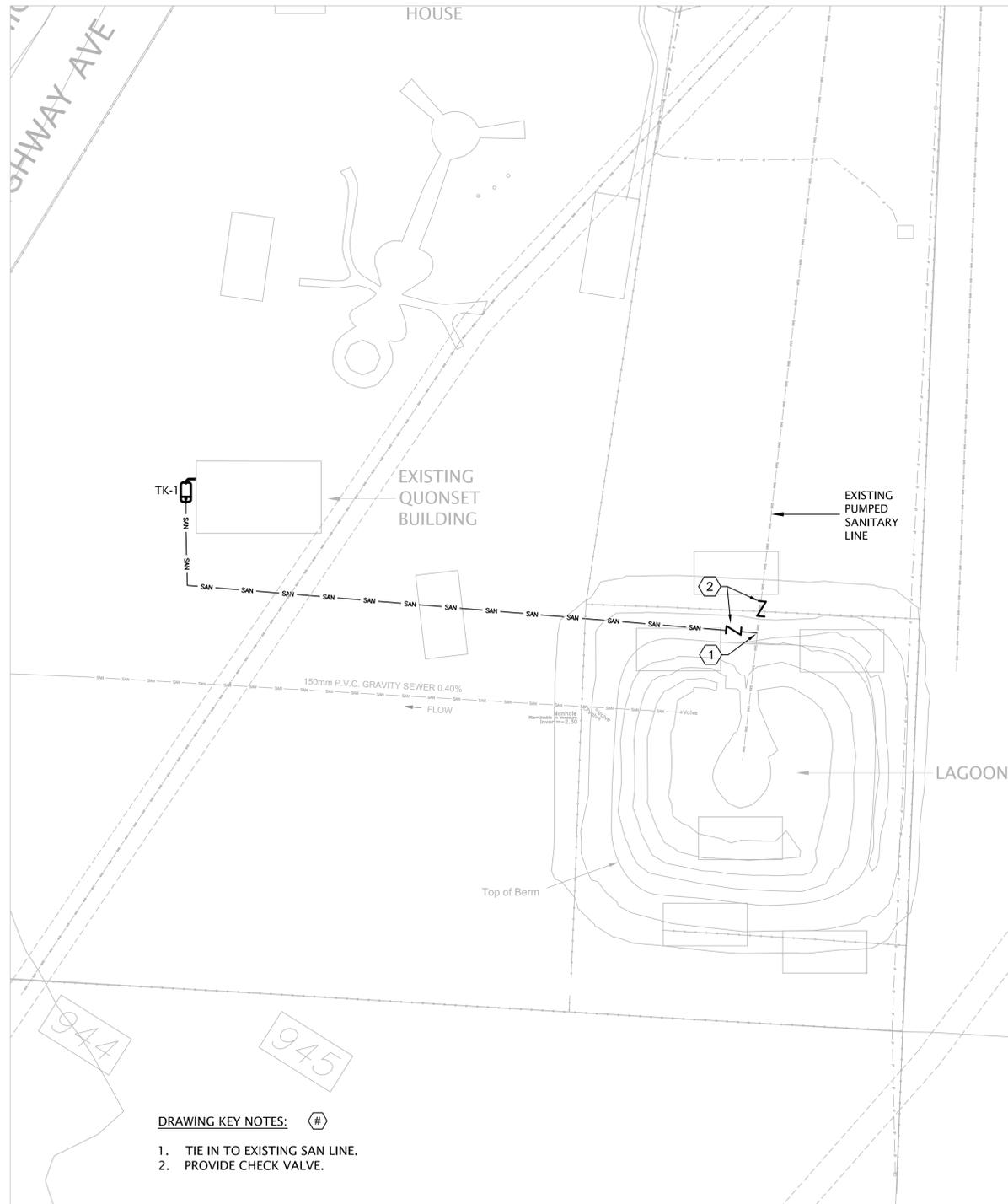


MECHANICAL SPECIFICATIONS

1. GENERAL
  - 1.1. ALL WORK SHOWN OR IMPLIED ON THESE DRAWINGS SHALL BE CARRIED OUT IN ACCORDANCE WITH:
    - 1.1.1. ALBERTA BUILDING CODE (ABC) 2006
    - 1.1.2. PLUMBING CODE OF CANADA 2010
    - 1.1.3. CAN/CSA-B125-05 PLUMBING FITTINGS.
    - 1.1.4. LOCAL AUTHORITY HAVING JURISDICTION.
    - 1.1.5. NFPA 10-2002 PORTABLE FIRE EXTINGUISHERS.
    - 1.1.6. ULC STANDARDS
  - 1.2. PRIOR TO SUBMITTING TENDERS, EACH TRADE SHALL EXAMINE THE SITE TO DETERMINE THE CONDITIONS WHICH MAY AFFECT THE PROPOSED WORK. NO CLAIM FOR EXTRA PAYMENT WILL BE CONSIDERED BECAUSE OF FAILURE TO FULFILL THIS CONDITION. START OF WORK WILL BE DEEMED EVIDENCE OF ACCEPTANCE OF, AND SATISFACTION WITH, EXISTING CONDITIONS.
  - 1.3. THE DRAWINGS SHALL BE CONSIDERED TO SHOW THE GENERAL CHARACTER AND SCOPE OF THE WORK AND NOT THE EXACT DETAILS OF THE INSTALLATION. THE INSTALLATION SHALL BE COMPLETE WITH ALL ACCESSORIES AND SUPPORTS REQUIRED FOR A COMPLETE AND OPERATIVE INSTALLATION. THESE MECHANICAL DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
  - 1.4. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE WORK WITH ALL OTHER TRADES AND THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR COMMUNICATING SAFETY REQUIREMENTS TO ITS EMPLOYEES AND COMPLY WITH OCCUPATIONAL HEALTH AND SAFETY ACT.
  - 1.5. ARRANGE, COORDINATE AND PAY ALL REQUIRED FEES AND PERMITS. SUBMIT DRAWINGS AND SPECIFICATIONS TO ALL AUTHORITIES AND OBTAIN APPROVAL BEFORE COMMENCING ANY WORK. PAY FOR FEES AND CHARGES LEVIED BY THE MUNICIPALITY, UTILITIES AND OTHER GOVERNING AUTHORITY FOR PERMITS, INSPECTIONS AND CERTIFICATES, AND WORK PERFORMED BY THE MUNICIPALITY OR UTILITIES IN CONNECTION WITH THE MECHANICAL WORK. ARRANGE AND COORDINATE SUCH WORK AND OBTAIN PERMITS. KEEP A COPY OF ALL SUCH PERMITS AND CERTIFICATES ON THE JOB SITE DURING THE PROJECT DURATION.
  - 1.6. WORKMANSHIP AND MATERIALS SHALL MATCH OR EXCEED THAT OF THE EXISTING.
  - 1.7. ALL WORK TO BE CONDUCTED DURING HOURS SPECIFIED BY THE PROJECT MANAGER. NO DISRUPTION TO BUILDING OPERATIONS WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE OWNER. ALL CHANGES AND CONNECTIONS TO EXISTING SERVICES, REQUIRING THE SHUTDOWN OF THAT SERVICE SHALL BE DONE AT A TIME DESIGNATED BY THE PROJECT MANAGER. ALLOW FOR PREMIUM TIME NEEDED.
  - 1.8. CAREFULLY REMOVE EQUIPMENT TO BE REUSED OR HANDED OVER TO THE OWNER. STORE EQUIPMENT FOR RE-INSTALLATION. RELOCATE ANY PIPING, DUCTWORK, OR EQUIPMENT INTERFERING WITH NEW CONSTRUCTION.
  - 1.9. THE CONTRACTOR SHALL AT ALL TIMES KEEP PREMISES FREE FROM THE ACCUMULATION OF WASTE MATERIAL TO THE SATISFACTION OF THE PROJECT MANAGER. THE CLEANING OF THE AFFECTED AREA SHALL BE CONTINUOUS. PLACE DUST PROTECTION IN THE FORM OF COVER SHEETS OVER EQUIPMENT AND FURNITURE TO ENSURE NO DUST INFILTRATION.
  - 1.10. MANUFACTURER'S INSTRUCTIONS REGARDING THE HANDLING, INSTALLATION AND TESTING OF EQUIPMENT SPECIFIED HEREIN SHALL BE CONSIDERED PART OF THIS SPECIFICATION.
  - 1.11. SUPPLY TOOLS, EQUIPMENT AND PERSONNEL TO DEMONSTRATE AND INSTRUCT OPERATING AND MAINTENANCE PERSONNEL IN OPERATING, CONTROLLING, ADJUSTING, TROUBLESHOOTING AND SERVICING OF ALL SYSTEMS AND EQUIPMENT DURING REGULAR WORK HOURS, PRIOR TO ACCEPTANCE.
  - 1.12. MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY FOR HOISTING OF MECHANICAL EQUIPMENT. COORDINATE HOISTING SCHEDULE WITH PROJECT MANAGER. ARRANGE AND PAY FOR ANY REQUIRED PERMITS.
  - 1.13. INSPECT ALL EQUIPMENT UPON DELIVERY AND NOTIFY PROJECT ENGINEER OF ANY DAMAGE OR DEFICIENCIES.
