

FOR CONTRACT No.: 07-285004
PROJECT ID 070000019951

INFORMATION HANDOUT

Battery Backup System Connection Diagrams

Portion of Site Investigation Report

ROUTE: 07-LA-5-PM 54.4

REVISED PER ADDENDUM NO. 2 DATED OCTOBER 25, 2012

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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LEGEND: (THIS SHEET ONLY)

- PTS = POWER TRANSFER SWITCH
- UPS = UNINTERRUPTIBLE POWER SUPPLY
- UPSC = UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
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- Wh+ = 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 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.
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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 SIX-FOOT COIL ON EACH END.

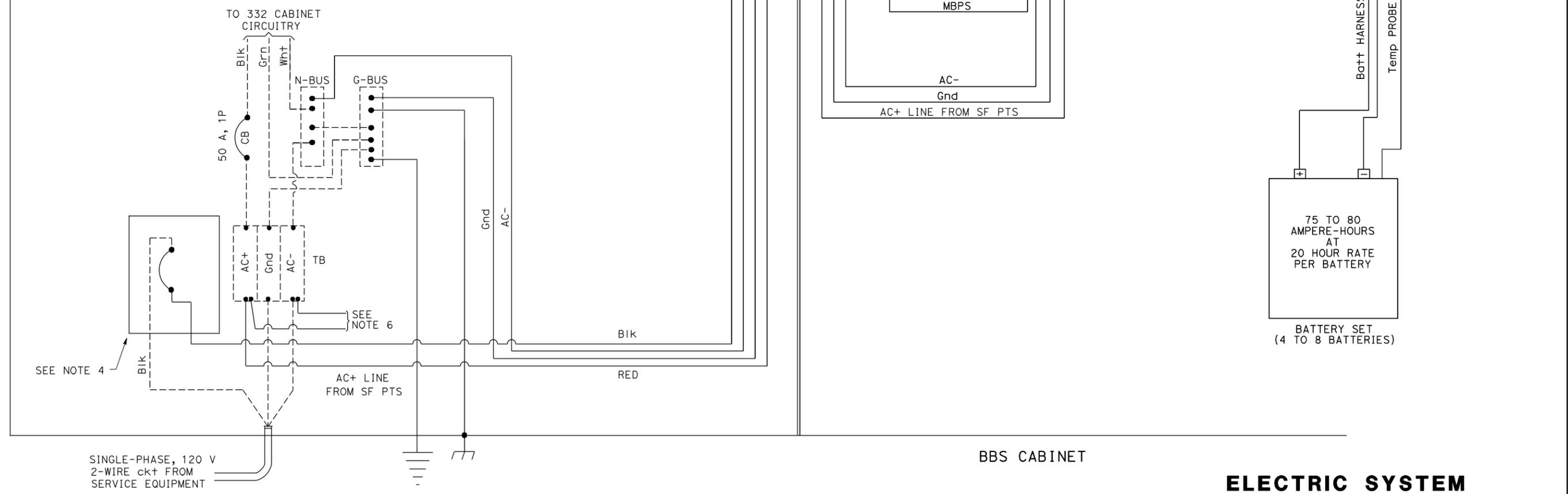
Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Theresa Gabriel
 REGISTERED CIVIL ENGINEER
 DATE 12-20-07

