

REMEDIAL DESIGN AND CONSTRUCTION INSPECTION



WORK PLAN

LIBERTY INDUSTRIAL FINISHING SITE

Brentwood, New York
(Site Registry No. 1-52-108)

WORK ASSIGNMENT NO. D003600-16

Prepared For

**New York State Department
of Environmental Conservation**

SEPTEMBER 1999

SEPTEMBER 28, 1999



Dvirka and Bartilucci

CONSULTING ENGINEERS

A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

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BY

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LIBERTY INDUSTRIAL FINISHING SITE

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.0	INTRODUCTION	1-1
2.0	SITE HISTORY AND BACKGROUND	2-1
3.0	SCOPE OF WORK	3-1
3.1	Task 1 - Work Plan Preparation	3-1
3.2	Task 2 -Remedial Design	3-1
3.2.1	Subtask 2A - Predesign Investigations/Surveys and Groundwater Monitoring Well Installation.....	3-1
3.2.2	Subtask 2B - Plans and Specifications (Contract Documents)	3-8
3.3	Task 3 - Citizens Participation	3-9
3.4	Task 4 - Pre-award Services.....	3-9
3.4.1	Subtask 4A - Pre-Bid Conference	3-10
3.4.2	Subtask 4B - Addenda.....	3-10
3.4.3	Subtask 4C - Bid Review	3-10
3.5	Task 5 - Construction Services.....	3-10
3.5.1	Subtask 5A - Preconstruction Meeting.....	3-11
3.5.2	Subtask 5B - Review of Submittals	3-11
3.5.3	Subtask 5C - Construction Inspection.....	3-11
3.5.4	Subtask 5D - Final Inspections and Payment Reviews	3-13
3.5.5	Subtask 5E - Final Remediation Report.....	3-15
4.0	PROJECT MANAGEMENT	4-1
4.1	Project Schedule and Key Milestones/Reports	4-1
4.2	Project Management, Organization and Key Technical Personnel.....	4-1
5.0	SITE-SPECIFIC QUALITY ASSURANCE AND QUALITY CONTROL PLAN	5-1
5.1	Sampling Program Design and Rationale	5-1
6.0	SITE-SPECIFIC HEALTH AND SAFETY PLAN	6-1
7.0	SCHEDULE 2.11s	7-1

TABLE OF CONTENTS (continued)

List of Appendices

Scope of Work for Surveying.....A

List of Figures

1-1 Site Location Map..... 1-2

2-1 Site Plan 2-2

3-1 Locations of Proposed Subsurface Soil Probes..... 3-3

3-2 Town of Islip Athletic Field Proposed Surface Soil
Sampling Locations 3-4

3-3 Existing and Proposed Monitoring Well Locations..... 3-5

4-1 Project Schedule..... 4-2

4-2 Project Team Organization Chart 4-4

6-1 Hospital Route 6-4

List of Tables

5-1 Summary of Monitoring Parameters 5-3

Labor Hour Estimate Summary..... 7-2

Schedule 2.11(a) – Summary of Work Assignment Price..... 7-4

Schedule 2.11(b)1 – Summary 7-5

Schedule 2.11(b)2 – Breakdown of Administrative LOE Hours..... 7-6

Schedule 2.11(c) – Direct Non-Salary Cost 7-7

Schedule 2.11(c)2 – Direct Non-Salary Costs..... 7-8

Schedule 2.11(d)1 – Equipment Purchased Under the Contract 7-9

Schedule 2.11(d)2 – Equipment Consultant Owned 7-10

Schedule 2.11(d)3 – Equipment Vendor Rented..... 7-11

Schedule 2.11(d)4 – Expendable Supplies 7-12

Schedule 2.11(d)5 – Consumable Supplies 7-13

Schedule 2.11(e) – Cost Plus Fixed-Fee Subcontractors (Surveying)..... 7-14

Schedule 2.11(f)1 – Unit Price Subcontracts (Printing)..... 7-15

Schedule 2.11(f)2 – Unit Price Subcontracts (Drilling) 7-16

Schedule 2.11(f)3 – Unit Price Subcontracts (Geoprobe) 7-18

Schedule 2.11(f)4 – Unit Price Subcontracts (Laboratory) 7-19

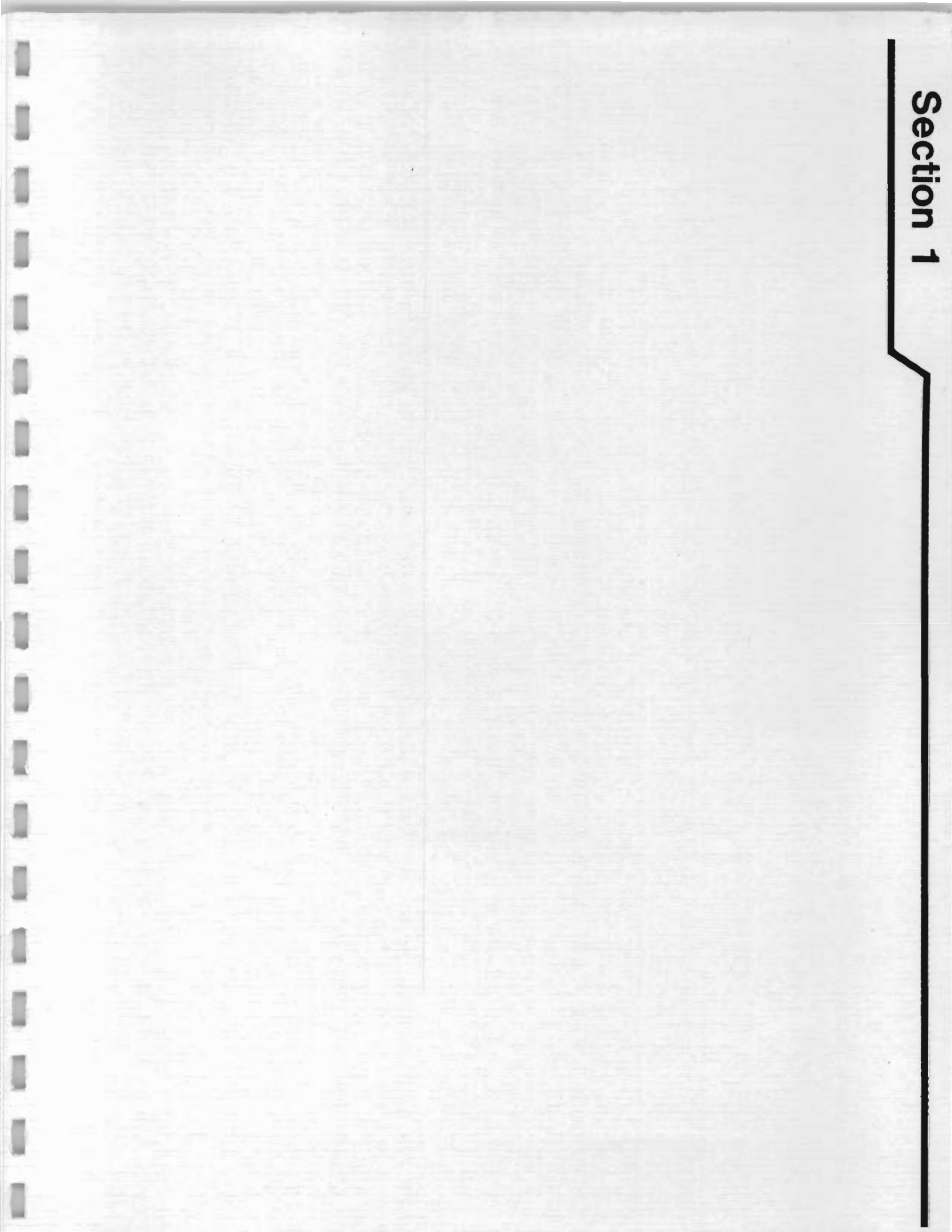
Schedule 2.11(f)5 – Unit Price Subcontracts (Drums)..... 7-20

Schedule 2.11(g) – Monthly Cost Control Report..... 7-21

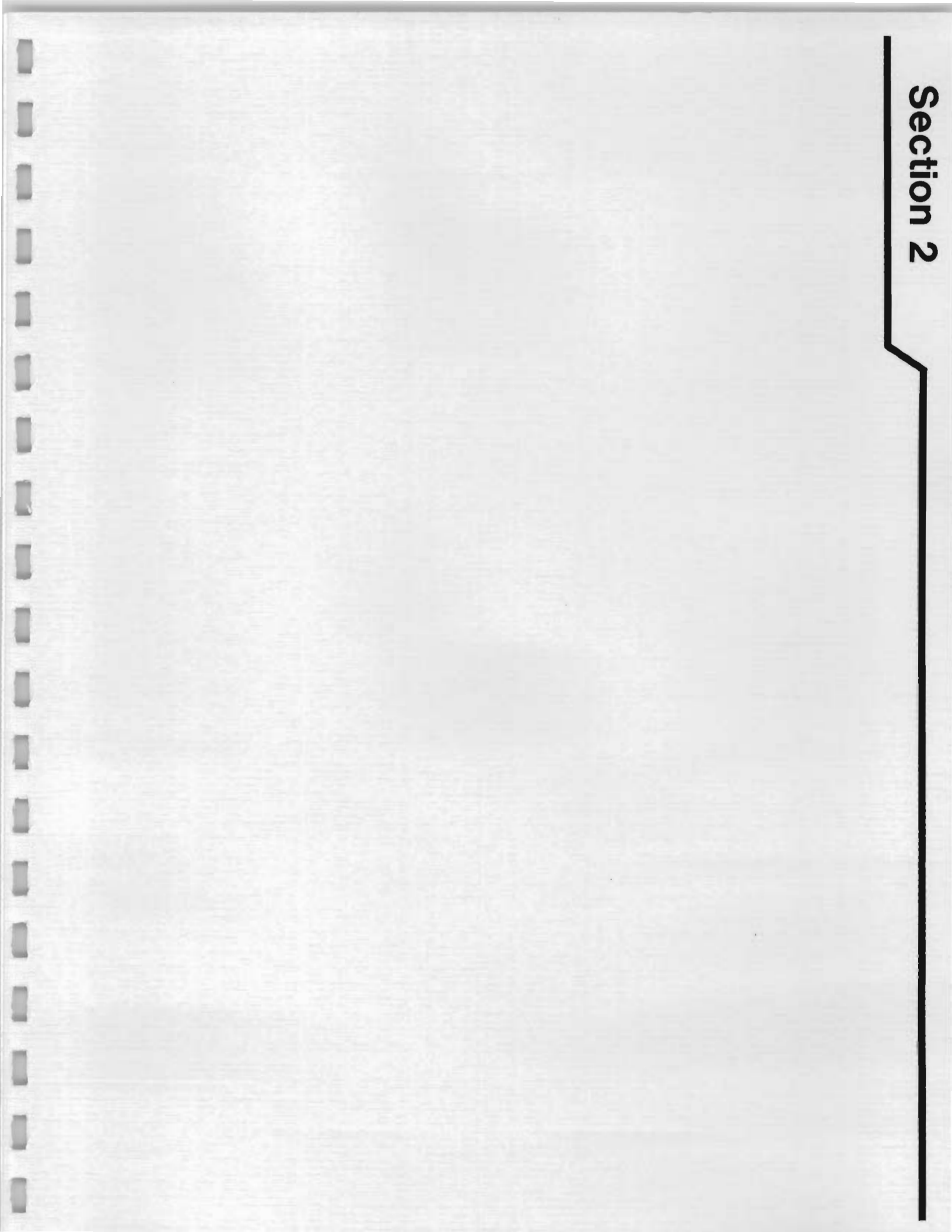
Schedule 2.11(h) – Monthly Cost Control Report –
Summary of Labor Hours..... 7-28

MBE/WBE Utilization Plan 7-29

Section 1



Section 2



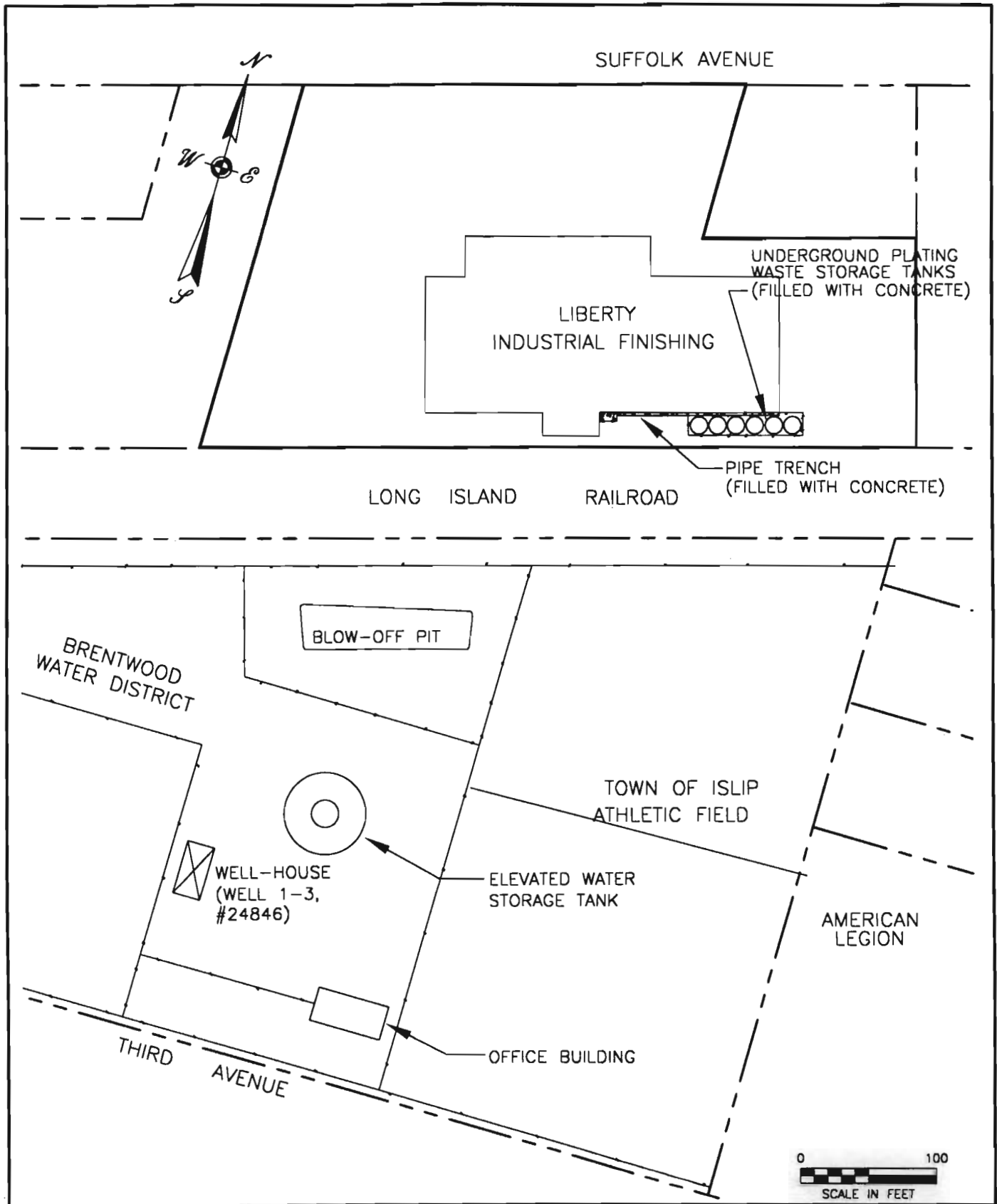
2.0 SITE HISTORY AND BACKGROUND

The Liberty Industrial Finishing Site is an abandoned metal plating facility located at 550 Suffolk Avenue in the Hamlet of Brentwood, Town of Islip, Suffolk County (see Figure 2-1). The site is approximately 3.9 acres in size and includes a one-story industrial building. Liberty Industrial Finishing was a medium-sized metal finishing facility engaged in finishing, plating and non-destructive testing of parts and components used primarily in the aircraft industry. The site is not connected to public storm or sanitary sewers. Instead, storm water dry wells and sanitary leaching pools were utilized for storm water and sanitary sewage disposal, respectively.

