Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	20	R4.1/R17.4	68	106

REGISTERED ELECTRICAL ENGINEER 6-4-12 DATE

6-4-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARY ANN HUDSPETH No. 17245 Exp. 6-30-12 ELECTRICAL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

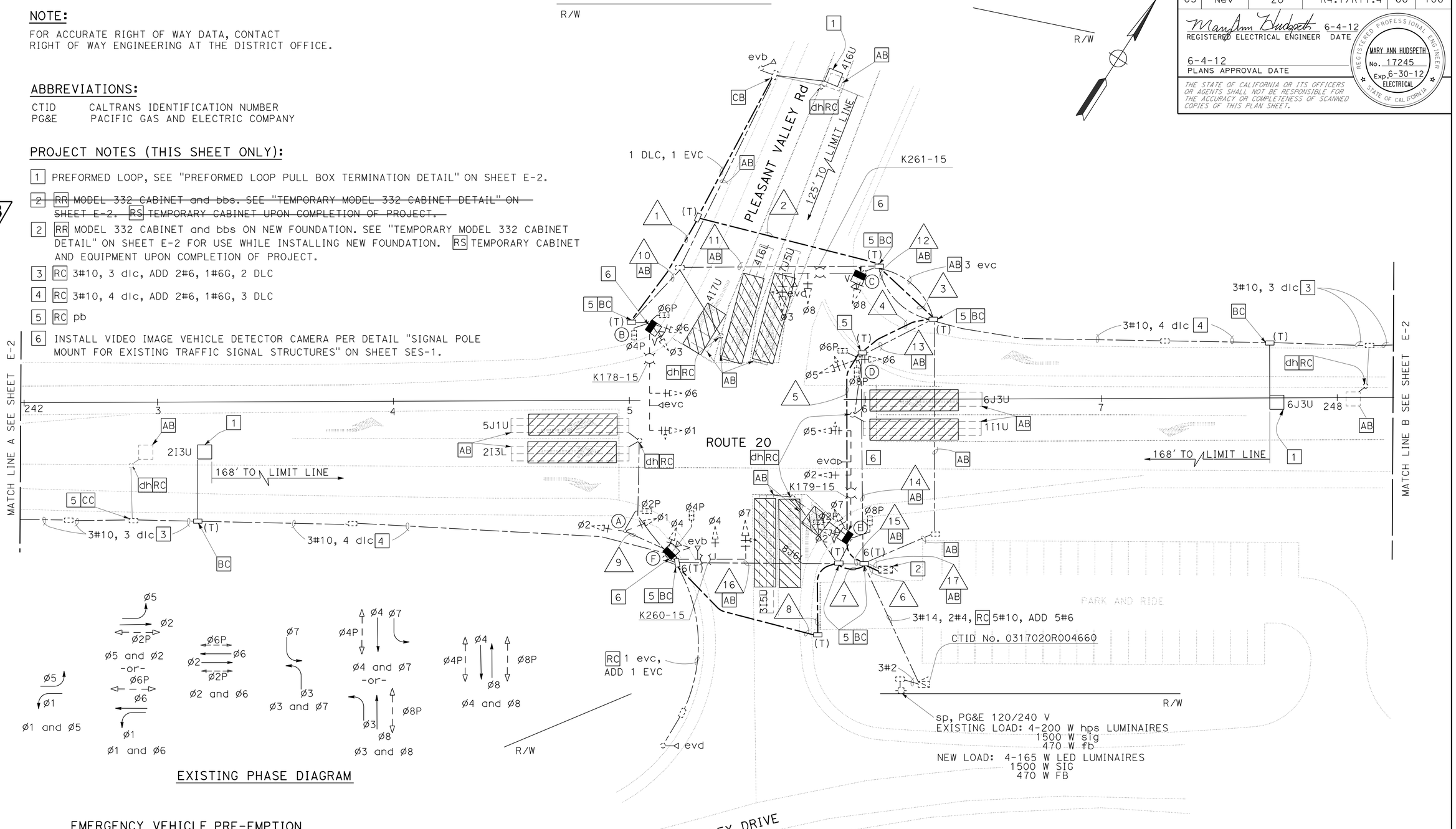
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

ABBREVIATIONS:

CTID CALTRANS IDENTIFICATION NUMBER
PG&E PACIFIC GAS AND ELECTRIC COMPANY

PROJECT NOTES (THIS SHEET ONLY):