PLANS APPROVAL DATE

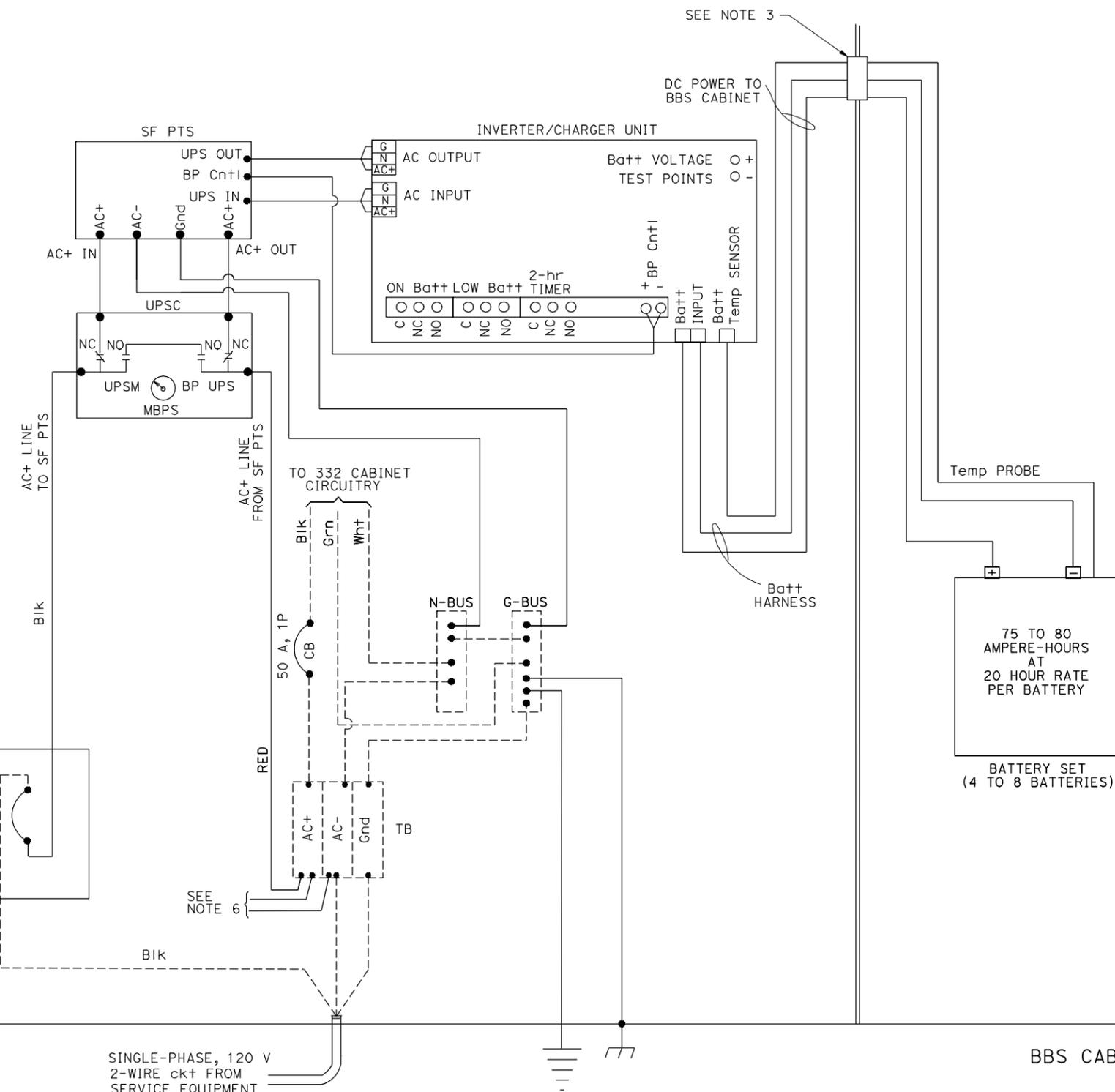
Theresa A. Gabriel
 No. E15129
 Exp. 6-30-10
 ELECT
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**ELECTRIC SYSTEM
 (BBS POWER CONNECTION DIAGRAM,
 TYPE A, CASE-1)**

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
<i>Theresa Gabriel</i> REGISTERED CIVIL ENGINEER			12-20-07 DATE	Theresa A. Gabriel No. E15129 Exp 6-30-10 ELECT STATE OF CALIFORNIA	
PLANS APPROVAL DATE					
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1. TYPE B REFERS TO THE BBS EQUIPMENT FROM MANUFACTURER B.
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 THE 2" C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
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**ELECTRICAL SYSTEMS
(BBS POWER CONNECTION DIAGRAM,
TYPE A, CASE-2)**

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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 2-2-09
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 TIME PLOTTED => 09:07