The facility operated from 1978 to 1997, during which time there were several documented discharges of plating waste to storm drains, leaching pools, and on-site surface and subsurface soils. The site was listed in the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites as a Class 2a site in 1987 and was reclassified as a Class 2 site in 1994.

A Remedial Investigation (RI) was performed by Dvirka and Bartilucci Consulting Engineers (D&B) for the NYSDEC from September 1997 to November 1998. The RI revealed that the sediment in four storm water dry wells and one sanitary leaching pool contained semivolatiles and metals exceeding standards, criteria, and guidance (SCGs). Also, the surface and subsurface soils in the vicinity of the six underground storage tanks (USTs) located directly south of the building are contaminated with metals. Concentrations of metals in shallow groundwater exceeding SCGs extend 500 feet downgradient of the site.

Two Interim Remedial Measures (IRMs) were completed during the RI. The first IRM was completed in January 1999. USEPA conducted an emergency removal action at the site to remove waste materials inside the building and close the six on-site USTs. The tanks were left in place and filled with concrete. As part of the second IRM, which was conducted in August 1998, the Town of Islip excavated and disposed of contaminated surface soils at the Town of Islip Athletic Field and the Brentwood Water District property.



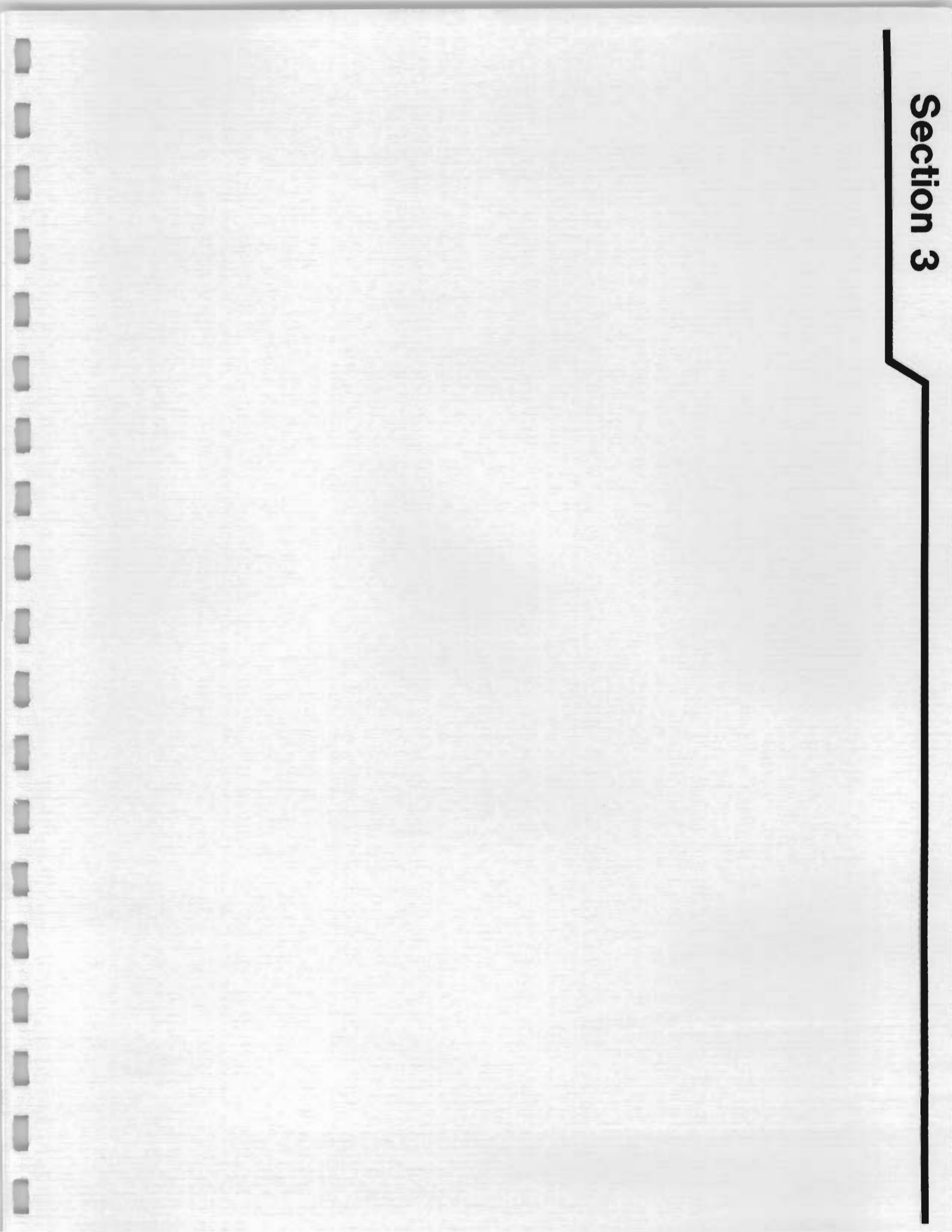
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LIBERTY INDUSTRIAL FINISHING SITE
 BRENTWOOD, NEW YORK
SITE PLAN

The Brentwood Water District water supply well field is located directly south of the site. The wells are situated 450 - 900 feet below ground surface (bgs) in the Magothy aquifer. Groundwater at the site flows southeast and therefore flows away from the Brentwood Water District property. These wells have not been affected by contamination at the Liberty Industrial Finishing site.

Potential remedial alternatives for the Liberty Industrial Finishing Site were identified, screened and evaluated in a Feasibility Study (FS) dated February 1999. Based on the RI and FS, the NYSDEC issued a Record of Decision (ROD) dated March 31, 1999, which identifies the selected remedy for the site.

Section 3



3.0 SCOPE OF WORK

The services to be provided by Dvirka and Bartilucci Consulting Engineers (D&B) include preparation of plans and specifications (contract documents) for procurement of a remedial contractor; providing assistance to NYSDEC with citizen participation activities; pre-award services including attendance at a pre-bid conference and review of bids; and construction inspection including attendance at a preconstruction meeting, review of submittals and payment requests, construction inspection and preparation of a final remediation report. Presented below is a description of each task to be performed in connection with the remedial design and construction inspection.

3.1 Task 1 - Work Plan Preparation

This task includes review of project records and reports and preparation of this work plan. This task also includes telephone discussions with Department representatives; preparation and submittal of a draft work plan for Department review and comment; and finalization of this work plan.

3.2 Remedial Design

This task consists of two subtasks: Subtask 2A-Predesign Investigations/Surveys and Groundwater Monitoring Well Installation and Subtask 2B-Plans and Specifications.

3.2.1 Subtask 2A - Predesign Investigations/Surveys and Groundwater Monitoring Well Installation

This subtask includes the following:

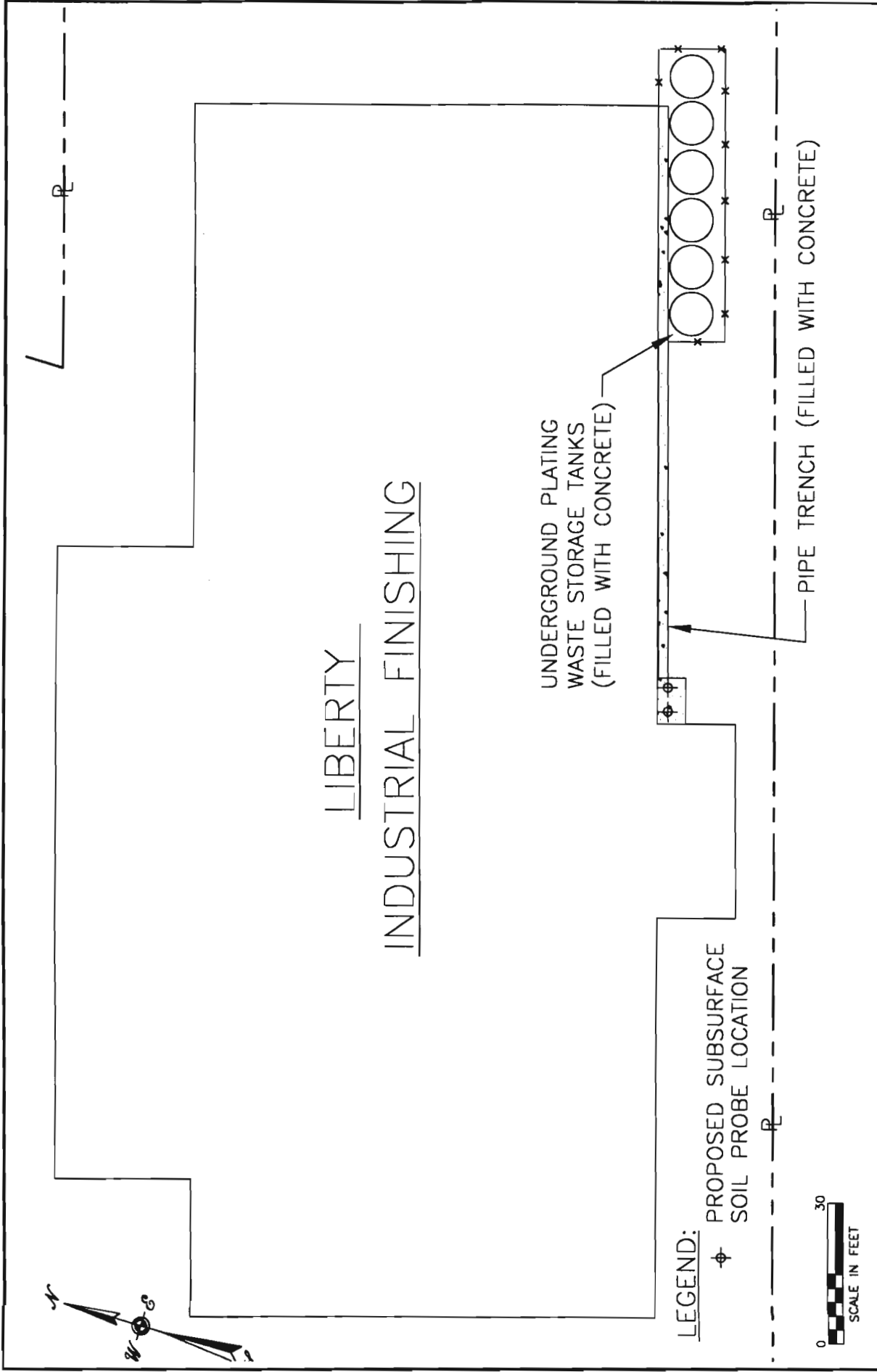
1. Delineation of subsurface soil contamination in the vicinity of west end of pipe gallery. Subsurface soil contamination was detected in soil boring B-29D located at the west end of the pipe gallery. Chromium was detected in B-29D at concentrations of 1,320 mg/kg and 1,530 mg/kg in samples collected 0 to 4 feet and 4 to 8 feet below

ground surface, respectively. As shown on Figure 3-1, probes will be advanced at two locations. Soil samples will be collected continuously at 4-foot intervals from ground surface to the water table (approximately 40 feet below ground surface). Coring through the concrete which has been used to fill in the former trench will be required. The samples collected will be tested for target analyte list (TAL) metals and TCLP metals.

2. Collection and analysis of surface soil samples from the Town of Islip Athletic Field. In accordance with the Record of Decision, surface soil samples will be collected from the Town of Islip Athletic Field before and after construction. During both rounds of sampling, surface soil samples will be collected at the 12 locations shown on Figure 3-2. The samples will be analyzed for TAL metals. The purpose of the pre-construction sampling is to establish a baseline of conditions prior to remedial construction. The purpose of sampling after construction is completed is to determine whether there has been any impact to the Athletic Field as a result of the remedial construction. Since the second round of sampling will be conducted after construction, it has been budgeted for under Subtask 5D (Final Inspections and Payment Reviews).
3. Property survey of site and Athletic Field. Property surveys of both the site and Athletic Field will be prepared by a licensed surveyor as part of this subtask. The surveys will identify any easements, rights of way, etc. (e.g., LIRR easements) on either property. A sealed property survey will be included in the contract documents (see Appendix A).
4. Installation of groundwater monitoring wells. Two groundwater monitoring well clusters will be installed, one cluster will be installed downgradient of the site and the other cluster will be installed on the Brentwood Water District property as shown on Figure 3-3. (Note: The locations shown for the new well clusters are subject to change pending review by the Suffolk County Department of Health Services.)

The shallow well in each cluster will be constructed first, as follows:

- A nominal 12-inch diameter borehole will be drilled to approximately 40 feet below grade utilizing the mud rotary drilling technique. Upon reaching a depth of 40 feet, a Schedule 40, 10-inch diameter steel casing will be lowered into the borehole. Drilling fluids will be pumped from the annular space and the casing will be grouted in place. (The purpose of this 40-foot deep outer casing is to prevent undermining during completion of the borehole).
- After letting the grout set for a minimum of 24 hours, mud rotary drilling will proceed using a nominal 6-inch diameter drill bit. Split spoon samples will be collected at five-foot intervals beginning at 100 feet below ground surface and the soil samples will be described and logged. Drilling will continue to a depth of 150 feet (assumed depth) or until the low permeability transition between the Upper Glacial aquifer and the Magothy aquifer is encountered, whichever is deeper.

