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Drawn by:	Zile
Number:	6921

*MCP Supplemental Phase
II Scope of Work for the
Allendale School Property*

General Electric Company
Pittsfield, Massachusetts

November 1996

6921

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GE-P

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BLASLAND, BOUCK & LEE, INC.
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27.18

Area Environmental & Facility Programs
General Electric Company
100 Woodlawn Avenue, Pittsfield, MA 01201

Transmitted Via Federal Express

November 18, 1996

Ms. J. Lyn Cutler
Section Chief, Special Projects
Bureau of Waste Site Cleanup
Department of Environmental Protection
436 Dwight Street
Springfield, MA 01103

Re: DEP: 1-0960 Pittsfield
MCP Supplemental Phase II Scope of Work
for the Allendale School Property

Dear Ms. Cutler:

The *MCP Supplemental Phase II Scope of Work for the Allendale School Property* is enclosed. Please call if you have any questions with this submittal.

Your truly,

Richard W. Gates
Remediation Project Manager

SYR-T:32061137.WPD--101.84 #2

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REPORT

*MCP Supplemental Phase
II Scope of Work for the
Allendale School Property*

General Electric Company
Pittsfield, Massachusetts

November 1996

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BLASLAND, BOUCK & LEE, INC.
engineers & scientists

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Table of Contents

Section 1.	Introduction	1-1
Section 2.	Background Information	2-1
	2.1 General	2-1
	2.2 Extent of Fill Material and PCBs	2-3
Section 3.	Proposed Supplemental Phase II Activities	3-1
	3.1 Soil Boring and Sampling Activities	3-1
	3.2 Surface Water and Sediment Sampling	3-3
	3.3 Groundwater Sampling	3-4
	3.4 Status of Stormwater Drain Lines	3-5
	3.5 Clarification Regarding Source of PCDFs and Interference with PCDF Analyses	3-5
	3.6 Information on Background Concentrations	3-5
Section 4.	Schedule	4-1
References		
Figures		
Figure 1	Former Sampling Locations and Limit of Cover	
Figure 2	Comparison of the Pre-1950 to Post-1951 Topographic Elevations	
Figure 3	Cross Section A-A'	
Figure 4	Cross Section B-B'	
Figure 5	Cross Section C-C'	
Figure 6	Existing PCB Soil Analytical Data Through September 1996	
Figure 7	PCB Soil Analytical Data - October 1996	
Figure 8	Proposed Sampling Locations Based on 200-Foot x 200-Foot Grid	
Attachments		
Attachment A	Allendale School Topographic Survey (untitled and undated - pre 1950)	
Attachment B	Allendale School Building Plan (S.W. Haynes & Associates, dated 5/9/51)	
Attachment C	Allendale Capping Project Plan (GE drawing dated 10/25/91)	

1. Introduction

In January 1993, the General Electric Company (GE) submitted to the Massachusetts Department of Environmental Protection (MDEP) an *MCP Interim Phase II Report for the Allendale School Property* (Phase II Report). Upon review of that document, the MDEP sent GE a letter dated September 13, 1996, directing GE to: (a) submit within 15 days an Imminent Hazard Evaluation Proposal calling for surface and near-surface soil sampling and analysis at the Allendale School property to facilitate further evaluation of whether a potential "imminent hazard" exists as defined in the Massachusetts Contingency Plan (MCP); (b) submit thereafter a Supplemental Phase II Scope of Work proposing certain additional sampling and analysis activities at the Allendale School property; and (c) upon completion of the additional investigations, submit a Supplemental Phase II Report for the property presenting the results of the additional investigations and clarifying certain other matters identified in the MDEP's letter. On September 27, 1996, GE submitted the requested Imminent Hazard Evaluation Proposal, which was conditionally approved by the MDEP in a letter of October 10, 1996. GE is currently implementing that imminent hazard evaluation program. This document proposes GE's Supplemental Phase II Scope of Work for the Allendale School property.

Section 2 of this document provides a brief summary of background information related to the Allendale School property. In accordance with the MDEP's letter of September 13, 1996, that section also presents and discusses plans showing, to the extent possible based on currently available data, the horizontal and vertical extent of fill at the school property, as well as the existing PCB analytical data for soils.

Section 3 describes the proposed additional investigative activities required by the MDEP's September 13, 1996 letter. These activities include:

-
- Performing a soil boring program at the Allendale School property with soil sampling to further define the horizontal and vertical extent of PCBs and fill materials at the property and to obtain additional information on the presence of other Appendix IX+3 constituents at the property;
 - Collection and PCB analysis of surface water and sediment samples from the stormwater drainage system at locations “upstream” and “downstream” of the school property;
 - Installation of additional groundwater monitoring wells, groundwater sampling from the new and select existing wells with analysis for Appendix IX+3 constituents, and construction of a revised groundwater table contour map;
 - Clarification of the status of the previously existing 15-inch stormwater line at the site (with respect to whether or not GE replaced that line as part of drainage improvements) and preparation of a site plan indicating the location of all stormwater lines at or around the site (including the Hill 78 Area Site), to the extent that such information is available;
 - Clarification regarding the possible source of polychlorinated dibenzofurans (PCDFs) in the soil samples and how PCDFs relate to the presence of PCBs, as well as clarification regarding the interference of polychlorinated diphenyl ethers (PCDEs) on the detection of PCDFs; and
 - Activities to obtain background data on Appendix IX+3 constituents for the site.

Section 4 of this document presents a proposed schedule for completion of the investigative activities described in Section 3 and for submission of a Supplemental Phase II Report for this site.

2. Background Information

2.1 General

The Allendale School property is located to the north of the Hill 78 Area of the GE facility, across the Tyler Street Extension. At the time of the school's construction in 1950, GE and the City of Pittsfield entered into an agreement under which GE gave the City permission to remove soil material from the GE property for use as fill material in the school property.

Concerns associated with the Allendale School property were initially identified by the MDEP during construction of the Altresco Corporation Cogeneration Facility, located within GE property southeast of the school property. The presence of PCBs in soil at the GE property led to MDEP concerns regarding the potential presence of PCBs in the soils of the Allendale School property. In response, the MDEP performed a soil and surface water sampling program for this area in January 1990. The MDEP investigation detected low levels of PCBs in the surficial soils in the southeast corner of the Allendale School property. The MDEP subsequently established a PCB concentration of 2 parts per million (ppm) (dry weight) as the "level of concern" for surficial soils in this area. Two samples collected from the school property by the MDEP exceeded this concentration. The results of the surface water analysis indicated that PCBs were not detected.

The detection of PCBs by the MDEP at the school property above the MDEP's level of concern led to several subsequent sampling events by GE designed to characterize the extent of PCBs, as well as to assess the potential presence of other hazardous constituents. These activities were conducted between April 1990 and September 1990.

As a result of these investigations, GE and the MDEP evaluated a range of options for conducting a Short-Term Measure (STM) to reduce the potential for human contact with soils containing PCBs above the MDEP's level of concern. GE's evaluation was presented in a document entitled *Study of Potential Remedial Options for PCB-*

Containing Soils at the Allendale School Property (Blasland & Bouck, September 1990). In a March 15, 1991 letter to GE, the MDEP conditionally approved the containment/capping option presented in that report. As conditionally approved by the MDEP, the STM involved the placement of a minimum of 2 feet of "clean" soil (and a geotextile layer) over all areas where soil PCB concentrations exceeded 2 ppm within the top 3 feet of existing soil. In addition, improvements to the existing surface water drainage system in the area were included.

The MDEP's conditions were incorporated into the study and a revised version of the report entitled *Study of Potential Remedial Options for PCB-Containing Soils at the Allendale School Property* was submitted in April 1991 (Blasland & Bouck, April 1991). Construction activities were initiated in June 1991 after school had recessed for the summer. These activities were completed in the summer of 1991, in accordance with the conditions set out by the MDEP.

In a letter dated March 6, 1992, the MDEP classified the Allendale School Property as a priority disposal site under the MCP for which further remedial response action was necessary, and stated that a Scope of Work (SOW) for a Phase II - Comprehensive Site Assessment must be submitted within 60 days of the date of the letter. On May 4, 1992, GE submitted to the MDEP a Phase II SOW designed to address the remaining data gaps associated with the Comprehensive Site Assessment. The activities proposed in that document were conditionally approved by the MDEP in a letter dated June 30, 1992.

In January 1993, GE submitted the *MCP Interim Phase II Report for the Allendale School Property*. This Phase II Report described the physical and environmental setting of the site, the extent of fill and PCBs, the prior STM activities, and the results of the MCP Phase II investigations.

Subsequently, in April 1996, Gifford Engineering, on behalf of Barry Architects, Inc. and at the direction of the City of Pittsfield, installed seven borings at the school property. Soil samples were collected primarily for structural purposes in support of proposed building additions to the Allendale School building. However, samples consisting of soil from the top 4 feet of the ground surface at two borings were submitted for PCB analysis. The results indicated that PCBs were not present at concentrations above 1 ppm. Thereafter, at the MDEP's direction, Gifford Engineering completed additional soil sampling on August 22, 1996. That additional soil sampling consisted of installation of 13 borings. At each boring location, soil samples were collected from ground surface to depths of up to 10 feet (2-foot sampling intervals). All analytical results from this sampling indicated PCB concentrations of less than 1 ppm with the exception of B-20 (8'-10'), B-21 (4'-6'), B-22 (2'-4'), and B-22 (4'-6') which had PCB concentrations of 5.42, 10.6, 24.4, and 2.73 ppm, respectively (Gifford Engineering, *Addendum to Geotechnical Report, Allendale School, Connecticut Ave., Pittsfield, MA*, August 28, 1996). These sampling locations, along with previous soil sampling locations at the site, are shown on Figure 1.

In a letter dated September 13, 1996, the MDEP provided comments on the Phase II Report. As noted above in Section 1, that letter required GE to submit an Imminent Hazard Evaluation Proposal, a Supplemental Phase II Scope of Work, and a Supplemental Phase II Report for the Allendale School property. The imminent hazard evaluation activities are proceeding on a separate track in accordance with the MDEP's letter of October 10, 1996. The present document constitutes the Supplemental Phase II Scope of Work required by the MDEP's September 13, 1996 letter.

