

## Addendum 1

Issued June 26, 2024

The following information changes the competitive process documents issued on Thursday, June 13, 2024.

### GENERAL INFORMATION

Item 1: Refer to appended 'Addendum No 1' from mcCallumSather dated June 26, 2024 issued by the Consultant (8 pages).

### QUESTIONS AND RESPONSES

**Refer to General Information Item 1 for questions answered by the Consultant.**

- Q1 The RFT document item 1.4.2 indicates a normal working hours general timeframe of June 30, 2025 to August 22, 2025. Item 1.5.2 indicates substantial performance by June 27, 2025. This does provide enough time to complete the major equipment R&R work since we are not since we are not permitted to interrupt mechanical services, and the chiller lead time will not permit us to perform work ahead of cooling season. Please consider changing the substantial performance date towards end of normal working hour timeframe provided in item 1.4.2
- R1 **The constraints listed in Item 1.4 WORKING HOURS remain unchanged. Five months has been provided for construction, start-up of new equipment and commissioning under 1.5 PROJECT SCHEDULE, commencing in February/March 2025. This section remains unchanged.**
- Q2 Drawing M0.01 general note 9 indicates mechanical services to occupied areas must not be interrupted during renovation work. Please confirm that the school is not considered occupied through the June 30, 2025 to August 22, 2025 dates provided in the RFT document item 1.4.2
- Q2 **The cooling tower and chiller system will not be operational during the proposed construction dates (Winter – Spring 2025) per 1.5 PROJECT SCHEDULE.**

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End of Addendum 1

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*This addendum is issued prior to the award of the contract to provide certain additions, revisions, and clarifications as noted hereinafter. Incorporate Work covered by this addendum into the Contract Documents.*

1. PART      GENERAL

- .1      This Addendum contains:
- .1      Part 2 – Drawings
  - .2      Part 3 – Specifications
  - .3      Part 4 – Clarifications
  - .4      Part 5 – Addenda from Other Consultants

2. PART      DRAWINGS

.1      **Drawing M1.01 – Mechanical Demolition Plans**

- Revised representation of existing cooling tower chemical feed system to better reflect footprint on site.

.2      **Drawing M2.01 – Plans**

- Revised representation of existing cooling tower chemical feed system to better reflect footprint on site.
- Added location of cooling tower fan VFD locations in upper level mechanical room. Electrical and Controls contractors to allow for provision of power and controls wiring to coordinate with these proposed VFD installation locations.
- Contractor to allow for 1 additional Honeywell Model 301 EMRP-RFSA Annunciator panel with integral horn/strobe than what is show on this drawing. Intent is to mount this additional panel in the upper mechanical room outside the door leading to the stairs down to the lower mechanical room where the new chiller will be installed.

.3      **Drawing M3.01 – Mechanical Schematics**

- Added 2-way solenoid valve on DCW make up water line to the cooling tower which will be tied to the cooling tower control panel and manufacturer provided cooling tower sump float system.

.4      **Drawing M4.01 – Details & Diagrams**

- Revised drawing #1 'Chilled Water Plant Control Schematic' as shown on the attached drawing.

.5      **Drawing M5.01 – Mechanical Specifications**

- Revised BAS points list, point 8.6, as shown on the attached drawing.

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3. PART      SPECIFICATIONS

.1            N/A

4. PART      CLARIFICATIONS

**Question 1:** Please confirm if alternates to the Honeywell gas leak detection components will be accepted as long as they meet/exceed the specifications provided.

**Answer 1:** Please refer to RFT document 2024-142-PO1997, page 23, point 3.15 for substitution procedures should the alternative proposed not be explicitly listed in the tender documents as an acceptable equivalent manufacturer/model.

**Question 2:** Please provide line size of cooling tower side stream piping (detail of skid provided shows 2" inlet connection, 1-1/2" outlet connection)

**Answer 2:** The cooling tower side stream piping is confirmed as a 2" inlet and 1-1/2" outlet for model TFSP-0065. Flow rate of unit is 65 gpm and at low head (40' TDH) the motor HP is estimated at 1.5HP.

**Question 3:** Will a grooved piping system for sizes 2-1/2" and up be accepted for hydronic systems?

**Answer 3:** Welded piping systems are required for piping 2-1/2" and larger as per specification point 7.10 on drawing M5.01.

**Question 4:** Is there a preferred route for the new electrical feed to P-CW-9 from the main floor mechanical room to the 2nd floor mechanical room?

**Answer 4:** The most direct and economical route is the preferred route.

**Question 5:** Please confirm that CST-1 is performance spec, and other makes/models that meet/exceed specifications will be accepted.

**Answer 5:** Please refer to RFT document 2024-142-PO1997, page 23, point 3.15 for substitution procedures should the alternative proposed not be explicitly listed in the tender documents as an acceptable equivalent manufacturer/model.

**Question 6:** Please confirm that P-CW-7/8/9 are performance specs, and other makes/models that meet/exceed specifications will be accepted.

**Answer 6:** Please refer to RFT document 2024-142-PO1997, page 23, point 3.15 for substitution procedures should the alternative proposed not be explicitly listed in the tender documents as an acceptable equivalent manufacturer/model.

**Question 7:** Will BAC be accepted as an alternate to the Evapco cooling tower (CT-1)?

**Answer 7:** BAC is listed and acceptable as an alternate to the EVAPCO unit. It is imperative the cooling tower physical dimensions and weights match the basis of design EVAPCO selection and do not exceed them. BAC will be rejected if this is the case.

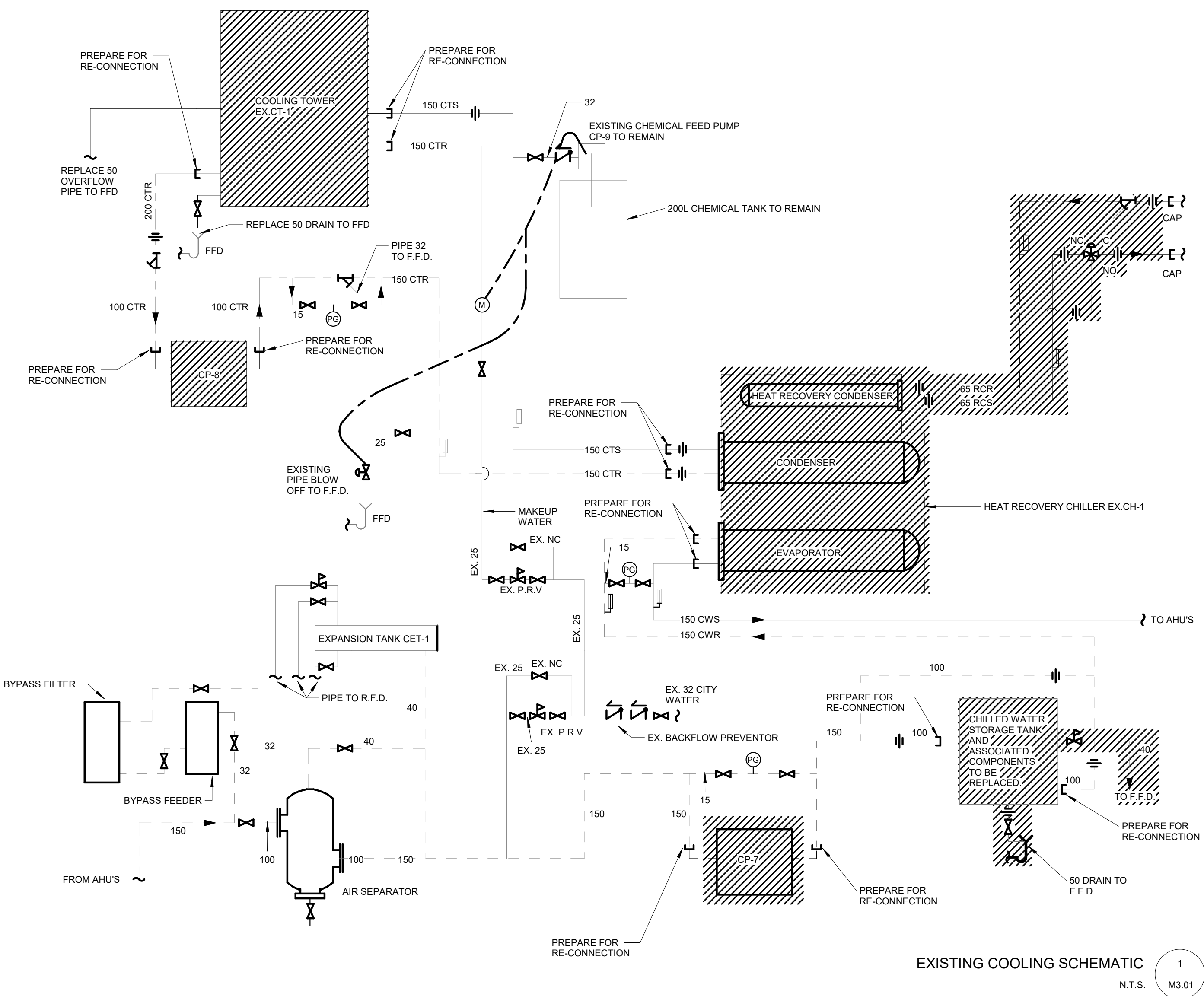
5. PART      ADDENDA FROM OTHER CONSULTANTS  
    .1          N/A

