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| SYMBOLS LIST |   |
|--------------|---|
|              | <b>CIRCUIT BREAKER</b><br>X - POLES<br>Y - FRAME SIZE<br>Z - TRIP RATING  |
|              | EQUIPMENT   |
|              | RECEPTACLE  |
|              | LIGHTING  |
|              | MOTOR   |
|              | GENERATOR   |
|              | SHORE POWER RECEPTACLE  |
|              | <b>INSTRUMENTATION</b><br>V - VOLT, A - AMPERES,<br>kW - KILOWATTS, Hz - FREQUENCY<br>PA - POWER AVAILABLE  |
|              | <b>MOTOR CONTROLLER</b><br>W - R S, RUN STOP, H O A, HAND OFF AUTO<br>X - FVNR, FULL VOLTAGE NON REVERSING<br>VFD, VARIABLE FREQUENCY DRIVE<br>Y - NEMA SIZE<br>Z - LVP, LOW VOLTAGE PROTECTION<br>LVR, LOW VOLTAGE RELEASE |
|              | <b>CONTROL DEVICES/FUNCTIONS</b><br>PB - PUSH-BUTTON<br>PB/IL - PUSH-BUTTON, ILLUMINATED<br>PS - PRESSURE SWITCH<br>FR - FIRE SHUTDOWN  |
|              | FUSE  |
|              | VENDOR PROVIDED MOTOR CONTROLLER  |
|              | TRANSFORMER   |

| REVISION HISTORY |      |             |     |      |      |
|------------------|------|-------------|-----|------|------|
| REV              | ZONE | DESCRIPTION | DWN | DATE | APVD |
|                  |      |             |     |      |      |



  

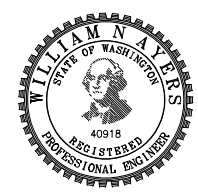
| GENERAL NOTES  |
|--|
| 1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH 46 CFR SUBCHAPTER T REGULATIONS.  |
| 2. SHIP SERVICE DISTRIBUTION IS A 3 PHASE 4 WIRE SYSTEM, 208/120V, 60 Hz, WITH A GROUNDED NEUTRAL. SEE REFERENCE 3 FOR SWITCHBOARD AND DISTRIBUTION PANEL LOCATIONS.   |
| 3. ALL PERMANENTLY INSTALLED ELECTRICAL EQUIPMENT SHALL HAVE METAL ENCLOSURES PROPERLY GROUNDED PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, UNLESS NOTED OTHERWISE.   |
| 4. THE SWITCHBOARD SHALL BE ARRANGED FOR PARALLELED OPERATION OF GENERATORS, WITH A TIMED INTERLOCK MECHANISM TO PREVENT CONNECTION OF MULTIPLE GENERATORS FOR LONGER THAN 20 SECONDS. SHORE POWER SHALL BE INTERLOCKED TO PREVENT CONNECTION WITH EITHER GENERATOR.   |
| 5. ALL POWER CABLE SHALL COMPLY WITH THE REQUIREMENTS OF IEEE 1580. ALL CABLE SHALL BE LOW SMOKE, ZERO HALOGEN TYPE.   |
| 6. NYLON OR BRASS STUFFING TUBES SHALL BE USED WHEN PENETRATING ELECTRICAL ENCLOSURES OR JUNCTION BOXES.   |
| 7. ALL CABLES SHALL BE RATED AT 90°C CONDUCTOR TEMPERATURE IN ACCORDANCE WITH IEEE STANDARD NO. 45 2002 TABLE 25.  |
| 8. EACH CABLE SHALL BE TAGGED WITH ITS UNIQUE CIRCUIT DESIGNATION USING EMBOSSED ALUMINUM TAGS ON EACH SIDE OF PENETRATIONS AND INTO CONNECTION BOXES AND/OR EQUIPMENT.  |
| 9. METAL USED FOR TERMINAL STUDS, LUGS, NUTS, AND WASHERS SHALL BE CORROSION RESISTANT AND GALVANICALLY COMPATIBLE WITH THE WIRE AND TERMINAL LUGS.  |
| 10. CABLE PENETRATIONS THROUGH BULKHEADS AND DECKS, BOTH WATERTIGHT AND NON-WATERTIGHT, SHALL COMPLY WITH REGULATORY BODY REQUIREMENTS. MULTI-CABLE TRANSIT TYPE PENETRATIONS MAY BE SUBSTITUTED FOR STUFFING TUBES FOR ALL PENETRATIONS EXCEPT THROUGH OPEN DECKS. EXTRA HEAVY, LOW ALLOY KICK PIPES WITH STUFFING TUBES, OR EQUIVALENT, SHALL BE WELDED INTO ALL OPEN DECKS AND SHALL BE NINE INCHES HIGH TO TOP OF THE STUFFING TUBE. BUILT-IN WATERTIGHT BOXES MAY BE USED IN LIEU OF KICK PIPES. POURED SEALERS SHALL NOT BE ALLOWED. |
| 11. NON-MACHINERY SPACE VENTILATION FIRE SHUTDOWNS SHALL BE CONTROLLED FROM THE PILOTHOUSE.  |

