| | HVAC SYMBOLS |
|--------------------|--|
| | NEW HVAC EQUIPMENT |
| | |
| | NEW DUCTWORK |
| | FUTURE EQUIPMENT/PIPING |
| | EXISTING HVAC EQUIPMENT/DUCTWORK |
| | EXTERNALLY INSULATED DUCTWORK |
| | ACOUSTICALLY LINED DUCTWORK |
| | RETURN/EXHAUST DUCT DOWN |
| | RETURN/EXHAUST DUCT UP |
| \searrow | SUPPLY DUCT DOWN |
| | SUPPLY DUCT UP |
| (BDD)-\\\\- | BACKDRAFT DAMPER C/W DUCT ACCESS DOOR |
| B— | BALANCE DAMPER C/W DUCT ACCESS DOOR |
| Ē | FIRE DAMPER C/W DUCT ACCESS DOOR |
| FS- | FIRE/SMOKE DAMPER C/W DUCT ACCESS DOOR |
| MD-#]-\\\ | MOTORIZED DAMPER C/W DUCT ACCESS DOOR |
| <u>\$</u> — | SMOKE DAMPER C/W DUCT ACCESS DOOR |
| -1- | AIR FLOW DIRECTION |
| G# -x- - L/s | GRILLE NO. NECK SIZE AIR FLOW RATE |
| | —LOUVER NO.)—LOUVER SIZE —AIR FLOW RATE |

| (0) | CARBON MONOXIDE SENSOR |
|--------------------|------------------------------|
| (CO ₂) | CARBON DIOXIDE SENSOR |
| / \ _ / | CONTROL WIRING |
| DDC | DIRECT DIGITAL CONTROL |
| DP | DIFFERENTIAL PRESSURE SENSOR |
| FS | FLOW SWITCH |
| \oplus | HUMIDISTAT |
| Н | HUMIDITY SENSOR |
| LS | LIMIT SWITCH |
| Р | PRESSURE SENSOR |
| SCR | SILICONE CONTROL RECTIFIER |
| Т | TEMPERATURE SENSOR |
| T | THERMOSTAT |
| VFD | VARIABLE FREQUENCY DRIVE |
| DH | DEHUMIDISTAT |

CONTROLS

| | ABBREVIATIONS LIST |
|------|----------------------------------|
| С | CONDENSATE |
| CA | COMPRESSED AIR |
| DCW | DOMESTIC COLD WATER |
| DHW | DOMESTIC HOT WATER |
| DHWR | DOMESTIC HOT WATER RECIRCULATION |
| TW | TEMPERED WATER |
| TWS | TEMPERED WATER SUPPLY |
| TWR | TEMPERED WATER RETURN |
| E/A | EXHAUST AIR |
| GS | GLYCOL SUPPLY |
| GR | GLYCOL RETURN |
| HWR | HOT WATER RETURN |
| HWS | HOT WATER SUPPLY |
| NG | NATURAL GAS |
| O/A | OUTDOOR AIR |
| R | REFRIGERANT PIPING |
| R/A | RETURN AIR |
| RWL | RAIN WATER LEADER |
| S | STEAM |
| S.S. | SANITARY SEWER |
| S/A | SUPPLY AIR |
| WM | WATER METER |

| | EQUIPMENT TAGS |
|--------------|----------------------------|
| AHU-# | AIR HANDLING UNIT |
| B-# | BOILER |
| BB- # | BASEBOARD HEATER |
| BFP-# | BACKFLOW PREVENTER |
| CH-# | CHILLER |
| EF-# | EXHAUST FAN |
| ERV-# | ENERGY RECOVERY VENTILATOR |
| EXP-# | EXPANSION TANK |
| FF-# | FORCE FLOW |
| GMU-# | GLYCOL MAKE-UP UNIT |
| HRV-# | HEAT RECOVERY VENTILATOR |
| HWT-# | HOT WATER TANK |
| MUA-# | MAKE-UP AIR UNIT |
| PU-# | PUMP |
| PHC-# | PRE-HEAT COIL |
| RAD-# | RADIATOR |
| RF-# | RETURN FAN |
| RH-# | RANGE HOOD |
| RHC-# | REHEAT COIL |
| RPP-# | REDUCED PRESSURE PRINCIPAL |
| RTU-# | ROOFTOP UNIT |
| SF-# | SUPPLY FAN |
| UH-# | UNIT HEATER |
| VAV-# | VARIABLE AIR VOLUME BOX |

| FIRE PROTECTION LEGEND | | | | |
|------------------------|-------------------------------------|--|--|--|
| | NEW SPRINKLER PIPING/EQUIPMENT | | | |
| | EXISTING SPRINKLER PIPING/EQUIPMENT | | | |
| 0 | SPRINKLER HEAD | | | |
| \triangleleft | HORIZONTAL SIDEWALL | | | |
| D | DRY | | | |
| U | UPRIGHT | | | |
| BD | BLOW DUCT OBSTRUCTION | | | |
| EC | EXTENDED COVERAGE | | | |
| R | EXISTING SPRINKLER HEAD TO REPLACED | | | |
| С | CONCEALED | | | |
| WG | WIRE GUARD | | | |
| LAT | LAY-IN ACOUSTIC TILE | | | |
| PL | PLASTER | | | |
| GB | GIPSUM BOARD | | | |