  - 1.14. SUBMIT ONE (1) COPY OF SHOP DRAWINGS AND PRODUCT DATA IN ELECTRONIC PDF FORMAT OF ALL SPECIFIED EQUIPMENT & SYSTEMS. HARD COPY SHOP DRAWINGS WILL NOT BE ACCEPTED. CERTIFY THAT SHOP DRAWINGS HAVE BEEN REVIEWED BY GENERAL CONTRACTOR PRIOR TO SUBMITTING TO CONSULTANT FOR REVIEW. REVIEWED ELECTRONIC SHOP DRAWINGS WILL BE RE-DISTRIBUTED AS PER PROJECT MANAGER'S INSTRUCTIONS.
  - 1.15. ALL EQUIPMENT, PIPING, DUCTWORK AND WIRING SHALL BE RUN AT RIGHT ANGLES TO AND BE SUSPENDED FROM THE BUILDING STRUCTURE.
  - 1.16. PROVIDE BLACK WITH WHITE WRITING LAMACOID PLATE ON ALL NEW EQUIPMENT. LABEL UNIT AS SHOWN ON DRAWINGS. LETTERING SIZE TO BE MINIMUM 25MM HIGH. MOUNT NEAR CONTROL SECTION OF THE UNIT.
  - 1.17. PROVIDE CUTTING, PATCHING AND CORING OF ALL WALLS, CEILING AND OTHER SURFACES AS REQUIRED FOR MECHANICAL WORK. OBTAIN WRITTEN VERIFICATION OF LOCATIONS FROM THE ENGINEER PRIOR TO CUTTING. ALL ROOFING WORK FOR MECHANICAL EQUIPMENT TO BE UNDERTAKEN BY QUALIFIED ROOFING CONTRACTORS UNDER THIS SECTION.
  - 1.18. INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS WITH ADEQUATE ACCESS.
  - 1.19. PIPING LAYOUT ILLUSTRATED ON DRAWINGS INDICATES GENERAL ROUTING OF PIPE WORK AND DOES NOT SHOW ALL FITTINGS AND OFFSETS REQUIRED FOR COMPLETE INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING FITTINGS & OFFSETS REQUIRED FOR COORDINATED INSTALLATION WITH OTHER SYSTEMS (DUCTWORK, PIPING, CONDUITS, LIGHTS, ETC.).
  - 1.20. CONTRACTOR SHALL BE RESPONSIBLE FOR DEACTIVATION, DRAINING, REFILLING AND REACTIVATING OF OPERATIONAL SYSTEMS. COORDINATE WITH OWNER AND ENSURE THAT NO UNDUDE DISRUPTION OF BUILDING OPERATIONS OCCUR.
  - 1.21. MAINTAIN A SET OF WHITE PRINTS MARKED UP TO "AS BUILT" CONDITION ON SITE, UPDATED ON AN ONGOING BASIS THROUGHOUT THE COURSE OF THE PROJECT. PURCHASE, FROM THE CONSULTANT, SET OF CADD FILES OF THE MECHANICAL CONTRACT DRAWINGS AND TRANSFER ALL INFORMATION ONTO THE CAD DRAWINGS. HAND OVER 2 SETS OF WHITE PRINTS AND CD WITH CADD FILES SHOWING THE "AS BUILT" CONDITION TO THE CONSULTANT FOR FINAL REVIEW PRIOR TO FINAL INSPECTIONS.
  - 1.22. SUBMIT THREE (3) COPIES OF OPERATION AND MAINTENANCE MANUALS FOR ENGINEER'S APPROVAL.
  - 1.23. WARRANTY PERIOD SHALL BE FOR TWELVE (12) MONTHS AFTER THE DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY ENGINEER.
2. INSULATION
  - 2.1. ALL COMPONENTS OF INSULATION SYSTEM TO BE SUITABLE FOR PLENUM INSTALLATION, HAVING MAXIMUM FLAME SPREAD RATING OF 25 AND MAXIMUM SMOKE DEVELOPED RATING OF 50 IN ACCORDANCE WITH CAN4-S102
  - 2.2. INSULATE DOMESTIC COLD WATER PIPING WITH 1" FIBER GLASS INSULATION WITH FACTORY APPLIED VAPOUR BARRIER JACKED, MOLDED TO CONFORM TO PIPING K VALUE AT 24 C.
  - 2.2. PROVIDE ISOLATING VALVES ON MAIN AND/OR BRANCH LINES AND AT ALL EQUIPMENT OR FIXTURES OR WHERE SHOWN. ALL VALVES SHALL BE SUITABLE FOR THE OPERATING PRESSURE OF THE SYSTEM.
  - 2.3. ALL THE INDOOR SUPPLY DUCT WORK TO BE INSULATED WITH 25mm THICK FIBERGLASS INSULATION.
  - 2.4. OUTDOOR & COMBUSTION AIR DUCT WORKS ARE TO BE INSULATED WITH 50mm OF INSULATION.
  - 2.5. INSULATE EXHAUST DUCTS WITH 25mm INSULATION FOR 3000mm FROM OUTSIDE WALL.
3. PLUMBING
  - 3.1. PROVIDE DIELECTRIC COUPLINGS/UNION UNIONS WHERE DISSIMILAR METALS ARE JOINED.
  - 3.2. PROVIDE ISOLATING VALVES ON MAIN AND/OR BRANCH LINES AND AT ALL EQUIPMENT OR FIXTURES OR WHERE SHOWN. ALL VALVES SHALL BE SUITABLE FOR THE OPERATING PRESSURE OF THE SYSTEM IN WHICH THEY ARE INSTALLED. MAKE AND MODEL SHALL BE AS PER BASE BUILDING STANDARDS AND SPECIFICATIONS UNLESS NOTED OTHERWISE.
  - 3.3. INSTALL ALL ABOVE GRADE PIPING TO ALLOW COMPLETE DRAINAGE.
