

2.1 FINISHES:

2.1.1 Lay-in tile Acoustical Ceilings and Core Areas

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

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

2.1.2 Concrete Floors

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

2.1.3 Core, Columns and Perimeter Walls

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

2.1.4 Perimeter Curtain Wall Glazing Systems and Precast Punched Windows

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

2.1.5 Perimeter Ceiling Radiation Panels

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

2.1.6 Doors and Frames

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

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

2.2 MECHANICAL SYSTEMS:

2.2.1. Heating, Ventilating and Air Conditioning Systems

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

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

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

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

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

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

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

The washroom exhaust system is sized for 50 l/s per fixture with an allowance for future Tenant exhaust. Exhaust is drawn from lighting coves above the w.c's and is made up

through crossover ducts to the lighting coves over the basins from the adjacent ceiling space outside the core. General exhaust includes a vertical duct shaft in the compartmental room with a runout to draw air from the Tenant ceiling space.

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

The design criteria for office space is as follows:

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

2.2.2 New Equipment Installation

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

Should a Tenant require supplemental cooling continuously i.e. computer room, an independent system should be installed at the Tenant's sole expense subject to the written approval of the Landlord. Electrical and water meters are required to be installed at the Tenant's expense.

2.2.3 Plumbing and Drainage

Plumbing into the main domestic cold water supply and connections to the sanitary drain and vent risers are provided at the core to allow for the addition of a limited number of facilities in the leased premises, subject to the Landlord's approval. Tenants requiring hot water must provide their own hot water tanks and water meters must be installed for consumption charges.

2.2.4 Fire Protection

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

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

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

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

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

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

2.2.5. Smoke Evacuation System

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

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

Smoke detectors and annunciation speakers are base building standards.

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

2.3 ELECTRICAL SYSTEMS:

Emergency Power

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

transfer the emergency loads from utility sources to generator power.

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

Exit Lighting

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

Emergency Lighting

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

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

Fire Alarm and Detection Systems

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

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

ENERGY

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

POWER TO TENANT SPACES, TYPICAL FLOOR OFFICES

Power to Tenant space is provided from a 347/600V volt, 4-pole bus duct riser. Bus ducts rise through electrical rooms on each floor.

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

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

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

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

Power capacities have been provided as follows:

3.7 watts/ft² for lighting.

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

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

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

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

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

LIGHTING DESIGN

Typical Floors:

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

A safety chain must secure all electrical fixtures.

Washrooms:

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

Stairwells:

Lensed fluorescent luminaries at each landing and mid landing.

Exit Lighting:

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

TELECOMMUNICATIONS INFRASTRUCTURE

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

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

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

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

SECURITY SYSTEM

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

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

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

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

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

BUILDING LIGHTING CONTROL

A microprocessor based lighting control and energy monitoring system is provided to control all lighting in the office building. Points will control exterior lights, parkade

lighting, ground floor, and typical office floor lighting in the system. Tenant's electrical designers will be required to co-ordinate any lighting changes and/or additions with the base building lighting control system

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

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

TENANT METERING

A central microprocessor based electronic metering system is provided to allow accurate distribution of utility costs. Meters will be incorporated into any Tenant fit-up design program at the Tenant's expense.

2.4 STRUCTURAL SYSTEMS:

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

2.5 STANDARDS:

2.5.1 Door Hardware

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

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

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

2.5.2 Security Card Access Systems

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

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

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

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

2.5.3 Venetian Blinds

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

2.5.4 Signage

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

King Products has been engaged by the Landlord to provide an electronic lobby directory in the main lobby of the building. Typical floor lobby directory boards will be provided at each floor. The Property Manager will arrange for production of required tenant signage incorporation on to the typical floor lobby directory slats at the Tenant's expense.

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