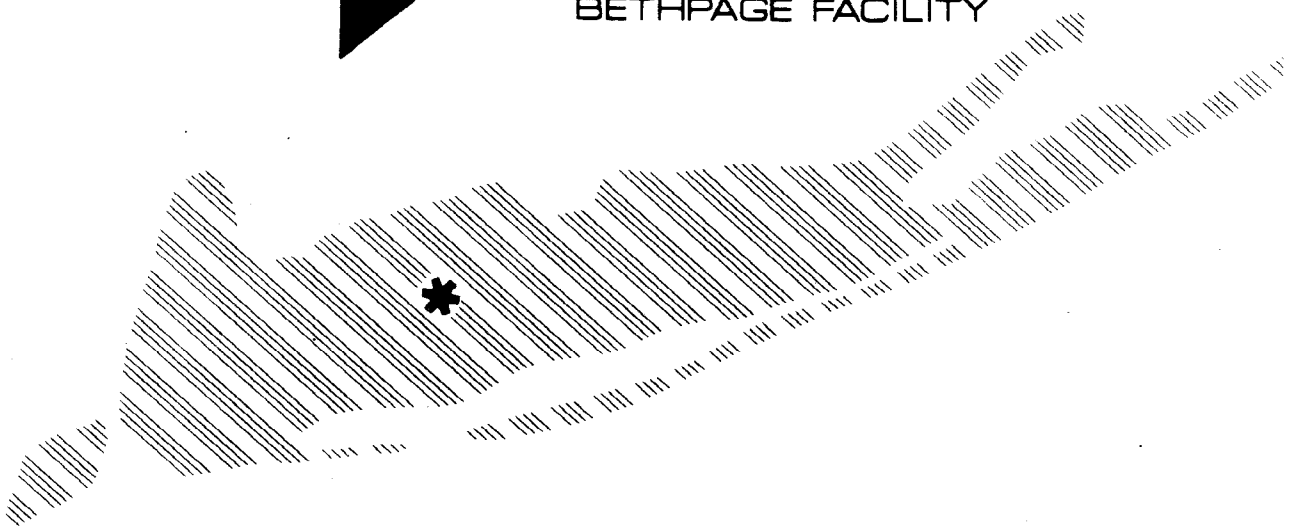
GRUMMAN AEROSPACE CORPORATION
BETHPAGE FACILITY



NEW YORK STATE SITE REGISTRY DELISTING PETITION BUILDING 113

GRUMMAN AEROSPACE CORPORATION
BETHPAGE, NEW YORK

db

Dvirka and Bartilucci

Consulting Engineers

NOVEMBER 1991

Grumman Corporation
Bethpage, New York 11714-3580

November 27, 1991

Thomas Jorling, Commissioner
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, NY 12233-7010

Re: New York State Site Registry Delisting Petition - Building 113

Dear Mr. Jorling:

I am pleased to submit for your review three copies of the enclosed document, entitled "New York State Site Registry Delisting Petition, Building 113" for the Grumman Aerospace Corporation property located at 800 South Oyster Bay Road, Hicksville, New York.

The report prepared by our consultants, Dvirka and Bartilucci Consulting Engineers, documents the past and present operations of the site based on a review of available records, a descriptive narrative of chronological aerial photographs of the area from 1950 through 1988 and the results of the collection and analysis of soil and groundwater samples. The site is located upgradient and approximately 2,700 feet from the nearest Grumman Aerospace Corporation manufacturing facilities associated with potential releases in connection with the State "superfund" site.

The information presented in this report will assist the New York State Department of Environmental Conservation (NYSDEC) in determining the nature of the use of the site over the past 40 years and to evaluate the merits of the delisting petition. Based on the review of available data, we believe that the property is eligible for removal from the NYSDEC Site Registry List and as such, an appropriate modification to the map depicting the "superfund" site is warranted.

If you have any comments and/or questions regarding this matter, do not hesitate to contact me at (516) 575-2385.

Very truly yours,

J. Ohlmann

John Ohlmann
Director

JO/AH/mbf
Enclosure
cc/encl.:
Robert Marino (NYSDEC)
0381a/1

GRUMMAN AEROSPACE CORPORATION

NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

PREPARED BY
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
SYOSSET, NEW YORK

NOVEMBER 1991

1866R/2

GRUMMAN AEROSPACE CORPORATION

NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

TABLE OF CONTENTS

Section 1

1.0 INTRODUCTION

Grumman Aerospace Corporation has directed the preparation of this report as part of an effort to satisfy the requirements for delisting the Grumman property, known as Building 113, located at 800 South Oyster Bay Road, Hicksville, New York, from a New York State superfund site. Information presented in this report has been compiled from site inspections performed on April 2, 1991, and May 17, 1991, an evaluation of available aerial photographs, various files and records obtained from the Grumman Aerospace Corporation, Paumanock Development Corporation, the Town of Oyster Bay, the Nassau County Department of Health and the EPA, along with interviews of Grumman personnel to determine and document the historical use of the site and the surrounding areas. Documentation regarding visual inspections undertaken by Grumman Aerospace Corporation are also included as part of this report. A current "Location Plan," "Site Plan" and "Floor Plan" has been included in this document as Appendices A, B and C, respectively. Additionally, aerial photographs of the site from 1950 through 1988 have been included as Appendix D.

Correspondence from the New York State Department of Environmental Conservation (NYSDEC) to the Grumman Aerospace Corporation provided a list of the "Delisting Petition Information" required for the Grumman property. In order to facilitate the review of this document, the 14 items requested in the NYSDEC correspondence are listed on the following table with an appropriate response or cross reference regarding the location of the response in this document. The information supplied is of sufficient detail to enable the NYSDEC to determine the nature of the site's past and present operations, and assess the potential for any on-site contamination.

GRUMMAN AEROSPACE CORPORATION

NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

Delisting Petition Information

Requirement		Response
1.	Site Name	Grumman, Bethpage
	Owner	Grumman Aerospace Corporation
2.	Site Number	1-30-003
3.	Site Location	800 South Oyster Bay Road Hicksville, Nassau County, NY 11801
4.	Size	1.96 Acres
5.	Boundaries	See Appendices A through D
6.	Nature of Operation	See Sections 2.1 and 2.2
	Hazardous Waste Disposal	See Section 3
7.	History of Site	See Section 2.1
8.	History of Site Investigations	See Section 2.1
9.	Waste	See Section 2.2
10.	Affected Resources	See Sections 2.2 and 3
11.	Demographic Information	See Section 2.2
12.	Geographic Information	See Section 2.2
13.	Cleanup Actions	See Section 3
14.	Basis for Delisting	See Section 3

Section 2

2.0 SITE EVALUATION

Location: 800 South Oyster Bay Road
Hicksville, New York 11801

Lot: 75

Block: N

Zoning: Industrial H

Grumman Building: 113

Land Use(s): Recreation

Plot Size: 1.96 acres

Building Area: 6,347 sq.ft.

Available Parking: 77 paved stalls

2.1 Site History

A review of available aerial photographs of the area from 1950 to 1988 (see Appendix C) indicates that the site was farmland prior to 1957. From 1950 to 1957, the site contained several farm houses or ancillary barns. Vegetation appears to be crops and no paving is evident on-site. Development of the site was subsequently initiated between the years of 1957 and 1962. The existing building first becomes apparent on the 1962 aerial of the area and appears to be under construction at that time. From 1969 to the present, the site appears to have approximately 70% of the area paved, 20% of the area undeveloped, and 10% of the area occupied by the on-site building.

The building was initially owned by the Town of Oyster Bay and used as a vehicle maintenance garage. As a result, the potential existed for the release of waste oil, lubricating fluids, fuel and cleaning solvents (degreasers) to the surrounding environment during this period. However, no significant visual evidence of any chemical and/or fuel spills or releases was apparent at the site based on site inspections performed on April 2, 1991 and May 17, 1991. Grumman subsequently purchased the site in January of 1985. In March of 1985, the two existing underground storage tanks were emptied, backfilled with sand and abandoned in place. One tank was a 2,500-gallon diesel fuel tank and the other was a 550-gallon waste oil tank. A fuel pump island was also removed at that time. A copy of the Abandonment Certificate that was submitted to the Nassau County Fire Marshal in April of 1985 is included in Appendix E. Sanitary sewage disposal occurred on-site prior to connection to the Nassau County sewer system. Based on conversations with Grumman personnel and a site inspection and record review completed by Grumman staff, no manufacturing, chemical dispensing or usage, or hazardous waste handling operations have taken place on the site since Grumman acquisition. The only fuel handling operations have been regular deliveries of fuel oil for the space heating system. A copy of

a Grumman interoffice correspondence, which documents a portion of the history of the building is included in Appendix F. Furthermore, aerial photographs of the site do not show any aboveground fuel dispensing or waste disposal or storage facilities.