1. PREFORMED LOOP, SEE "PREFORMED LOOP PULL BOX TERMINATION DETAIL" ON SHEET E-2.
2. ~~RR MODEL 332 CABINET and bbs. SEE "TEMPORARY MODEL 332 CABINET DETAIL" ON SHEET E-2. RS TEMPORARY CABINET UPON COMPLETION OF PROJECT.~~
3. RR MODEL 332 CABINET and bbs ON NEW FOUNDATION. SEE "TEMPORARY MODEL 332 CABINET DETAIL" ON SHEET E-2 FOR USE WHILE INSTALLING NEW FOUNDATION. RS TEMPORARY CABINET AND EQUIPMENT UPON COMPLETION OF PROJECT.
4. RC 3#10, 3 dlc, ADD 2#6, 1#6G, 2 DLC
5. RC 3#10, 4 dlc, ADD 2#6, 1#6G, 3 DLC
6. RC pb
7. INSTALL VIDEO IMAGE VEHICLE DETECTOR CAMERA PER DETAIL "SIGNAL POLE MOUNT FOR EXISTING TRAFFIC SIGNAL STRUCTURES" ON SHEET SES-1.



EXISTING PHASE DIAGRAM

EMERGENCY VEHICLE PRE-EMPTION

eva - Ø2, Ø5
evb - Ø4, Ø7
evc - Ø1, Ø6
evd - Ø8, Ø3

MODIFY SIGNAL AND LIGHTING
PLEASANT VALLEY ROAD

SCALE: 1" = 20'

3 REVISED PER ADDENDUM No. 3 DATED NOVEMBER 8, 2012

APPROVED FOR ELECTRICAL WORK ONLY

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: STEVEN BLOCK
CALCULATED-DESIGNED BY: ZAHRA NIKNAFS
CHECKED BY: MARY ANN HUDSPETH
REVISED BY / DATE REVISED

LAST REVISION DATE PLOTTED => 08-NOV-2012
TIME PLOTTED => 12:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	20	R4.1/R17.4	69	106

REGISTERED ELECTRICAL ENGINEER 6-4-12 DATE

6-4-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARY ANN HUDSPETH No. 17245 Exp. 6-30-12 ELECTRICAL STATE OF CALIFORNIA

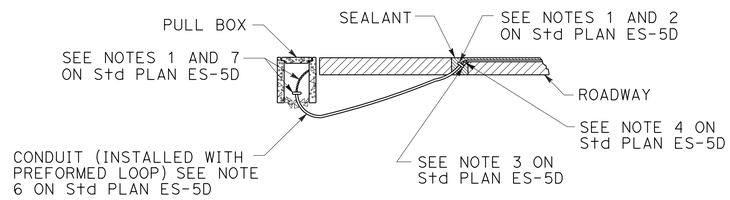
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

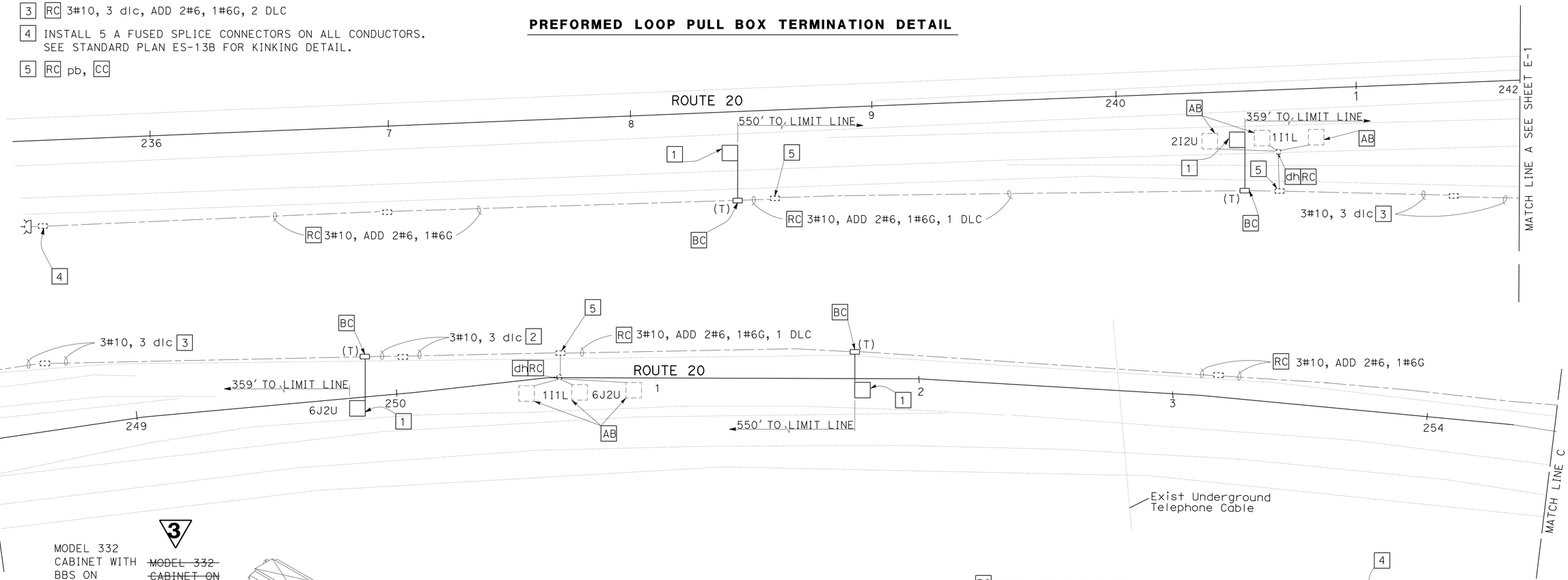
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