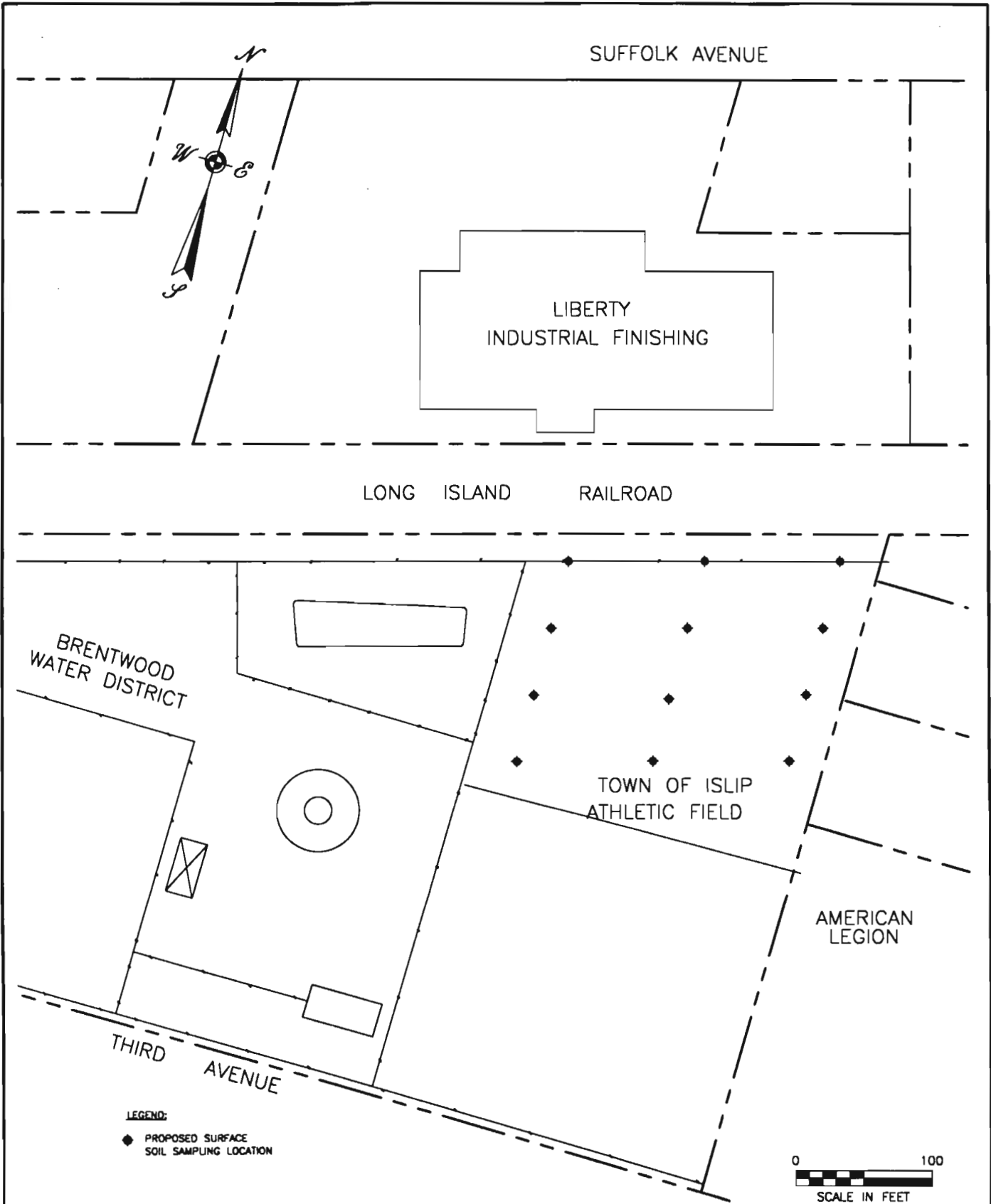


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**LOCATIONS OF PROPOSED
SUBSURFACE SOIL PROBES**

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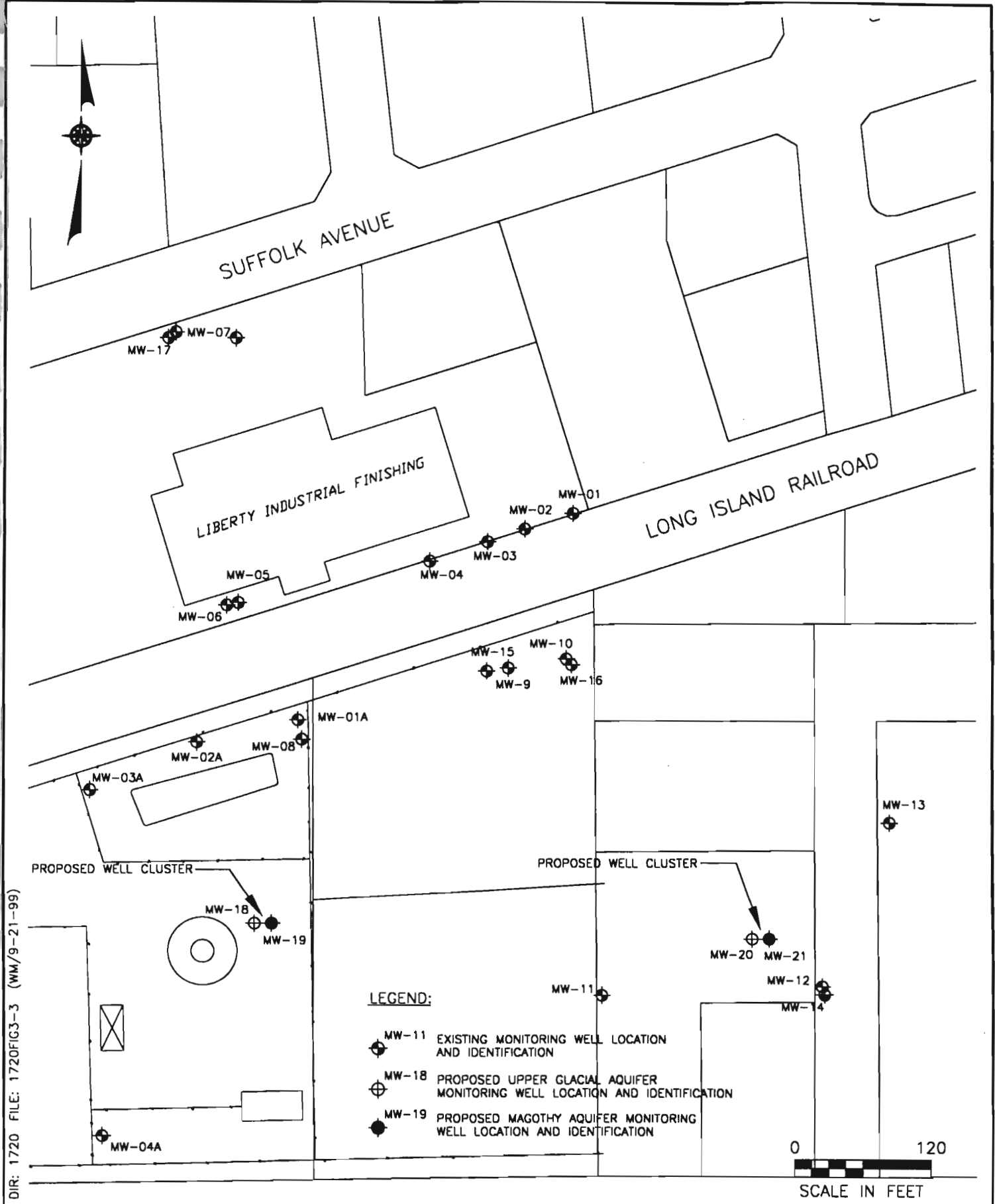
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**TOWN OF ISLIP ATHLETIC FIELD PROPOSED
SURFACE SOIL SAMPLING LOCATIONS**

FIGURE 3-2



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LIBERTY INDUSTRIAL FINISHING SITE
 BRENTWOOD, NEW YORK
EXISTING AND PROPOSED MONITORING WELL LOCATIONS

- Upon completion of the borehole, a monitoring well constructed of 2-inch diameter PVC riser pipe and ten feet of 2-inch diameter PVC well screen will be installed within the borehole. A locking protective casing will be installed on each well.
- After the wells are properly developed and have been allowed to set, one groundwater sample will be collected from each well and analyzed for metals (Superfund CLP inorganics) and cyanide (Method No. 335.2). Standard 28-day laboratory turnaround time will be provided.

The results of the analysis of the groundwater samples collected from the shallow monitoring wells will be used to determine the method of construction for the deep wells in each cluster. If contamination is detected in a shallow well, since the shallow wells are screened near the transition between the Upper Glacial aquifer and the Magothy aquifer, consideration will be given to installing the deep wells with double casing. The outer casing would be keyed into the low permeability layer between the aquifers, if present.

However, for the purpose of preparing this work plan it has been assumed that significant contamination will not be detected in the shallow wells. As a result, it is assumed that the deep wells will be constructed as follows:

- A nominal 12-inch diameter borehole will be drilled to approximately 40 feet below grade utilizing the mud rotary drilling technique. Upon reaching a depth of 40 feet, a Schedule 40, 10-inch diameter steel casing will be lowered into the borehole. Drilling fluids will be pumped from the annular space and the casing will be grouted in place.
- After letting the grout set for a minimum of 24 hours, mud rotary drilling will proceed using a nominal 8-inch diameter drill bit. Split spoon samples will be collected at 10-foot intervals beginning at the depth of completion of the corresponding shallow well for each cluster. The soil samples will be described and logged. Drilling will continue to a depth of 250 feet.
- Upon completion of the borehole, a monitoring well constructed of 4-inch diameter PVC riser pipe and ten feet of 4-inch diameter PVC well screen will be installed within the borehole. A locking protective casing will be installed on each well.

D&B will have a survey prepared to document the horizontal and vertical locations of the 4 new monitoring wells.

The following assumptions have been made in connection with this subtask:

1. As a result of the sampling conducted at the Town of Islip Athletic Field it will be determined that remediation is not required.
2. Standard laboratory turnaround time of 28 days will be provided for analysis of the surface soil, subsurface soil and groundwater samples.
3. There will be no restrictions to access for the field investigations, surveys and groundwater monitoring well installation. It has been assumed that the Department will make arrangements for access to off-site properties as necessary to perform the work.
4. Underground clearance for utilities, as required for subsurface soil sampling and groundwater monitoring well installation, will be obtained at no charge.
5. Drill cuttings and fluids from construction of the new monitoring wells will be drummed and transported and staged at the Liberty site. It is assumed that a total of 65 drums will be generated. One composite sample will be collected of the drill cuttings and fluids from each well cluster. The two (2) samples will be analyzed for TAL and TCL parameters and cyanide, for waste characterization purposes. Standard 28-day laboratory turnaround time will be provided. Drum transport and disposal costs are based on disposal of a total of 65 drums of nonhazardous (uncontaminated) soil.
6. It is assumed that development of each 2-inch diameter well will be conducted for 2 hours at a rate of 5-gallons per minute and each 4-inch well will be conducted for 2 hours at a rate of 10-gallons per minute, resulting in a total of 3,600-gallons. The development water will be discharged to a mobile storage tank, and transported to the Liberty site for disposal. The water will not be tested for disposal. It is assumed that there will be no special requirements (e.g., manifesting, labeling, reporting, etc.) in connection with transporting the wastewater from the wells to the Liberty site. If required by the transporter, a representative of D&B will sign for NYSDEC any documentation which may be required to certify that the development water is nonhazardous.
7. The results of all sample analyses will be tabulated and submitted to NYSDEC in a brief letter report. Collection and analysis of quality assurance/quality control samples and data validation services are included in the scope of work.

3.2.2 Subtask 2B - Plans and Specifications (Contract Documents)

Draft and final performance based specifications and drawings will be prepared for the purpose of competitively bidding the remedial construction in conformance with the NYSDEC Standard Contract Documents. The specifications will conform to the selected remedy in the Record of Decision and will conform with New York State laws, rules, regulations and guidelines.

The design documents will specify limits and depths of sediment removal; limits and depths of soil removal; limits and depths of concrete and asphalt removal; remediation criteria; end-point sampling requirements; fill material limits and specifications; specifications for installation of the asphalt cap; plans for providing structural support to the building during excavation; specifications for site preparation and restoration and control of noise and odor; as well as submittal requirements, including preparation of a site-specific sampling and analysis plan (SAP), quality assurance/quality control (QA/QC) plan and a site-specific health and safety plan (HASP). The specifications will indicate that construction will not begin until after August 1st, when the Town of Islip Athletic Field is not being used. In addition, the Contract Documents will contain a bid schedule; estimated quantities for each bid item; contractor qualification and experience requirements; maximum time period for remediation; and a cost estimate for the construction project.

Three (3) copies of draft plans and specifications will be provided to NYSDEC for review and comment. Supporting data, documentation and design calculations will be provided with the design documents in the form of a letter report. D&B will meet with the NYSDEC in Albany to review comments on the draft submittal and based upon the comments will provide one (1) copy of the final contract documents to NYSDEC. Upon return of this copy, D&B will submit seventy-five (75) copies of the plans and specifications to the Department for bidding. The plans and specifications will be signed and sealed by a professional engineer licensed to practice in New York.

A detailed construction cost estimate will be prepared under this task. The estimate will be prepared on a bid item basis as provided in the bid schedule in the contract documents in order to provide an estimate for each bid item. The estimated quantities on the bid schedule in the final contract document will be utilized to provide a total engineering cost estimate for the remedial construction project. A draft construction cost estimate will be submitted to NYSDEC for review and comment. Based upon the comments from the Department, D&B will revise and submit the final cost estimate to NYSDEC.

Additionally, as part of this task D&B will provide recommendations to NYSDEC for deed restrictions and institutional controls for the site (such as fencing the site perimeter, prohibiting installation of subsurface structures, etc.).

As part of this task, D&B will also verify field conditions. It should also be noted that D&B will verify that the contract documents contain specific requirements for submittal of a project schedule, MBE/WBE goals and bid forms. As stated above, the construction documents will be based upon the Department's "boiler plate."

Further, it should be noted that no soil excavation will occur at the Town of Islip Athletic Field as part of the construction project. After construction is complete and the athletic field is sampled, D&B will submit a proposal for excavation of contaminated soil at the athletic field, if necessary.