In August of 1991 two water samples and two soil samples from the Building 113 site were obtained by Soil Mechanics Drilling Corporation and analyzed by EcoTest Laboratories, Inc. The soil samples were collected from two test borings drilled in the area north and west of the building as shown on the map in Appendix H.

The test borings were located in the area of the underground oil fuel storage tank and the soil samples obtained were analyzed for total petroleum hydrocarbon content. The results presented in Appendix G indicate nondetectable levels of petroleum hydrocarbons.

The two water samples were obtained from upgradient and downgradient temporary monitoring wells located as shown on the map in Appendix H. These samples were analyzed for heavy metals and organics. Detectable levels of zinc at 0.18 ppm were found in the sample collected from the well located upgradient of the building and detectable levels of lead at 0.005 ppm and zinc at 0.11 ppm were found in the sample collected from the downgradient well. The New York State ambient water quality standard for lead is 0.025 ppm and for zinc is 0.3 ppm. The detectable levels of lead and zinc from both samples are below the New York State ambient water quality standards.

The water sample analysis results presented in Appendix G indicate nondetectable levels of volatile organics for both samples.

A summary of the investigation procedures and sample analysis results is presented in a letter by Soil Mechanics Drilling Corp. which is included in this report in Appendix G.

2.2 General Site Description

The site is currently owned and operated by Grumman Aerospace Corporation and is used for recreational purposes by the Grumman Athletic Association. The facility includes administrative offices and meeting areas for various extracurricular activities. The entire site is zoned Industrial H and comprises approximately 1.96 acres. The site is adjacent to a medium density residential development to the north, with higher density residential development further to the north and northeast. To the south is commercial development. Appendix A presents the location plan. The one-story building (Building

113) comprises approximately 6,347 square feet, of which 1,347 square feet is office space with 8-foot ceilings and 5,000 square feet is open area with 12-foot ceilings. The site currently has 77 stalls for parking with additional space available on the adjacent oversized lot. Appendices B and C present the Site Plan and Floor Plan, respectively.

Air conditioning is supplied from one 5-ton unit and one 15-ton unit. The entire building has oil fired hot water heat, and is connected to the Nassau County sewer system. Public water is supplied from a water main along South Oyster Bay Road. An overhead sprinkler system and a central paging system is located throughout the building. The building is equipped with a 400-amp, 208/120-volt, 3-phase electrical system.

The site is generally level with good drainage. Catch basins are located throughout the site and manholes border along South Oyster Bay Road. The site does not exist within any floodplains or wetlands, and does not contain any surface waters. The Soil Conservation Service classifies the entire site as Urban Land (2/87). This classification is defined as an area with at least 85 percent asphalt, concrete, or other impervious building material, with most of the remaining small areas of soil being well drained Riverhead, Hempstead, or Enfield soils, or excessively drained Udipsaments. The depth from ground surface to the Upper Glacial Aquifer is approximately 60 feet.

Section 3

3.0 FINDINGS AND CONCLUSIONS

There are no aboveground storage tanks on-site. An underground fuel oil tank is located on the north side of the building. Based on inspections of the site on April 2, 1991 and May 17, 1991, there was no apparent evidence of any stressed vegetation or of previous on-site spills or releases of any chemicals and/or fuel.

The site does not appear to present any outstanding environmental concerns requiring remediation. As previously stated, the previous use of the site as a maintenance garage could potentially have introduced various oils, lubricants, fuels and cleaning solvents to the adjacent area, but no visual evidence of such is immediately apparent. We believe, based on the collection and review of available data, including a site inspection, a review of available records from the Town of Oyster Bay and the Nassau County Department of Health and an evaluation of the results of soil and water samples collected at the facility, that the property is eligible for delisting under New York State regulations.

The existing building and surrounding areas do not appear to present any significant restrictions to the continued use of all on-site areas. Furthermore, the oversized lot is available for the potential expansion of the building, or for additional parking, if required.

Section 4

4.0 HOOKER CHEMICAL SITE

One area of concern related to the delisting of the Grumman property containing Building 113 could be the proximity of the property to the Hooker Chemical/Ruco Polymer NPL site. The approximate boundaries of the Hooker Chemical site are delineated on the Location Plan presented in Appendix A. This site has been on the Federal Superfund list (National Priorities List) since 1984, and has been the subject of investigations intended to identify the scope of contamination and hazard presented by previous waste disposal practices at this site. A Remedial Investigation and Feasibility Study (RI/FS) has been conducted, with the associated field work having been completed in February 1990. The RI/FS, under review by EPA, has identified two (2) operable units subject to remedial actions.

Operable Unit 1 involves the remediation of soil and water contaminated by volatile organic compounds (VOCs) used in the various manufacturing processes. Operable Unit 2 addresses an area of soils contaminated by PCBs resulting from releases of the heat transfer fluid, Therminol. Spread of the PCBs to other portions of the site, released from the on-site structure referred to as the "Pilot Plant", was enhanced by storm water runoff and on-site truck traffic. The boundary of the area of contaminated soils is entirely contained on the site of the Hooker Chemical/Ruco Polymer NPL site. No off-site contamination or remedial activities have been identified with Operable Unit 2.

Effect of the Hooker Chemical/Ruco Polymer Site on Delisting

Until the EPA finalizes its review and releases all details concerning Operable Unit 1, it is not possible to fully characterize the extent of any off-site impacts. It could be expected that as a result of public water being supplied to the various properties, the Grumman property containing Building 113 may not be subject to any significant adverse effects from the Hooker Chemical/Ruco Polymer site. It is possible, however, that the perception of a hazardous situation could exist as a result of the proximity to the site. However, considering that the Grumman property is located approximately 1200 feet to the northeast of this area, and that the general groundwater flow has a south/southeast direction, the property could be considered removed from the significant adverse conditions present at the Hooker Chemical/Ruco Polymer site. In fact, based on the collection and review of available data, including soil and groundwater analytical results, there appears to be no evidence that suggest a hazardous situation at the Building 113 site.

Section 5

5.0 REFERENCES

USEPA – Region 2, Proposed Plan Superfund Update Hooker Chemical/Ruco Polymer Site, Hicksville, New York, July 1990.

USEPA, Declaration for Record of Decision, Hooker Chemical/Ruco Polymer Site, Hicksville, Nassau County, New York, September 1990.

EBASCO, Final Work Plan RI/FS Hooker Chemical/Ruco Polymer Superfund Site, EPA Contract 68-01-7250, Work Assignment No. 186-2443, September 1988.

Legette, Brashear & Graham, Final Field Operations Plan, August 1989.

Legette, Brashear & Graham, Focused Feasibility Study for Remediation of Soils Containing Arochlor 1248 for Occidental Chemical Corp., June 1990.

LKB Aerial Photographs: April 11, 1950; January 20, 1955; January 24, 1957; March 23, 1962; April 11, 1969; April 18, 1972; March 8, 1988.

Grumman Interoffice Correspondence

Nassau County Fire Commission, Office of Fire Marshal Certificate of Abandonment of Underground Storage Tanks, April 1985.

