

**FOR CONTRACT NO.: 06-0A5704**

# **INFORMATION HANDOUT**

## **MATERIALS INFORMATION**

**INSTALLATION DETAILS FOR STATE-FURNISHED  
BATTERY BACKUP SYSTEM  
(BBS Cabinet mounting details and wiring details)**

**ROUTE: 06-Tul-137-KP R24.8**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**



| Dist | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
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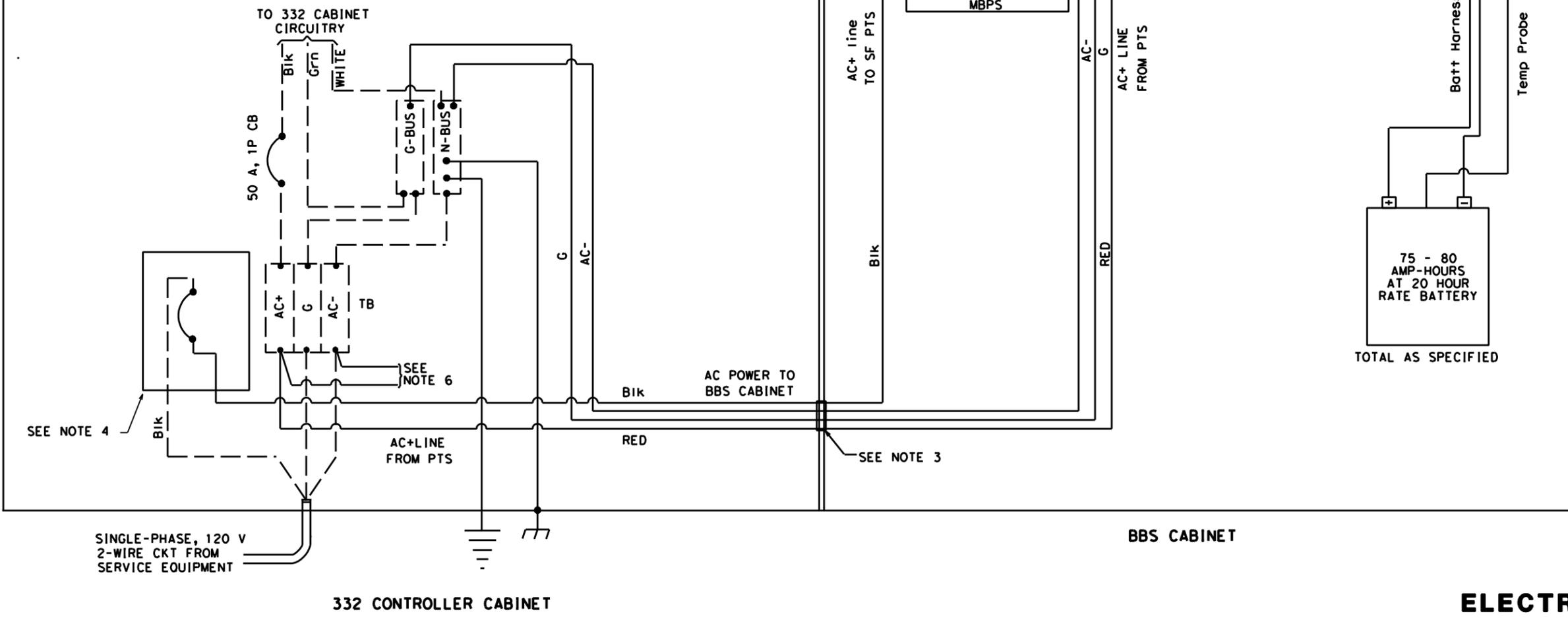
Theresa Gabriel 12-20-07  
 REGISTERED ELECT. ENGINEER DATE  
 No. E15129  
 Exp. 6-30-08  
 ELECT  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 PLANS APPROVAL DATE \_\_\_\_\_  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