3.3 Task 3 - Citizen Participation

D&B will assist the NYSDEC in citizen participation activities such as public meetings as requested by the NYSDEC. D&B will prepare summary documents, maps, sketches and other handouts for these meetings. D&B will answer questions raised at the public meetings that concern the design of the project, construction techniques and the project scheduling. The existing mailing list of interested citizens and public officials will be used for the mailing of public meeting notices and fact sheets as needed. For cost estimating purposes, one mailing,

attendance at one meeting and preparation of presentation materials for one meeting have been assumed.

3.4 Task 4 - Pre-award Services

Under this task D&B will provide pre-award services to the Department in conjunction with the competitive bidding of the remedial construction project. The work under this task has been organized into three subtasks as described below. Advertising for bids and distribution of bid documents and addenda will be performed by the Department. D&B will support the Department in advertising the project.

3.4.1 Subtask 4A - Pre-Bid Conference

D&B will assist the Department in conducting the pre-bid conference and site visit with prospective bidders. D&B will respond to technical questions regarding the contract plans and specifications and prepare and submit to the Department meeting minutes for the pre-bid conference. It is assumed that the pre-bid conference will be held at the Liberty site in Brentwood.

3.4.2 Subtask 4B - Addenda

D&B will prepare written responses to questions raised at the pre-bid conference and any necessary addenda to the plans and specifications, for the timely transmittal by the Department to the prospective bidders. D&B will provide up to seventy (75) copies of addenda to the Department for distribution.

3.4.3 Subtask 4C - Bid Review

Following the receipt of bids, D&B will perform a technical evaluation of the bids and prepare a tabulation of the bids that will be submitted to the Department. D&B will review the

submittals required by the contract documents as part of the bids, including the health and safety plans submitted by the three lowest responsive bidders.

3.5 Task 5 - Construction Services

Construction services to be provided under this task will include the following: attendance at the pre-construction meeting (Subtask 5A), review of contractors' submittals (Subtask 5B), construction inspection (Subtask 5C), final inspections and payment reviews (Subtask 5D) and preparation of the final remediation report (Subtask 5E). A description of each subtask is presented below.

3.5.1 Subtask 5A - Preconstruction Meeting

D&B will attend a preconstruction meeting to initiate the construction phase of the project. It is assumed that the preconstruction meeting will be held at the Liberty site in Brentwood, New York. The focus of this meeting will be to finalize the contractor's schedule and formats for progress payment requests, reports, project correspondence, all other submittals and procedures for communications. Meeting minutes will be prepared and distributed to all attendees by D&B.

3.5.2 Subtask 5B - Review of Submittals

Contractor submittals will be reviewed by D&B for compliance with the requirements of the contract documents. D&B will accept, reject, or require modifications to submittals. Any proposals made by the contractor which constitute a significant change in the work will be discussed with the NYSDEC Project Manager. D&B will review shop drawings, test results, and as-built drawings submitted by the contractor for the duration of the project and will make recommendations for acceptance/rejection of these to the NYSDEC.

D&B will continually monitor the contractor's progress, review the contractor's progress schedule bi-weekly and notify the Department of the status of remedial construction. D&B will sign manifests and bills of lading for disposal of hazardous and non-hazardous waste for the NYSDEC. D&B will review and make recommendations for approval or modification of all requests for payment submitted by the contractor. Approved payment requests will be forwarded to the NYSDEC.

3.5.3 Subtask 5C - Construction Inspection

Full-time on-site inspection services will be provided during the construction. The work will be monitored for conformance with the approved design by inspecting the construction activities. During the construction, D&B will hold weekly progress meetings with the contractor to discuss project issues, performance and schedule. D&B will prepare and issue minutes of these meetings to those in attendance. The construction phase is estimated to take four (4) weeks. At the completion of the construction, a punch list inspection will be conducted to identify remaining work items to be completed followed by a final inspection to determine if all work has been completed and to verify that the requirements of the contract documents have been satisfied.

D&B will notify the contractor and the NYSDEC in the event that the contractor fails to perform the work as specified in the contract and will recommend to the NYSDEC the acceptance, disapproval or rejection of the contractor's work. D&B also will issue instructions, field orders, interpretations and clarifications of contract language to the contractor. In the event that a change order is required, D&B will negotiate, develop, and submit the change order and recommendations documented with an independently developed, detailed cost estimate and other pertinent information, as needed, to the NYSDEC. D&B will document, evaluate, and recommend a course of action for all disputes and claims with the contractor.

Complete and detailed records will be maintained as required by NYSDEC related to construction activities. The complete original records will become the property of NYSDEC at the completion of the project. These records and reports will include the following:

- Daily inspection logs and daily contractor work completion reports to be maintained in a daily log book.
- Work completed, on-site visitors and important conversations.
- Listing and use of contractor's personnel, material and equipment which allows for quantification of the contractor's production.
- Records documenting the contractor's deviation from the specifications and approved submittals including descriptions of actions and resolutions.
- Unusual circumstances (weather conditions, environmental problems, health and safety hazards encountered, etc.)
- General files including correspondence and other documentation related to the project.
- Meeting minutes with documentation on resolution of issues.
- Record of submittals.
- Construction photographs. Photographs will be taken of the work during its progress and at completion of the work. Each photograph will have attached to its backing a label containing the project name, engineer's name, site number, short description of view, photograph number and date taken. Also, photographs before work begins and other situations where disputes may arise with the public will be taken.
- Telephone logs and conversations.
- Security and health and safety incident reports.
- Weekly and monthly narrative status reports.
- Records of contractor submittals.

3.5.4 Subtask 5D - Final Inspections and Payment Reviews

D&B will regularly inspect work to verify compliance with contract requirements and to evaluate the degree of completion, as described above. D&B will also:

1. Conduct an inspection upon substantial completion of the work; and
2. Conduct a final inspection upon project completion.

During construction, the contractor will perform confirmatory soil and sediment sampling tests in the excavated areas and cleaned drainage structures to evaluate the effectiveness of the excavation and sediment removal. D&B will obtain split samples from the contractor for analysis.

Upon completion of construction of the wells and remediation of the site, D&B will collect groundwater samples from each of the four new monitoring wells. Each sample will be analyzed for TAL metals. All samples will be obtained and tested using the procedures listed in the RI/FS Work Plan.

If applicable, D&B will prepare a detailed list of unfinished work items and an estimate of the value of the work that must still be completed. D&B will participate in the final inspection to determine that all work is completed and meets the requirements of the construction contract. Once this inspection has been performed, D&B will deliver to the NYSDEC a written notice regarding the disposition of the project. When D&B determines that the project has been satisfactorily completed as specified in the contract plans and specifications, certification to this fact will be made to the NYSDEC by a licensed professional engineer employed by D&B (see Subtask 5E below).

As stated in Section 3.2.1, the post-construction surface soil sampling at the Town of Islip Athletic Field will be conducted as part of this subtask.

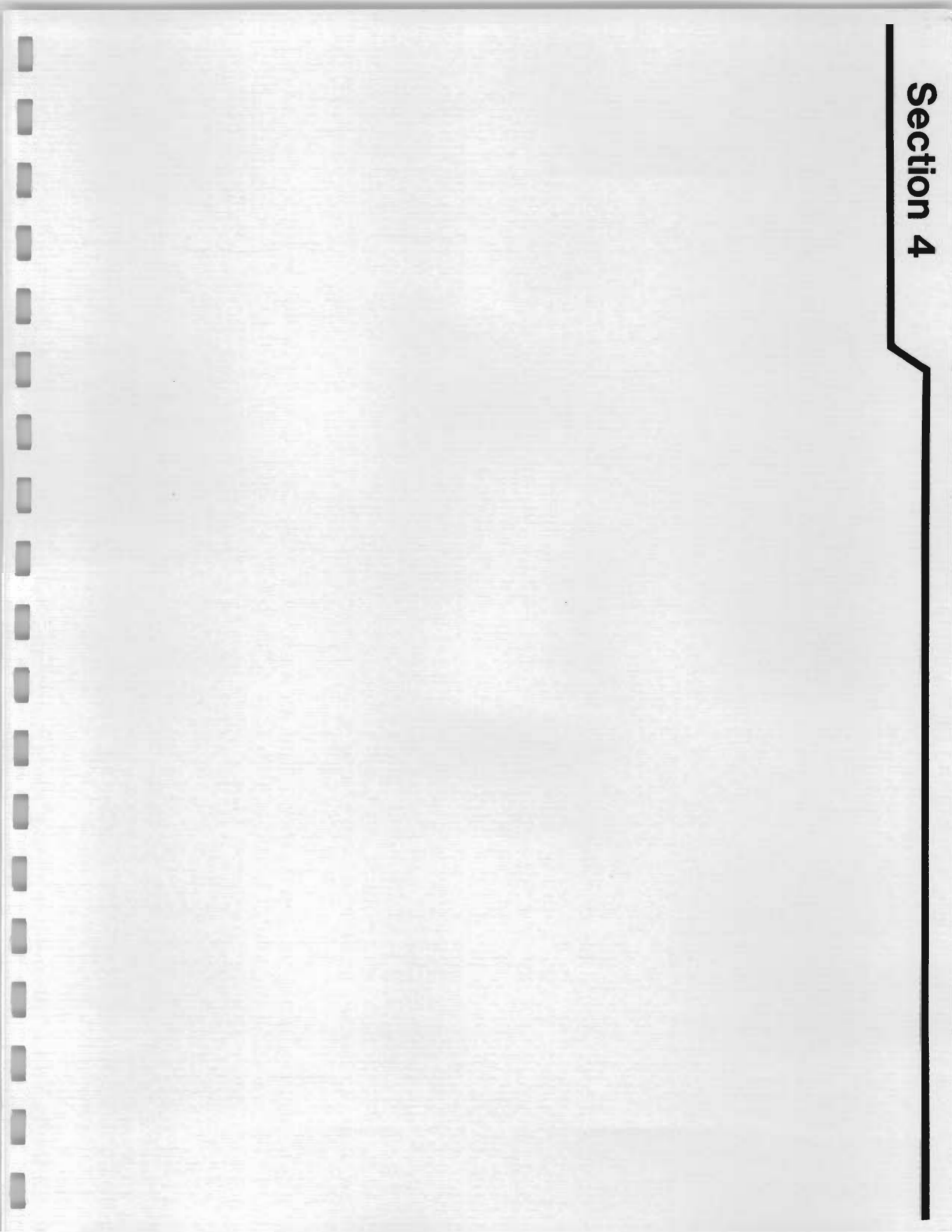
The following assumptions have been made in connection with this subtask:

1. D&B will receive a total of five (5) sediment split samples and three (3) soil split samples from the contractor. The samples will be analyzed for TAL metals and TCL semivolatile organic compounds. Forty-eight (48) hour laboratory turnaround time will be provided. Data validation services will not be required for the split samples.
2. Standard 28-day laboratory turnaround will be provided for the surface soil and groundwater monitoring well samples. It is assumed that filtering of the groundwater samples will be performed by the laboratory, if required. Collection and analysis of QA/QC samples and data validation of the surface soil and groundwater sampling results is included in the scope of work.
3. No testing of purge water will be performed and it will be disposed of at the Liberty site. It has been assumed that 2 drums will be generated from well purging and 2 hours have been budgeted for transporting and staging the drums at the site. Disposal of the empty drums has been included in the budget.
4. The results of the sampling will be presented in the Final Remediation Report.

3.5.5 Subtask 5E - Final Remediation Report

D&B will document construction results in a report that summarizes the work assignment, provides "as-built" drawings (to be prepared by the contractor), and includes the Subtask 5C oversight records and the Subtask 5D confirmatory sampling results in appendices. The report will describe all variations from the contract documents, surveys, and a summary of all waste and their disposition as provided by the contractor. The report will be sealed and signed by a professional engineer licensed to practice in New York and employed by D&B.

Section 4



4.0 PROJECT MANAGEMENT

4.1 Project Schedule and Key Milestones/Reports

A project schedule is provided in Figure 4-1. Key milestones are identified in order to monitor work progress. Specific deadlines for completion of tasks and subtasks are established throughout the project to ensure timely completion of work. The following is the list of the milestones for this project:

1. Submittal of Draft Work Plan
2. Submittal of Draft Contract Documents
3. Submittal of Draft Construction Cost Estimate
4. Submittal of Draft Final Remediation Report

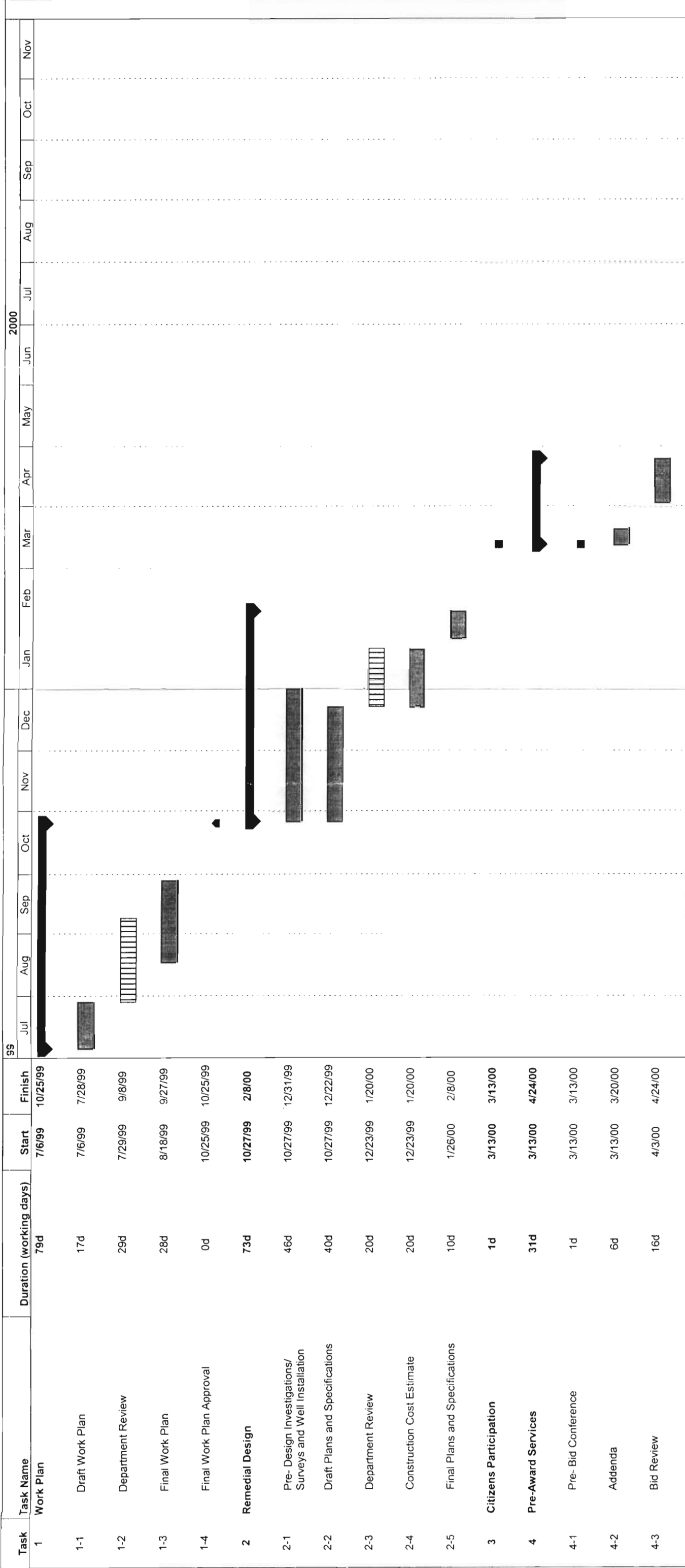
4.2 Project Management, Organization and Key Technical Personnel

Dvirka and Bartilucci Consulting Engineers will be the prime consultant responsible for performance of the interim remedial design and construction management. Due to the nature of the work, only a limited number of subcontractors can be used on the project, including:

- YEC, Inc. (MBE) - surveying
- Zebra Environmental Corp. - geoprobe
- Chemtech (MBE) - laboratory
- Uni-Tech Drilling Co., Inc. - driller
- Jamaica Blue Print (WBE) - printing/copying
- Waste Management - drum transport and disposal

Project organization illustrating both management and project responsibility functions for the project team and key personnel, is provided in Figure 4-2.

