FOR CONTRACT NO.: 07-127224

INFORMATION HANDOUT

MATERIALS INFORMATION

Final Site Investigation Report, Lead Testing (ADL) at Route 138, Task Order No. 07-127200-8G. Page 6.

and

Battery Backup System Connection Diagrams and Foundation Details

ROUTE: 07-LA-138-KP 87.2/88.9

PSI Information To Build On
Engineering • Consulting • Testing

Lead

LA 138
TO # 07-127200-8G
KP 82.72 - 96.88

PM 51.40 - 60.20

7L03

To: Sam Chen

From - A. Nili

FINAL
SITE INVESTIGATION REPORT
LEAD TESTING (ADL) AT LA-ROUTE 138
FROM PM 51.4 TO 60.2
LOS ANGELES COUNTY, CALIFORNIA

CALTRANS CONTRACT NUMBER SA43A0012
TASK ORDER NO. 07-127200-8G

Prepared for

State of California
Department of Transportation, District 7
120 South Spring Street
Los Angeles, California 90012-3606

Prepared by

Professional Service Industries
3960 Gilman Street
Long Beach, California 90815

PSI Project No. 559-1G008
September 17, 2001

correlated (refer to Appendix C).

Regression analysis is used to investigate and model the relationship between a response variable (i.e. Totals) and one or more predictors (i.e. soluble by WET). Regression analysis suggests a 88.5% variability between totals and soluble results, which denotes a strong linear relationship. The equation of the regression line was estimated to be $y = -0.346250+0.0693982x$, where x and y represent total and soluble lead concentrations, respectively. A fitted regression line plot for totals vs. soluble lead results using a 90% and 95% confidence level are provided in Appendix C.

8.0 OBSERVATIONS

The following observations are provided to summarize the results generated by the site investigation results and statistical analysis:

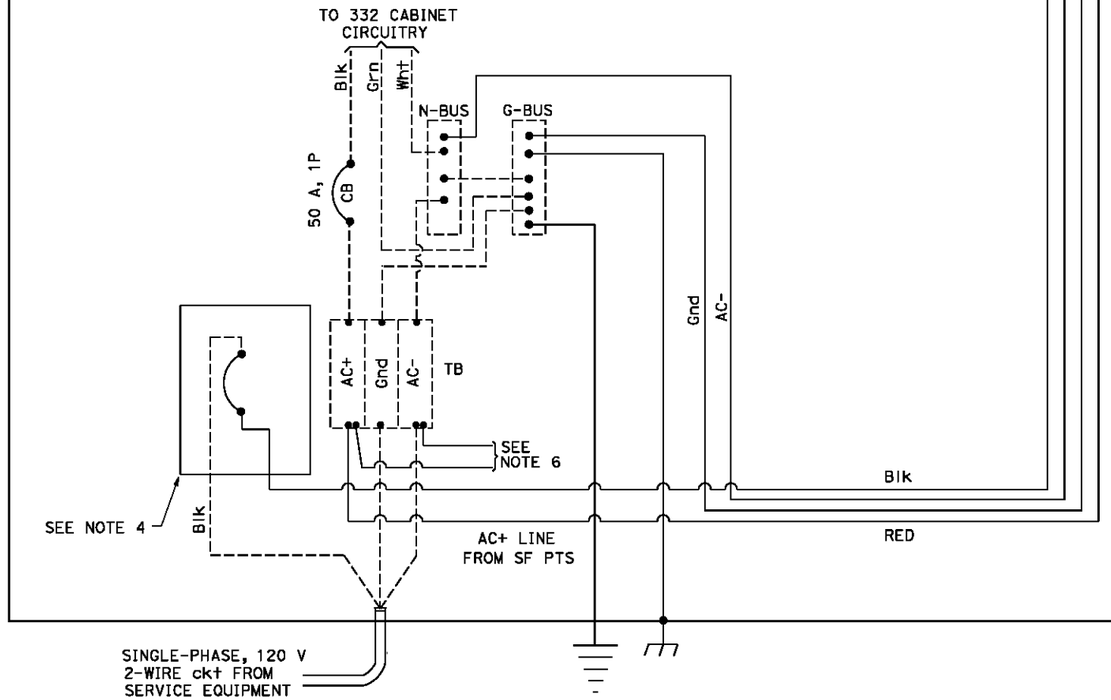
- The project area is underlain by silty sand to the depth investigated of approximately 1.5-feet bgs. Groundwater was not encountered.
- PH values from selected samples ranged from 6.6 to 8.7.
- The concentrations of total lead in all soil samples analyzed ranged from 1.2 mg/kg to 140 mg/kg.
- **PROJECT-WIDE** - The calculated 90% and 95% UCLs for all total soil samples is estimated to be 28.8 and 30.39 mg/kg, respectively. The calculated UCLs for all samples indicate that lead concentrations are below the California Health and Safety (H & S) Code threshold of 350 mg/kg. The corresponding 90% and 95% UCLs for soluble lead is estimated to be 1.65 and 1.76 mg/l, respectively. Soluble results indicate concentrations below the Title 22 hazardous waste threshold of 5 mg/l. No samples analyzed for soluble lead using the modified WET were detected in a concentration that was above the 0.5 mg/l limit.
- **NORTH BOUND** - The calculated 90% and 95% UCLs for all total north bound soil samples is estimated to be 43.0 and 45.9 mg/kg, respectively. The calculated UCLs for all samples indicate that lead concentrations are below the California Health and Safety (H & S) Code threshold of 350 mg/kg. The corresponding 90% and 95% UCLs for soluble lead is estimated to be 2.64 and 2.84 mg/l, respectively. Soluble results indicate concentrations below the Title 22 hazardous waste threshold of 5 mg/l. No samples analyzed for soluble lead using the modified WET were detected in a concentration that was above the 0.5 mg/l limit.
- **SOUTH BOUND** - The calculated 90% and 95% UCLs for all total south bound soil samples is estimated to be 20.2 and 21.7 mg/kg, respectively. The calculated UCLs for all samples indicate that lead concentrations are below the California Health and Safety (H & S) Code threshold of 350 mg/kg. The corresponding 90% and 95% UCLs for soluble lead is estimated to be 1.06 and 1.16

LEGEND: (THIS SHEET ONLY)