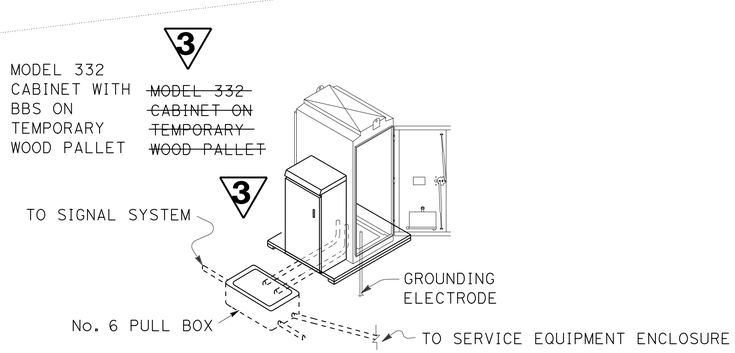
PROJECT NOTES (THIS SHEET ONLY):

1. PREFORMED LOOP, SEE "PREFORMED LOOP PULL BOX TERMINATION DETAIL" ON THIS SHEET.
2. RC 3#10, 3 dlc, ADD 2#6, 1#6G, 1 DLC
3. RC 3#10, 3 dlc, ADD 2#6, 1#6G, 2 DLC
4. INSTALL 5 A FUSED SPLICE CONNECTORS ON ALL CONDUCTORS. SEE STANDARD PLAN ES-13B FOR KINKING DETAIL.
5. RC pb, CC

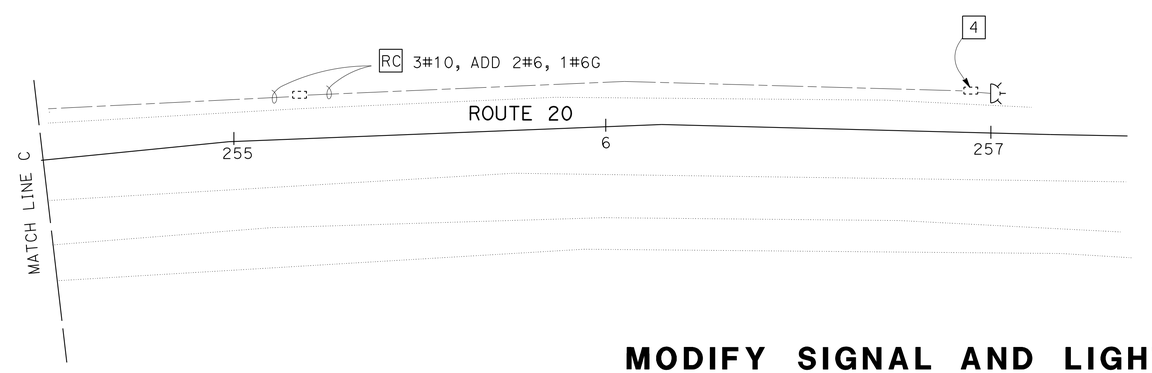


PREFORMED LOOP PULL BOX TERMINATION DETAIL





TEMPORARY MODEL 332 CABINET DETAIL



3 **REVISED PER ADDENDUM No. 3 DATED NOVEMBER 8, 2012**

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY SIGNAL AND LIGHTING
PLEASANT VALLEY ROAD

SCALE: 1" = 20'