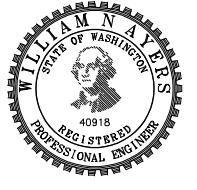
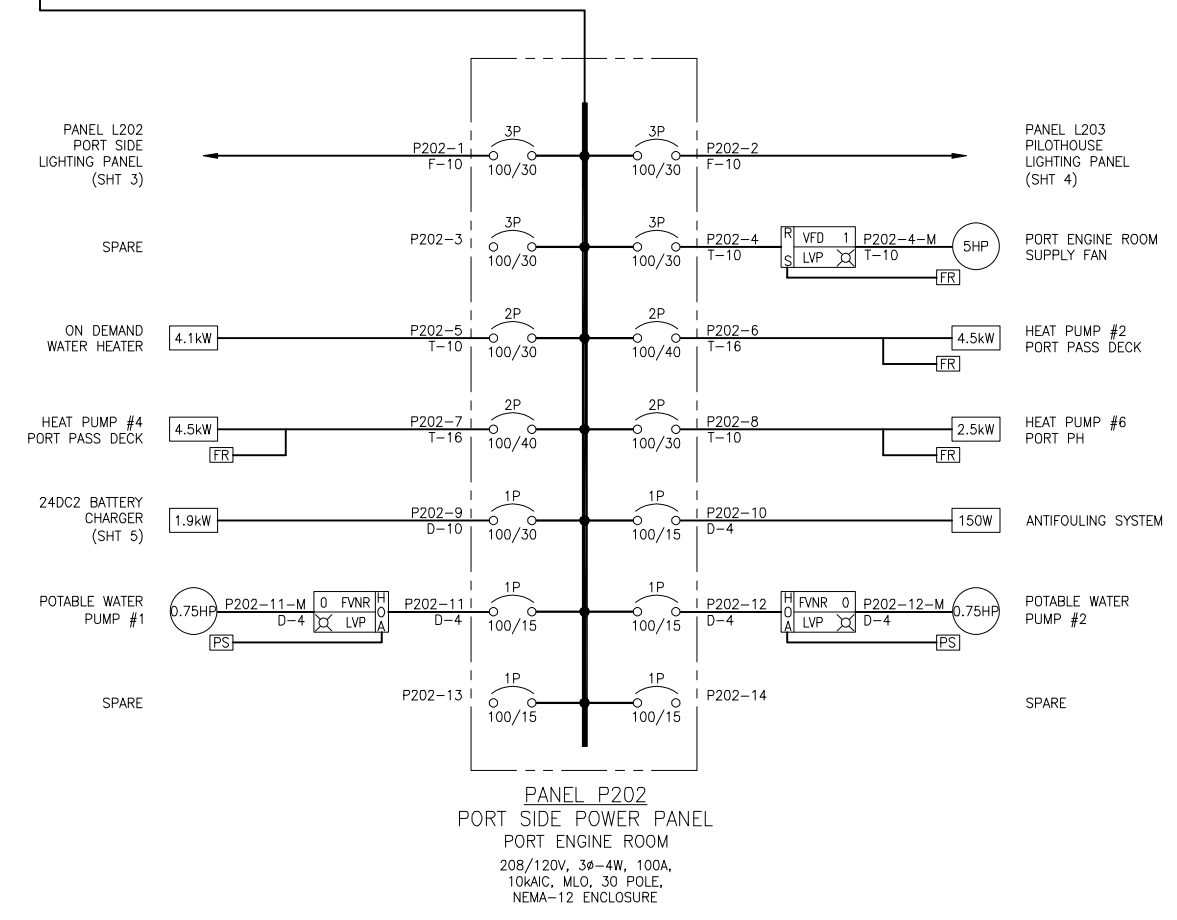
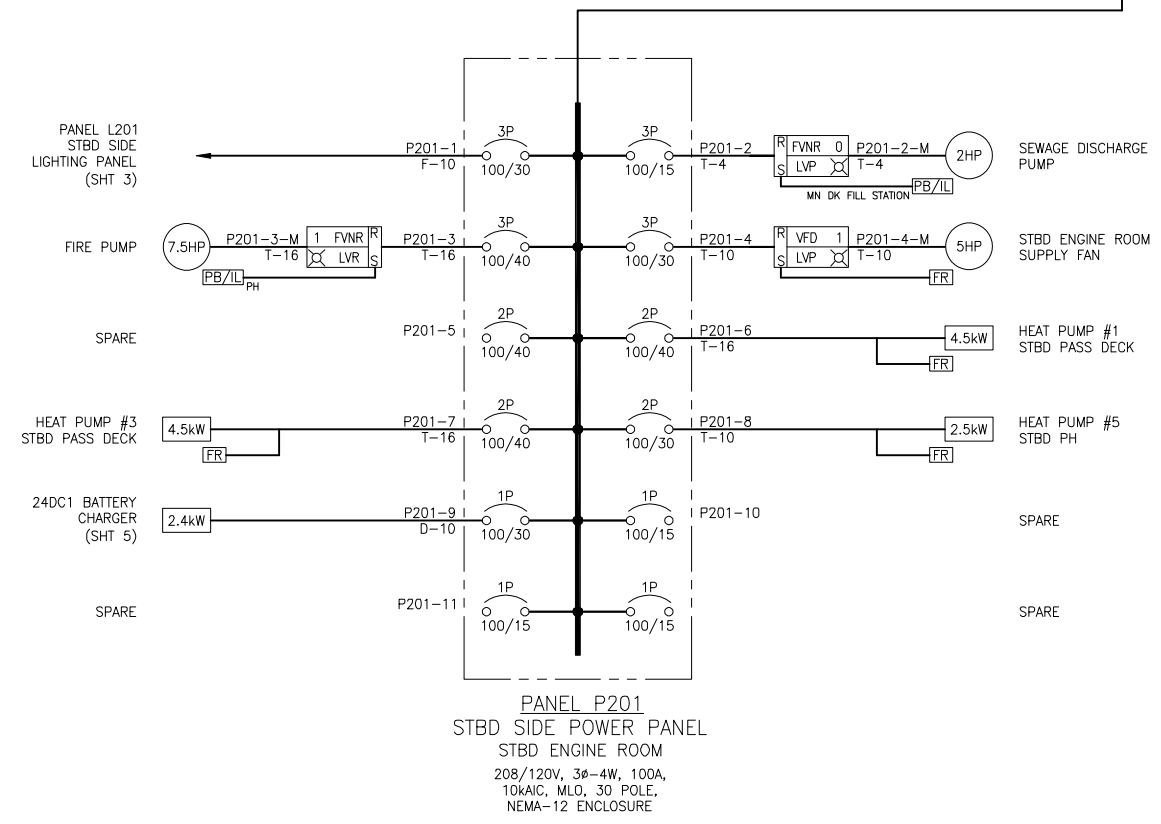
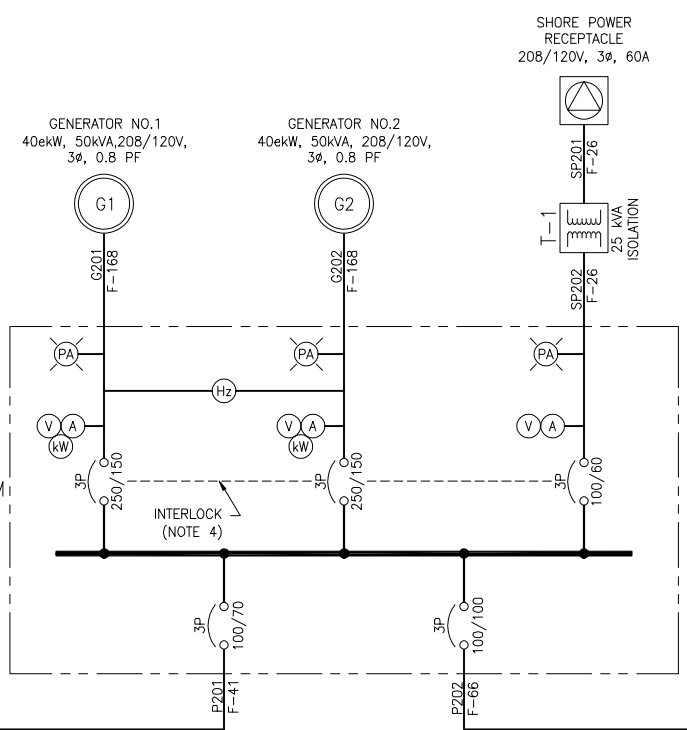
| REFERENCES         |                           |
|--------------------|---------------------------|
| 1. 16109-003-802-0 | CONTRACT SPECIFICATIONS   |
| 2. 16109-003-300-0 | ELECTRICAL LOADS ANALYSIS |
| 3. 16109-003-201-1 | MACHINERY ARRANGEMENT     |
| 4. 16109-003-635-1 | CEILING AND LIGHTING PLAN |

