

PROTECTION

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November 30, 2000

Handwritten: (415) 973-0707

Ms. Susan Hugo  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502

SHR 6691A

RE: Soil Remediation Plan Addendum  
PG&E Substation "E"  
Piedmont, California

Dear Ms. Hugo,

Attached please find the proposed soil remediation plan. This plan is an addendum to the Workplan you have already received for the above location.

If you have any questions about this plan, please feel free to call me at 510-786-9751.

Sincerely,

KELLCO Services, Inc.

  
Bonnie Lee Kellogg DHS, CAC, REA

bk/s

cc: Sara Everitt, PG&E

**ADDENDUM TO****Workplan for Equipment Removal and Cleanup  
of Pacific Gas and Electric Company  
Substation "E"  
Piedmont, California****Prepared for  
Pacific Gas and Electric Company****November 29, 2000**

This addendum supplements the *Workplan for Equipment Removal and Cleanup of Pacific Gas and Electric Company Substation "E,"* prepared by KELLCO Services, Inc. ("the *Workplan*," September 18, 2000). Substation "E" is located at 408 Linda Avenue in Piedmont, as shown on Figure 1. This addendum modifies portions of section 3.2 of the *Workplan* to address comments from Ms. Susan Hugo of the Alameda County Environmental Health Department having to do with soil remediation.

**1) Cleanup Objectives (Workplan Section 3.2.1 Update)**

The cleanup goal for soil will be 147 mg/kg, as requested by Ms. Hugo. The cleanup goal for lead is currently subject to debate, and the USEPA, California Department of Toxics Substances Control, and San Francisco Regional Water Quality Control Board have published and used health-protective screening levels for lead in residential soils that vary from 147 to 400 mg/kg. Approved cleanups for lead in residential soil fall within this range. For this project, PG&E has agreed to use the lowest screening level (147 mg/kg) because the amount of soil to be remediated is relatively small, no future controls on land use are contemplated, this will satisfy any current state and federal screening levels for lead in soil, and the site is small enough that developing an alternate goal with a specific risk assessment is not warranted.

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<http://www.kellco.com> email: [kellco@kellco.com](mailto:kellco@kellco.com)

**2) Pre-Cleanup Sampling Results (From Workplan Section 3.2.2)** Section 3.2.2 of the Workplan indicated that additional soil samples would be collected prior to remediation. The original and supplemental test results are shown below. Laboratory reports are available upon request.

Original Surface Soil Testing – 10/14/99

Location	Sample #	Surface Lead in Soil
East side yard	SESP-1	280 mg/kg
East side yard	SESP-2	350 mg/kg
East side yard	SESP-3	490 mg/kg
Front yard	SESP-4	280 mg/kg
Courtyard (rear)	SESP-6	1600 mg/kg
Courtyard (rear)	SESP-7	1100 mg/kg
West side yard	SESP-8	230 mg/kg

Original Soil Bore Samples – 11/23/00

Location	Sample #	Surface Lead mg/kg	6" Deep Lead mg/kg	12" Deep Lead mg/kg
Courtyard (rear)	B1	550	20	5
Courtyard (rear)	B2	170	8	16
Courtyard (rear)	B3	920	61	10
Northwest yard	B4	220	440	24

Note that most of the samples at 6 inches in depth are well below the desired criteria of 147 mg/kg.

Supplemental Soil Surface Samples –10/31/00

LOCATION	SAMPLE #	LEAD mg/kg
East side yard	001031-3	14
North yard, above courtyard	001031-4	200
West yard)	001031-5	53

### 3) Cleanup Activities (Workplan Section 3.2.3 Update)

#### a) *East side yard (between building and house)*

This area will be excavated to a depth of 6 inches from the building to ten feet of the east property line. Initially the sidewalk will be left in place. If it is the opinion of the contractor that the surrounding excavation has weakened the foundation of the sidewalk, the sidewalk will be removed. The area will be back-filled with clean soil.

#### b) *Rear (north) courtyard and rear yard (uphill from courtyard) and northwest between building and property line*

This area will be excavated to a depth of 6 inches from the building to the east and west property lines. The area will be back-filled with clean soil.

#### c) *West side yard (between building and bridge).*

This area will be excavated to a depth of 10 inches from the building to 20 feet west of the building, where surface soil had less than the target level of lead. Excavated areas will be back-filled with clean soil.

