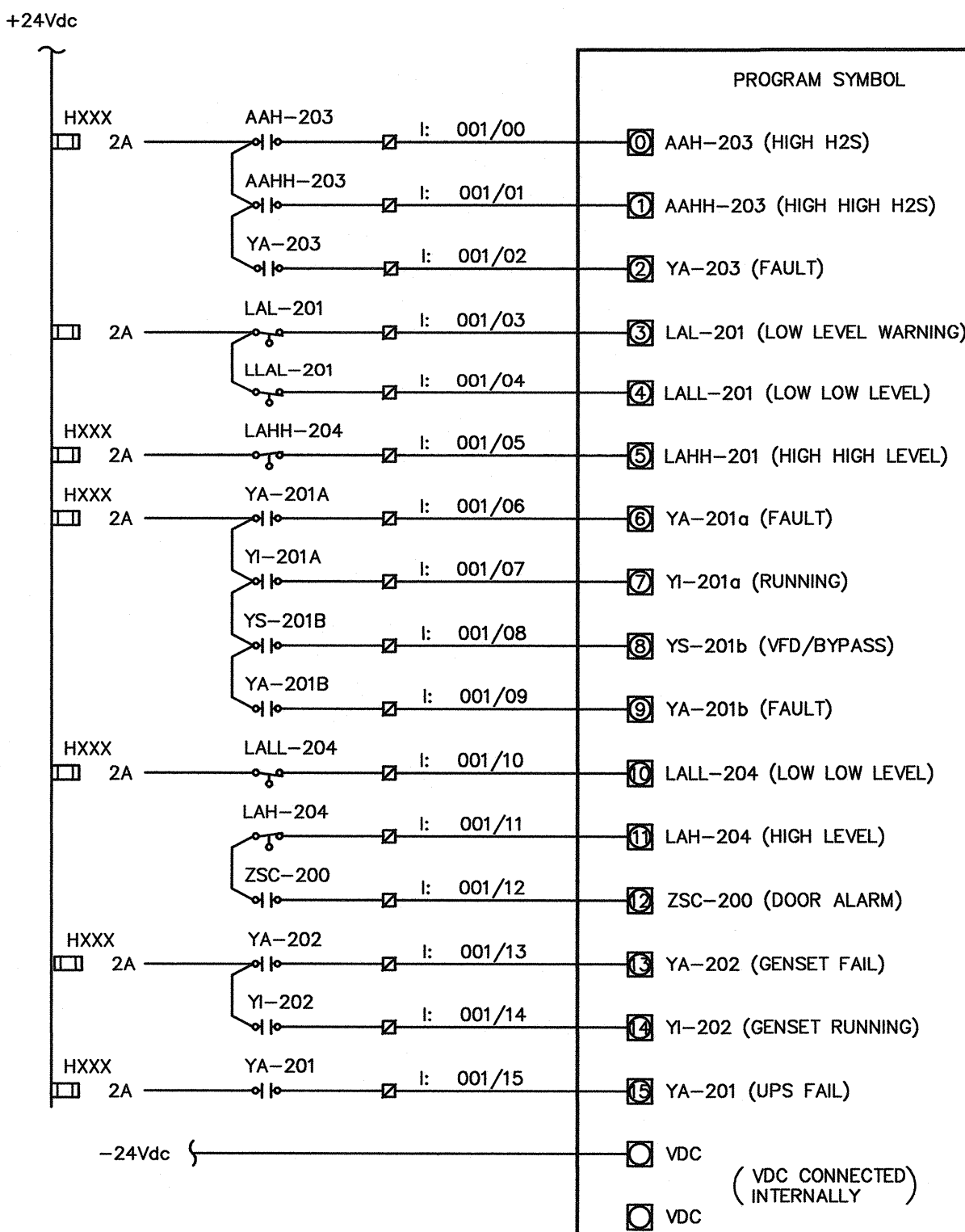


| DESCRIPTION                                                      |
|------------------------------------------------------------------|
| AIT-203 (WETWELL H2S DETECTOR)<br>HIGH H2S ALARM                 |
| AIT-203 (WETWELL H2S DETECTOR)<br>HIGH HIGH H2S ALARM            |
| AIT-203 (WETWELL H2S DETECTOR)<br>DETECTOR FAULT ALARM           |
| LSL-201 (FUEL TANK LEVEL SWITCH)<br>LOW LEVEL WARNING ALARM      |
| LSLL-201 (FUEL TANK LEVEL SWITCH)<br>LOW LOW LEVEL WARNING ALARM |
| LSHH-204 (WETWELL LEVEL SWITCH)<br>HIGH HIGH WETWELL LEVEL       |
| P-201 (LIFT PUMP)<br>MOTOR STARTER FAULT                         |
| P-201 (LIFT PUMP)<br>PUMP RUNNING INDICATION                     |
| P-201 (LIFT PUMP)<br>VFD/BYPASS SELECTOR                         |
| P-201 (LIFT PUMP)<br>BYPASS STARTER FAULT                        |
| LSLL-204 (WET WELL LEVEL SWITCH)<br>LOW LOW WET WELL LEVEL       |
| LSH-204 (WET WELL LEVEL SWITCH)<br>HIGH WET WELL LEVEL           |
| ZSC-200 (BUILDING SECURITY)<br>DOOR ALARM                        |
| YA-202 (STAND-BY GENERATOR)<br>GENERATOR FAIL ALARM              |
| YI-202 (STAND-BY GENERATOR)<br>GENERATOR RUNNING INDICATION      |
| YA-201 (UPS)<br>UPS FAIL ALARM                                   |