Soil Mechanics Water and Soil Sample Analysis, August 1991

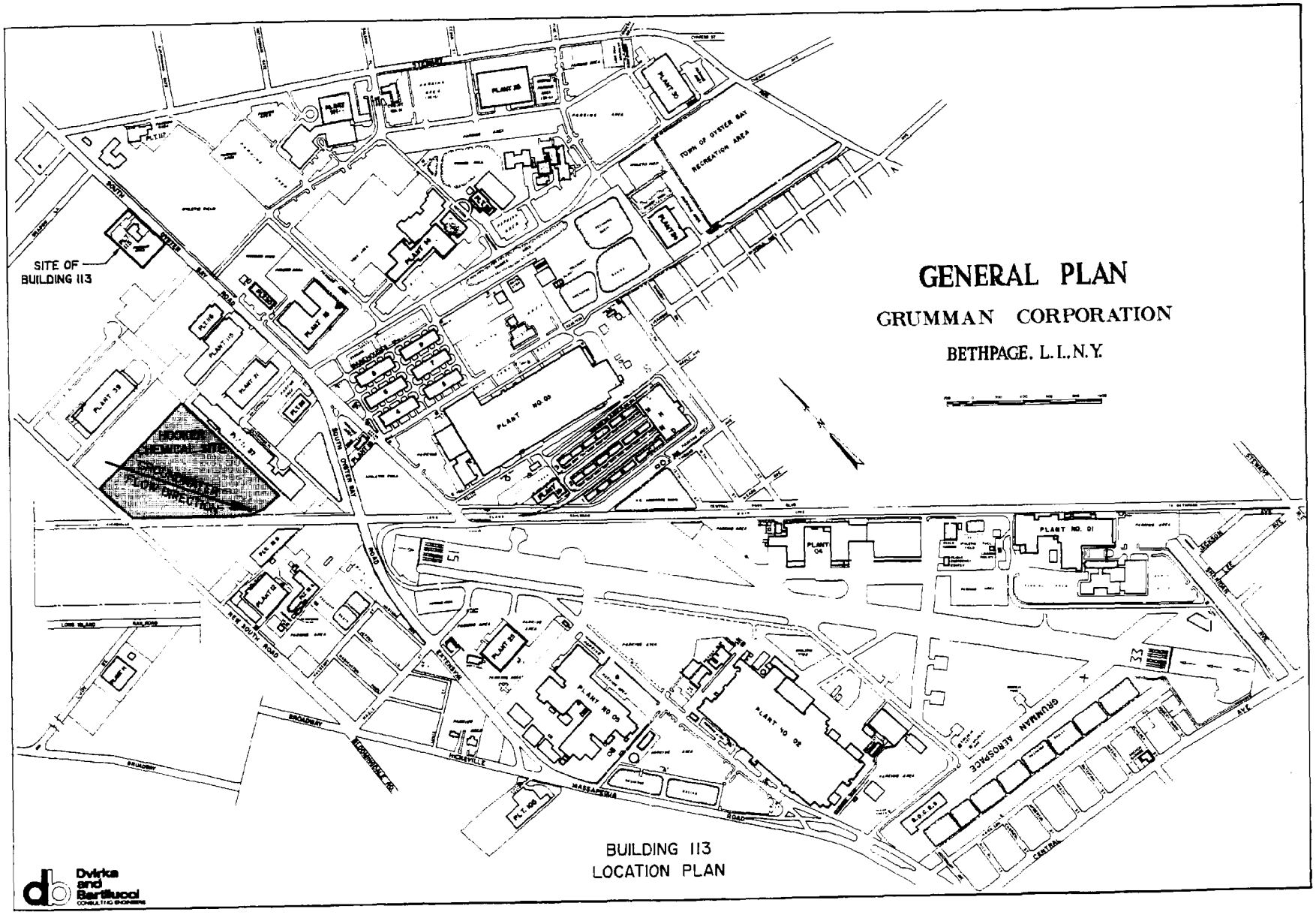
Appendix A

GRUMMAN AEROSPACE CORPORATION

NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

APPENDIX A
LOCATION PLAN

1932R/2



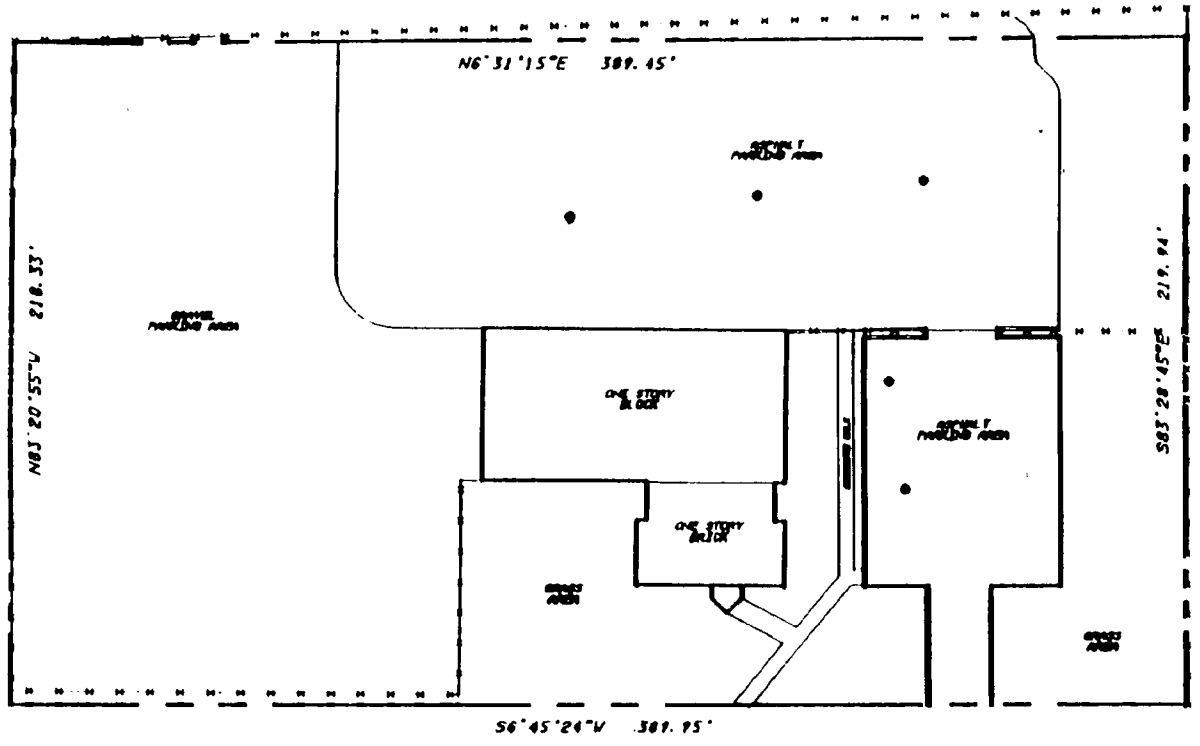
Appendix B

GRUMMAN AEROSPACE CORPORATION

NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

APPENDIX B
SITE PLAN

1932R/2



0 30 60
SCALE IN FEET

GRUMMAN AEROSPACE CORPORATION
BETHPAGE, NEW YORK

Dvirka and Bartilucci CONSULTING ENGINEERS