| INDEX     |                                |
|-----------|--------------------------------|
| SHEET NO. | SHEET CONTENT                  |
| 1         | GENERAL NOTES, SYMBOL LIST     |
| 2         | SWITCHBOARD, PANELS P201, P202 |
| 3         | PANELS L201, L202              |
| 4         | PANELS L203, 12DC1             |
| 5         | PANELS 24DC1, 24DC2, 24DC3     |

|  |  |
|--|--|
| <br>NORTH CAROLINA FERRY SYSTEM<br><small>8500 SHIPYARD RD WAREHOUSES, NC 27683</small> |  |
|  <b>Elliott Bay Design Group</b><br><b>North Carolina, PLLC</b>                         |  |
| CLIENT   | NORTH CAROLINA D.O.T.<br>RALEIGH, NORTH CAROLINA |
| PROJECT  | PEDESTRIAN FERRY                                 |
| <b>ELECTRICAL</b><br><b>ONE-LINE DIAGRAM</b>   |  |
| SIZE   | D  |
| DWG NO.  | 16109-003-320-0                                  |
| SCALE  | AS NOTED   |
| FILE NAME  | 16109-003-320-0-                                 |
| SHEET  | 1 OF 5   |
| DWN  | EMT  |
| MOD  |  |
| CKD  | WNA  |
| APVD   | WNA  |
| APVD DATE  | 3/3/2017   |



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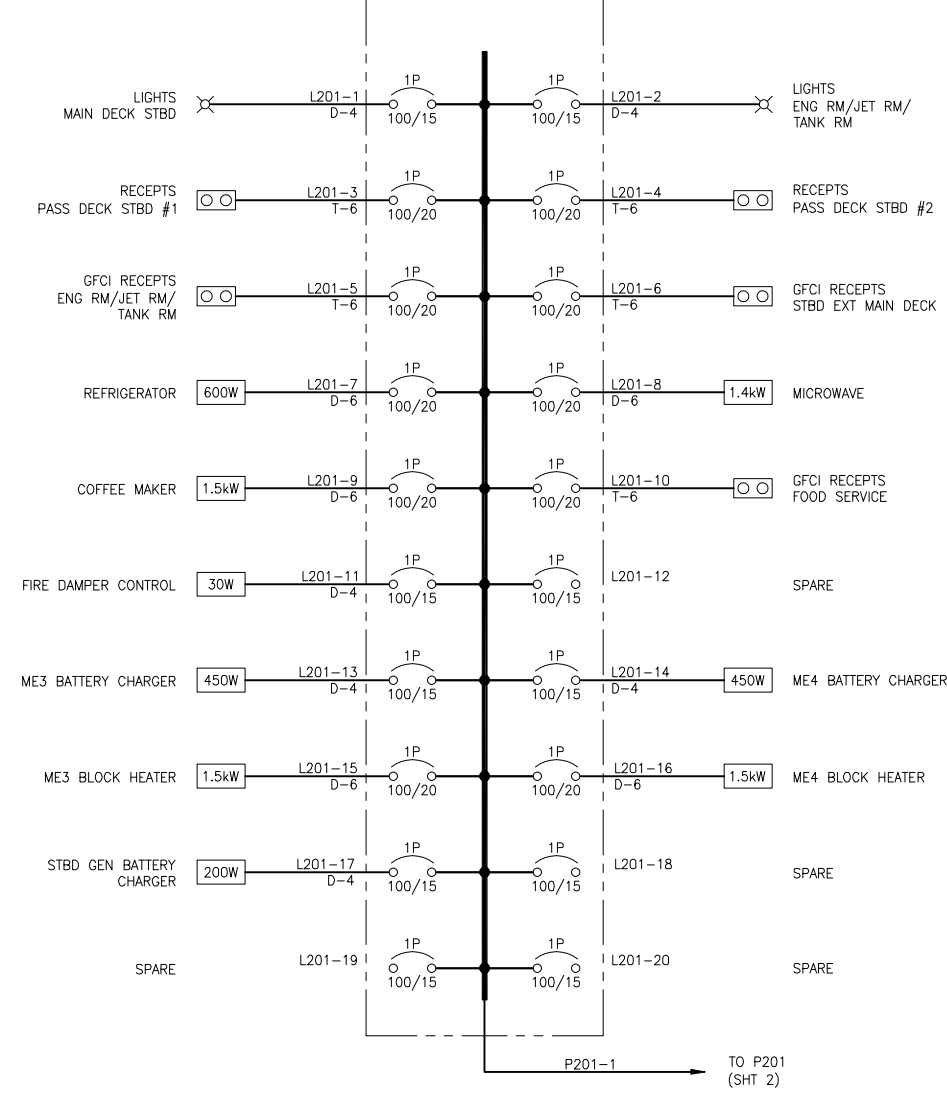
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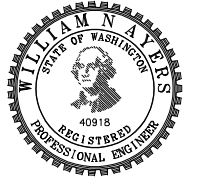
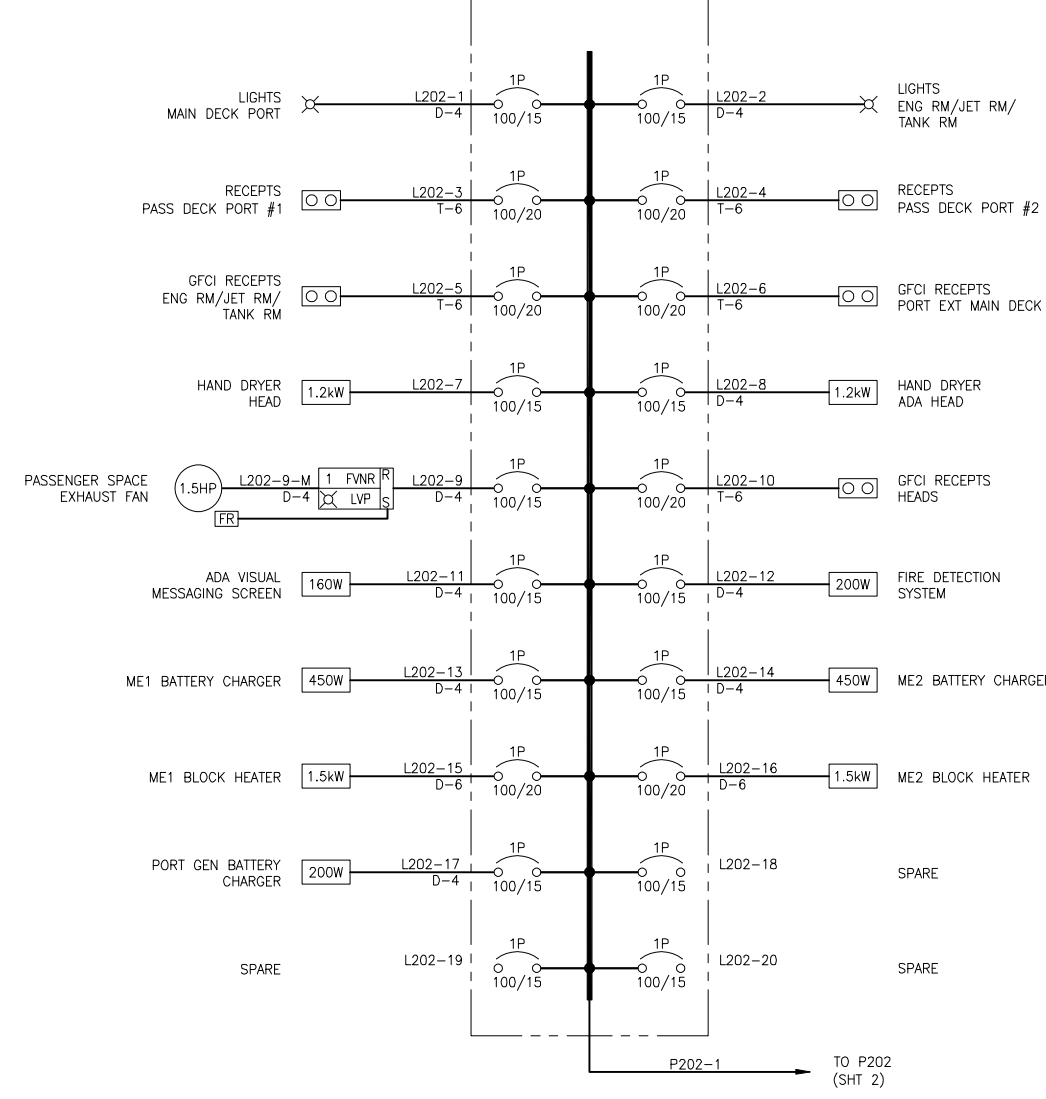
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**PANEL L201**  
 STBD SIDE LIGHTING PANEL  
 STBD UPPER ENGINE ROOM  
 208/120V, 3ø-4W, 100A, 10kAIC, MLO  
 30 POLE, NEMA-12 ENCLOSURE