END OF SECTION

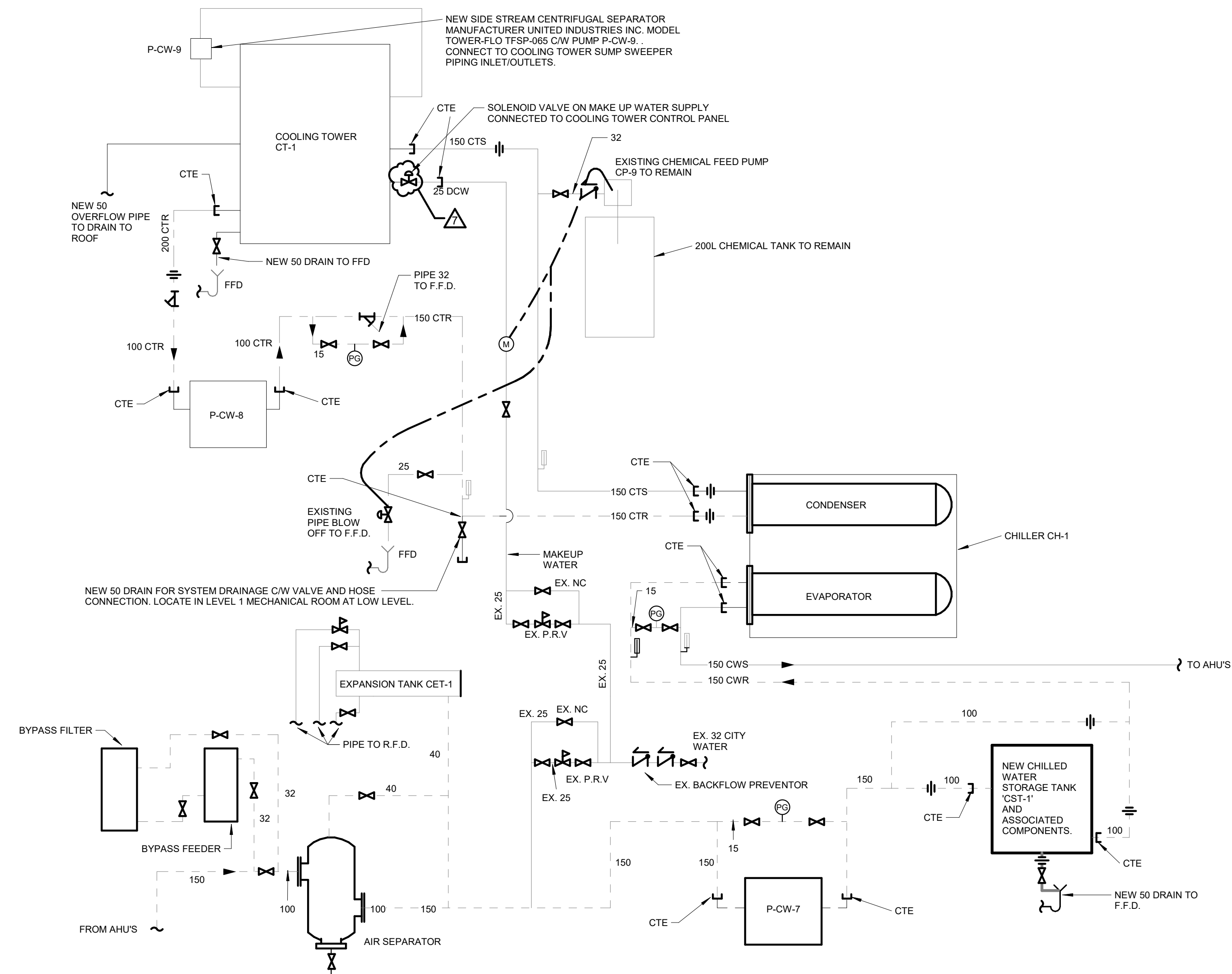








EXISTING COOLING SCHEMATIC 1  
N.T.S. M3.01



PROPOSED COOLING SCHEMATIC 2  
N.T.S. M3.01

KEY PLAN  
**HWDSB**

No.	DESCRIPTION	DATE
7	ISSUED FOR ADDENDUM 1	2024/06/25
6	ISSUED FOR TENDER	2024/06/05
5	ISSUED FOR PERMIT	2024/05/10
4	ISSUED FOR REVIEW	2024/05/03
3	ISSUED FOR PERMIT	2024/04/14
2	ISSUED FOR PERMIT REVIEW	2024/03/08
1	ISSUED FOR 90% PROGRESS SET	2024/02/02

REVISIONS:  
DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ENGINEER BEFORE PROCEEDING. ONLY DIMENSIONS SHOWN ON THIS DRAWING MUST BE USED. THE CONTRACTOR MUST CHECK THE DIMENSIONS ON SITE. THE DRAWING IS PROTECTED BY COPYRIGHT. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS.

DO NOT SCALE THE DRAWINGS.  
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286 Sanford Ave. N  
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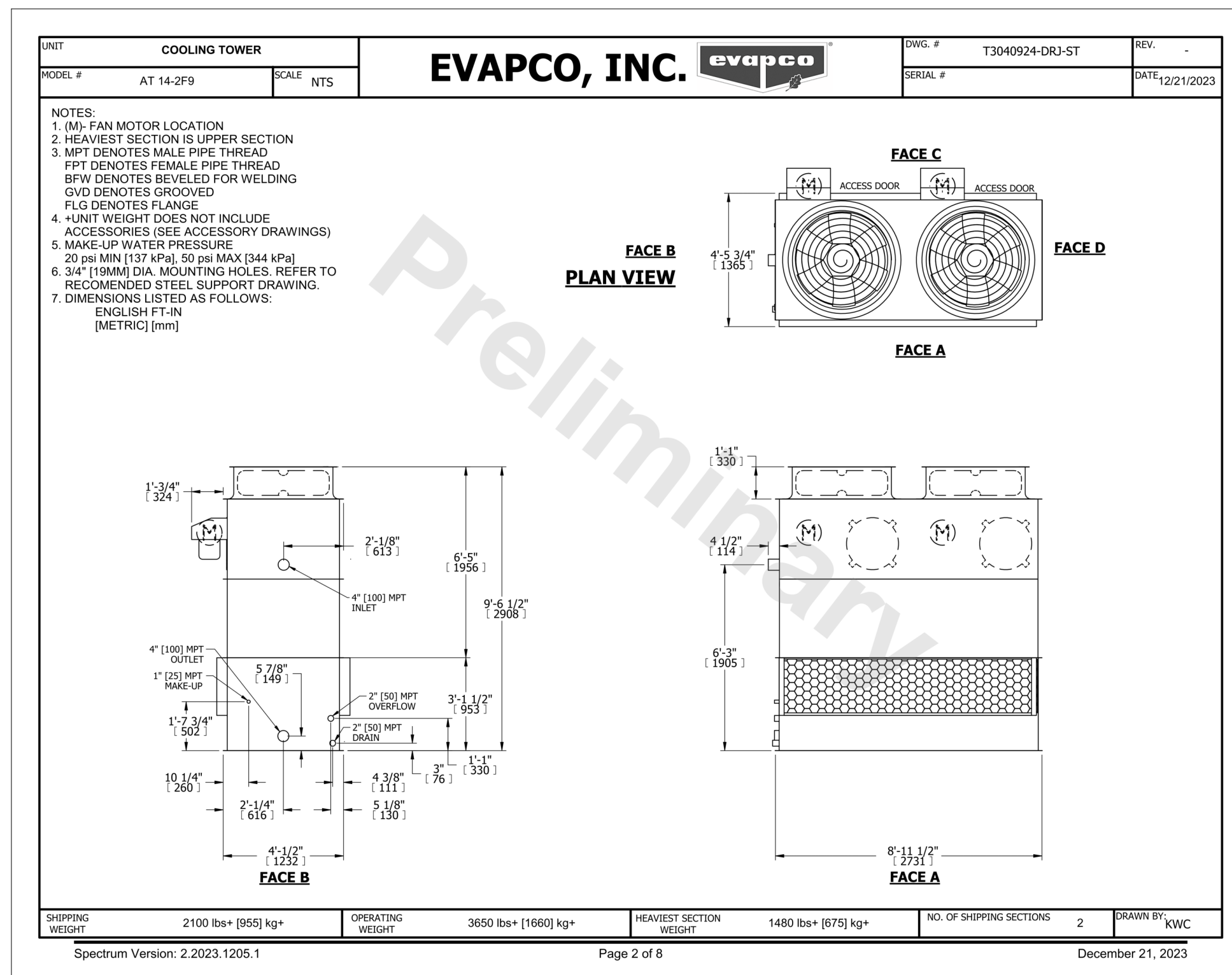
PROJECT:  
**GORDON PRICE ELEMENTARY SCHOOL**  
11 GUILDWOOD DR.  
HAMILTON, ON L9C 7K2

DRAWING TITLE:  
**MECHANICAL SCHEMATICS**

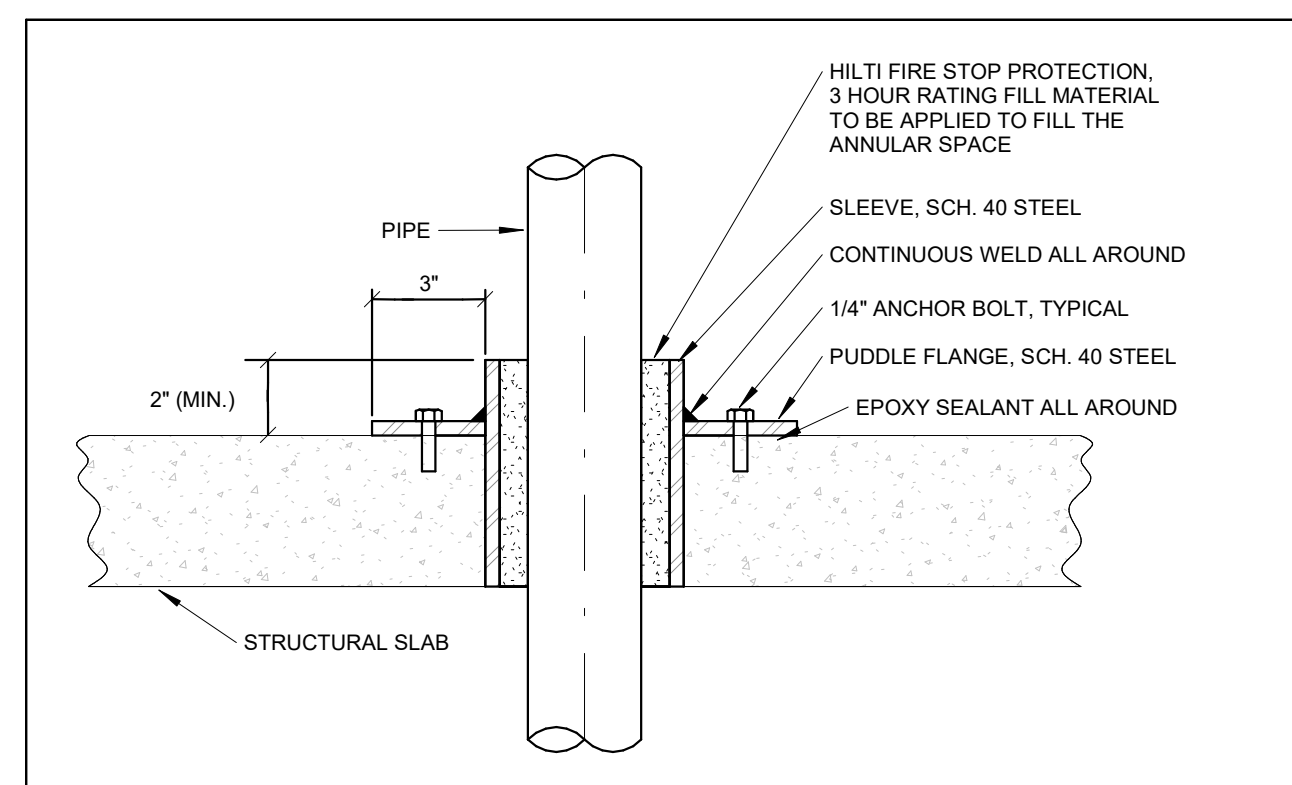
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CHECKED BY: DR SCALE: As Indicated