E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: STEVEN BLOCK
CALCULATED-DESIGNED BY: ZAHRA NIKNAFS
CHECKED BY: MARY ANN HUDSPETH
REVISED BY / DATE REVISED

LAST REVISION: DATE PLOTTED => 08-NOV-2012 TIME PLOTTED => 12:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	NEV	20	R4.1/R17.4	85A	106

REGISTERED ELECTRICAL ENGINEER — 6-4-12 DATE

6-4-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — MARY ANN HUDSPETH No. 17245 Exp. 6-30-14 ELECTRICAL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

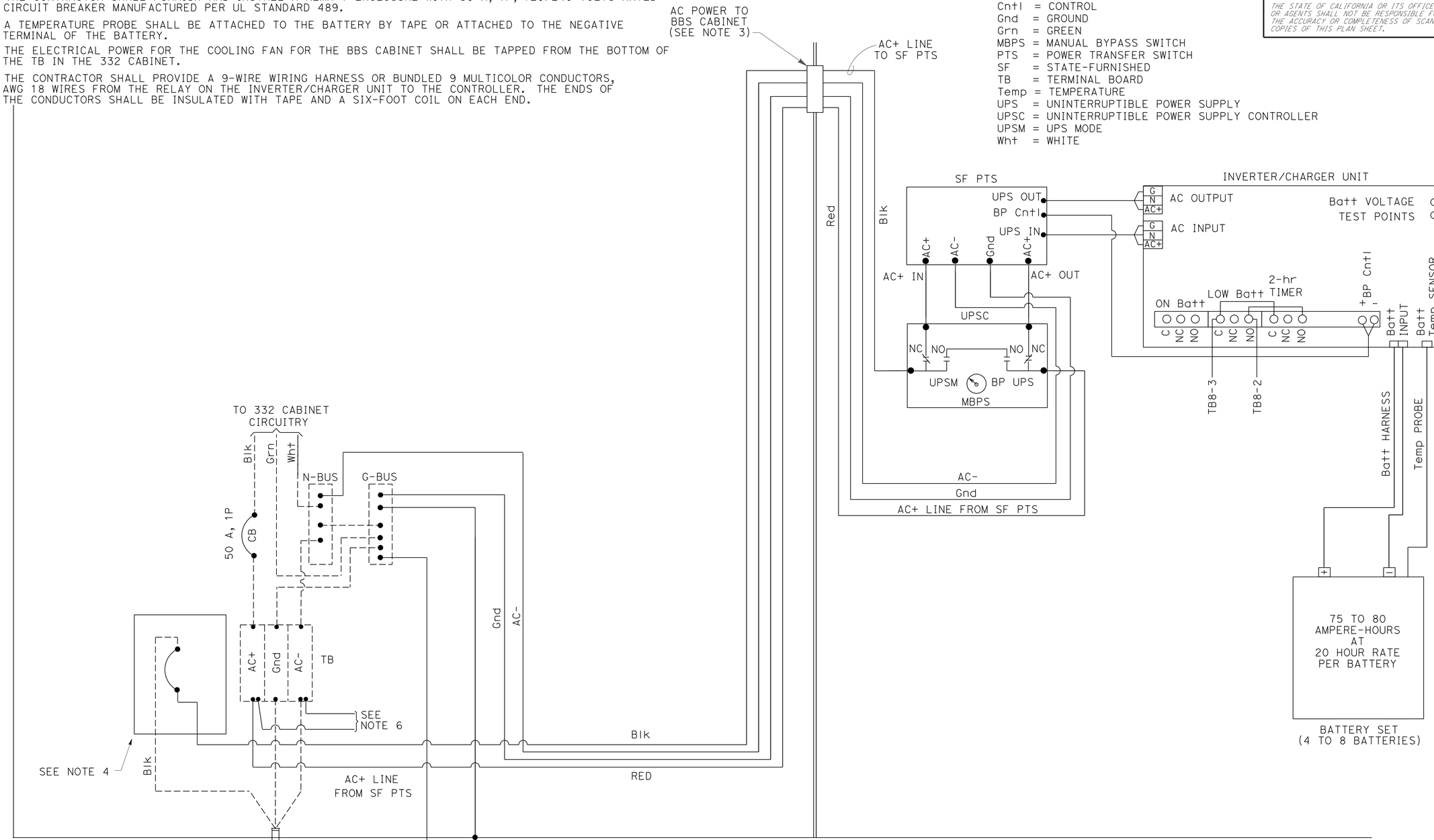
3

NOTES: (FOR THIS SHEET ONLY)

