Click Here to Return to Main Document

DRAWINGS

WOODARD & CURRAN
Engineering · Science · Operations

DATE 1/8/01
DWN MG
APP
REV
PROJECT NO.
205223

DRAWING 1
ELECTRIC BOAT CORPORATION
SHIPYARD FACILITY
GROTON, CONNECTICUT
SITE LOCATION

0 200 400
SCALE IN FEET

LEGEND

- FORMER BUILDING/STRUCTURE LOCATION AND IDENTIFIER (AS OF MARCH 1998)
- CURRENT BUILDING/STRUCTURE LOCATION AND IDENTIFIER (AS OF MARCH 1998)
- FENCE LINE
- RAILROAD TRACKS
- SHORE LINE
- PROPERTY NOT OWNED BY ELECTRIC BOAT CORPORATION
- INVESTIGATION AREA IDENTIFIER
- INVESTIGATION AREA BOUNDARY
- INVESTIGATION REGION BOUNDARY

NORTH YARD
SH-01, SH-02, SH-03, SH-04, SH-05, SH-06

MAIN YARD
SH-09, SH-10, SH-12, SH-13, SH-18, SH-19

HILL AND PARKING AREA
SH-07, SH-08, SH-11, SH-14, SH-22

LAND LEVEL AND DOCK AREA
SH-17, SH-20

SOUTH YARD
SH-15, SH-16, SH-21, SH-23, SH-24, SH-25, SH-26, SH-27, SH-28, SH-29, SH-30

NOTES

1. THE TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN HEREON WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED MAY 3, 1990 BY L. ROBERT KIMBALL AND ASSOCIATES OF EBENSBURG, PA. THESE FEATURES HAVE NOT BEEN RESURVEYED TO VERIFY THE ACCURACY OF THE SAME. ADDITIONAL FEATURES WERE ADDED BASED ON A FIELD CHECK OF THE ABOVE MENTIONED BASE MAP ALONG WITH VARIOUS FIELD SURVEYS CONDUCTED AS PART OF THE INVESTIGATION.
2. THE GRID SYSTEM USED IS THE CONNECTICUT STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM 1983 (NAD 83), EXPRESSED IN FEET (GRID NOT SHOWN ON DRAWING).
3. THE VERTICAL DATUM IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29), EXPRESSED IN FEET.
4. EXISTING SITE HORIZONTAL AND VERTICAL SURVEY CONTROL AND MONUMENTATION WAS ESTABLISHED FROM FIELD SURVEYS CONDUCTED FROM SEPTEMBER 1993 THROUGH DECEMBER 1997.
5. SAMPLING POINTS SHOWN ON THIS DRAWING WERE LOCATED THE FIELD USING GROUND CONTROL CLOSED TRAVERSE SURVEYS WITH AN ELECTRONIC TOTAL STATION.
6. THE SURVEY DATA AS PRESENTED ON THIS PLAN WAS CORRECT AT THE TIME THIS PLAN WAS PRODUCED. ANY AND ALL DATA IS SUBJECT TO CHANGE WITH TIME AND WE ASSUME NO RESPONSIBILITY FOR THE USE OF INCORRECT OR OUTDATED INFORMATION. FOR VERIFICATION OR UPDATE OF SURVEY DATA FOR THIS SITE CONTACT WOODARD & CURRAN.