2.2 Extent of Fill Material and PCBs

The MDEP's letter of September 13, 1996 states that the Supplemental Phase II Scope of Work should include plans showing the horizontal and vertical extent of contaminated fill, as well as the available PCB data, to the extent possible. To estimate the extent of fill, a review has been conducted of the available information presented in

Section 3.2 of the Phase II Report, including the cross-sections shown on Figures 3-1 through 3-4 of that report. In addition, GE has recently obtained two historical drawings with topographical information associated with the filling efforts which occurred on this property. The first of these historical drawings (Attachment A) is an undated topographic survey, of unknown origin, which was obtained from the City of Pittsfield. This survey appears to depict the original surface topography of the site before the actual construction of the Allendale School and associated filling activities. This drawing also shows the Allendale School building superimposed on the topographic survey, but it is interesting to note that the fill necessary to bring Allendale School building up to final grade and other construction details are not depicted on this drawing. As a result, it can be concluded that this drawing is one of the early conceptual drawings for the Allendale School construction efforts and depicts the original topography of the area before any fill was brought onto the site.

The second drawing (Attachment B), which is dated May 1951 was also obtained from the City of Pittsfield, depicts the completed grading plan for the Allendale School building, as well as certain notations, including a drawing legend identifying both “existing contours” and “finish contours.” This drawing indicates that, by the May 1951 timeframe, the low-lying area behind the school had been filled and that certain excavation and filling activities had been conducted immediately around the school building before its construction, as indicated by the “existing contours” designation in the legend. The “finish contours” depicted on this drawing appear to represent the proposed contours for additional filling and grading in the immediate vicinity of the Allendale school building following its construction, in order to bring the topography surrounding the school building up to grade. The line designated “limit of contract” on this drawing appears to represent the horizontal limits for this final grading, indicating the line north of which these final grading activities were to occur.

The topographic information from the pre-1950 and the May 1951 drawings are shown on Figure 2. This information indicates that the low-lying area to the south of the school had been filled prior to May 1951 and that

additional fill (potentially from different sources) was placed in the area around the school building both before construction of the school building and again afterwards in the final grading effort.

Finally, topographic information from an as-built drawing (Attachment C) for the Allendale School capping project, dated October 1991, was reviewed and compared to the final topography of the site from the 1951 drawing. The purpose of this comparison was to determine if the site had received additional fill after 1951. Based on this analysis, the site topography (before the recent construction of the cap) closely matched the elevations associated with the 1951 drawing. As a result, it can be concluded that no additional fill was brought onto the Allendale School property after the 1951 construction efforts.

To further depict the vertical extent of fill material at the property, the three cross-sections originally presented in the Phase II Report have been revised to show the approximate original grade and the extent of fill, based on the historical topographic mapping discussed above and presented on Figure 2. The locations of these transects are shown on Figure 1, while the vertical cross-sectional information along these transect are presented on Figures 3, 4, and 5. These figures will be updated based on the results of the additional investigations outlined in Section 3, and the revised figures will be included in the Supplemental Phase II Report.

To show the available analytical data for soils at this property, two figures have been prepared. Figure 6 shows the PCB data available through September 1996, while Figure 7 presents the analytical results from the grid sampling of surface (0-6 inches) and near-surface (6-12 inches) soil conducted in October 1996 as part of the imminent hazard evaluation soil sampling activities. The PCB data for the borings along the cross-sectional transects are also included in Figures 3, 4, and 5. Taken together, Figures 2 through 7 indicate that the extent of PCBs at the Allendale School property correlates closely with the fill materials that were deposited at the property prior to May 1951, particularly in the low-lying area south of the school building. More specifically, Figures 3, 4, and 5 show

that PCBs, above detection limits, occur with few exceptions in the materials immediately overlying the black silt and grey and brown clay subsurface strata. This black silt and grey and brown clay strata correlates to the original surface topography of the site and is uniquely different in physical characteristics from the predominantly silty-sand fill material which overlays this material.

3. Proposed Supplemental Phase II Activities

This section describes the supplemental investigative activities that GE proposes to conduct at the Allendale School property pursuant to the MDEP's September 13, 1996 letter. All tasks that involve sampling and analysis will be performed in accordance with GE's *Sampling and Analysis Plan/Data Collection and Analysis Quality Assurance Plan (SAP/DCAQAP)* (May 1994) with any subsequent revisions approved by the Department.

3.1 Soil Boring and Sampling Activities

The MDEP's letter of September 13, 1996, requires GE to propose additional soil borings and sampling to define the extent of PCBs at the school property outside the capped area (on a grid basis) and to further define the vertical extent of PCB contamination at the southern edge of the school property in the approximate area of the existing trees. GE has carefully reviewed the currently available data on the extent of both fill and PCBs at the property, including the newly available topographic information and the recent grid sampling results for PCBs, to determine the best way to achieve those objectives. Based on review of this information, and particularly the new information indicating that the extent of PCBs correlates closely with the extent of the fill deposited prior to May 1951, GE believes that the most appropriate sampling program is to install soil borings on a grid basis larger than that used for the imminent hazard evaluation, and to augment that sampling with several strategically placed soil boring locations. These soil borings will be designed to define the horizontal and vertical extent of PCBs in areas of fill that lie outside the capped area and have not been fully characterized by prior sampling efforts. Thus, GE will install six borings (ASB-1, ASB-2, ASB-4, ASB-5, SCH-1, and SCH-2) on a 200-foot by 200-foot grid in the area outside the cap, as shown on Figure 8, and will install 10 additional soil borings at strategically placed locations, also shown on Figure 8. Those 10 additional borings include: one (ASB-3) at the location of the Gifford Engineering sample location B-22 to verify the prior sampling results at that location; three (ASB-6, ASB-7, and ASB-8) between that location and former sampling locations T-9 through T-12 (see Figure 6); three (ASB-9, ASB-10, and SCH-3) between the back of the school building and the capped area; one (ASB-11) to the east of the cap as close as feasible to the existing wetland area; and two (ASB-12 and SCH-4) to the

south of the cap and north of the Tyler Street Extension. This soil boring program, together with the prior PCB sampling data, the recently obtained topographic information, and the recent surface and near-surface soil sampling results from the grid sampling (Figure 7), should be sufficient to characterize the extent of PCBs and fill in the uncapped portion of the school property.

In addition, the boring to be installed to the east of the cap (ASB-11) and the additional borings at the edge of the cap between the capped area and the Tyler Street Extension (ASB-12 and SCH-4) will further define the vertical extent of PCBs at the southern edge of the school property near the existing area of trees. While the MDEP's letter states that GE should consider use of angled drilling techniques as one possible option for obtaining soil samples beneath the capped area, this type of technique has limited feasibility at this property. Specifically, since the fill materials are only approximately 3 to 5 feet thick beneath the capped area, any angled drilling effort would have limited horizontal reach beneath the cap due to this relatively thin layer of fill material. Instead, the previously discussed soil borings should provide adequate information to define the vertical extent of PCBs at the southern edge of the school property.

In addition, the soil boring to be installed to the north of the school (SCH-1) (which will later be converted to an upgradient monitoring well) will be used to assist in providing site-specific background soil and groundwater data, as further discussed in Section 3.6.

At each boring location, soil samples will be collected from 0-6 inch and 6-12 inch increments and in two-foot increments from 12 inches to approximately two feet below the fill/original grade interface. This will generally involve sampling to a depth of approximately 10-12 feet, although the soil sampling at SCH-1, SCH-3, and ASB-6 through ASB-10 may have to proceed to a slightly greater depth due to the increased fill depth in this area. Since existing data indicate that the extent of PCBs is predominantly associated with the extent of fill

material, an effort will be made to ensure that soil samples are collected from the two-foot intervals immediately above and below the fill/original grade interface. All soil samples will be screened for volatile organic compounds (VOCs) using a portable photoionization detector (PID) and will be submitted for PCB analysis.

The results from the above-described soil samples will be used to further delineate the horizontal and vertical extent of both PCBs and fill materials, and to prepare revised versions of the plans set forth in Figures 3 through 7 for inclusion in the Supplemental Phase II Report.

Finally, soil samples from certain selected borings will be submitted for analysis of Appendix IX+3 constituents (excluding pesticides and herbicides). As shown in Table 4-1 of the Phase II Report, Appendix IX+3 data already exist for sample locations K-16 through K-20. The new borings selected for Appendix IX+3 analysis are the following: (1) the easternmost new boring between the capped area and the Tyler Street Extension (SCH-4); (2) the boring to the east of the cap near the wetland area (ASB-11), (3) the boring between the capped area and Virginia Avenue (SCH-2); (4) one of the borings between the school building and the cap (SCH-3); (5) the boring at Gifford Engineering sample location B-22 (ASB-3); and (6) the upgradient boring to the north of the school (SCH-1), all of which are shown on Figure 8. One sample from each of these borings will be selected for analysis of Appendix IX+3 constituents (excluding pesticides and herbicides) in accordance with the selection criteria set forth in the SAP/DCAQAP.

3.2 Surface Water and Sediment Sampling

The MDEP's September 13, 1996 letter directed GE to propose surface water and sediment sampling for PCBs from the storm drainage system at locations "upstream" and "downstream" of the school property. "Upstream" surface water and sediment samples have recently been collected from this stormwater line at the intersection of Brighton Avenue and Dalton Avenue, pursuant to the MCP Phase II Scope of Work/RFI Proposal for the Hill

78 Area Site. The PCB results from these samples will be used to characterize "upstream" PCB concentrations for the Allendale School property (as well as the Hill 78 Area).

To characterize "downstream" PCB levels, one set of grab samples of surface water and sediments will be collected for PCB analysis from the manhole located on the 42-inch diameter stormwater drainage line, which is situated near the southwestern corner of the site on the centerline of Tyler Street Extension, as shown on Figure 8. This manhole is a location to which all stormwater from the storm drainage system drains, and thus is an appropriate "downstream" location for assessing whether any migration of PCBs from the school property is occurring through the drainage system. Following collection, these samples will be submitted for PCB analysis.

