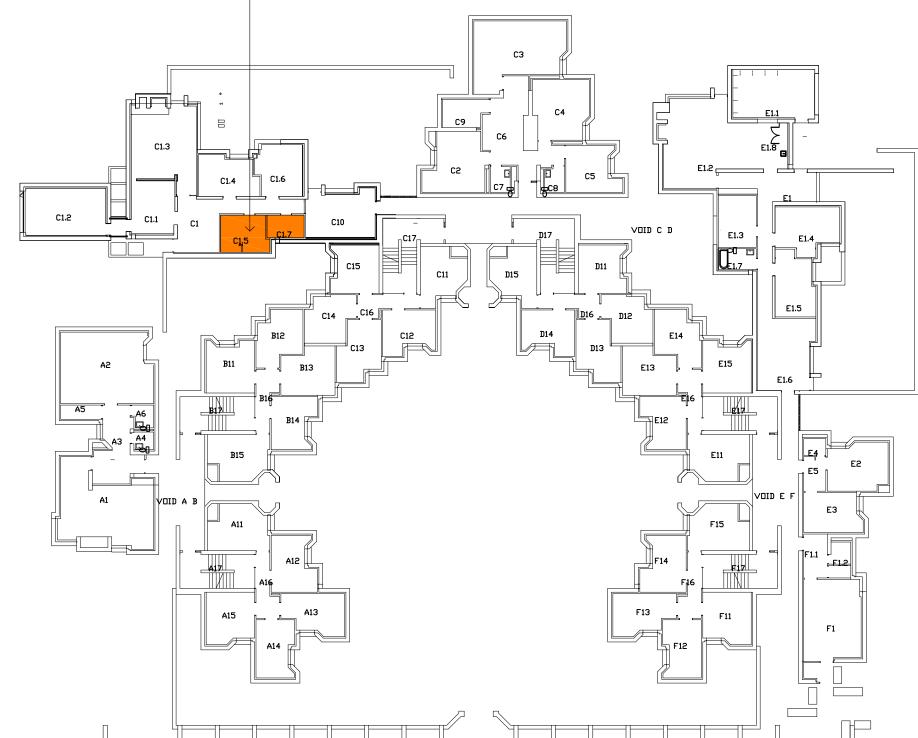
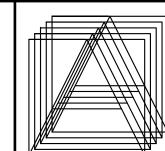


AREA OF WORK

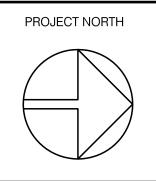












FOR PERMIT	SEPT. 09, 2025
ISSUED:	DATE:

THIS DRAWING IS COMPLIMENTARY & MUST BE READ IN CONJUNCTION WITH ALL THE OTHER DRAWINGS AND/ OR SPECIFICATIONS. REPORT ANY INCONSISTENCIES TO THE ARCHITECT.

# PROJECT: TRENT UNIVERSITY - RENOVATIONS TO CHAMPLAIN COLLEGE

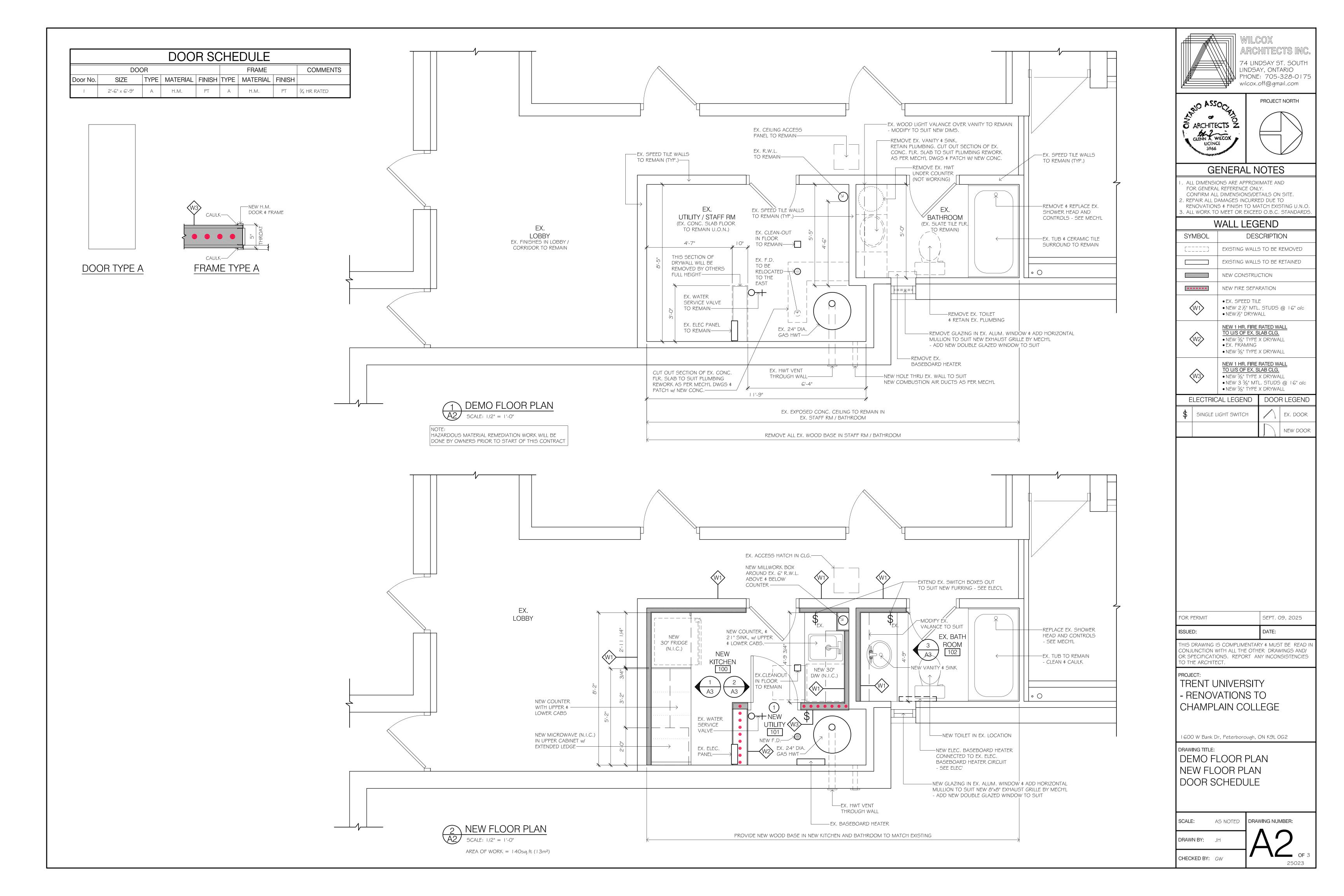
l 600 W Bank Dr, Peterborough, ON K9L OG2

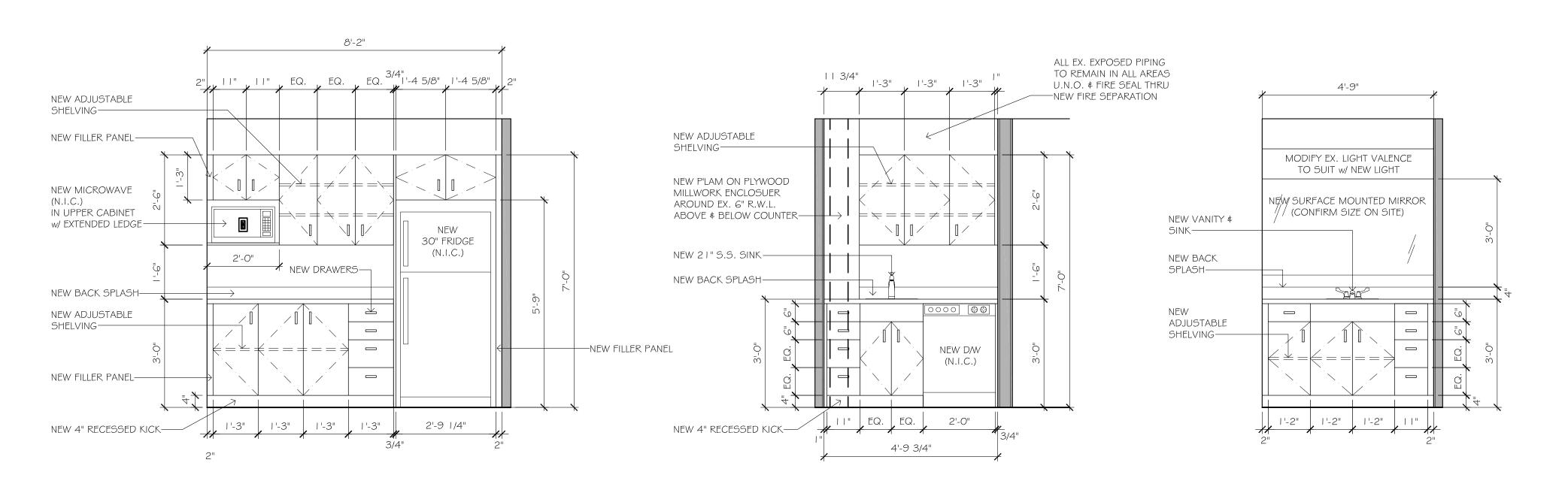
DRAWING TITLE:
KEY PLAN OVERALL FLOOR PLAN