  - 3.4. DOMESTIC COLD WATER PIPING: COPPER TUBE, HARD DRAWN, TYPE "L" WITH WROUGHT COPPER FITTINGS USING LEAD FREE SOLDER AND PRESSURE TESTED TO PLUMBING CODE.
  - 3.5. BALL VALVES NPS 2 AND UNDER, SCREWED, CLASS 150, BRONZE BODY, STAINLESS STEEL BALL, PTFE TEFLON ADJUSTABLE PACKING, BRASS GLAND AND PTFE TEFLON SEAT, STEEL LEVER HANDLE, CRANE OR APPROVED EQUAL.
  - 3.6. HANGERS AND SUPPORTS SHALL BE OF MANUFACTURED TYPE AND ASSEMBLED AS PER MANUFACTURER'S INSTRUCTIONS. DESIGN HANGERS AND SUPPORTS TO OPERATE UNDER ALL OPERATING CONDITIONS. ALLOW FOR FREE EXPANSION AND CONTRACTION AND PREVENT THE TRANSMISSION OF EXCESSIVE STRESSES INTO PIPE WORK OR CONNECTED EQUIPMENT. PROVIDE FOR VERTICAL ADJUSTMENT AFTER INSTALLATION. DESIGN SHALL BE IN ACCORDANCE WITH ANSI B31.1 AND MSS-SP58. SUPPORT FROM TOP OR BOTTOM OF STRUCTURAL MEMBERS. WHERE STRUCTURAL BEARING DOES NOT EXIST OR INSERTS ARE NOT IN SUITABLE LOCATIONS, PROVIDE SUPPLEMENTARY STRUCTURAL STEEL MEMBERS. PROVIDE ADDITIONAL SUPPORTS AT CHANGES IN PIPE DIRECTION AND FOR CONCENTRATION OF LOADS DUE TO WEIGHT OF VALVES, STRAINERS, ETC. HANGER SPACING: COPPER PIPING UP TO NPS 1/2 EVERY 5 FT, STEEL PIPING EVERY 10'. HANGERS SHALL BE WITHIN 12" OF EACH ELBOW.
  - 3.7. PROVIDE PIPE IDENTIFICATION TO MATCH EXISTING BASE BUILDING STANDARD; IDENTIFY PIPE ON EITHER SIDE OF WALL / SLAB / ROOF PENETRATIONS, AND AT NOT LESS THAN 30' INTERVALS THROUGH LARGE ROOMS.
  - 3.8. SHUT-OFF VALVE: BALL TYPE FOR NPS 2 ID AND SMALLER. BUTTERFLY TYPE FOR 65 MM (2-1/2") AND LARGER.
  - 3.9. PLUMBING FIXTURES TO BE AS DWG M00-02.
4. HEATING, VENTILATION, AND COOLING
  - 4.1. GALVANIZED STEEL DUCT LOCK FORMING QUALITY: TO ASTM A 525M, Z90 ZINC COATING. THICKNESS, FABRICATION, JOINTS AND REINFORCEMENT: TO ASHRAE AND SMACNA. ALL TRANSVERSE JOINTS AND CONNECTIONS SHALL BE SEALED WITH WATER BASED DUCT SEALANT AND TAPE.
  - 4.2. HANGERS: ALL DUCTWORK AND HANGERS SHALL BE FABRICATED IN ACCORDANCE WITH THE LATEST ASHRAE AND SMACNA RECOMMENDATIONS AND STANDARDS.
  - 4.3. IDENTIFICATION DUCTWORK SYSTEMS STENCILED LETTERS 50 MM (2") HIGH. DIRECTIONAL ARROWS 150 MM (6") LONG X 50 MM (2") HIGH. COLORS: BLACK, OR CO-ORDINATED WITH BASE COLOR TO ENSURE STRONG CONTRAST.
5. TESTING, ADJUSTING AND BALANCING
  - 5.1. TEST, ADJUST AND BALANCE NEW DUCTWORK.
  - 5.2. REPORT: PROVIDE REPORT INDICATING AIR VOLUMES AND LOCATION OF TESTING ON A COPY OF CONSTRUCTION DRAWINGS. SUBMIT 3 BOUND COPIES OF TAB REPORTS, COMPLETE WITH INDEX TABS FOR VERIFICATION AND APPROVAL OF ENGINEER.
6. FIRE PROTECTION
  - 6.1. MULTI PURPOSE ABC TYPE DRY CHEMICAL, PRESSURIZED WITH HOSE AND SHUT OFF NOZZLE OR INTEGRAL SHUTOFF NOZZLE AND MOUNTING BRACKET. 10 LB CAPACITY.
7. CONTROLS
  - 7.1. PROVIDE ALL CONTROLS AND WIRING INCLUDING APPURTENANCES NECESSARY FOR COMPLETE AND OPERATING SYSTEM.
8. LIST OF APPROVED MANUFACTURERS
  - 8.1. AIR TERMINALS - GRILLES, REGISTERS, DIFFUSERS: E.H PRICE, TITUS, NAILOR.
  - 8.2. ACCESS DOORS: MAXAM, MILCOR, MIFAB, ACUDOR.
  - 8.3. AIR VENTS: HOFFMAN, MAID-O-MIST, TACO.
  - 8.4. BALANCING AGENTS: KD ENGINEERING, MDT SYSTEMS, WESTERN MECHANICAL SYSTEMS
  - 8.5. DRAINS-FLOOR, CLEANOUTS, PRIMERS: ZURN, ANCON, PPP, J.R-SMITH.
  - 8.6. FANS: BROAN, GREENHECK, ACME, NUTONE, COOK.
  - 8.7. PLUMBING FIXTURES: AMERICAN STANDARDS, KOHLER, CRANE.
  - 8.8. WATER HEATERS: A.O.SMITH, STATE, RUUD-RHEEM, RINNAL.
  - 8.9. FIRE EXTINGUISHERS: FLAG, NFE, WILSON & COUSINS.
  - 8.10. PRESSURE WASHERS: HOTSY.
  - 8.11. AIR HANDLING UNIT: ENGINEERED AIR, SILENT AIR, HAAKON.
  - 8.12. ELECTRIC HEATERS: OULLET, CHROMALOX, STELPRO, QMARK.
  - 8.13. GAS FIRED HEATER: MODINE, REZTOR.
  - 8.14. SEWAGE PUMP: MYERS, BARNES, ZOELLER.