3.3 Groundwater Sampling

Four of the soil borings described in Section 3.1 will be converted to monitoring wells. These are (1) the boring located between the capped area and Virginia Avenue (SCH-2), (2) the upgradient boring to the north of the school (SCH-1), (3) one of the borings between the school building and the capped area (SCH-3), and (4) the easternmost new boring between the capped area and the Tyler Street Extension (SCH-4) as illustrated on Figure 8. The areas downgradient of the school property are already encompassed by an extensive downgradient monitoring well system, including existing monitoring wells 78-1, 78-6, NY-3, and NY-4 (see Figure 8) along with the monitoring wells present at the Hill 78 Area Site. New monitoring well SCH-1 will provide upgradient data, monitoring wells SCH-2 and SCH-3 will provide data from the areas of the former temporary piezometers and monitoring well SCH-4 will provide additional downgradient groundwater data in the area between existing wells 78-1 and 78-6.

The four new monitoring wells and existing downgradient wells 78-1, 78-6, NY-3, and NY-4 will be sampled, and the samples will be analyzed for Appendix IX+3 constituents (excluding pesticides and herbicides). During

this sampling effort, groundwater elevation information will be collected from each well, and the direction of groundwater flow will be determined using this new information. A revised groundwater contour and flow map will also be prepared for inclusion in the Supplemental Phase II Report.

3.4 Status of Stormwater Drain Lines

To clarify the status of the previously existing 15-inch stormwater drain line, as requested by the MDEP, the as-built drawing associated with the Allendale School property capping project (Attachment C) has been reviewed in order to determine whether or not that previously existing 15-inch stormwater line was replaced as a component of the drainage improvement efforts. Based on Attachment C, the previously existing 15-inch stormwater line which was located along the southern boundary of the property (in an east to west orientation) was replaced with a 24-inch perforated PVC pipeline and a 30-inch PVC pipeline. In addition, GE will also provide additional stormwater information associated with the Hill 78 Site to the extent such information is available. The Supplemental Phase II Report will include a site plan which indicates the location of the stormwater drains at and around the site, as documented by the as-built drawing for the capping project.

3.5 Clarification Regarding Source of PCDFs and Interference with PCDF Analyses

In the Supplemental Phase II Report, GE will provide a clarification, to the extent possible based on existing data, regarding the source of PCDFs detected in soil, how PCDFs are related to the presence of PCBs, and the potential interference by PCDEs on the detection of PCDFs.

3.6 Information on Background Concentrations

To provide information on background concentrations of Appendix IX +3 constituents for the site, GE will utilize: (1) the soil and groundwater data from the upgradient boring and well to be installed to the north of the school (SCH-1) (see Figure 8); and (2) the background soil and groundwater data obtained in accordance with GE's

Background Sampling Plan for the GE Facility Sites, which was submitted to the MDEP on April 23, 1996 (assuming that plan is approved in sufficient time to obtain the background data and include those data in the Supplemental Phase II Report for this site).

4. Schedule

The information obtained through the Supplemental Phase II activities described in Section 3 will be incorporated in a *Supplemental Phase II Report for the Allendale School Property*, which will be submitted to the MDEP within 150 days from approval of this Supplemental Phase II Scope of Work. This schedule assumes that access to the school property will continue to be granted without restriction.

References

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

References

Blasland & Bouck Engineers, P.C., *Study of Potential Remedial Options for PCB-Containing Soils at the Allendale School Property*, September 1990.

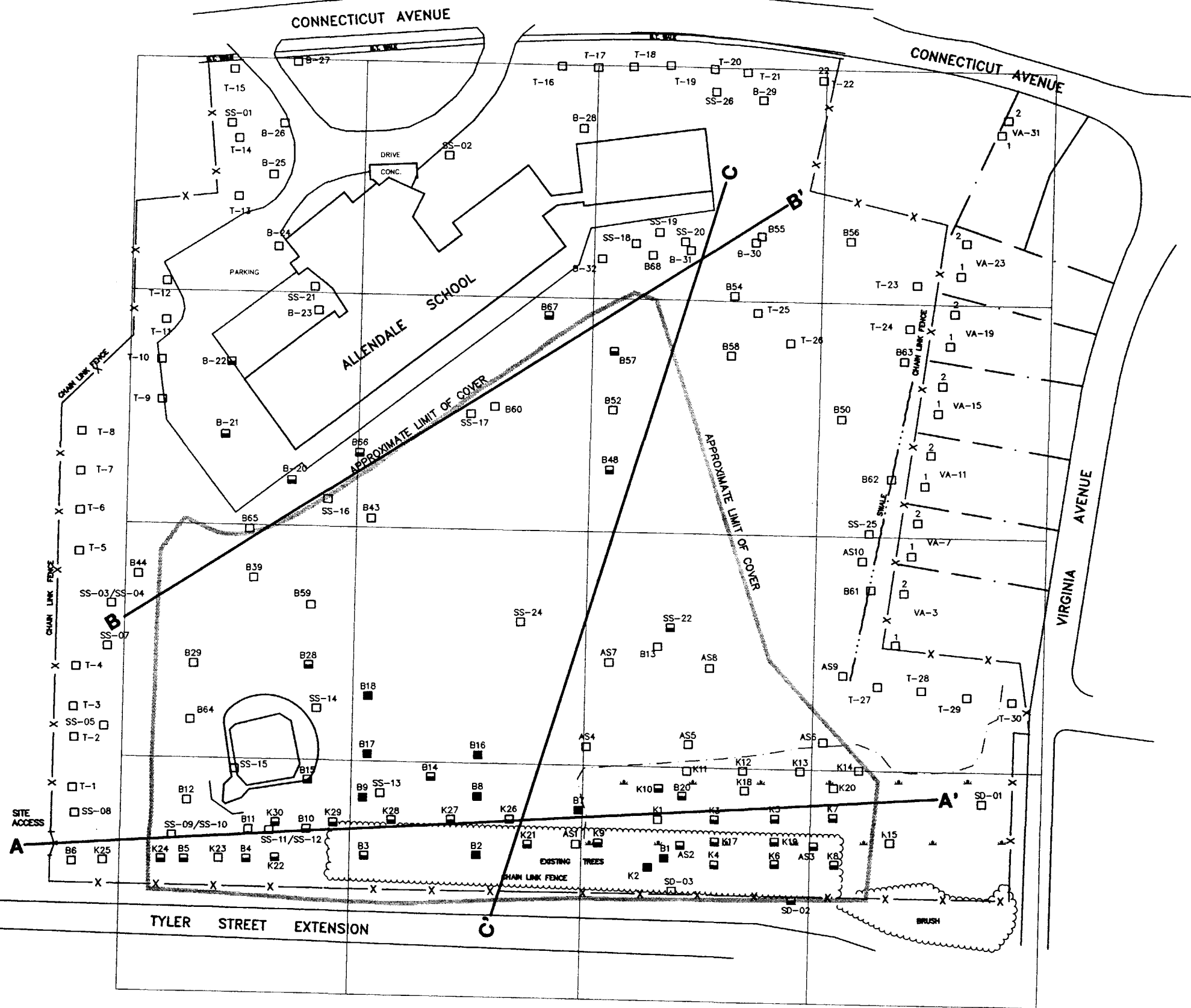
Blasland & Bouck Engineers, P.C., *Study of Potential Remedial Options for PCB-Containing Soils at the Allendale School Property* (Revised), April 1991.

Blasland & Bouck Engineers, P.C., *MCP Interim Phase II Report for the Allendale School Property*, January 1993.

Gifford Engineering Geotechnical and Geoenvironmental Services, *Addendum to Geotechnical Report, Allendale School, Connecticut Avenue, Pittsfield, MA*, August 1996.

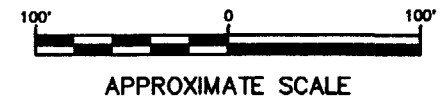
Figures

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LEGEND:

- x-x-x- EXISTING CHAIN LINK FENCE
- - - - - APPROXIMATE LOWLAND BOUNDARY
- - - - - EXISTING DRAINAGE SWALE
- [Dotted line symbol] EXISTING TREES AND BRUSH
- HIGHEST PCB CONCENTRATION OF ALL SAMPLES COLLECTED AT BORING LOCATION:
- LESS THAN 2.0 ppm
- ▣ 2.0 ppm TO LESS THAN 50.0 ppm
- GREATER THAN OR EQUAL TO 50 ppm
- A—A' TRANSECT



GENERAL ELECTRIC COMPANY, PITTSFIELD MASSACHUSETTS
SUPPLEMENTAL PHASE II
 SCOPE OF WORK FOR THE
 ALLENDALE SCHOOL PROPERTY

**FORMER SAMPLING LOCATIONS
 AND LIMIT OF COVER**

L: ON=, OFF=REF
 P: STD-PCP/BL
 11/18/96 SYR-54-RLP MFS
 101B4100\TOPG\101B4SM3.DWG

ORIGINAL INCLUDES COLOR CODING.

Available at the US EPA New England Superfund Records Center, Boston, MA

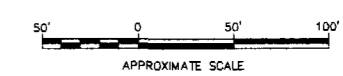


LEGEND:

- PRE-1950 EXISTING CONTOURS
- - - MAY 1951 EXISTING CONTOURS
- MAY 1951 FINISH CONTOURS
- - - APPROXIMATE LIMIT OF FINAL GRADING CONTRACT
- X-X- EXISTING CHAIN LINK FENCE
- - - APPROXIMATE LOWLAND BOUNDARY
- - - EXISTING DRAINAGE SWALE
- ◻ EXISTING TREES AND BRUSH

NOTE:

1. PRE-1950 CONTOURS BASED ON UNTITLED AND UNDATED TOPOGRAPHIC MAPPING OF ALLENDALE SCHOOL PROPERTY. EXISTING AND FINISH 1951 CONTOURS BASED ON GRADING PLAN DATED 5/9/51, DRAWN BY S.W. HAYNES & ASSOCIATES.