REV	DATE	DESCRIPTION	DRN BY	DES BY	CHK BY	APP BY

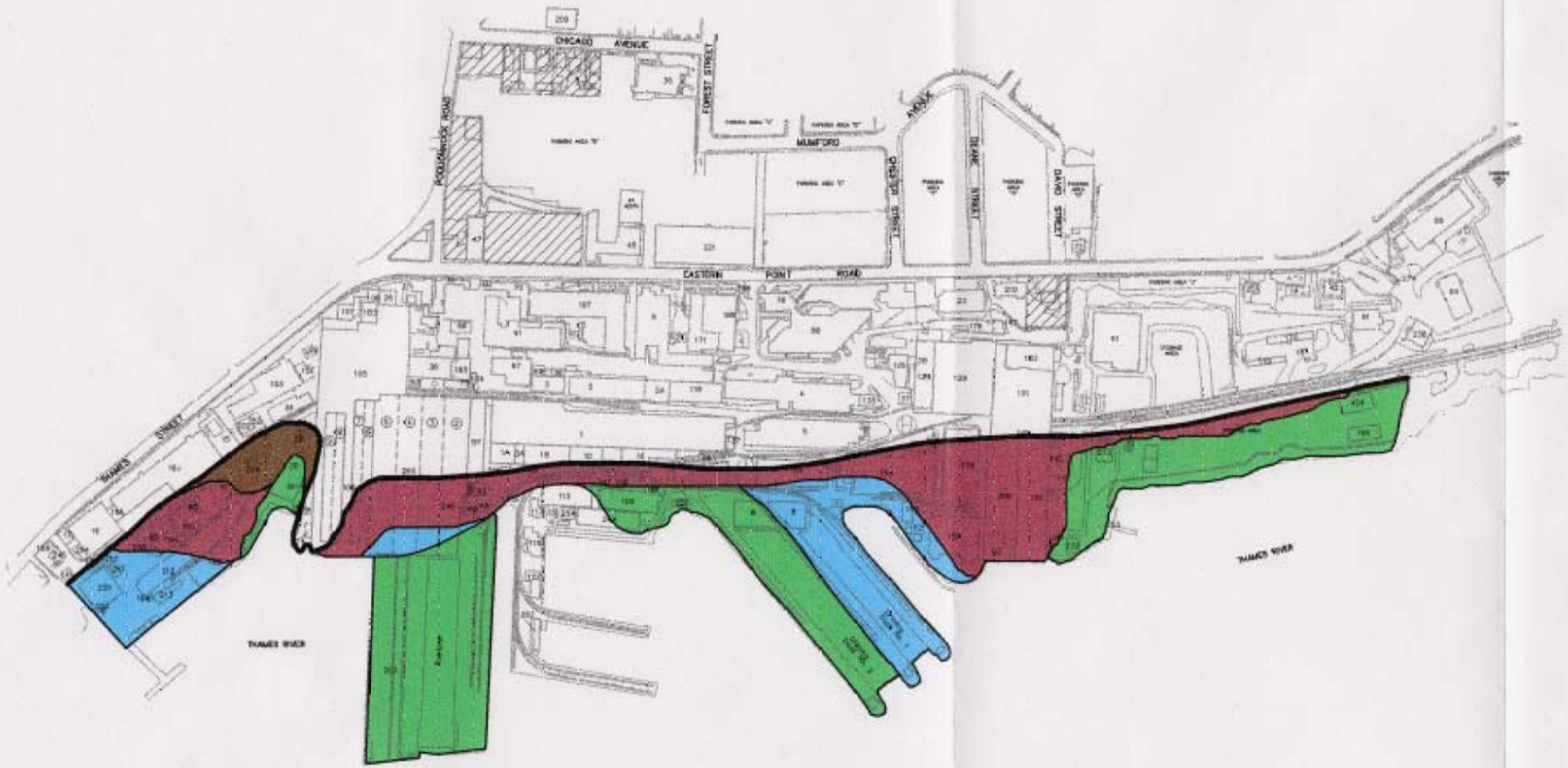
DATE OF ISSUE 1/16/01 — DRN BY EVR — DES BY JAH — CHK BY — APP BY

