

**HEAT RECOVERY VENTILATOR (BASED ON TEMPEFF)**

| TAG    | FUNCTION          | MODEL NUMBER | SUPPLY AIR | S/A FAN    | E.S.P. | MOTOR   | E/A FAN    | EXHAUST AIR | E.S.P. | MOTOR   | WINTER DESIGN OUTDOOR TEMP | WINTER S/A TEMP FROM UNIT | WEIGHT  |
|--------|-------------------|--------------|------------|------------|--------|---------|------------|-------------|--------|---------|----------------------------|---------------------------|---------|
| HRV-1  | WASH BAY          | 12G16000     | 4371 L/S   | GXLB-5-056 | 249 PA | 5.59 KW | GXLB-5-056 | 4371 L/S    | 249 PA | 5.59 KW | -30°C                      | 18°C                      | 3500 KG |
| HRV-2  | SM (SOUTH)        | RG9000       | 2562 L/S   | GXLB-5-045 | 249 PA | 3.73 KW | GXLB-5-045 | 2562 L/S    | 249 PA | 3.73 KW | -30°C                      | 21.11°C                   | 2150 KG |
| HRV-3  | SM (NORTH)        | RG11000      | 3408 L/S   | GXLB-5-045 | 249 PA | 5.59 KW | GXLB-5-045 | 3408 L/S    | 249 PA | 5.59 KW | -30°C                      | 21.11°C                   | 2300 KG |
| HRV-4  | BRIDGE OPERATIONS | RG3600       | 1269 L/S   | GXLB-5-028 | 249 PA | 2.24 KW | GXLB-5-28  | 1260 L/S    | 249 PA | 2.24 KW | -30°C                      | 21.11°C                   | 850 KG  |
| HRV-5A | LOCKERS           | RG5400       | 1692 L/S   | GXLB-5-031 | 150 PA | 2.24 KW | GXLB-5-031 | 1692 L/S    | 150 PA | 2.24 KW | -30°C                      | 21.11°C                   | 1080 KG |
| HRV-5B | OFFICES           | RG3600       | 1269 L/S   | GXLB-5-028 | 249 PA | 2.24 KW | GXLB-5-028 | 1269 L/S    | 249 PA | 2.24 KW | -30°C                      | 21.11°C                   | 850 KG  |
| HRV-8  | VEHICLE STORAGE   | RG3600       | 1128 L/S   | GXLB-5-028 | 249 PA | 2.24 KW | GXLB-5-028 | 1128 L/S    | 249 PA | 2.24 KW | -30°C                      | 21.11°C                   | 850 KG  |
| HRV-9  | FLEET GARAGE      |              | 5311 L/S   |            | 249 PA |         |            | 5076 L/S    | 249 PA |         | -30°C                      |                           |         |
| HRV-10 | FLEET OFFICES     | RG1800       | 401 L/S    | GXLB-5-022 | 249 PA | 1.12 KW | GXLB-5-022 | 400 L/S     | 249 PA | 1.12 KW | -30°C                      | 21.11°C                   | 590 KG  |

**RADIANT TUBE HEATERS (BASED ON SCHWANK)**

| TAG   | MODEL         | LENGTH (M) | OUTPUT (KW) | WEIGHT |
|-------|---------------|------------|-------------|--------|
| RTH-1 | STW-JZ-130-30 | 9.1        | 38.1        |        |
| RTH-2 | STW-JZ-80-20  | 6.1        | 23.4        |        |
| RTH-3 | STS-JZ-130-30 | 9.1        | 38.1        |        |
| RTH-4 | STS-JZ-130-40 | 12.2       | 38.1        |        |
| RTH-5 | STS-JZ-155-40 | 12.2       | 45.4        |        |
| RTH-6 | STS-JZ-80-20  | 6.1        | 23.4        |        |

**EXPANSION TANKS (BASED ON AMTROL)**

| TAG  | MODEL | TANK VOLUME | ACCEPTANCE VOLUME | SIZE | NOTES |
|------|-------|-------------|-------------------|------|-------|
| XT-1 |       |             |                   |      |       |
| XT-2 |       |             |                   |      |       |

**TAILPIPE EXHAUST FAN (BASED ON MONOXIVENT)**

| TAG    | MODEL NUMBER | FLOW | ESP | HOSE REEL MODEL | HOSE DIAM |
|--------|--------------|------|-----|-----------------|-----------|
| TPEF-1 |              |      |     |                 |           |