PLUMBING GENERAL NOTES

DEMOLITION GENERAL NOTES

PERFORM WORK IN ACCORDANCE WITH ALL APPLICABLE

EQUIPMENT LOCATIONS AND PIPE ROUTING INDICATED ON

THE DRAWINGS IS APPROXIMATE ONLY. CONFIRM IN THE

FIELD. REROUTE PIPING AS REQUIRED TO ELIMINATE FIELD

INTERFERENCES, WITH BUILDING STRUCTURES, ELECTRICAL,

ETC.. CONFIRM CHANGES WITH CONTRACT ADMINISTRATOR.

SIZES, ETC. THESE ARE FOR BIDDING PURPOSES ONLY.

EXTRA CHARGES TO THE PROJECT. THE CONTRACTOR IS

ALL REMOVED EQUIPMENT SHALL BE DISPOSED OFF SITE.

CONFIRM WORK WITH OWNER IF ANY MATERIAL SHALL BE

EQUIPMENT, DUCTWORK, AND PIPING AND MAKE GOOD.

RESPONSIBLE TO ENSURE ALL EQUIPMENT, DUCTWORK

AND PIPING FITS IN THE SPACE AVAILABLE AND TO

MAINTAIN THE GENERAL DESIGN INTENT FOR THE

SEAL ALL OPENINGS REMAINING FROM REMOVED

IN THE EVENT THERE ARE DISCREPANCIES ON THE

DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE CONTRACT

ADMINISTRATOR PRIOR TO CLOSE OF TENDERS AND PRIOR

TO PROCEEDING WITH CONSTRUCTION. CLARIFICATION WILL

BE PROVIDED WITH THE INTENT OF ELIMINATING EXTRA

FIRE PROTECTION GENERAL NOTES

SPRINKLER AND FIRE SUPPRESSION SYSTEM TO BE

INSTALLED IN ACCORDANCE WITH THE FOLLOWING

- NFPA 13. STANDARD FOR INSTALLATION OF

AND INSTALLED BY A LICENSED FIRE PROTECTION

THE SPRINKLER SYSTEM SHALL BE DESIGNED, SUPPLIED

CONTRACTOR WHO SHALL SUBMIT DRAWINGS FOR REVIEW

TO CONTRACT ADMINISTRATOR AND AUTHORITIES HAVING

SYSTEM LAYOUTS, HYDRAULIC CALCULATIONS, PIPE SIZING

AND SPRINKLER HEAD SELECTION IS THE RESPONSIBILITY

SPRINKLER CONTRACTOR SHALL PROVIDE FIRE STOPPING

DRAWING SINCE THIS DRAWING SHOWS ONLY MAINS. COST

CONTRACTOR. REFER TO ARCHITECTURAL FOR FIRE RATED

RUN ALL NEW SPRINKLER PIPING INSIDE CEILINGS WHERE

WHERE REQUIRED TO INSTALL AND SERVICE SPRINKLER

ALL HORIZONTAL SPRINKLER PIPING TO BE MOUNTED AS

NECESSARY. EXPOSED PIPING SHALL BE STRAPPED TIGHT

TO THE CEILINGS AND WALLS TO MINIMIZE INFRINGEMENT

SPRINKLER MAINS ONLY ARE SHOWN. CONTRACTOR IS TO

HEAD LOCATIONS. COORDINATE WITH LIGHTING AND HVAC

DIFFUSER LAYOUT TO ELIMINATE INTERFERENCES. SHOW

DETERMINE LAYOUT OF CROSSMAINS AND SPRINKLER

IN THE EVENT THERE ARE DISCREPANCIES ON THE

DRAWINGS AND/OR SPECIFICATIONS. THE CONTRACTOR

SHALL REQUEST CLARIFICATION FROM THE CONTRACT

COSTS WILL BE ENTERTAINED FOR REQUESTS FOR

CLARIFICATION ONCE THE PROJECT IS AWARDED.

TO BE COORDINATED WITH ARCHITECT.

