizational marketability, has the potential to increases occupant productivity and demonstrates a commitment to a sustainable community. Beyond that, it contributes to a sustainable environment by reducing our energy and natural resource consumption and cutting down on the waste and pollution we create.

Many leading organizations consider the impact their workplaces have on a range of financial drivers and a Green Design can assist in securing a competitive advantage. This can provide the following benefits:

- ✓ Enhance company reputation
- ✓ Attract and retain talented employees
- Enhance employee wellbeing and productivity
- Enhance and protect organizational knowledge
- ✓ Reduce Liability

Some of the economic benefits of a green building are:

- ✓ Lower utility bills and operating costs because of energy and water efficiency systems
- ✓ Lower waste and dumping costs because of landfill diversion measures (recycling/reuse programs) used during construction and occupancy
- ✓ Lower energy bills from efficiencies in HVAC systems
- Fewer employee sick days taken and heightened worker productivity because of improved indoor air quality



# **Getting Started**

Whether you have an in-house team that serves your facility design needs or you rely on outside firms to assist you, it is paramount that you select design consultants that are wholly committed to a Green Design. Once your design team is established choose other advisors (including engineers, suppliers, commissioning services and contractors) that are equally engaged in environmental best practices.

Key considerations in a Green Design include:

- Energy efficiency in mechanical and electrical installations that addresses thermal considerations, noise and indoor air quality and meets flexibility and privacy needs
- Environmentally friendly interiors that support healthy work environments and avoid / minimize harmful emissions
- ✓ Effective Waste Management practices and indoor environmental controls during renovation work

This document includes a number of initiatives and strategies that should be considered when arranging service agreements and construction documents and will assist you in developing and refining plans and specifications that achieve your Green Design goals.

Often the first question asked is "What does a Green Design cost?" Many measures can be done with no additional cost while others may involve minimal upfront costs but will save money over the long haul.

Some green measures may cost considerably more, but yield benefits that are more difficult to quantify, such as improved productivity. In all cases, the key to eliminating or minimizing additional costs is to establish your design team and set your goals very early in the process.



# **Energy Efficiency**

#### Water:

It is important to consider reducing our consumption of this resource in order to ease the burden on water and sewer infrastructure systems in our cities. Through Green Design you can maximize water efficiency within your space to reduce the burden on water supply and waste water systems.

These strategies, in aggregate, will help you to reduce potable water consumption up to 20% over a typical installation. Use the following as a guide to achieving this goal:

Fixture	Maximum Requirement		Flow	Index: (LPF) liters per flush	
Water Closets	6.0	(LPF)	1.6	(GPF)	(LPM) liters per minute
Urinals	3.8	(LPF)	1.0	(GPF)	(L/CY) liters per cycle
Shower Heads	9.5	(LPM)	2.5	(GPM)	(GPF) gallons per flush
Faucets	8.3	(LPM)	2.2	(GPM)	(GPM) gallons per minute
Replacement Aerators	8.3	(LPM)	2.2	(GPM)	(G/CY) gallons per cycle
Metering Faucets	0.95	(L/CY)	0.25	(G/CY)	200

Choose the most efficient water consuming fixtures available when installing new fixtures, whether these are for a kitchen, private bathroom, employee gym, etc. Technologies are changing at a rapid pace so ensure your consultants incorporate the best available in your Green Design.

#### Lighting:

Understandably, a lot of emphasis goes into designing premises lighting in a Green Design. After all, it accounts for more than 60% of total premises energy costs and represents the largest single opportunity for savings. The building standard lighting system already achieves a high level of energy performance though the use of T8 lighting and proper spacing of fixtures.

Taking advantage of as much natural light as possible should be the initial focus. Next is an efficient lighting design. Energy efficient solutions are flooding the marketplace at an increasing rate and your design team is crucial to ensuring latest technologies are used.