**PANEL L202**  
 PORT SIDE LIGHTING PANEL  
 PORT UPPER ENGINE ROOM  
 208/120V, 3ø-4W, 100A, 10kAIC, MLO  
 30 POLE, NEMA-12 ENCLOSURE



|       |          |           |                  |       |        |
|-------|----------|-----------|------------------|-------|--------|
| SIZE  | D        | DWG NO.   | 16109-003-320-0  | REV   | -      |
| SCALE | AS NOTED | FILE NAME | 16109-003-320-0- | SHEET | 3 OF 5 |

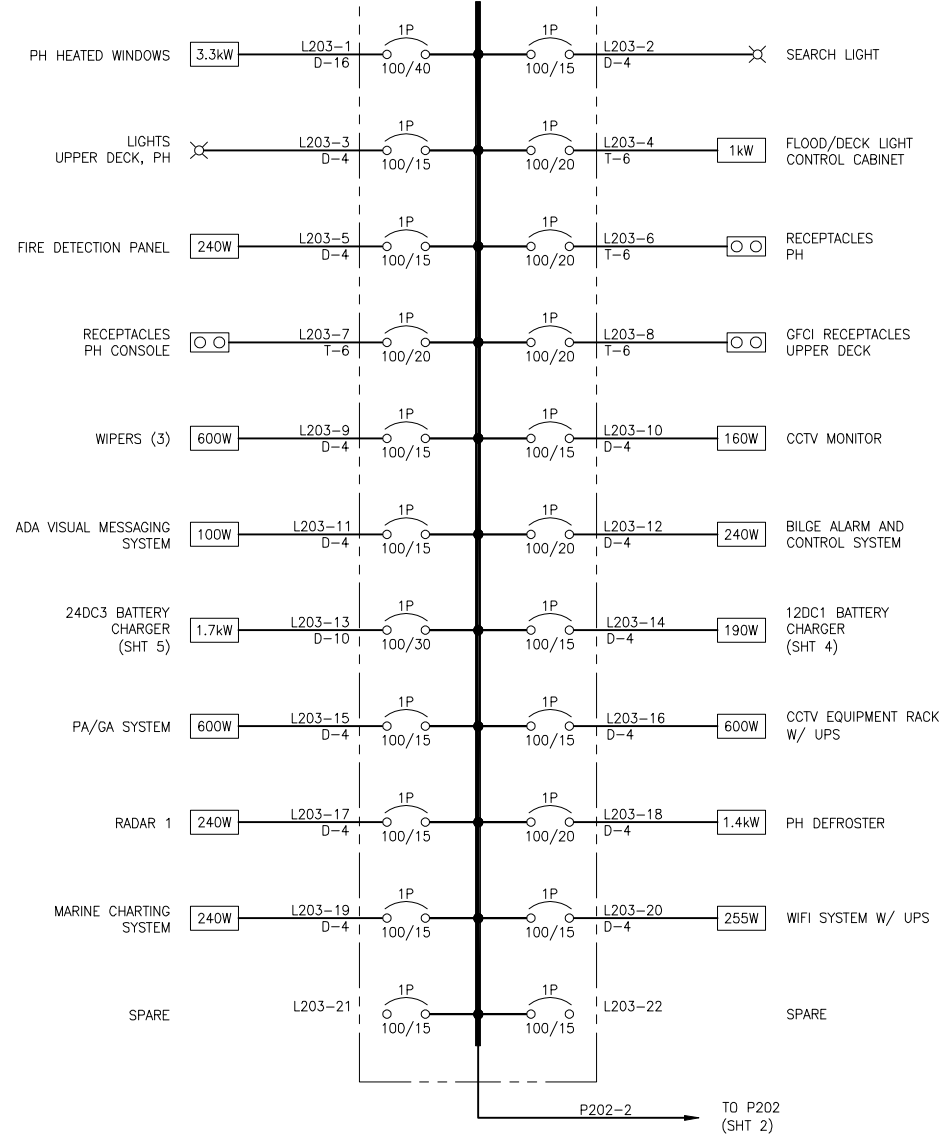
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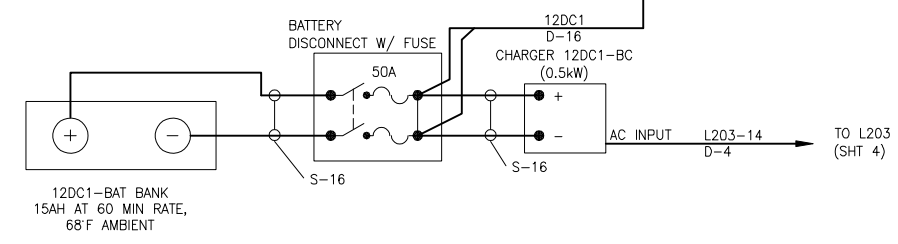
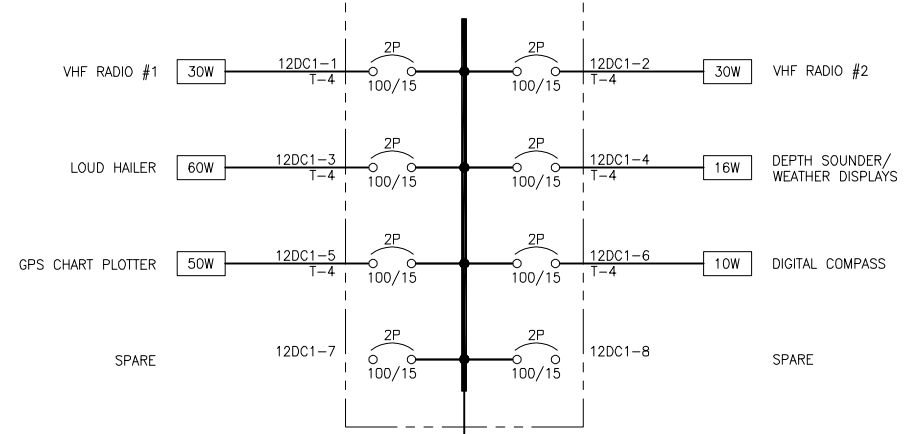
**PANEL L203**  
 PILOTHOUSE LIGHTING PANEL  
 PILOTHOUSE