BUILDING 113
SITE PLAN

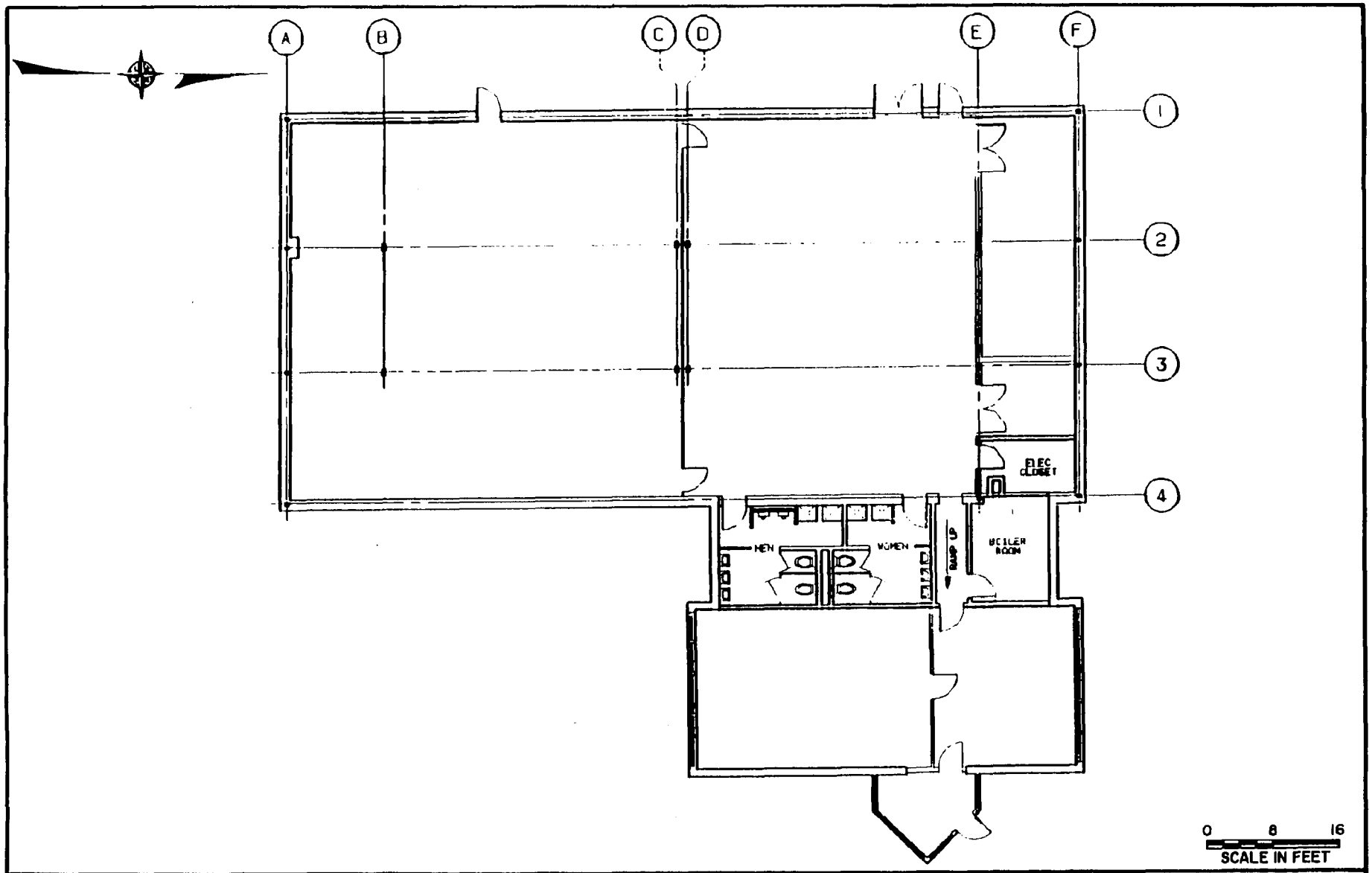
Appendix C

GRUMMAN AEROSPACE CORPORATION

NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

APPENDIX C
FLOOR PLAN

1932R/2



GRUMMAN AEROSPACE CORPORATION
BETHPAGE, NEW YORK

Dvirka and Bartilucci
CONSULTING ENGINEERS

BUILDING 113
FLOOR PLAN

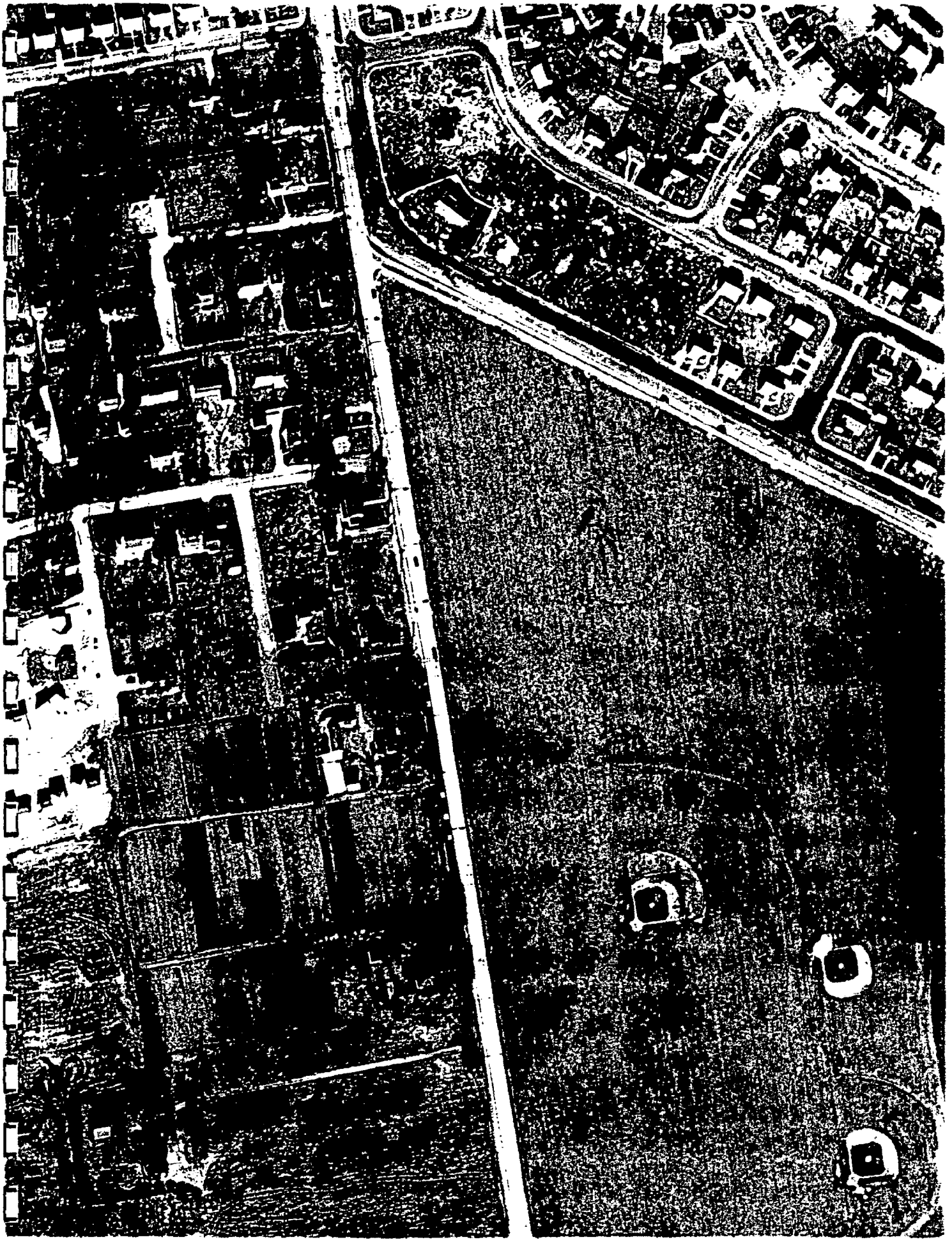
Appendix D

GRUMMAN AEROSPACE CORPORATION

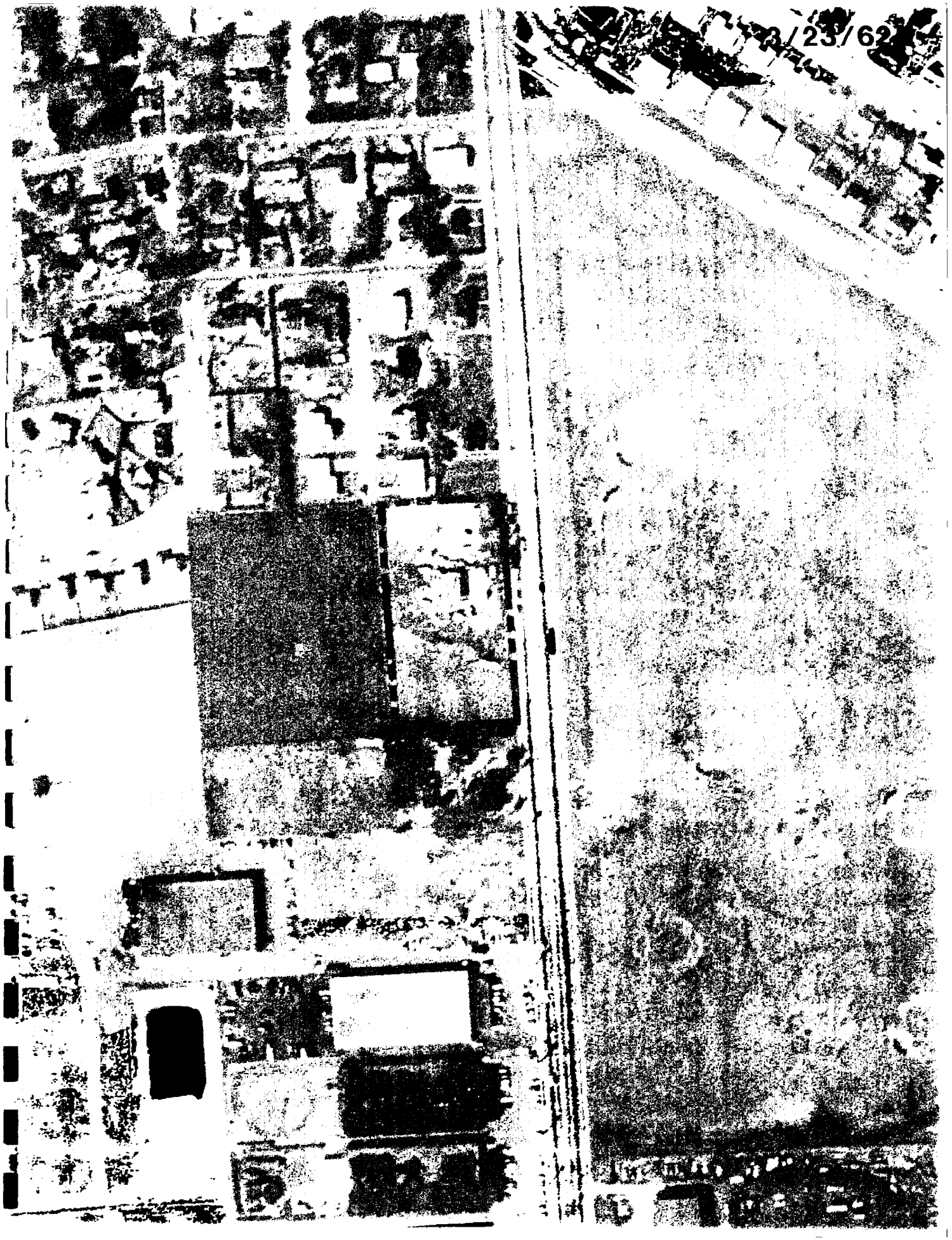
NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