WOODARD & CURRAN
Engineering · Science · Operations

ELECTRIC BOAT CORPORATION
SHIPYARD FACILITY
GROTON, CONNECTICUT

SITE PLAN AND INVESTIGATION AREAS

DRAWING NO. 2
PROJECT NO. 205213



LEGEND

- FORMER BUILDING/STRUCTURE LOCATION AND IDENTIFIER (AS OF MARCH 1998)
- CURRENT BUILDING/STRUCTURE LOCATION AND IDENTIFIER (AS OF MARCH 1998)
- FENCE LINE
- RAILROAD TRACKS
- SHORE LINE
- PROPERTY NOT OWNED BY ELECTRIC BOAT CORPORATION
- PRE-ELECTRIC BOAT SHORE-LINE (CIRCA 1910s). DATA OBTAINED FROM MAPS ENTITLED PLAN SHOWING PROPOSED LOCATION FOR ELECTRIC RAILWAY FROM GROTON TO MYSTIC THROUGH THE TOWN OF GROTON (1902) AND THE EASTERN SHIPBUILDING COMPANY (MAY 4, 1903).
- APPROXIMATE AREA OF 1920s/1930s FILLING EVENT. DATA OBTAINED FROM 1934 AERIAL PHOTOGRAPH.
- APPROXIMATE AREA OF EARLY 1940s FILLING EVENT. DATA OBTAINED FROM SHIPYARD FACILITY YARD PLAN DATED JUNE 1942.
- APPROXIMATE AREA OF 1960s FILLING EVENT. DATA OBTAINED FROM SHIPYARD FACILITY YARD PLAN DATED NOVEMBER 19, 1962 AND 1965 AERIAL PHOTOGRAPH.
- APPROXIMATE AREA OF 1970s FILLING EVENT. DATA OBTAINED FROM SHIPYARD FACILITY YARD PLAN DATED DECEMBER 5, 1975 AND 1970 AND 1975 AERIAL PHOTOGRAPHS.