**Liberty Industrial Finishing Site
Remedial Design and Construction Inspection
Project Schedule**

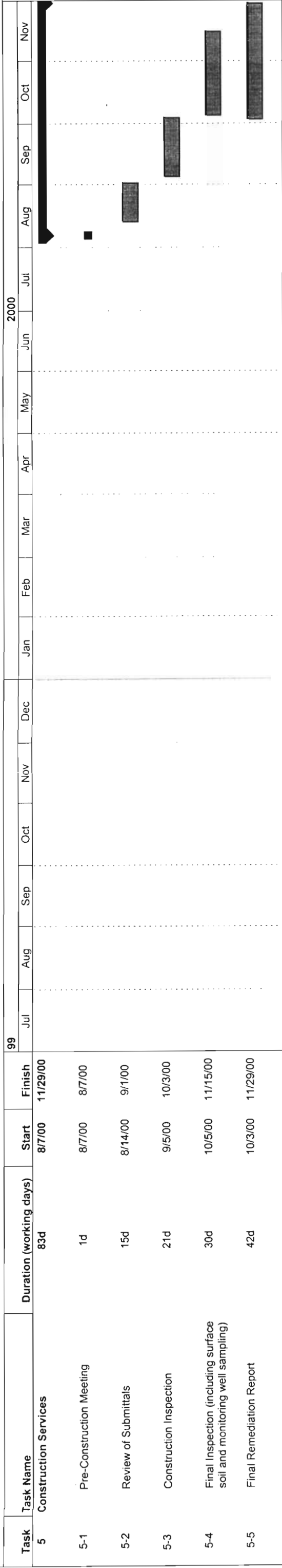


Project: Liberty Industrial Finishing Site
Remedial Design/Construction Inspection

Date: September 20, 1999

Task Department Review Meeting Approval

**Liberty Industrial Finishing Site
Remedial Design and Construction Inspection
Project Schedule (Continued)**

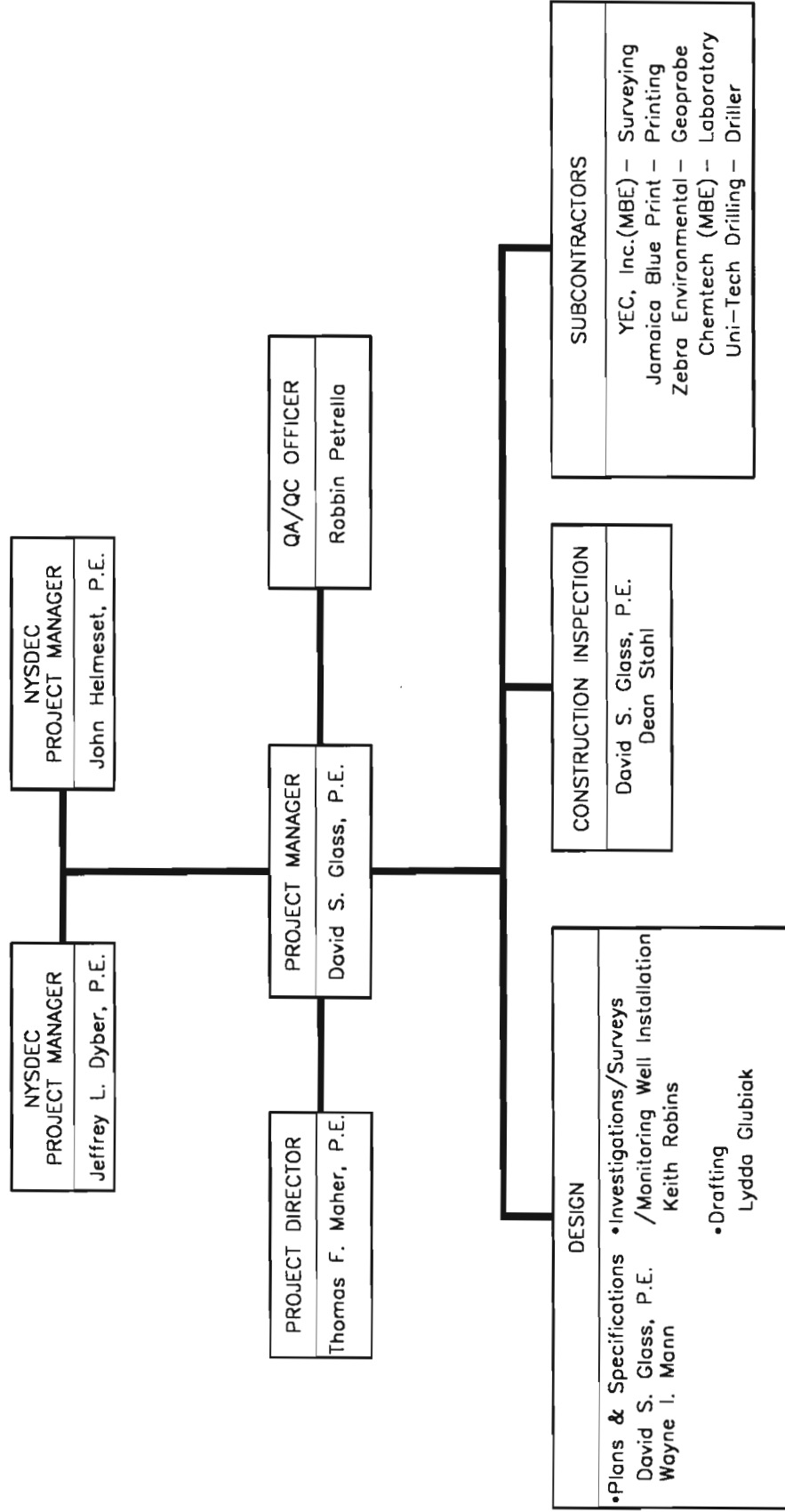


Project: Liberty Industrial Finishing Site
Remedial Design/Construction Inspection
Date: September 20, 1999

Task **Department Review** **Meeting** **Approval**

FIGURE 4-2 PROJECT TEAM ORGANIZATION CHART

FOR
REMEDIAL DESIGN AND CONSTRUCTION INSPECTION
LIBERTY INDUSTRIAL FINISHING SITE
BRENTWOOD, NEW YORK



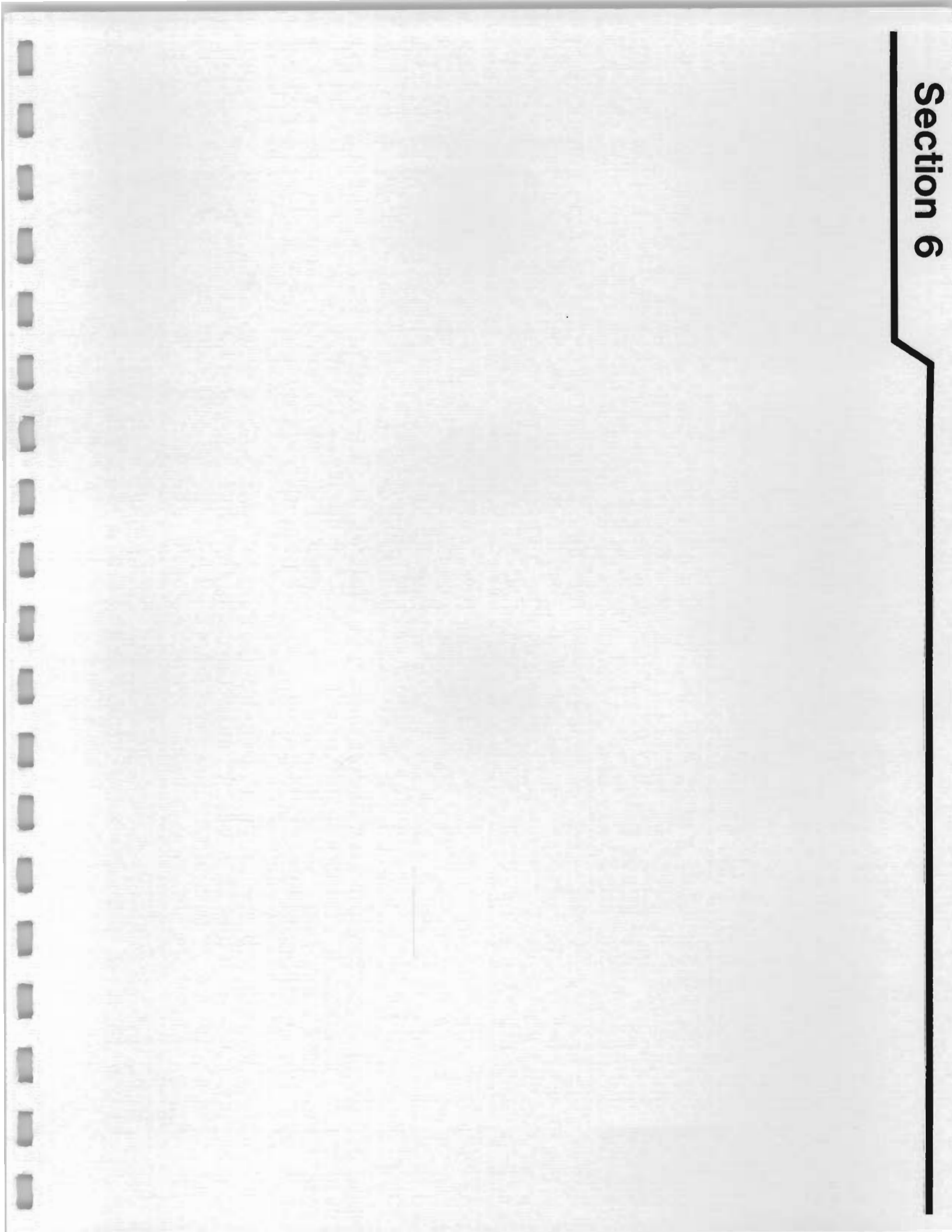
Section 5

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Section 6



6.0 SITE-SPECIFIC HEALTH AND SAFETY PLAN

The following site-specific information comprises information not included in the Generic Work Plan. The Generic Work Plan includes a Generic Health and Safety Plan. The following information will be utilized in conjunction with the Generic Health and Safety Plan. Information with regard to contaminants of concern, personal protective equipment, exposure limits and monitoring requirements are provided in the Generic Health and Safety Plan.

Site Name: Liberty Industrial Finishing Site
Address: 550 Suffolk Avenue
Brentwood, New York
Telephone: None
Dates of Field Investigations: Oct. 1999 through Nov. 1999 and November 2000
Entry Objectives: Delineate on-site soil contamination, test off-
site surface soil, test downgradient groundwater
and remediate on-site soil and sediment.

Site Organization Structure:	<u>Name</u>	<u>Phone</u>
Project Director:	<u>T. Maher</u>	<u>516-364-9890</u>
Project Manager:	<u>D. Glass</u>	<u>516-364-9890</u>
Health and Safety Officer (HSO)	<u>M. Ziskin</u>	<u>203-457-2100</u>
Field Operations Manager/Alternate HSO	<u>W. Mann</u>	<u>516-364-9890</u>
Field Team Staff:	<u>K. Robins/D. Stahl</u>	<u>516-364-9890</u>

Subcontractors:	YEC, Inc.	914-268-3203
	Uni-Tech Drilling	609-694-4200
	MITKEM Corporation	401-732-4300
	Zebra Environmental	516-371-2020

Medical Assistance:

Physician: Dr. Ronald Rosen

Address: 269-11 76th Avenue – CCC Building
Third Floor - Room 313
New Hyde Park, NY 11042