PROJECT NO: **23080**

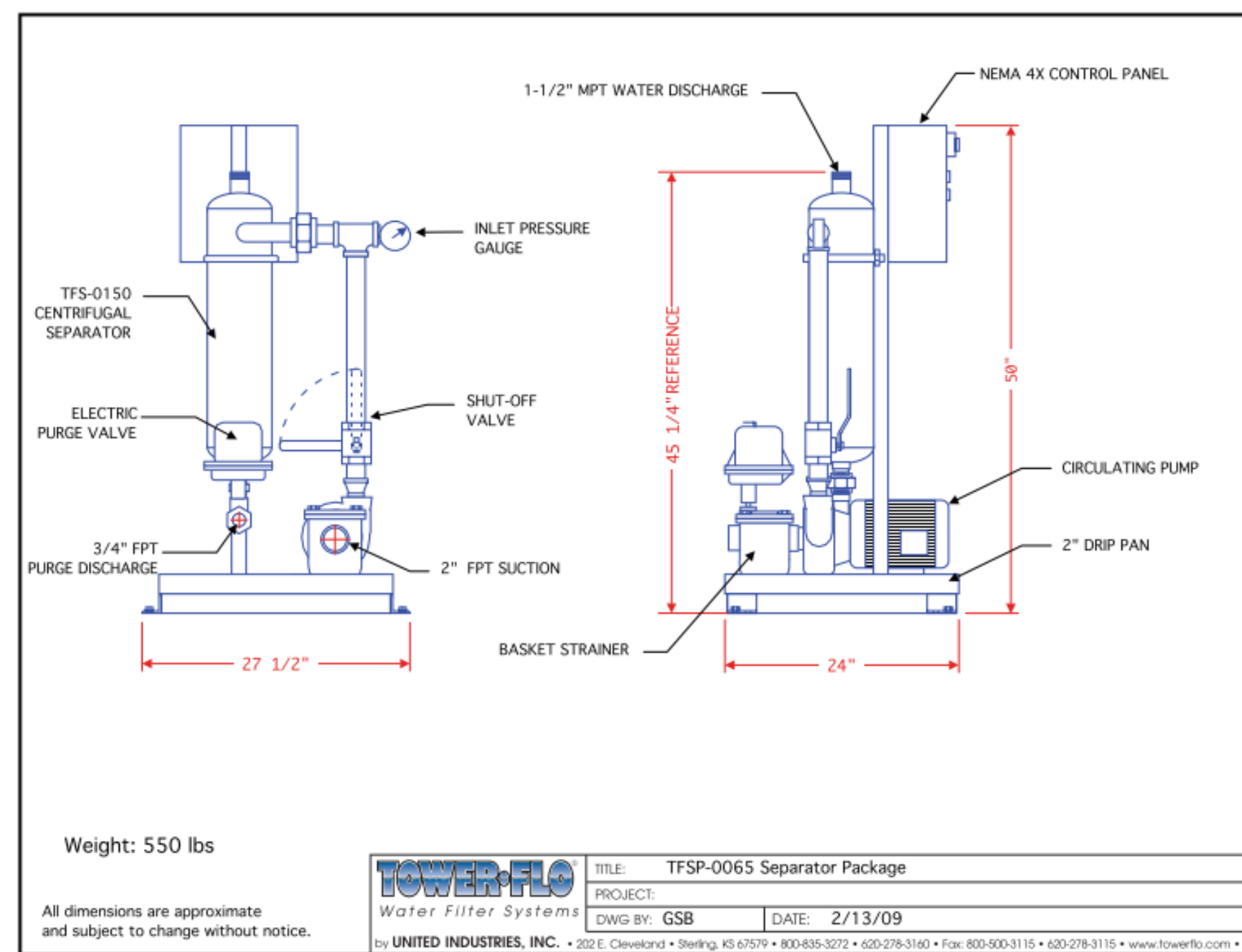
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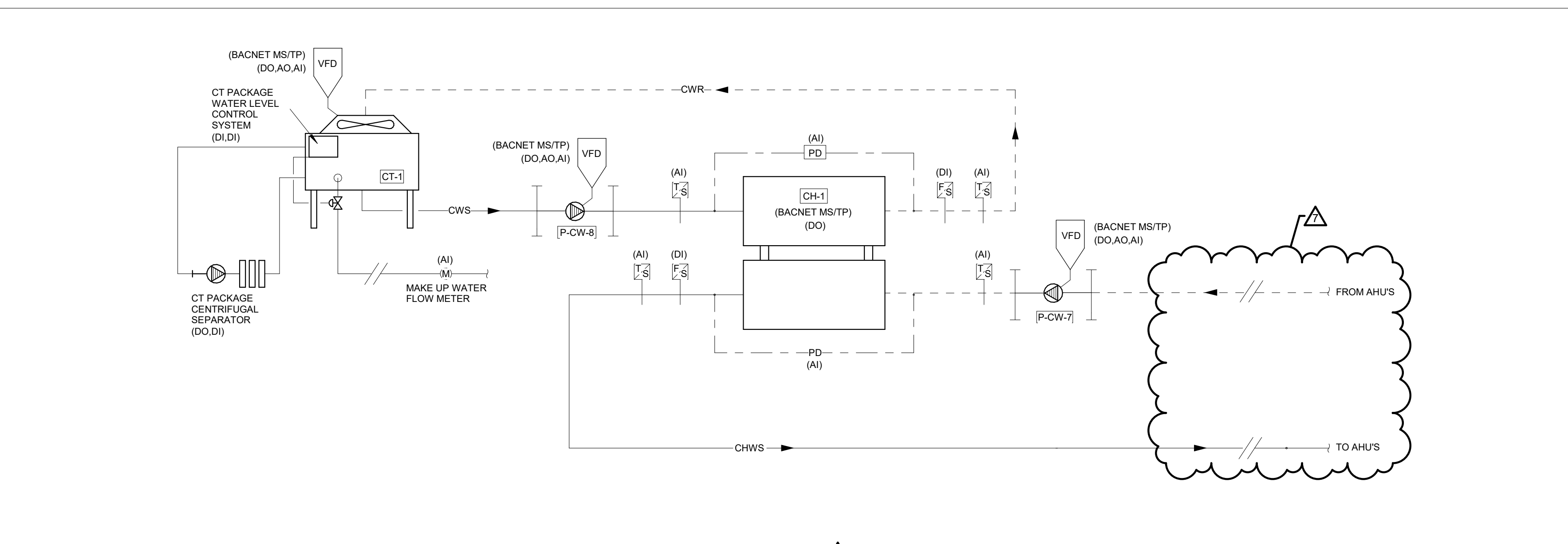
COOLING TOWER 2  
N.T.S. M4.01



DETAIL OF PIPE PENETRATION THROUGH SLAB 5  
N.T.S. M4.01



COOLING TOWER SEPARATOR 6  
N.T.S. M4.01



SEQUENCE OF OPERATION:

- SYSTEM IS ENABLED THROUGH THE BAS BASED ON AN OPERATOR DEFINED OUTDOOR AIR TEMPERATURE SETPOINT AND SCHEDULE. ONCE ENABLED THE SYSTEM SHALL OPERATE IN ACCORDANCE WITH THE FOLLOWING SEQUENCE OF OPERATION. CHILLED WATER SHALL BE AVAILABLE CONTINUOUSLY THROUGHOUT THE COOLING SEASON.

CONDENSER WATER PUMP P-CW-8 CONTROL:

- WHENEVER THE CHILLED WATER PLANT IS ENABLED THE CONDENSER WATER PUMP SHALL BE ENABLED AND OPERATE CONTINUOUSLY. CIRCULATING PUMP SHALL MODULATE TO MAINTAIN PRESSURE DIFFERENTIAL SETPOINT ACROSS CHILLER CONDENSER SECTION, AS RECOMMENDED BY SUCCESSFUL MANUFACTURER TO MAINTAIN DESIGN CONDENSER WATER FLOW.
- STATUS OF CONDENSER WATER CIRCULATING PUMP SHALL BE MONITORED BY THE BAS. IF THE PUMP FAILS TO OPERATE THE BAS SHALL GENERATE AN ALARM.