ADMINISTRATOR PRIOR TO CLOSE OF TENDER. NO EXTRA

FINISHED COLORS OF ALL SPRINKLER HEADS (ALL TYPES)

PENETRATIONS BY NEW PIPING NOT SHOWN ON THIS

OF FIRE STOPPING TO BE CARRIED BY SPRINKLER

CEILINGS EXIST. PROVIDE DRYWALL ACCESS DOORS

HIGH AS POSSIBLE IN CEILING SPACES. OBTAIN

APPROVAL TO RUN EXPOSED PIPING ONLY WHERE

SYSTEMS. PAINT AND MAKE GOOD.

ALL DETAIL ON SHOP DRAWINGS.

TO ENSURE ALL PENETRATIONS THROGH FIRE

SEPARATIONS ARE FIRE STOPPED, INCLUDING

NATIONAL BUILDING CODE OF CANADA.

SPRINKLERS SYSTEMS.

LOCAL JURISDICTION.

OF THE CONTRACTOR.

SEPARATIONS.

ON SPACES.

CO-ORDINATE WORK WITH ALL SUBTRADES. WHERE DIMENSIONS ARE INDICATED FOR PIPING EQUIPMENT

THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL

EQUIPMENT AND COMMENCING INSTALLATION WITHOUT

DIMENSIONS IN THE FIELD PRIOR TO ORDERING

CODES AND REGULATIONS.

TURNED OVER TO OWNER.

COST TO THE CONTRACT.

STANDARDS:

SYSTEMS.

- CONFORM TO MANITOBA PLUMBING CODE AND ALL LOCAL CODES AND AUTHORITY HAVING JURISDICTION FOR DESIGN SUPPLY AND INSTALLATION OF PLUMBING AND VENT SYSTEM. VENT CONCEALED INSIDE WALLS ACCORDING TO CODE. MINIMIZE ROOF PENETRATIONS.
 - EQUIPMENT LOCATIONS AND PIPE ROUTING INDICATED ON THE DRAWINGS IS APPROXIMATE ONLY. CONFIRM IN THE FIELD. REROUTE PIPING AS REQUIRED TO ELIMINATE FIELD INTERFERENCES, WITH BUILDING STRUCTURES, ELECTRICAL, ETC.. CONFIRM CHANGES WITH CONTRACT ADMINISTRATOR. CO-ORDINATE WORK WITH ALL SUBTRADES. WHERE DIMENSIONS ARE INDICATED FOR PIPING EQUIPMENT SIZES. ETC. THESE ARE FOR BIDDING PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO ORDERING EQUIPMENT AND COMMENCING INSTALLATION WITHOUT EXTRA CHARGES TO THE PROJECT. THE CONTRACTOR IS RESPONSIBLE TO ENSURE ALL EQUIPMENT, DUCTWORK AND PIPING FITS IN THE SPACE AVAILABLE AND TO MAINTAIN THE GENERAL DESIGN INTENT FOR THE
- CONFIRM ADEQUATE PIPE SLOPES EXIST FOR ALL NEW DRAINAGE PIPING.
- PROVIDE TRAP PRIMERS FOR ALL NEW FLOOR DRAINS.
- PROVIDE CLEANOUTS AS PER PLUMBING CODE.
- INSULATE DOMESTIC HOT WATER (DHW), DOMESTIC WATER RECIRCULATION (DHWR) AND DOMESTIC COLD WATER (DCW) PIPING. RUN PIPING IN CEILING SPACE DOWN TO FIXTURES INSIDE PLUMBING WALLS.
- PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR NEW PIPING (WATER AND DRAINAGE). FINISH ALL PENETRATIONS AND MAKE GOOD.
- PROVIDE SHUT-OFF VALVES AT ALL FIXTURES, WATER TANKS, AND WATER HAMMER ARRESTERS AT ENDS OF ALL PIPE RUNS.
- IN THE EVENT THERE ARE DISCREPANCIES ON THE DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE CONTRACT ADMINISTRATOR PRIOR TO CLOSE OF TENDERS AND PRIOR TO PROCEEDING WITH CONSTRUCTION. CLARIFICATION WILL BE PROVIDED WITH THE INTENT OF ELIMINATING EXTRA COST TO THE CONTRACT.