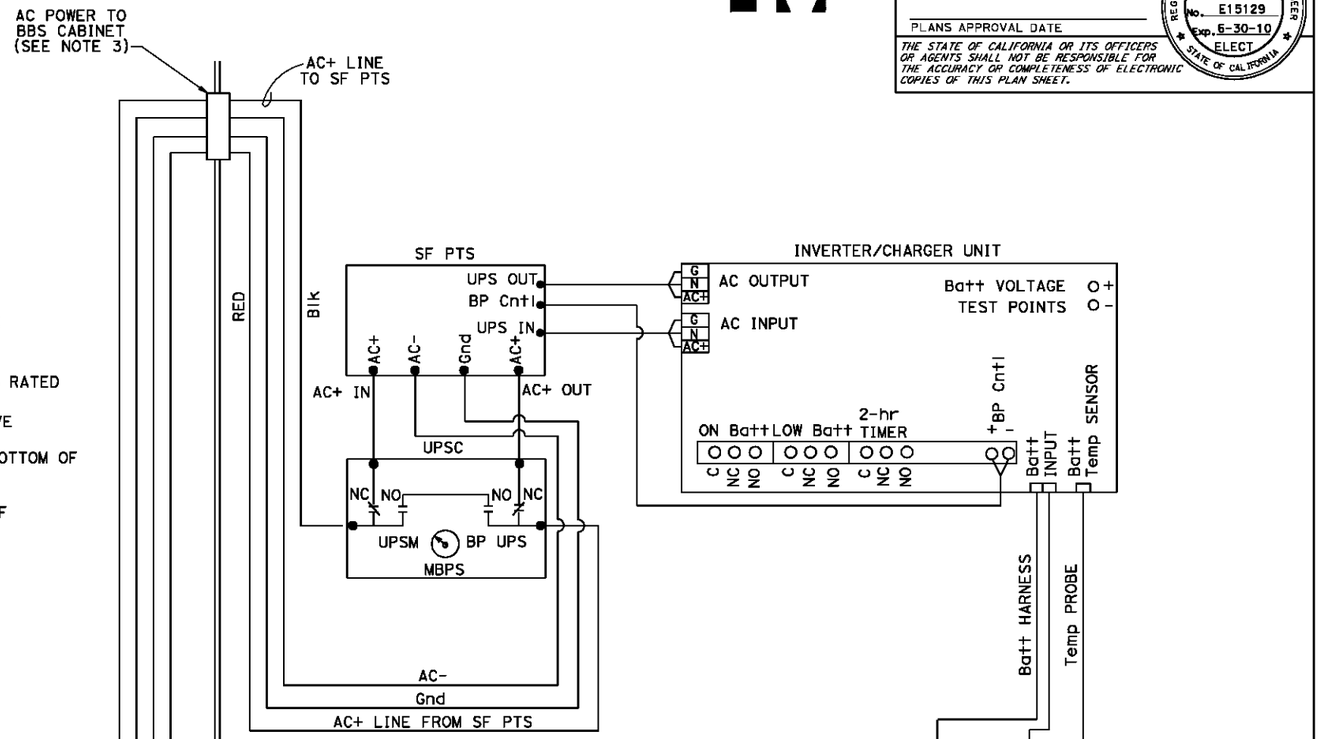
PTS = POWER TRANSFER SWITCH
UPS = UNINTERRUPTIBLE POWER SUPPLY
UPSC = UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
UPSM = UPS MODE
BP = BYPASS
MBPS = MANUAL BYPASS SWITCH
AC+ = UNGROUNDED CONDUCTOR
AC- = GROUNDED CONDUCTOR
C = COMMON
Grn = GREEN
Blk = BLACK
Wht = WHITE
SF = STATE-FURNISHED
TB = TERMINAL BOARD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

NOTES: (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 53C 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, #18 AWG WIRES FROM THE RELAY ON THE INVERTER/CHARGER UNIT TO THE CONTROLLER. THE ENDS OF THE CONDUCTORS SHALL BE INSULATED WITH TAPE AND A 1.828 m COIL ON EACH END.



332 CONTROLLER CABINET



BBS CABINET

ELECTRICAL SYSTEMS
(BBS POWER CONNECTION DIAGRAM, TYPE A, CASE-1)

NO SCALE

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Theresa Gabriel 12-20-07
REGISTERED ELECTRICAL ENGINEER DATE

Theresa A. Gabriel No. E15129 Exp. 6-30-10 ELECT

PLANS APPROVAL DATE

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Caltrans Metric

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 2-2-09 | DATE PLOTTED => 02-FEB-2009 | TIME PLOTTED => 10:48

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Theresa Gabriel — REGISTERED ELECTRICAL ENGINEER — 12-20-07 DATE

PLANS APPROVAL DATE

Theresa A. Gabriel No. E15129 Exp. 6-30-10 ELECT — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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LEGEND: (THIS SHEET ONLY)