A Green Design for lighting incorporates many elements, the highlights of which are detailed below:

- ✓ Use energy efficient fluorescent lights with electronic ballast (less than 10W/m2) for general office lighting
- ✓ Design for light levels to 35.40 foot candles or 1 watt per square foot and incorporate task lighting where higher lighting levels are needed.
- ✓ For special purpose lighting, use compact fluorescents or LED's.
- ✓ Install comprehensive occupancy based lighting control systems with appropriate zoning and incorporate daylight harvesting (use of natural light within 4.5 meters (15 feet) of windows and

under skylights). Simple solutions include occupancy sensors in private offices or meeting rooms and/or electronic dimmer switches.

- ✓ Use LED in exit signs which only consume 1.6W of power versus 30W in conventional signs.
- ✓ Where the base building system does not meet your needs, you may wish to consider installing upward facing or indirect lighting using parabolic lenses to reflect off the ceiling as a replacement to standard overhead fluorescent fixtures. Not only does this system produce a softer and shadow free light, computer screen glare is also reduced.

An added benefit to lowering the energy use in lighting systems is the reduction in the heat loads created which has a positive effect in the cooling system/s of the building.

#### Heating Ventilation and Air Conditioning:

Improved and enhanced indoor air quality is fundamental in achieving overall employee satisfaction. Thus, your goal is to establish and design to quantifiable standards for indoor air quality (IAQ) performance.

A successful Green Design for HVAC is often conditional on the base building capacities and systems. Where feasible:

- ✓ Provide for separate control zones in every room or area with a solar exposure
- ✓ Zone interior spaces separately
- ✓ Install controls and systems capable of sensing space use and modulating HVAC systems in response to space demand. This includes private offices and specialty occupancies (conference rooms, kitchens, etc.)

#### **Equipment and Appliances:**

Install only Energy Star rated equipment and appliances, including kitchen and laundry appliances, office equipment, electronics and commercial food service equipment and, more importantly, ensure equipment and computers are turned off when not in use.

#### Energy Measurement:

The ability to track energy consumption within the premises is a key step in energy conservation and awareness. It allows ongoing accountability and optimization in energy performance over time. By installing metering equipment that measures and records consumption within your space on all electrical, gas and water services you are able to monitor energy usage, which in turn allows you to identify, influence and see the results of any energy programs and initiatives you undertake.

For larger projects, continuous metering equipment should also be installed for the following end uses:

- ✓ Lighting systems and controls
- ✓ High consumption areas such as computer / server rooms
- ✓ "plug load" measuring consumption of office equipment, photocopiers, computers, etc. which are plugged into electrical outlets throughout your space

## Construction and Commissioning:

The construction phase begins once you have a contract with the contractor you have selected. It ends when the project is complete and ready for occupancy. The last step prior to occupancy should be a commissioning period.

A project cannot be deemed a success until proven with written verification that confirms the project's mechanical, HVAC and electrical systems are installed and calibrated and performance is validated to the

intended design. This verification process is completed by a commissioning team and should be included as part of your project work.

## Further Reductions in Footprint:

In order to further reduce your energy footprint once you have designed and constructed efficient space, you may want to give consideration to purchase Green Power for your premises.



# **Environmentally Friendly Interiors**

#### Floor Materials:

Floor finishes have the greatest single environmental impact of any fixed item over the life of a typical tenant's occupancy timeframe. This is due to a tendency to replace floor materials at the end of every lease cycle. If reusing existing floor finishes is not possible or practical, many environmentally friendly options are available at similar and often lower cost than typical selections. For example:

- ✓ Use modular carpets, reconditioned options or those with high recycled content
- ✓ Choose low emissions products
- ✓ Use linoleum instead of vinyl
- ✓ Select carpets from vendors who will take back the product for recycling at the end of its useful life.

#### Walls, Wallcovering & Paint:

Research indicates a link between open plan work environments and improved organizational learning. By reducing the amount of walls or offices and moving towards an "open work" plan, you are not only reducing upfront costs, but increasing employee moral and wellbeing. This has the potential to generate further proven organizational productivity through inherent increases in natural light and better ventilation associated with this design approach.