DRAWING KEY NOTES: (#)

1. TIE IN TO EXISTING SAN LINE.
2. PROVIDE CHECK VALVE.

1  
M00-01 PARTIAL MECHANICAL SITE PLAN 2:1

DRAWING LIST

DRAWING NO.	DRAWING NAME
M00-01	MECHANICAL SPECIFICATIONS & DRAWING LIST AND MECHANICAL SITE PLAN
M00-02	MECHANICAL LEGENDS AND SCHEDULES
M00-03	MECHANICAL SCHEDULES
M01-01	MECHANICAL DETAILS
M20-01	MECHANICAL PLUMBING LAYOUT
M50-01	MECHANICAL VENTILATION LAYOUT

DATE	ISSUED FOR	REV
2015-06-01	TENDER	0

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Project Component

Keyplan

North Arrow

Detail Symbol

Symbol not to scale

Consultants

Civil:

Landscape:

Architectural:

Structural:

Mechanical:

Electrical:

Seal(s)

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Project Manager	Drawn
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Project Leader	Checked
D. HIDER	M. ALVIRI
Client	
GOVERNMENT OF CANADA	
Project	
QUONSET FITUP	
Drawing Title	
MECHANICAL SPECIFICATIONS	
Check Scale (may be photo reduced)	
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Project No.	
NCCA-140204	
Drawing No.	
M00-01	

PLOT DATE: June 3, 2015 TIME: 6:25 PM FULL PATH AND FILENAME: C:\D:\TIMSDATA\NCCA\4020A\300-DELIV\99 SHEETS\W00-02.DWG PLOT STYLE TABLE: Ingenium.ctb

### EXHAUST FAN SCHEDULE

TAG	SERVICE	MANUF. AND MODEL ①	AIR FLOW (L/S)	E.S.P. (Pa)	R.P.M.	V/C/P	FLA	HP	W	NOTES
EF-1	WASHROOM, JANITOR ROOM EXHAUST	GREENHECK - CSP-A250	102	62	1000	115/60/1	-	-	83	C/W BACKDRAFT DAMPER
EF-2	CAR WASH EXHAUST	GREENHECK -CW-095-VG	439	75	1722	115/60/1	3.4	1/6	-	C/W ECM MOTOR & REMOTE DIAL SPEED CONTROLLER

### AIR HANDLING UNIT SCHEDULE

TAG	LOCATION	MANUFACTURER ①	MODEL ①	NET COOLING CAPACITY (KW)	SENSIBLE CAPACITY (KW)	HEATING INPUT (KW)	HEATING OUTPUT (KW)	AIR FLOW (L/S)	E.S.P (PA)	V/HZ/P	MCA (AMPS)	NOTES
AHU-1	OUTDOOR SOUTH SIDE	ENGINEERED AIR	FWE92/DJS60	33.66	33.66	175.8	140.6	1652	373.7	208/3/60	61.1	C/W DISCHARGE AIR & ROOM RE-SET