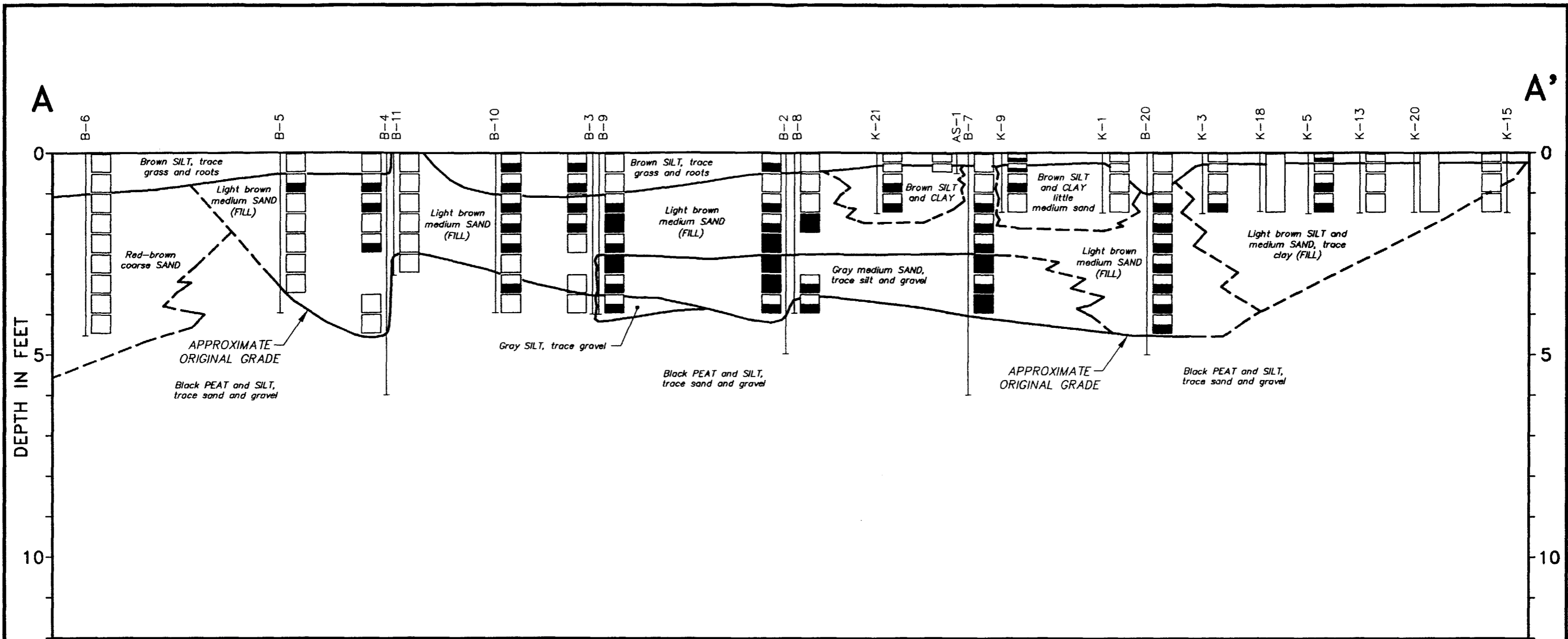


GENERAL ELECTRIC COMPANY, PITTSFIELD MASSACHUSETTS
SUPPLEMENTAL PHASE II
SCOPE OF WORK FOR THE
ALLENDALE SCHOOL PROPERTY
COMPARISON OF
PRE-1950 TO POST-1951
TOPOGRAPHIC ELEVATIONS

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FIGURE
2

L: ON=, OFF=REF
P: SM1-D.PCP (SM1-D2B.PCP)
11/18/96 SYR-54-RLP MFS
10184100\TOP0\10184SM1.DWG

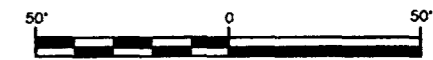


NOTES:

1. HORIZONTAL LIMITS OF FILL ARE BASED UPON HISTORICAL TOPOGRAPHIC MAPPING FOR THE ALLENDALE SCHOOL PROPERTY (REFER TO FIGURE 2).

LEGEND:

- ← SOIL BORING NUMBER
- ← SOIL BORING
- PCB CONCENTRATION:
- 3 INCH SAMPLE:
 - ◻ ← LESS THAN 2.0 ppm
 - ◼ ← 2.0 ppm TO LESS THAN 50.0 ppm
- 6 INCH SAMPLE:
 - ◻ ← LESS THAN 2.0 ppm
 - ◼ ← 2.0 ppm TO LESS THAN 50.0 ppm
 - ◼ ← GREATER THAN OR EQUAL TO 50 ppm
- 18 INCH SAMPLE:
 - ◻ ← LESS THAN 2.0 ppm
- ← BOTTOM OF BORING



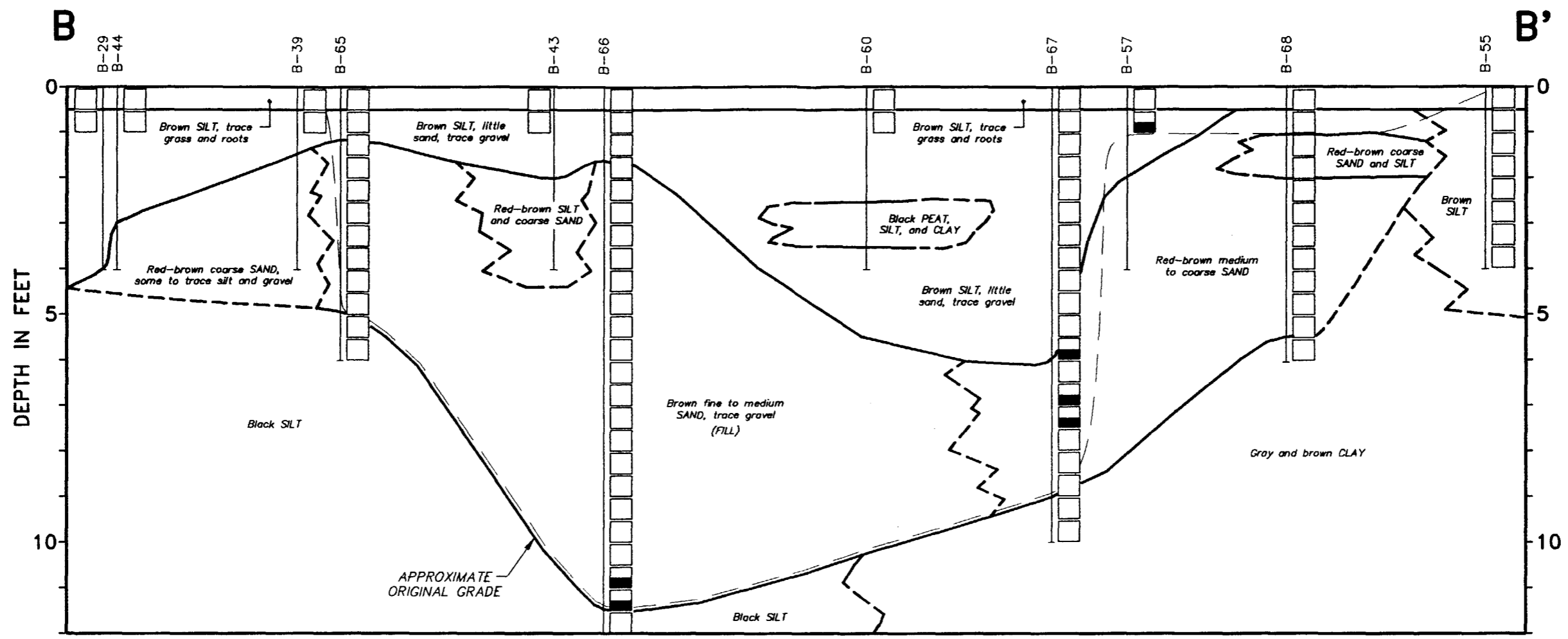
HORIZONTAL SCALE: 1" = 50' (APPROX.)

GENERAL ELECTRIC COMPANY, PITTSFIELD MASSACHUSETTS
SUPPLEMENTAL PHASE II
SCOPE OF WORK FOR THE
ALLENDALE SCHOOL PROPERTY

CROSS SECTION A-A'

BBL BLASLAND, BOUCK & LEE, INC.
 engineers & scientists

FIGURE
3

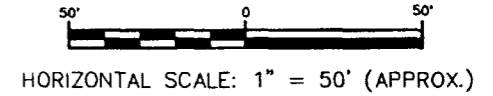


NOTES:

1. TRANSECT B-B' EXTENDS ACROSS SECTIONS OF BOTH THE 1951 EXISTING CONTOURS AND THE 1951 FINISH GRADING LIMITS. THE ORIGINAL GRADE LINE BETWEEN BORINGS B-65 AND B-57 DEPICTS THE ORIGINAL GRADE BENEATH THE 1951 FINISH GRADING.

LEGEND:

