

| OIL FIRED BOILER SCHEDULE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---------------------|-------|-------|-------------|-------|----------------|------------------|---------------|---------------------------|--------------------|------------------------|--------------------|----------------|------------|-------|-------------|-------------|---------|--------------|--------------------------|--------------|-------|----------------|------------|-------|--------|--------|-------|--------|-------|------------|-------|------|
| TAG | HEATING PERFORMANCE | | | | | | | | | | | | | WATER SIDE | | | | | | PHYSICAL CHARACTERISTICS | | | | | | | | | | | | | |
| | ENERGY TYPE | INPUT | | MIN. OUTPUT | | COMB. EFF. (%) | THERMAL EFF. (%) | # OF SECTIONS | HTG SURFACE FLUE GAS SIDE | | HTG SURFACE WATER SIDE | | BURNER CONTROL | FLOW RATE | | PRESS. DROP | INLET CONN. | | OUTLET CONN. | | FLUID VOLUME | | OVERALL WEIGHT | | WIDTH | | LENGTH | | HEIGHT | | FLUE CONN. | | |
| | | (kW) | (MBH) | (kW) | (MBH) | | | | (m ²) | (ft ²) | (m ²) | (ft ²) | | (L/s) | (GPM) | | (Pa) | (ft.WC) | (mm) | (in.) | (mm) | (in.) | (Litres) | (U.S.Gal.) | (kg) | (lbs.) | (mm) | (in.) | (mm) | (in.) | (mm) | (in.) | (mm) |
| B-2 | #2 OIL | 643.6 | 2,196 | 568.9 | 1,941 | 87.8 | 88.0 | 13 | 23.6 | 254 | 13.2 | 142 | MODULATING | 12.05 | 191.0 | 14.9 | 5.0 | 101.6 | 4.0 | 101.6 | 4.0 | 359.6 | 95.0 | 2,425 | 5,335 | 1,251 | 49 1/4 | 2,000 | 78 3/4 | 1,289 | 50 3/4 | 305 | 12 |

NOTES:
 1. OIL FIRED BOILER WITH STAINLESS STEEL HEAT EXCHANGER.
 2. PROVIDE MANUFACTURED CATEGORY IV VENTING.
 3. BOILER TO BE INTERLOCKED WITH RESECTIVE BOILER PUMP AND OPERATION.
 4. PROVIDE A BOILER MANAGEMENT SYSTEM TO CONTROL BOILER AND START/STOP OF RESPECTIVE PUMP. SYSTEM TO BE INTERFACED WITH EMCS. REFER ALSO TO SEQUENCE OF OPERATIONS
 5. PIPE RELIEF TO DRAIN AND PROVIDE LOW WATER CUT OFF.

| ELECTRIC BOILER SCHEDULE | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---------------------|-------|-------|----------|------|----------------------|------------------------|------------|-------|-------------|---------|-------------|-------|--------------|--------------------------|--------------|------------|----------------|--------|-------|-------|--------|-------|--------|-------|--|--|
| TAG | HEATING PERFORMANCE | | | | | | | WATER SIDE | | | | | | | PHYSICAL CHARACTERISTICS | | | | | | | | | | | | |
| | ENERGY TYPE | RATED | | ELEMENTS | | NUMBER OF CONTACTORS | NUMBER AND KW OF STEPS | FLOW RATE | | PRESS. DROP | | INLET CONN. | | OUTLET CONN. | | FLUID VOLUME | | OVERALL WEIGHT | | WIDTH | | LENGTH | | HEIGHT | | | |
| | | (kW) | (MBH) | QTD. | (kW) | | | (L/s) | (GPM) | (Pa) | (ft.WC) | (mm) | (in.) | (mm) | (in.) | (Litres) | (U.S.Gal.) | (kg) | (lbs.) | (mm) | (in.) | (mm) | (in.) | (mm) | (in.) | | |
| B-1A | ELECTRIC | 162.1 | 553 | 27.0 | 6 | 5 | 3@36, 1@54 | 3.50 | 55.5 | 7.5 | 2.5 | 76.2 | 3.0 | 76.2 | 3.0 | 94.6 | 25.0 | 457 | 1,005 | 914 | 36 | 864 | 34 | 1,727 | 68 | | |
| B-1B | ELECTRIC | 162.1 | 553 | 27.0 | 6 | 5 | 3@36, 1@54 | 3.50 | 55.5 | 7.5 | 2.5 | 76.2 | 3.0 | 76.2 | 3.0 | 94.6 | 25.0 | 457 | 1,005 | 914 | 36 | 864 | 34 | 1,727 | 68 | | |
| B-1C | ELECTRIC | 162.1 | 553 | 27.0 | 6 | 5 | 3@36, 1@54 | 3.50 | 55.5 | 7.5 | 2.5 | 76.2 | 3.0 | 76.2 | 3.0 | 94.6 | 25.0 | 457 | 1,005 | 914 | 36 | 864 | 34 | 1,727 | 68 | | |