Minimize the amount of volatile organic compounds 'VOC" in paints, adhesives and sealants that are specified. This contributes to a healthier and more pleasant work environment for staff, especially at the beginning of your occupancy. Natural paints cost only a little more than standard paints and are completely VOC free. These provide a tangible demonstration of your company's commitment to maintaining a healthy environment for employees. Avoid the use of vinyl wall coverings as much as possible as most tend to have a high VOC content.

#### Furniture:

Workstations can also have a significant environmental impact, particularly if they are not designed for easy assembly and reassembly, and capable for reuse or recycling. Improvements to indoor environment quality can be attained through the use of products that contain no or low "VOC".

General office furniture contributes to a significant percentage of waste going to landfills. Consider reusing as much office furniture as possible which saves money and the environment. Cost effective, environmentally and healthy (no or low VOC) products are readily available and some manufactures agree to take back products for reuse or recycling at the end of your use.

## Millwork:

A Green Design incorporates built in waste receptacle millwork to ensure that all recyclable materials generated within your space is diverted from landfill. The following waste streams should be taken into consideration when working with your property management team:

#### Kitchens/Kitchenettes/Serveries Pho

- . Organic Waste
- . Cans and Bottles
- . Paper
- . Plastics and Styrofoam
- Photocopy Areas . Paper . Toner Cartridges . Battery Recycling
- **Meeting/ Boardrooms**
- . Paper
- . Cans and Bottles
- . Waste
- . Organic waste

Each receptacle should be properly labeled according to the building's identified waste streams.

# **During Construction or Renovations**



#### Waste Management:

An effective waste management program is based on the 3Rs, Reduce, Recycle and Reuse.

The element that needs to be considered right from the start is REUSE!

If your Green Design requirements are due to a relocation be sure to walk through your new premises and give careful consideration to any existing fixtures and furniture that can be reused. Also look to reuse whatever materials, equipment and resources you can from your existing premises.

If demolition of some or all of the premises is to be undertaken ensure suppliers, contractors and/or subcontractors retrieve / retain packaging (e.g. skids, plastic wrap etc.) for reuse.

This leads us to the next step in waste management, RECYCLE!

Your contractor should be advised to contact local salvaging/recycling companies and arrange for recycling services. At a minimum, you should ensure your contractor recycles the following waste materials that could not be reused and may be generated throughout demolition or construction:

- ✓ Concrete / masonry / stone
- ✓ Steel and other metals
- ✓ Wood
- ✓ Gypsum
- ✓ Cardboard

- ✓ Plastic
- Blue Box waste
- ✓ Glass
- Ceiling tiles
- ✓ Carpet

The final step in your waste management efforts is to REDUCE!

Prevent damage of materials due to mishandling, improper storage and contamination so they do not end up as waste. Where possible, use prefabricated components built at a central facility to avoid waste generation at the site.

An important element of the commitment to waste management is ensuring effective documentation is kept during the construction process. This is done through a Waste Diversion Report. The report is comprised of a compilation of waybills, invoices, letters and other documentation from your

suppliers/contractors that is appropriately indexed and shows product types, quantities and details of waste diverted and waste sent to landfill. A copy of your Waste Diversion Report is to be provided to us when completed.

It is therefore essential that you inform your contractor early in the renovation process about the following processes and procedures that form part of a Green Design.

Designate a central Waste Collection Area onsite that is dedicated to the separation and storage of all waste generated during demolition and construction.

- ✓ Provide separate containers in the Waste Collection Area that are sized to accommodate the estimate amount of each waste type and quantity.
- ✓ Clearly indicate the material type being stored in each container using appropriate signage and labels.
- ✓ If space is insufficient to provide proper sorting, ship all materials to a sorting station.
- ✓ Coordinate daily inspections of containers to check for and remedy cross contaminations.
- ✓ Ensure the material type is clearly labeled on each container.
- ✓ Arrange for and/or promptly transport containers to receiving facilities when containers are full.