1. TYPE A REFERS TO THE 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 THE 2"C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL A NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 VOLTS RATED CIRCUIT BREAKER MANUFACTURED PER UL STANDARD 489.
5. A 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 THE BBS CABINET SHALL BE TAPPED FROM THE BOTTOM OF THE TB IN THE 332 CABINET.
7. THE CONTRACTOR SHALL PROVIDE A 9-WIRE WIRING HARNESS OR BUNDLED 9 MULTICOLOR CONDUCTORS, AWG 18 WIRES FROM THE RELAY ON THE INVERTER/CHARGER UNIT TO THE CONTROLLER. THE ENDS OF THE CONDUCTORS SHALL BE INSULATED WITH TAPE AND A SIX-FOOT COIL ON EACH END.

LEGEND: (FOR THIS SHEET ONLY)

AC+ = UNGROUNDED CONDUCTOR
AC- = GROUNDED CONDUCTOR
Batt = BATTERY
Blk = BLACK
BP = BYPASS
C = COMMON
Cntl = CONTROL
Gnd = GROUND
Grn = GREEN
MBPS = MANUAL BYPASS SWITCH
PTS = POWER TRANSFER SWITCH
SF = STATE-FURNISHED
TB = TERMINAL BOARD
Temp = TEMPERATURE
UPS = UNINTERRUPTIBLE POWER SUPPLY
UPSC = UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
UPSM = UPS MODE
Wht = WHITE



3 **ADDED PER ADDENDUM No. 3 DATED NOVEMBER 8, 2012**

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY SIGNAL AND LIGHTING
(BBS POWER CONNECTION DIAGRAM, TYPE A, CASE-1 ELECTRICAL DETAIL)

NO SCALE

E-18A

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

REVISED BY	DATE REVISED
ZAHRA NIKNAFS	
MARY ANN HUDSPETH	
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	
STEVEN BLOCK	

LAST REVISION — DATE PLOTTED => 08-NOV-2012 TIME PLOTTED => 12:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	NEV	20	R4.1/R17.4	85B	106

REGISTERED ELECTRICAL ENGINEER — 6-4-12 DATE

6-4-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — MARY ANN HUDSPETH No. 17245 Exp. 6-30-14 ELECTRICAL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