#### d) *South (front) from building to sidewalk.*

This area will be excavated to 6 inches from the building to the sidewalk. The area will be back-filled with clean soil.

### 4) Verification Sampling and Excavation Closure (Workplan Section 3.2.4 Update)

#### a) Rationale

Clearance samples will be taken after excavation and before the areas are back-filled with clean dirt. This will demonstrate that the excavation depth has been sufficient to reach lead levels below the goal of 147 mg/kg.

#### b) Number of samples

The minimum sampling plan is as follows:

AREA	MINIMUM SAMPLES
East side yard	4 samples
North courtyard	2 samples ✓
North yard above courtyard	2 samples ✓
Northwest yard	1 sample
West side yard	2 samples
Front yard	1 sample

- c) Approximate sample locations are indicated on the attached drawing.
- d) Type of analysis  
Samples will be analyzed by Atomic Absorption in a laboratory accredited the State of California for analysis of lead in soil.
- e) Clearance criteria  
Soil samples are expected to show that lead is below 147 mg/kg of soil.




Removed soil will be replaced with soil that is certified by the supplier to be free of asbestos, pesticides, hydrocarbons and Title 22 heavy metals above California acceptable levels. The soil supplier will provide adequate documentation of soil testing and analysis.

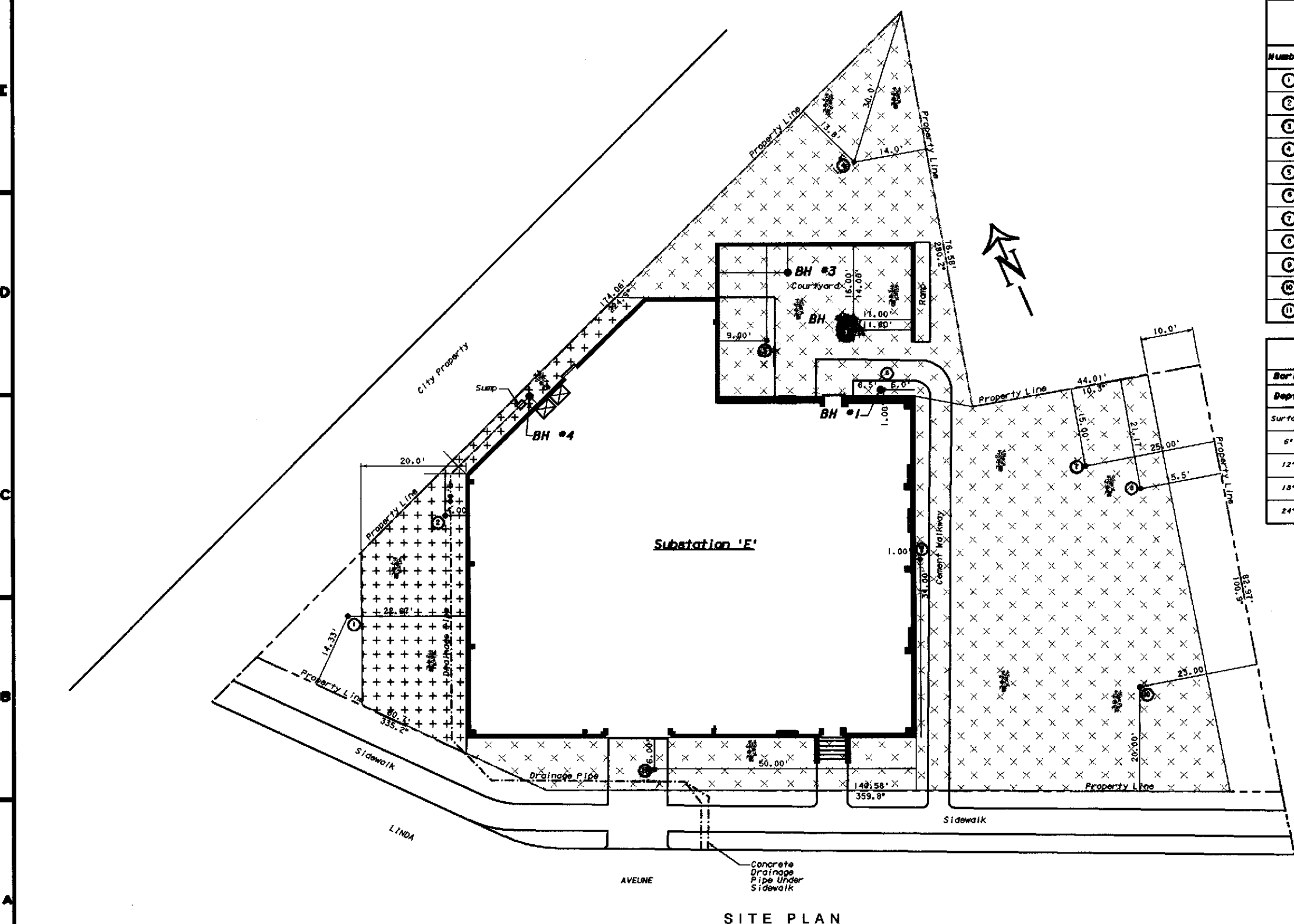
### SURFACE SOIL SAMPLES

Number	Sample	Date	TPHd						
			Pb	PCB	Sample	Date	PH	Water Oil	Mineral Oil
①	001031-5	10/31/00	53mg/kg						
②	SESP-6	10/19/99	230mg/kg	<0.50mg/kg	SESP-8A	3/2/00	6.8mg/kg	67mg/kg	<1mg/kg
③	SESP-6	10/19/99	4.80mg/kg	0.089mg/kg	SESP-8A	3/2/00	7.9mg/kg	<50mg/kg	<1mg/kg
④	001031-4	10/31/00	200mg/kg						
⑤	SESP-7	10/19/99	1100mg/kg	0.14mg/kg	SESP-7A	3/2/00	1.9mg/kg	<50mg/kg	<1mg/kg
⑥	SESP-5	10/19/99	17.60mg/kg	0.050mg/kg	SESP-5A	3/2/00	69mg/kg	<140mg/kg	<1mg/kg
⑦	SESP-3	10/19/99	490mg/kg	<0.050mg/kg	SESP-3A	3/2/00	5.1mg/kg	<55mg/kg	<1mg/kg
⑧	001031-3	10/31/00	14mg/kg						
⑨	SESP-1	10/19/99	280mg/kg	<0.050mg/kg	SESP-1A	3/2/00	4.2mg/kg	<50mg/kg	<1mg/kg
⑩	SESP-2	10/19/99	350mg/kg	<0.050mg/kg	SESP-2A	3/2/00	3.9mg/kg	<50mg/kg	<1mg/kg
⑪	SESP-4	10/19/99	350mg/kg	<0.050mg/kg	SESP-4A	3/2/00	4.2mg/kg	<50mg/kg	<1mg/kg

### SOIL BORING LOCATIONS

Boring Hole #1	Boring Hole #2	Boring Hole #3	Boring Hole #4
Depth Pb, mg/kg	Depth Pb, mg/kg	Depth Pb, mg/kg	Depth Pb, mg/kg
Surface 850	Surface 170	Surface 820	Surface 220
6" 20	6" 8	6" 61	6" 420
12" 5	12" 16	12" 10	12" 24
18" 10	18" 11	18" 17	18" 33
24" 13	24" 4	24" 28	24" 21
			30" 46

**LEGEND:**  
 BH # = Boring Hole #  
 = PROPOSED CONFIRMATION SAMPLE LOCATION  
 = CUT 10" OF TOP SOIL  
 = CUT 6" OF TOP SOIL