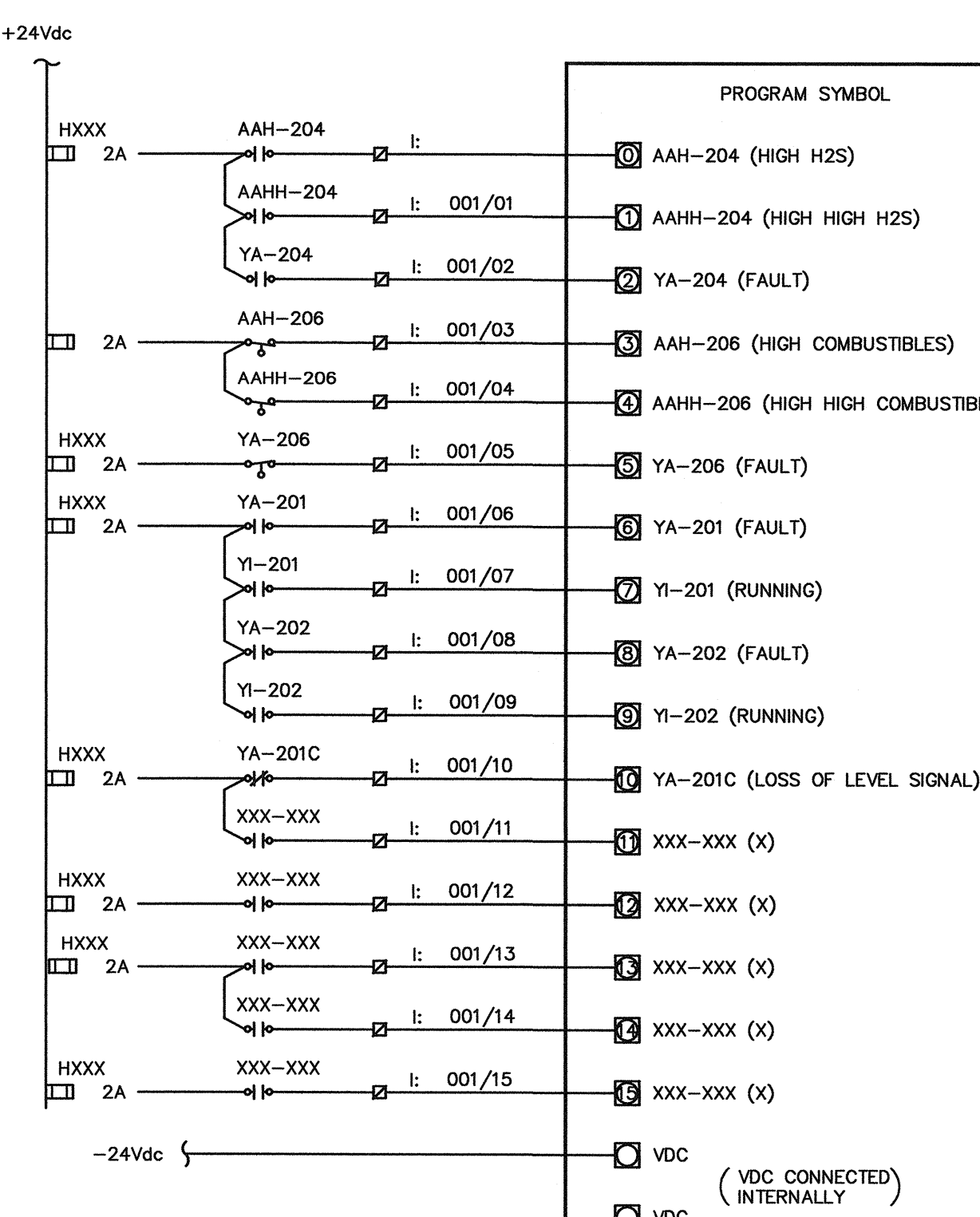


| SYMBOL SCHEDULE                     |                                                          |
|-------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> | CONTROL PANEL TERMINALS                                  |
| <input type="checkbox"/>            | MCC TERMINALS                                            |
|                                     | SEE LOOP DRAWING<br>REFERENCE FOR FIELD<br>WIRING LAYOUT |
|                                     | FIELD WIRING                                             |
|                                     | PANEL WIRING                                             |

| 1746 - IB16 DISCRETE INPUT |     |   |   |   |   |   |         |
|----------------------------|-----|---|---|---|---|---|---------|
| SLOT                       | 0   | 1 | 2 | 3 | 4 | 5 | 6       |
| POWER SUPPLY               | CPU |   |   |   |   |   | END CAP |

1 PLC DISCRETE INPUT MODULE WIRING DIAGRAM  
N.T.S.

| DESCRIPTION                                                      |
|------------------------------------------------------------------|