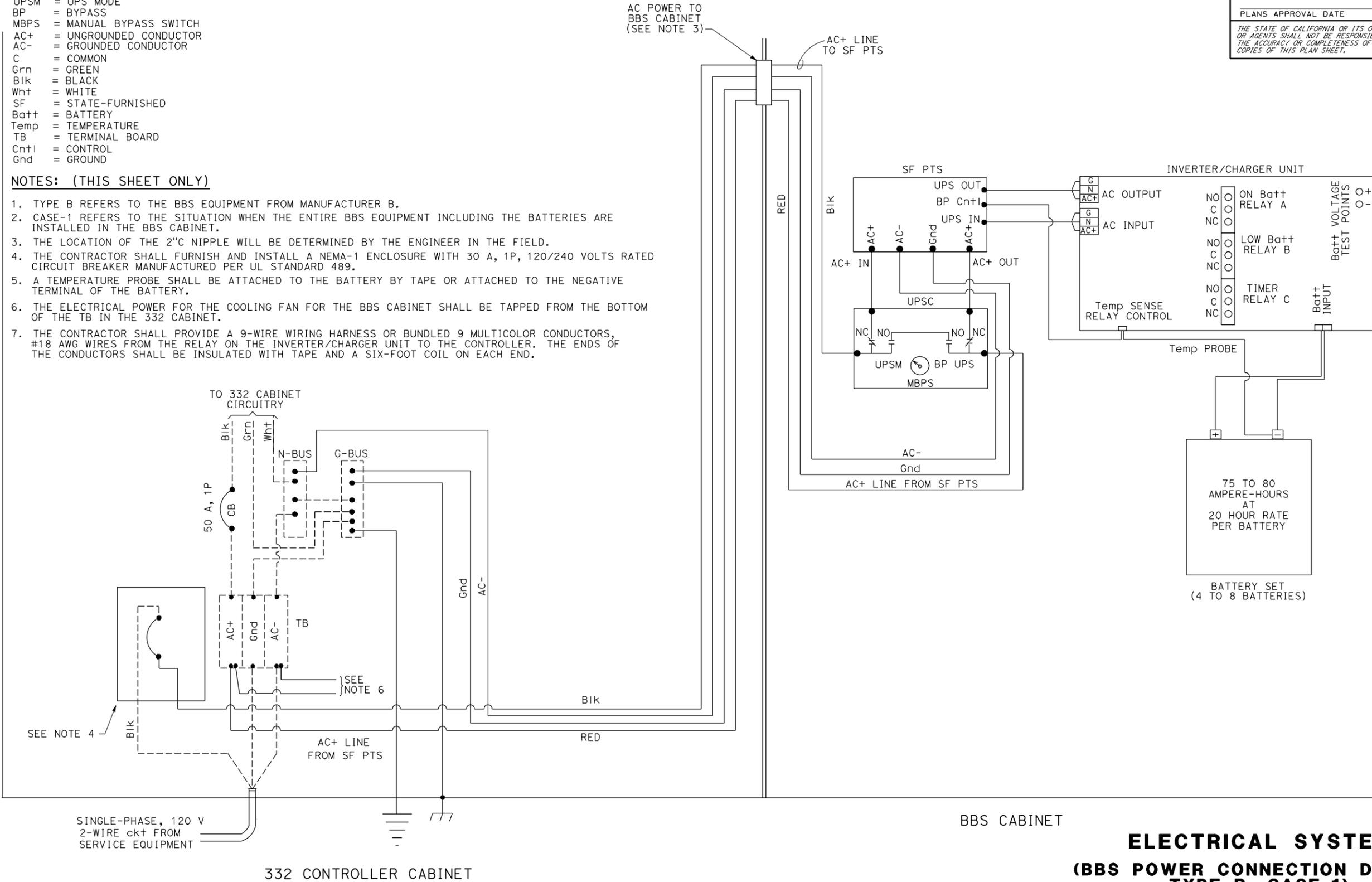
Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
Theresa Gabriel			12-20-07	REGISTERED CIVIL ENGINEER DATE	
Theresa A. Gabriel			REGISTERED PROFESSIONAL ENGINEER		
No. E15129			Exp 6-30-10		
ELECT			STATE OF CALIFORNIA		
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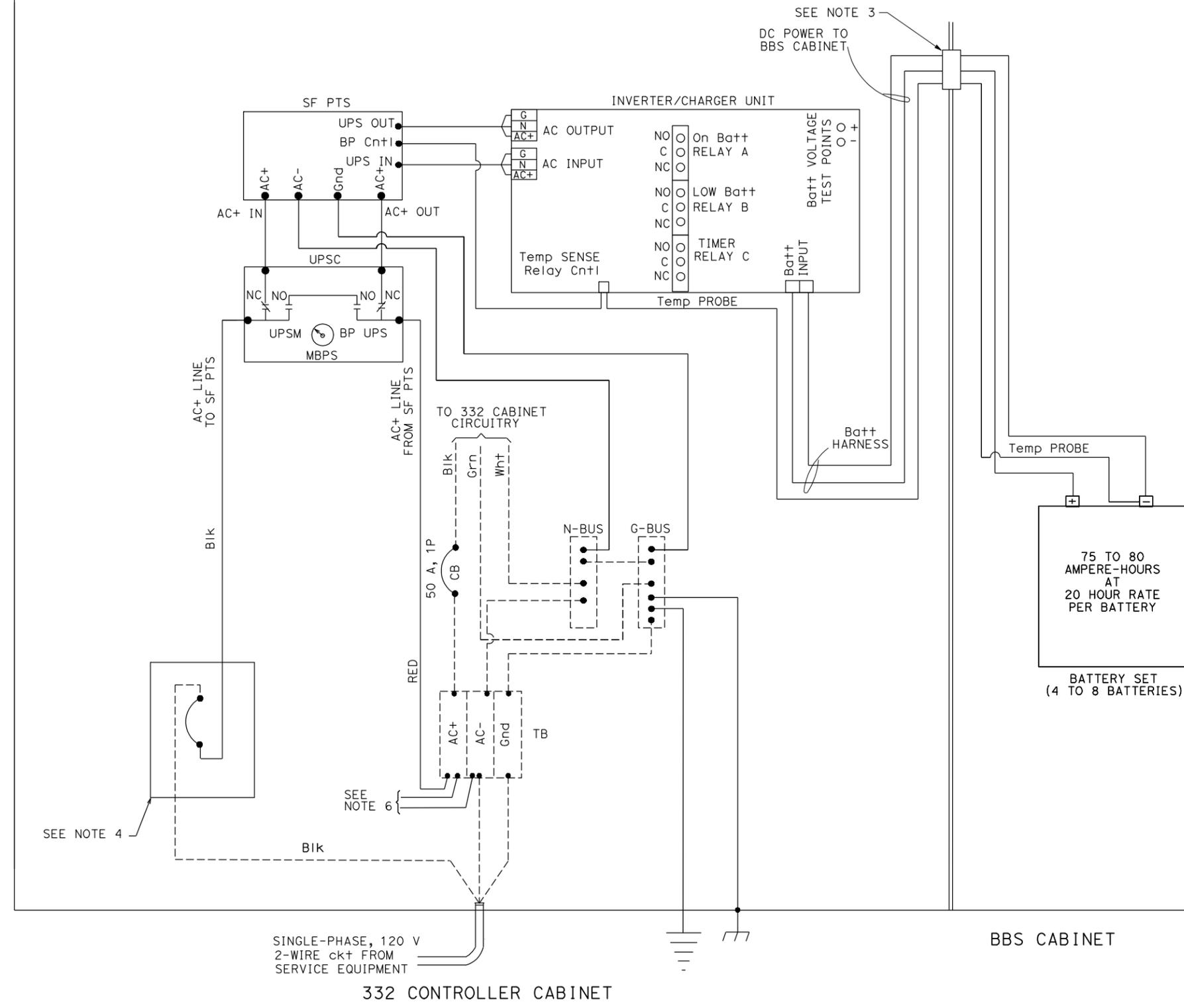


