

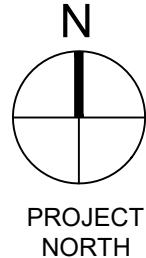
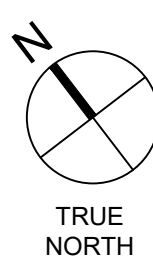
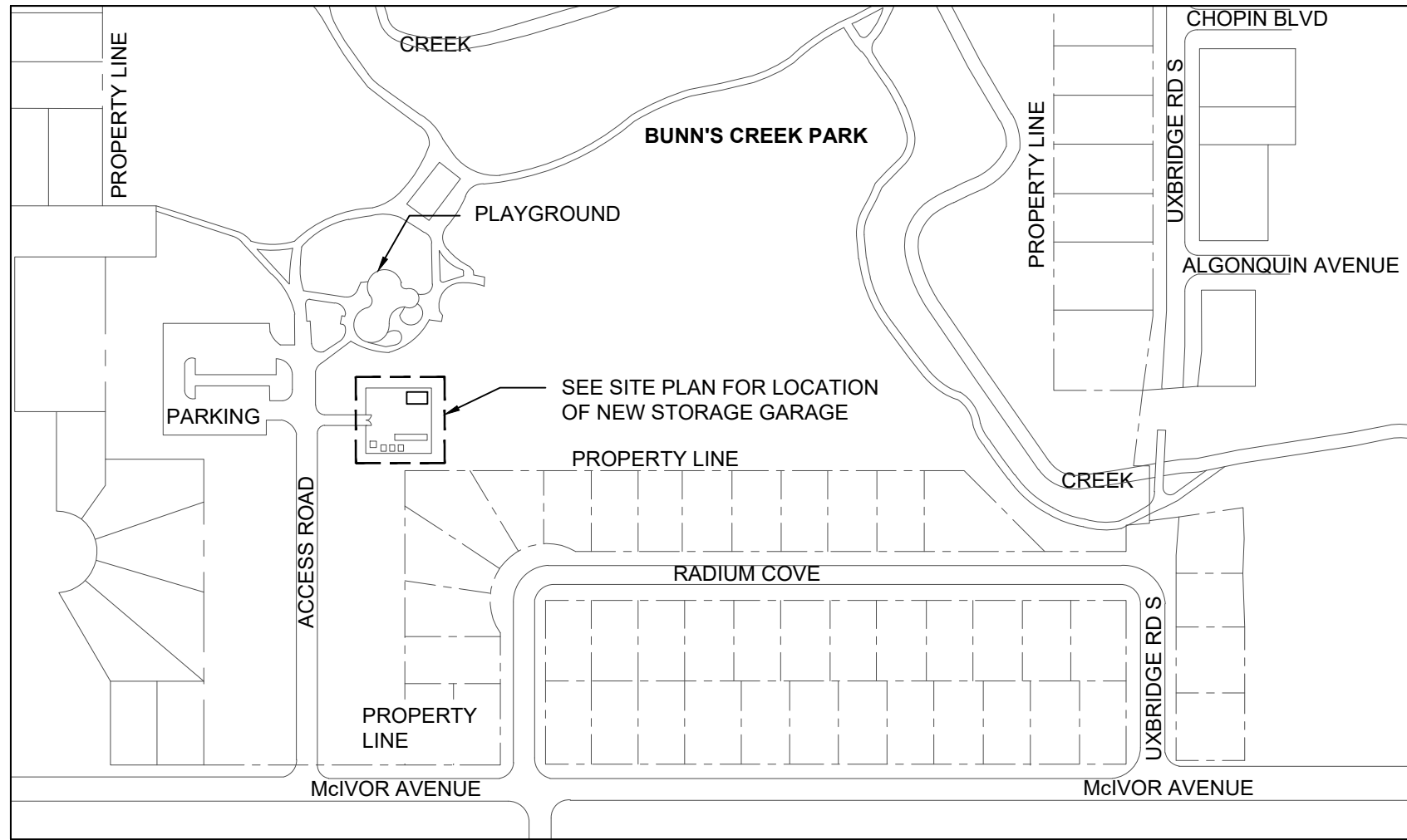
1
M1