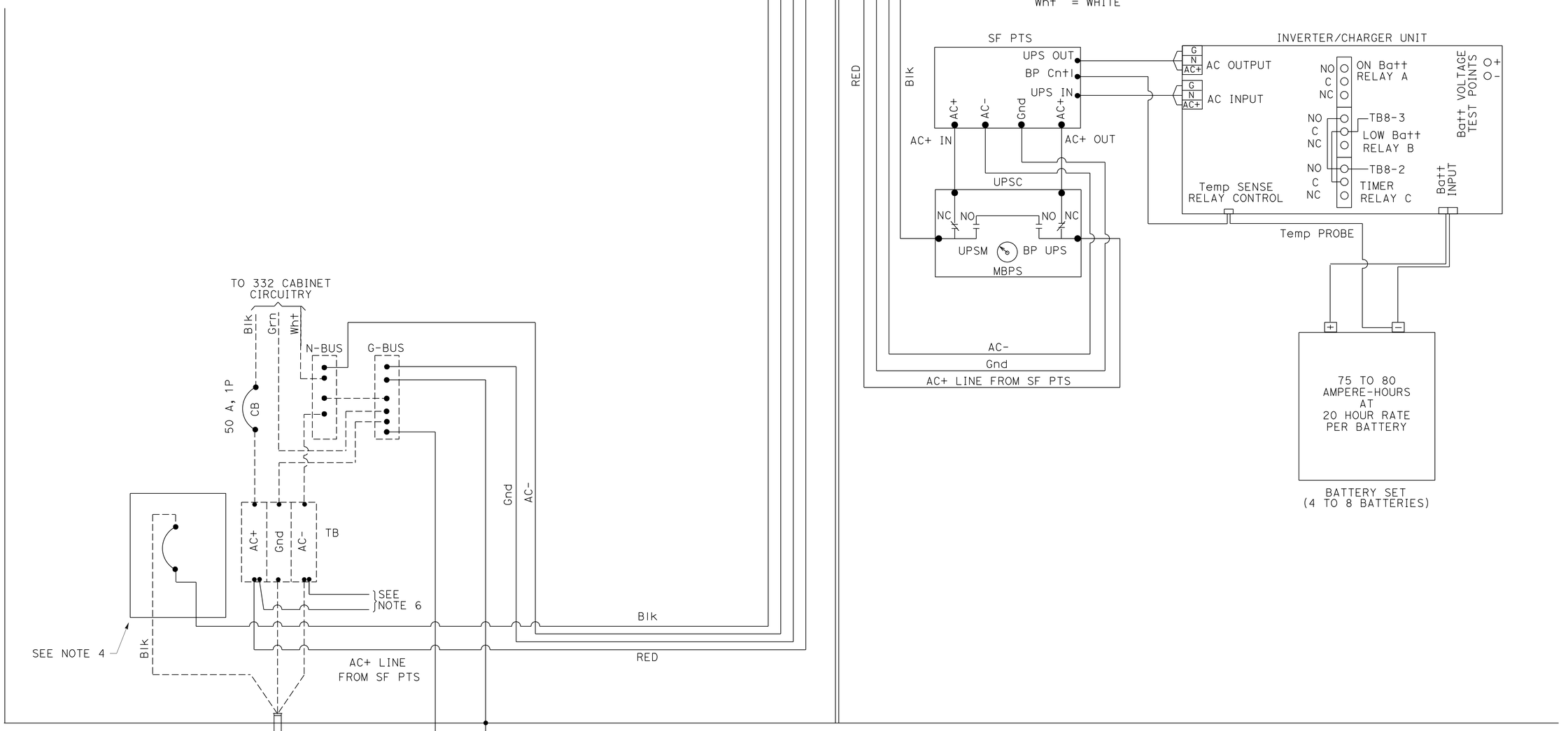
3

NOTES: (FOR THIS SHEET ONLY)

1. TYPE B REFERS TO THE 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 THE 2"C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL A NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 VOLTS RATED CIRCUIT BREAKER MANUFACTURED PER UL STANDARD 489.
5. A 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 THE BBS CABINET SHALL BE TAPPED FROM THE BOTTOM OF THE TB IN THE 332 CABINET.
7. THE CONTRACTOR SHALL PROVIDE A 9-WIRE WIRING HARNESS OR BUNDLED 9 MULTICOLOR CONDUCTORS, AWG 18 WIRES FROM THE RELAY ON THE INVERTER/CHARGER UNIT TO THE CONTROLLER. THE ENDS OF THE CONDUCTORS SHALL BE INSULATED WITH TAPE AND A SIX-FOOT COIL ON EACH END.

LEGEND: (FOR THIS SHEET ONLY)

AC+ = UNGROUNDED CONDUCTOR
AC- = GROUNDED CONDUCTOR
Batt = BATTERY
Blk = BLACK
BP = BYPASS
C = COMMON
Cntl = CONTROL
Gnd = GROUND
Grn = GREEN
MBPS = MANUAL BYPASS SWITCH
PTS = POWER TRANSFER SWITCH
SF = STATE-FURNISHED
TB = TERMINAL BOARD
Temp = TEMPERATURE
UPS = UNINTERRUPTIBLE POWER SUPPLY
UPSC = UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
UPSM = UPS MODE
Wht = WHITE



3 **ADDED PER ADDENDUM No. 3 DATED NOVEMBER 8, 2012**

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY SIGNAL AND LIGHTING
(BBS POWER CONNECTION DIAGRAM, TYPE B, CASE-1 ELECTRICAL DETAIL)

NO SCALE

E-18B

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans® ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR: STEVEN BLOCK
CALCULATED-DESIGNED BY: ZAHRA NIKNAFS
CHECKED BY: MARY ANN HUDSPETH
REVISED BY / DATE REVISED

LAST REVISION — DATE PLOTTED => 08-NOV-2012 TIME PLOTTED => 12:55