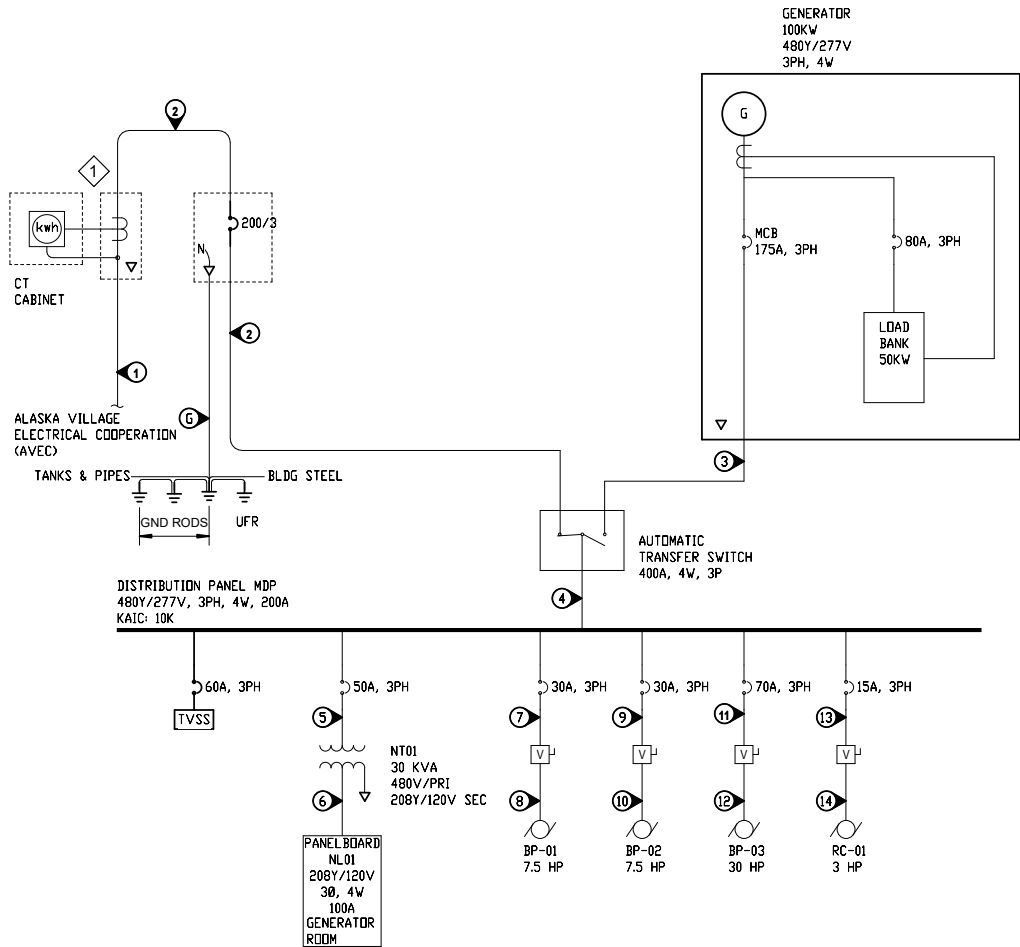
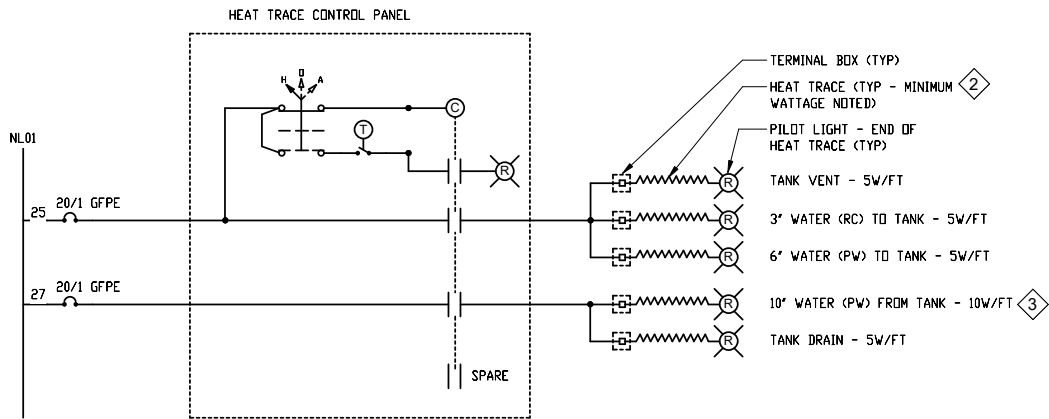




**1 ONE-LINE DIAGRAM**  
E-501 SCALE: NO SCALE



**2 SCHEMATIC DIAGRAM - HEAT TRACE SYSTEM**  
E-501 SCALE: NO SCALE

### SHEET KEYNOTES

- PROVIDE CT ENCLOSURE AND METER BASE/SOCKET. CURRENT TRANSFORMERS AND METER PROVIDED BY AVEC. COORDINATE INSTALLATION REQUIREMENTS WITH AVEC.
- ACCOMMODATE FLANGES AND EXPANSION JOINTS PER MANUFACTURER. PROVIDE SLACK IN THE CABLE AT THE EXPANSION JOINTS.
- WRAP THE HEAT TRACE ON THE 10" PIPE AS NEEDED TO OBTAIN A MINIMUM OF 14W/FT.