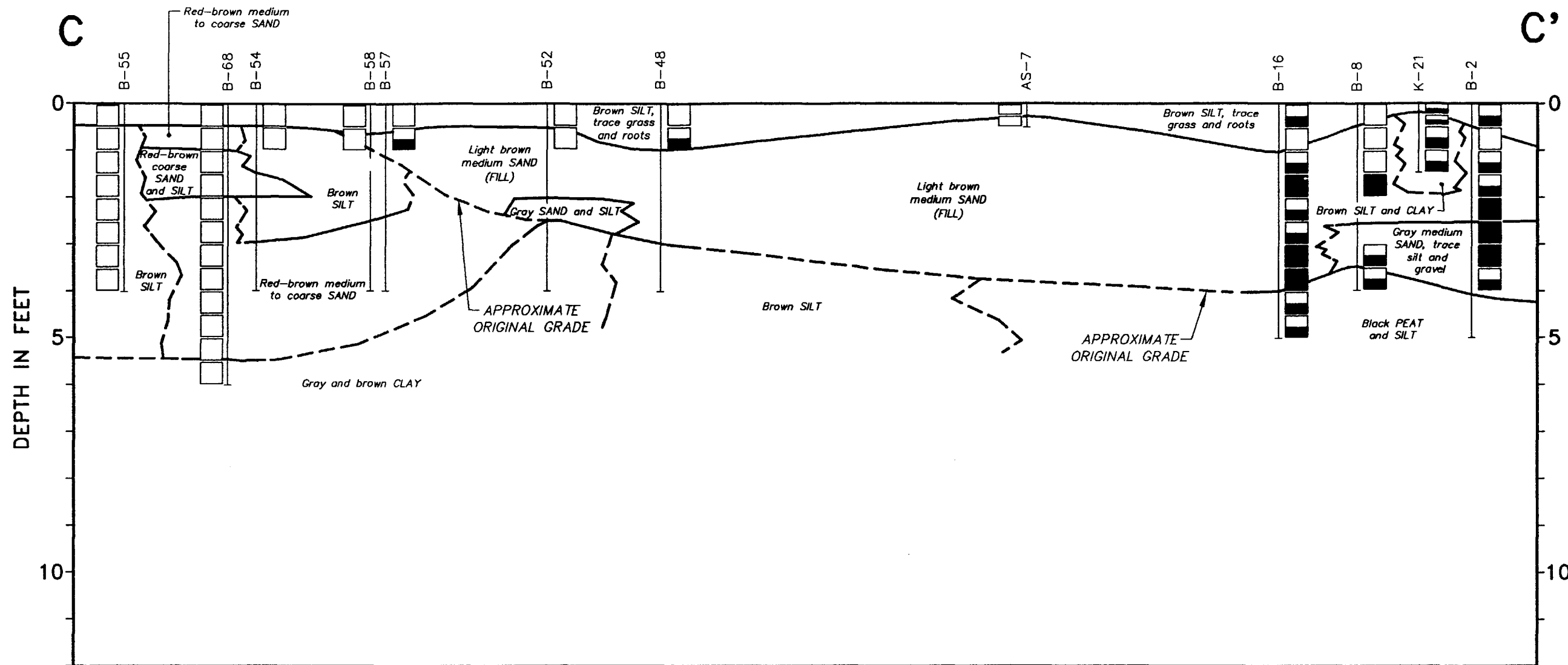
- ← SOIL BORING NUMBER
- ← SOIL BORING
- PCB CONCENTRATION:
- 3 INCH SAMPLE:
 - LESS THAN 2.0 ppm
 - ▒ 2.0 ppm TO LESS THAN 50.0 ppm
- 6 INCH SAMPLE:
 - LESS THAN 2.0 ppm
 - ▒ 2.0 ppm TO LESS THAN 50.0 ppm
 - GREATER THAN OR EQUAL TO 50 ppm
- 18 INCH SAMPLE:
 - LESS THAN 2.0 ppm
- ← BOTTOM OF BORING
- APPROXIMATE ORIGINAL GRADE



GENERAL ELECTRIC COMPANY, PITTSFIELD MASSACHUSETTS
SUPPLEMENTAL PHASE II
 SCOPE OF WORK FOR THE
 ALLENDALE SCHOOL PROPERTY

CROSS SECTION B-B'

BBL BLASLAND, BOUCK & LEE, INC.
 engineers & scientists

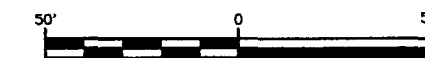


NOTES:

1. HORIZONTAL LIMITS OF FILL ARE BASED UPON HISTORICAL TOPOGRAPHIC MAPPING FOR THE ALLENDALE SCHOOL PROPERTY (REFER TO FIGURE 2).

LEGEND:

- ← SOIL BORING NUMBER
- ← SOIL BORING
- PCB CONCENTRATION:
- 3 INCH SAMPLE:
 - ← LESS THAN 2.0 ppm
 - ▒ ← 2.0 ppm TO LESS THAN 50.0 ppm
- 6 INCH SAMPLE:
 - ← LESS THAN 2.0 ppm
 - ▒ ← 2.0 ppm TO LESS THAN 50.0 ppm
 - ← GREATER THAN OR EQUAL TO 50 ppm
- 18 INCH SAMPLE:
 - ← LESS THAN 2.0 ppm
- ← BOTTOM OF BORING



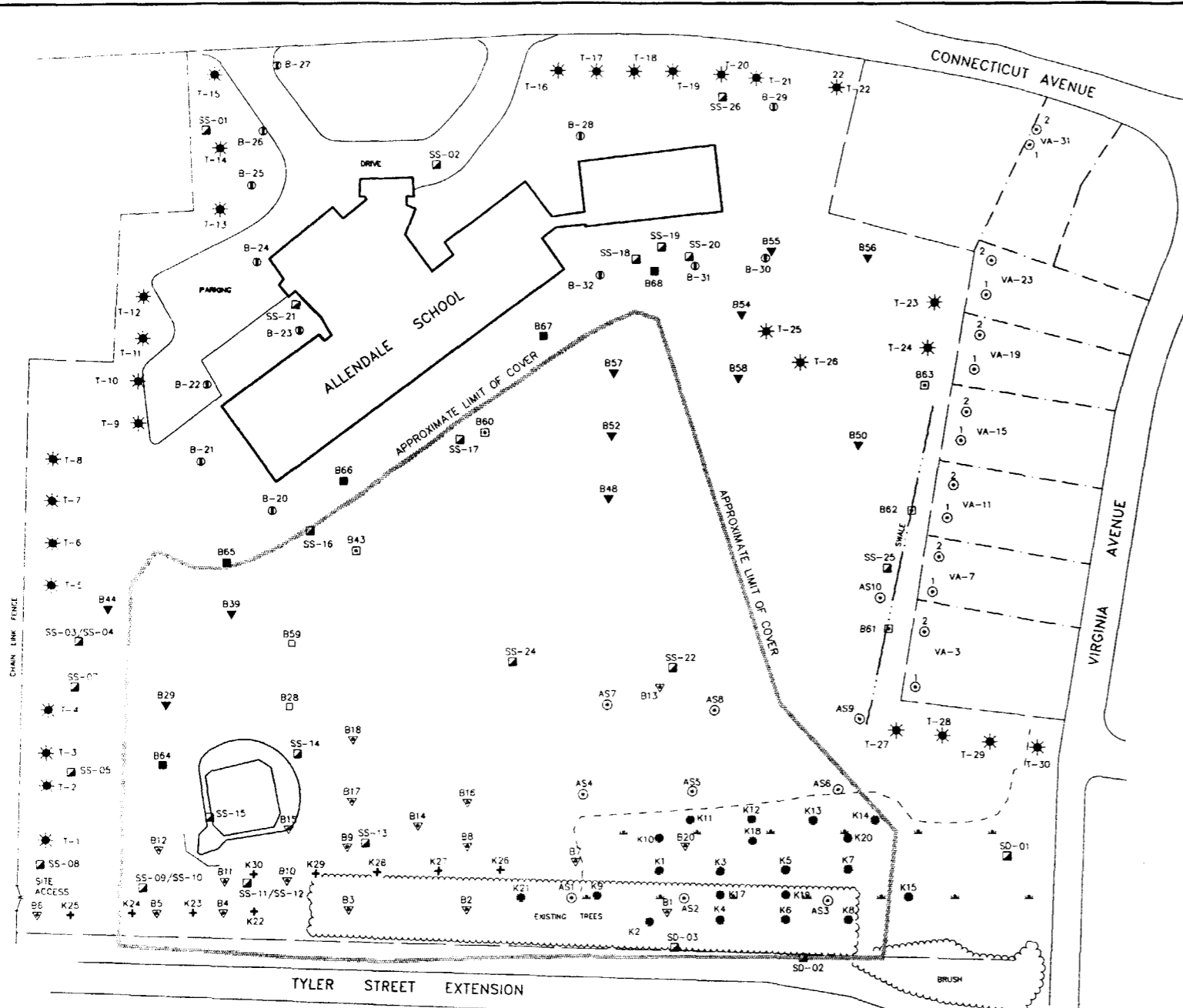
HORIZONTAL SCALE: 1" = 50' (APPROX.)

GENERAL ELECTRIC COMPANY, PITTSFIELD MASSACHUSETTS
SUPPLEMENTAL PHASE II
 SCOPE OF WORK FOR THE
 ALLENDALE SCHOOL PROPERTY

CROSS SECTION C-C'

BBL BLASLAND, BOUCK & LEE, INC.
 engineers & scientists

FIGURE
5



- LEGEND:**
- EXISTING CHAIN LINK FENCE
 - - - APPROXIMATE LOWLAND BOUNDARY
 - - - EXISTING DRAINAGE SWALE
 - EXISTING TREES AND BRUSH
 - ☐ JANUARY 1990 - SAMPLING LOCATIONS
 - APRIL 1990 - SAMPLING LOCATIONS
 - JULY 1990 - SAMPLING LOCATIONS
 - ⊕ AUGUST 1990 - SAMPLING LOCATIONS
 - ▽ AUGUST 17, 1990 - SAMPLING LOCATIONS
 - ⊞ AUGUST 23, 1990 - SAMPLING LOCATIONS
 - ⊠ AUGUST 24, 1990 - SAMPLING LOCATIONS
 - AUGUST 27, 1990 - SAMPLING LOCATIONS
 - ☼ FEBRUARY 1991 - SAMPLING LOCATIONS
 - ⊙ AUGUST 1996 - SAMPLING LOCATIONS
 - NR NO RECOVERY
 - SAMPLES WERE ANALYZED FOR THE EPA APPENDIX IX LIST PLUS THREE ADDITIONAL CONSTITUENTS
 - [] FIELD DUPLICATE

NOTE:
AUGUST 1996 SAMPLING LOCATIONS ARE APPROXIMATE AND ARE BASED UPON FILE No. 9607A DATED AUGUST 28, 1996 BY GIFFORD ENGINEERING GEOTECHNICAL AND GEONENVIRONMENTAL SERVICES.