BBS CABINET

332 CONTROLLER CABINET

**ELECTRICAL SYSTEM
(BBS POWER CONNECTION DIARAM.
TYPE B, CASE-1)**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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 13-MAR-2009
 09:09



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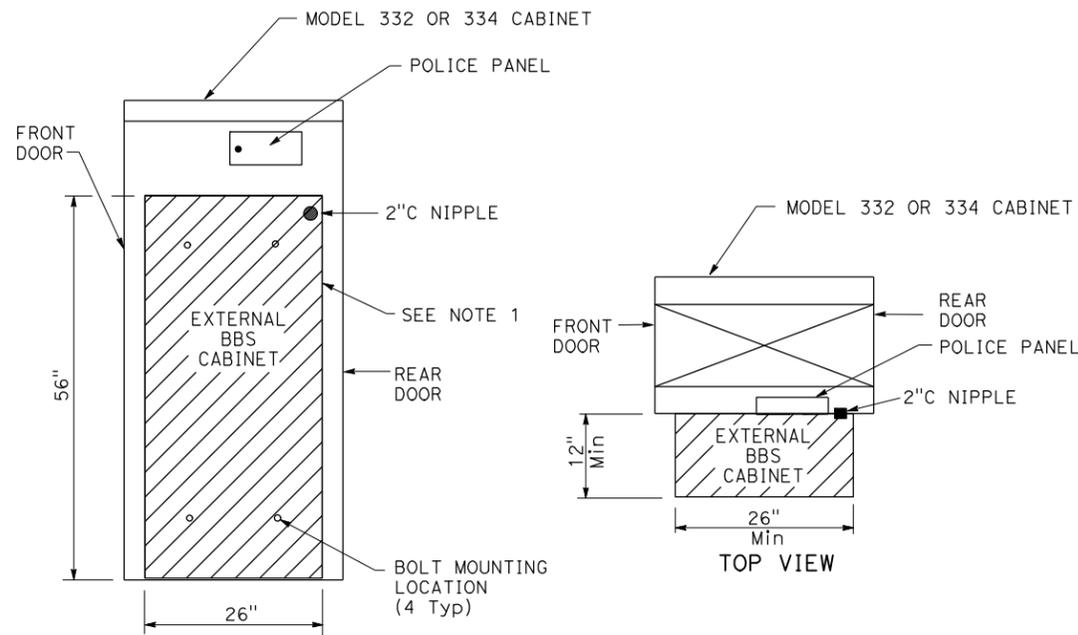
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**ELECTRICAL SYSTEM
 (BBS POWER CONNECTION DIAGRAM,
 TYPE B, CASE-2)**