### HEATER SCHEDULE

TAG	SERVICE	MANUFACTURER ①	TYPE	MODEL	HEATING CAPACITY (KW)	RPM	HP	VOLTAGE	ELECTRICAL POWER (KW)	NOTES
UH-1	WASHROOM	OUELLET	OFM ELECTRIC BASEBOARD HEATER	OFM2008	2	-	-	208/1	2	
UH-2	MECHANICAL ROOM	OUELLET	OAS SUSPENDED UNIT HEATER	OASU05008	5	1550	1/30	208/1	5	

### GAS UNIT HEATER SCHEDULE

TAG	SERVICE	MANUFACTURER ①	TYPE	MODEL	HEAT INPUT (KW)	HEAT OUTPUT (KW)	AIR FLOW (L/S)	VOLTAGE	ELEC MOTOR (HP)	ELEC MOTOR (RPM)	NOTES
UH-3	CAR WASH	MODINE	GAS FIRED UNIT HEATER	HDS 30SS0111FBAN	7.5	6	238	115/60/1	1 / 15	1550	DIRECT VENT, SEALED COMBUSTION

### FORCED FLOW UNIT HEATER SCHEDULE

TAG	SERVICE	MANUFACTURER ①	TYPE	MODEL	NET CAPACITY (KW)	CFM	VOLTAGE	NOTES
CUH-1	COORIDOR & SCENT TRAINING AREA	OUELLET	OCA FORCED-AIR CABINET UNIT HEATER	OCAU05038	5	250	208/3	C/W BUILT IN T-STAT
CUH-2	COORIDOR & SCENT TRAINING AREA	OUELLET	OCA FORCED-AIR CABINET UNIT HEATER	OCAU05038	5	250	208/3	C/W BUILT IN T-STAT

### DOMESTIC WATER HEATER SCHEDULE

TAG	MANUF. AND MODEL ①	SOURCE	FIRST HOUR RATING (L/S)	CAPACITY (L)	HEAT INPUT (KW)	NOTES
DWH-1	AO SMITH PROMAX PLUS (GVCT 60)	GAS	109	227.12	15.3	

### HIGH PRESSURE WASHER SCHEDULE

TAG	LOCATION	SERVICE	MANUFACTURER ①	MODEL	MODEL	FLOW (L/S)	HEATING CAPACITY (KW)	PRESSURE (KPA)	ELECTRICAL POWER (HP)	AMP	MOTOR (RPM)	V/HZ/P	NOTES
PW-1	MECHANICAL ROOM	CAR WASH & SCENT TRAINING AREA	HOTSY	942N	HH406R.1	0.303	107	13789.5	5	18	1725	208/60/3	C/W HYDROMETER, DETERGENT DRUM, MACHINE STAND, DRAFT DIVERTER, MOTORIZED DAMPER, GUN WAND, HOSE & HOSE REEL.

### PLUMBING FIXTURE SCHEDULE

FIXTURE	COLD WATER (mm)	HOT WATER (mm)	SANITARY (mm)	MANUFACTURER ①	SPECIFICATIONS
WC-1	10	-	80	AMERICAN STANDARD	WHITE VITREOUS CHINA FLOOR MOUNTED FLOOR OUTLET - CADET FLUSHING SYSTEM WITH POWER WASH RIM SIPHON FLUSHING SYSTEM - TWO PIECES SPEED CONNECT TANK ASSEMBLY - LINED TANK AS CADET PRO ELONGATED MODEL # 215CA.054, HEAVY DUTY FOR ELONGATED BOWL OPEN FRONT WHITE SOLID PLASTIC LESS COVER AS CENTOCO MODEL # 500STSCC.001
LAV-1	10	10	32	AMERICAN STANDARD	WALL HUNG BASIN - VITREOUS CHINA - FRONT OVERFLOW - SELF DRAINING FAUCET LEDGE - CONTOURED BACK AND SIDE SPLASH SHIELD AS LUCERNE 0355.012, CHICAGO FAUCET SINGLE LEVER - CHROME PLATED AS 420-E2805-ABCP.
JAN-1	10	10	40	AMERICAN STANDARD	FLOOR MOUNTED, 2'x2' SERVICE MOP SINK TERRAZZO AS SP-900 CHICAGO FAUCETS WALL MOUNTED TWO HANDEL UTILITY MOP MANUAL FAUCET AS 897-RCF.
SH-1	15	15	40	AMERICAN STANDARD	MAXX 1-PIECE ALLIA SHR-6034 (1500x850x2200) ACRYLIC SHOWER C/W STANDARD FEATURES, 25mm GALVANIZED-BONDERIZED STEEL TILING FLANGE ON THREE SIDES - INTEGRAL CAST BRASS FLOOR DRAIN 50mm WITH S.S. STRAINER - SHOWER DRAIN CASEKET CONNECTION AS PARIAN WDA-3660, CHICAGO FAUCET AS SH-PB1-00-000.

### DRAINS SCHEDULE

TAG	MANUFACTURER ①	MODEL ①	COATING	SIZE		SERVICE	NOTES
				AREA (MM)	PIPE DIAMETER (MM)		
FD-1	WATTS DRAINAGE	FD-200-C-A5-1	EPOXY COATED CAST IRON	127Ø	100Ø	FLOOR DRAIN	MECHANICAL ROOM
FD-2	WATTS DRAINAGE	FD-200-FC	EPOXY COATED CAST IRON	150Ø	100Ø	FLOOR DRAIN	FINISHED AREA

### MECHANICAL DRAWING LEGEND

DESIGNATION	SERVICE	DESIGNATION	SERVICE
	DOMESTIC COLD WATER		PUMP
	DOMESTIC HOT WATER		FAN
	DOMESTIC HOT WATER RETURN		FLOOR DRAIN WITH HINGED GATE
	VENT		FIRE EXTINGUISHER
	SANITARY ABOVE GRADE		PENDANT SPRINKLER
	NATURAL GAS		CONCEALED SPRINKLER
	CLEANOUT TURNED UP THROUGH FLOOR		GAS METER
	CLEANOUT ABOVE GRADE OR FLOOR		WATER METER
	BALANCING VALVE		THERMOSTAT
	PRESSURE REDUCING VALVE		FIRE DAMPER
	BALL VALVE		BALANCING DAMPER
	GATE VALVE		DIFFUSER/GRILLE TYPE SIZE AIRFLOW
	HOSE BIB		UNIT HEATER HORIZONTAL
HR	HOSE REEL		
DH	DUCT HEATER	PW-1	PRESSURE WASHER
CUH	CABINET UNIT HEATER		