Telephone: 718-470-4435

Name of Hospital: Southside Hospital

Telephone: 516-968-3000

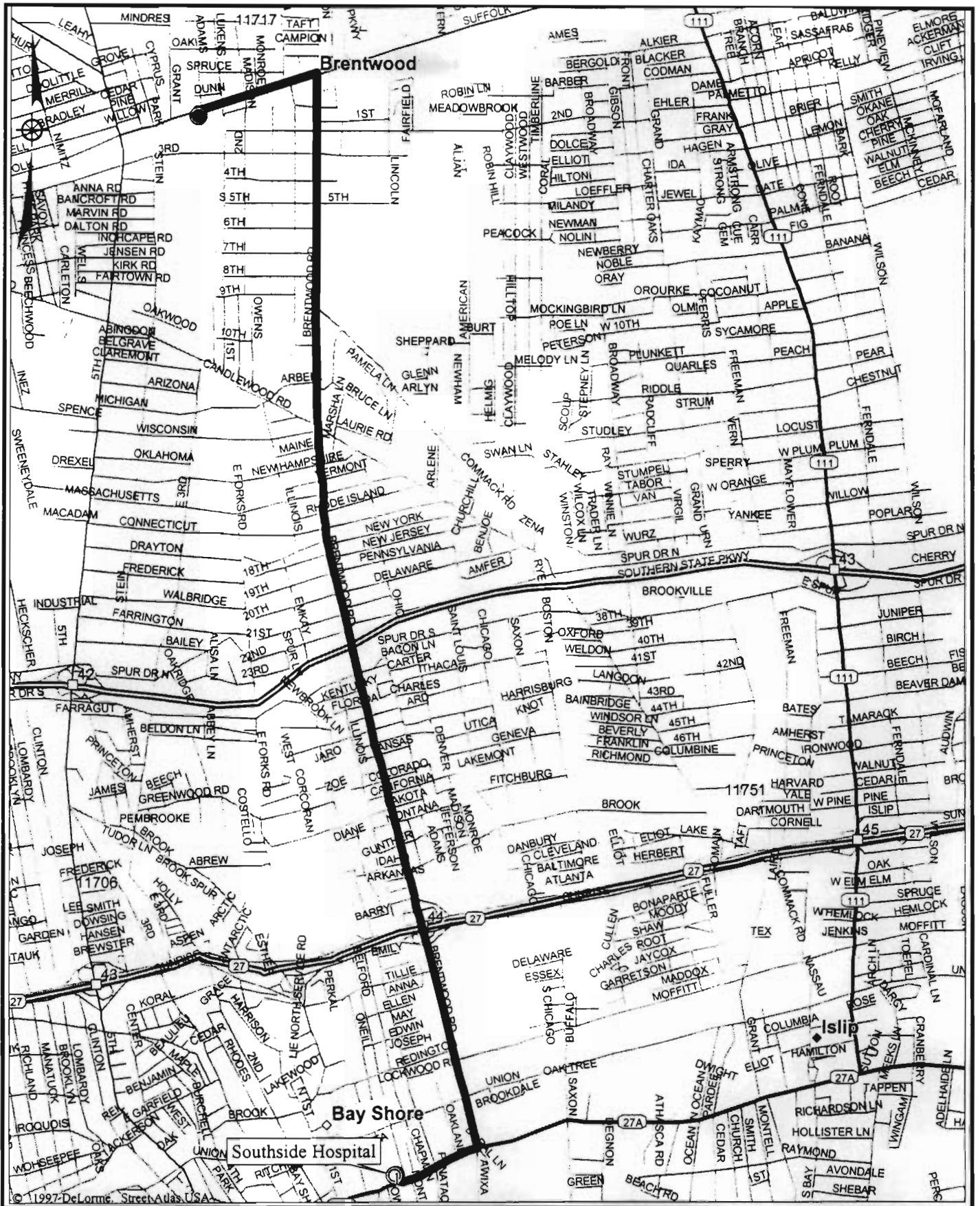
Directions: From the site, turn right and proceed east on Suffolk Avenue for about half a mile. Turn right (south) onto Brentwood Road and travel for over 6 miles (passing the South Shore Mall, the Southern State Parkway and Sunrise Highway). Turn right (west) onto East Main Street and travel five blocks (about half a mile). Southside Hospital is on right.

Emergency Telephones:

Agent/Facility	Telephone	Emergency Number
EMS - Ambulance	911	911
Police Department	---	911
Fire Department	---	911
Hospital	516-968-3000	--
Poison Control Center	516-542-2323	--

Additional site-related information (including, special hazards, site control, waste storage and disposal, personal protective equipment, decontamination area location, special engineering controls, etc.).

NOT APPLICABLE



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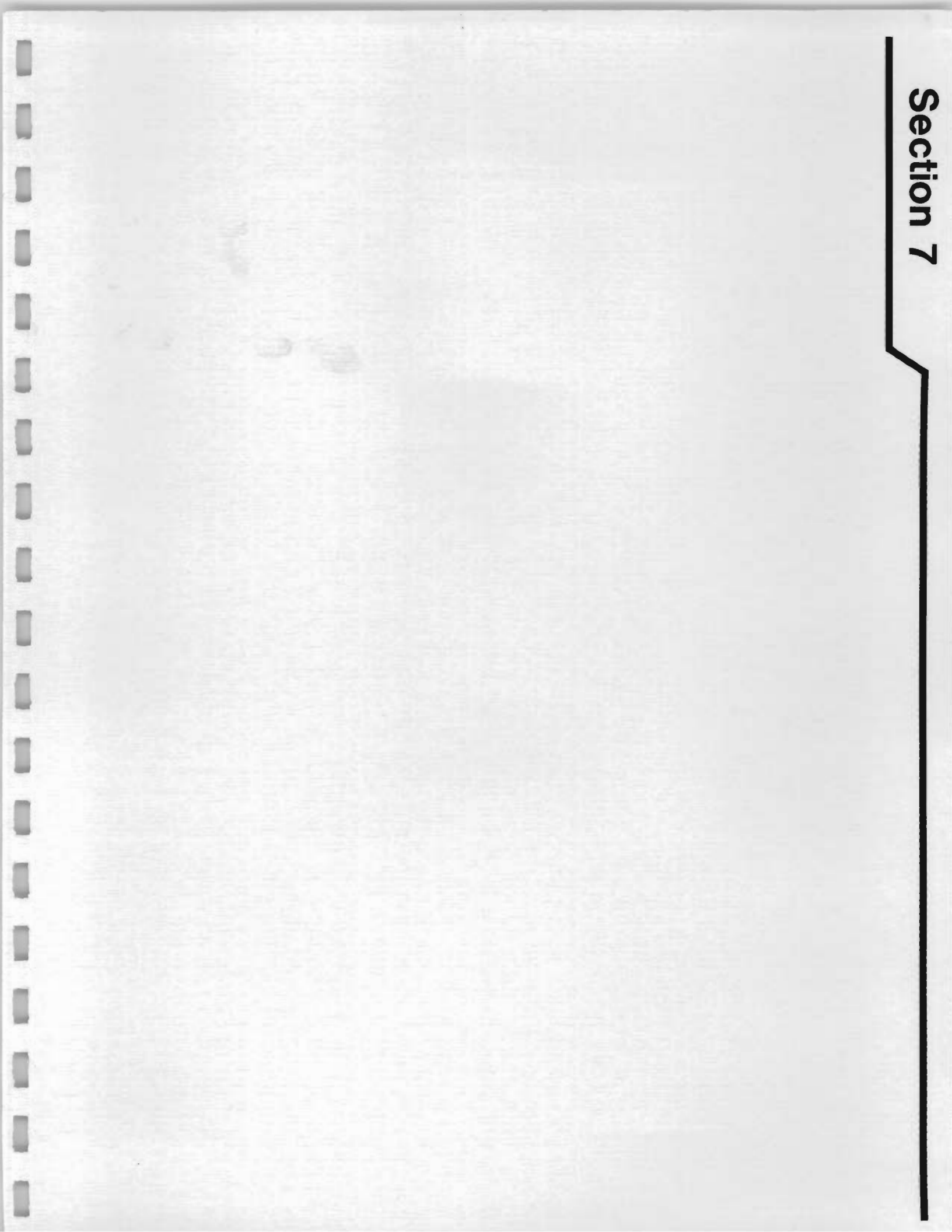
LIBERTY INDUSTRIAL FINISHING SITE
BAY SHORE, NEW YORK

db
Dvirka and Bartilucci
 CONSULTING ENGINEERS
 A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

HOSPITAL ROUTE

FIGURE 6-1

Section 7



7.0 SCHEDULE 2.11s

**Liberty Industrial Finishing Site
Work Assignment No. D003600-16
Remedial Design and Construction Inspection
Labor Estimate**

NAME/LABOR CLASSIFICATION	NSPE Level	Hourly Rate as of		Task 1 Work Plan Preparation	Task 2 - Remedial Design			Task 3 Citizens Participation	Task 4 - Preaward Services				Task 4 Total						
		July 1999	July 1 2000		Subtask 2A Predesign Invs./Surveys & Well Installation	Subtask 2B Plans and Specifications	Task 2 Total		Subtask 4A Pre-Bid Conference	Subtask 4B Addenda	Subtask 4C Bid Review	Task 4 Total							
Thomas Maher Project Director	IX	\$58.29	\$60.04	4	\$233	4	\$233	8	\$466	12	\$699	2	\$117	2	\$117	4	\$233		
Elias Pritchard Principal Engineer	VIII	\$54.61	\$56.25	2	\$109	0	\$0	40	\$2,184	40	\$2,184	0	\$0	2	\$109	4	\$218		
David Glass Senior Engineer	VII	\$47.47	\$48.89	56	\$2,658	14	\$665	40	\$1,899	54	\$2,563	4	\$190	4	\$190	12	\$570		
Robert O'Connor Senior Designer	V	\$32.14	\$33.10	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0		
Robbin Petrella Senior Scientist	V	\$32.14	\$33.10	8	\$257	14	\$450	8	\$257	22	\$707	0	\$0	2	\$64	4	\$129		
Richard Avanzini Associate Technician	V	\$32.14	\$33.10	2	\$64	0	\$0	4	\$129	4	\$129	8	\$257	0	\$0	0	\$0		
Wayne Mann Geologist	IV	\$27.14	\$27.95	32	\$868	264	\$7,165	120	\$3,257	384	\$10,422	16	\$434	16	\$434	24	\$651		
Keith Robins Geologist	IV	\$27.14	\$27.95	0	\$0	0	\$0	8	\$217	8	\$217	0	\$0	0	\$0	0	\$0		
Dean Stahl Geologist	III	\$24.63	\$25.37	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0		
Lytida Gubjak Drafter	II	\$21.38	\$22.02	8	\$171	16	\$342	80	\$1,710	96	\$2,052	16	\$342	0	\$0	16	\$342		
Ginger Passalacqua Administrative Assistant	II	\$21.38	\$22.02	16	\$342	8	\$171	8	\$171	16	\$342	4	\$86	2	\$43	2	\$43		
Allyson Mainz Word Processor	II	\$21.38	\$22.02	16	\$342	8	\$171	40	\$855	48	\$1,026	4	\$86	8	\$171	2	\$43		
Melissa Reinell Engineering Technician	I	\$17.05	\$17.56	16	\$273	16	\$273	16	\$273	32	\$546	24	\$408	0	\$0	8	\$136		
Labor Subtotal (Direct Salary)				160	\$5,319	344	\$9,470	372	\$11,419	716	\$20,888	78	\$1,920	30	\$838	46	\$1,353	128	\$3,681
Indirect Cost (1.583)					\$8,419		\$14,990		\$18,076		\$33,066		\$3,040		\$1,326		\$2,142		\$5,796
Profit (0.084)					\$1,154		\$2,055		\$2,478		\$4,532		\$417		\$182		\$294		\$794
TOTAL				160	\$14,892	344	\$26,515	372	\$31,972	716	\$58,486	78	\$5,376	30	\$2,346	46	\$3,789	128	\$10,251

**Liberty Industrial Finishing Site
Work Assignment No. D003600-16
Remedial Design and Construction Inspection
Labor Estimate (Continued)**

NAME/LABOR CLASSIFICATION	NSPE Level	Hourly Rate as of		Task 5 - Construction Services										Total Remedial Design & Construction Insp (hours)	Total (\$)		
		July 1 1999	July 1 2000	Subtask 5A Preconstruction Meeting	Subtask 5B Review of Submittals	Subtask 5C Construction Inspection ¹	Subtask 5D Final Inspections & Payment Reviews	Subtask 5E Final Remediation Report	Task 5 Total								
Thomas Maher Project Director	IX	\$58.29	\$60.04	0	\$0	2	\$120	2	\$120	2	\$120	4	\$240	10	\$600	32	\$1,883
Elias Pritchard Principal Engineer	VIII	\$54.61	\$56.25	0	\$0	4	\$225	8	\$450	2	\$113	0	\$0	14	\$788	60	\$3,300
David Glass Senior Engineer	VII	\$47.47	\$48.89	4	\$196	8	\$391	16	\$782	8	\$391	8	\$391	44	\$2,151	170	\$8,132
Robert O'Connor Senior Designer	V	\$32.14	\$33.10	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Robbin Petrella Senior Scientist	V	\$32.14	\$33.10	0	\$0	4	\$132	0	\$0	8	\$265	0	\$0	12	\$397	46	\$1,490
Richard Avanzini Associate Technician	V	\$32.14	\$33.10	0	\$0	0	\$0	0	\$0	0	\$0	4	\$132	4	\$132	18	\$582
Wayne Mann Geologist	IV	\$27.14	\$27.95	4	\$112	40	\$1,118	0	\$0	48	\$1,342	40	\$1,118	132	\$3,689	620	\$16,934
Keith Robins Geologist	IV	\$27.14	\$27.95	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	8	\$217
Dean Shahi Geologist	III	\$24.63	\$25.37	12	\$304	0	\$0	200	\$5,074	16	\$406	0	\$0	228	\$5,784	228	\$5,784
Lydda Glubiak Drafter	II	\$21.38	\$22.02	0	\$0	0	\$0	0	\$0	0	\$0	24	\$529	24	\$529	160	\$3,436
Ginger Passalacqua Administrative Assistant	II	\$21.38	\$22.02	2	\$44	2	\$44	8	\$176	4	\$88	8	\$176	24	\$529	66	\$1,426
Allyson Marz Word Processor	II	\$21.38	\$22.02	4	\$88	4	\$88	8	\$176	4	\$88	40	\$881	60	\$1,321	146	\$3,160
Melissa Reindl Engineering Technician	I	\$17.05	\$17.56	0	\$0	0	\$0	24	\$421	16	\$281	24	\$421	64	\$1,124	144	\$2,488
Labor Subtotal (Direct Salary)				26	\$744	64	\$2,119	266	\$7,200	108	\$3,093	152	\$3,889	616	\$17,044	1698	\$48,833
Indirect Cost (1.583)					\$1,178		\$3,354		\$11,397		\$4,897		\$6,156		\$26,981		\$77,302
Profit (0.084)					\$161		\$460		\$1,562		\$671		\$844		\$3,698		\$10,595
TOTAL				26	\$2,083	64	\$5,932	266	\$20,160	108	\$8,681	152	\$10,888	616	\$47,724	1698	\$136,730

¹ Based on a 4 week construction period.