**ELECTRIC HUMIDIFIER (BASED ON NORTEC)**

| TAG  | SPACE SERVED | MODEL              | POWER  | STEAM CAPACITY | DRAIN CONNECTION | WEIGHT  |
|------|--------------|--------------------|--------|----------------|------------------|---------|
| H-5B | OFFICES      | NHTC-020/550-600/1 | 7.5 KW | 9.1 KG/HR      | 22.4 MM OD       | 40.5 KG |
| H-10 | FLEET OFFICE | NHTC-050/550-600-3 | 5 KW   | 22.7 KG/HR     | 22.4 MM OD       | 70.1 KG |

**HYDRONIC HEATERS (BASED ON RITTLING)**

| TAG     | MODEL     | CAPACITY | WATER FLOW | PRESSURE DROP | AIR FLOW | MOTOR POWER | WATER TEMP DROP | WEIGHT |
|---------|-----------|----------|------------|---------------|----------|-------------|-----------------|--------|
| HUH-1   | RH-18     | 3.8 KW   | 0.08 L/S   | 1.46 KPA      | 188 L/S  | 25 W        | 11.1°C          |        |
| HUH-2,3 | RH-33     | 7.2 KW   | 0.16 L/S   | 358 PA        | 233 L/S  | 50 W        | 11.1°C          |        |
| HFF-1   | RF-220 06 | 11.8 KW  | 0.13 L/S   | 597 PA        | 296 L/S  | 75 W        | 11.1°C          |        |

**AIR COMPRESSOR (BASED ON SULLAIR)**

| TAG  | MODEL           | CAPACITY | PRESSURE | DRYER SIZE | FILTER SIZE | CONNECTION | DBA RATING | WEIGHT |
|------|-----------------|----------|----------|------------|-------------|------------|------------|--------|
| AC-1 | VAT-5063        | 17.3 L/S | 1034 KPA | -          | -           | 3/4" NPT   | -          | 185 KG |
| AC-2 | SHOP-TEK ST1509 | 36.7 L/S | 862 KPA  | RH-100     | FXF-130     | 3/4" NPT   | 70 AT 1 M  | 601 KG |

**AIR STORAGE TANK (BASED ON SULLAIR)**

| TAG   | CAPACITY | M       | PRESSURE | ACCESSORIES   |
|-------|----------|---------|----------|---|
| AST-2 | 4012 L   | 1219 MM | 1034 KPA | SAFETY RELIEF VALVE, PRESSURE GAUGE AND PNEUMATIC NO-LOSS DRAIN VALVE |

**PUMPS**

| TAG      | MANUFACTURER    | MODEL        | FLOW     | HEAD      | POWER   | COMMENTS  |
|----------|-----------------|--------------|----------|-----------|---------|---|
| DHWP-1   | PATTERSON       | 5735-95 AMT  | 3.77 L/S |           | 249 W   |   |
| DHWP-2   | PATTERSON       | 5690-95 AMT  | 0.71 L/S |           | 187 W   |   |
| DHWP-3   | PATTERSON       | 5730-95 AMT  | 4.95 L/S |           | 373 W   |   |
| DHWP-4   | PATTERSON       | 5720-95 AMT  | 1.98 L/S |           | 187 W   |   |
| BCP-1/2  | PATTERSON       | V4D7-CC      | 14.2 L/S | 89.6 KPA  | 3.73 KW |   |
| HWCP-1/2 | BELL AND GOSSET | 80-4X4X9 1/2 | 18.9 L/S | 238.9 KPA | 11.2 KW |   |
| SP-1A/B  | ZOELLER         | N276         | 6.6 L/S  | 23.9 KPA  | 373 W   | 39-0084 GUIDE RAIL ASSEMBLIES, DS3-225/2X0.5/1/60-39 DUPLEX CONTROL PANEL |

**CONDENSING BOILER (BASED ON CAMUS)**

| TAG   | SERIES    | MODEL | MAX INPUT | MAX OUTPUT | THERM EFF | VENT          | FLOW   | WATER PRESS DROP | WATER CAPACITY | WEIGHT |
|-------|-----------|-------|-----------|------------|-----------|---------------|--------|------------------|----------------|--------|
| B-1/2 | DYNAFORCE | 2500  | 732 KW    | 694 KW     | 93%       | 225@ AT 11/TV | 15 L/S | 80.9 KPA         | 50 L           | 397 KG |