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DETAIL#

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Symbol not to scale

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June 1st, 2015

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Ingenium Distribution Inc. (Ingenium Distribution Inc.)  
Ingenium Retail Inc. (Ingenium Retail Inc.)  
Ingenium Wholesale Inc. (Ingenium Wholesale Inc.)  
Ingenium Manufacturing Inc. (Ingenium Manufacturing Inc.)  
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Ingenium Assembly Inc. (Ingenium Assembly Inc.)  
Ingenium Fabrication Inc. (Ingenium Fabrication Inc.)  
Ingenium Welding Inc. (Ingenium Welding Inc.)  
Ingenium Machining Inc. (Ingenium Machining Inc.)  
Ingenium Casting Inc. (Ingenium Casting Inc.)  
Ingenium Forging Inc. (Ingenium Forging Inc.)  
Ingenium Heat Treating Inc. (Ingenium Heat Treating Inc.)  
Ingenium Finishing Inc. (Ingenium Finishing Inc.)  
Ingenium Coating Inc. (Ingenium Coating Inc.)  
Ingenium Packaging Inc. (Ingenium Packaging Inc.)  
Ingenium Labeling Inc. (Ingenium Labeling Inc.)  
Ingenium Marking Inc. (Ingenium Marking Inc.)  
Ingenium Printing Inc. (Ingenium Printing Inc.)  
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PUMP SCHEDULE										
TAG	SERVICE	MANUFACTURER ①	MODEL ①	L/S	HP	VOLTAGE	PHASE	RPM	CONTROL	NOTES
P-1	EFFLUENT	MYERS	WHR5H-11	1.57	1/2	115	1	3450	MANUAL	C/W OUTDOOR PANEL AND FOUR FLOATS

GRILLE AND DIFFUSER SCHEDULE				
TAG	MANUFACTURER ①	MODEL ①	TYPE	NOTES
A	PRICE	LOUVERED FACE SUPPLY (500 SERIES)	300X125/ 520/F/L/A/B12	
B	PRICE	LOUVERED FACE SUPPLY (500 SERIES)	400X150 /520/F/L/A/B12	
C	PRICE	ROUND DIFFUSERS	250/RCDE/B12	
D	PRICE	LOUVERED FACE RETURN (500 SERIES)	450X400/ 530/F/L/A/B12	
E	PRICE	LOUVERED FACE RETURN (500 SERIES)	1000X600/ 530Z/F/L/A/B12	
F	PRICE	LOUVERED FACE RETURN (500 SERIES)	600X400/ 530Z/F/L/A/B12	
G	PRICE	SQUARE CONE DIFFUSER	250/ 600X600/ SCD/3C/B12	
H	PRICE	SQUARE CONE DIFFUSER	150/ 600X600/ SCD/3C/B12	
I	PRICE	EGGCRATE (80 SERIES)	200X150/ 80/F/A/B12	
J	PRICE	EGGCRATE (80 SERIES)	150X150/ 80/F/A/12B	
K	PRICE	EGGCRATE (80 SERIES)	600X500/ 80/F/A/12B	
L	VENTEX	2210 LOUVER	500X500	

SEPTIC TANK SCHEDULE						
TAG	SERVICE	MANUFACTURER ①	MODEL ①	CAPACITY (L)	EFFLUENT CHAMBER (L)	NOTES
TK-1	WASTE WATER	ALBERTA WILBERT SALES	2000 GALLON	5413	1798	OR EQUAL (WESTCAN, TANKS-A-LOT)

KEY NOTES: #

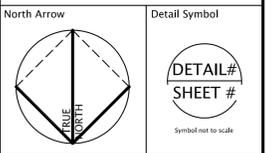
1: MANUFACTURER / MODEL NOTED WAS USED IN THE DESIGN / SIZING OF THE SYSTEM NOTED. ALTERNATIVE MANUFACTURERS / MODELS MAY BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE CONSULTANT.

DATE	ISSUED FOR	REV
2015-06-01	TENDER	0

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Project Component

Keyplan



North Arrow

Detail Symbol

DETAIL#

SHEET #

Symbol not to scale

Consultants

Civil:

Landscape:

Architectural:

Structural:

Mechanical:

Electrical:

Seal(s)



June 1st, 2015

**NORR**

ARCHITECTS ENGINEERS PLANNERS

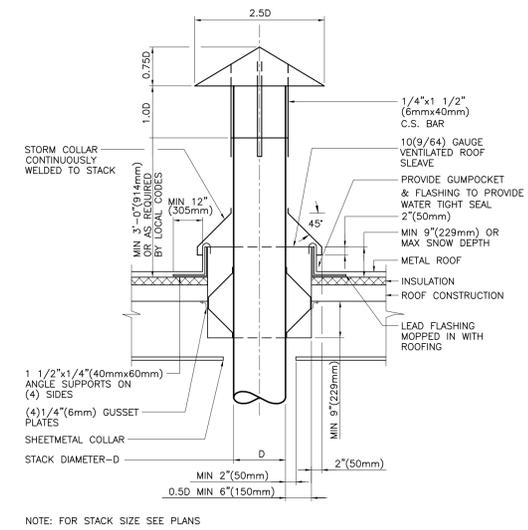
An Ingenium Group Company

221-10 Ave SE,  
Suite 100,  
Calgary, Alberta, Canada T2G 0V9  
www.norr.com

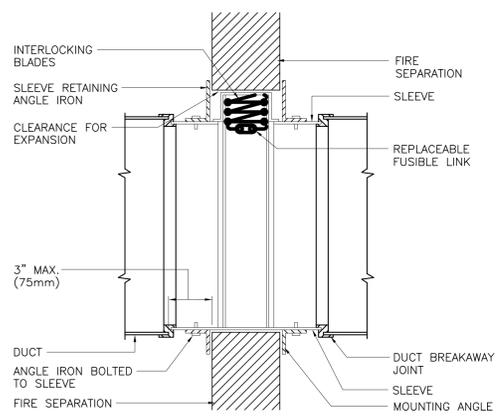
A Partnership of Limited Companies

Victor Smith, Architect, AIA, E.Arch, M.Arch.  
Ronald W. Pugh, Architect, AIA, E.Arch, M.Arch.  
Boris C. Mckoy, Architect, AIA, M.Arch, M.Arch.  
A. Silvio Meloni, Architect, AIA, E.Arch, M.Arch.  
Arlene Todola, P.Eng., AFCEA  
Chris P. King, AFCEA