208/120V, 3Ø-4W, 100A, 10KAIC, MLO  
 30 POLE, NEMA-12 ENCLOSURE



**PANEL 12DC1**  
 12VDC DISTRIBUTION  
 PILOTHOUSE

12VDC, 2W, 100A, 10KAIC, MLO  
 30 POLE, NEMA-12 ENCLOSURE



|       |          |           |                  |       |        |
|-------|----------|-----------|------------------|-------|--------|
| SIZE  | D        | DWG NO.   | 16109-003-320-0  | REV   | -      |
| SCALE | AS NOTED | FILE NAME | 16109-003-320-0- | SHEET | 4 OF 5 |

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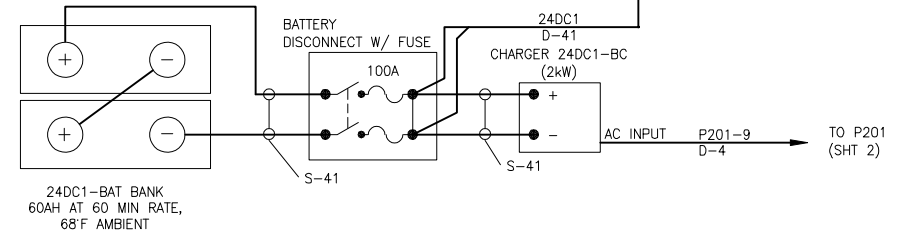
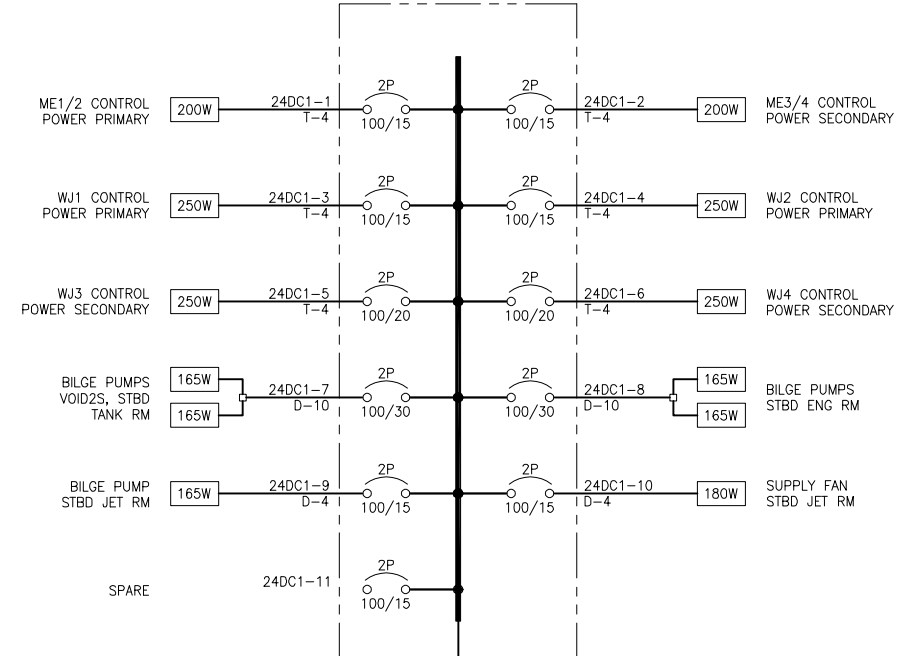
D