NOTES:
 1. BOILER TO BE INTERLOCKED WITH RESECTIVE BOILER PUMP AND OPERATION.
 2. PROVIDE A BOILER MANAGEMENT SYSTEM TO CONTROL BOILER AND START/STOP OF RESPECTIVE PUMP. SYSTEM TO BE INTERFACED WITH EMCS. REFER ALSO TO SEQUENCE OF OPERATIONS

| PUMP SCHEDULE | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|-----------------------------------|---------|-------|-----------|-------|-----------|-------|-------|---------|---------------------|--------------------|--------------|-------|-------|-------|---------|-------|-------|--------|-----|
| TAG | TYPE | SERVES | SUCTION | | DISCHARGE | | FLOW RATE | | HEAD | | DUTY POINT EFF. (%) | PART LOAD EFF. (%) | IMPELLER DIA | | NPSHr | MOTOR | | | NOTES | | |
| | | | (mm) | (in.) | (mm) | (in.) | (L/s) | (gpm) | (kPa) | (ft.WC) | | | (mm) | (in.) | | (kPa) | (ft.WC) | (kW) | | (H.P.) | RPM |
| P-1A | HIGH EFFICIENCY LARGE WET ROTOR CIRC WITH ECM MOTOR | PRIMARY - BOILER B-1A | 51 | 2.00 | 51 | 2.00 | 3.53 | 56 | 18 | 6 | 57 | N/A | N/A | N/A | N/A | 1.49 | 2.00 | 1,309 | 1.2 | | |
| P-1B | HIGH EFFICIENCY LARGE WET ROTOR CIRC WITH ECM MOTOR | PRIMARY - BOILER B-1B | 51 | 2.00 | 51 | 2.00 | 3.53 | 56 | 18 | 6 | 57 | N/A | N/A | N/A | N/A | 1.49 | 2.00 | 1,309 | 1.2 | | |
| P-1C | HIGH EFFICIENCY LARGE WET ROTOR CIRC WITH ECM MOTOR | PRIMARY - BOILER B-1C | 51 | 2.00 | 51 | 2.00 | 3.53 | 56 | 18 | 6 | 57 | N/A | N/A | N/A | N/A | 1.49 | 2.00 | 1,309 | 1.2 | | |
| P-1D | HIGH EFFICIENCY LARGE WET ROTOR CIRC WITH ECM MOTOR | PRIMARY - BOILER B-2 | 51 | 2.00 | 51 | 2.00 | 12.05 | 191 | 36 | 12 | 54 | N/A | N/A | N/A | N/A | 1.49 | 2.00 | 2,368 | 1.2 | | |
| P-2A | SPLIT COUPLED IN-LINE CENTRIFUGAL PUMP | SECONDARY (DUTY 2 STAGE/STAND-BY) | 76 | 3.00 | 76 | 3.00 | 10.09 | 160 | 158 | 53 | 67 | 61 | 197 | 7.75 | 21 | 7.2 | 3.73 | 5.00 | 1,703 | 1.3 | |
| P-2B | SPLIT COUPLED IN-LINE CENTRIFUGAL PUMP | SECONDARY (DUTY 2 STAGE/STAND-BY) | 76 | 3.00 | 76 | 3.00 | 10.09 | 160 | 158 | 53 | 67 | 61 | 197 | 7.75 | 21 | 7.2 | 3.73 | 5.00 | 1,703 | 1.3 | |
| P-2C | SPLIT COUPLED IN-LINE CENTRIFUGAL PUMP | SECONDARY (DUTY 2 STAGE/STAND-BY) | 76 | 3.00 | 76 | 3.00 | 10.09 | 160 | 158 | 53 | 67 | 61 | 197 | 7.75 | 21 | 7.2 | 3.73 | 5.00 | 1,703 | 1.3 | |