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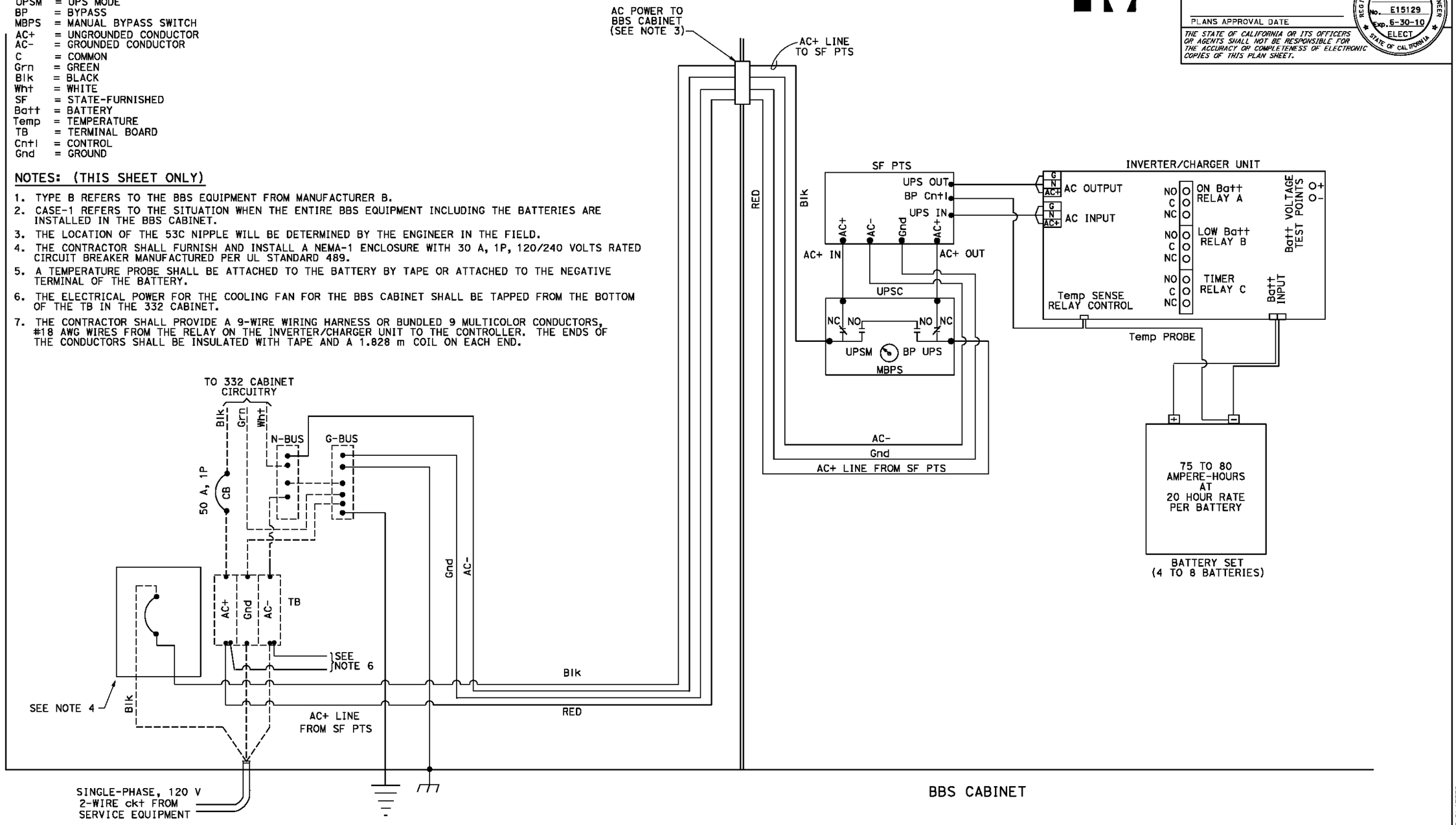
Wht	= WHITE
SF	= STATE-FURNISHED
Batt	= BATTERY
Temp	= TEMPERATURE
TB	= TERMINAL BOARD
Cntl	= CONTROL
Gnd	= GROUND

NOTES: (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 53C 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, #18 AWG WIRES FROM THE RELAY ON THE INVERTER/CHARGER UNIT TO THE CONTROLLER. THE ENDS OF THE CONDUCTORS SHALL BE INSULATED WITH TAPE AND A 1.828 m COIL ON EACH END.