**LEGEND: (THIS SHEET ONLY)**

- BBS = BATTERY BACKUP SYSTEM
- PTS = POWER TRANSFER SWITCH
- UPS = UNINTERRUPTIBLE POWER SUPPLY
- UPSC = UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
- UPSM = UPS MODE
- BP = BYPASS
- MBPS = MANUAL BYPASS SWITCH
- AC+ = UNGROUNDED CONDUCTOR
- AC- = GROUNDED CONDUCTOR
- C = COMMON
- Grn = GREEN
- Blk = BLACK
- SF = STATE-FURNISHED
- Batt = BATTERY
- Temp = TEMPERATURE
- TB = TERMINAL BLOCK
- CNTL = CONTROL

**NOTES: (THIS SHEET ONLY)**

1. TYPE A REFERS TO BBS EQUIPMENT FROM MANUFACTURER A
2. CASE-1 REFERS TO THE SITUATION WHEN THE ENTIRE BBS EQUIPMENT INCLUDING THE BATTERIES ARE INSTALLED IN THE BBS CABINET.
3. THE LOCATION OF 41C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 V RATED CIRCUIT BREAKER MANUFACTURED PER U.L. STANDARD 489.
5. TEMPERATURE PROBE SHALL BE ATTACHED TO THE BATTERY BY TAPE OR ATTACHED TO THE NEGATIVE TERMINAL OF THE BATTERY.
6. THE ELECTRICAL POWER FOR THE COOLING FAN FOR BBS CABINET SHALL BE TAPPED FROM THE BOTTOM OF TB IN 332 CABINET.



**ELECTRICAL SYSTEMS**  
**(BBS POWER CONNECTION DIAGRAM, TYPE A, CASE-1)**  
 NO SCALE

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS  
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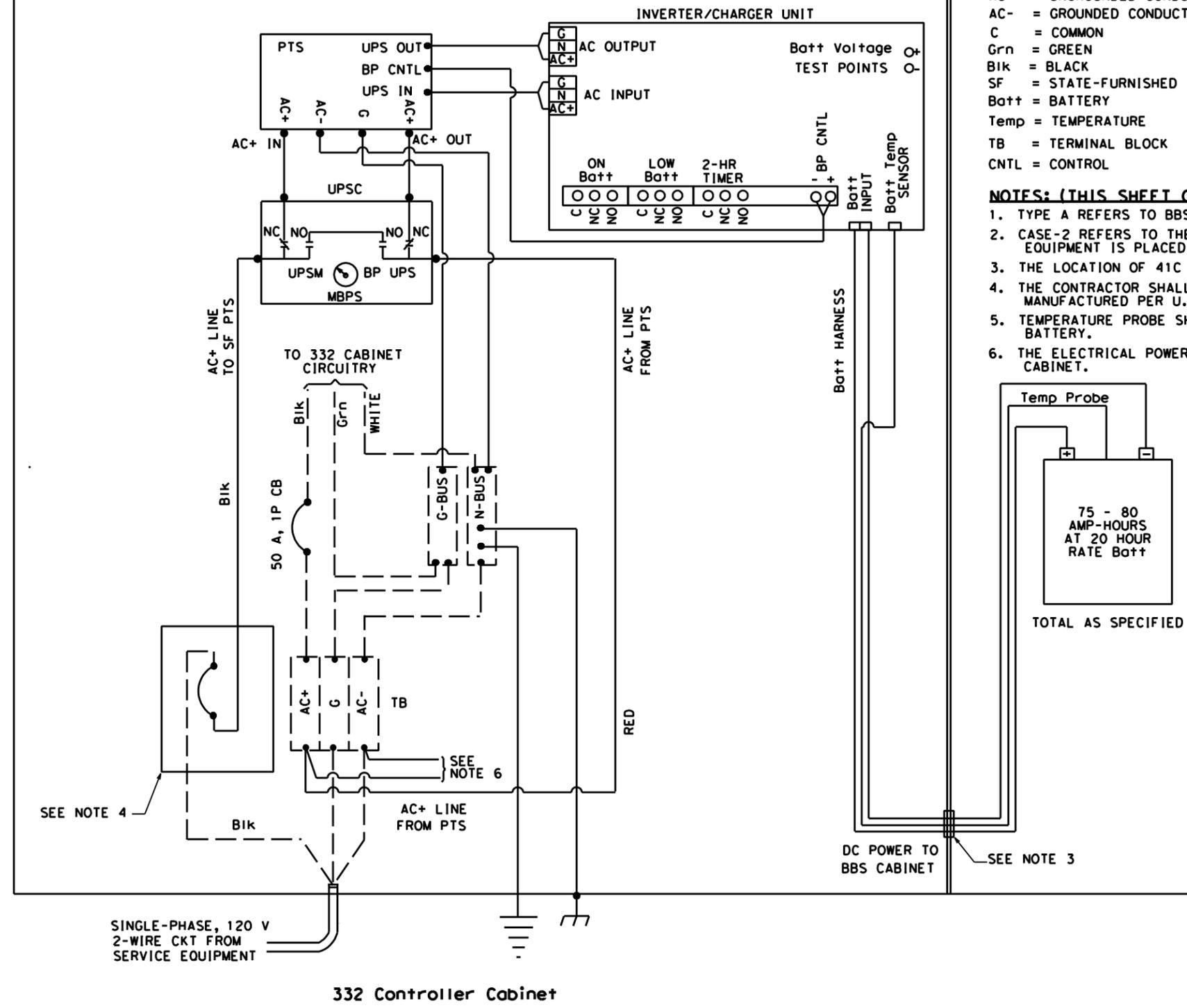