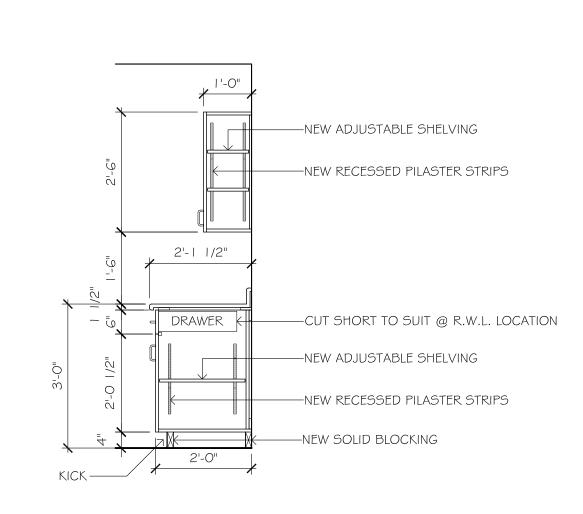
SCALE:	AS NOTED	DRAWING NUMBER:

DRAWN BY: CHECKED BY: GW









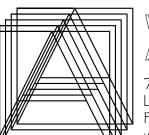
1 ELEVATION #1
A3 SCALE: 1/2" = 1'-0"

CONFIRM RECEPTACLES w/ ELEC. DWGS. 2 ELEVATION #2 A3 SCALE: 1/2" = 1'-0"

3 ELEVATION #3
A3 SCALE: 1/2" = 1'-0"

TYP. CABINETRY SECTION

SCALE: 1/2" = 1'-0"



ARCHITECTS INC.
74 LINDSAY ST. SOUTH
LINDSAY, ONTARIO
PHONE: 705-328-0175
wilcox.off@gmail.com



PROJECT NORTH

TYPICAL CABINETRY NOTES:

• CONSTRUCT NEW CABINETS TO INCORPORATE ALL BUILDING SITE CONDITIONS.

• ALL SHELVES TO BE ADJUSTABLE U.O.N. W/APPROVED METAL SHELF SUPPORTS.

• SECURE NEW CABINET BACKS TO EXISTING WALL

STRUCTURE @ STUDS.

• DOOR PULL TO BE BRUSHED NICKEL AND DRAWER HARDWARE TO BE FULL EXTENSION AND SOFT CLOSE

• ALL EXPOSED OPEN SHELVES AND INSIDE CABINETS TO BE FINISHED.

• PROVIDE ALL BUILD UP AS REQUIRED.

• FINISH ALL EXPOSED SURFACES IN P'LAM

FOR PERMIT	SEPT. 09, 2025
ISSUED:	DATE:

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TRENT UNIVERSITY
- RENOVATIONS TO
CHAMPLAIN COLLEGE

I 600 W Bank Dr, Peterborough, ON K9L 0G2

DRAWING TITLE:
NEW INT. ELEVATIONS

SCALE: AS NOTED

DRAWN BY: J

CHECKED BY: GW

DRAWING NUMBER:

	ELECTRI	C HEATING EQUI	PMENT SCHEDULE
SYMBOL	MODEL NUMBER	MANUFACTURER	DESCRIPTION
BB-1	OFM0502	OUELLET OR APPROVED EQUAL	500W BASEBOARD HEATER, WHITE, ASSUMED VOLTAGE IS 120V. CONTRACTOR TO CONFIRM.
BB-2	OFM0502	OUELLET OR APPROVED EQUAL	500W BASEBOARD HEATER, WHITE, 120V
$\Theta$	OTL221	OUELLET OR APPROVED EQUAL	MECHANICAL THERMOSTAT, SINGLE-POLE, SINGLE-THROW, 120V

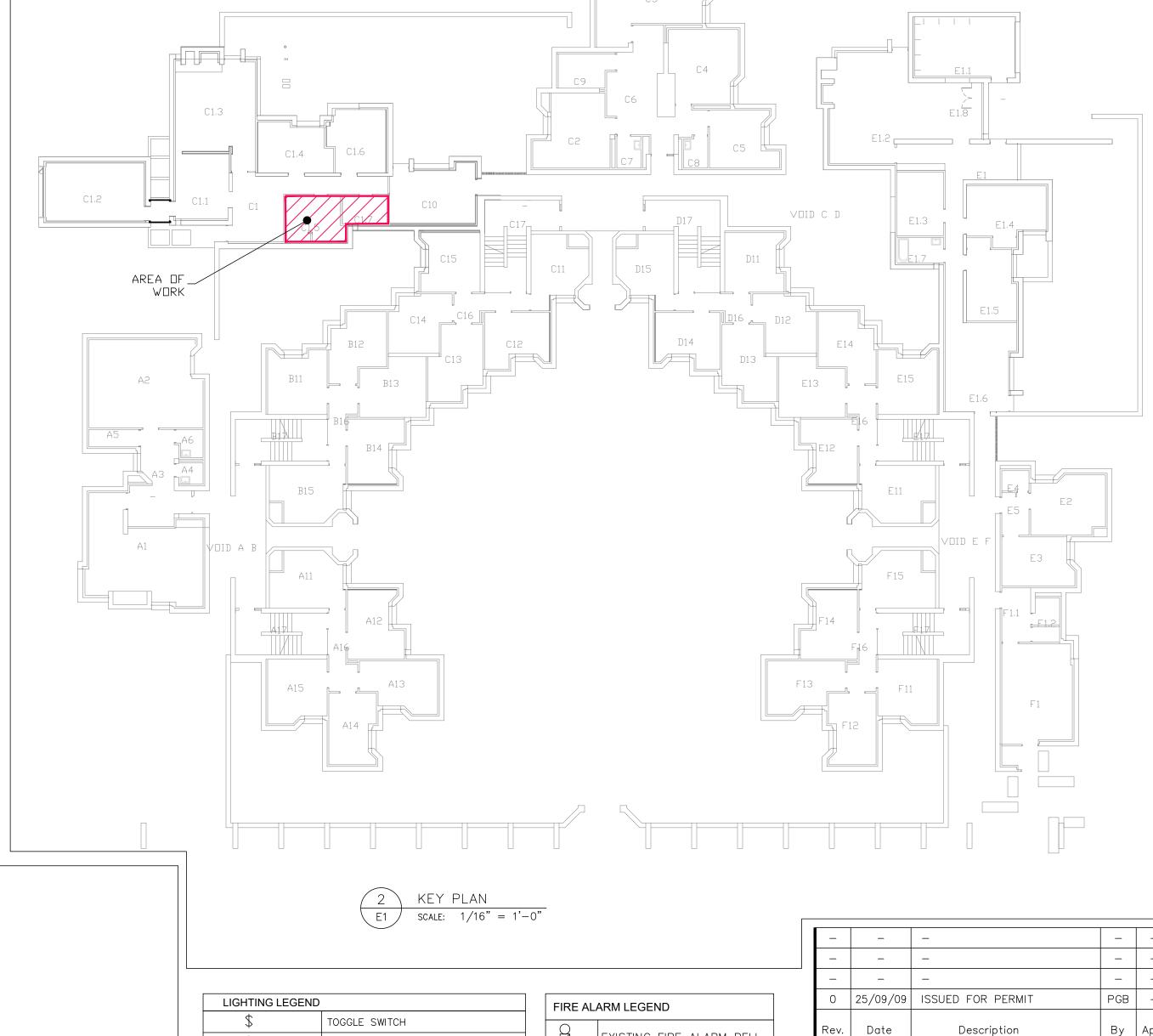
	LIGHTING SCHEDULE				
SYMBOL	MODEL NUMBER	MANUFACTURER	DESCRIPTION		
A	AE-SF-MRE-02- 1525-M-CA-303540	ERALUX MOONRAKER OR APPROVED EQUAL	2' LED LINEAR LIGHT, ADJUSTABLE LUMENS, SET TO 2875 LUMENS (25W), 80CRI, 120V, 0-10V DIMMING, SURFACE MOUNT, SWITCHABLE CCT, SET TO 4000K		