**ROOF TOP UNITS (BASED ON TRANE)**

| TAG   | FUNCTION           | MODEL NUMBER  | NOMINAL TONNAGE | SUPPLY AIR | E.S.P. | BLOWER MOTOR | OUTSIDE AIR | REFRIGERANT | HEAT INPUT | HEAT OUTPUT | WEIGHT |
|-------|--------------------|---------------|-----------------|------------|--------|--------------|-------------|-------------|------------|-------------|--------|
| RTU-1 | WOODSHOP           | YSC048E1EHA   | 4               | 752 L/S    | 249 PA | 746 W        | 33 L/S      | R-410A      | 35.2 KW    | 28.1 KW     | 256 KG |
| RTU-2 | TOOL STORAGE/ASSEM | 4YCC3024B1064 | 2               | 376 L/S    | 200 PA | 187 W        | 22 L/S      | R-410A      | 18.75 KW   | -           | 175 KG |
| RTU-3 | PAINT ROOM         | 4YCC3024B1064 | 2               | 376 L/S    | 200 PA | 187 W        | 22 L/S      | R-410A      | 18.75 KW   | -           | 175 KG |

C/W ROOF CURB, 100% MODULATING ECONOMIZER, 2" PLEATED MERV 11 FILTER, NIGHT SET BACK MODE, RETURN AIR TEMPERATURE LIMIT CONTROL, WARM-UP MODE DELAY

**FANS (BASED ON LOREN COOK)**

| TAG   | FUNCTION          | TYPE                | PRODUCT ILNE | MODEL NUMBER | DRIVE | FLOW     | E.S.P. | POWER  | MOUNTING  | COMMENT          |
|-------|-------------------|---------------------|--------------|--------------|-------|----------|--------|--------|-----------|------------------|
| EF-1  | WASH BAY          | UPBLAST CENTRIFUGAL |              |              |       | 4371 L/S |        |        | ROOF CURB | MOTORIZED DAMPER |
| EF-2  | SM (SOUTH)        | UPBLAST CENTRIFUGAL | ACRU-B       | 210R8B       | BELT  | 2562 L/S | 100 PA | 1.1 KW | ROOF CURB | MOTORIZED DAMPER |
| EF-3  | SM (NORTH)        | UPBLAST CENTRIFUGAL | ACRU-B       | 270R9B       | BELT  | 3408 L/S | 100 PA | 1.5 KW | ROOF CURB | MOTORIZED DAMPER |
| EF-4  | BRIDGE OPERATIONS | UPBLAST CENTRIFUGAL | ACRU-B       | 270R9B       | BELT  | 3431 L/S | 100 PA | 1.5 KW | ROOF CURB | MOTORIZED DAMPER |
| EF-5  | FLEET MEZZ MECH   | UPBLAST CENTRIFUGAL | ACRU-B       | 100R3B       | BELT  | 236 L/S  | 100 PA | 187 W  | ROOF CURB | MOTORIZED DAMPER |
| EF-6  | PLASTIC WELDING   | INLINE DUCT BLOWER  | SDB          |              |       |          |        |        | SUSPENDED | MOTORIZED DAMPER |
| EF-7  | PAINT ROOM        | UPBLAST CENTRIFUGAL | ACRU-B       | 300R8B       | BELT  | 752 L/S  | 75 PA  | 1.1 KW | ROOF CURB | MOTORIZED DAMPER |
| EF-8  | VEHICLE STORAGE   | UPBLAST CENTRIFUGAL | ACRU-B       | 270R9B       | BELT  | 3572 L/S | 100 PA | 1.5 KW | ROOF CURB | MOTORIZED DAMPER |
| EF-9  | FLEET GARAGE      | UPBLAST CENTRIFUGAL | ACRU-B       | 365R9B       | BELT  | 5076 L/S | 100 PA | 1.5 KW | ROOF CURB | MOTORIZED DAMPER |
| EF-10 | FLEET STORAGE     | UPBLAST CENTRIFUGAL | ACRU-B       | 330R9B       | BELT  | 4719 L/S | 100 PA | 1.5 KW | ROOF CURB | MOTORIZED DAMPER |
| EF-11 | CENT SERV OB      | INLINE DUCT BLOWER  | SON-B        | 80SQN-B      | BELT  | 245 L/S  | 100 PA | 187 W  | SUSPENDED |                  |
| EF-12 | CENT SERV OB      | INLINE DUCT BLOWER  | SON-B        | 150SQN-B     | BELT  | 991 L/S  | 75 PA  | 373 W  | SUSPENDED |                  |
| EF-13 | STREET MAINT OB   | INLINE DUCT BLOWER  | SON-B        | 300SQN-B     | BELT  | 4935 L/S | 100 PA | 2.2 KW | SUSPENDED |                  |
| EF-14 | EAST AREA OB      | INLINE DUCT BLOWER  | SDB          | 100 SDB      | BELT  | 1210 L/S | 75 PA  |        |           |                  |
| SF-1  | FLEET MEZZ        | INLINE DUCT BLOWER  | SON-B        | 135SQN-B     | BELT  | 611 L/S  | 149 PA | 249 PA | SUSPENDED |                  |
| SF-2  | CENT SERV OB      | INLINE DUCT BLOWER  | SDB          | 100 SDB      | BLET  | 212 L/S  | 100 PA | 187 W  | SUSPENDED |                  |