Provide "blue box" recycling bins on site for recycling waste generated by site workers and visitors. Waste deposited in the bins should include aluminum, food or beverage cans, glass and plastic bottles and jars for food or beverage, cardboard and paper products.

Within 14 days...

- ✓ Have suppliers and contractors provide a letter listing the item(s) to be reused and the item(s) and quantity being removed from the site.
- Those items being removed from the site should show a list of proposed salvaging / recycling facilities to be used and further specify the material(s) that will be accepted by each facility and whether the material(s) will be reused, recycled or sent to landfill.
- ✓ Follow any salvaging / recycling facilities' material acceptance requirements to ensure materials are properly sorted, grouped and packaged for collection.

Additional information and suggestions on waste management practices can be found on these websites:

Halton Region . http://www.halton.ca/living\_in\_halton/recycling\_waste City of Toronto . <u>http://www.toronto.ca/garbage/index.htm</u> Web Based . Buy and Sell of Recycling materials . <u>http://www.recycle.net/</u>

#### Indoor Environment:

Prevent indoor air quality problems arising from the construction / renovation process.

Protect all materials from moisture damage whether stored onsite or installed with the use of absorptive materials. Provide filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 at <u>each</u> return air grill when air handlers are used during construction. Air handling systems serving the premises will only be turned on in the construction area when filters have been installed.

Additionally, reduce the quantity of indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well being of installers and occupants. This would include adhesives, sealants and sealant primers. Specify low volatile organic compound "VOC" materials in all products being used. This is often accomplished with no additional cost.



Special consideration should be given to the selection of furniture and fixtures to ensure VOC levels are minimized and sufficient time for "off gassing" of new furniture is allowed to occur in a warehouse designed for this purpose rather than on the construction site. Be sure to order these products early in your process so it does not delay your overall construction schedule.

## **Information and Resources**

To assist you in identifying environmentally friendly and sustainable ("green") goods and services; sourcing, using and disposing office products in an environmentally preferable manner; and recognizing the vast array of products and services available, we have identified a few of the thousands of web sites available in your pursuit of Green Design.

**EcoLogo**<sup>™</sup> **Program** – Launched by the Canadian Federal government in 1988, EcoLogo<sup>™</sup> has grown to service thousands of buyers and sellers of green products throughout the United States and Canada. EcoLogo TM is North America's oldest environmental standard and certifications organization. At this site, you will be able to make important, green conscious decisions while you browse through a list of over 7,000 product and service offerings. <u>http://www.ecologo.org/en/</u>

**Bullfrog Power** – Bullfrog sources power exclusively from generators who meet or exceed the federal governments Environmental Choice Program EcoLogo<sup>M</sup> standard for renewable electricity. http://bullfrogpower.com

**Public Works Canada** - offers a number of reference guides and publications including Environmentally Responsible Green Office and an Environmentally Responsible Construction and Renovation handbook. <u>http://www.pwgsc.gc.ca/realproperty/text/publications.e.html</u>

**BUILDSMART**<sup>®</sup> - a program of Metro Vancouver, is a sustainable building information source for the design and construction industry, helping make smart, sustainable choices when crafting the future of our constructed environment. The site features a sustainable products directory, technical resources, and information covering the life cycle of a building including; Design, Construction, Operations, Retrofit/Renovation and finally Deconstruction. <u>http://www.gvrd.bc.ca/BuildSmart/</u>

# Taking it to the Next Level

If you wish to take your commitment to designing and constructing sustainable office interiors to an elevated level we highly recommend you consider certification of your interior renovations to the LEED<sup>®</sup>. CI rating system offered by the Canadian and United States Green Building Councils. A two page summary is attached to this guide as Schedule 1 with detailed information available at the following websites:

http://www.cagbc.org/

http://www.usgbc.org/

Of paramount importance is to ensure your consultants are LEED Accredited Professional with experience in LEED accreditation programs to alleviate costs that can be associated with their learning curve.