COOLING TOWER CT-1 SYSTEM(S) CONTROL:

- WHENEVER THE CHILLED WATER PLANT IS ENABLED THE COOLING TOWER SYSTEM(S) SHALL BE ENABLED. COOLING TOWER FAN SHALL MODULATE THROUGH REMOTE VFD TO MAINTAIN CONDENSER WATER SUPPLY TEMPERATURE SETPOINT. CONDENSER WATER SUPPLY TEMPERATURE SETPOINT SHALL BE RESET BASED ON OUTDOOR AIR WET BULB TEMPERATURE AS FOLLOWS:  
▶ OA-WB HIGH = 80°F, CWS RESET HIGH = 85°F  
▶ OA-WB LOW = 55°F, CWS RESET LOW = 60°F
- COOLING TOWER WATER LEVEL CONTROL SYSTEM SHALL OPERATE UNDER ITS OWN SYSTEM OF CONTROLS AND SAFETIES. WATER LEVEL CONTROL SYSTEM SHALL BE PROVIDED WITH FOUR (4) FLOAT SWITCHES TO CARRY OUT CONTROL AND MONITORING FUNCTIONS AS FOLLOWS:  
▶ UPON "LOW WATER LEVEL" DETECTION MAKE-UP WATER VALVE SHALL OPEN  
▶ UPON "HIGH WATER LEVEL" DETECTION MAKE-UP WATER VALVE SHALL CLOSE  
▶ UPON "LOW WATER LIMIT" DETECTION A LOW WATER LEVEL ALARM SHALL BE GENERATED BY THE BAS  
▶ UPON "HIGH WATER LIMIT" DETECTION A HIGH WATER LEVEL ALARM SHALL BE GENERATED BY THE BAS  
PULSE OUTPUT GENERATED BY THE COOLING TOWER MAKE-UP WATER FLOW METER SHALL BE CORRELATED TO VOLUME AND TOTALIZED BY THE BAS.
- COOLING TOWER CENTRIFUGAL SEPARATOR SHALL BE ENABLED THROUGH THE BAS WHENEVER THE CHILLED WATER PLANT IS ENABLED. ONCE ENABLED THE SYSTEM SHALL OPERATE CONTINUOUSLY UNDER ITS OWN SYSTEM OF CONTROLS AND SAFETIES. PUMP STATUS SHALL BE MONITORED BY THE BAS, GENERATE AN ALARM IF STATUS DOES NOT MATCH COMMAND.

CHILLED WATER PUMP P-CW-7 CONTROL:

- WHENEVER THE CHILLED WATER PLANT IS ENABLED THE CHILLED WATER PUMP SHALL BE ENABLED AND OPERATE CONTINUOUSLY. CIRCULATING PUMP SHALL RUN AT CONSTANT VOLUME.
- STATUS OF CHILLED WATER CIRCULATING PUMP SHALL BE MONITORED BY THE BAS. IF THE PUMP FAILS TO OPERATE THE BAS SHALL GENERATE AN ALARM.

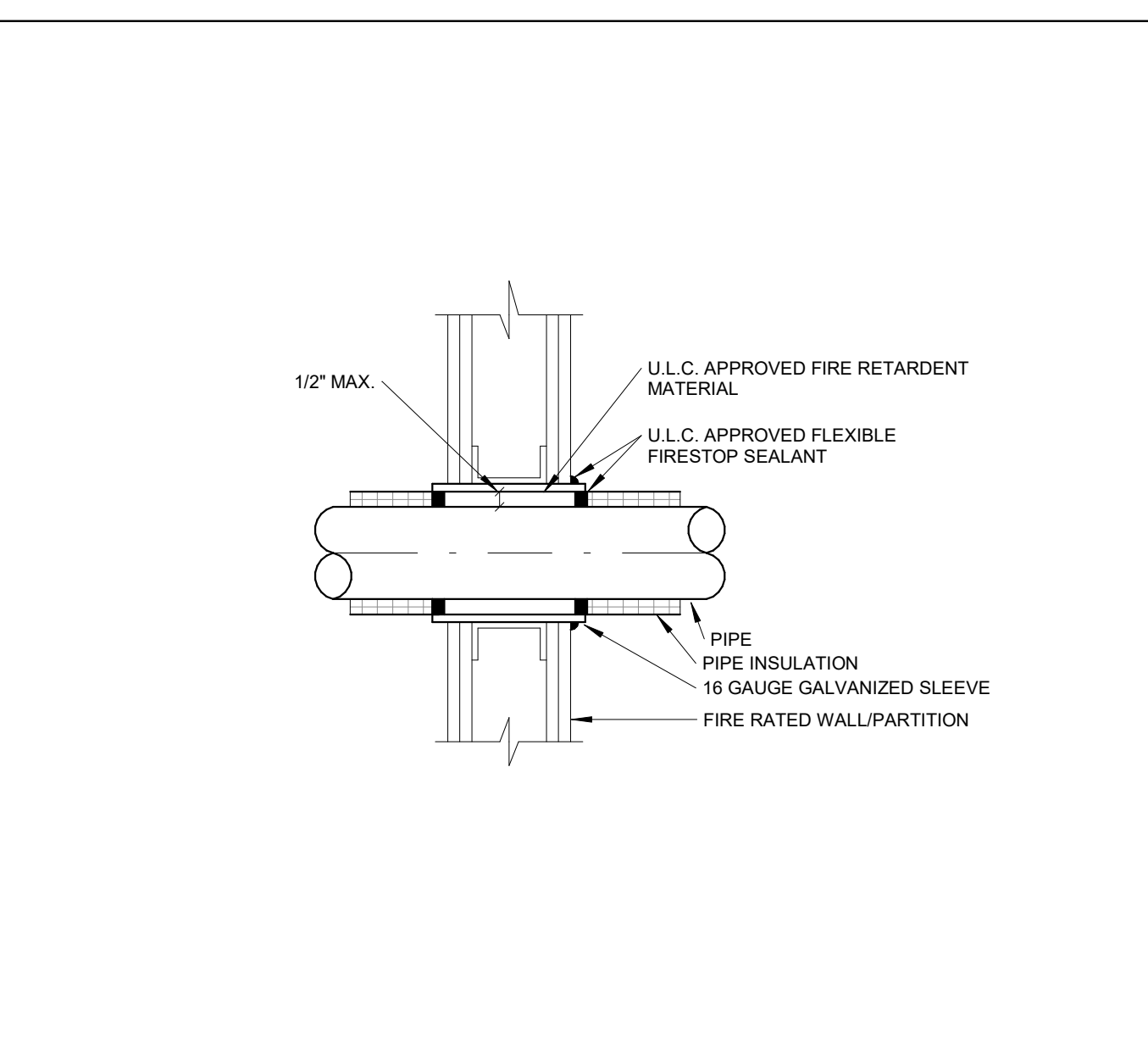
CHILLER CH-1 CONTROL:

- WHENEVER THE CHILLED WATER PLANT IS ENABLED, CONDENSER WATER FLOW STATUS AND CHILLED WATER FLOW STATUS SHALL BE CONFIRMED. ONCE CONFIRMED, THE CHILLER SHALL BE ENABLED THROUGH THE BAS AND OPERATE UNDER ITS OWN SYSTEM OF CONTROLS AND SAFETIES TO MAINTAIN A CHILLED WATER TEMPERATURE SETPOINT OF 46°F (ADJUSTABLE). CHILLED WATER SHALL BE AVAILABLE CONTINUOUSLY THROUGHOUT THE COOLING SEASON.
- CHILLED WATER SUPPLY TEMPERATURE SHALL BE RESET BASED ON OUTDOOR DRY-BULB TEMPERATURE AS FOLLOWS: 46F AT 80F OF ABOVE, 54F AT 60F AND BELOW, AND RAMPED LINEARLY BETWEEN 46F AND 54F AT TEMPERATURES BETWEEN 80F AND 60F.
- CHILLER STATUS AND INDICATION OF VARIOUS ALARMS SHALL BE THROUGH THE INTEGRAL CHILLER CONTROLLER WITH OUTPUT TO THE BAS THROUGH A BACNET MS/TP CONNECTION.

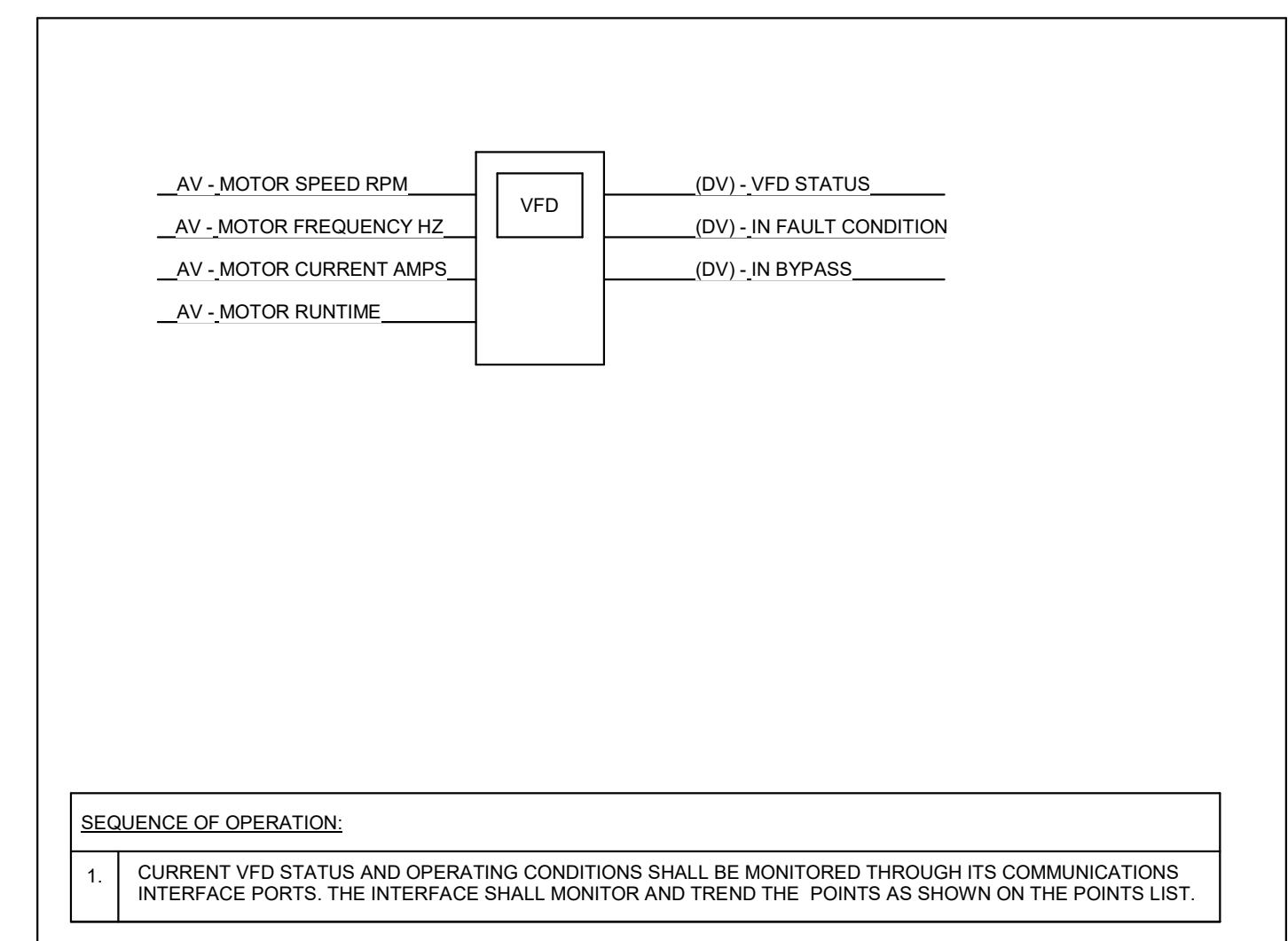
NOTES:

- REFER TO POINT SCHEDULES INCLUDED WITHIN THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

CHILLED WATER PLANT CONTROL SCHEMATIC 1  
N.T.S. M4.01



DETAIL OF PIPE SLEEVE THROUGH FIRE RATED WALL 4  
N.T.S. M4.01



VARIABLE FREQUENCY DRIVE INTERFACE CONTROL SCHEMATIC 3  
N.T.S. M4.01

KEY PLAN  
**HWDSB**

No.	DESCRIPTION	DATE
7	ISSUED FOR ADDENDUM 1	2024/06/25
6	ISSUED FOR TENDER	2024/06/05
5	ISSUED FOR PERMIT	2024/05/10
4	ISSUED FOR REVIEW	2024/05/03
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SEALED  
CONSULTANTS:

PROJECT:  
**GORDON PRICE ELEMENTARY SCHOOL**

11 GUILDWOOD DR.  
HAMILTON, ON L9C 7K2

DRAWING TITLE:  
**DETAILS & DIAGRAMS**

DRAWN BY: FS DATE: 23/04/20  
CHECKED BY: DR SCALE: As Indicated

PROJECT NO: **23080**  
DRAWING NO:

**M4.01**



1. GENERAL

- 1.1. COMPLETE THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ONTARIO BUILDING CODE, ONTARIO FIRE CODE, C.S.A. STANDARDS, U.L.C., N.F.P.A., O.S.H.A. AND OTHER CODES AS REQUIRED.
1.2. WHEREVER THE WORDS "PROVIDE" OR "SUPPLY AND INSTALL" ARE USED, IT SHALL BE UNDERSTOOD TO MEAN "PROVIDE AND INSTALL, INCLUSIVE OF ALL LABOUR, MATERIALS, INSTALLATION, TESTING, AND CONNECTIONS" FOR THE ITEM TO WHICH IT REFERS.
1.3. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, C.S.A. CERTIFIED AND MANUFACTURED TO THE STANDARDS SPECIFIED.
1.4. THE DRAWINGS FOR THE MECHANICAL WORK ARE DIAGRAMMATIC PERFORMANCE DRAWINGS ONLY, INTENDED TO SHOW THE GENERAL INTENT OF THE WORK, NOT THE DETAILS OF INSTALLATION, CO-ORDINATE THE ROUTING AND INSTALLATION OF ALL MECHANICAL SERVICES WITH ALL EXISTING CONDITIONS, STRUCTURE AND THE WORK OF ALL OTHER TRADES.
1.5. PROVIDE SLEEVING DRAWINGS SHOWING ALL OPENINGS IN THE STRUCTURE WITH ALL REQUIRED DIMENSIONS.
1.6. PROVIDE INSTALLATION DRAWINGS OF ALL WORK WITH DIMENSIONS, DRAWN TO SCALE AND CO-ORDINATED WITH ALL TRADES AND DIVISIONS. SHOW ALL REQUIREMENTS FOR EQUIPMENT INSTALLED, AREA ACCESS, CLEARANCES AND CONNECTIONS BY OTHER TRADES.
1.7. PROVIDE STRUCTURAL LOADS WITH ALL DETAILS NECESSARY FOR INSTALLATION OF INSERTS AND ALL CONCRETE CONSTRUCTION ITEMS INCLUDING PADS, CURBS, SILLS, BASINS, ANCHORS, INSERTS ETC.
1.8. DO NOT SCALE MECHANICAL DRAWINGS. OBTAIN ALL SITE DIMENSIONS FROM SITE MEASUREMENTS.
1.9. MAKE APPLICATION, PROVIDE, OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND INSPECTIONS.
1.10. ENSURE THAT FEDERAL TAXES ARE INCLUDED WHERE REQUIRED, H.S.T. TO BE SHOWN AS EXTRA.
1.11. PROVIDE A COMPLETE ITEMIZED BREAKDOWN OF MATERIAL, LABOUR, OVERHEAD, PROFIT, ETC. WHEN SUBMITTING QUOTATIONS FOR CHANGE NOTICES ON THIS PROJECT. THE HOURLY LABOUR RATE SHALL BE INCLUSIVE OF ALL CHARGES FOR SUPERVISION, VARIABLE LABOUR FACTORS, HAND TOOLS, PAYROLL BURDENS, HEIGHT FACTORS, WARRANTIES, STORAGE, RENTALS, ADDITIONAL BONDING, PARKING, CLEAN-UP, AS-BUILT DRAWINGS, HOISTING, FREIGHT AND DELIVERY, BUT EXCLUSIVE OF OVERHEAD AND PROFIT.
1.12. PROVIDE A WRITTEN WARRANTY FOR ALL MATERIALS, EQUIPMENT AND LABOUR FOR A ONE-YEAR PERIOD BEGINNING AT DATE OF SUBSTANTIAL PERFORMANCE PER SGC 12.3.3.
1.13. PROVIDE SHOP DRAWINGS (4 COPIES) OF ALL PRODUCTS FOR REVIEW.
1.14. CO-ORDINATE ALL SHUTDOWNS OF EXISTING BASE BUILDING SYSTEMS WITH THE LANDLORD OR REPRESENTATIVE. ADVISE THE LANDLORD OR REPRESENTATIVE AT LEAST 48 HOURS PRIOR TO ANY SHUTDOWN AND PAY FOR ANY COSTS INCURRED INCLUDING PREMIUM TIME OUTSIDE OF NORMAL WORKING HOURS.
1.15. CO-ORDINATE THE MECHANICAL WORK WITH ALL OTHER TRADES.
1.16. PROVIDE IN THE TENDER PRICE ANY COSTS FOR PREMIUM TIME OUTSIDE OF NORMAL WORKING HOURS TO COMPLETE THE WORK ON SCHEDULE AND TO MAINTAIN ALL EXISTING MECHANICAL SYSTEMS IN OPERATION. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY INTERRUPTIONS OR DISRUPTIONS TO THE EXISTING SERVICES. ALL EXISTING BUILDING SERVICES MUST BE KEPT OPERATIONAL AT ALL TIMES. INTERRUPTIONS SHALL BE PERFORMED ONLY AFTER REGULAR SCHOOL HOURS. ARRANGE WORK SUCH THAT INTERRUPTIONS IN SERVICES OCCUR ONLY AT SCHEDULED TIMES SUITABLE TO THE LANDLORD.
1.17. CHECK AND VERIFY EXISTING ELECTRICAL VOLTAGE AND ENSURE THAT ALL MECHANICAL EQUIPMENT SUPPLIED IS SUITABLE FOR THE AVAILABLE VOLTAGE.
1.18. ALL POWER WIRING BY ELECTRICAL CONTRACTOR, CONTROL AND INTERLOCK WIRING BY MECHANICAL CONTRACTOR, VERIFY LOCATIONS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL CONTRACTOR BEFORE WORK COMMENCES.
1.19. PROVIDE STARTERS WITH REQUIRED OVERLOAD PROTECTION FOR ALL MECHANICAL EQUIPMENT. PROVIDE LINE VOLTAGE REVERSE ACTING THERMOSTATS WHERE SPECIFIED. STARTERS AND LINE VOLTAGE THERMOSTATS SHALL BE TURNED OVER TO DIVISION 16 FOR INSTALLATION, WHERE SWITCHES ARE USED ON FINISHED WALLS PROVIDE TO MATCH LIGHTING SWITCH AND TYPE.
1.20. PROVIDE ALL DEMOLITION, CLEAN-UPS, STORAGE, LIFTING, FLASHING, DRILLING, CUTTING AND PATCHING AS REQUIRED. ALL CUTTING AND PATCHING REQUIRED TO THE EXISTING BUILDING STRUCTURE FOR THE WORK SHALL BE INCLUDED UNDER THIS CONTRACT, AND BE ACCEPTABLE TO THE OWNER. PROVIDE X-RAY OF SLAB PRIOR TO CORING AND CUTTING OF FLOOR. SUBMIT WRITTEN CONFIRMATION THAT X-RAY HAS BEEN PERFORMED.
1.21. PROVIDE ALL EQUIPMENT PADS, CURBS, SILLS, BASINS, ANCHORS, INSERTS, SUPPORTS, SLEEVES, ETC. AS REQUIRED FOR MECHANICAL EQUIPMENT AND PIPING.
1.22. PROVIDE ACCESS AS REQUIRED IN WALLS AND CEILING. ENSURE THAT ACCESS IS PROVIDED FOR ALL EQUIPMENT. PROVIDE ACCESS DOORS COMPATIBLE WITH THE ADJACENT FINISHES AND WITH FIRE RATING EQUAL TO SURFACES IN WHICH INSTALLED. PROVIDE ACCESS PANELS IN PLASTER AND DRYWALL SURFACES WITH RECESSED DOOR WITH WELDED METAL LATH READY TO ACCEPT PLASTER/ DRYWALL INSERT AND WITH A PLASTER GROMMET FOR DOOR KEY ACCESS. MIFAB SERIES CAD-DW OR EQUIVALENT.
1.23. RE-USE AND RELOCATE EXISTING MATERIALS SUCH AS PIPING, FIXTURES, DUCTWORK, DIFFUSERS, EQUIPMENT ETC. WHERE SHOWN. CAP AND DISCONNECT ALL EXISTING PIPING AND DUCTWORK NOT REQUIRED AT CEILING, WALLS OR FLOOR, OR TO A LOCATION AS DIRECTED BY THE LANDLORD. MAINTAIN INTEGRITY OF ALL INSULATION INCLUDING VAPOUR BARRIERS WHEN CONNECTING TO EXISTING SERVICES. MAINTAIN THE INTEGRITY OF ALL EXISTING SYSTEMS ASSOCIATED WITH THE BUILDING SYSTEM IN PLACE, UNLESS NOTED OTHERWISE OBTAIN PERMISSION FROM THE LANDLORD AND REMOVE FROM THE SITE ALL MATERIALS WHICH ARE NOT TO REMAIN OR BE RE-USED.
1.24. ADJUST THE LOCATION OF DEVICES AND/OR EQUIPMENT (UP TO 10'-0" IN ANY DIRECTION) DIRECTED BY THE OWNER AND MECHANICAL CONSULTANT WITHOUT ADJUSTMENT TO THE CONTRACT PRICE, PROVIDED THAT THE CHANGES ARE REQUESTED BEFORE INSTALLATION.
1.25. PLEASE REFER TO THE FRONT END FOR PROPOSED ALTERNATIVES OR SUBSTITUTIONS.
1.26. IDENTIFY ALL SYSTEMS AND LABEL ALL EQUIPMENT WITH LAMACOID LABELS. IDENTIFY REMOTE CONTROLS FOR ALL PERTINENT EQUIPMENT INCLUDING ALL ASSOCIATED DISCONNECTS. PRODUCTS NOT SPECIFICALLY SPECIFIED SHALL BE OF A QUALITY CONSISTENT WITH THE REMAINDER OF THE SPECIFICATION.
1.27. PROVIDE OVERSIZED PIPE HANGERS AND INSULATION SHIELDS FOR INSULATED COLD PIPE. PROVIDE PLASTIC COATED PIPE HANGERS WHERE HANGER IS IN DIRECT CONTACT WITH COPPER PIPE.
1.28. PROVIDE ALL MISCELLANEOUS METALS REQUIRED FOR MECHANICAL WORK.
1.29. PROVIDE DIELECTRIC FITTINGS TO SEPARATE ALL DISSIMILAR METALS.
1.30. PROVIDE AND INSTALL PIPING WITH ALL NECESSARY EXPANSION LOOPS, OFFSETS, GUIDES, JOINTS, ANCHORS ETC. AS MAY BE REQUIRED SO THAT PIPING WILL NOT BE OVERSTRESSED DURING EXPANSION AND CONTRACTION.
1.31. PROVIDE FLASHING AND COUNTER FLASHING FOR ALL DUCTS, PIPES, ETC., PASSING THROUGH EXTERIOR WALLS, WATERPROOF FLOORS AND ROOF.
1.32. PATCH AND SEAL ALL OPENINGS IN FLOORS, WALLS AND PARTITIONS. SEAL ALL VERTICAL SLEEVES AND CORE DRILLED OPENINGS THROUGH ROOF. MECHANICAL ROOMS AND FLOORS ETC. WITH PERMANENTLY RESILIENT WATERPROOF SILICONE BASE SEALING COMPOUND.
1.33. IDENTIFY ALL PIPING WITH STENCILED LETTERS OR COLOR CODES AND DIRECTIONAL ARROWS.
1.34. PROVIDE MANUFACTURER'S START-UP OF ALL MAJOR EQUIPMENT. MANUFACTURER REPRESENTATIVE TO PROVIDE WRITTEN CONFIRMATION THAT EQUIPMENT IS PROPERLY INSTALLED AND TESTED IN ACCORDANCE WITH MANUFACTURER'S REPRESENTATIVES.
1.35. CONTRACTOR SHALL COORDINATE WORK SO THAT AS MUCH CONTROLS WORK AS POSSIBLE IS COMPLETED PRIOR TO INSTALLATION OF NEW EQUIPMENT. DELAY COSTS THAT RESULT FROM FAILURE TO DO THIS SHALL BE INCURRED AT THE CONTRACTORS COST.
1.36. FOR DEFINITIONS REFERENCE HWDSB REQUEST FOR TENDER DOCUMENT 2024-142-P01997 GORDON PRICE CHILLER & COOLING TOWER REPLACEMENT PROJECT.
1.37. FOR HAZARDOUS MATERIALS REFERENCE THE GORDON PRICE CHILLER & COOLING TOWER REPLACEMENT PROJECT BY MTE CONSULTANTS INC., DATED FEBRUARY 22, 2024, AND SPECIFICATION SECTION 02 82 00 ASBESTOS ABATEMENT FOR GORDON PRICE CHILLER & COOLING TOWER REPLACEMENT PROJECT BY MTE CONSULTANTS INC..
1.38. FOR PAYMENT TERMS REFERENCE HWDSB REQUEST FOR TENDER DOCUMENT 2024-00-P01942 GORDON PRICE CHILLER & COOLING TOWER REPLACEMENT PROJECT.
1.39. FOR INSURANCE, BONDING AND WSIB REFERENCE HWDSB REQUEST FOR TENDER DOCUMENT 2024-142-P01997 GORDON PRICE CHILLER & COOLING TOWER REPLACEMENT PROJECT.
1.40. INCLUDE FOR ANY AND ALL CURRENT HEALTH & SAFETY REQUIREMENTS AS PER THE PROVINCE OF ONTARIO.
1.41. FOR RELEASE OF HOLDBACK REFERENCE HWDSB REQUEST FOR TENDER DOCUMENT 2024-142-P01997 GORDON PRICE CHILLER & COOLING TOWER REPLACEMENT PROJECT.
1.42. ACCESS TO SCHOOL WASHROOMS IS NOT AVAILABLE. VENDORS NEED TO HAVE THEIR OWN PORTABLE TOILET. LOCATION TO BE PROVIDED BY THE SUCCESSFUL VENDOR AND REVIEWED/APPROVED BY HWDSB VIA EMAIL PRIOR TO CONSTRUCTION.
1.43. USE OF THE SCHOOL'S ELECTRICAL SERVICE IS ALLOWED TO FACILITATE THE SCOPE OF WORK, IF REQUIRED AND APPROVED VIA EMAIL BY HWDSB.
1.44. PARKING IS ALLOWED ON PROPERTY DURING THE SUMMER, AFTER SCHOOL HOURS AND ON WEEKENDS. FOR PARKING DURING THE SCHOOL YEAR/DAY SUCCESSFUL VENDORS ARE TO PROVIDE A LOCATION FOR REVIEW /APPROVAL BY HWDSB.
1.45. SMOKING, VAPING, DRUGS AND ALCOHOL ARE NOT PERMITTED ON SCHOOL PROPERTY. ANYONE SEEN DOING THESE WILL BE REMOVED FROM THE PROPERTY AND NOT ALLOWED BACK.