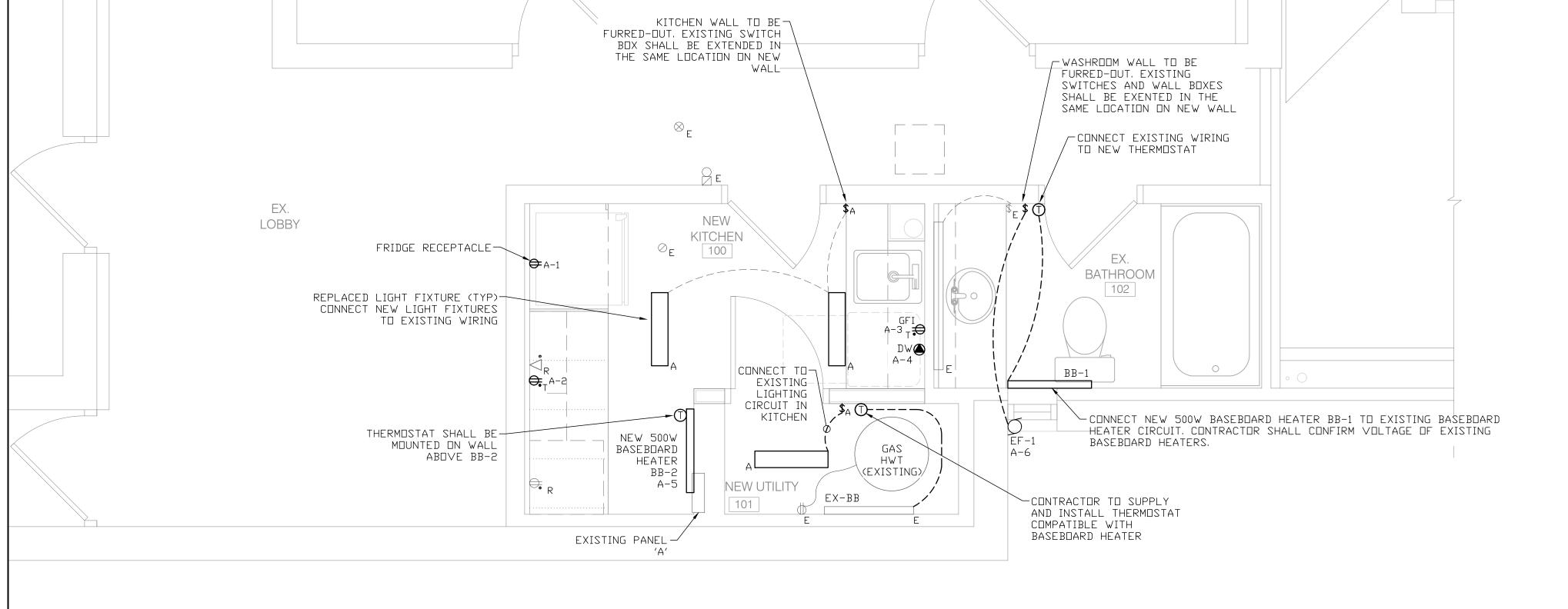
		LIGHTING CONTROLS SCHEDULE						
SYMBOL MODEL NUMBER MANUFACTURER DESCRIPTION				DESCRIPTION				
	\$ A	MS-B102-WH	LUTRON MAESTRO	DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR, 120V, WHITE IN COLOUR, PROGRAMMED AUTO—ON				

## CIRCUITING NOTES:

ALL CIRCUITS SHOWN ARE FOR REFERENCE PURPOSES ONLY. NEW CIRCUITS SHALL BE INSTALLED WHERE SPACE PERMITS.

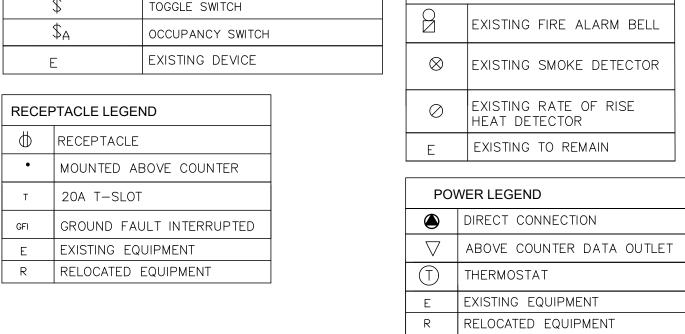
EXISTING PANEL 'A' - CIRCUIT A-1 INSTALL NEW 1P, 15A BREAKER: NEW FRIDGE RECEPTACLE - CIRCUIT A-2 INSTALL NEW 1P, 20A BREAKER: NEW COUNTER T-SLOT RECEPTACLE - CIRCUIT A-3 INSTALL NEW 1P, 20A BREAKER; NEW COUNTER T-SLOT RECEPTACLE - CIRCUIT A-4 INSTALL NEW 1P, 15A BREAKER: NEW DISHWASHER - CIRCUIT A-5 INSTALL NEW 1P, 15A BREAKER: NEW BASEBOARD HEATER BB-2 - CIRCUIT A-6 INSTALL NEW 1P, 15A BREAKER: NEW EXHAUST FAN



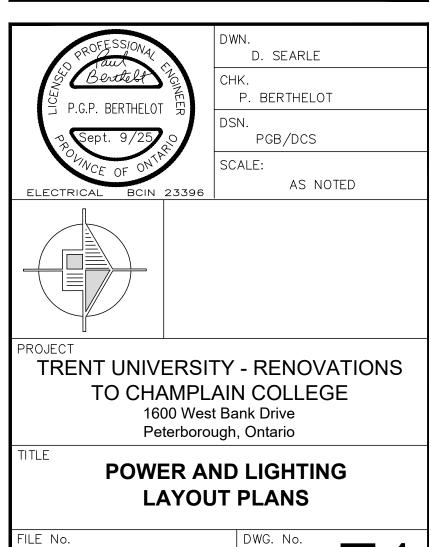


1 \ POWER & LIGHTING LAYOUT PLAN

SCALE: 1/2" = 1'-0"







765

#### Part 1 - General

#### 1.1. General

- 1.1.1. This section covers the general requirements for the electrical work.

  Read all divisions of the contract documents.
- 1.1.2. All equipment shall be CSA approved.
- 1.1.3. All equipment, materials and installation methods shall conform to the best commercial standard practice, and in accordance with the Ontario Electrical Safety Code and all bulletins.

#### 1.2. Outline Scope

- 1.2.1. The following major items of work shall be supplied and installed under the electrical contract:
  - 1.2.1.1.Provide all labour, materials, equipment and services to complete the work of the electrical division as further specified and as shown on the drawings:

    a.Supply and install light fixtures as detailed on the
    - b. Supply and install receptacles as detailed on drawings. c. Miscellaneous removals as required.

#### 1.3. Contract Drawings

- 1.3.1. Drawings for electrical work are performance drawings, diagrammatic, intended to convey scope of work and indicate general arrangement and approximate location of apparatus, fixtures and wiring. Drawings do not show all conduits. Those shown are diagrammatic only.
- 1.3.2. Additional money over the contract price shall not be paid unless an approved change order is issued by the architect. Claims for extras shall be submitted with a complete breakdown of material, labour, hourly rates, etc.

#### 1.4. Shop Drawings

- 1.4.1 Submit four reproducible copies of manufacturer's detailed shop drawings, which indicate clearly the materials and/or equipment actually being supplied, all details of construction, accurate dimensions, capacity, operating characteristics and performance for each piece of manufactured equipment and for items listed under each section for review.
- 1.4.2. Shop drawings submitted for approval that are not stamped and signed in accordance with the preceding requirements will be returned for resubmittal.
- 1.4.3. Installation of any equipment shall not commence until after shop drawings have been reviewed by the consultant.
- 1.4.4. Bind one set of approved shop drawings in each operating and maintenance instruction manual.

#### 1.5. Co-Operation with Other Trades

1.5.1. The contractor shall co-operate fully with other trades in such a manner as not to interfere with other work being carried out at the job site. Where other work and equipment has to be installed along with work pertaining to this division, arrange with other trades to install this work to best suit the needs for the particular condition.