0 200 400
SCALE IN FEET

REV	DATE	DESCRIPTION	DRN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 1/8/01 DRN BY EVR DES BY CHK BY APP BY

WOODARD & CURRAN
Engineering · Science · Operations

ELECTRIC BOAT CORPORATION
SHIPYARD FACILITY
GROTON, CONNECTICUT

HISTORIC WATERFRONT FILL AREAS

DRAWING NO. 3
PROJECT NO. 205223

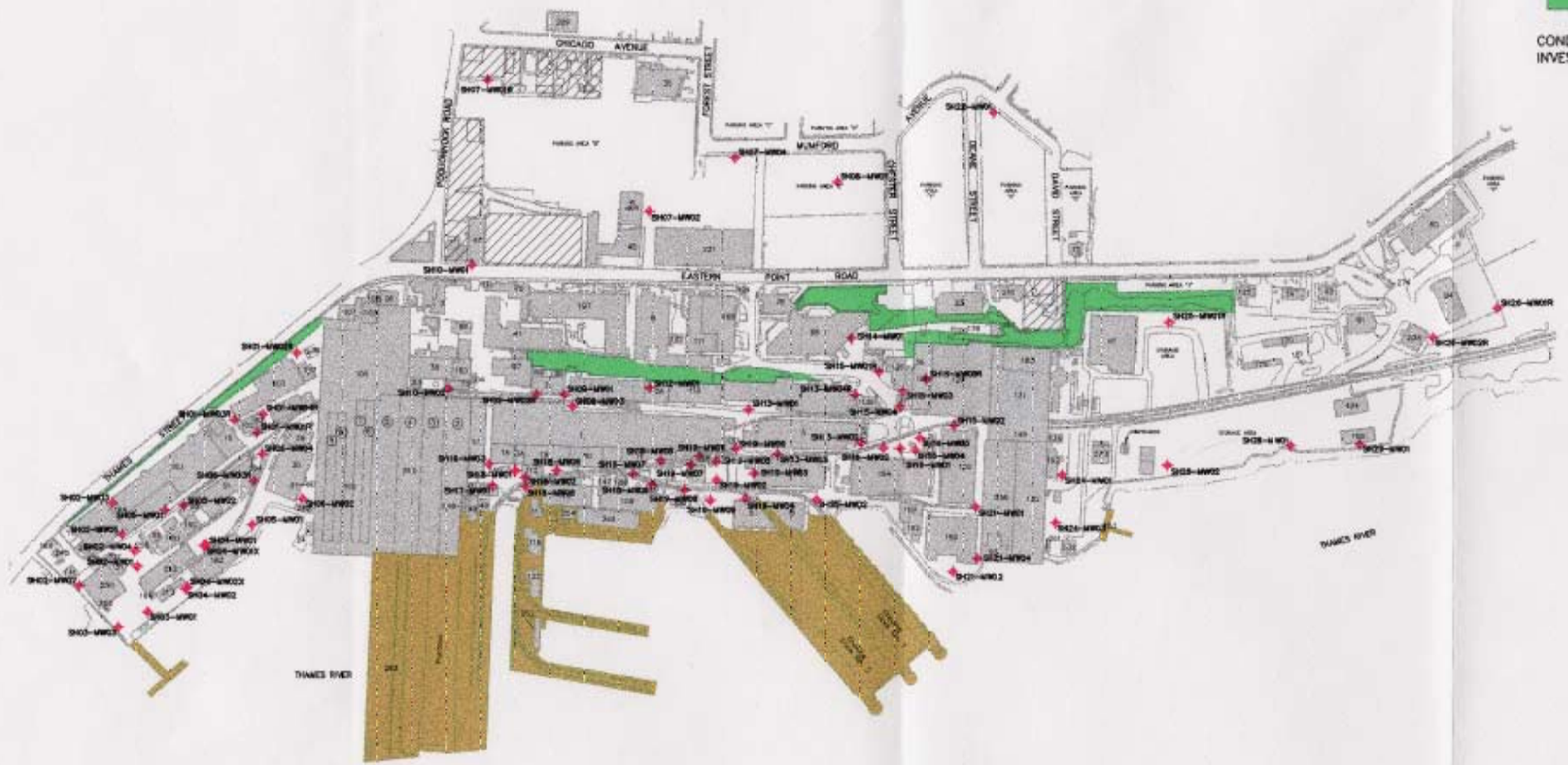
LEGEND

SH26-MW01R ◆ MONITORING WELL LOCATION AND IDENTIFIER

INACCESSIBLE/RESTRICTED ACCESS AREAS

- BUILDINGS/STRUCTURES
- GRAVING DOCKS/WET DOCKS/PIERS
- STEEP HILLSLOPE

CONDITIONS DEPICTED AT TIME OF RFI FIELD INVESTIGATION (1993–1998).