T-1	T-6	T-11	T-16	T-21	T-26
DEP(Hg) (ppm) 0.12 < 0.05	DEP(Hg) (ppm) 0.12 < 0.05	DEP(Hg) (ppm) 0.12 < 0.05	DEP(Hg) (ppm) 0.12 < 0.05	DEP(Hg) (ppm) 0.12 < 0.05	DEP(Hg) (ppm) 0.12 < 0.05
PCB(Σ) (ppm) 24-36 < 0.11	PCB(Σ) (ppm) 24-36 < 0.11	PCB(Σ) (ppm) 24-36 < 0.11	PCB(Σ) (ppm) 24-36 < 0.11	PCB(Σ) (ppm) 24-36 < 0.11	PCB(Σ) (ppm) 24-36 < 0.11

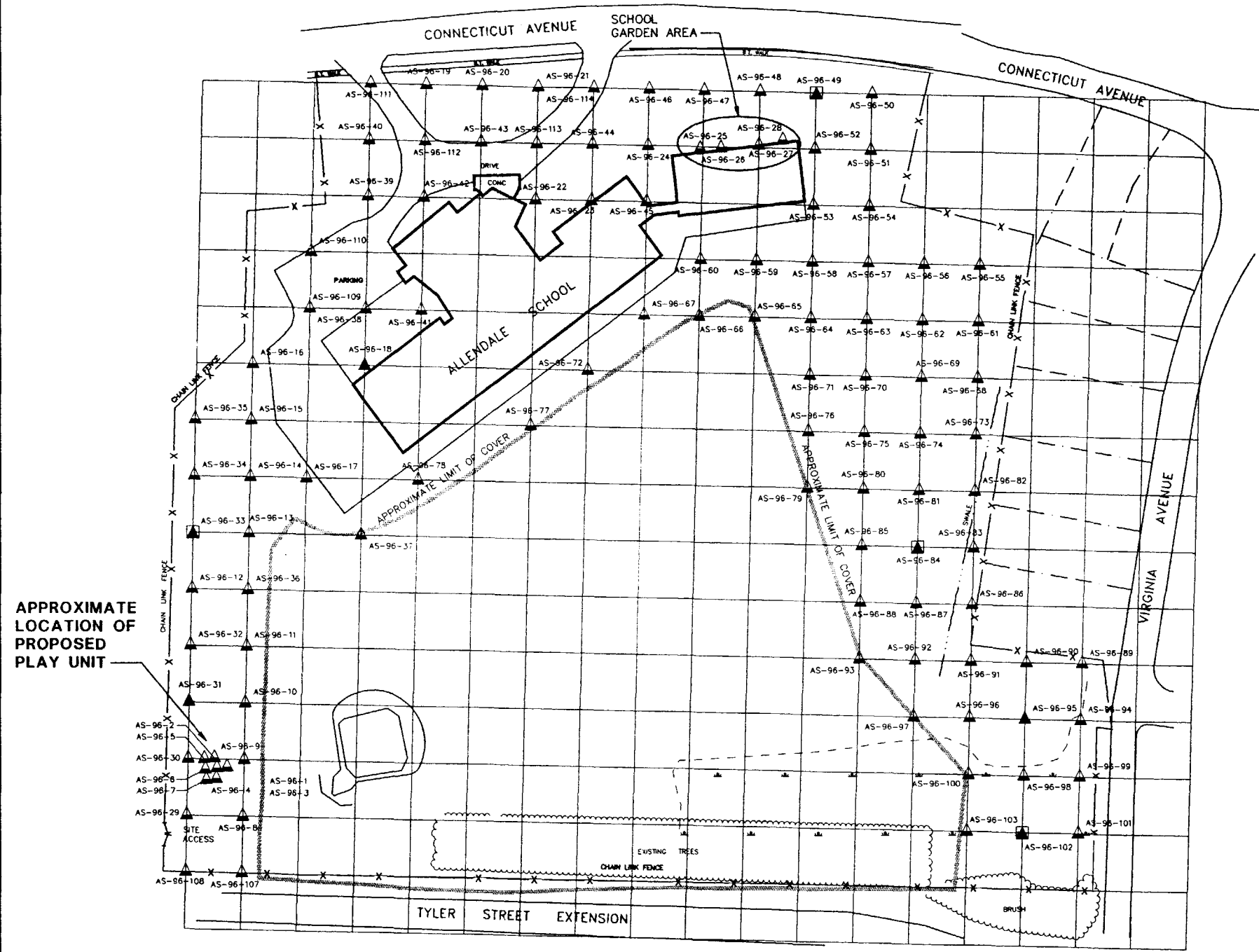
K1	K2	K3	K4	K5	K6
DEP(Hg) (ppm) 0.3 < 1.2	DEP(Hg) (ppm) 0.3 < 1.2	DEP(Hg) (ppm) 0.3 < 1.2	DEP(Hg) (ppm) 0.3 < 1.2	DEP(Hg) (ppm) 0.3 < 1.2	DEP(Hg) (ppm) 0.3 < 1.2
PCB(Σ) (ppm) 6-12 < 0.8	PCB(Σ) (ppm) 6-12 < 0.8	PCB(Σ) (ppm) 6-12 < 0.8	PCB(Σ) (ppm) 6-12 < 0.8	PCB(Σ) (ppm) 6-12 < 0.8	PCB(Σ) (ppm) 6-12 < 0.8

VA7-1	VA7-2	B-20	B-21	B-22	B-23
DEP(Hg) (ppm) 0.3 < 0.05	DEP(Hg) (ppm) 0.3 < 0.05	DEP(Hg) (ppm) 0.3 < 0.05	DEP(Hg) (ppm) 0.3 < 0.05	DEP(Hg) (ppm) 0.3 < 0.05	DEP(Hg) (ppm) 0.3 < 0.05
PCB(Σ) (ppm) 0.3 < 0.05	PCB(Σ) (ppm) 0.3 < 0.05	PCB(Σ) (ppm) 0.3 < 0.05	PCB(Σ) (ppm) 0.3 < 0.05	PCB(Σ) (ppm) 0.3 < 0.05	PCB(Σ) (ppm) 0.3 < 0.05

AS1	AS2	AS3	AS4	AS5	AS6
DEP(Hg) (ppm) 0.3 < 1.22	DEP(Hg) (ppm) 0.3 < 1.37	DEP(Hg) (ppm) 0.3 < 1.43	DEP(Hg) (ppm) 0.3 < 1.37	DEP(Hg) (ppm) 0.3 < 1.5	DEP(Hg) (ppm) 0.3 < 1.2
PCB(Σ) (ppm) 5.6 < 0.60	PCB(Σ) (ppm) 5.6 < 0.60	PCB(Σ) (ppm) 5.6 < 0.60	PCB(Σ) (ppm) 5.6 < 0.60	PCB(Σ) (ppm) 5.6 < 0.60	PCB(Σ) (ppm) 5.6 < 0.60

GENERAL ELECTRIC COMPANY, PITTSFIELD MASSACHUSETTS
SUPPLEMENTAL PHASE II
 SCOPE OF WORK FOR THE
 ALLENDALE SCHOOL PROPERTY
EXISTING PCB SOIL
ANALYTICAL DATA
 THROUGH SEPTEMBER 1996

L: ON=*, OFF=REF
 P: STD=PCP/PL(02B.PCP)
 11/18/96 5:41 PM MFS
 10184100\TOP\10184SM2.DWG



SAMPLE IDENTIFICATION	PCBs(ppm)	
	0-6"	6"-12"
AS-96-1	0.056	0.14
AS-96-2	0.077	ND(0.039)
AS-96-3	0.093	0.088
AS-96-4	0.053	0.097
AS-96-5	0.052	ND(0.039)
AS-96-6	0.067	ND(0.039)
AS-96-7	0.069	ND(0.040)
AS-96-8	0.06	0.065
AS-96-9	0.06	0.22
AS-96-10	0.17	0.056
AS-96-11	0.052	ND(0.041)
AS-96-12	ND(0.039)	ND(0.038)
AS-96-13	0.28	ND(0.041)
AS-96-14	0.27	0.13
AS-96-15	0.094	0.073
AS-96-16	0.071	0.075
AS-96-17	0.33	0.1
AS-96-18	0.18	0.073
AS-96-19	0.088	0.075
AS-96-20	0.044	ND(0.037)
AS-96-21	0.058	ND(0.037)
AS-96-22	0.071	ND(0.036)
AS-96-23	0.07	ND(0.036)
AS-96-24	0.051	ND(0.036)
AS-96-25	0.11	ND(0.035)
AS-96-26	0.11	0.051
AS-96-27	0.13	ND(0.036)
AS-96-28	0.072	ND(0.036)
AS-96-29	0.11	0.045
AS-96-30	0.06	ND(0.039)
AS-96-31	ND(0.036)	ND(0.040)
AS-96-32	0.049	ND(0.038)
AS-96-33	0.057	ND(0.033)
AS-96-34	0.096	0.17
AS-96-35	0.066	ND(0.038)
AS-96-36	0.1	ND(0.043)
AS-96-37	0.075	0.069
AS-96-38	0.19	0.065
AS-96-39	0.063	ND(0.038)
AS-96-40	0.054	ND(0.039)
AS-96-41	0.13	0.12
AS-96-42	0.057	0.071
AS-96-43	0.08	0.061
AS-96-44	0.046	ND(0.036)
AS-96-45	0.16	0.083
AS-96-46	0.084	0.063
AS-96-47	0.084	0.055
AS-96-48	0.07	ND(0.039)
AS-96-49	0.085	0.046
AS-96-50	0.13	0.091
AS-96-51	0.12	0.089
AS-96-52	0.051	ND(0.036)
AS-96-53	0.1	0.042
AS-96-54	0.074	0.056
AS-96-55	0.05	0.051
AS-96-56	0.066	0.071
AS-96-57	0.092	0.065