**INSTANTANEOUS INDIRECT WATER HEATER (BASED ON THERMO 2000)**

| TAG   | SERVICE      | MODEL         | CAPACITY | DOMESTIC FLOW | INLET TEMP | OUTLET TEMP | PRESSURE DROP | WATER FLOW | PRESSURE DROP |
|-------|--------------|---------------|----------|---------------|------------|-------------|---------------|------------|---------------|
| IWH-1 | WASH BAYS    | TURBO MAX 109 | 175 KW   | 1.26 L/S      | 4.5°C      | 37.8°C      | 41.3 KPA      | 3.77 L/S   | 4.6 KPA       |
| IWH-2 | SA EYEWASH   | TURBO MAX 23  | 33 KW    | 0.32 L/S      | 4.5°C      | 29.4°C      | 26.9 KPA      | 0.71 L/S   | 2.4 KPA       |
| IWH-3 | ADMIN OFFICE | TURBO MAX 109 | 230 KW   | 3.15 L/S      | 4.5°C      | 60°C        | 67.4 KPA      | 4.95 L/S   | 1.9 KPA       |
| IWH-4 | FLEET OFFICE | TURBO MAX 109 | 92 KW    | 1.26 L/S      | 4.5°C      | 60°C        | 41.3 KPA      | 1.98 L/S   | 1.2 KPA       |

**MAKE UP AIR (BASED ON THERMOTEK)**

| TAG    | FUNCTION          | MODEL         | FLOW     | HEATING INPUT | HEATING OUTPUT | E.S.P.  | MOTOR  | WEIGHT |
|--------|-------------------|---------------|----------|---------------|----------------|---------|--------|--------|
| MUA-1  | WASH BAYS         | T3-D.1000-G18 | 4389 L/S | 320 KWH       | 294 KWH        | 100 PA  | 3.7 KW | 480 KG |
| MUA-2  | SM (SOUTH)        | T3-D.500-G18  | 2572 L/S | 113 KWH       | 104 KWH        | 100 PA  | 2.2 KW | 439 KG |
| MUA-3  | SM (NORTH)        | T3-D.1000-G18 | 3422 L/S | 249 KWH       | 229 KWH        | 100 PA  | 3.7 KW | 480 KG |
| MUA-4  | BRIDGE OPERATIONS | T3-D.1000-G18 | 3445 L/S | 279 KWH       | 257 KWH        | 100 PA  | 3.7 KW | 480 KG |
| MUA-7  | PAINT ROOM        | T3-D.1000-G18 | 3776 L/S | 306 KWH       | 281 KWH        | 75 PA   | 3.7 KW | 480 KG |
| MUA-8  | PARKS GARAGE      | T4-D.1000-920 | 4719 L/S | 208 KWH       | 191 KWH        | 62.5 PA | 3.7 KW | 757 KG |
| MUA-9  | FLEET GARAGE      | T4-D.1500-920 | 5097 L/S | 413 KWH       | 380 KWH        | 100 PA  | 3.7 KW | 757 KG |
| MUA-10 | FLEET STORAGE     | T4-D.1000-920 | 4719 L/S | 208 KWH       | 191 KWH        | 62.5 PA | 3.7 KW | 757 KG |

ISSUED FOR CITY REVIEW 11-06-2012

| REV | DESCRIPTION             | DATE        | BY  |
|-----|-------------------------|-------------|-----|
| 3   | ISSUED FOR CONSTRUCTION | 11 MAY 2012 | PSG |
| 2   | ISSUED FOR 66% REVIEW   | 06 MAR 2012 | PSG |
| 1   | ISSUED FOR 33% REVIEW   | 06 JAN 2012 | PSG |

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**CITY OF WINNIPEG PUBLIC WORKS EAST YARD COMPLEX**  
MAIN OFFICE & GARAGES  
SHEET TITLE:  
**MECHANICAL EQUIPMENT SCHEDULE**

SHEET NUMBER:  
**M5.0**  
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