MECHANICAL FLOOR PLAN

1/4" = 1' - 0"

MECHANICAL NOTES:

- NEW EXHAUST FAN MOUNTED AT HIGH LEVEL C/W VIBRATION ISOLATOR. FAN CONTROLLED BY SPACE CO/NOX SENSORS.
- NEW 8" EXHAUST DUCT DOWN, EXHAUST OPENING C/W METAL SCREEN 12" ABOVE FLOOR, 340 CFM.
- NEW BACK DRAFT DAMPER.
- NEW 12"x10" EXHAUST HOOD C/W METAL SCREEN.
- NEW 8"Ø EXHAUST OPENING C/W METAL SCREEN AT HIGH LEVEL, 340 CFM.



KEY PLAN

SCALE: NTS

MECHANICAL LEGEND

	MOTORIZED DAMPER
	BACKDRAFT DAMPER
	BALANCE DAMPER
	SUPPLY AIR DUCT UP/DOWN
	RETURN AIR DUCT UP/DOWN
	CO/NO _x SENSOR
	EQUIPMENT DESIGNATION

FAN SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	AIR FLOW CFM	SP in.	MOTOR			NOTE
						V/C/P	NEC FLA (amps)	BHP	
EF-1	GREENHECK	CSP-A700	IN LINE FAN	180	0.5	115/60/1	3.3	0.14	GARAGE EXHAUST FAN

NOTE: EF-1 IS CONTROLLED BY CO/NOX SENSOR
APPROVED EQUAL PRODUCTS: PENN, TWIN CITY, COOK

MECHANICAL SPECIFICATIONS

1.0 GENERAL

- VISIT JOBSITE DURING BID. DRAWINGS INDICATE APPROXIMATE LOCATION OF EXISTING MECHANICAL EQUIPMENT AND SERVICES. VERIFY EXACT LOCATIONS OF EXISTING MECHANICAL EQUIPMENT AND SERVICES AND ALLOW FOR NECESSARY RELOCATING OF NOTED SERVICES (OR RECONNECTION TO EXISTING SERVICES) TO SUIT NEW CONSTRUCTION.
- ALL WORK SHALL CONFORM TO MANITOBA BUILDING CODE AND LOCAL AUTHORITIES. APPLY FOR, OBTAIN AND PAY FOR ALL NECESSARY PERMITS.
- COORDINATE INSTALLATION WITH ALL RELATED TRADES. ARCHITECTURAL DRAWINGS, INTERIOR DESIGN PLANS AND REFLECTED CEILING PLANS. VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING EQUIPMENT AND SERVICES PRIOR TO PROCEEDING WITH WORK.
- SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT TO CONTRACT ADMINISTRATOR.
- PROVIDE ONE-YEAR WARRANTY FOR ALL EQUIPMENT.
- BID QUOTATIONS SHALL BE BASED ON THE USE OF SPECIFIED EQUIPMENT, UNLESS ACCEPTANCE FOR THE USE OF EQUAL MANUFACTURERS IN ACCORDANCE WITH B6 IS OBTAINED FROM THE CONTRACT ADMINISTRATOR PRIOR TO SUBMISSION OF BIDS. ALTERNATE MANUFACTURERS MAY BE QUOTED AS AN INCREASE OR DECREASE AMOUNT TO THE TENDER PRICE, WITHOUT PRIOR ACCEPTANCE OF THE CONTRACT ADMINISTRATOR.
- FURNISH TO THE CITY THREE (3) COMPLETE SETS OF MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT REQUIRING MAINTENANCE. REVIEW INSTRUCTIONS WITH CONTRACT ADMINISTRATOR TO ENSURE A THOROUGH UNDERSTANDING OF THE EQUIPMENT AND ITS OPERATION.
- PROVIDE A MARK-UP OF THE CONTRACT DRAWINGS FOR RECORD "AS-BUILT" DRAWINGS, REVISED AS REQUIRED TO SHOW ANY CHANGES FROM THAT ORIGINALLY SHOWN.
- ALL DUCTWORK AND PIPING TO BE INSTALLED STRAIGHT, PARALLEL TO THE BUILDING WALLS. WHERE DUCTS GO THROUGH AN EXTERIOR ROOF OR WALL, THEY SHOULD BE BOXED-IN, FLASHED AND WATERPROOFED. ALLOW FOR EXPANSION AND CONTRACTION OF PIPE.
- ALL WIRING FOR EQUIPMENT SPECIFIED HEREIN SHALL BE BY THE ELECTRICAL SUBCONTRACTOR, UNLESS OTHERWISE NOTED.
- MECHANICAL SUB-CONTRACTOR SHALL REVIEW ALL EQUIPMENT REQUIRING ELECTRICAL HOOK-UP WITH ELECTRICAL SUBCONTRACTOR AND ELECTRICAL DRAWINGS PRIOR TO ORDERING EQUIPMENT. ENSURE PROPER ELECTRICAL CHARACTERISTICS ARE DETERMINED FOR ALL AFFECTED AND RELATED WORK.