| AIT-204 (WETWELL H2S DETECTOR)<br>HIGH H2S ALARM                 |
| AIT-204 (WETWELL H2S DETECTOR)<br>HIGH HIGH H2S ALARM            |
| AIT-204 (WETWELL H2S DETECTOR)<br>DETECTOR FAULT ALARM           |
| AAHH-206 (WETWELL COMB DETECTOR)<br>HIGH COMBUSTIBLES ALARM      |
| AAHH-206 (WETWELL COMB DETECTOR)<br>HIGH HIGH COMBUSTIBLES ALARM |
| YA-206 (WETWELL COMB DETECTOR)<br>DETECTOR FAULT ALARM           |
| G-201 (WETWELL GRINDER)<br>MOTOR STARTER FAULT                   |
| G-201 (WETWELL GRINDER)<br>GRINDER RUNNING INDICATION            |
| G-202 (WETWELL GRINDER)<br>MOTOR STARTER FAULT                   |
| G-202 (WETWELL GRINDER)<br>GRINDER RUNNING INDICATION            |
| YA-201C (LEVEL TRANSMITTER)<br>LOSS OF LEVEL SIGNAL              |
| SPARE X                                                          |
| SPARE X                                                          |
| SPARE X                                                          |
| SPARE X                                                          |
| SPARE X                                                          |
| SPARE X                                                          |