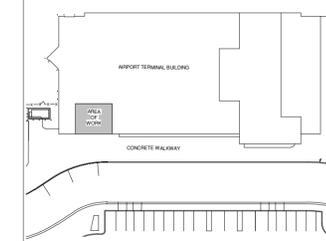
NOTES:
 1. FLUID: 100% WATER.
 2. ECM WET ROTOR PUMP WITH BUILT IN CONTROL.
 3. PROVIDE SUCTION DIFFUSER, TRIPLE DUTY VALVE, STAINLESS STEEL FLEXIBLE CONNECTIONS, INTEGRATED SENSORLESS VFD CONTROL SYSTEM WITH BUILT IN BACNET COMPATIBILITY.

| EXPANSION TANK SCHEDULE | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|-------------|------------|-------------------|------------|---------------------|--------|-------------------------------|-------|----------|--------|-----------------|-------|---------|-------|-------------------|-------|------------|
| TAG | ARRANGEMENT | TANK VOLUME | | ACCEPTANCE VOLUME | | PRE-CHARGE PRESSURE | | MAXIMUM RATED CHARACTERISTICS | | | | TANK DIMENSIONS | | | | SYSTEM CONNECTION | | ASME RATED |
| | | (Litres) | (U.S.Gal.) | (Litres) | (U.S.Gal.) | (kPa) | (PSIG) | TEMPERATURE | | PRESSURE | | DIAMETER | | HEIGHT | | (mm) | (in.) | |
| | | | | | | | | (C) | (F) | (kPa) | (PSIG) | (mm) | (in.) | (mm) | (in.) | | | |
| ET-1 | VERTICAL | 416 | 110.0 | 129 | 34.0 | 83 | 12 | 115.6 | 240.0 | 862 | 125 | 609.60 | 24.00 | 1676.40 | 66.00 | 25 | 1.00 | YES |

NOTES:
 1. REFER TO DETAILS FOR REQUIRED ACCESSORIES AND VALVING.

| COMBINATION HYDRAULIC, AIR, DIRT AND MAGNETIC SEPARATOR | | | | | | | | | | | | | | | | |
|---|-------------|----------|------------|----------------|-------|-------------------------------|-------|----------|--------|--------------------|--------|---------|--------|--------------------|-------|------------|
| TAG | ARRANGEMENT | VOLUME | | WATERFLOW RATE | | MAXIMUM RATED CHARACTERISTICS | | | | OVERALL DIMENSIONS | | | | SYSTEM CONNECTIONS | | ASME RATED |
| | | (Litres) | (U.S.Gal.) | (L/s) | (gpm) | TEMPERATURE | | PRESSURE | | DIAMETER | | HEIGHT | | (mm) | (in.) | |
| | | | | | | (C) | (F) | (kPa) | (PSIG) | (mm) | (in.) | (mm) | (in.) | | | |
| HS-1 | VERTICAL | 30 | 8.0 | 15.58 | 247 | 104.4 | 220.0 | 1034 | 150 | 469.90 | 18 1/2 | 1225.55 | 48 1/4 | 102 | 4.00 | YES |

NOTES:
 1. INSTALL PER MANUFACTURERS INSTRUCTIONS.



| | | |
|---|---------------------------|------------|
| 3 | ISSUED FOR CONSTRUCTION | 2022-05-17 |
| 2 | 99% CONSTRUCTION DOCUMENT | 2021-08-06 |
| 1 | 50% DESIGN SUBMISSION | 2021-05-28 |

| | | |
|--|---------|------|
| revisions | | date |
| project | project | |
| Wabush - ATB Boiler Upgrade | | |
| Wabush Airport Terminal Building (ATB) | | |
| drawing | dessin | |

MECHANICAL SCHEDULES

| | |
|----------------------|---------------------------------|
| designed | conçu |
| MG | |
| drawn | dessiné |
| IS | |
| approved | approuvé |
| DH | |
| Tender | Soumission |
| PSPC Project Manager | Administrateur de projets TPSGC |
| project no. | no. du projet |
| R111141.001 | |
| drawing no. | no. du dessin |

M-4