DIST	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
Theresa Gabriel			12-20-07		
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE					
			Theresa A. Gabriel No. E15129 Exp. 6-30-10 ELECT STATE OF CALIFORNIA		
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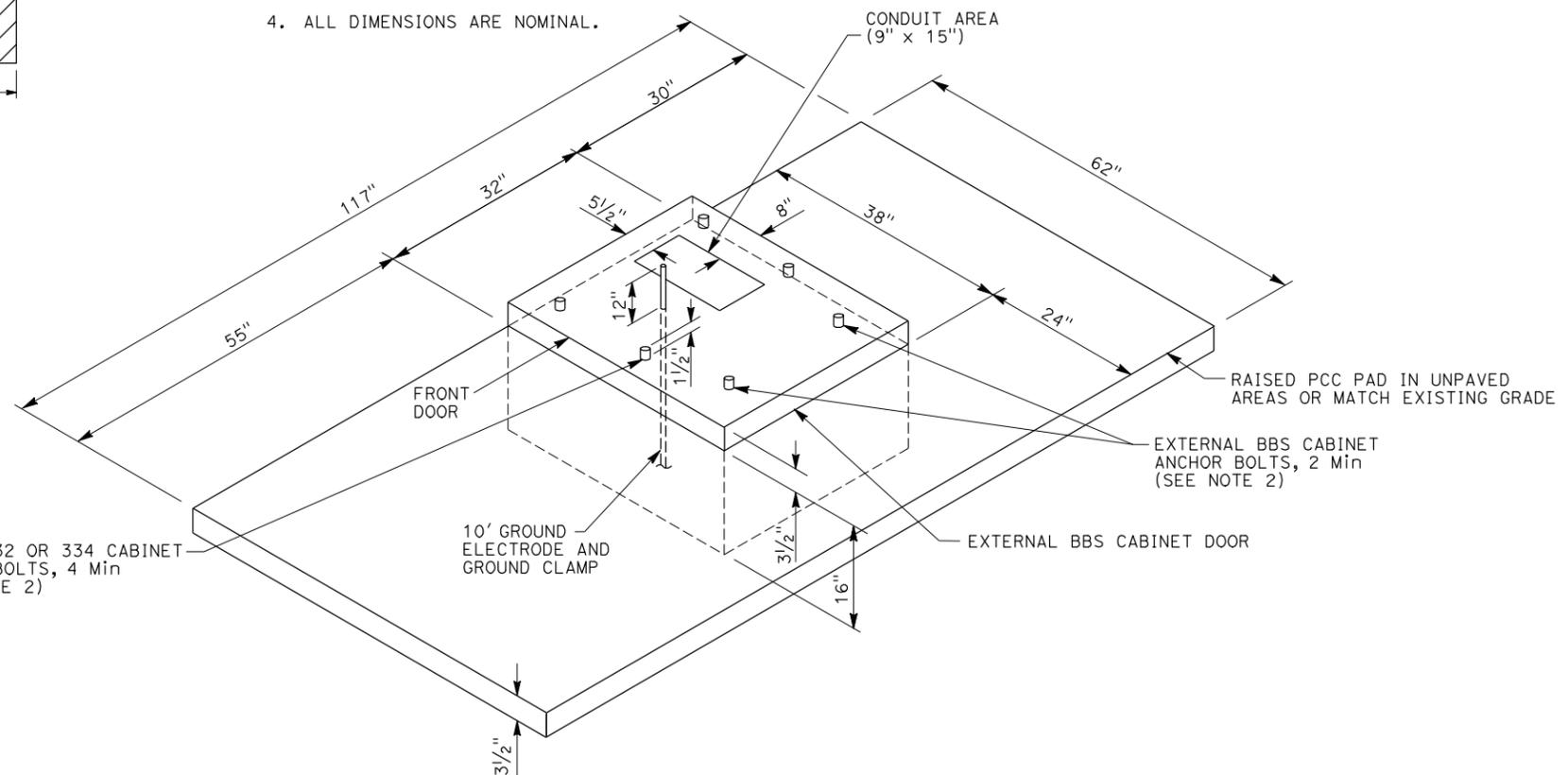


SIDE VIEW

EXTERNAL BBS CABINET MOUNTED TO THE MODEL 332 OR 334 CABINET

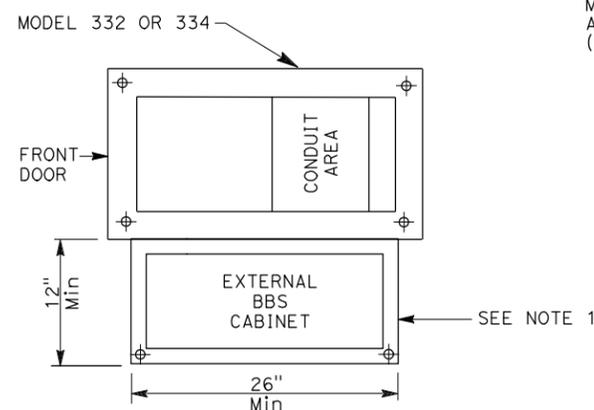
NOTE: (THIS SHEET ONLY)