### 1.6. Warranty

1.6.1. The contractor shall guarantee all work for a period of one year after the date of issue of the final certificate by the engineer and for longer periods where specified. If any defects become evident within the guarantee periods all necessary repairs and replacements to the work shall be made without cost to the owner. The contractor shall pay for making good any other work damaged through defects in the work of this section during both construction and guarantee periods.

# 1.7. Insurance

1.7.1. The contractor shall maintain all necessary insurance to protect the owner and all trades from all possible claims.

# 1.8. Liability

1.8.1. The contractor shall assume full responsibility for layout of work and for any damage caused by improper location or carrying out of work of these sections.

# 1.9. Cutting and Patching

1.9.1. The contractor shall complete all required cutting and patching to perform the work of this contract. Cuttings shall be kept to a minimum and be performed with clean cut straight edges. Patching shall be neat, clean and restore to original finish conditions using similar types of materials. Use only trades personnel skilled in the various types of work required. Cutting of structural members shall not be permitted without written approval by the owner.

# 1.10. Record Drawings

- 1.10.1 The contractor shall maintain accurate records of changes to the drawings on the job site.
- These shall include: all changes included in addenda to the tender documents; site instructions; and contract change notices. Upon project completion, the contractor shall forward to the consultant the set of drawings indicating the as—built conditions.

# 1.11. Existing Conditions

- 1.11.1. The contractor shall visit and examine the site and become familiar with all existing conditions affecting the work prior to submitting tender. No allowances in cost will be made by the owner for any difficulties encountered in the work arising out of conditions existing at the time of tendering.
- 1.12. Product Delivery, Storage and Handling
- 1.12.1. Inspect products delivered to the site and before acceptance, ensure that the product is: new; free from defects; is as specified; and is as per reviewed shop drawings, all in accordance with the contract documents. Store materials only in designated areas and protect as necessary to maintain materials in new condition.

#### 1.15. Clean-Up

1.15.1. At all times keep the premises free from accumulations of waste material or rubbish caused by employees or work. At the completion of the work, remove all rubbish and all tools, equipment and surplus materials from and about the work and leave the work "broom clean" or its equivalent, unless more exactly specified. All lighting fixtures, light switches, and other operable electrical devices shall be cleaned at the completion of work.

#### 1.16. Codes and Standards

- 1.16.1. Provide equipment and materials, and do the work, in accordance with the following, and comply with relevant sections as adopted or amended by authorities having jurisdiction:
  - a. Canadian electrical code (Canada)
  - b. National Fire Protection Association c. CAN/ULC Standards
  - d. Ontario Electrical Safety Code, including current bulletins and amendments.
  - e. Ontario Building Code
- f. Worker's Compensation Board Regulations g. Governing Fire Codes in the Province Of Ontario

#### 1.17. Permit, Fees and Inspection

- 1.17.1 The contractor shall apply for, obtain and pay all permits, licenses, inspections, examinations and fees required. The contractor shall arrange for inspection of all work by the authorities having jurisdiction over the work. On completion of the work, present to the owner the final unconditional certificate of approval by the inspection authorities.
- 1.17.2 Before starting any work, submit the required number of copies of drawings and specifications to the authorities for their approval and comments. Comply with any changes requested as part of the contract, but notify the owner immediately of such changes, for proper processing of these requirements.

#### <u>Part 2 — Basic Materials and Methods</u>

#### 2.1. Conduits, Conduit Fastenings and Conduit Fittings

- 2.1.1. Conduit systems shall be electrical metallic tubing, intermediate metal conduit, galvanized rigid steel conduit, or polyvinyl chloride.

  Minimum size shall be 1/2". Use EMT above—grade for indoor construction except where rigid conduit is required. Where galvanized rigid steel conduit is required, provide lock—nuts and bushing at terminations.
- 2.1.2. Type BX -90 flexible armoured cable may be used only for final connections to lighting fixtures. Use flexible conduit for final connections to motors and sensors. Lengths should not exceed 18". Use liquid tight PVC jacketed flexible conduit for connections to equipment outdoors or in damp locations.
- 2.1.3. Conduits shall be of sufficient size to permit easy removal of the conductors at any time. Use one hole steel straps to secure surface conduits 2" and smaller, and two hole steel straps for conduits larger than 2". Use beam clamps to secure conduits to expose steel work. Install fittings manufactured for use with the conduit supplied. Watertight connectors and couplings are required for EMT. Set screws are not acceptable.
- 2.1.4. Install conduits to conserve headroom in exposed locations and cause minimum interference in spaces through which they pass. Conduits shall be run exposed in service areas, but shall be concealed in finished rooms. Exposed conduits shall be installed parallel and perpendicular to walls and ceilings. Wherever conduits cross building expansion joints, approved means, such as conduit expansion joints or flexible conduit loops shall be provided as necessary to take care of the movement. Conduit shall not be run horizontally in partitions.
- 2.1.5. All conduits shall be properly supported with spacing not to exceed C.E.C. requirements. Approved electrical hardware, hangers, structural shapes, etc. Shall be used. Perforated strap handlers shall not be permitted. Where run exposed on concrete or masonry walls, conduits shall be supported using conduit clamps and lead anchors or approved preset concrete inserts and where run on building steel, beam clamps shall be used. Conduit clamps shall be heavy duty galvanized malleable iron. Factory "ells" shall be used where 90° bends are required for 1" or larger conduits. Make bends and offsets with a hickey or power bender without flattening or denting the conduits. Bend conduit cold. Replace conduit if kinked or flattened more than 1/10th of its original diameter. Connect conduit lengths with only approved couplings or conduit unions.
- 2.1.6. Install conduits so that there is no interference with access openings in ceilings or access to equipment in the ceiling space. Install conduit to avoid proximity to water or heating pipes. Do not run within 6" of such pipes. Where crossings are unavoidable, maintain a minimum distance of 1" from the pipe covering.
- 2.1.7. Square—cut all conduit ends, ream and file to remove all burrs before installation and properly clean and cap all empty conduits.

  Install fish cord in empty conduits.

# 2.2. Wires and Cables

- 2.2.1. All conductors shall be copper, unless otherwise noted. Conductors shall be stranded for #8AWG and larger with 1000v insulation of chemically cross—linked thermo setting polyethylene. 600v insulation can be used for conductors smaller than #8AWG. Base the 600 volt RW 90 conductor ampacities on published CEC 90°C. Rating. Cables shall be loaded to not more than 75% (70% to 80%) of this rating. Minimum #12AWG wiring shall be used.
- 2.2.2.Neutrals of power systems, although connected to a common ground at the source, shall be electrically separated and isolated from each other beyond this point of origination. Feeders to two or more switches or panels and the tapoffs to same shall all be run using the same size conductors throughout.
- 2.2.3. All wires shall be carried full size from source to the load. Neutral wires shall be the same size as phase wires. Equipment Ground wires shall be one size smaller than phase wire, except that the conductor shall not be larger than a 4/0 and shall be no. 10 for 30 amp circuits and no. 12 for circuits less than 30 amps. Insulation shall be type RW 90. Multi-circuit branch circuits in same conduit require only one equipment ground wire.

#### 2.3. Junction and Pullboxes

2.3.1. Junction and pullboxes should be of welded steel construction with screw—on flat covers for surface mounting. Install pullboxes in inconspicuous but accessible locations. Install junction and pullboxes so as not to exceed 30m of conduit run between pullboxes. All junction and pullboxes should be labelled to identify equipment or circuit numbers.

#### 2.4. Outlet, Conduit Boxes and Fittings

2.4.1. Size boxes in accordance with CSA C22.1. 100 mm square or larger outlet boxes as required for special devices. Gang boxes where wiring devices are grouped. Provide blank cover plates for boxes without wiring devices. Support boxes independently of connecting conduits. Conduit boxes shall be cast FS boxes with factory threaded hubs and mounting feet for surface wiring. Provide correct size of opening in boxes for conduit and cables. Reducing washers are not allowed.

#### 2.5. Wiring Devices

#### <u>Switches</u>

- 2.5.1. Locate light switches as shown on the drawings and on the latch side of doors. Install single throw switches with handle in "up" position when switch closed.
- 2.5.2 Install switches in gang type outlet box when more than one switch is required in one location.
- 2.5.3 Provide 20A, 125V single pole specification grade light switches as shown on the contract drawings.

  Receptacles
- 2.5.4.Install receptacles in gang type outlet box when more than one receptacle is required in one location. Combination boxes with barriers shall be used where outlets for more than one system are grouped.
- 2.5.5 Provide 15A, 120V specification grade duplex convenience outlets as shown on the contract drawings.
- 2.5.6 Do not install outlets back to back in wall. Allow a minimum 150 mm horizontal clearance between boxes. Change location of outlets at no extra cost or credit, providing distance does not exceed 3000 mm and information is given before installation.