SCHEDULE 2.11 (a)Summary of Work Assignment Price
Liberty Industrial Finishing Site

Work Assignment Number: D003600-16

1. Direct Salary Costs (Schedules 2.10 (a) and 2.11(b))	\$48,833
2. Indirect Costs (Schedule 2.10 (g))	\$77,302
3. Direct Non-Salary Costs (Schedules 2.11 (c) and (d))	\$4,482

Subcontract Costs

Cost-Plus-Fixed-Fee Subcontracts (Schedules 2.11(e))

<u>Name of Subcontractor</u>	<u>Services To Be Performed</u>	<u>Subcontract Price</u>
1. YEC, Inc.	Survey and Mapping	\$14,880
4. Total Cost-Plus-Fixed-Fee Subcontracts		\$14,880

Unit Price Subcontracts (Schedules 2.11(f))

<u>Name of Subcontractor</u>	<u>Services To Be Performed</u>	<u>Subcontract Price</u>
1. Jamaica Blue Print	Printing Services	\$1,455
2. Uni-Tech Drilling Co., Inc.	Drilling Services	\$54,111
3. Zebra Environmental Corp.	Geoprobe	\$2,737
4. Chemtech	Analytical Laboratory Services	\$15,874
5. Waste Management, Inc.	Drum Transport and Disposal	\$4,550
5. Total Unit Price Subcontracts		\$78,726
6. Subcontract Management Fee		\$2,449
7. Total Subcontract Costs (lines 4 + 5 + 6)		\$96,056
8. Fixed Fee (Schedule 2.10 (h))		\$10,595
9. Total Work Assignment Price (lines 1 + 2 + 3 + 7 + 8)		\$237,267

SCHEDULE 2.11 (b)1

SUMMARY

Liberty Industrial Finishing Site

Work Assignment Number: D003600-16

NSPE	IX	VIII	VII	VI	V	IV	III	II	I	TOTAL HOURS
as of July 1, 1999	\$58.29	\$54.61	\$47.47	\$38.23	\$32.14	\$27.14	\$24.63	\$21.38	\$17.05	
as of July 1, 2000	\$60.04	\$56.25	\$48.89	\$39.38	\$33.10	\$27.95	\$25.37	\$22.02	\$17.56	
Task 1	4	2	56	0	10	32	0	40	16	160
Task 2	12	40	54	0	26	392	0	160	32	716
Task 3	2	0	4	0	8	16	0	24	24	78
Task 4	4	4	12	0	4	56	0	40	8	128
Task 5	10	14	44	0	16	132	228	108	64	616
Subtotal 1999 Hours	22	46	126	0	48	496	0	264	80	1082
Subtotal 2000 Hours	10	14	44	0	16	132	228	108	64	616
Total Hours	32	60	170	0	64	628	228	372	144	1698
Total Direct Labor Cost	\$1,883	\$3,300	\$8,132	\$0	\$2,072	\$17,151	\$5,784	\$8,023	\$2,488	\$48,833

SCHEDULE 2.11 (c)
DIRECT NON-SALARY COSTS
 Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16

ITEM	MAXIMUM REIMBURSEMENT RATE	UNIT	ESTIMATED NUMBER OF UNITS	TOTAL ESTIMATED COSTS
OUTSIDE SERVICES				
Sample Shipping	\$75.00	package	14	\$1,050.00
Express Mail	\$40.00	package	13	\$520.00
Photographs/Slides	\$80.00	package	10	\$800.00
	\$100.00	Lump Sum	1	\$100.00
TRAVEL				
Transportation (Personal Car)	\$0.310	mile	2490	\$771.90
Tolls	\$20.00	trip	2	\$40.00
Van Rental	\$330.00	week	2	\$660.00
Gas	\$20.00	week	2	\$40.00
TOTAL DIRECT NON-SALARY COSTS				\$3,981.90

Schedule 2.11 (c)J
 Direct Non-Salary Costs
 Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16

Item	Reimbursement* Rate	Est. No. of Units (Task 1)		Total Cost (Task 2)		Est. No. of Units (Task 3)		Total Cost (Task 3)		Est. No. of Units (Task 4)		Total Cost (Task 4)		Est. No. of Units (Task 5)		Total Cost (Task 5)		Total Estimated No. of Units	Total Estimated Cost		
		Est. No. of Units	Cost	Est. No. of Units	Cost	Est. No. of Units	Cost	Est. No. of Units	Cost	Est. No. of Units	Cost	Est. No. of Units	Cost	Est. No. of Units	Cost						
A. Miscellaneous (Travel)																					
1. Transportation (Personal Car)	\$0.310 /mile	390	\$120.90	1020	\$316.20	60	\$18.60	30	\$9.30	990	\$306.90	2490	\$771.90								
2. Tolls (Personal Car)	\$20.00 /trip	1	\$20.00	1	\$20.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	2	\$40.00
3. Van Rental	\$330.00 /week	0	\$0.00	1	\$330.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	1	\$330.00	0	\$0.00	2	\$660.00
4. Gas	\$20.00 /week	0	\$0.00	1	\$20.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	1	\$20.00	0	\$0.00	2	\$40.00
Subtotal (Travel)			\$140.90		\$686.20		\$18.60		\$9.30		\$656.90		\$1,511.90								
B. Miscellaneous (Expenses)																					
1. Sample Shipping	\$75.00 /package	0	\$0.00	8	\$600.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	6	\$450.00	0	\$0.00	14	\$1,050.00
2. Express Mail	\$40.00 /package	3	\$120.00	5	\$200.00	1	\$40.00	2	\$80.00	2	\$80.00	13	\$520.00	2	\$80.00	0	\$0.00	0	\$0.00	10	\$800.00
3. Photographs/Slides	\$80.00 /package	0	\$0.00	10	\$800.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	10	\$800.00
	\$100.00 Lump Sum	0	\$0.00	0	\$0.00	1	\$100.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	1	\$100.00
Subtotal (Misc. Expenses)			\$120.00		\$1,600.00		\$140.00		\$80.00		\$530.00		\$2,470.00								
TOTAL			\$260.90		\$2,286.20		\$158.60		\$89.30		\$1,186.90		\$3,981.90								

• See Schedule 2.10(b) for rates.

SCHEDULE 2.11 (d)1

EQUIPMENT PURCHASED UNDER THE CONTRACT
 Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16

ITEM	ESTIMATED PURCHASE PRICE	O&M RATE (\$/per month)	TERM OF USAGE (MONTHS)	ESTIMATED USAGE COST (COL. 2 + [3X4])
None				
			TOTAL	\$0

SCHEDULE 2.11 (d)2

EQUIPMENT

CONSULTANT OWNED

Liberty Industrial Finishing Site

Work Assignment Number: D003600-16

ITEM	PURCHASE PRICE X 85%	USAGE RATE (\$/day)	CAPITAL RECOVERY RATE (\$/Unit of Time)	O & M RATE (\$/Unit of Time)	ESTIMATED USAGE (days)	ESTIMATED USAGE COST (Col. 3x6)
None						
					TOTAL	\$0

Notes:

Usage Rate = Capital Recovery Rate + O&M rate

The maximum usage rate for an item of equipment reverts to the O&M rate when the total usage reimbursement exceed 85% of the purchase price.

SCHEDULE 2.11 (d)3

EQUIPMENT

VENDOR RENTED

Liberty Industrial Finishing Site

Work Assignment Number: D003600-16

ITEM	MAXIMUM REIMBURSEMENT RATE	TIME PERIOD	ESTIMATED USAGE (period of time)	ESTIMATED USAGE COST (Col. 2 X 3)
None				
			Total	\$0

SCHEDULE 2.11 (d)4

EXPENDABLE SUPPLIES

Liberty Industrial Finishing Site

Work Assignment Number: D003600-16

ITEM	ESTIMATED QUANTITY	UNITS	UNIT COST	TOTAL BUDGETED COST (COL. 2 X 3)
None			TOTAL	\$0

SCHEDULE 2.11 (d)5

CONSUMABLE SUPPLIES

Liberty Industrial Finishing Site

Work Assignment Number: D003600-16

ITEM	ESTIMATED QUANTITY	UNIT COST	TOTAL BUDGETED COST (COL. 2 X 3)
Miscellaneous Supplies	1	\$500.00 Lump sum	\$500.00
TOTAL			\$500.00

Schedule 2.11 (e)
 Cost Plus Fixed-Fee Subcontracts

Liberty Industrial Finishing Site

August 3, 1999

<u>NAME OF SUBCONTRACTOR</u>		<u>SERVICES TO BE PERFORMED</u>				<u>SUBCONTRACT PRICE</u>	
YEC, INC.		Property Boundary & Well Location Survey & CADD Mapping				\$14,879.91	
A. Direct Salary Costs							
<u>Professional Responsibility Level</u>	<u>Labor Classi- fication</u>	<u>Average Reimbursement Rate (\$/Hr.)</u>		<u>Maximum Reimbursement Rate (\$/Hr.)</u>		<u>Estimated Number of Hours</u>	<u>Total Estimated Direct Salary Cost (\$)</u>
		1999		1999			
Principal	VIII	1999	47.69	1999	51.51	8	381.52
Senior Geologist/Scientist/ Engineer/ Licensed Surveyor	V	1999	31.53	1999	34.68	100	3,153.00
Staff Geologist/ Scientist/Engineer	IV	1999	27.40	1999	30.14	0	0.00
Staff Geologist/ Scientist/Engineer/CAD Operator	III	1999	23.78	1999	26.40	32	760.96
Senior Technician/Staff Engineer/Scientist/Geologist	II	1999	17.60	1999	19.71	16	281.60
Technician/Draftsperson	I	1999	15.94	1999	17.85	55	876.70
						Total Direct Salary Costs:	5,453.78
B. Indirect Costs - 117% of direct salary cost							
						Indirect Costs:	6,380.92
C. Maximum Reimbursement Rates for Direct Non-Salary Costs:							
<u>Item</u>	<u>Maximum Reimbursement Rate</u>		<u>Estimated No. of Units</u>				
Per Diem	0.00 /day		0 days		0.00		
Mileage	0.31 /mile		1000 miles		310.00		
Tolls	11.00 /trip		5 trips		55.00		
Survey Equipment Rental	65.00 day		5 days		325.00		
CAD Equipment	15.00 hour		32 hours		480.00		
Tele./Postage/Repro./Field supplies	100.00 lump sum				100.00		
						Total Direct Non Salary Costs:	1,270.00
D. Fixed Fee (15% of Total Direct and Indirect Salary Costs)							
						Fixed Fee:	1,775.21

SCHEDULE 2.11 (f)1
UNIT PRICE SUBCONTRACTS
 Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MANAGEMENT FEE
Jamaica Blue Print	Reproduction Services	\$1,455.00	\$0.00
	Maximum Reimbursement Rate	Estimated No. of Units	Total Estimated Costs
Photocopying of Documents	\$0.034 per copy	37,500	\$1,275.00
Printing of Drawings	\$0.30 per drawing	600	<u>\$180.00</u>
	Total		\$1,455.00

DRILLING SERVICES
SCHEDULE 2.11 (f)2
UNIT PRICE SUBCONTRACTS
 Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACTOR PRICE	MANAGEMENT FEE
Uni-Tech Drilling Inc.	Drilling Services	\$54,111.00	\$1,893.89
	<u>Item</u>	<u>Unit Rate</u>	<u>Estimated No. of Units</u>
			<u>Total Estimated Costs</u>
1. Mobilization, Construction and Removal of Decon Pad, Setup and Demobilization			
A. Site Mob and Demob	\$0.95 /Mile	1600 Miles	\$1,520.00
B. Construction and Removal of Decon Pad	\$425.00	2 Pads	\$850.00
C. Site Setup and Removal	\$150.00	4 Sites	\$600.00
D. Well Set-up	\$75.00 /Per well	4 Wells	\$300.00
2. Drilling Techniques			
2D. Mud Rotary			
(1) 0-50 Feet in Depth			
B. 6 inch Diameter Bit	\$14.00 /Ft	20 Ft.	\$280.00
C. 8 inch Diameter Bit	\$16.00 /Ft	20 Ft.	\$320.00
D. 12 inch Diameter Bit	\$30.00 /Ft	160 Ft.	\$4,800.00
(2) 50-100 Feet in Depth			
B. 6 inch Diameter Bit	\$14.00 /Ft	100 Ft.	\$1,400.00
C. 8 inch Diameter Bit	\$16.00 /Ft	100 Ft.	\$1,600.00
(3) 100-200 Feet in Depth			
B. 6 inch Diameter Bit	\$16.00 /Ft	100 Ft.	\$1,600.00
C. 8 inch Diameter Bit	\$18.00 /Ft	200 Ft.	\$3,600.00
(4) Greater than 200 Feet in Depth			
C. 8 inch Diameter Bit	\$18.00 /Ft	100 Ft.	\$1,800.00
6. Borehole Sampling			
6A. Split Spoon Sampling			
(3) 100-200 Feet in Depth			
A. 2 inch OD	\$20.00 /Sample	30 Samples	\$600.00
(4) Greater than 200 Feet in Depth			
A. 2 inch OD	\$25.00 /Sample	10 Samples	\$250.00
7. Well Screen			
7A. PVC			
(6) PVC Well Screen 2.0 Inch ID # 10 Slot Schedule 40			
B. 10 Foot	\$11.50 /Ft	20 Ft.	\$230.00
(7) PVC Well Screen 4.0 Inch ID # 10 Slot Schedule 40			
B. 10 Foot	\$21.50 /Ft	20 Ft.	\$430.00
8. Well Riser			
8A. PVC			
(1) PVC Well Riser, Schedule 40			
B. 2.0 inch ID	\$5.00 /Ft	290 Ft.	\$1,450.00
C. 4.0 inch ID	\$8.00 /Ft	490 Ft.	\$3,920.00
9. Well Screen Sandpack Material	\$10.00 /Bag	25 Bags	\$250.00
10. Bentonite			
A. Pellets	\$65.00 /5 Gal Pail	6 Pails	\$390.00
B. Powder	\$10.00 /50 lb Bag	23 Bags	\$230.00
11. Grout			
A. Portland Cement - Type II	\$12.00 /94lb Bag	310 Bags	\$3,720.00
12. Installation of Protective Casings			
12A. Flush Mount			
(1) Flush Mount			
C. 8.0 inch ID	\$300.00 /Casing	4 Casings	\$1,200.00
12C. Keyed Alike Locks	\$12.00 /Lock	4 Locks	\$48.00
13. Containerization of Drilling Material and Staging on Pallets			
A. Provide Clean Empty DOT Approved 55-Gallon Drums with Seals, Bungs and Lids.	\$45.00 /Drum	65 Drums	\$2,925.00
B. Filling, Moving, Staging, 55 Gallon Drums on-site on Pallets	\$45.00 /Drum	65 Drums	\$2,925.00

SCHEDULE 2.11 (f) 4
 UNIT PRICE SUBCONTRACTS
 Liberty Industrial Finishing Site
 Work Assignment No. D003600-16