ELECTRICAL SYSTEMS
(BBS POWER CONNECTION DIAGRAM, TYPE B, CASE-1)

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

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LAST REVISION 2-2-09

DATE PLOTTED => 02-FEB-2009

TIME PLOTTED => 10:50

BORDER LAST REVISED 3/1/2007

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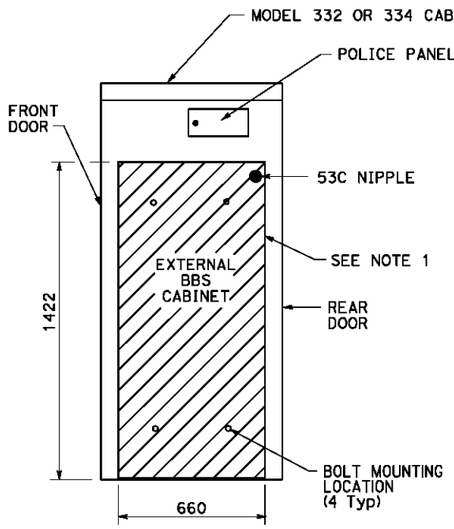
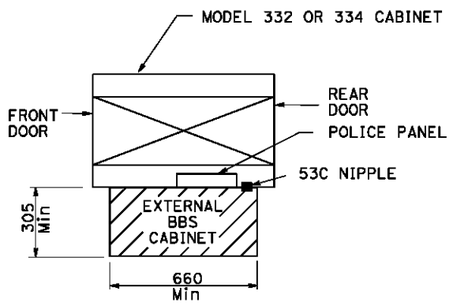
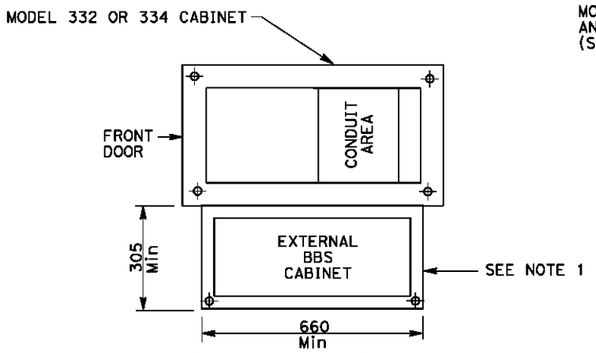