#### Telephone/Cable T.V./Computer Raceway System, (etc.)

- 2.5.7.Empty conduit systems shall be provided for telephone from outlet box to accessible ceiling space, or as shown on the drawings.
- 2.5.8.Contractor is responsible for providing and/or coordinating the size, type and location of the incoming telephone conduit with the telephone company or the building owner.

#### 2.5.9. All interior building raceways shall be EMT.

- 2.5.10.2 long radius 90 degree bends shall be the maximum allowed between pull boxes.
- 2.5.11. Pole cords shall be provided in each conduit for future pulling of wires.
- 2.5.12. Contractor shall provide necessary boxes and associated cover plates as required for the above systems.

# Mounting Heights

- 2.5.13 Mounting heights for wiring devices shall be as follows unless otherwise indicated and shall be from centre line of outlet box to finished floor:
  - 2.5.13.1. Duplex receptacles shall be mounted 300mm above finished floor or 150mm above counter top.
  - 2.5.13.2.Light switches shall be mounted at no less than 900mm and no more than 1100mm above finished floor.
  - 2.5.13.3.Disconnect switches shall be mounted 1200mm above finished floor.

2.5.13.4.Exit lights shall be mounted 300mm above door trim.

- 2.5.13.5.Emergency lights shall be mounted 2300mm above finished floor, unless otherwise specified or minimum 150mm clearance from ceiling.
- 2.5.13.6.Panelboards shall be mounted 1200mm above finished floor.

# <u>Cover Plates</u>

2.5.14.Cover plates from one manufacturer shall be used throughout the project and supplied for all wiring devices and any pullboxes.

# <u>Equipment Nameplates</u>

2.5.15.Nameplates shall be provided for all pieces of electrical equipment including panelboards, junction boxes, pull boxes, splitters, control panels, disconnect switches and motor starters. Nameplates shall be black laminated rigid plastic with 0.25 inch high white engraved letters. Nameplates shall be fastened to equipment in a conspicuous location on equipment. A list of the exact engraving of nameplates shall be submitted for approval prior to fabrication. Nameplates for disconnect switches shall indicate name of equipment being controlled and circuit and panel from which they are fed.

## Part 4 — Lighting Equipment

#### <u>Luminaires</u>

4.1. Locate and install luminaires as indicated on contract drawings and connect luminaires to lighting circuits.

# Lighting Control 4.2. Locate and install lighting control devices as indicated on the

- contract drawings, and in accordance with ASHRAE Standard 90.1—2010, Section 9, Lighting.
- 4.3. Contractor shall provide functional testing of the lighting control system as per Section 9.4.4. (Functional Testing), of ASHRAE Standard 90.1—2010.
  - 4.3.1. Lighting control devices and control systems shall be tested to ensure that control hardware and software are calibrated, adjusted, programmed, and in proper working condition.
  - 4.3.2. When occupant sensors, time switches, programmable schedule controls, or photosensors are installed, at a minimum, the following procedures shall be performed:

    a. Confirm that the placement, sensitivity, and time—out adjustments for occupancy sensors yield acceptable performance, lights turn off only after space is vacated and do not turn on unless space is occupied.
  - b. Confirm that the time switches and programmable schedule controls are programmed to turn the lights off.
     c. Confirm that photosensor controls reduce electric light levels based on the amount of usable daylight in the space as specified.
  - 4.3.3. The party responsible for the functional testing shall not be directly involved in either the design or construction of the project and shall provide documentation certifying that the installed lighting controls meet or exceed all documented performance criteria. Certification shall be specific enough to verify conformance.

#### <u>Part 7 - Mechanical Equipment</u>

- 7.1. Provide power and connections to all mechanical equipment as detailed on the drawings.
- 7.2. Ensure all equipment is properly protected with disconnect
- 7.3. Confirm with mechanical trade for exact locations of equipment and connection points.
- 7.4. Verify all motor connections for proper phase rotation.

#### <u>Part 8 — Removals</u>

8.1. Contractor shall disconnect and remove all existing electrical devices and equipment, as per the contract documents.

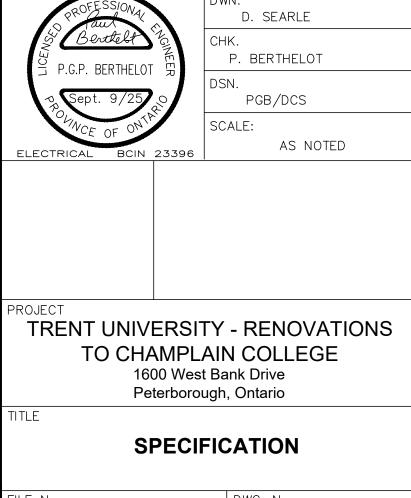
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# BERTHELOT ENGINEERING LTD

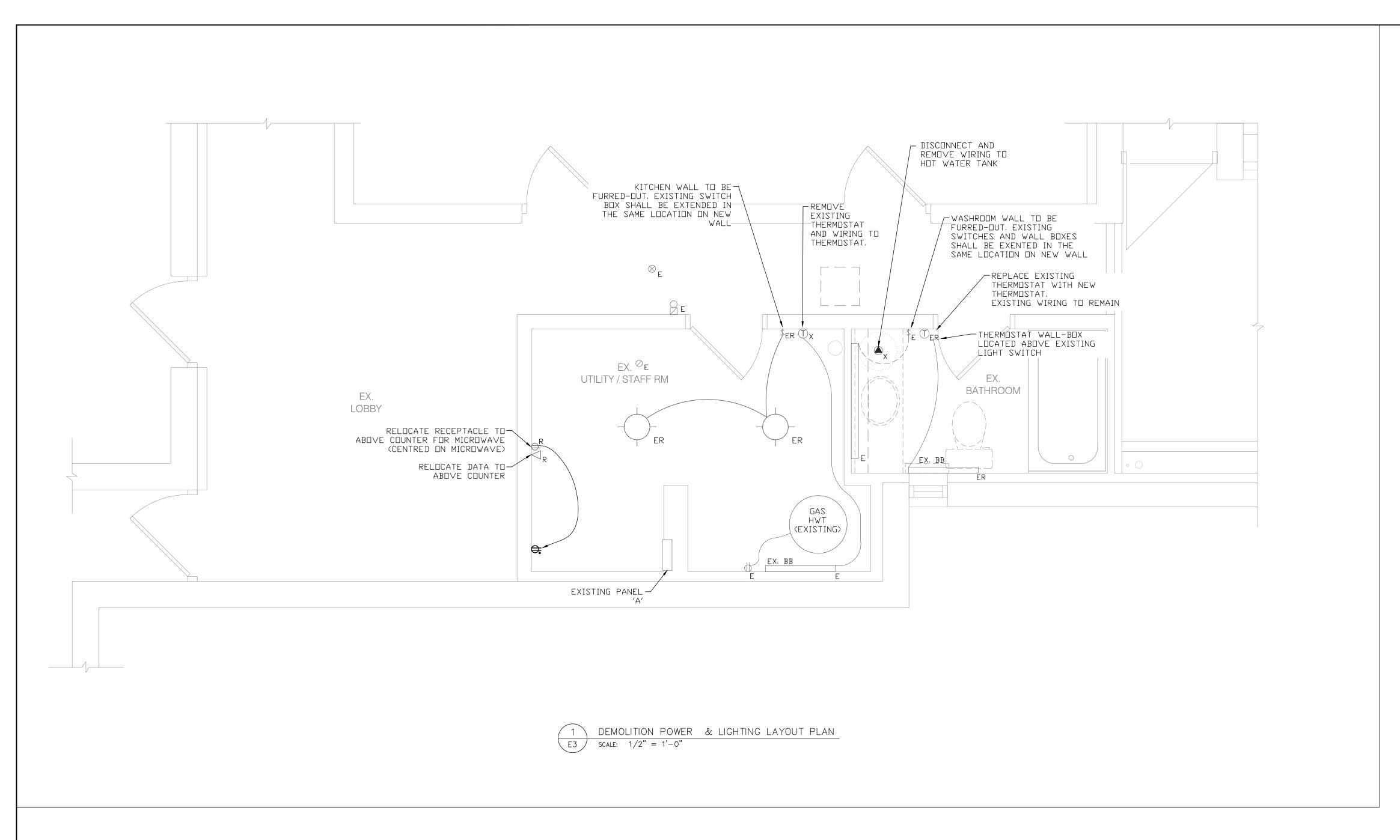
2193 Lynhaven Rd., Tel: (705) 775-1517
Peterborough, ON.
K9K 1W8

Email: pberthelot@bertheloteng.com



FILE No. DWG. No.