- 1.47. FOR SCHOOL ACCESS REQUIREMENTS REFERENCE HWDSB REQUEST FOR TENDER DOCUMENT 2024-142-P01997 GORDON PRICE CHILLER & COOLING TOWER REPLACEMENT PROJECT.
1.48. CONTRACTOR TO PROVIDE CONSTRUCTION SIGNAGE, FENCING, ETC. AS REQUIRED TO FACILITATE SCOPE OF WORK.
1.49. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY INCLUDING FLAG PERSONS, SAFETY LOGS, MEETINGS, ETC.
1.50. CONTRACTOR IS RESPONSIBLE FOR SITE SECURITY INCLUDING SECURITY EQUIPMENT, MATERIAL ETC. SECURITY OF ANY MATERIALS, EQUIPMENT, PORTABLE TOILETS, GARBAGE BINS, VEHICLES ETC. ARE THE CONTRACTOR'S RESPONSIBILITY.
1.51. HWDSB CARETAKING EQUIPMENT IS NOT TO BE USED BY GENERAL CONTRACTOR OR SUBTRADEES.
1.52. CONTRACTOR TO FOLLOW ALL CITY OF HAMILTON BY-LAWS IN TERMS OF NOISE, DUST, DEBRIS ETC., AS REQUIRED TO FACILITATE SCOPE OF WORK.
1.53. CONTRACTOR TO PROVIDE MUD MATS, STREET CLEANING REQUIREMENTS ETC. TO ENSURE THE SURROUNDING COMMUNITY HAS THE LEAST DISTURBANCE FROM CONSTRUCTION, AS REQUIRED TO FACILITATE SCOPE OF WORK.

2. COMPLETION OF CONTRACT

- 2.1. ALL EQUIPMENT MUST BE CLEANED AND TESTED BEFORE FINAL ACCEPTANCE BY CONSULTANT.
2.2. PRIOR TO CONTACTING THE CONSULTANT FOR FINAL INSPECTION, THE CONTRACTOR MUST CORRECT ALL DEFICIENCIES AS SPECIFIED ON THE DEFICIENCY LIST.
2.3. PROVIDE A WRITTEN WARRANTY FOR ONE YEAR COVERING ALL EQUIPMENT, MATERIALS AND WORKMANSHIP FROM THE DATE OF ACCEPTANCE OF THE INSTALLATION BY THE OWNER. INCLUDE IN THE OPERATION AND MAINTENANCE MANUAL.
2.4. ANY DEFECTS OR DEFICIENCIES WHICH ORIGINATE OR BECOME EVIDENT DURING THE WARRANTY PERIOD MUST BE REPAIRED OR CORRECTED AT NO COST TO THE OWNER.

3. AS-BUILT DRAWINGS

- 3.1. AT THE COMPLETION OF WORK AND BEFORE FINAL ACCEPTANCE, PROVIDE REDLINE AS-BUILT DRAWINGS OF THE INSTALLATION TO THE CONSULTANT FOR REVIEW.
3.2. INCORPORATE ALL CHANGES AND DEVIATIONS FROM THE TENDER DRAWINGS IN THE REDLINE AS-BUILTS.
3.3. ALL CONCEALED PIPING RUNS, VALVE AND DAMPER LOCATIONS, SERVICE LOCATIONS, ETC. MUST BE REFLECTED ON THE DRAWINGS.
3.4. REMOVE THE MECHANICAL ENGINEER'S STAMP AND COMPANY NAME FROM ALL DRAWINGS. CLEARLY INDICATE THE WORDS "AS-BUILT" IN THE TITLE BLOCK COLUMN OF THE DRAWINGS AS WELL AS THE MECHANICAL CONTRACTOR'S NAME AND ADDRESS.
3.5. SUBMIT A PRINT TO CONSULTANT TO REVIEW, WHEN FOUND ACCEPTABLE BY THE CONSULTANT, SUBMIT THREE (3) SETS OF PRINTS TOGETHER WITH AUTO CAD DISKS FOR PRESENTATION TO LANDLORD AND TENANT.