**SITE PLAN**

<p>1 2/2/00 ISSUED TO AGENCY</p> <p>DATE: 1/2/00</p>	<p>SCALE: 1/8" = 1'-0"</p> <p>PROJECT: CIVIL SITE PLAN FOR SOIL REMEDIATION PLAN FOR PEDMONT SUBSTATION 'E'</p> <p>PREPARED BY: [Name]</p> <p>CHECKED BY: [Name]</p> <p>DATE: 1/2/00</p>	<p style="text-align: center;"><b>CIVIL SITE PLAN FOR SOIL REMEDIATION PLAN FOR PEDMONT SUBSTATION 'E'</b></p> <p style="text-align: center;">PREPARED BY: [Name]</p> <p style="text-align: center;">CHECKED BY: [Name]</p> <p style="text-align: center;">DATE: 1/2/00</p> <p style="text-align: right;"><b>4028448</b></p>
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
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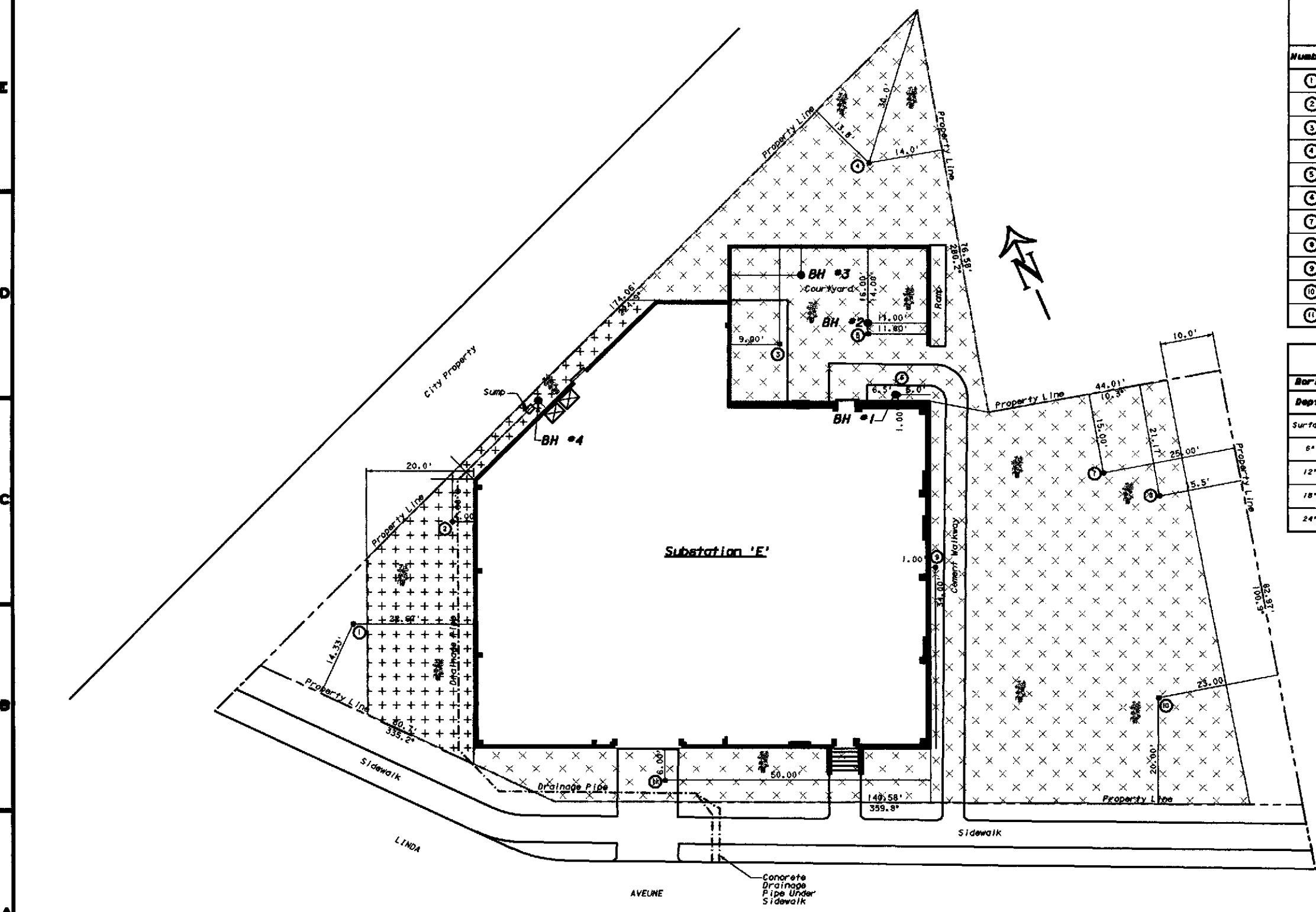
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**SITE PLAN**

<p>11/27/00 ISSUED TO AGENCY</p> <p>DATE: 11/27/00</p> <p>BY: [Signature]</p>	<p><b>CIVIL</b></p> <p><b>SITE PLAN</b></p> <p><b>SOIL REMEDIATION PLAN</b></p> <p><b>PEDESTRIAN SUBSTATION 'E'</b></p> <p>POWER REGENERATOR</p> <p>INDIAN GAS AND ELECTRIC COMPANY</p> <p>Site Remediation, Inc.</p>	<p>DATE: 11/27/00</p> <p>BY: [Signature]</p> <p>1 4028448</p>
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