 $\mathbf{E}$ 



LIGHTING LEGEND	
E - ER	EXISTING LIGHTS TO REMAIN, OR BE REPLACED AS INDICATED ON THE DRAWINGS
\$	TOGGLE SWITCH
\$ <sub>A</sub>	OCCUPANCY SWITCH
E	EXISTING TO REMAIN
ER	EXISTING TO BE REPLACED

FIRE AL	FIRE ALARM LEGEND			
	EXISTING FIRE ALARM BELL			
$\otimes$	EXISTING SMOKE DETECTOR			
$\bigcirc$	EXISTING RATE OF RISE HEAT DETECTOR			
E	EXISTING TO REMAIN			

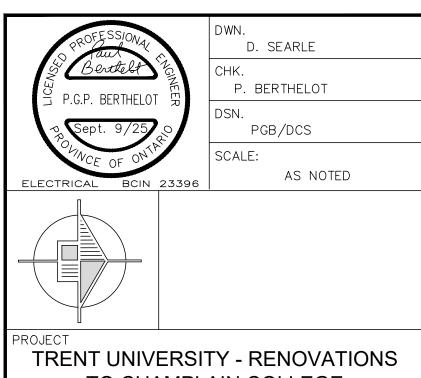
RECEF	PTACLE LEGEND
Ф	RECEPTACLE
•	MOUNTED ABOVE COUNTER
Т	20A T-SLOT
GFI	GROUND FAULT INTERRUPTED
Е	EXISTING EQUIPMENT
R	RELOCATED EQUIPMENT

POV	WER LEGEND
	DIRECT CONNECTION
$\nabla$	DATA OUTLET
$\bigcirc$	THERMOSTAT
E	EXISTING EQUIPMENT
R	RELOCATED EQUIPMENT
ER	EXISTING TO BE REPLACED
Χ	REMOVE EQUIPMENT
	© T E R ER

NOTE: EXISTING ELECTRICAL EQUIPMENT AND LIGHTING TO REMAIN, EXCEPT AS NOTED. DISCONNECT DEVICES SCHEDULED FOR REMOVAL OR RELOCATION. REMOVE EXISTING WIRING AND CONDUIT BACK TO SOURCE, WHERE PRACTICAL, AND MAKE SAFE.

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_	_	_	_	_
0	25/09/09	ISSUED FOR PERMIT	PGB	_
Rev.	Date	Description	Ву	Арр.

# BERTHELOT ENGINEERING LTD 2193 Lynhaven Rd., Tel: (705) 775-1517 Peterborough, ON. K9K 1W8 Email: pberthelot@bertheloteng.com



TRENT UNIVERSITY - RENOVATIONS

TO CHAMPLAIN COLLEGE

1600 West Bank Drive
Peterborough, Ontario

POWER & LIGHTING
DEMOLITION LAYOUT PLAN

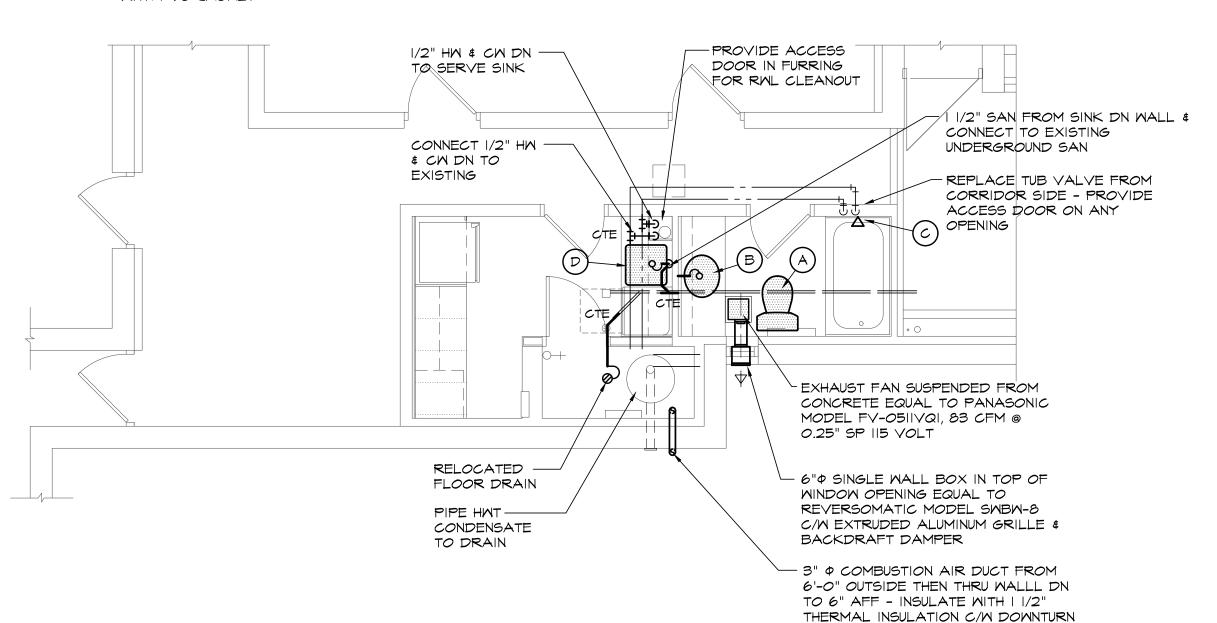
LE No. DWG. No. 765

INSULATION INSULATE ALL HW & CW PIPING WITH I" THERMAL INSULATION \* COVER WITH PVC

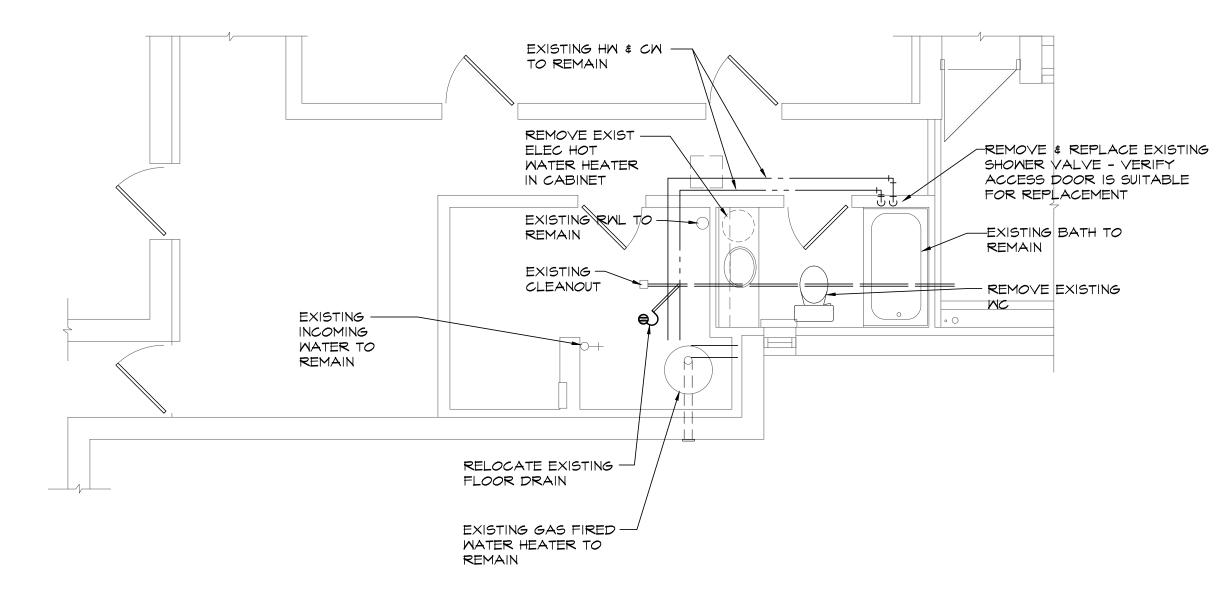
EXHAUST DUCT TO BE INSULATED WITH I 1/2" THERMAL DUCT INSULATION & COVER WITH PVC JACKET

OTHER THAN TUB VALVE REPLACEMENT AVOID DISRUPTING EXISTING WALL FINISHES (ASBESTOS)