4. OPERATION AND MAINTENANCE MANUALS

- 4.1. PROVIDE ELECTRONIC SETS OF OPERATION AND MAINTENANCE MANUALS, TO BE PROVIDED TO THE LANDLORD. INCLUDE THE FOLLOWING INFORMATION IN THE OPERATION AND MAINTENANCE MANUALS:
-TECHNICAL DATA, PRODUCT DATA, SUPPLEMENTED BY BULLETINS, COMPONENT ILLUSTRATIONS, EXPLODED VIEWS, TECHNICAL DESCRIPTIONS OF ITEMS, AND PARTS LISTS. ADVERTISING OR SALES LITERATURE IS NOT ACCEPTABLE.
-THE CONSULTANTS REVIEWED SHOP DRAWINGS.
-CERTIFICATE(S) OF ACCEPTANCE FROM AUTHORITIES HAVING JURISDICTION.
-VERIFICATION REPORTS AND CERTIFICATE(S) FOR ANY NEW LIFE SAFETY COMPONENTS OR TIE-INS TO AN BASE BUILDING SYSTEMS. -AIR BALANCING REPORTS
-WRITTEN GUARANTEE.
-AS-BUILT DRAWINGS.
-CONTACT LIST.
4.1. REVIEW INFORMATION PROVIDED IN THE MAINTENANCE INSTRUCTIONS AND MANUALS WITH THE LANDLORD'S OPERATING PERSONNEL WHERE BASE BUILDING SYSTEMS ARE REVISED, TO ENSURE A COMPLETE UNDERSTANDING OF THE MECHANICAL EQUIPMENT AND SYSTEMS AND THEIR OPERATION.

5. PLUMBING

- 5.1. PROVIDE COMPLETE PLUMBING AND DRAINAGE SYSTEMS INCLUDING ALL NECESSARY LABOUR, SERVICES, PRODUCTS, MATERIALS AND EQUIPMENT.
5.2. PROVIDE ALL WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO PLUMBING CODE AND ALL AUTHORITIES HAVING JURISDICTION INCLUDING ALL APPLICABLE BY-LAWS. ABOVE GROUND SANITARY DRAINAGE AND VENT PIPING 2" AND SMALLER SHALL BE DWV COPPER PIPE WITH DRAINAGE FITTINGS AND 95/5 TIN/ANTIMONY SOLDER JOINTS. SYSTEM XFR 15-50 PIPING AND FITTINGS BY IPEX IN ACCORDANCE WITH CANULUC S102.2 AND CSA B181.2. IS ACCEPTABLE IN LIEU OF COPPER DRAINAGE PIPING. PROVIDE APPROVED FIRESTOP DEVICES AND MATERIALS WHERE PENETRATING FLOORS. PVC DR 35 GRAVITY SEWER PIPE WITH SOLVENT JOINTS IS ACCEPTABLE FOR BELOW GRADE DRAINAGE PIPING.
5.3. ABOVE GROUND DOMESTIC WATER PIPING SHALL BE TYPE "L" HARD COPPER WITH WROUGHT COPPER FITTINGS AND 95/5 TIN/ANTIMONY SOLDER JOINTS. TYPE "K" PIPING SHALL BE USED BELOW GROUND.
5.4. PROVIDE AND COVER ALL DOMESTIC WATER PIPING, VALVES, FITTINGS, APPURTENANCES, ETC. WITH RIGID PREFORMED FIBRE GLASS INSULATION. PROVIDE VAPOUR BARRIER FOR COLD WATER PIPING. INSULATION SHALL BE 1" THICK FOR COLD WATER PIPING AND FOR HOT WATER AND HOT WATER RECIRCULATING PIPING. DO NOT USE STAPLES. ENSURE COMPLETE COVERAGE AND SEAL WITH AN APPROVED VAPOUR BARRIER CEMENT. MAINTAIN THE INTEGRITY OF ALL EXISTING THERMAL INSULATION WHEN CONNECTING NEW PIPING TO EXISTING PIPING. PROVIDE PVC JACKETTING FOR ALL EXPOSED PIPE INSULATION.
5.5. APPLY ONE-PIECE MOLDED TYPE PVC JACKET TO ALL INSULATED PIPING SERVICES IN EXPOSED AREAS. USE SOLVENT WELD ADHESIVE COMPATIBLE WITH INSULATION TO SEAL LAP AND JOINTS. JACKETING TO BE PAINTED BY GENERAL TRADES.
5.6. PROVIDE BALL VALVES AT PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EQUIPMENT TO BE REMOVED FOR SERVICING. PROVIDE BALL VALVES ON ALL MAIN AND BRANCH DOMESTIC WATER PIPING LINES. PROVIDE CHECK VALVES ON SUPPLY SIDE OF EQUIPMENT.
5.7. PROVIDE PIPE LABELING AS PER HWDSB STANDARD ON ALL NEW & MODIFIED SERVICE PIPING INCLUDED UNDER THIS SCOPE OF WORK

6. TESTING, BALANCING, ADJUSTING AND COMMISSIONING

- 6.1. PROVIDE TESTING, BALANCING AND COMMISSIONING OF ALL SYSTEMS. COMMISSIONING SHALL INCLUDE PUTTING INTO SERVICE, ADJUSTING, CALIBRATING AND VERIFYING ALL SYSTEMS, BOTH NEW AND EXISTING.
6.2. PROVIDE AN INDEPENDENT BALANCING COMPANY ACCEPTABLE TO THE CONSULTANT TO TEST, BALANCE AND ADJUST THE AIR AND WATER SYSTEMS.
6.3. WATER SYSTEMS:
1. PERFORM TOTAL MECHANICAL SYSTEMS TESTING, ADJUSTING, AND BALANCING. REQUIREMENTS INCLUDE MEASUREMENT AND ESTABLISHMENT OF THE FLUID QUANTITIES OF THE MECHANICAL SYSTEMS AS REQUIRED TO MEET DESIGN SPECIFICATIONS AND COMFORT CONDITIONS, AND RECORDING AND REPORTING THE RESULTS.
2. MECHANICAL SYSTEMS TO BE TESTED, ADJUSTED AND BALANCED INCLUDE:
1. COOLING SYSTEMS: TAB OF COOLING SYSTEMS IS ALSO TO INCLUDE ALL PIPING AND EQUIPMENT FLUID TEMPERATURES, FLOWS AND CONTROL, AND IF TAB IS NOT DONE DURING THE COOLING SEASON, A FOLLOW-UP SITE VISIT DURING THE COOLING SEASON WILL BE REQUIRED TO CONFIRM FLOW RATES AND TEMPERATURES, AND ANY REQUIRED SYSTEM "FINE TUNING".
2. PREPARATION OF REPORTS: PREPARE REPORTS AS INDICATED BELOW.
DRAFT REPORTS: UPON COMPLETION OF TESTING, ADJUSTING, AND BALANCING PROCEDURES, PREPARE DRAFT REPORTS ON ABC OR NEBB FORMS. DRAFT REPORTS MAY BE HAND WRITTEN, BUT MUST BE COMPLETE, FACTUAL, ACCURATE, AND LEGIBLE. ORGANIZE AND FORMAT DRAFT REPORTS IN THE SAME MANNER SPECIFIED FOR THE FINAL REPORTS. SUBMIT TWO COMPLETE SETS OF DRAFT REPORTS. ONLY ONE COMPLETE SET OF DRAFT REPORTS WILL BE RETURNED.
FINAL REPORT: UPON VERIFICATION AND APPROVAL OF DRAFT REPORTS, PREPARE FINAL REPORTS, TYPE WRITTEN, AND ORGANIZED AND FORMATTED AS SPECIFIED BELOW. SUBMIT 2 COMPLETE SETS OF FINAL REPORTS. USE UNITS OF MEASUREMENT (SI OR IMPERIAL) AS USED ON THE PROJECT DOCUMENTS.

7. HYDRONIC

- 7.1. HYDRONIC SYSTEMS TO 150 PSIG, ABOVE GROUND
1. NOMINAL OPERATING PRESSURE 125 PSIG
2. DESIGN PRESSURE 150 PSIG
3. TEST PRESSURE 225 PSIG
4. DESIGN TEMPERATURE 350°F
5. CORROSION ALLOWANCE 0.0625 IN.
6. STEEL PIPE ASTM A53 GR. B ERW OR ASTM A106 GR.B SMLS, SCH 40.
7. JOINTS, 2" AND SMALLER SCREWED
8. SCREWED FITTINGS 150 LB. MALLEABLE IRON
9. UNIONSCL 150, ASTM A-47 MALLEABLE IRON, ASTM A-153 GALVANIZED, ANSI B2.1 THREADS.
10. JOINTS, 2-1/2" AND LARGER WELDED, WITH FLANGES AT CONNECTIONS TO EQUIPMENT
11. BUTT WELD FITTINGS ASTM A234 GR. WFB
12. FLANGES ASTM A105, CLASS 150, RAISED FACE, WELD NECK OR SLIP ON
13. BOLTS ASTM A307 C.S. BOLTS, SO. HEAD, ASTM A563 NUTS, HEX HEAD
14. GASKETS 1/16" (1.6 MM) THICK PREFORMED NON-ASBESTOS GRAPHITE FIBRE.
15. COPPER TUBING, 2" AND SMALLER ASTM B88, TYPE L, HARD DRAWN
16. JOINTS: SOLDER, LEAD FREE, ASTM B32, 95-5 TIN-ANTIMONY, OR TIN AND SILVER, WITH MELTING RANGE 220 °C TO 280 °C.
17. FITTINGS: ASME B16.18, CAST BRASS, OR ASME B16.22, SOLDER WROUGHT COPPER
18. DIELECTRIC UNIONS: UNION WITH GALVANIZED OR PLATED STEEL THREADED END, COPPER SOLDER END, WATER IMPERVIOUS ISOLATION BARRIER.
19. VALVES, 2" AND SMALLER ASTM A105
20. GATE VALVES (ISOLATING) 300 PSIG NON-SHOCK WOG, ASTM B62 BRONZE BODY, SOLID W EDGE DISC, RISING STEM, BRONZE TRIM, THREADED ENDS, KITZ #25
21. GLOBE VALVES (THROTTLING) 300 PSIG NON-SHOCK WOG, ASTM B62 BRONZE BODY, COMPOSITION (ITERLOW) DISC, BRONZE TRIM, THREADED ENDS, KITZ #69
22. CHECK VALVES (BACKFLOW) 300 PSIG NON-SHOCK WOG, ASTM B62 BRONZE BODY, Y-PATTERN HORIZONTAL, SWING TYPE DISC, THREADED ENDS, KITZ #29
23. BALL VALVES (DRAIN) 600 PSIG NON-SHOCK WOG, FORGED BRASS, 2-PIECE, CHROME BALL AND STEM, FULL PORT, BLOW-OUT PROOF PTFE SEATS & STEM, LEVER HANDLE, THREADED ENDS, KITZ #68AC.