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, 3/8"-16 X 1" BOLTS; TWO WASHERS PER BOLT, DESIGNED FOR 3/8" BOLTS AND ARE 18-8 STAINLESS STEEL, 1" 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 3/4" Dia X 15" WITH A 2"-90° BEND. THE CABINET MANUFACTURER'S SPECIFICATION SHALL DETERMINE THE LOCATION OF THE ANCHOR BOLTS IN THE FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE THE 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 STANDARD PLANS FOR MODEL 332 AND 334 CABINETS)



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))

ELECTRICAL SYSTEMS (BBS FOUNDATION DETAILS)

NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

RELATIVE BORDER SCALE IS IN INCHES



USERNAME => trcarol
DGN FILE => BBS Foundation.dgn

CU 00000

EA 000000

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 Revised By
 Date Revised
 State of California
 Caltrans

DATE PLOTTED => 13-MAR-2009
TIME PLOTTED => 09:11
LAST REVISION: 2-2-09

Lead

LA 5
TO # 07-4E0901-HJ
KP 84.42 - 95.91

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LEAD INVESTIGATION REPORT

ROUTE 5 FROM 800 FEET
SOUTH OF VALENCIA BOULEVARD TO
600 FEET NORTH OF
LAKE HUGHES ROAD
LOS ANGELES COUNTY, CALIFORNIA

CONTRACT 43Y097
TASK ORDER NO. 07-4E0901-HJ
PM 52.46/59.7 (KP 84.42/95.91)



GEOCON

GEOTECHNICAL
&
ENVIRONMENTAL
CONSULTANTS

Prepared for

CALIFORNIA DEPARTMENT OF
TRANSPORTATION, DISTRICT 7
LOS ANGELES, CALIFORNIA

Prepared by

GEOCON ENVIRONMENTAL CONSULTANTS, INC.
6970 FLANDERS DRIVE
SAN DIEGO, CALIFORNIA 92121
Tel.: 619.558.6100
Fax: 619.558.8437

FEBRUARY 1998



Project No. 08730-06-64
Task Order No. 07-4E0901-HJ
February 26, 1998

Mr. George Ghebraniou
California Department of Transportation
District 7
120 So. Spring St.
Los Angeles, California 90012-3606

Subject: SITE INVESTIGATION REPORT
ROUTE 5 FROM 800 FEET SOUTH OF VALENCIA BOULEVARD
TO 600 FEET NORTH OF LAKE HUGHES ROAD
LEAD INVESTIGATION
LOS ANGELES COUNTY, CALIFORNIA
CONTRACT 43Y097
TASK ORDER NO. 07-4E0901-HJ
PM 52.46/59.7 (KP 84.42/95.91)

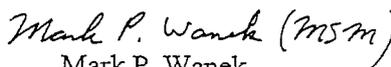
Dear Mr. Ghebraniou:

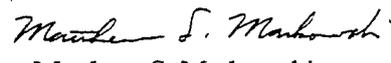
In accordance with Caltrans Contract No. 43Y097 and the January 22, 1998, Task Order No. 07-4E0901-HJ, Geocon Environmental Consultants, Inc. (Geocon) has performed environmental engineering services at the subject site. The site consisted of the exposed soil in the median of Route 5 in Los Angeles County, California, from 800 feet south of Valencia Boulevard to 600 feet north of Lake Hughes Road. The accompanying report summarizes the services performed including the advancement of hand-auger borings, limited soil sampling, and laboratory analyses. If questions concerning the contents of this report arise, or if Geocon may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON ENVIRONMENTAL CONSULTANTS, INC.


Joel C. Kloth, RG 4628
Project Geologist


Mark P. Wanek
Staff Geologist


Matthew S. Markowski
Staff Geologist

MSM:MPW:JCK:sc

(5) Addressee



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- I. Summary of Analytical Laboratory Results

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- A. Geocon's Standard Operating Procedures (SOP's) Nos. 11 and 31
- B. Laboratory Reports and Chain-Of-Custody Documentation

I. EXECUTIVE SUMMARY

Pursuant to the California Department of Transportation (Caltrans) January 22, 1998, Task Order (TO) No. 07-4E0901-HJ, Geocon Environmental Consultants, Inc. (Geocon) has performed a site investigation for aerially deposited lead along Route 5 in Los Angeles County, California, from 800 feet south of Valencia Boulevard to 600 feet north of Lake Hughes Road. Caltrans proposes to perform excavation activities for the paving of the median slope.

A total of forty-four samples were collected from twenty-two boring locations. Soil samples were collected at each boring from the surface and from a depth of approximately 0.45 meters below the ground surface. All borings were situated approximately 1 to 2 meters away from the edge of the pavement.