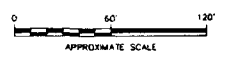
SAMPLE IDENTIFICATION	PCBs(ppm)	
	0-6"	6"-12"
AS-96-58	0.11	0.044
AS-96-59	0.094	0.11
AS-96-60	0.086	0.11
AS-96-61	0.059	0.046
AS-96-62	0.14	0.066
AS-96-63	0.41	0.62
AS-96-64	0.23	0.89
AS-96-65	ND(0.039)	0.1
AS-96-66	ND(0.039)	ND(0.039)
AS-96-67	0.1	0.059
AS-96-68	ND(0.040)	ND(0.038)
AS-96-69	0.14	0.052
AS-96-70	0.46	0.52
AS-96-71	ND(0.034)	ND(0.035)
AS-96-72	0.18	0.14
AS-96-73	0.077	ND(0.041)
AS-96-74	0.51	0.41
AS-96-75	1.0	1.5
AS-96-76	2.8	2.7
AS-96-77	0.11	0.06
AS-96-78	0.085	0.04
AS-96-79	ND(0.038)	ND(0.038)
AS-96-80	3.6	3.6
AS-96-81	1.7	0.88
AS-96-82	0.067	0.11
AS-96-83	0.094	0.043
AS-96-84	0.2	0.21
AS-96-85	0.13	0.64
AS-96-86	0.18	0.12
AS-96-87	0.4	0.047
AS-96-88	0.22	0.93
AS-96-89	0.41	0.29
AS-96-90	0.25	0.27
AS-96-91	0.22	0.16
AS-96-92	0.34	0.47
AS-96-93	ND(0.041)	ND(0.039)
AS-96-94	0.37	0.13
AS-96-95	0.23	0.12
AS-96-96	0.27	0.61
AS-96-97	ND(0.040)	ND(0.039)
AS-96-98	0.72	0.22
AS-96-99	0.13	0.053
AS-96-100	0.22	0.61
AS-96-101	0.18	0.14
AS-96-102	0.48	0.54
AS-96-103	ND(0.042)	0.13
AS-96-104	0.12	0.96
AS-96-105	0.23	0.45
AS-96-106	ND(0.041)	ND(0.041)
AS-96-107	0.061	ND(0.040)
AS-96-108	0.37	0.074
AS-96-109	0.14	0.092
AS-96-110	0.98	0.24
AS-96-111	0.098	ND(0.036)
AS-96-112	0.096	0.068
AS-96-113	0.085	0.058
AS-96-114	ND(0.037)	0.12

LEGEND:

- AS-96-101 ▲ SOIL SAMPLES COLLECTED FROM (0-6") AND (6"-12")
- AS-96-95 ▲ SOIL SAMPLE COLLECTED FOR PCB AND VOC ANALYSES
- AS-96-84 ▲ SOIL SAMPLE COLLECTED FOR TOC AND PCB ANALYSES
- - - - - EXISTING CHAIN LINK FENCE
- - - - - APPROXIMATE LOWLAND BOUNDARY
- - - - - EXISTING DRAINAGE SWALE
- ⊞ EXISTING TREES AND BRUSH

AS-96-75 1.0 1.5
AS-96-76 2.8 2.7

SAMPLE CONCENTRATION GREATER THAN 1 ppm PCB



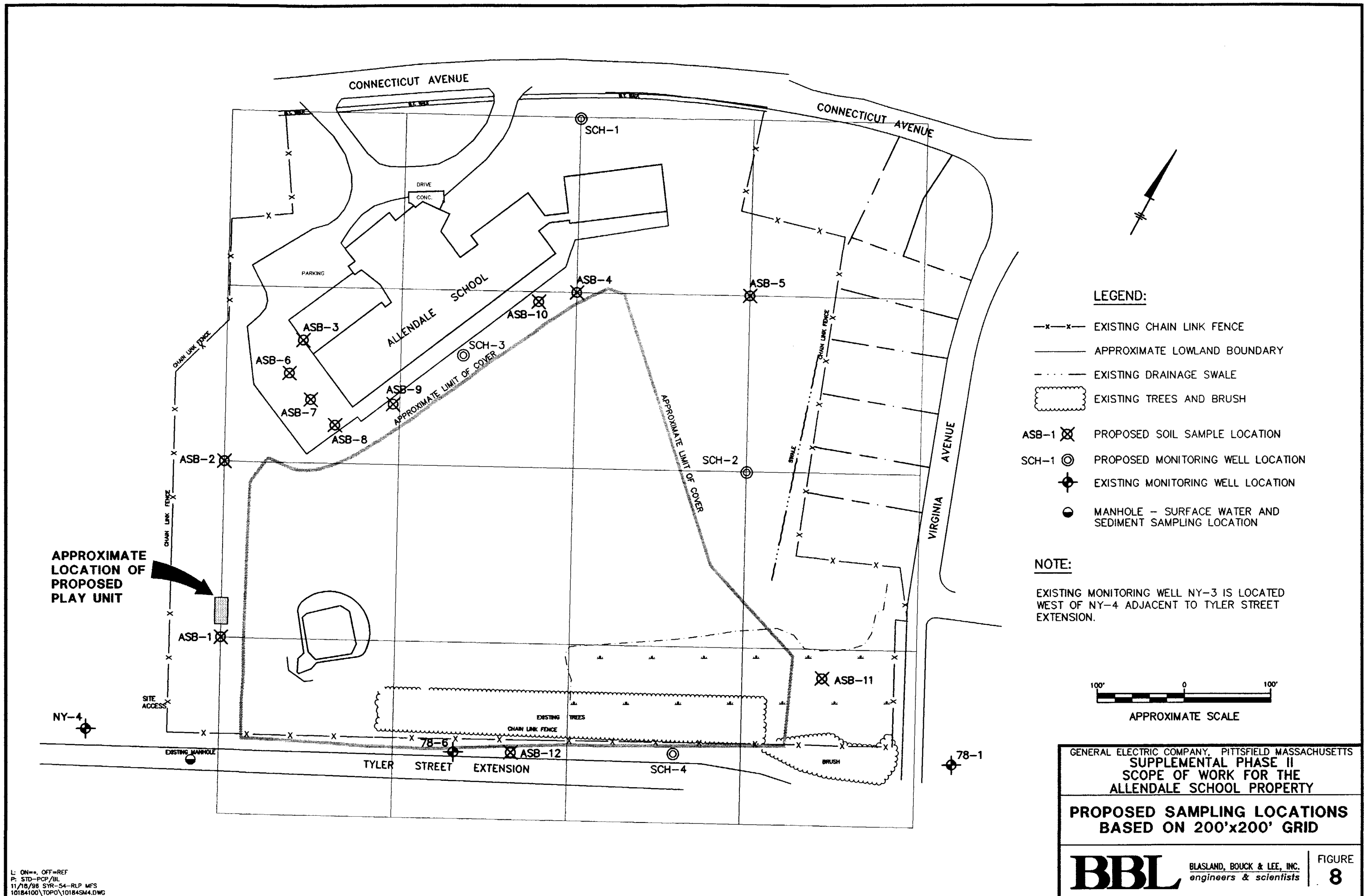
NOTE:
1. ALL ROADS, BUILDINGS, AND SAMPLE LOCATIONS ARE APPROXIMATE. SAMPLE LOCATIONS WERE SURVEYED IN OCTOBER 1996 BY BLASLAND, BOUCK & LEE, INC.

GENERAL ELECTRIC COMPANY, PITTSFIELD MASSACHUSETTS
SUPPLEMENTAL PHASE II
 SCOPE OF WORK FOR THE
 ALLENDALE SCHOOL PROPERTY

PCB SOIL ANALYTICAL DATA
OCTOBER 1996

BBL BLASLAND, BOUCK & LEE, INC.
 engineers & scientists

FIGURE
7



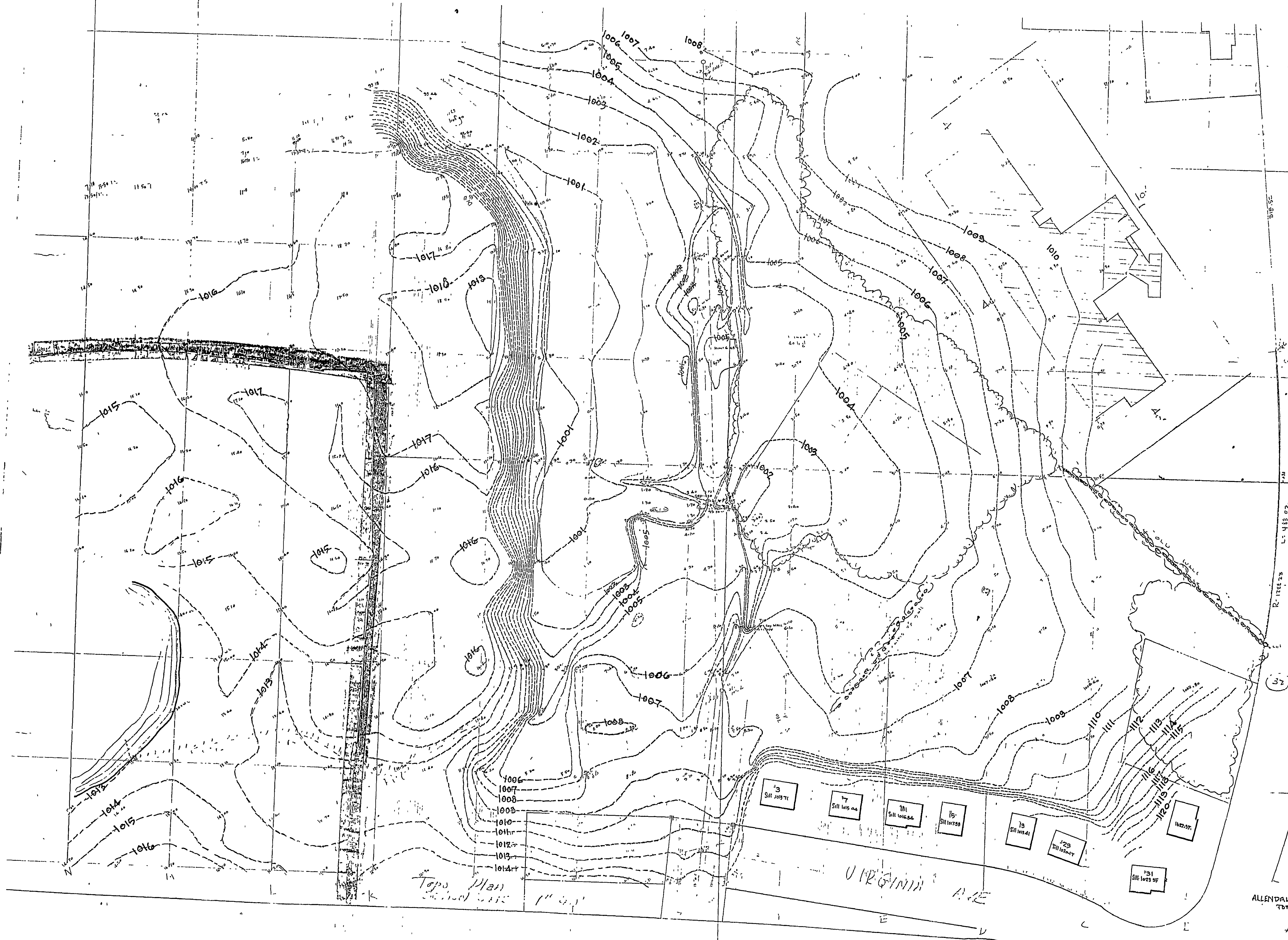
Attachments

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Attachment A

Allendale School Topographic Survey (untitled and undated - pre 1950)

BLASLAND, BOUCK & LEE, INC.
engineers & scientists



AVE.