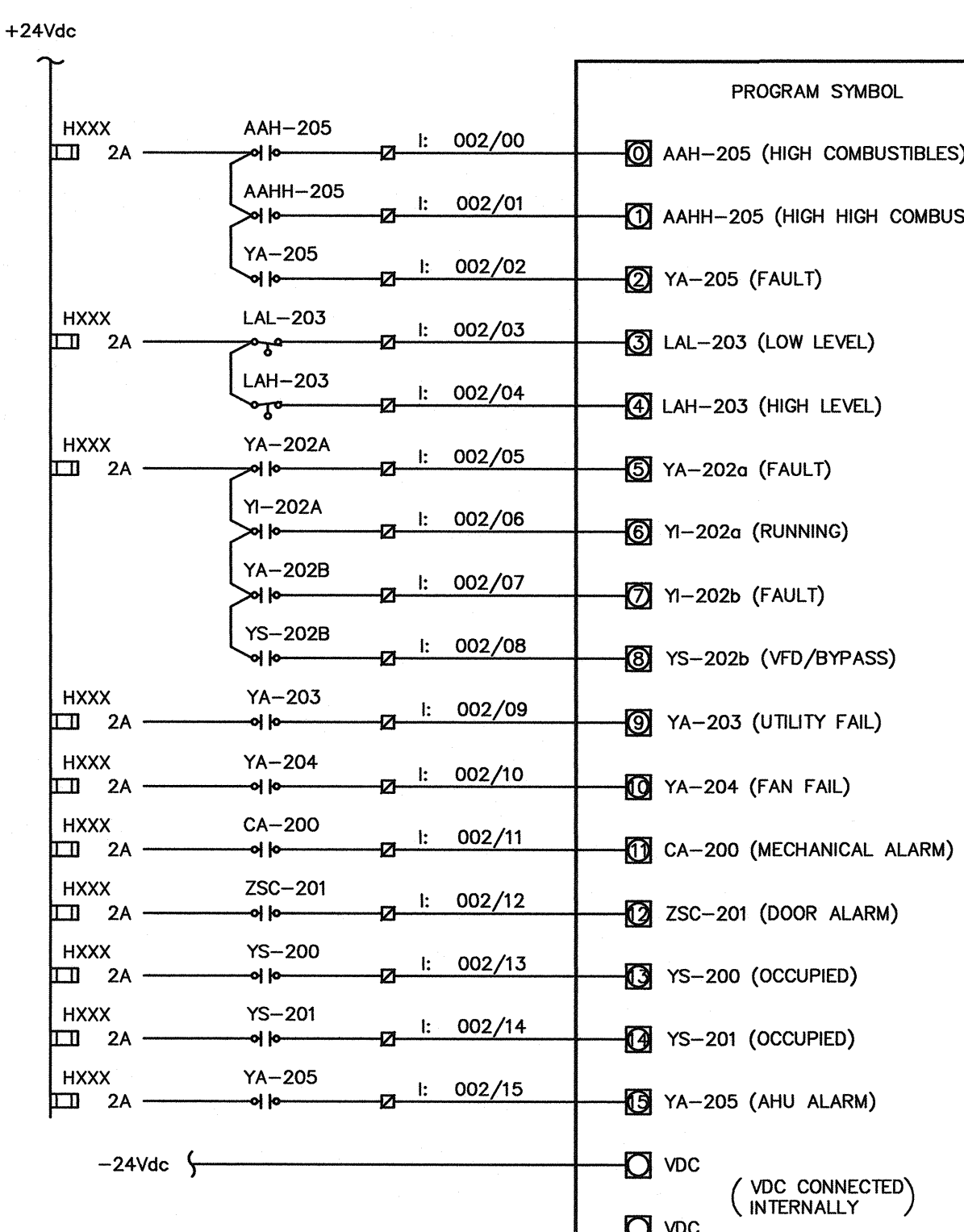


| SYMBOL SCHEDULE                     |                                                          |
|-------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> | CONTROL PANEL TERMINALS                                  |
| <input type="checkbox"/>            | MCC TERMINALS                                            |
|                                     | SEE LOOP DRAWING<br>REFERENCE FOR FIELD<br>WIRING LAYOUT |
|                                     | FIELD WIRING                                             |
|                                     | PANEL WIRING                                             |

| 1746 - IB16 DISCRETE INPUT |     |   |   |   |   |   |         |
|----------------------------|-----|---|---|---|---|---|---------|
| SLOT                       | 0   | 1 | 2 | 3 | 4 | 5 | 6       |
| POWER SUPPLY               | CPU |   |   |   |   |   | END CAP |