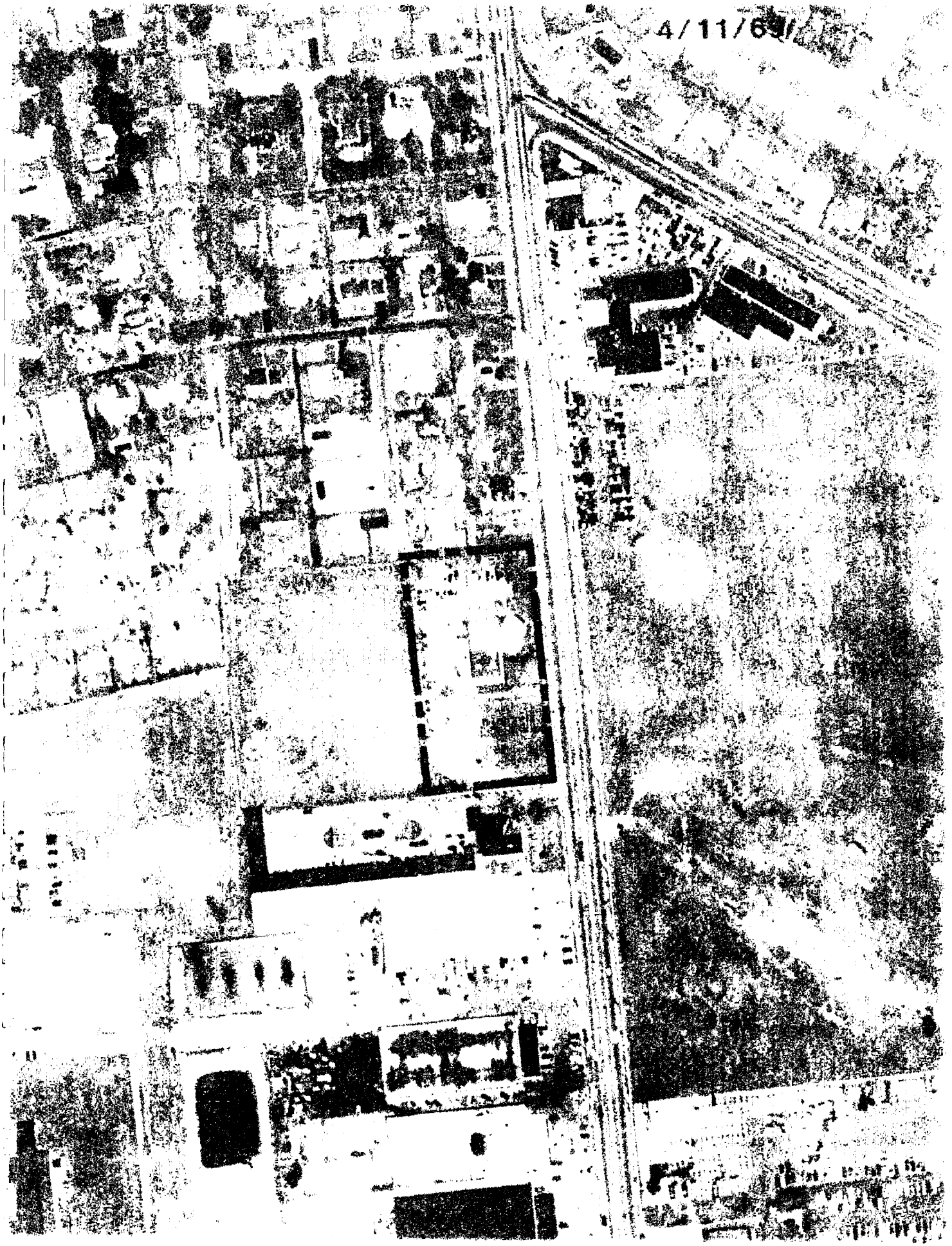
APPENDIX D
AERIAL PHOTOGRAPHS (1950–1988)

NYSDEC 024439




24-2
1/24/


3/23/62


4/11/69


4/18

NYSDEC 024445

Appendix E

GRUMMAN AEROSPACE CORPORATION

NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

APPENDIX E
UNDERGROUND STORAGE TANK
ABANDONMENT CERTIFICATE

NASSAU COUNTY FIRE COMMISSION

OFFICE OF FIRE MARSHAL

399 JERUSALEM AVENUE
P.O BOX 109
UNIONDALE, NEW YORK 11553

TO: NASSAU COUNTY FIRE MARSHAL

INSP. NO. _____

FROM: Marine Pollution Control, Inc.
375 Dunton Avenue
P.O. Box 2220
E. Patchogue, NY 11772

RE: Grumman Aerospace Corp.
Plant 113. Oyster Bay Rd.
(Old Parks Dept. Garage)
Bethpage, NY

The following underground bulk storage tanks, at the above-named location, have been: (CHECK THE ONE THAT APPLIES)

__ ____ A - Placed Temporarily out-of-service (filled with water)

__X__ B - Abandoned in place (filled with an inert solid material)

__ ____ C - Removed from the premises

per G Kerrigan
12-23-85

NO.	SIZE	CONST.	P	DATE	NO.	SIZE	CONST.	P	DA
1	2500 gal	Steel Diesel		3/29/85	5				
2	550 gal	Steel WASTE OIL		3/29/85	6				
3					7				
4					8				

All work has been done in accordance with the Nassau County Fire Prevention Ordinance, and Appendix C, of the National Fire Protection Association - N.F.P.A. - 30-1977.

John F Meaney

Signature

JOANNE VANRIPER
Notary Public, State of New York
No. 52-4625823 Suffolk County
Commission Expires March 30, 1986

Notary Stamp

County of Suffolk,

State of New York,

personally appeared before me this

2 day of April 1985

Joanne VanRiper

Notary Signature

Appendix F

GRUMMAN AEROSPACE CORPORATION

NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

APPENDIX F
BUILDING HISTORY – GRUMMAN INTEROFFICE
CORRESPONDENCE

1932R/2

GRUMMAN CORPORATE OPERATIONS

Facilities Engineering and Construction Technical Services

Interoffice Memorandum

March 27, 1991
ECE-30

From: C.B. Wilson
Facilities Engineering

To: J. Ohlmann, P.E.
Director
Corporate Environmental Protection

Subject: Building 113 Environmental Inspection

As requested, the writer performed an inspection of the subject facility on February 22, 1991 for areas of environmental concern.

Building 113 is 6347 square feet and is constructed of brick and concrete block. The interior consists of a two-room office area and a large recreation room with movable wall partitions.

Approximately ninety percent of the floor is covered with vinyl tiles. These tiles may contain asbestos. The office area (approximately fifteen percent of the floor) has carpet over the tile. If the carpet is ever removed, care should be taken not to damage the tile beneath. No tile damage was noted during the inspection.

All of the pipe, boiler and duct insulation that was observed is fiberglass. The pipe insulation is mitered at the elbows. No cementitious insulation was noted.

Based upon the estimated age of the building (greater than twenty-five years), the built-up roof may contain asbestos bearing materials. This should not be a problem if the roofing material is not disturbed.

There is a one-thousand gallon underground #2 fuel oil storage tank on the north side of the building. The tank is currently in use and contains approximately seven hundred gallons of fuel. This tank is exempt from testing requirements as stated in Nassau County Public Health Ordinance, Article XI, Section 7.a.5.

The building has paved parking areas on the north and west sides. The east and south ends of the property are not paved. The property is bordered by South Oyster Bay Road (east), residential properties (north), a schoolyard (west) and a motel (south).

The building is used by the Grumman Athletic Association (GAA). No chemical usage, dispensing or manufacturing operations are conducted there. The building and grounds are clean and well kept. No stains or evidence of spillage was noted.

The building was previously owned by the Town of Oyster Bay and used as an office and garage by the Parks Department. Grumman purchased the building on January 22, 1985. A search of our records indicates that in March, 1985, two underground storage tanks were emptied, backfilled with sand, and abandoned in place. One tank was a 2500 gallon Diesel Fuel Tank, and the other was a 550 gallon Waste Oil Tank. Grumman has a copy of the Abandonment Certificate that was submitted to the Nassau County Fire Marshall on file. A fuel pump island was also removed as a part of the tank abandonment job.

A hydraulic lift inside the building was removed by Grumman. The hydraulic fluid reservoir for the lift was emptied and backfilled with concrete without incident.