HVAC GENERAL NOTES

- PERFORM WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
- REVIEW EQUIPMENT LOCATIONS WITH CONTRACT ADMINISTRATOR PRIOR TO INSTALLATION.
- EQUIPMENT LOCATIONS, DUCT, AND PIPE ROUTING INDICATED ON THE DRAWINGS IS APPROXIMATE ONLY. CONFIRM IN THE FIELD. REROUTE DUCTWORK AND PIPING AS REQUIRED TO ELIMINATE FIELD INTERFERENCES. WITH BUILDING STRUCTURES, ELECTRICAL, ETC. CONFIRM CHANGES WITH CONTRACT ADMINISTRATOR. COORDINATE WORK WITH ALL SUBTRADES. WHERE DIMENSIONS ARE INDICATED FOR PIPING, DUCTWORK, DUCT SIZES, EQUIPMENT SIZES, ETC. THESE ARE FOR BIDDING PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO ORDERING EQUIPMENT AND COMMENCING INSTALLATION WITHOUT EXTRA CHARGES TO THE PROJECT. THE CONTRACTOR IS RESPONSIBLE TO ENSURE ALL EQUIPMENT, DUCTWORK, AND PIPING FITS IN THE SPACE AVAILABLE AND TO MAINTAIN THE GENERAL DESIGN INTENT
- CONFORM TO SMACNA STANDARDS FOR SUPPLY AND INSTALLATION OF DUCTWORK. SEAL ALL DUCT JOINTS.

FOR THE SYSTEMS.

- SEAL ALL FLOOR, ROOF AND WALL PENETRATIONS WATER AND AIR TIGHT.
- 6. FIRE SEAL ALL PENETRATIONS THROUGH FIRE SEPARATIONS.
- MAINTAIN SERVICE CLEARANCES FOR ALL EQUIPMENT AS PER SUPPLIER RECOMMENDATIONS.
- 8. CONFORM TO NATIONAL GAS INSTALLATION CODE CAN/CGA-B149.1 AND MANITOBA GAS NOTICES FOR INSTALLATION OF GAS PIPING. OBTAIN APPROVAL FOR INSTALLATION OF EQUIPMENT FROM THE OFFICE OF THE FIRE COMMISSIONER PRIOR TO INSTALLATION.
- 9. IN THE EVENT THERE ARE DISCREPANCIES ON THE DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE CONTRACT ADMINISTRATOR PRIOR TO CLOSE OF TENDERS AND PRIOR TO PROCEEDING WITH CONSTRUCTION. CLARIFICATION WILL BE PROVIDED WITH THE INTENT OF ELIMINATING EXTRA COST TO THE CONTRACT.
- 10. THERMALLY INSULATE ALL OUTSIDE AIR, SUPPLY AIR AND EXHAUST AIR DUCTWORK AS CALLED FOR IN THE SPECIFICATIONS OR SHOWN ON THE DRAWING.

| | | DRAWING LIST |
|---|-------|---|
| | M0-00 | DRAWING LIST AND MASTER LEGEND |
| , | M1-00 | BASEMENT FLOOR PLAN — PLUMBING & HVAC DEMO |
| | M1-01 | MAIN FLOOR PLAN — PLUMBING & HVAC DEMO |
| | M1-02 | MEZZANINE FLOOR PLAN - HVAC DEMO |
| | M1-03 | BASEMENT/MAIN FLOOR PLAN - FIRE PROTECTION DEMO |
| | M2-00 | BASEMENT FLOOR PLAN - NEW PLUMBING |
| | M2-01 | MAIN FLOOR PLAN — NEW PLUMBING |
| | M2-02 | ROOF PLAN - NEW PLUMBING |
| | M3-00 | BASEMENT FLOOR PLAN - NEW HVAC |
| | M3-01 | MAIN FLOOR PLAN - NEW HVAC |
| | M3-02 | MEZZANINE FLOOR PLAN - NEW HVAC |
| | м3-03 | ROOF PLAN - NEW HVAC |
| | M3-04 | ENLARGE MEZZANINE PLAN - NEW HVAC |
| | M4-00 | BASEMENT FLOOR PLAN - NEW FIRE PROTECTION |
| | M4-01 | MAIN FLOOR PLAN - NEW FIRE PROTECTION |
| | M4-02 | MEZZANINE FLOOR PLAN - NEW FIRE PROTECTION |
| | M5-00 | SECTIONS AND DETAILS |
| | M5-01 | SECTIONS AND DETAILS |
| | M5-02 | SECTIONS AND DETAILS |
| | M6-00 | PLUMBING SCHEMATIC |
| | M6-01 | PIPING SCHEMATICS |

M6-02 GAS PIPING SCHEMATIC M6-03 HVAC CONTROL SCHEMATIC

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date issue notes

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drawing information

MECHANICAL **DRAWING LIST** AND MASTER LEGEND

drawn by:

approved by: scale: date issued: 2016.12.08

AS NOTED 14-1736-008 **R-0**

LOW WATER CUT OFF