2.0 VENTILATION

- DUCTWORK
 - GALVANIZED IRON SCHEDULE:

MAX. SIZE	Gauges (USSG)	BRACING
UP TO 24"	24	NONE
25 TO 30"	24	1" X 1" X 1/8" ANGLE,
		4" FROM JOINT.
31 TO 40"	22	1" X 1" X 1/8" ANGLE,
		4" FROM JOINT.
ROUND DUCT UP TO 19"	26	NONE
- EXTERIOR DUCTWORK TO BE TWO GAUGES HEAVIER THAN INDICATED IN SCHEDULES NOTED ABOVE. CONSTRUCT DUCT SO THAT TOP OF DUCT SLOPES 1:24 MINIMUM TO ENSURE THAT WATER DOES NOT COLLECT ON TOP.
- DUCT SIZES SHOWN ARE INSIDE DIMENSIONS. IF DUCTS ARE ACOUSTICALLY LINED, OUTSIDE DUCT SIZE TO BE INCREASED TO SUIT.

- DUCTWORK SHALL BE CONSTRUCTED AS RECOMMENDED IN ASHRAE GUIDE.
- SEAL ALL JOINTS (NEW AND EXISTING) AIRTIGHT WITH DURO-DYNE S-2 DUCT SEALER OR EQUAL, IN STRICT ACCORDANCE WITH MANUFACTURER'S PUBLISHED RECOMMENDATIONS. PRIOR TO APPLICATION, DUCTWORK TO BE DRY AND FREE OF GREASE, ETC. USE 1/4" BEAD OF MATERIAL ALONG JOINTS. MATERIAL, WHEN DRY, TO HAVE 1/8" DEPTH EXTENDING 1" ON EACH SIDE OF JOINT OR SEAM.
- SIZE ROUND DUCTS, INSTALLED IN PLACE OF RECTANGULAR DUCTS, FROM ASHRAE TABLE OF EQUIVALENT RECTANGULAR AND ROUND DUCTS.
- PRIOR TO FABRICATION OF DUCTWORK, CHECK ALL CEILING SPACES AND HEIGHTS FOR CONFLICTION WITH OTHER TRADES.
- DUCT AND EQUIPMENT SUPPORTS, HANGERS AND INSERTS
 - SUPPORT HORIZONTAL DUCTS ON MAXIMUM 8'-0" CENTRES BY NON-PERFORATED GALV. STEEL, RIVETTED STRAP FOR DUCTWORK 36" (EITHER DIMENSION) OR LESS, AND MINIMUM 1" X 1" X 1/8" GALV. IRON PASSING UNDER DUCTS 37" OR OVER (EITHER DIMENSION) WITH 3/8" DIAM. THREADED RODS SUSPENDING ANGLES FROM STRUCTURE.
 - FOR INSERTS IN EXISTING CONCRETE, USE HILTI H.K.D. STEEL ANCHORS.
- MANUAL VOLUME DAMPERS TO BE #16 GA. GALV. STEEL, STIFFENED, DAMPERS HARDWARE TO BE DURO-DYNE KS-145, KS-385 OR KS-12 AS RECOMMENDED BY MANUFACTURER.
- VENTEX / CONTINENTAL FAN IS AN APPROVED MANUFACTURER OF THE BACKDRAFT DAMPER.