| FEEDER SCHEDULE |                     |       |                |      |                               |
|-----------------|---------------------|-------|----------------|------|-------------------------------|
| NO.             | CONDUCTORS          | INSUL | RACEWAY        | RUNS | REMARKS                       |
| 1               | 3#3/0, 1#2N         | XHHW  | 2" PVC OR RTRC | 1    | SERVICE                       |
| 2               | 3#3/0, 1#2N, 1#4EGC | XHHW  | 2" RMC         | 1    |                               |
| 2               | 3#3/0, 1#2N, 1#4EGC | XHHW  | 2" RMC         | 1    |                               |
| 3               | 3#3/0, 1#2N, 1#4EGC | XHHW  | 2" RMC         | 1    |                               |
| 4               | 3#3/0, 1#2N, 1#4EGC | XHHW  | 2" EMT         | 1    |                               |
| 5               | 3#6 AWG 1#8 EGC     | XHHW  | 1" EMT         | 1    |                               |
| 6               | 4#2 AWG 1#8 EGC     | XHHW  | 1-1/4" EMT     | 1    |                               |
| 7               | 3#10 AWG 1#10 EGC   | XHHW  | 1/2" EMT       | 1    |                               |
| 8               | 3#10 AWG 1#10 EGC   | XHHW  | 1/2" EMT       | 1    |                               |
| 9               | 3#10 AWG 1#10 EGC   | XHHW  | 1/2" EMT       | 1    |                               |
| 10              | 3#10 AWG 1#10 EGC   | XHHW  | 1/2" EMT       | 1    |                               |
| 11              | 3#4 AWG 1#8 EGC     | XHHW  | 1-1/4" EMT     | 1    |                               |
| 12              | 3#4 AWG 1#8 EGC     | XHHW  | 1-1/4" EMT     | 1    |                               |
| 13              | 3#12 AWG 1#12 EGC   | XHHW  | 1/2" EMT       | 1    |                               |
| 14              | 3#12 AWG 1#12 EGC   | XHHW  | 1/2" EMT       | 1    |                               |
| G               | #2 BCU              | -     | -              | 1    | GROUNDING ELECTRODE CONDUCTOR |

| LOAD ANALYSIS   |                                    |                 |                 |                 |                 |
|-----------------|------------------------------------|-----------------|-----------------|-----------------|-----------------|
| ITEM            | DESIGNATION                        | NORMAL          |                 | HIGH FLOW       |                 |
|                 |                                    | CONTINUOUS (HP) | CONTINUOUS (KW) | CONTINUOUS (HP) | CONTINUOUS (KW) |
|                 | STORAGE TANK MIXER                 | 1.000           | 0.83            | 1.000           | 0.83            |
| BP-01           | BOOSTER PUMP NO. 1                 | 7.500           | 6.22            | 7.500           | 6.22            |
| BP-02           | BOOSTER PUMP NO. 2                 |                 |                 | 7.500           | 6.22            |
| BP-03           | HIGH FLOW PUMP                     |                 |                 | 30.000          | 24.87           |
| RC-01           | RECIRC. PUMP                       | 3.000           | 2.49            | 3.000           | 2.49            |
| BP-04           | BOOSTER PUMP NO. 3 (FUTURE)        |                 |                 | 7.500           | 6.22            |
| CP-01           | CALCIUM HYPOCHLORITE PUMP          | 0.333           | 0.28            | 0.333           | 0.28            |
| UH-01           | UNIT HEATER - HORIZONTAL DISCHARGE | 0.025           | 2.62            | 0.025           | 2.62            |
| UH-02           | UNIT HEATER - HORIZONTAL DISCHARGE | 0.025           | 2.62            | 0.025           | 2.62            |
| EF-01           | EXHAUST FAN                        | 0.167           | 0.14            | 0.167           | 0.14            |
| VF-01           | VENTILATION FAN                    | 0.167           | 0.14            | 0.167           | 0.14            |
| CH-01           | CONVECTION HEATER                  |                 |                 |                 | 0.50            |
| CH-02           | CONVECTION HEATER                  |                 |                 |                 | 0.50            |
| CH-03           | CONVECTION HEATER                  |                 |                 |                 | 0.50            |
| WH-01           | WATER HEATER                       |                 |                 |                 | 1.65            |
| DT-01           | GENERATOR DAY TANK                 | 0.333           | 0.28            | 0.333           | 0.28            |
|                 | LIGHTING                           |                 | 1.40            |                 | 1.40            |
|                 | RECEPTACLES                        |                 | 1.08            |                 | 1.08            |
|                 | GENERATOR HEATER                   |                 | 1.50            |                 | 1.50            |
|                 | BATTERY CHARGER                    |                 | 0.60            |                 | 0.60            |
|                 | HEAT TRACE                         |                 | 3.00            |                 | 3.00            |
|                 | CONTROLS                           |                 | 1.00            |                 | 1.00            |
| TOTAL LOAD (KW) |                                    | 12.4            | 33.2            | 57.5            | <b>69.4</b>     |
| GENERATOR (KW)  |                                    |                 |                 |                 | <b>57.3</b>     |
| SERVICE (KVA)   |                                    |                 |                 |                 | <b>64.8</b>     |
| CURRENT (AMPS)  |                                    |                 |                 |                 | <b>78.1</b>     |

CONSULTANT :



**Juneau, AK**  
9103 Mendernall Mall Rd. Ste 4  
Juneau, AK 99801  
Phone: 907.780.0060  
www.respec.com  
AECC-63270



PROJECT :

**CITY & BOROUGH OF YAKUTAT  
WATER SYSTEM EXTENSION**

**YAKUTAT, ALASKA**

SHEET TITLE :

**ONE-LINE DIAGRAM**

DESIGN *NK*  
DRAWN *CSB*  
CHECKED *BCH*  
DATE *04-16-2025*

PROJECT No.  
**10297.24002**  
SHEET NUMBER

**E-501**

| No.       | Date | Item |
|-----------|------|------|
| REVISIONS |      |      |