3 PLC DISCRETE INPUT MODULE WIRING DIAGRAM  
N.T.S.

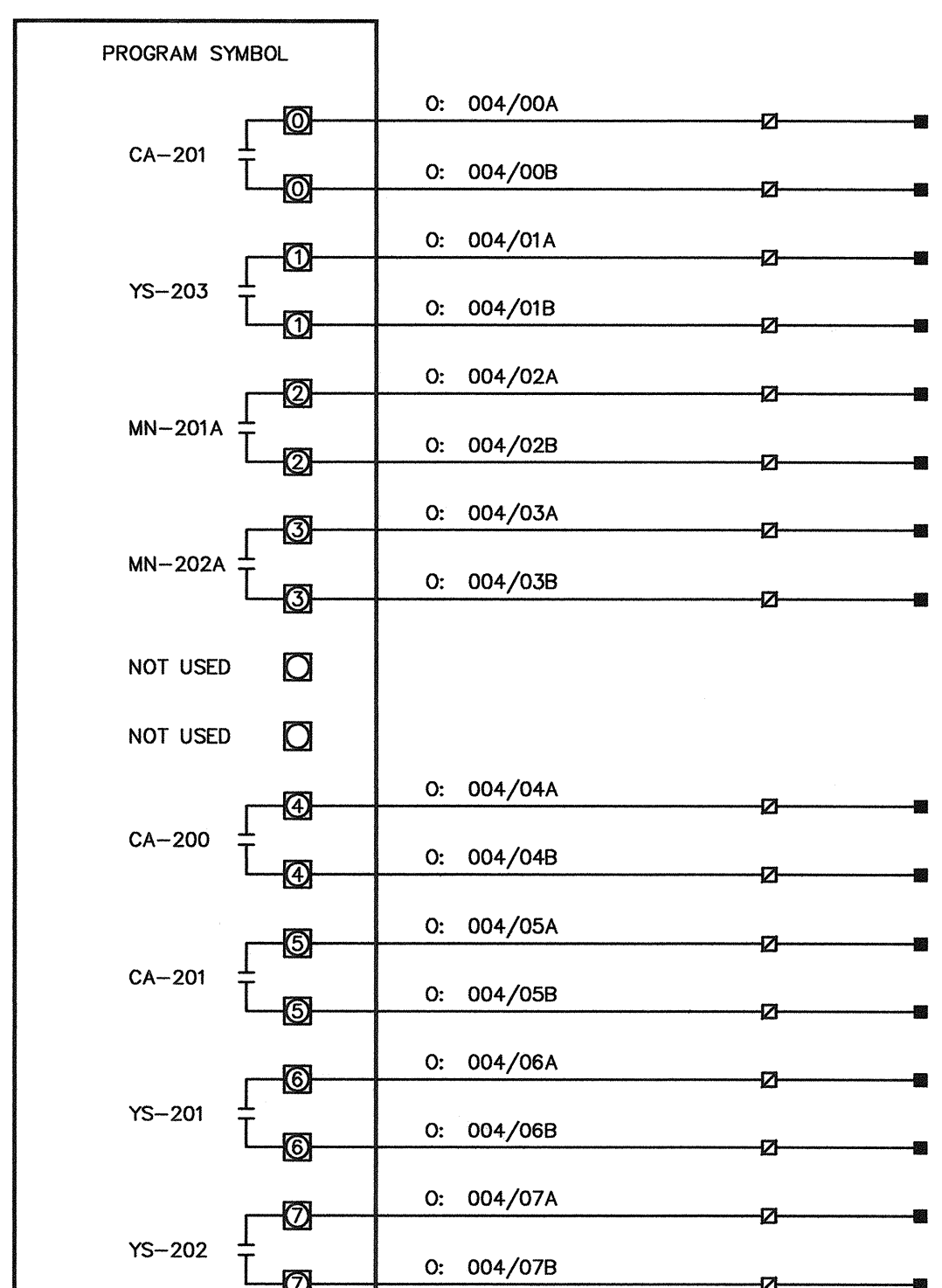
| DESCRIPTION                                                      |
|------------------------------------------------------------------|
| AIT-205 (WETWELL COMB DETECTOR)<br>HIGH COMBUSTIBLES ALARM       |
| AAHH-205 (WETWELL COMB DETECTOR)<br>HIGH HIGH COMBUSTIBLES ALARM |
| YA-205 (WETWELL COMB DETECTOR)<br>DETECTOR FAULT ALARM           |
| LSL-203 (WATER TANK LEVEL)<br>LOW LEVEL ALARM                    |
| LSH-203 (WATER TANK LEVEL)<br>HIGH LEVEL ALARM                   |
| P-202 (LIFT PUMP)<br>MOTOR STARTER FAULT                         |
| P-202 (LIFT PUMP)<br>PUMP RUNNING INDICATION                     |
| P-202 (LIFT PUMP)<br>BYPASS STARTER FAULT                        |
| P-202 (LIFT PUMP)<br>VFD/BYPASS SELECTOR                         |
| YA-203 (TRANSFER SWITCH)<br>UTILITY POWER FAIL ALARM             |
| YA-204 (WETWELL EXHAUST FAN)<br>EXHAUST FAN FAIL ALARM           |
| CA-200 (MECHANICAL SYSTEMS)<br>MECHANICAL SYSTEM COMMON ALARM    |
| ZSC-201 (BUILDING SECURITY)<br>DOOR ALARM                        |
| HS-200<br>OCCUPIED/UNOCCUPIED SWITCH                             |
| HS-201<br>OCCUPIED/UNOCCUPIED PUSH BUTTON                        |
| YA-205<br>AIR HANDLING UNIT COMMON ALARM                         |