# Schedule 1

# LEED<sup>®</sup>. CI Summary

#### What is LEED?

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System<sup>™</sup> is a voluntary, consensus based national rating system that encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria.

#### **LEED Basic Facts**

- LEED is implemented by the Canadian Green Building Council for the Canadian market and by the U.S. Green Building Council for the United States market which are not for profit and non profit organizations respectively
- LEED is a point based system for rating the environmental performance of buildings
- Ratings of CERTIFIED, SILVER, GOLD or PLATINUM are awarded based on the number of points a project achieves
- LEED includes a third party review and certification process
- There are several versions of LEED, each addressing different building types and construction scopes

#### LEED –CI

LEED for Commercial Interiors is the green benchmark appropriate for the tenant improvement market. It is the recognized system for certifying high performance green interiors that: are healthy, productive places to work; are less costly to operate and maintain; and have a reduced environmental footprint. LEED–CI provides a framework to make sustainable choices to tenants and designers who do not occupy whole buildings.

LEED–CI addresses the following categories of environmental performance, which are explained in more detail in the sections that follow:

- Sustainable Sites
- Water Efficiency
- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality
- Innovation in Design

#### Sustainable Sites

This section looks at the environmental choices in terms of the site, its surroundings and certain aspects of the base building in which the LEED–CI project is taking place. A number of the issues addressed in this section may be outside of the scope of influence of the tenant. Within Sustainable Sites, LEED–CI addresses environmental performance in areas such as the reuse of brownfield sites, storm water management, heat island effect, onsite renewable energy and transportation management.

#### Water Efficiency

Points for water efficiency are awarded to project teams for their reduction in potable water use relative to standard practice. Low flow fixtures such as toilets, showers and faucets all contribute towards these points.

#### Energy & Atmosphere

Energy conservation may be the most important way to reduce the negative environmental impact of buildings, since energy use is implicated in resource depletion, global warming and air pollution to name but a few impacts.

To reflect the importance of this section, it contains three prerequisites – mandatory measures that must be completed in order to obtain any level of LEED certification. These are:

- Fundamental Commissioning to ensure that testing procedures are conducted before tenant occupancy
- Minimum Energy Performance to ensure compliance with energy code standards
- CFC Reduction to ensure the avoidance of ozone depleting CFCs in mechanical equipment

LEED rewards projects with points for meeting or exceeding energy efficiency standards for lighting, HVAC and appliances. Points are also available for electricity from green sources, energy metering and enhanced commissioning.

#### Materials and Resources

The energy and resources required to extract, manufacture and transport building materials have significant environmental impacts. To reduce these impacts, the design team should emphasize the use of materials that have a minimal environmental impact and low embodied energy.

This section has one prerequisite – the provision of space for storing recyclables in the finished project – and also assesses the recycled content, reused content and locality of the materials used. Points are also available for diverting construction waste from landfill and selecting sustainable materials such as FSC certified wood or rapidly renewable materials such as bamboo.

#### Indoor Environmental Quality

Earth conscious building design doesn't stop at the building entrance, but includes issues related to the indoor environment: air quality, natural lighting and outdoor views. Healthy workspaces mean healthy, happy and productive staff with reduced absenteeism; many measures in this section make commercial sense too.

All projects must comply with two prerequisites in this section – tobacco smoke control and ventilation rates in accordance with or better than minimum standards.

Beyond that, LEED encourages a healthy working environment in two ways. First, LEED awards project points for minimizing harmful substances such as pollutants from construction process and harmful substances (particularly VOCs) in materials, paints, sealants and furniture. Second, LEED recognizes design features that actively contribute toward health and well being, namely natural day lighting, views out and comfortable and controllable heating, ventilation and lighting systems.

#### Innovation in Design

The final section allows projects to be rewarded for innovation measures not covered elsewhere in LEED or to achieve points by demonstrating "exceptional performance" in one of the areas covered by LEED.