| Dist | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
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**NOTES: (THIS SHEET ONLY)**  
 1. TYPE A REFERS TO BBS EQUIPMENT FROM MANUFACTURER A.  
 2. CASE-2 REFERS TO THE SITUATION WHEN ONLY THE BATTERIES ARE INSTALLED IN THE BBS CABINET. THE REMAINING EQUIPMENT IS PLACED IN THE 332 CONTROLLER CABINET.  
 3. THE LOCATION OF 41C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.  
 4. THE CONTRACTOR SHALL FURNISH AND INSTALL NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 V RATED CIRCUIT BREAKER MANUFACTURED PER U.L. STANDARD 489.  
 5. TEMPERATURE PROBE SHALL BE ATTACHED TO THE BATTERY BY TAPE OR ATTACHED TO THE NEGATIVE TERMINAL OF THE BATTERY.  
 6. THE ELECTRICAL POWER FOR THE COOLING FAN FOR BBS CABINET SHALL BE TAPPED FROM THE BOTTOM OF TB IN 332 CABINET.



BBS Cabinet

332 Controller Cabinet

**ELECTRICAL SYSTEMS**  
**(BBS POWER CONNECTION DIAGRAM, TYPE A, CASE-2)**  
 NO SCALE

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|   |                     |  |
|---|---------------------|--|
|   |                     | Theresa Gabriel<br>REGISTERED ELECTRICAL ENGINEER<br>No. E15129<br>Exp. 6-30-08<br>ELECT |