COMMERCIAL

37

Topo Plan
Scale 1" = 40'

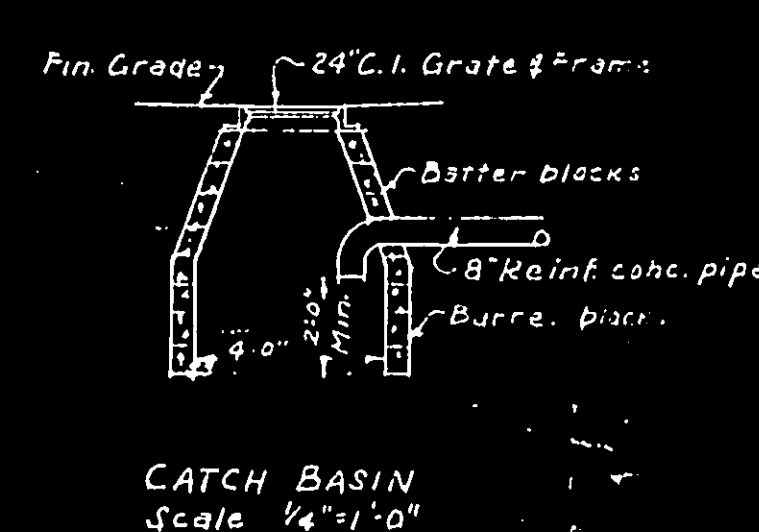
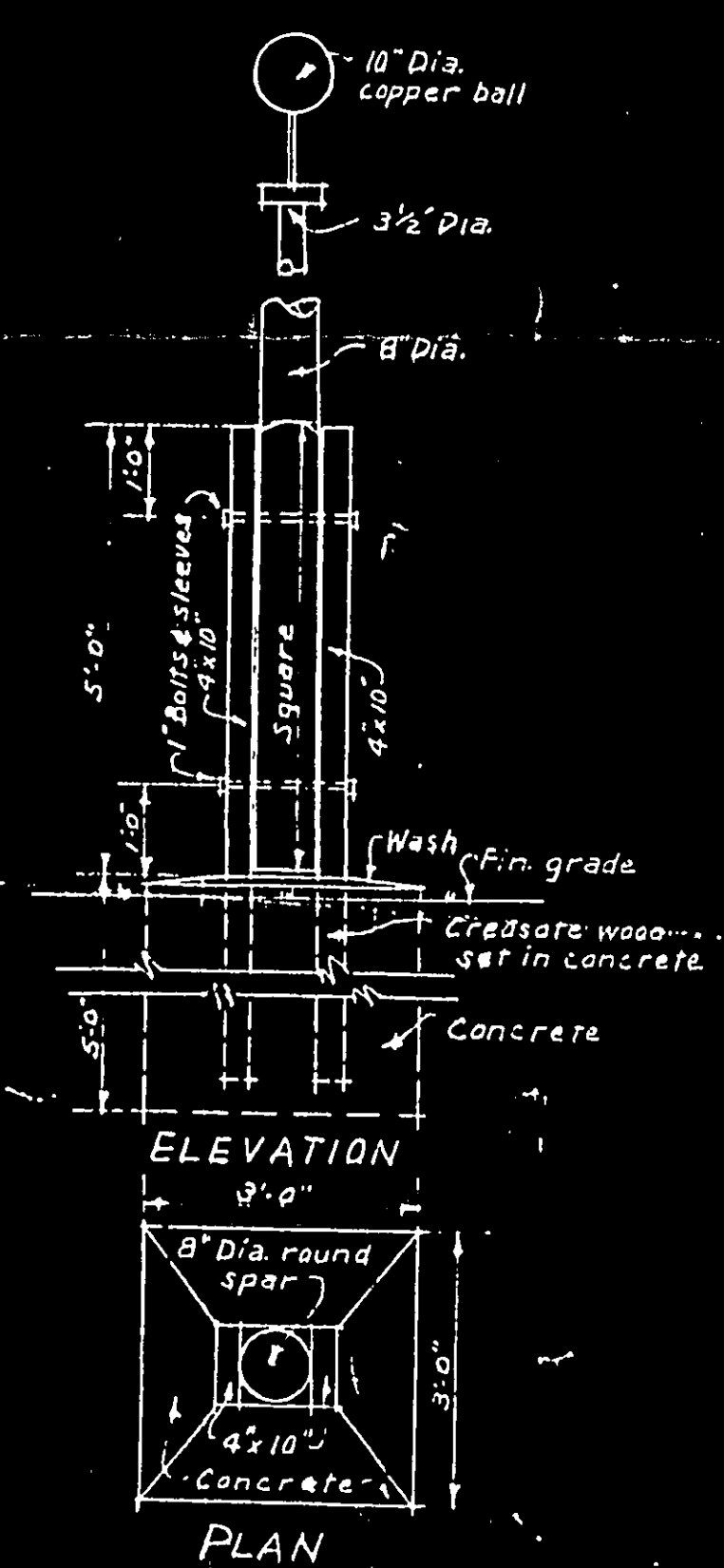
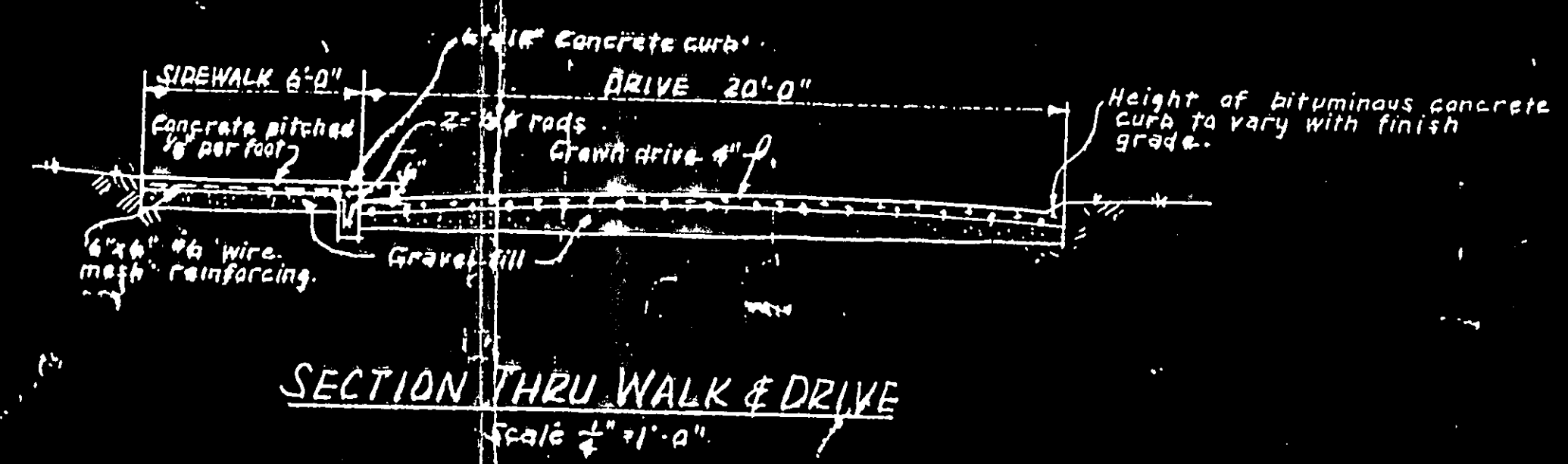
VIRGINIA AVE

ALLEDALE SCH
TOTO

Attachment B

Allendale School Building Plan (S.W. Haynes & Associates, dated 5/9/51)

BLASLAND, BOUCK & LEE, INC.
engineers & scientists



Existing Contours
 Finish Contours
 Finish Grade at Bldg. 30.00

GRADING PLAN
 Scale 1"=40'

NOTE:
 ALL DIMENSIONS MUST BE VERIFIED
 BY CONTRACTOR AT BUILDING.

	DATE 5-9-51	ALLENDALE SCHOOL BUILDING PITTSFIELD, MASS. S. W. HAYNES & ASSOC. ARCHITECTS FITCHBURG, MASS.	SHEET NO. 67
	REVISED		

Attachment C

Allendale Capping Project Plan (GE drawing dated 10/25/91)

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

UNLESS OTHERWISE SPECIFIED USE THE FOLLOWING--			
APPLIED PRACTICES	SURFACES	TOLERANCES ON MACHINED DIMENSIONS	ANGLE
FRACTIONS	DECIMALS	FRACTIONS	DECIMALS
✓	✓	±	±

THIRD ANGLE PROJECTION

NEW CB. INV.(IN) 1014.34 INV.(OUT) 1013.34
 NOT CONNECTED TO CITY AT THIS POINT
 NEW BIT. CURB

NEW C.B. INV.(OUT) 1014.74
 NEW BIT. CURB

NEW DMH
 RIM 1011.6
 INV.(IN) 1007.57
 INV.(OUT) 1007.43

NEW DMH
 RIM 1008.8
 INV.(IN) 1005.92
 INV.(OUT) 1005.83

NEW DMH
 INV.(IN) 1004.42
 INV.(OUT) 1004.35

EXIST. DMH
 INV.(OUT) 1006.44 ±

NEW DMH (REPLACED EXISTING)
 30" INV.(IN) 1001.47
 30" INV.(OUT) 1001.41

EXIST. DMH
 30" INV.(IN) 1001.13
 EXIST INV.(OUT) 1000.70

NEW DMH (REPLACED EXISTING)
 RIM 1007.5
 INV.(IN) 1002.14
 INV.(OUT) 1001.87

NEW DMH
 15" INV.(IN) 1004.32
 24" INV.(IN) 1004.30
 24" INV.(OUT) 1004.15

REVISIONS

NO.	REVISIONS	PRINTS TO

1"=40'
 0 20 40 80
 SCALE IN FEET