The soil samples were analyzed for total lead following Environmental Protection Agency (EPA) Test Method 6010. Eighteen samples exhibiting total lead concentrations between 50 mg/kg and 1000 mg/kg were analyzed for soluble lead following EPA Test Method 7420, using citric acid as the extractant. Four samples exhibiting soluble lead concentrations greater than 5 mg/L, as analyzed according to EPA Test Method 7420, were analyzed according to EPA Test Method 3050 using de-ionized water as the extractant.

i.i. Conclusions

One soil sample, B21-1, exhibited total lead concentrations greater than the TTLC of 1,000 mg/kg. Eighteen samples exhibited total lead concentrations greater than 50 mg/kg and were analyzed for soluble lead via the Waste Extraction Test. Seventeen of these samples exhibited soluble lead concentrations greater than or equal to the STLC of 5.0 mg/l. This data indicated that a portion of the soil excavated at the site has the potential to be classified as a hazardous waste per Title 22 of the California Code of Regulations (CCR). The following table indicates the intervals in the soil borings that may be impacted with hazardous lead concentrations.

BORING NUMBER	DEPTH POTENTIALLY IMPACTED BY HAZARDOUS LEAD CONCENTRATIONS	APPROXIMATE VOLUME OF POTENTIALLY IMPACTED SOIL
B10	From the surface to 0.45 meter* below the ground surface.	1400 cubic meters*
B1 through B7, B9, B11 through B13, B17, B19 through B22	From the surface to 0.45 meter below the ground surface.	22,400 cubic meters
B8 B14 through		

4. CONCLUSIONS

One soil sample, B21-1, exhibited total lead concentrations greater than the TTLC of 1,000 mg/kg. Eighteen samples exhibited total lead concentrations greater than 50 mg/kg and were analyzed for soluble lead via the Waste Extraction Test. Seventeen of these samples exhibited soluble lead concentrations greater than or equal to the STLC of 5.0 mg/l. This data indicated that a portion of the soil excavated at the site has the potential to be classified as a hazardous waste per Title 22 of the California Code of Regulations (CCR). The following table indicates the intervals in the soil borings that may be impacted with hazardous lead concentrations.

BORING NUMBER	DEPTH POTENTIALLY IMPACTED BY HAZARDOUS LEAD CONCENTRATIONS	APPROXIMATE VOLUME OF POTENTIALLY IMPACTED SOIL
B10	From the surface to 0.45 meter* below the ground surface.	1400 cubic meters*
B1 through B7, B9, B11 through B13, B17, B19 through B22	From the surface to 0.45 meter below the ground surface.	22,400 cubic meters
B8, B14 through B16, B18	None	0 cubic meters

*Due to the unavailability of data from depths below 0.45 meter, conclusions are not made regarding soil from below 0.45 meter at boring B10.

5. RECOMMENDATIONS

Based upon the results of the soil samples analyzed, it is recommended that the soil excavated at the locations shown in the table below be re-used on-site in accordance with the Department of Toxic Substances Control (DTSC) variance issued to Caltrans. The boring locations are depicted on the Boring Location Maps, presented as Figures 2 through 17. If the soil excavated from the site cannot be re-used on-site, it is recommended that the soil be re-used within Caltrans right-of-way at another site following the method for re-use described below.