WHERE WALL REMOVAL MAY BE REQUIRED FOR TUB VALVE REPLACEMENT PROVIDE ACCESS DOOR IN REQUIED OPENING



YPARTIAL FLOOR PLAN - MECHANICAL



PARTIAL FLOOR PLAN - DEMOLITION

# LEGEND DESCRIPTION SYMBOL EXISTING SANITARY ABOVE GROUND TO REMAIN \_\_\_\_\_ EXISTING SANITARY BELOW GROUND TO REMAIN EXISTING DOMESTIC COLD WATER TO REMAIN EXISTING DOMESTIC HOT WATER TO REMAIN EXISTING PIPING, EQUIPMENT ETC. TO BE REMOVED SANITARY ABOVE GROUND SANITARY BELOW GROUND DOMESTIC COLD WATER DOMESTIC HOT WATER - 60° (140°F) \_\_\_\_\_ SANITARY VENT PLUMBING FIXTURE DESIGNATION CTE CONNECT TO EXISTING

#### GENERAL NOTES

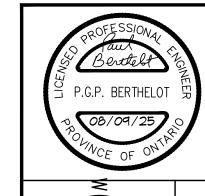
- I. ALL DUCTWORK, PIPING & EQUIPMENT IS NEW UNLESS NOTED AS BEING EXISTING
- 2. VISIT AND EXAMINE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AFFECTING WORK. NO ALLOWANCES WILL BE MADE BY THE OWNER FOR DIFFICULTIES ENCOUNTERED IN THE WORK ARISING OUT OF CONDITIONS EXISTING AT THE TIME OF TENDERING.
- 3. CONDITIONS SHOWN ON PLANS ARE RELATIVE TO THE WORK TO BE PERFORMED. DRAWINGS ARE BASED ON THE BEST INFORMATION AVAILABLE BUT ARE SUBJECT TO VERIFICATION. VERIFY EXACT LOCATION AND ELEVATION OF ALL SERVICES PRIOR TO COMMENCING ANY WORK, FAILURE TO TO PERFORM SUCH VERIFICATIONS WHICH CAUSE DEFICIENCIES SHALL BE CORRECTED AT NO EXPENSE TO OWNER
- 4. CO-ORDINATE INSTALLATION OF DUCTWORK, PIPING, EQUIPMENT ETC. WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL & FIRE PROTECTION TRADES PRIOR TO INSTALLATION

0	08/09/25	ISSUED FOR PERMIT/TENDER	SMS	
Rev.	Date	Description	Ву	Арр.

# BERTHELOT ENGINEERING LTD 2193 Lynhaven Rd., Tel: (705) 775-1517

Peterborough, ON. K9K 1W8

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S.STRANAGHAN SMS S.STRANAGHAN AS NOTED

TRENT UNIVERSITY

1600 WEST BANK DRIVE

PARTIAL FLOOR PLANS - MECHANICAL

765M01

#### PLUMBING FIXTURE SCHEDULE APPROVED ALTERNATES: CRANE, MAAX, MOEN, MIROLIN, KHOLER COLD DESCRIPTION DRAIN VENT FIXTURE MAKE & MODEL TRIM MAKE & MODEL REMARKS MATER | MATER | MATER C/W FLEXIBLE SUPPLIES & ESCUTCHEONS AMERICAN STANDARD "CADET PRO" 215CA.154 CENTOCO 820STS.OOI HEAVY DUTY, OPEN FRONT WITH A WATER CLOSET ΕX EX ΕX COVER FOR ELONGATED BOWL. - STAINLESS STEEL FLOOR MTD VITREOUS CHINA, ELONGATED , 54 mm (2 CHECK HINGES, METAL WASHERS & STAINLESS STEEL 1/8") GLAZED TRAPWAY , LINED FLUSH TANK, 4.8 L POSTS AND NUTS (1.07 GAL) FLUSH, CHROME FINISH HANDLE DELTA 22C451, SINGLE HANDLE, CAST BRASS, CHROME | C/W FLEXIBLE SUPPLIES & ESCUTCHEONS, CONTRACTOR TO VERIFY AMERICAN STANDARD " AQUALYN" 0476.028, B LAVATORY - COUNTER ΕX EX PLATED, 3 1/2" (89 mm) LEVER HANDLE, VANDAL EXISTING HW FROM BUILDING SYSTEM EXISTS AFTER SMALL WATER VITREOUS CHINA, COUNTER MOUNTED, FAUCET LEDGE, HEATER REMOVAL RESISTANT AERATOR, I.9 L/MIN (0.5 GPM), OPEN GRID FRONT OVER FLOW, 102mm (4") CENTRES. STRAINER DELTA TI3291, C/W ROUGH IN VALVE BODY RIOOOO EXISTING TUB TO REMAIN C BATH ΕX ΕX ΕX SERIES, PRESSURE BALANCING VALVE, SHOWER ONLY LEVER METAL HANDLE, MAX 120 DEG ROTATION, 2 GPM SHOWER HEAD, CHROME PLATED ELBOW & ESCUTCHEON DELTA IOOLF-HDF SINGLE HANDLE DECK FAUCET, ALL | C/W FLEXIBLE SUPPLIES & ESCUTCHEONS, PROVIDE I/2" VALVED FRANKE LBS6408, SINGLE BOWL, LEDGE BACK, 20 1/2" 1/2" 1 1/2" 1 1/4" D SINK - I COMP. METAL BODY, 221mm (8 11/16") LONG SWING SPOUT., 8" HW & DRAIN CONNECTION FOR DISHWASHER GUAGE, 18-8 STAINLESS STEEL, EXPOSED FINISHED ARE SATIN FINISHED, 204mm (8") CENTRESET, 89mm (3 CENTRES, CERAMIC CARTRIDGE, 5/7 L/min (1.5 GPM), 1/2") BASKET STRAINER - 460mm(18 1/8")×478mm (18

AND INSECT SCREEN ON EXTERIOR

APPROVED ALTERNATES: ZURN, KHOLER, MOEN, KHOLER

# GENERAL SPECIFICATION

- I PROVIDE ALL EQUIPMENT, MATERIALS, LABOUR AND SERVICES, ETC. NECESSARY TO COMPLETE THE WORK. ALL MATERIALS AND EQUIPMENT USED ARE TO BE NEW AND ARE TO HAVE C.S.A. APPROVAL. MATERIALS AND EQUIPMENT ARE SPECIFIED BY NAME TO ESTABLISH A STANDARD OF QUALITY AND WORKMANSHIP. USE ONLY SPECIFIED EQUIPMENT OR ALTERNATES NOTED.
- .2 VISIT AND EXAMINE THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AFFECTING THE WORK, PRIOR TO SUBMITTING TENDER. NO ALLOWANCES IN COST WILL BE MADE BY THE OWNER FOR ANY DIFFICULTIES ENCOUNTERED IN THE WORK ARISING OUT OF CONDITIONS EXISTING AT THE TIME OF TENDERING.
- .3 OBEY ALL APPLICABLE CODES AND REGULATIONS OF ALL GOVERNING AUTHORITIES HAVING JURISDICTION OVER THE WORK.
- .4 WHERE THE SUPPLY OF AN ITEM IS SPECIFIED GENERALLY ONLY WITHOUT EXTENSIVE DETAIL. THIS IMPLIES THE ITEM AND/OR WORK SHALL CONFORM WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITY AND/OR MANUFACTURER'S RECOMMENDATIONS.
- .5 CONFORM TO THE BEST PRACTICES APPLICABLE TO THIS TYPE OF WORK. INSTALL ALL EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION BUT CONSISTENT WITH THE GENERAL REQUIREMENTS OF THIS SPECIFICATION.
- .6 ARRANGE AND PAY FOR ALL PERMITS, INSPECTION FEES, CERTIFICATES, ETC. CONNECTED WITH THE WORK.
- .7 OBTAIN FROM THE CONSULTANT TWO EXTRA SETS OF WHITE PRINTS ON WHICH TO NOTE AND CLEARLY MARK ANY APPROVAL DEVIATIONS FROM THE WORK SHOWN ON THE PLANS AS THE JOB PROGRESSES. THESE SETS OF PRINTS SHALL BE KEPT UP TO DATA AND RETURNED TO THE OWNER FOR RECORD PURPOSES AT THE COMPLETION OF THE JOB.
- .8 PERFORM ALL TESTS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION, SUPPLYING THEREFORE ALL NECESSARY EQUIPMENT AND LABOUR.