CBW:td
TD-344

Appendix G

GRUMMAN AEROSPACE CORPORATION

NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

APPENDIX G
WATER AND SOIL SAMPLE ANALYSIS
AND
SOIL MECHANICS DRILLING CORP. LETTER

1932R/2

SUBSOIL INVESTIGATIONS

SOIL MECHANICS DRILLING CORP.
3770 MERRICK ROAD • SEAFORD, L. I., NEW YORK 11783 • (516) 221-2333

August 30, 1991

PAUMANOCK DEV. CORP.
1111 Stewart Ave.
Bethpage, NY 11714

Re: 800 So. Oyster Bay Rd.
Hicksville, N. Y.

Att: Thomas D. Gill
Vice President & Secretary

Gentlemen:

Presented herein are the results of our recent work conducted at the above referenced site. As part of that investigation, two (2) soil test borings were drilled and temporary Monitoring Wells installed (see enclosed boring logs and boring location plan, our Dwg. 91R3962).

Soil samples were collected from each of the test borings at continuous 5 ft. intervals to a maximum depth of 22 ft. below existing grade. One (1) sample from each test boring was submitted for total petroleum hydrocarbon (TPHC) laboratory analysis. Upgradient and downgradient borings advanced to ground water and temporary monitoring wells were installed at each location. Aqueous samples, identified as TMW-1 and TMW-2, were collected and laboratory analyzed for priority pollutant metals and volatile organics.

The samples were collected, by qualified Soil Mechanics technicians, in accordance with proper sampling and decontamination protocol. The samples were delivered, for analysis, to EcoTest Laboratories Inc. in accordance with appropriate Chain of

(Continued)

SOIL MECHANICS DRILLING CORP.
3770 MERRICK ROAD · SEAFORD, L. I., NEW YORK 11783 · (516) 221-2333

Custody procedures. The results of that analysis are as follows (see attached laboratory reports):

Sample TMW-1: Detectable levels of lead (.005 ppm) and zinc (.11 ppm); non detectable levels of volatile organics.

Sample TMW-2: Detectable levels of zinc (.18 ppm); non detectable levels of volatile organics.

Soil Samples (Borings B-1 and B-2): Non detectable levels of petroleum hydrocarbons.

The concentrations of lead and zinc in Samples TMW-1 and TMW-2 are below applicable regulatory guidelines of .05 ppm and 5 ppm, respectively.

Although the site appears to be clean, we have been informed that Grumman has signed a Consent Order for clean-up of all their properties. We suggest you pursue how this Consent Order affects this particular parcel.

Should you have any questions, please feel free to call and discuss them with us. Billing is enclosed.

Very truly yours,

SOIL MECHANICS DRILLING CORP.

Carl Vernick

Carl Vernick
President

CV:ja
encl.

ECOTEST LABORATORIES, INC. ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C912958/1 08/26/91

Soil Mechanics
3770 Merrick Road
Seaford, NY 11783
ATTN: Robert Cardinale PO# 4902

SOURCE OF SAMPLE: Hicksville, Project No. 91-396
COLLECTED BY: Client DATE COL'D:08/09/91 RECEIVED:08/12/91

SAMPLE: Water sample, TMW-1, 1000

ANALYTICAL PARAMETERS			ANALYTICAL PARAMETERS
Antimony as Sb	mg/L	<0.005	
Arsenic as As	mg/L	<0.002	
Beryllium as Be	mg/L	<0.001	
Cadmium as Cd	mg/L	<0.001	
Chromium as Cr	mg/L	<0.005	
Copper as Cu	mg/L	<0.02	
Lead as Pb	mg/L	0.005	
Mercury as Hg	mg/L	<0.00025	
Nickel as Ni	mg/L	<0.10	
Selenium as Se	mg/L	<0.002	
Silver as Ag	mg/L	<0.001	
Thallium as Tl	mg/L	<0.005	
Zinc as Zn	mg/L	0.11	

cc:

REMARKS:

DIRECTOR

rn= 13316 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC. ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C912958/1 08/26/91

Soil Mechanics
3770 Merrick Road
Seaford, NY 11783
ATTN: Robert Cardinale PO# 4902

SOURCE OF SAMPLE: Hicksville, Project No. 91-396
COLLECTED BY: Client DATE COL'D:08/09/91 RECEIVED:08/12/91

SAMPLE: Water sample, TMW-1, 1000

ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlordifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<2
11 Dichloroethene	ug/L	<1
11 Dichloroethane	ug/L	<1
12 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
12 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
12 Dichloropropane	ug/L	<1
t 13 Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c 13 Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	<1

ANALYTICAL PARAMETERS		
Chlorobenzene	ug/L	<1
13 Dichlorobenzene	ug/L	<2
12 Dichlorobenzene	ug/L	<2
14 Dichlorobenzene	ug/L	<2
Benzene	ug/L	<1
Toluene	ug/L	<2
Ethyl Benzene	ug/L	<1
m Xylene	ug/L	<2
o+p Xylene	ug/L	<4

cc:

REMARKS:

DIRECTOR

rn= 13317 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC. ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C912958/2 08/26/91

Soil Mechanics
3770 Merrick Road
Seaford, NY 11783
ATTN: Robert Cardinale PO# 4902

SOURCE OF SAMPLE: Hicksville, Project No. 91-396
COLLECTED BY: Client DATE COL'D:08/09/91 RECEIVED:08/12/91

SAMPLE: Water sample, TMW-2, 1100

ANALYTICAL PARAMETERS			ANALYTICAL PARAMETERS
Antimony as Sb	mg/L	<0.005	
Arsenic as As	mg/L	<0.002	
Beryllium as Be	mg/L	<0.001	
Cadmium as Cd	mg/L	<0.001	
Chromium as Cr	mg/L	<0.005	
Copper as Cu	mg/L	<0.02	
Lead as Pb	mg/L	<0.005	
Mercury as Hg	mg/L	<0.00025	
Nickel as Ni	mg/L	<0.10	
Selenium as Se	mg/L	<0.002	
Silver as Ag	mg/L	<0.001	
Thallium as Tl	mg/L	<0.005	
Zinc as Zn	mg/L	0.18	

cc:

REMARKS:

DIRECTOR

rn= 13318 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC. ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C912958/2 08/26/91

Soil Mechanics
3770 Merrick Road
Seaford, NY 11783
ATTN: Robert Cardinale PO# 4902

SOURCE OF SAMPLE: Hicksville, Project No. 91-396
COLLECTED BY: Client DATE COL'D:08/09/91 RECEIVED:08/12/91

SAMPLE: Water sample, TMW-2, 1100

ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlordifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<2
11 Dichloroethene	ug/L	<1
11 Dichloroethane	ug/L	<1
12 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
12 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
12 Dichloropropane	ug/L	<1
t 13 Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c 13 Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	<1

ANALYTICAL PARAMETERS		
Chlorobenzene	ug/L	<1
13 Dichlorobenzene	ug/L	<2
12 Dichlorobenzene	ug/L	<2
14 Dichlorobenzene	ug/L	<2
Benzene	ug/L	<1
Toluene	ug/L	<2
Ethyl Benzene	ug/L	<1
m Xylene	ug/L	<2
o+p Xylene	ug/L	<4

cc:

REMARKS:

DIRECTOR _____

rn= 13319 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC. ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C912958/3 08/26/91

Soil Mechanics
3770 Merrick Road
Seaford, NY 11783
ATTN: Robert Cardinale PO# 4902

SOURCE OF SAMPLE: Hicksville, Project No. 91-396
COLLECTED BY: Client DATE COL'D:08/09/91 RECEIVED:08/12/91

SAMPLE: Soil sample, Boring #1, 15'-17', 1200

ANALYTICAL PARAMETERS		ANALYTICAL PARAMETERS
Petrol. Hydrocarbons mg/Kg	<10	

cc:

REMARKS:

DIRECTOR

rn= 13320 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC. ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C912958/4 08/26/91

Soil Mechanics
3770 Merrick Road
Seaford, NY 11783
ATTN: Robert Cardinale PO# 4902

SOURCE OF SAMPLE: Hicksville, Project No. 91-396
COLLECTED BY: Client DATE COL'D:08/09/91 RECEIVED:08/12/91

SAMPLE: Soil sample, Boring #2, 15'-17', 1230

ANALYTICAL PARAMETERS		ANALYTICAL PARAMETERS
Petrol. Hydrocarbons	mg/Kg <10	

cc:

REMARKS:

DIRECTOR_____

rn= 13321 NYSDOH ID# 10320

SOIL MECHANICS

3770 MERRICK ROAD · SEAFORD, L. I., NEW YORK 11783 · (516) 221-2333

CHAIN OF CUSTODY

LABORATORY: ECOTEST

PROJECT NAME: Hicksville

PROJECT NO. 91-396

SAMPLE I.D. NUMBER	DATE	TIME	COMP.	GRAB	MATRIX	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS: PP METALS	LEAD	TPHC	CYANIDE	VOA	BTX	PCB	PEST.	HERB.	A/E	B/N	OTHER	ADDITIONAL REQUIREMENTS
TMW-1	8/9	10⁰⁰		✓	Aq	Temp Mon Well #1	3	✓			✓									
TMW-2	↓	11⁰⁰		✓	Aq	Temp Mon Well #2	3	✓			✓									
B-1/S-1		12⁰⁰	✓		Soil	Boring #1 15-17	1		✓											
B-2/S-1		12³⁰	✓		Soil	Boring #2 15-17'	1		✓											

RELINQUISHED BY (SIGNATURE)	DATE/TIME	AGENT OF:	RECD. BY (SIGNATURE)	DATE/TIME	AGENT:
PRINTED NAME			PRINT. NME.		
REL. BY (SIG.)	DATE/TIME	AGENT OF:	RECD. BY (SIGN.)	DATE/TIME	AGENT:
PRINT. NME.			PRINT. NME.		
REL. BY (SIG.)	DATE/TIME	RECEIVED FOR LAB BY:	DATE/TIME	REMARKS:	
PRINT. NME.	8/12/91 15⁴⁵	PRINT NME. Marianne List	8/12/91 15⁴⁵	PO # 4902	
SAMPLER (SIGNATURE)		SAMPLER NAME (PRINT)			
Kurt J Stabler		Kurt J Stabler			

NYSDEC 024463

PURCHASE ORDER

4902

TO ECOTEST LABS

ADDRESS 377 SHEFFIELD AVE

CITY N BABYLON

SHIP TO 91-396

ADDRESS

CITY 8/12/91

REQ. NO.	FOR Hicksville	DATE REQUIRED	TERMS	HOW SHIP	DATE

QUANTITY ORDERED	QUANTITY RECEIVED	PLEASE SUPPLY ITEMS LISTED BELOW	PRICE		COST
		2 Soil Samples (B-1/S-4, B-2/S-4) For TPHC			
		+			
		2 Aq Samples (TMW-1, TMW-2) For 601/602 + PP METALS			

DISPOSITION OF MATERIAL

Receiving Clerk

PURCHASING AGENT

1H 147 REDIFORM.