| 12-20-07  | DATE                |  |
|   | PLANS APPROVAL DATE |  |
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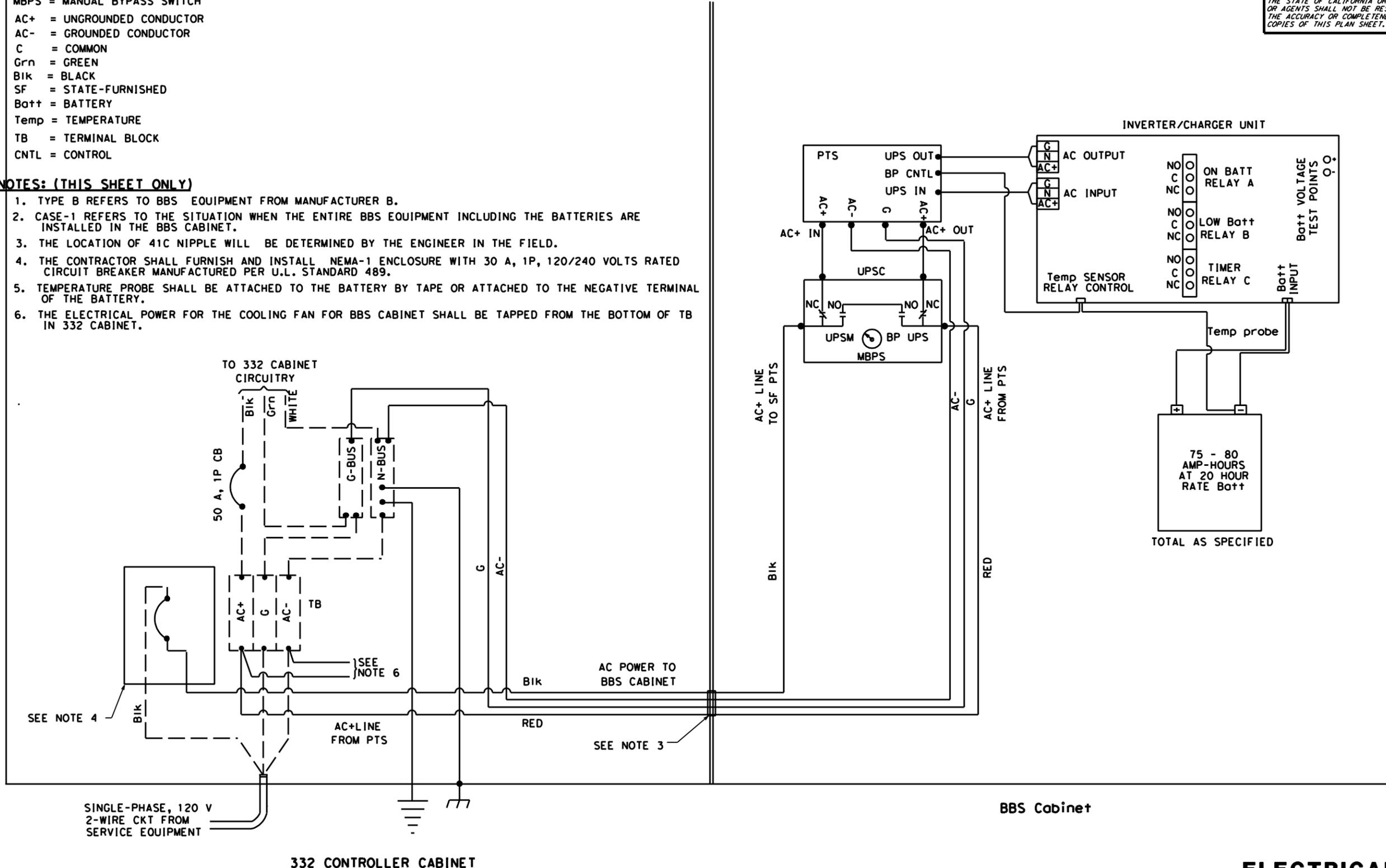
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- CNTL = CONTROL

**NOTES: (THIS SHEET ONLY)**

1. TYPE B REFERS TO BBS EQUIPMENT FROM MANUFACTURER B.
2. CASE-1 REFERS TO THE SITUATION WHEN THE ENTIRE BBS EQUIPMENT INCLUDING THE BATTERIES ARE INSTALLED IN THE BBS CABINET.
3. THE LOCATION OF 41C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 VOLTS RATED CIRCUIT BREAKER MANUFACTURED PER U.L. STANDARD 489.
5. TEMPERATURE PROBE SHALL BE ATTACHED TO THE BATTERY BY TAPE OR ATTACHED TO THE NEGATIVE TERMINAL OF THE BATTERY.
6. THE ELECTRICAL POWER FOR THE COOLING FAN FOR BBS CABINET SHALL BE TAPPED FROM THE BOTTOM OF TB IN 332 CABINET.

REVISOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CALCULATED/DESIGNED BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 FUNCTIONAL SUPERVISOR: \_\_\_\_\_  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans



**ELECTRICAL SYSTEMS**  
**(BBS POWER CONNECTION DIAGRAM, TYPE B, CASE-1)**  
 NO SCALE

BORDER LAST REVISED 3/1/2007

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