.9 GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR. IT SHALL BE UNDERSTOOD THAT IF

ANY DEFECTS BECOME EVIDENT WITHIN THE GUARANTEE PERIOD, ALL NECESSARY REPAIRS

- AND REPLACEMENTS TO THE WORK SHALL BE MADE WITHOUT COST TO THE OWNER. ALSO PAY FOR MAKING GOOD ANY OTHER WORK DAMAGED THROUGH DEFECTS IN THE WORK OF THIS CONTRACT DURING BOTH CONSTRUCTION AND GUARANTEE PERIODS.
- .IO PROVIDE HANGERS FOR ALL PIPES AND DUCTS AND AVOID ANY DIRECT CONTACT OF DISSIMILAR METALS. SPACE HANGERS TO PREVENT SAGGING OR LOADING JOINTS.
- .II HANGERS SHALL ONLY BE SUSPENDED FROM STRUCTURAL BEARINGS SUCH AS STEEL BEAMS OR TOP CHORD OF JOISTS. WHERE SUCH BEARINGS DO NOT EXISTS, USE NECESSARY
- .12 PROVIDE SUPPORTS FOR EQUIPMENT INSTALLED IN THIS CONTRACT, INCLUDING HANGER RODS AND SPRING VIBRATION ISOLATORS.

- .13 PROVIDE MOTORS AND DRIVES FOR ALL POWERED EQUIPMENT OF CANADIAN MAKE AND LOCALLY SERVICEABLE MANUFACTURE.
- .14 SUBMIT I ELECTRONIC (PDF) COPY OF SHOP DRAWINGS OF EACH PIECE OF MANUFACTURED EQUIPMENT TO CONSULTANT FOR REVIEW.
- .15 RUN IN ADJUST AND BALANCE THE SYSTEMS FOR PROPER OPERATION.
- .16 ALL EQUIPMENT, PIPING, DUCTWORK, ETC. IS NEW UNLESS NOTED AS BEING EXISTING. .17 VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING SERVICES PRIOR TO
- .18 MAINTAIN ALL NECESSARY INSURANCE TO PROTECT THE OWNER AND ALL TRADES FROM ALL POSSIBLE CLAIMS DURING THE CONSTRUCTION PERIOD.
- .19 DO ALL NECESSARY REQUIRED CUTTING AND PATCHING AS MAY BE REQUIRED TO PERFORM THE WORKS OF THIS CONTRACT. CUTTINGS SHALL BE KEPT TO A MINIMUM, AND SHALL BE PERFORMED WITH CLEAN CUT STRAIGHT EDGES. PATCHING SHALL BE NEAT AND CLEAN AND RESTORE TO ORIGINAL FINISH CONDITIONS USING SIMILAR TYPES TO MATERIALS. USE
- .20 UPON COMPLETION, REMOVE ALL WASTES, MATERIAL, ETC. AND LEAVE SITE IN CLEAN CONDITION.

ONLY TRADES PERSONNEL SKILLED IN THE VARIOUS TYPES OF WORK REQUIRED (ie.

# PLUMBING & DRAINAGE

COMMENCING ANY WORK.

MASONS, ROOFERS, ETC.).

| 13/16")x203mm(8") DEEP

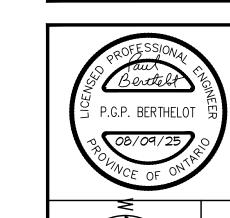
- I SANITARY DRAINAGE AND VENT PIPING ABOVE FLOOR SHALL BE PVC DWV CERTIFIED TO CSABIBI.Z. OR TYPE DMV HARD DRAWN COPPER TUBE WITH CAST BRASS SOLDER FITTINGS (USE 95/5 SOLDER), UP TO 63mm (2-1/2") COPPER OVERCAST IRON. NO NON APPROVED PVC TO BE LOCATED IN RETURN AIR CEILING SPACE.
- .2 SANITARY DRAINAGE AND VENT PIPING IN PLENUM SPACE SHALL BE CERTIFIED TO CSA BIBI.2 AND TESTED AND LISTED IN ACCORDANCE WITH CAN/ULC SIO2.2 AND CLEARLY MARKED WITH CERTIFICATION LOGO INDICATING FLAME SPREAD RATING NOT MORE THAN 25 AND SMOKE-DEVELOPED CLASSIFICATION NOT EXCEEDING 50. PIPING EQUAL TO IPEX SYSTEM XFR 15-50 DWV
- .3 SANITARY DRAINAGE AND VENT PIPING BELOW FLOOR SHALL BE ABS-DWV PIPING WITH SOLVENT WELD JOINTS FOR SIZES UP TO 75mm (3"). FOR SIZES 4" AND LARGER USE PVC PIPING WITH RING TITE COUPLINGS TO CSAI82.1 (DR35 OR 28).
- .4 HOT AND COLD WATER PIPING SHALL BE TYPE 'L' HARD DRAWN COPPER TUBE WITH WROUGHT COPPER SOLDER FITTINGS (USE 95/5 SOLDER).
- .5 DOMESTIC WATER PIPING BELOW FLOOR SHALL BE TYPE 'K' SOFT DRAWN COPPER TUBE WITH BRONZE FLARE FITTINGS FOR SIZES UP TO 50mm (2").

# PLUMBING INSTALLATION

- PROVIDE A COMPLETE DOMESTIC HOT AND COLD WATER DRAINAGE AND VENT TO SERVE FIXTURES AND ITEMS SPECIFIED AND SHOWN ON PLANS. INSTALL AS PER OBC PART 7 AND AUTHORITY HAVING JURISDICTION.
- .2 ROUTE ABOVE GROUND PIPING IN CEILING SPACE OR WALL INTERIORS FOR CONCEALMENT WHERE EVER POSSIBLE UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS. CO-ORDINATE PIPE INSTALLATION IN WALLS WITH MASON AND OR DRYWALLER OR APPROPRIATE TRADE INVOLVED
- .4 INSTALL ISOLATION VALVES IN EACH BRANCH LINES FROM MAINS AND AT BASE OF EACH RISER. PROVIDE A FIRE RATED ACCESS DOOR AT EACH CONCEALED VALVE.
- .5 INSTALL PIPING STRAIGHT PARALLEL AND CLOSE TO WALLS AND CEILINGS, WITH APPROPRIATE PITCH. USE STANDARD FITTINGS FOR DIRECTION CHANGES.
- .6 INSTALL FLANGES OR UNIONS TO PERMIT REMOVAL OF EQUIPMENT WITHOUT DISTURBING
- PROVIDE COMPLETE DRAINAGE AND VENT SYSTEMS TO SERVE FIXTURES AND ITEMS SPECIFIED AND AS SHOWN ON PLANS.
- .8 INSTALL PIPING PASSING THROUGH FIRE SEPARATIONS WITH NON-COMBUSTIBLE MATERIAL ONE SIDE OF SEPARATION OR PROVIDE APPROVED FIRE STOPPING DEVICE
- .9 WHERE EXPOSED PIPES PASSES THROUGH FINISHED FLOORS, WALLS OR CEILINGS, PROVIDE CHROME PLATED ESCUTCHEON WITH SET SCREW.
- .IO GRADE HORIZONTAL DRAINAGE AND VENT PIPING LARGER THAN 75mm (3") AT I.0% OR AS NOTED ON DRAWINGS AND SLOPE 75mm (3") AND SMALLER AT 2.0 % MIN
- WHEN PIPE LAYING NOT IN PROGRESS, CLOSE OFF OPEN ENDS OF PIPE WITH WATER TIGHT PLUG OR CAP.
- .12 INSTALL CLEANOUTS AS PER THE PLUMBING CODE AND/OR AS SHOWN ON DRAWINGS. ENSURE CLEAN OUTS ARE MADE ACCESSIBLE. WHERE PIPING RUNS CONCEALED IN WALL INSTALL EXTENDED TYPE CLEANOUTS WHERE NECESSARY SO THAT COVER IS LOCATED ON EXPOSED WALL SURFACE.
- .13 INSTALL FLOOR DRAINS SO THAT STRAINER IS FLUSH WITH FINISHED FLOOR AND WITH TRAP PRIMER PIPED TO NEAREST PLUMBING FIXTURE WATER SUPPLY.

# INSTALLATION OF PLUMBING FIXTURES

- I CONNECT FIXTURES COMPLETE WITH SUPPLIES AND DRAINS, TRAPPED, SUPPORTED, SANITARY LEVEL AND SQUARE WITH HOT WATER FAUCETS ON THE LEFT.
- .2 PROVIDE CHROME PLATED FLEXIBLE SUPPLIES TO FIXTURES WITH SCREWDRIVER STOPS, REDUCERS AND ESCUTCHEONS.
- .3 PROVIDE CHROME PLATED TRAPS & PIPING EXPOSED TO VEIW UNDER LAVATORIES



- RENOVATIONS TO CHAMPLAIN COLLEGE

PETERBOROUGH, ONTARIO

ILE No. DWG. No.