3.0 TESTING AND BALANCING

- EXHAUST AIR SYSTEMS SHALL BE BALANCED AND TESTED BY AN INDEPENDENT AIR BALANCE AGENCY (AABC) TO PROVIDE AIR QUANTITIES AS SHOWN. PROVIDE AIR BALANCE REPORT FOR REVIEW BY THE CONSULTANT. SUBMIT TWO COPIES FOR REVIEW UPON COMPLETION. PROVIDE DAMPER STICKER UPON FINAL BALANCING COMPLETION.
- AIR BALANCE AGENCY SHALL TEST ALL FIRE DAMPERS AND PROVIDE A REPORT FOR REVIEW BY CONTRACT ADMINISTRATOR. SUBMIT TWO COPIES FOR REVIEW UPON COMPLETION. THIS WORK SHALL INCLUDE THE FOLLOWING:
 - PROVIDE INSPECTION, VERIFICATION AND TESTING OF ALL FIRE DAMPERS, FIRE/SMOKE DAMPERS, SMOKE CONTROL DAMPERS AND CEILING FIRE STOPS AFTER INSTALLATION. COORDINATE THE WORK WITH VENTILATION AND CONTROLS CONTRACTOR(S).
 - PROVIDE DETAILED VERIFICATION REPORT TO INCLUDE ALL FIRE PROTECTION DEVICES NOTED. REPORT SHALL LIST EACH DEVICE AND VERIFICATION OF ITS OPERATION AND INSTALLATION PER THE REQUIREMENTS SPECIFIED.
 - PROVIDE TWO COPIES OF COMPLETED DRAFT VERIFICATION REPORT TO CONSULTANT FOR REVIEW.
 - INCORPORATE COMMENTS OR CHANGES REQUESTED BY CONSULTANT AND PROVIDE SUFFICIENT NUMBER OF COPIES OF FINAL REPORT TO MECHANICAL SUBTRADE FOR INCLUSION IN OPERATING & MAINTENANCE MANUALS.
 - TESTING SHALL BE PERFORMED AFTER AIR BALANCING HAS BEEN COMPLETED.
 - TEST SHALL INCLUDE FOLLOWING:
 - VISUAL INSPECTION OF EACH DEVICE:
 - CONFIRM APPROPRIATELY RATED DEVICE INSTALLED AND CSA/ULC LABEL AFFIXED AND VISIBLE THROUGH DUCT/CEILING ACCESS DOOR.
 - CONFIRM APPROPRIATE DUCT AND/OR CEILING ACCESS DOOR PROVIDED TO PERMIT SERVICING OF DEVICE. CONFIRM DUCT ACCESS DOOR OPENABLE WITHOUT INTERFERENCE FROM ADJACENT CEILING, PIPES, DUCTS, ETC.
 - CONFIRM DEVICE HAS BEEN INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF THE SPECIFICATIONS, MANUFACTURER'S INSTRUCTIONS AND CODES.