| SYMBOL SCHEDULE                     |                                                          |
|-------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> | CONTROL PANEL TERMINALS                                  |
| <input type="checkbox"/>            | MCC TERMINALS                                            |
|                                     | SEE LOOP DRAWING<br>REFERENCE FOR FIELD<br>WIRING LAYOUT |
|                                     | FIELD WIRING                                             |
|                                     | PANEL WIRING                                             |

| 1746 - IB16 DISCRETE INPUT |     |   |   |   |   |   |         |
|----------------------------|-----|---|---|---|---|---|---------|
| SLOT                       | 0   | 1 | 2 | 3 | 4 | 5 | 6       |
| POWER SUPPLY               | CPU |   |   |   |   |   | END CAP |

2 PLC DISCRETE INPUT MODULE WIRING DIAGRAM  
N.T.S.



| DESCRIPTION                                                            |
|------------------------------------------------------------------------|
| CA-201<br>PLC OUTPUT TO AUTODIALER<br>FACILITY COMMON ALARM            |
| YS-203<br>PLC OUTPUT TO VENTILATION SYSTEMS<br>GAS DETECTION SIGNAL    |
| P-201<br>WETWELL LIFT PUMP<br>PUMP RUN SIGNAL                          |
| P-202<br>WETWELL LIFT PUMP<br>PUMP RUN SIGNAL                          |
| NOT USED                                                               |
| NOT USED                                                               |
| CA-200<br>BUILDING HORN<br>HIGH H2S ALARM                              |
| CA-201<br>H2S STROBE LIGHTS<br>HIGH H2S ALARM                          |
| YS-201<br>PLC OUTPUT TO MECHANICAL SYSTEMS<br>BUILDING OCCUPIED SIGNAL |
| YS-202<br>PLC OUTPUT TO ELECTRICAL SYSTEMS<br>BUILDING OCCUPIED SIGNAL |

| SYMBOL SCHEDULE                     |                                                          |
|-------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> | CONTROL PANEL TERMINALS                                  |
| <input type="checkbox"/>            | MCC TERMINALS                                            |
|                                     | SEE LOOP DRAWING<br>REFERENCE FOR FIELD<br>WIRING LAYOUT |
|                                     | FIELD WIRING                                             |
|                                     | PANEL WIRING                                             |

| 1746 - OB16 DISCRETE OUTPUT |     |   |   |   |   |   |         |
|-----------------------------|-----|---|---|---|---|---|---------|
| SLOT                        | 0   | 1 | 2 | 3 | 4 | 5 | 6       |
| POWER SUPPLY                | CPU |   |   |   |   |   | END CAP |

4 PLC DISCRETE OUTPUT MODULE WIRING DIAGRAM  
N.T.S.

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430 de l'hôpital bid, suite 210, J8V 1T7  
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Consulting Engineers

| No. | DESCRIPTION             | DATE     | BY   | APP'D |
|-----|-------------------------|----------|------|-------|
| 1   | ISSUED FOR CONSTRUCTION | 05/04/10 | WBBP |       |
| 0   | ISSUED FOR TENDER       | 06/19/09 | WBBP | C.W.  |

THE STAMP COLOUR IS RED FOR  
THE ORIGINAL SIGNED DRAWING

C. L. WOOD  
LICENSED PROFESSIONAL ENGINEER  
HWT/MW

**Trow Associates Inc.**  
154 Colonnade Road South  
Ottawa, Ont. K2E 7J5  
Tel:(613)225-9940  
Fax:(613)225-7337

CITY OF IQALUIT

PROJECT LIFT STATION No. 2  
MODIFICATIONS

TITLE ELECTRICAL  
PLC I/O SCHEMATICS

|            |              |             |               |
|------------|--------------|-------------|---------------|
| design by  | C.M.         | project no. | OTCD00019365A |
| drawn by   | F.S.         | drawing no. | E3            |
| checked by | C.M.         |             |               |
| date       | 06/11/2009   |             |               |
| scale      | NOT TO SCALE |             |               |