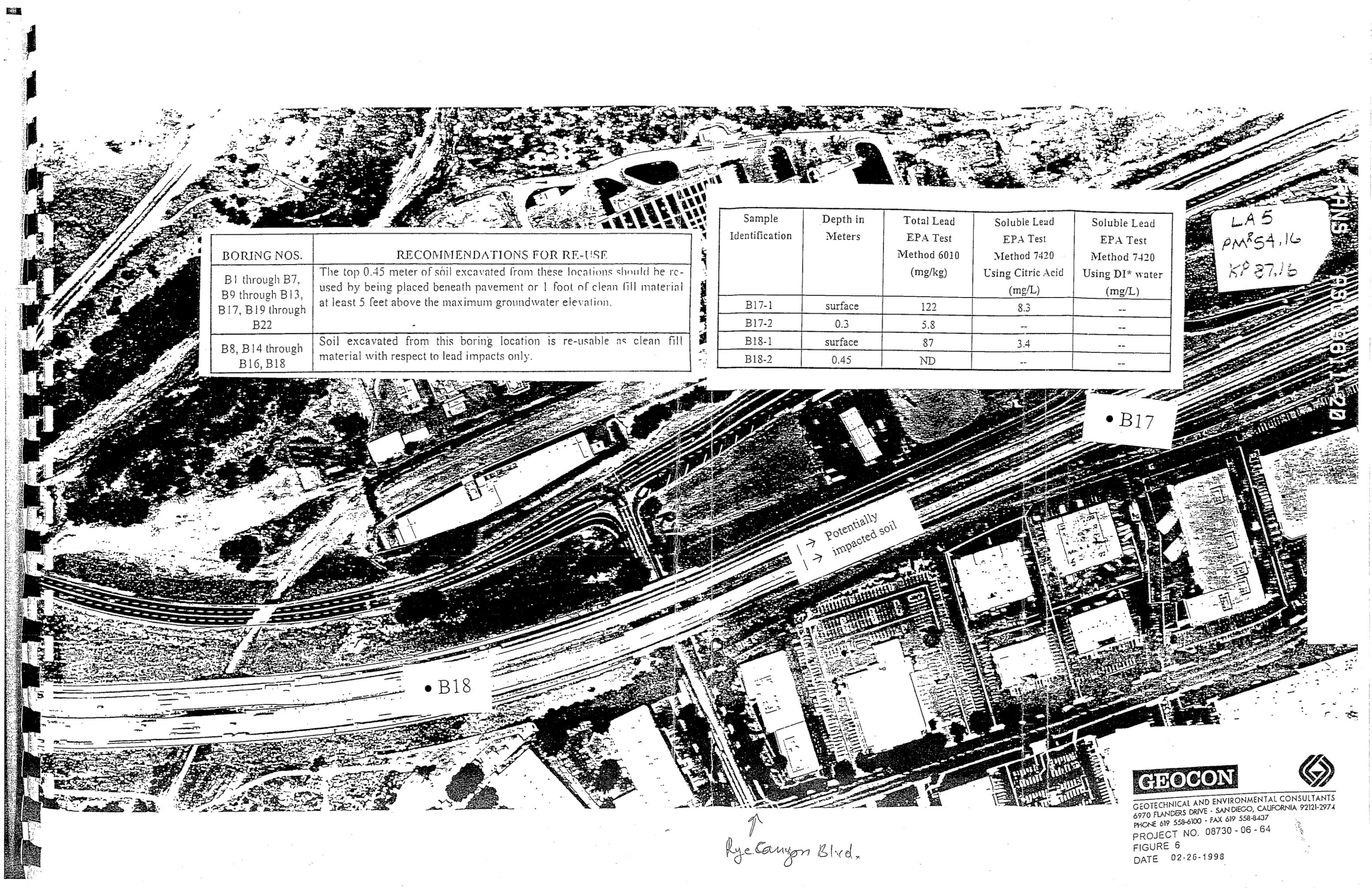
BORING NOS.	RECOMMENDATIONS FOR RE-USE
B1 through B7, B9 through B13, B17, B19 through B22	The top 0.45 meter of soil excavated from these locations should be re-used by being placed beneath pavement or 1 foot of clean fill material at least 5 feet above the maximum groundwater elevation.
B8, B14 through B16, B18	Soil excavated from this boring location is re-usable as clean fill material with respect to lead impacts only.

It is further recommended that Caltrans notify the contractors performing the construction activities that hazardous lead concentrations may be present in soil at the site as shown in the tables presented in the *Conclusions* section (i.i). The appropriate health and safety measures should be taken to minimize worker exposure to lead.

BORING NOS.	RECOMMENDATIONS FOR RE-USE
B1 through B7, B9 through B13, B17, B19 through B22	The top 0.45 meter of soil excavated from these locations should be re-used by being placed beneath pavement or 1 foot of clean fill material at least 5 feet above the maximum groundwater elevation.
B8, B14 through B16, B18	Soil excavated from this boring location is re-usable as clean fill material with respect to lead impacts only.

Sample Identification	Depth in Meters	Total Lead EPA Test Method 6010 (mg/kg)	Soluble Lead EPA Test Method 7420 Using Citric Acid (mg/L)	Soluble Lead EPA Test Method 7420 Using DI* water (mg/L)
B17-1	surface	122	8.3	--
B17-2	0.3	5.8	--	--
B18-1	surface	87	3.4	--
B18-2	0.45	ND	--	--

LA 5
PMR 54.16
KP 87.16



• B17

→ Potentially impacted soil

• B18

↑
Rye Canyon Blvd.

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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
PHONE 619 558-6100 - FAX 619 558-8437
PROJECT NO. 08730 - 06 - 64
FIGURE 6
DATE 02-26-1998

BORING NOS.	RECOMMENDATIONS FOR RE-USE
B1 through B7, B9 through B13, B17, B19 through B22	The top 0.45 meter of soil excavated from these locations should be re-used by being placed beneath pavement or 1 foot of clean fill material at least 5 feet above the maximum groundwater elevation.
B8, B14 through B16, B18	Soil excavated from this boring location is re-usable as clean fill material with respect to lead impacts only.

Sample Identification	Depth in Meters	Total Lead EPA Test Method 6010 (mg/kg)	Soluble Lead EPA Test Method 7420 Using Citric Acid (mg/L)	Soluble Lead EPA Test Method 7420 Using DI* water (mg/L)
B16-1	surface	13	--	--
B16-2	0.45	5.4	--	--

LA 5
PM R 54.75
KP 88.11

• B16

Potentially impacted soil ← |

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6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
PHONE 619 558-6100 - FAX 619 558-8437
PROJECT NO. 08730 - 06 - 64
FIGURE 7
DATE 02-26-1998