- CONFIRM PROPER INSTALLATION, CLEARANCES, USE OF PROPER ANGLE FRAMING, USE OF PROPER FASTENERS, USE OF FIRE RATED MATERIAL IN WALL OPENING, LOCATION OF BREAKAWAY JOINTS ETC.
- CONFIRM THAT DEVICE HAS NOT BEEN PAINTED.
- OPERATIONAL INSPECTION OF EACH DEVICE TO INCLUDE:
 - MANUAL RELEASE OF FUSIBLE LINK ALLOWING DEVICE TO CLOSE. CONFIRM TIGHT FIT CLOSURE WITHOUT BINDING.
 - CONFIRM THAT APPROPRIATE FUSIBLE LINK IS INSTALLED.
 - RE-OPEN DEVICE AND RESET FUSIBLE LINK CONNECTION.
- VERIFICATION REPORT SHALL INDICATE GENERAL LOCATION (E.G. ROOM NUMBER OR DESCRIPTION) AND SPECIFIC LOCATION (E.G. NORTH WALL ABOVE CEILING) OF ACCESS DOOR TO DEVICE. REPORT SHALL INCLUDE ITEMIZED VERIFICATION OF FOLLOWING, AS APPROPRIATE, FOR EACH DEVICE:
 - DEVICE IS FULLY ACCESSIBLE.
 - DEVICE HAS BEEN PROPERLY INSTALLED
 - DEVICE HAS BEEN SUCCESSFULLY TESTED.
 - DEVICE HAS BEEN RESET.
 - NAME OF TESTER.
 - DATE DEVICE TESTED SUCCESSFULLY

GENERAL NOTES:

- THESE DRAWINGS SHALL NOT BE SCALED.
- THIS DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR TO COORDINATE EXACT LOCATIONS OF AND ROUTING ON SITE WITH ALL NEW AND EXISTING SYSTEM.
- THE CONTRACTOR SHALL VISIT THE SITE AND SATISFY ONESELF ALL DIMENSIONS, DATUM, AND DETAILED INFORMATION SHOWN ARE CORRECT.
- THE CONTRACTOR IS TO REVIEW AND COORDINATE ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL OPENINGS THROUGH FLOORS, WALLS, AND CEILINGS FOR DUCT, PIPE & ELECTRICAL RISERS AND ALL OPENINGS NOT SHOWN ON DRAWINGS.
- ALL OPENINGS THROUGH FIRE ASSEMBLIES ARE TO BE FIRE STOPPED AND SEALED WITH ULC APPROVED FIRE STOPPING TO MAINTAIN THE INTEGRITY OF THE FIRE SEPARATION, AND PROVIDE A SMOKE-TIGHT BARRIER.
- ALL PRODUCTS AND MATERIALS TO BE USED AND INSTALLED SHALL CONFORM WITH MANUFACTURER'S SPECIFICATIONS & APPLICABLE CODES.
- NEW DUCT SHALL BE CONSTRUCTED AS RECOMMENDED BY SMACNA.



0	ISSUED FOR CONSTRUCTION	XYW	05.01	2025
No.	REVISION/DESCRIPTION	BY	DATE	

SEAL

DATE	DESIGN	DRAWN	CHECKED	APPROVED
2025.05.01	BY: XYW	BY: HA	BY: XYW	BY: XYW



THE CITY OF WINNIPEG

ASSETS & PROJECT MANAGEMENT DEPARTMENT
MUNICIPAL ACCOMMODATIONS DIVISION
3-65 GARRY STREET, R3C 4K4

PROJECT

PARKS & OPEN SPACE DIVISION
BUNN'S CREEK PARK - STORAGE GARAGE

365 McIVOR

SHEET TITLE

KEY PLAN

MECHANICAL FLOOR PLAN

LEGENDS, SCHEDULES & SPECIFICATIONS

SCALE	PROJECT No:	SHEET No:
AS SHOWN	2023-049	M1

DRAWING SHEET SIZE: ARCH "D" (24" x 36") PLOT 1:1