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MANAGEMENT FEE
ChemTech	Chemical Sample Analysis	\$15,874	\$556
	Maximum Reimbursement Rate	Estimated No. of Units	Total Estimated Costs
<u>Groundwater</u>			
TAL Metals	Superfund CLP Inorganics	\$118 /sample	6
Cyanide	335.2	\$25 /sample	6
<u>Subsurface soil</u>			
TAL Metals	Superfund CLP Inorganics	\$118 /sample	20
TCLP Metals	1311/6010	\$140 /sample	20
<u>Surface soil</u>			
TAL Metals	Superfund CLP Inorganics	\$118 /sample	24
<u>Drill Cuttings/Fluids</u>			
Volatile Organics	95-1	\$118 /sample	2
Semivolatile Organics	95-2	\$225 /sample	2
Pesticide/PCBs	95-3	\$125 /sample	2
TAL Metals	Superfund CLP Inorganics	\$118 /sample	2
Cyanide	335.2	\$25 /sample	2
<u>Sediment (Splits)</u>			
Semivolatile Organics	95-2	\$371 /sample*	5
TAL Metals	Superfund CLP Inorganics	\$195 /sample*	5
<u>Soil (Splits)</u>			
Semivolatile Organics	95-2	\$371 /sample*	3
TAL Metals	Superfund CLP Inorganics	\$195 /sample*	3
<u>QA/QC Samples</u>			
<u>Groundwater</u>			
Matrix Spike			
TAL Metals	Superfund CLP Inorganics	\$118 /sample	1
Cyanide	335.2	\$25 /sample	1
Matrix Spike Duplicate			
TAL Metals	Superfund CLP Inorganics	\$118 /sample	1
Cyanide	335.2	\$25 /sample	1
<u>Soil</u>			
Matrix Spike			
TAL Metals	Superfund CLP Inorganics	\$118 /sample	3
TCLP Metals	1311/6010	\$140 /sample	1
Matrix Spike Duplicate			
TAL Metals	Superfund CLP Inorganics	\$118 /sample	3
TCLP Metals	1311/6010	\$140 /sample	1
SUBTOTAL			\$15,874
SUBCONTRACT MANAGEMENT FEE			\$556
TOTAL			\$16,429

*:Cost includes surcharge for 48 hour turn-around

SCHEDULE 2.11 (f)5
UNIT PRICE SUBCONTRACTS
 Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MANAGEMENT FEE
Waste Management, Inc.	Drum Removal and Disposal	\$4,550.00	\$0.00
	Maximum Reimbursement Rate	Estimated No. of Units	Total Estimated Costs
1. Transportation and disposal of drums			
a. Soil-drill cuttings	\$70.00 /drum	65 drums	\$4,550.00
		SUBTOTAL	\$4,550.00
		SUBCONTRACT MANAGEMENT FEE	\$0.00
		TOTAL	\$4,550.00

**SCHEDULE 2.11 (g)
MONTHLY COST CONTROL REPORT
SUMMARY**

Project Name: Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16
 Task No./Name: All Tasks
 Complete: 0.00%

Date Prepared:
 Billing Period:
 Invoice No.:

Expenditure Category	MONTHLY COST CONTROL REPORT SUMMARY OF FISCAL INFORMATION							
	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	48,833	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	77,302	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	126,135	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	812	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	3,670	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	4,482	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	96,056	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	226,672	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	10,595	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	237,267	0.00

Project Manager (Engineer) _____ Date _____

Engineer: Dvirka & Bartilucci
 Work Assignment Number: D003600-16
 Project Name: Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16

Date Prepared:
 Billing Period:
 Invoice No.:

SCHEDULE 2.11(g) SUPPLEMENTAL
MONTHLY COST CONTROL REPORT
SUBCONTRACTS

Subcontract Name	Subcontract Costs Claimed this Application Including Resubmittals	Subcontract Costs Approved for Payment on Previous Application	Total Subcontract Costs to Date (A plus B)	Subcontract Approved Budget		Management Fee		Total Costs to Date	
				Budget	Budget	Fee	Paid	Costs to Date	Date
1. YEC, Inc. (MBE)	0.00	0.00	0.00	14,879.91	0.00	0.00	0.00	0.00	0.00
2. Jamaica Blue Print (WBE)	0.00	0.00	0.00	1,455.00	0.00	0.00	0.00	0.00	0.00
3. Uni-Tech Drilling Co., Inc.	0.00	0.00	0.00	54,111.00	1,893.89	0.00	0.00	0.00	0.00
4. Zebra Environmental Corp.	0.00	0.00	0.00	2,736.60	0.00	0.00	0.00	0.00	0.00
5. Chemtech (MBE)	0.00	0.00	0.00	15,873.60	555.58	0.00	0.00	0.00	0.00
6. Waste Management, Inc.	0.00	0.00	0.00	4,550.00	0.00	0.00	0.00	0.00	0.00
Total				93,606.11	2,449.46				

SCHEDULE 2.11 (g)

Project Name: Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16
 Task No./Name: 1/ Work Plan Preparation
 Complete: 0.00%

Date Prepared:
 Billing Period:
 Invoice No.:

MONTHLY COST CONTROL REPORT SUMMARY OF FISCAL INFORMATION								
Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	5,319	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	8,419	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	13,738	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	141	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	120	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	261	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	13,999	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	1,154	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	15,153	0.00

Project Manager (Engineer) _____ Date _____

Project Name: Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16
 Task No./Name: 2/Remedial Design
 Complete: 0.00%

SCHEDULE 2.11(g)

Date Prepared:
 Billing Period:
 Invoice No.:

MONTHLY COST CONTROL REPORT SUMMARY OF FISCAL INFORMATION								
Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	20,888	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	33,066	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	53,954	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	336	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	2,450	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	2,786	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	87,561	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	144,301	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	4,532	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	148,833	0.00

Project Manager (Engineer) _____ Date _____

Project Name: Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16
 Task No./Name: 3/ Citizens Participation
 Complete: 0.00%

SCHEDULE 2.11(g)

Date Prepared:
 Billing Period:
 Invoice No.:

Expenditure Category	MONTHLY COST CONTROL REPORT SUMMARY OF FISCAL INFORMATION							
	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	1,920	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	3,040	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	4,960	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	19	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	140	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	159	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	5,118	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	417	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	5,535	0.00

Project Manager (Engineer) _____ Date _____

Project Name: Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16
 Task No./Name: 4/Pre-award Services
 Complete: 0.00%

SCHEDULE 2.11(g)

Date Prepared:
 Billing Period:
 Invoice No.:

MONTHLY COST CONTROL REPORT SUMMARY OF FISCAL INFORMATION								
Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	3,661	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	5,796	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	9,457	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	9	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	80	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	89	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	1,455	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	11,001	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	794	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	11,796	0.00

Project Manager (Engineer) _____ Date _____

Project Name: Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16
 Task No./Name: 5/Construction Services
 Complete: 0.00%

SCHEDULE 2.11(g)

Date Prepared:
 Billing Period:
 Invoice No.:

Expenditure Category	MONTHLY COST CONTROL REPORT SUMMARY OF FISCAL INFORMATION							
	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	17,044	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	26,981	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	44,026	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	307	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	880	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	1,187	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	7,040	0.00
8. Total Task Cost	0.00	0.00	0.00	0.00	0.00	0.00	52,252	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	3,698	0.00
10. Total Task Price	0.00	0.00	0.00	0.00	0.00	0.00	55,951	0.00

Project Manager (Engineer) _____ Date _____

SCHEDULE 2.11 (h)

Date Prepared:
 Billing Period
 Invoice No.

Project Name: Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16

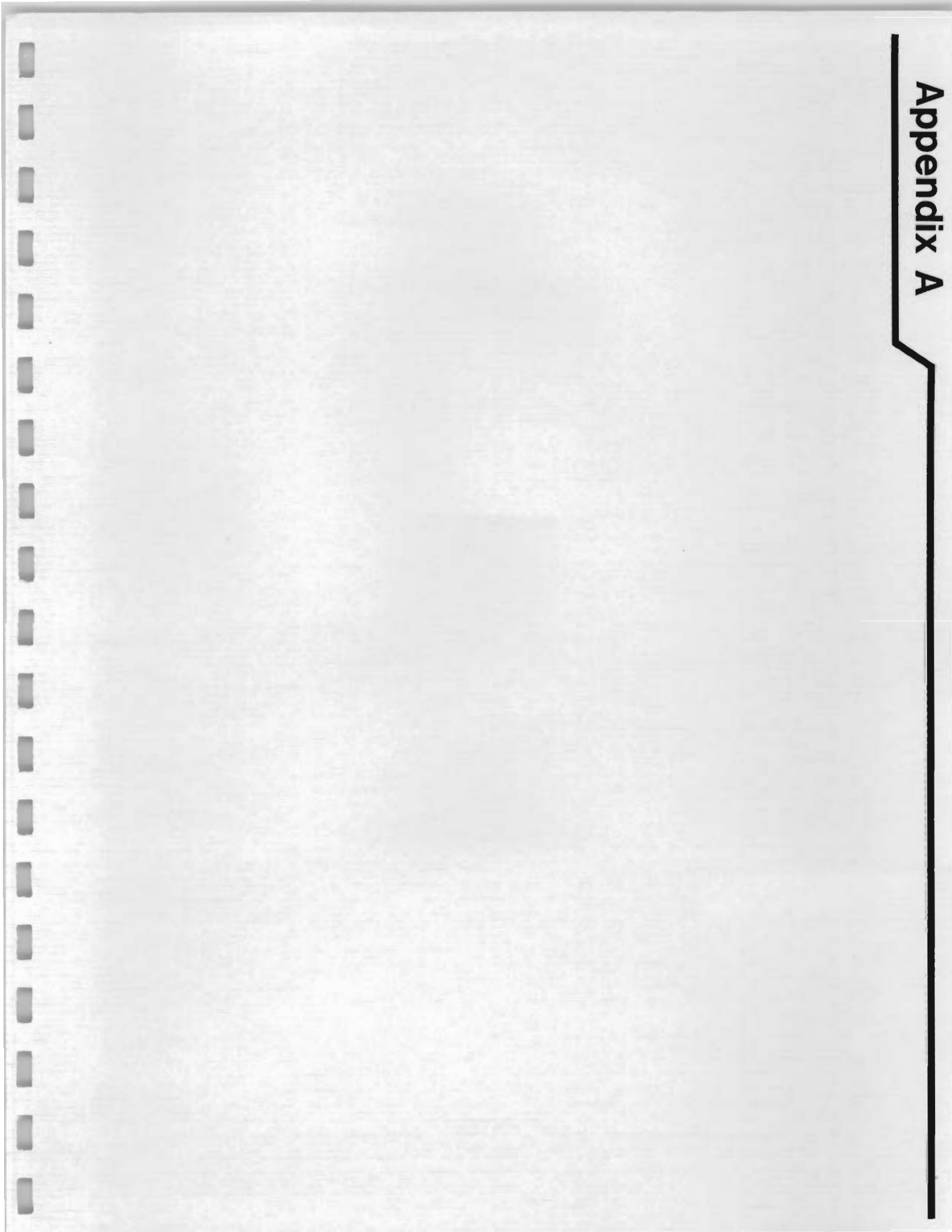
Monthly Cost Control Report
 Summary of Labor Hours
 Expended to Date/Estimated To Completion

NSPE Labor Classification	IX EXP/EST	VIII EXP/EST	VII EXP/EST	VI EXP/EST	V EXP/EST	IV EXP/EST	III EXP/EST	I & II EXP/EST	ADMIN/ SUPPORT	TOTAL NUMBER OF DIRECT LABOR HOURS EXP/EST
Task 1	0/ 4	0/ 2	0/ 56	0/ 0	0/ 10	0/ 32	0/ 0	0/ 56	0/ 0	0/ 160
Task 2	0/ 12	0/ 40	0/ 54	0/ 0	0/ 26	0/ 392	0/ 0	0/ 192	0/ 0	0/ 716
Task 3	0/ 2	0/ 0	0/ 4	0/ 0	0/ 8	0/ 16	0/ 0	0/ 48	0/ 0	0/ 78
Task 4	0/ 4	0/ 4	0/ 12	0/ 0	0/ 4	0/ 56	0/ 0	0/ 48	0/ 0	0/ 128
Task 5	0/ 10	0/ 14	0/ 44	0/ 0	0/ 16	0/ 132	0/ 228	0/ 172	0/ 0	0/ 616
Total Hours	0/ 32	0/ 60	0/ 170	0/ 0	0/ 64	0/ 628	0/ 228	0/ 516	0/ 0	0/ 1698

MBE/WBE
UTILIZATION PLAN
 Liberty Industrial Finishing Site
 Work Assignment Number: D003600-16

<u>Areas to be Subcontracted</u>	<u>Subcontractor Name</u>	<u>MBE/WBE</u>	<u>Total Subcontract Value</u>	<u>% MBE/WBE Utilization</u>
1. YEC, Inc.	Survey and Mapping	MBE	\$14,879.91	6.3%
2. Jamaica Blue Print	Reproduction	WBE	\$1,455.00	0.6%
3. Chemtech	Laboratory Services	MBE	\$15,873.60	6.69%
Total MBE Utilization	<u>MBE Subcontract Value</u>	=	<u>\$30,754</u>	12.96%
	<u>Total Contract Value</u>		<u>\$237,267</u>	
Total WBE Utilization	<u>WBE Subcontract Value</u>	=	<u>\$1,455</u>	0.6%
	<u>Total Contract Value</u>		<u>\$237,267</u>	

Appendix A



APPENDIX A

SCOPE OF WORK FOR SURVEYING

YEC, INC./YEC ENGINEERING, P.C.

Clarkstown Executive Park
612 Corporate Way, Suite 4M
Valley Cottage, NY 10989
Tel: (914) 268-3203 Fax: (914) 268-5313

August 4, 1999

David Glass
Dvirka & Bartilucci
330 Crossways Park Dr.
Woodbury, NY 11797

Re: Liberty Industrial Finishing Site Proposal

Dear Mr. Glass:

YEC recently submitted a 2.11e cost estimate to conduct a boundary and well survey for the above-referenced proposal. The tasks involved for the two properties in this survey include the following:

1. Conduct a deed/record search for two sites and their bordering properties at the county clerk office located in Riverhead, Long Island. Record search for existing easements on each of the two sites.
2. Field work to locate property markers, well locations. Assumed datum will be used unless there is a benchmark within 2000 feet of the site.
3. Data reduction of surveyed points.
4. Analyze record search information versus field information to determine property boundary.
5. Stake missing property corners in the field.
6. CAD mapping showing property boundaries, lot information and easements.
7. Submission of two stamped drawings of the property boundary survey for each site.
8. Submission of two stamped drawings of the property boundary and surveyed wells for each site.

Please feel free to contact me if you have any questions.

Sincerely,



Y.S. Ed Chen, Ph.D., P.E.
President, YEC, Inc.