8. CONTROLS

- 8.1. PROVIDE ALL CONTROLS, INCLUDING WIRING, APPROVED CABLE, FITTINGS, THERMOSTATS, RELAYS AUTOMATIC CONTROL VALVES, TRANSFORMERS, DAMPERS, FIRE STATS, FREEZE STATS, SWITCHES AND ACCESSORIES AS REQUIRED FOR COMPLETELY OPERATIONAL SYSTEMS. PROVIDE ALL NECESSARY CONNECTIONS, INTERLOCKS AND COMPONENTS FROM MAINS TO DAMPERS, CONTROL VALVES, THERMOSTATS, AND ANY OTHER DEVICES AS REQUIRED. ALL EXPOSED WIRING SHALL BE INSTALLED IN RIGID CONDUIT, WIRING INSTALLED ABOVE ACCESSIBLE CEILING SHALL BE SECURED TO STRUCTURAL MEMBERS, WIRING SHALL NOT BE SECURED TO MECHANICAL OR ELECTRICAL EQUIPMENT OR DEVICES, AND SHALL NOT BE REST ON CEILING TILES.
8.2. EQUIPMENT MANUFACTURER TO PROVIDE DDC BASED EQUIPMENT CONTROLLER PROVIDED WITH THE EQUIPMENT FOR INTEGRATION INTO THE EXISTING BAS SYSTEM.
8.3. PROVIDE ALL CONNECTIONS AND DEVICES NECESSARY TO INTERLOCK OR MAINTAIN THE INTENT OF ALL HVAC SYSTEMS, EQUIPMENT, AND ASSOCIATED ZONE CONTROL OF CHILLED WATER COOLING SYSTEMS AS REQUIRED.
8.4. ALL CONTROL WORK SHALL BE PERFORMED BY JOHNSON CONTROLS INC.
RAY KAMPEN
HVAC SMART BUILDING ACCOUNT EXECUTIVE
JOHNSON CONTROLS CANADA LP
(905) 730 9895
RAYMOND.A.KAMPEN@JCI.COM
8.5. CHILLED WATER SYSTEM BAS POINTS LIST:
COOLING TOWER 'CT-1':
1. STATUS
2. TEMPERATURE (SUPPLY & RETURN)
3. FLOW
4. RUN TIME TOTAL
5. PUMP P-CW-8 STATUS
6. PUMP P-CW-7 VFD SPEED
7. COOLING TOWER FAN 1 VFD SPEED
8. COOLING TOWER FAN 2 VFD SPEED
CHILLER 'CH-1':
1. STATUS
2. ALARM
3. ENABLE/DISABLE
4. TEMPERATURE (SUPPLY & RETURN)
5. FLOW
6. RUN TIME TOTAL
7. PUMP P-CW-7 STATUS
8. PUMP P-CW-7 VFD SPEED

9. REFRIGERANT GAS DETECTION SYSTEM SEQUENCE OF OPERATION

- 9.1. EF-5 NORMALLY SHALL HAVE ON/OFF OPERATION VIA A REVERSE ACTING THERMOSTAT AND WHEN ON RUN AT LOW SPEED 500 CFM.
9.2. WHEN THE SENSOR DETECTS LEVELS OF REFRIGERANT ABOVE 19.1 LBS/1000 CU.FT. AS PER CSA B52, THE HONEYWELL PANEL SHALL BE SET TO REVERSE ACTING THERMOSTAT TO OVERRIDE TEMPERATURE SETTING AND TURN ON EF-5 AND RAMP UP EF-5 TO HIGH SPEED 1000 CFM. HORN/STROBE AT EACH INTERIOR DOOR SHALL BE ACTIVATED.
9.3. WHEN THE SENSOR CLEARS, EF-5 SHALL BE TURNED OFF. EACH HORN/STROBE SHALL DE-ACTIVATE.

10. WATER TREATMENT

- 10.1. WATER TREATMENT SHALL BE PERFORMED BY AQUARIAN CHEMICALS INC.:
MAURO CESA
788 WESTGATE ROAD, UNIT 8, OAKVILLE, ONTARIO L6L 5N2
TEL: 416-540-1883
FAX: 905-825-0177
MAIL TO: MCESA@AQUARIANCHEMICALS.COM

11. EQUIPMENT & SYSTEM TRAINING

- 11.1. TRAIN THE OWNER'S DESIGNATED PERSONNEL IN ALL ASPECTS OF OPERATION AND MAINTENANCE OF EQUIPMENT AND SYSTEMS. ALL DEMONSTRATIONS AND TRAINING IS TO BE PERFORMED BY QUALIFIED TECHNICIANS EMPLOYED BY THE EQUIPMENT/SYSTEM MANUFACTURER/SUPPLIER.
11.2. FOR EACH ITEM OF EQUIPMENT AND FOR EACH SYSTEM FOR WHICH TRAINING IS SPECIFIED, PREPARE TRAINING MODULES AS SPECIFIED BELOW. OPERATING AND MAINTENANCE MANUALS ARE TO BE USED DURING THE TRAINING SESSIONS, AND TRAINING MODULES ARE TO INCLUDE:
1. OPERATING REQUIREMENTS AND CRITERIA: REQUIREMENTS AND CRITERIA ARE TO INCLUDE BUT NOT BE LIMITED TO EQUIPMENT FUNCTION, STOPPING AND STARTING, SAFETIES, OPERATING STANDARDS, OPERATING CHARACTERISTICS, PERFORMANCE CURVES, AND LIMITATIONS.
2. TROUBLESHOOTING: TROUBLESHOOTING IS TO INCLUDE BUT NOT BE LIMITED TO DIAGNOSTIC INSTRUCTIONS, DISASSEMBLY, COMPONENT REMOVAL AND REPAIR INSTRUCTIONS, INSTRUCTIONS FOR IDENTIFYING PARTS AND COMPONENTS, AND REVIEW OF ANY SPARE PARTS INVENTORY.
3. DOCUMENTATION: DOCUMENTATION IS TO INCLUDE BUT NOT BE LIMITED TO EQUIPMENT/SYSTEM WARRANTIES, AND MANUFACTURER'S/SUPPLIER'S PARTS AND SERVICE FACILITIES, TELEPHONE NUMBERS, EMAIL ADDRESSES, AND THE LIKE.
4. MAINTENANCE: MAINTENANCE REQUIREMENTS ARE TO INCLUDE BUT NOT BE LIMITED TO INSPECTION INSTRUCTIONS, TYPES OF CLEANING AGENTS TO BE USED AS WELL AS CLEANING METHODS, PREVENTIVE MAINTENANCE PROCEDURES, AND USE OF ANY SPECIAL TOOLS.
5. REPAIRS: REPAIR REQUIREMENTS ARE TO INCLUDE BUT NOT BE LIMITED TO DIAGNOSTIC INSTRUCTIONS, DISASSEMBLY, COMPONENT REMOVAL AND REPAIR INSTRUCTIONS, INSTRUCTIONS FOR IDENTIFYING PARTS AND COMPONENTS, AND REVIEW OF ANY SPARE PARTS INVENTORY.
11.3. ASSEMBLE THE TRAINING MODULES INTO A TRAINING MANUAL AND SUBMIT A COPY TO THE CONSULTANT FOR REVIEW PRIOR TO SCHEDULING TRAINING. ENSURE THAT EACH PARTICIPANT IN EACH TRAINING SESSION HAS ALL REQUIRED TRAINING MATERIAL.
11.4. SCHEDULE DEMONSTRATIONS AND TRAINING AT MUTUALLY AGREED TO TIMES WITH A MINIMUM OF SEVEN WORKING DAYS NOTICE. REFER TO SPECIFICATION SECTION 01 79 00 FOR FURTHER DETAILS.

KEY PLAN
HWDSB
7 ISSUED FOR ADDENDUM 1 2024/06/25
6 ISSUED FOR TENDER 2024/06/05
5 ISSUED FOR PERMIT 2024/05/10
4 ISSUED FOR REVIEW 2024/05/03
3 ISSUED FOR PERMIT 2024/05/14
2 ISSUED FOR PERMIT REVIEW 2024/03/08
1 ISSUED FOR 90% PROGRESS SET 2024/02/02
NO. 1 DESCRIPTION DATE
REVISIONS:
DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ENGINEER BEFORE PROCEEDING. ONLY DIMENSIONS MUST BE USED. THE CONTRACTOR MUST CHECK THE DIMENSIONS ON SITE. THE DRAWING IS PROTECTED BY COPYRIGHT. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS.
DO NOT SCALE THE DRAWINGS.
mcCallumSather
Westinghouse HQ, 2nd Floor
286 Sanford Ave. N
Hamilton, ON L8L 6A1
905.526.6700
www.mccallumsather.com
PROJECT:
GORDON PRICE ELEMENTARY SCHOOL
11 GUILDWOOD DR. HAMILTON, ON L9C 7K2
DRAWING TITLE:
MECHANICAL SPECIFICATIONS
DRAWN BY: FS DATE: 23/04/20
CHECKED BY: DR SCALE: As Indicated
PROJECT NO: 23080
DRAWING NO: M5.01