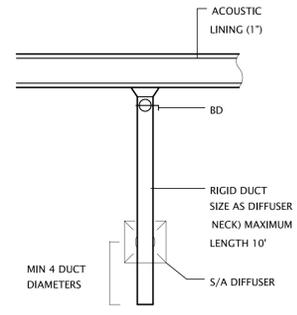
Project Manager A. TODELIA	Drawn N. ALY
Project Leader D. HIDER	Checked M. ALVIRI
Client GOVERNMENT OF CANADA	
Project QUONSET FITUP	
Drawing Title MECHANICAL SCHEDULES	
Check Scale (may be photo reduced) 0 1 inch 0 10mm	
Project No. NCCA-140204	
Drawing No. M00-03	



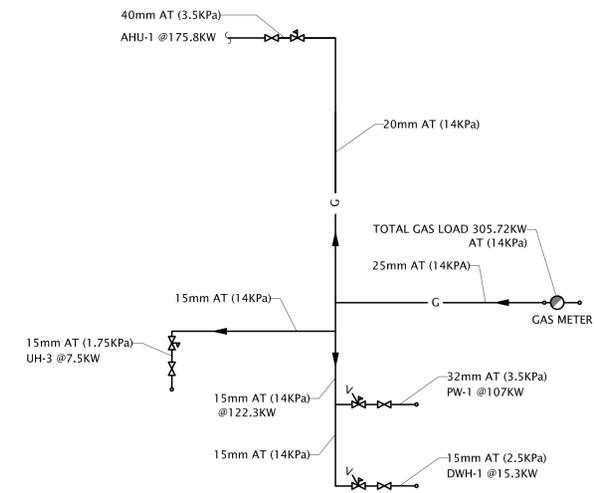
1 FLUE STACK THROUGH ROOF  
M01-01 N.T.S.



2 FIRE DAMPER INSTALLATION  
M01-01 N.T.S.



3 DIFFUSER CONNECTION  
M01-01 N.T.S.



4 GAS PIPING SCHEMATIC  
M01-01 N.T.S.

DATE	ISSUED FOR	REV
2015-06-01	TENDER	0

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Project Component

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North Arrow

Detail Symbol

DETAIL# SHEET #

Symbol not to scale

Consultants

Civil:

Landscape:

Architectural:

Structural:

Mechanical:

Electrical:

Seal(s)

June 1st, 2015

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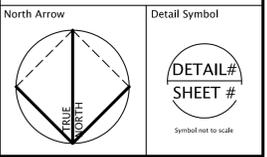
Project Manager A. TODELIA	Drawn N. ALY
Project Leader D. HIDER	Checked M. ALVIRI
Client GOVERNMENT OF CANADA	
Project QUONSET FITUP	
Drawing Title MECHANICAL DETAILS	
Check Scale (may be photo reduced) 0 1 inch 0 10mm	
Project No. NCCA-140204	
Drawing No. M01-01	

PLOT DATE: June 3, 2015 TIME: 6:26 PM FULL PATH AND FILENAME: C:\D:\TIMSDATA\NCCA\140204\300-DELU\99 SHEETS\M01-01.DWG PLOT STYLE TABLE: Ingenium.ctb

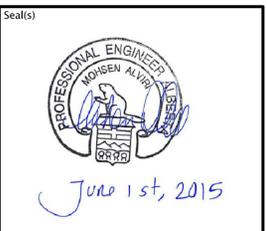
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Project Component  
Keyplan



Consultants  
Civil:  
Landscape:  
Architectural:  
Structural:  
Mechanical:  
Electrical:



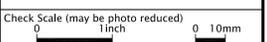
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Chris P. King, A.P.E.C.A.

Project Manager	Drawn
A. TODELIA	N. ALY
Project Leader	Checked
D. HIDER	M. ALVIRI
Client	