C

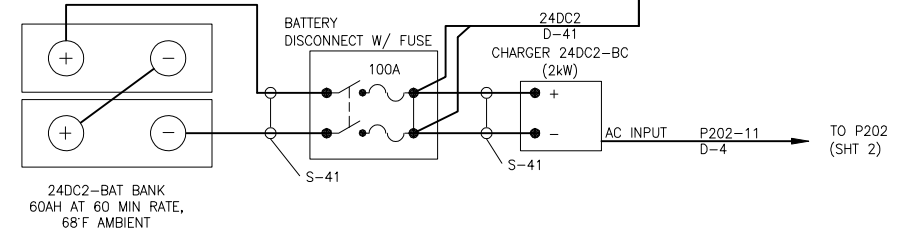
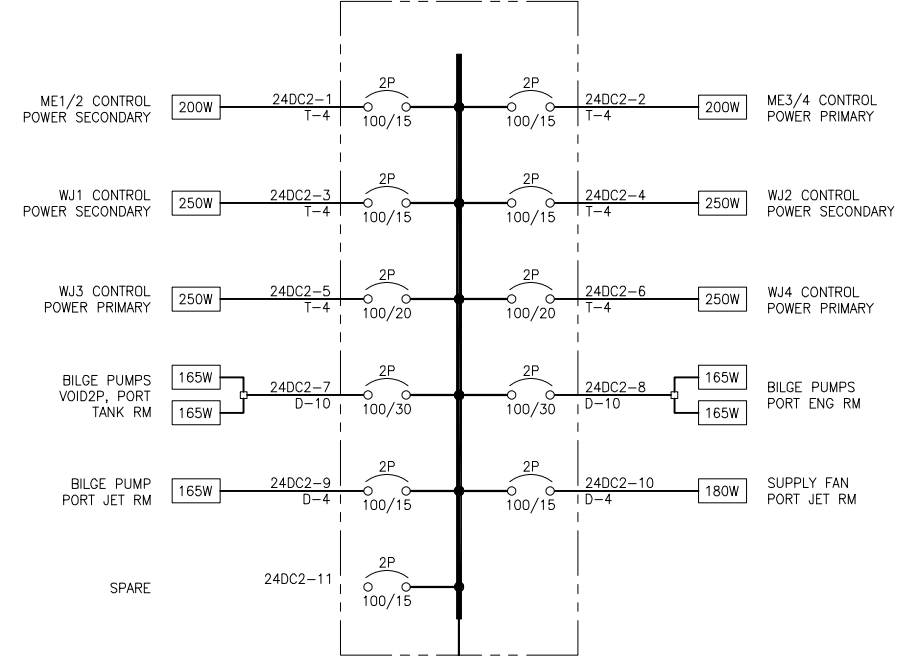
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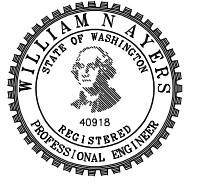
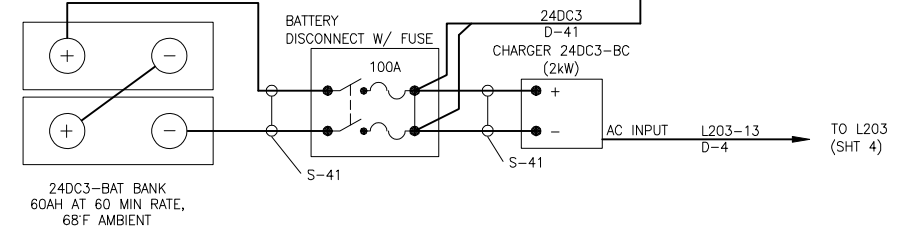
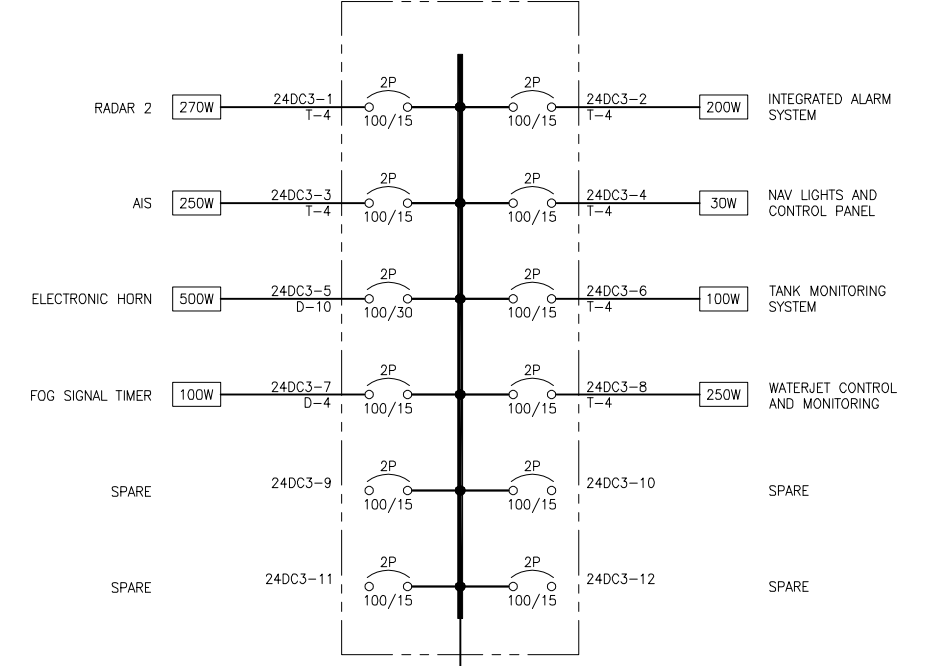
**PANEL 24DC1**  
 24VDC DISTRIBUTION  
 STBD JET ROOM  
 24VDC, 2W, 100A, 10kAIC, MLO  
 30 POLE, NEMA-12 ENCLOSURE



**PANEL 24DC2**  
 24VDC DISTRIBUTION  
 PORT JET ROOM  
 24VDC, 2W, 100A, 10kAIC, MLO  
 30 POLE, NEMA-12 ENCLOSURE



**PANEL 24DC3**  
 24VDC DISTRIBUTION  
 PILOTHOUSE  
 24VDC, 2W, 100A, 10kAIC, MLO  
 30 POLE, NEMA-12 ENCLOSURE



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