RECEIVING DEPT COPY

NYSDEC 024464

Appendix H

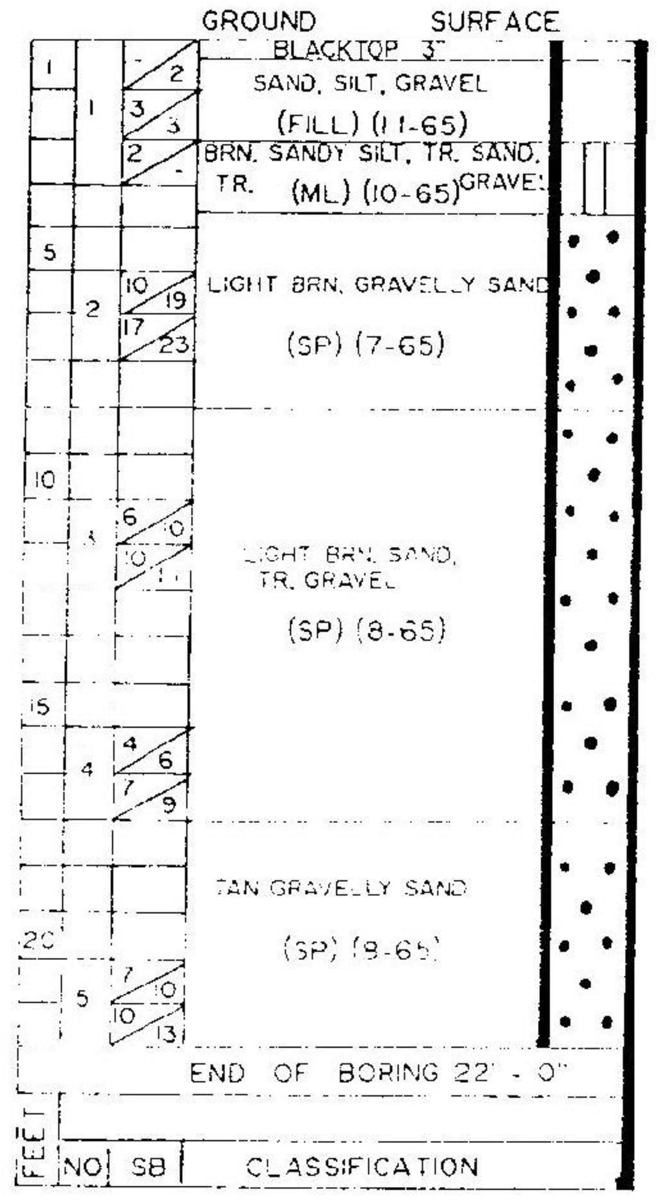
GRUMMAN AEROSPACE CORPORATION

NEW YORK STATE
SITE REGISTRY DELISTING PETITION
BUILDING 113

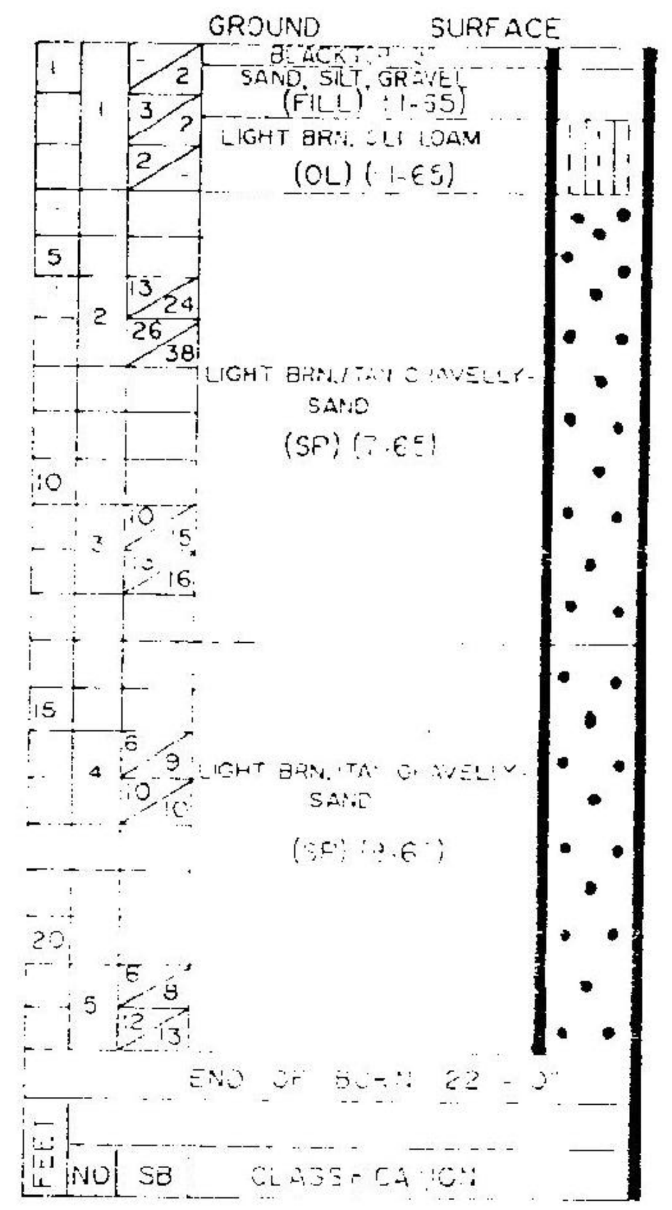
APPENDIX H
SAMPLE LOCATION PLAN

1932R/2

B-1

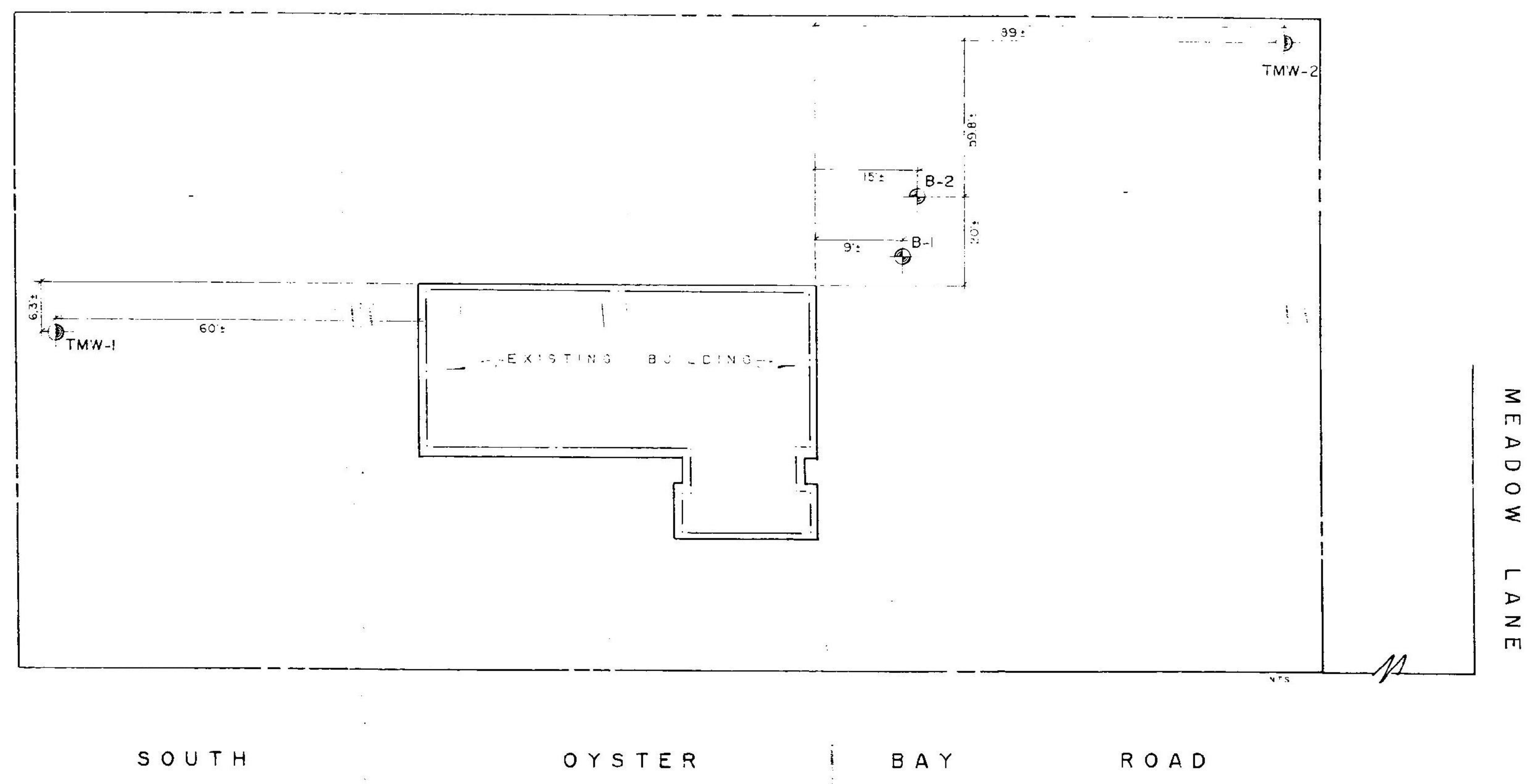


B-2



NOTES

1. SOIL DESCRIPTIONS ARE BY VISUAL EXAMINATION OF SOIL SAMPLES RECOVERED DURING DRILLING OPERATION.
2. SOIL DESCRIPTIONS ARE IN ACCORD WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.
3. NO GROUND WATER TABLE WAS ENCOUNTERED TO THE LOWEST DEPTH DRILLED.
4. SOIL STRATIFICATIONS ARE ACCURATE TO WITHIN TWO FEET VERTICALLY.
5. DENOTES BORING LOCATIONS.
6. DENOTES TEST MONITORING WELL LOCATIONS.



UNIFIED SOIL CLASSIFICATION

SOIL GROUPS	TYPICAL NAMES AND SOIL SYMBOLS
GW	WELL GRADED GRAVELS, GRAVEL SAND MIXTURES, LITTLE OR NO FINES
GP	POORLY GRADED GRAVELS OR GRAVEL SAND MIXTURES, LITTLE OR NO FINES
GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURE
GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURE
SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES
SM	SILTY SANDS, SAND - SILT MIXTURES
SC	CLAYEY SANDS, SAND - CLAY MIXTURES
ML	INORGANIC SILTS, VERY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT	PEAT AND OTHER HIGHLY ORGANIC SOILS

ALLOWABLE SOIL BEARING PRESSURES, NYC BLDG CODE C26-1103

CLASS OF MATERIAL	DESCRIPTION	ALLOWABLE BEARING TONS/SQ.FT
1 - 65	HARD SOUND ROCK	60
2 - 65	MEDIUM HARD ROCK	40
3 - 65	INTERMEDIATE ROCK	20
4 - 65	SOFT ROCK	8
5 - 65	HARDPAN	8 - 12
6 - 65	GRAVEL AND GRAVEL SOILS (SOIL GROUPS GW, GP, GM & GC AND GROUPS SW, SP & SM CONTAINING MORE THAN 10% GRAVEL)	4 - 10
7 - 65	SANDS (OTHER THAN FINE SANDS) (SOIL GROUPS SW, SP & SM BUT CONTAINING NOT MORE THAN 10% GRAVEL)	3 - 6
8 - 65	FINE SAND	2 - 4
9 - 65	CLAYS AND CLAY SOILS (SOIL GROUPS SC, CL & CH): HARD / MEDIUM / SOFT	(5 MAX) / (2 MAX) / BY TEST
10 - 65	[illegible]: DENSE / MEDIUM / LOOSE	[illegible] / 1.5 / BY TEST
11 - 65	NOMINALLY UNSATISFACTORY BEARING MATERIALS	BY TEST

COMPACTION RELATED TO SPOON BLOWS PER FOOT

SAND		SILT & CLAY	
LOOSE	15 OR LESS	SOFT	10 OR LESS
MEDIUM	16 TO 39	MEDIUM	11 TO 29
DENSE	40 OR MORE	HARD	30 OR MORE

"N" STANDARD PENETRATION TEST (2" SPOON, 140 lb HAMMER, 30" FALL)

N=17 BLOWS PER FOOT — SPOON BLOW COUNT IS GENERALLY SHOWN IN 6" INCREMENTS FOR 2' DRIVE. TO OBTAIN BLOWS PER FOOT (N) USE THE 2ND & 3RD 6" INCREMENT

	ROTARY CASING	EXTRA HEAVY CASING	SAMPLE SPOON
SIZES, INCHES	2.5		2.0
HAMMER WEIGHT, POUNDS	——		140
HAMMER FALL, INCHES	——		30

CB – CASING BLOWS PER 1 FOOT DRIVE
SB – SPOON BLOWS PER 6 INCH DRIVE
P – PUSHED BY WEIGHT OF HAMMER
UD – UNDISTURBED SOIL SAMPLE
NO – SAMPLE NUMBER
FEET – DEPTH FROM GND SUR. NOTED AT EACH 5'

THE LIABILITY OF SOIL MECHANICS DRILLING CORP., ITS OFFICERS OR EMPLOYEES, FOR ERRORS, OMISSIONS OR NEGLIGENCE RESULTING IN PERSONAL INJURIES, PROPERTY DAMAGE OR ANY CONSEQUENTIAL DAMAGES, IS LIMITED TO THE AMOUNT OF THE FEE PAID FOR THIS REPORT. THE RETENTION OR USE OF ANY PART OF THIS REPORT WILL CONSTITUTE AN ACCEPTANCE OF THIS LIMITATION OF LIABILITY. IF THIS IS UNACCEPTABLE, THE CLIENT MUST NOTIFY SOIL MECHANICS DRILLING CORP. IN WRITING BY CERTIFIED MAIL WITHIN SEVEN DAYS FROM THE DATE OF RECEIPT. THE FEE CHARGED FOR THIS REPORT IS BASED ON TH[illegible] WHICH IS OF THE ES[illegible]SENCE OF THIS AGREEMENT. IF THE CLIENT WANTS A HIGHER LIMITATION OF LIABILITY, SOIL MECHANICS DRILLING CORP. WILL [illegible] BE NO CHARGE [illegible] ASSUMPTION OF LIABILITY [illegible] EMPLOYEES HAVE NO LIABILITY OR RESPONSIBILITY TO P[illegible] OTHER THAN THE CLIENT FOR WHOM THIS REPORT WAS PREPARED. ANYONE, OTHER THAN OUR CLIENT, RELIES ON THIS REPORT AT THEIR OWN RISK.

SOIL MECHANICS DRILLING CORP.
subsoil investigations
3770 MERRICK ROAD · SEAFORD, NEW YORK 11783 · 516 221-2333

GRUMMAN BUILDING # 113
SUBSURFACE INVESTIGATION
HICKSVILLE, NEW YORK

VERTICAL BORING SCALE	DRAWING DATE	DRAWING NUMBER
1/4" = 1' - 0"	AUGUST 13, 1991 NAR	91R3962
DATES OF BORINGS: AUGUST 9, 1991	REVISED: OCTOBER 18, 1991	SHEET 1 OF 1