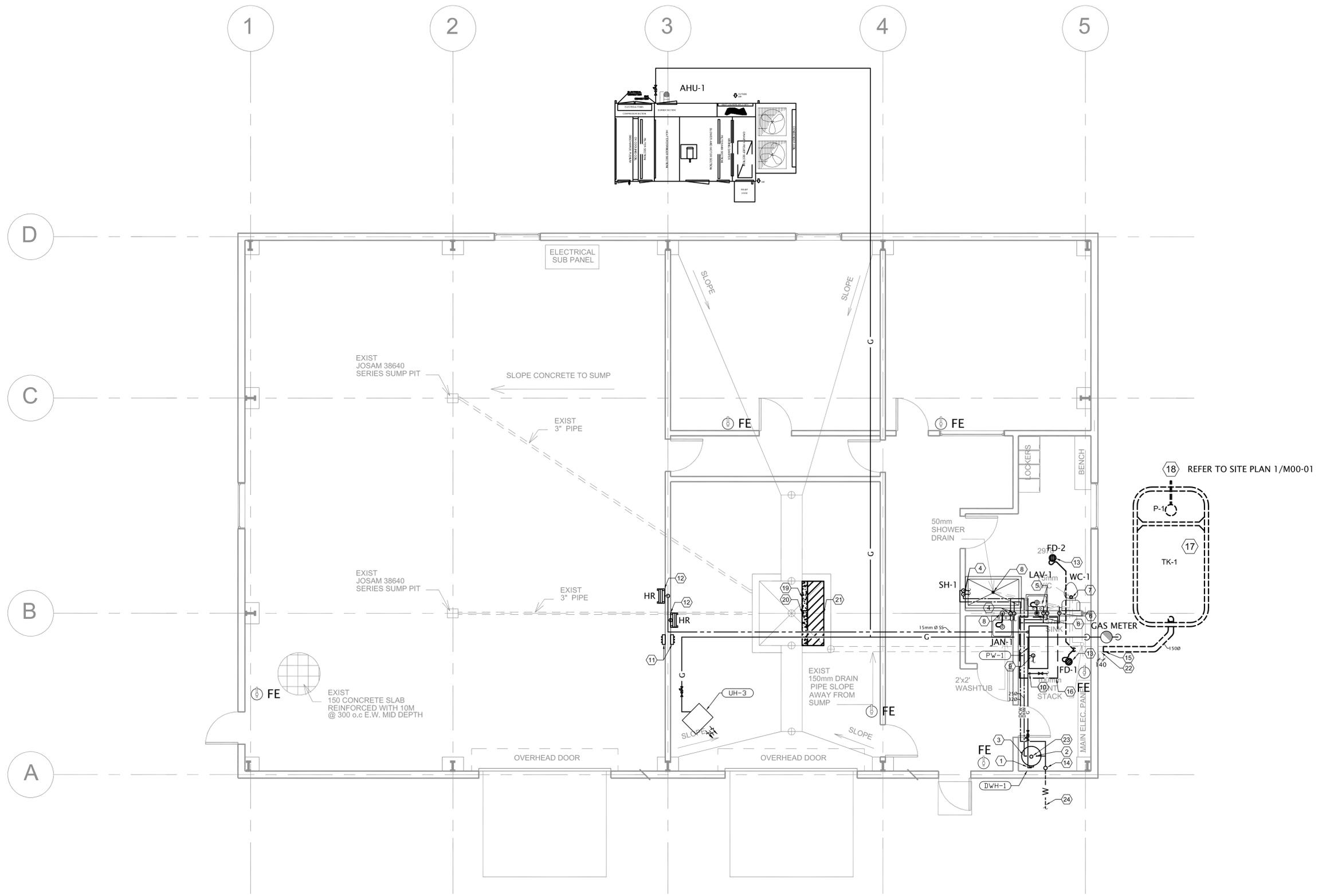
GOVERNMENT OF CANADA

Project  
QUONSET FITUP

Drawing Title  
**MECHANICAL PLUMBING LAYOUT**



Project No.	NCCA-140204
Drawing No.	M20-01



**1 MECHANICAL PLUMBING LAYOUT**  
M20-01 1:50

- GENERAL PLUMBING NOTES:**
- SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE AB BUILDING CODE AND THE LOCAL AUTHORITIES.
  - PROVIDE ALL PLUMBING VENTING AS REQUIRED AND AS PER CODE.
  - COORDINATE AND SLEEVE FOR ALL PLUMBING FIXTURES.
  - CONTRACTOR TO PROVIDE 100mm THICK HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED MECHANICAL EQUIPMENT.

- DRAWING KEY NOTES:**
- 19mmØ GAS LINE TO GAS FIRED DOMESTIC WATER HEATER (DWH-1).
  - 19mmØ DCW LINE TO GAS FIRED DOMESTIC WATER HEATER (DWH-1).
  - 19mmØ DHW LINE FROM GAS FIRED DOMESTIC WATER HEATER (DWH-1).
  - 15mmØ DCW&DHW DOWN.
  - 15mmØ DCW&DHW DOWN.
  - 15mmØ DCW.
  - TIE IN 75mmØ WC DRAIN TO THE NEAREST EXISTING SANITARY PIPE.
  - TIE IN 50mmØ DRAIN TO THE NEAREST EXISTING ROUGH IN SANITARY PIPE.
  - 19mmØ DCW DOWN TO HOTSY.
  - 15mmØ @3.4KPa GAS LINE TO HOTSY
  - HOTSY REMOTE START/SHUTDOWN TIMER CONTROL BOX.
  - WALL MOUNT COX 30480 mm HOSE REEL, GUN, WAND AND NOZZLES.
  - INSTALL NEW FLOOR DRAIN. CONCRETE FLOOR IS TO BE CUT AS REQUIRED.
  - 50mm INCOMING WATER LINE.
  - TIE IN 150mm SANITARY PIPE TO EXISTING UNDERGROUND SANITARY LINE.
  - CONTRACTORS TO COORDINATE WITH HOTSY SUPPLIER ON INSTALLATION DETAIL OF HOTSY, RELATED PIPING & ACCESSORIES.

- FIELD VERIFY SUITABLE LOCATION OF SEPTIC TANK TO SUIT SEWAGE OUTLET FROM BUILDING. TOP OF THE TANK IS TO BE BELOW THE FREEZING DEPTH (MAX. 3 METERS BELOW GRADE).
- 40mm UNDERGROUND POLYETHYLENE PIPE TO THE EXISTING LAGOON, ROUTING TO BE SITE VERIFIED & DETERMINED & COORDINATED WITH THE CLIENT. PIPE IS TO RUN UNDER FREEZING DEPTH. APPROXIMATE DISTANCE OF SANITARY LINE FROM QUONSET BUILDING TO LAGOON IS ESTIMATED @ 130m.
- 150mm CONCRETE WALL REINF. W/15@300 M.L. EW. DRILL & EPOXY HORIZONTAL REINF. INTO EXISTING WALLS USING HILTI RE 500 ADHESIVE SYSTEM.
- PROVIDE TWO 150mm OPENINGS IN THE PARTITION CONCRETE WALL. ONE AT 450mm ABOVE BOTTOM OF THE SUMP & ONE AT 200mm BELOW TOP OF THE PARTITION WALL.
- PROVIDE A SOLID PLATE COVER OVER THE 2ND COMPARTMENT AS CROSS HATCHED.
- EXACT DIMENSION TO BE VERIFIED ON SITE.
- 100mm VENT PIPE UP THROUGH THE ROOF.
- NEW 50mm BURIED WATER LINE FROM 50mm CAPPED WELL WATER MAIN LOCATED NEAR FIRE PUMP HOUSE. (APPROXIMATE DISTANCE 94m).

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