SIDE VIEW



TOP VIEW

EXTERNAL BBS CABINET MOUNTED TO THE MODEL 332 OR 334 CABINET

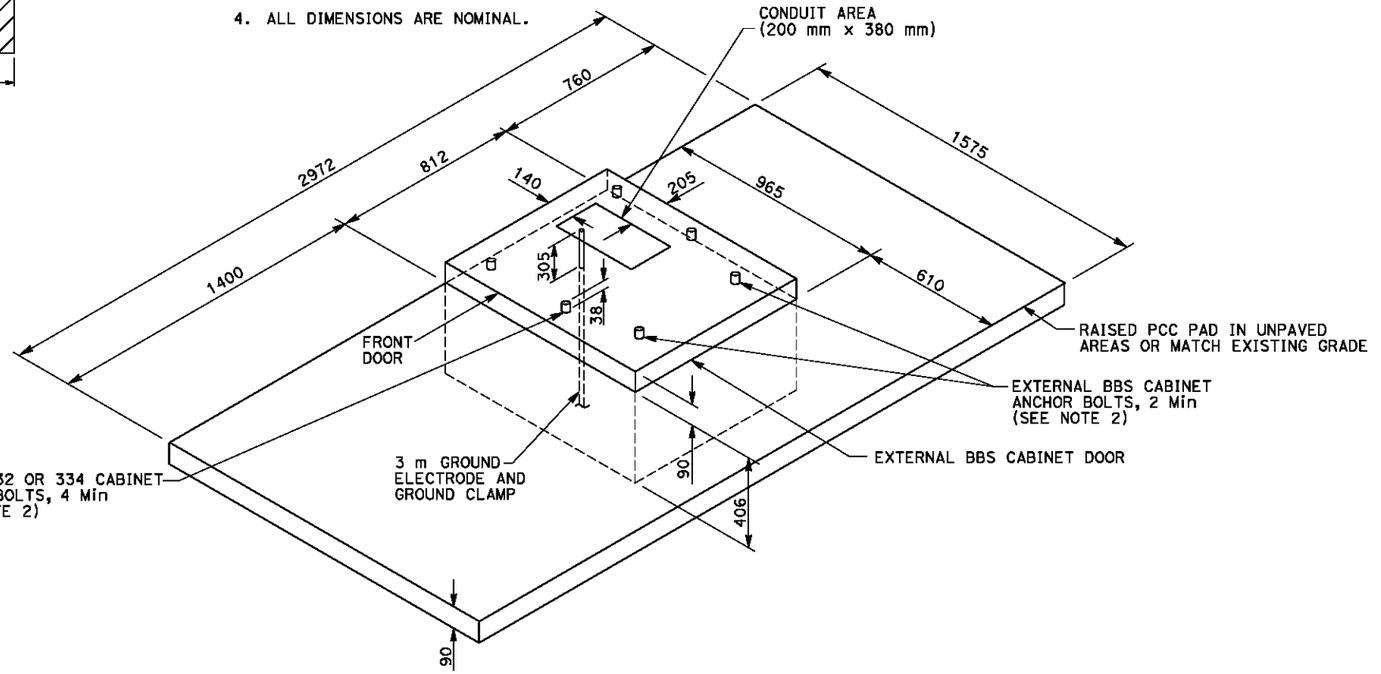


BASE PLAN FOR BBS MOUNTED TO THE MODEL 332 OR 334 CABINET

(FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE SHEET A6-1 TO A6-4, CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))

NOTE: (THIS SHEET ONLY)

1. THE EXTERNAL BBS CABINET SHALL BE MOUNTED TO THE MODEL 332 OR 334 CABINET WITH FOUR 18-8 STAINLESS STEEL HEX HEAD, FULLY-THREADED, 9.5 mm-16 X 25.4 mm BOLTS; TWO WASHERS PER BOLT, DESIGNED FOR 9.5 mm BOLTS AND ARE 18-8 STAINLESS STEEL, 25.4 mm OUTSIDE DIAMETER, ROUND, AND FLAT; AND ONE K-LOCK NUT PER BOLT, THAT IS 18-8 STAINLESS STEEL AND A HEX-NUT. THE ENGINEER WILL HAVE TO APPROVE THE BOLT MOUNTING LOCATION PRIOR TO INSTALLATION.
2. THE ANCHOR BOLTS SHALL BE 19 mm Dia X 380 mm WITH A 50 mm-90° BEND. THE CABINET MANUFACTURER'S SPECIFICATION SHALL DETERMINE THE LOCATION OF THE ANCHOR BOLTS IN THE FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE ANCHOR BOLTS AND ITS LOCATION IN THE FOUNDATION PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE BBS CABINET PRIOR TO CONSTRUCTING THE FOUNDATION OF THE MODIFIED PORTION OF THE Std MODEL 332 AND 334 CABINET FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE ANY NECESSARY DEVIATIONS PRIOR TO CONSTRUCTION.
4. ALL DIMENSIONS ARE NOMINAL.



MODIFIED MODEL 332 AND 334 CABINET FOUNDATION DETAIL FOR BATTERY BACKUP SYSTEM (BBS)

(FOR DIMENSIONS AND DETAILS NOT SHOWN AND ADDITIONAL NOTES, SEE SHEET ES-3C OF THE STANDARDS PLANS FOR MODEL 332 AND 334 CABINETS)

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

ELECTRICAL SYSTEMS (BBS FOUNDATION DETAILS)

NO SCALE

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Theresa Gabriel — REGISTERED ELECTRICAL ENGINEER — 12-20-07 DATE

PLANS APPROVAL DATE

Registered Professional Engineer — Theresa A. Gabriel — No. E15129 — Exp. 6-30-10 — ELECT — State of California

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