0 200 400
SCALE IN FEET

REV	DATE	DESCRIPTION	DRN BY	CKD BY	DSC BY	APP BY
	1/8/01		CJR			

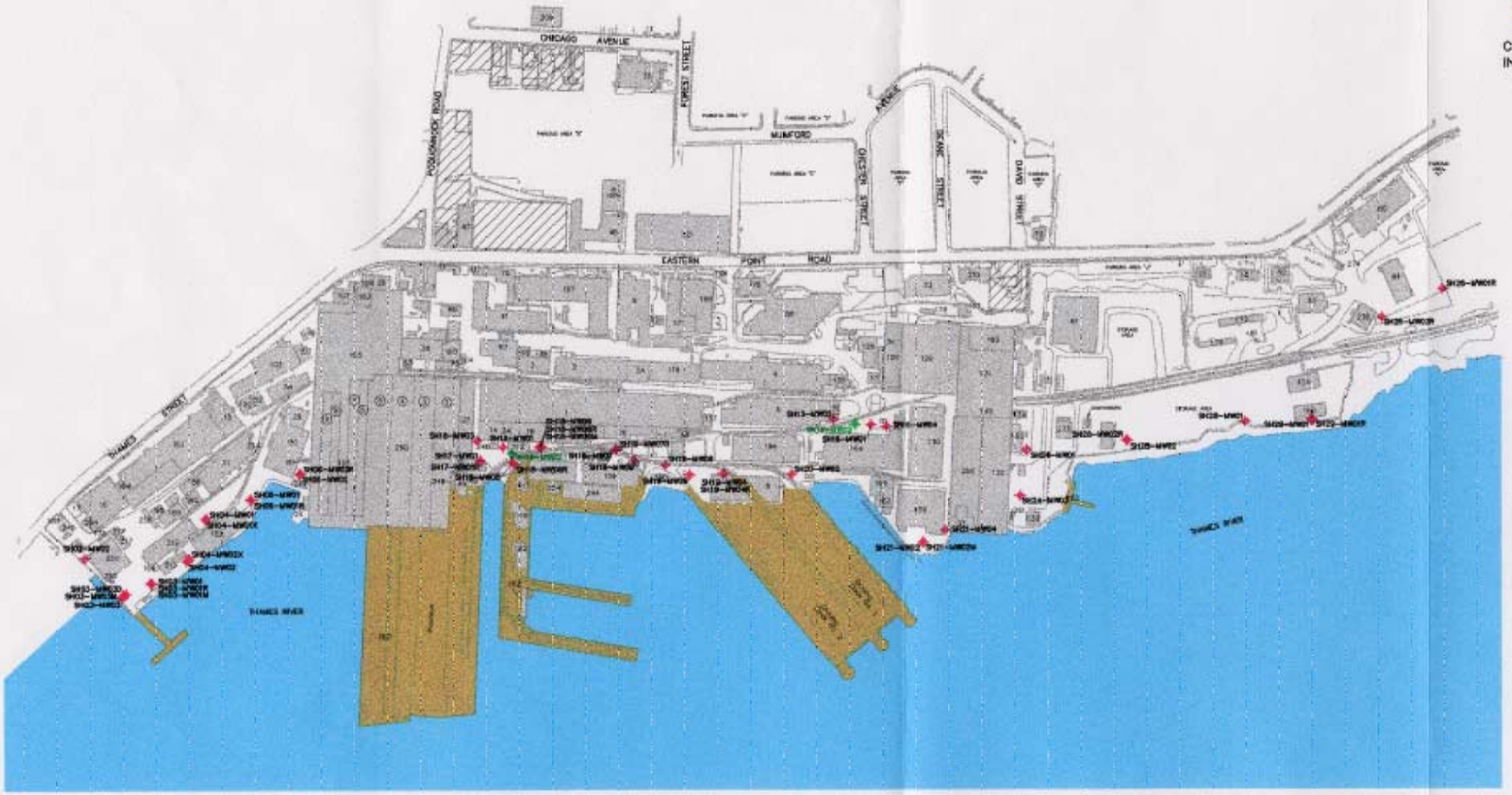
WOODARD & CURRAN
Engineering · Science · Operations

ELECTRIC BOAT CORPORATION
SHIPYARD FACILITY
GROTON, CONNECTICUT

MONITORING WELL LOCATIONS USED IN COMPARISON TO THE VOLATILIZATION I/C CRITERIA

DRAWING NO. 4

PROJECT NO. 395223



LEGEND

SH26-MW01R — MONITORING WELL LOCATION AND IDENTIFIER

SH16-MW02 — MONITORING WELL WITH CONSTITUENTS DETECTED IN EXCESS OF THE SWPC (PHENANTHRENE ONLY)

INACCESSIBLE/RESTRICTED ACCESS AREAS

BUILDINGS/STRUCTURES

GRAVING DOCKS/WET DOCKS/PIERS

CONDITIONS DEPICTED AT TIME OF RFI FIELD INVESTIGATION (1993–1998).

0 200 400
SCALE IN FEET

REV	DATE	DESCRIPTION	DSN BY	DES BY	CHK BY	APP BY
DATE OF ISSUE 1/8/01		DSN BY EVR DES BY	CHK BY APP BY			

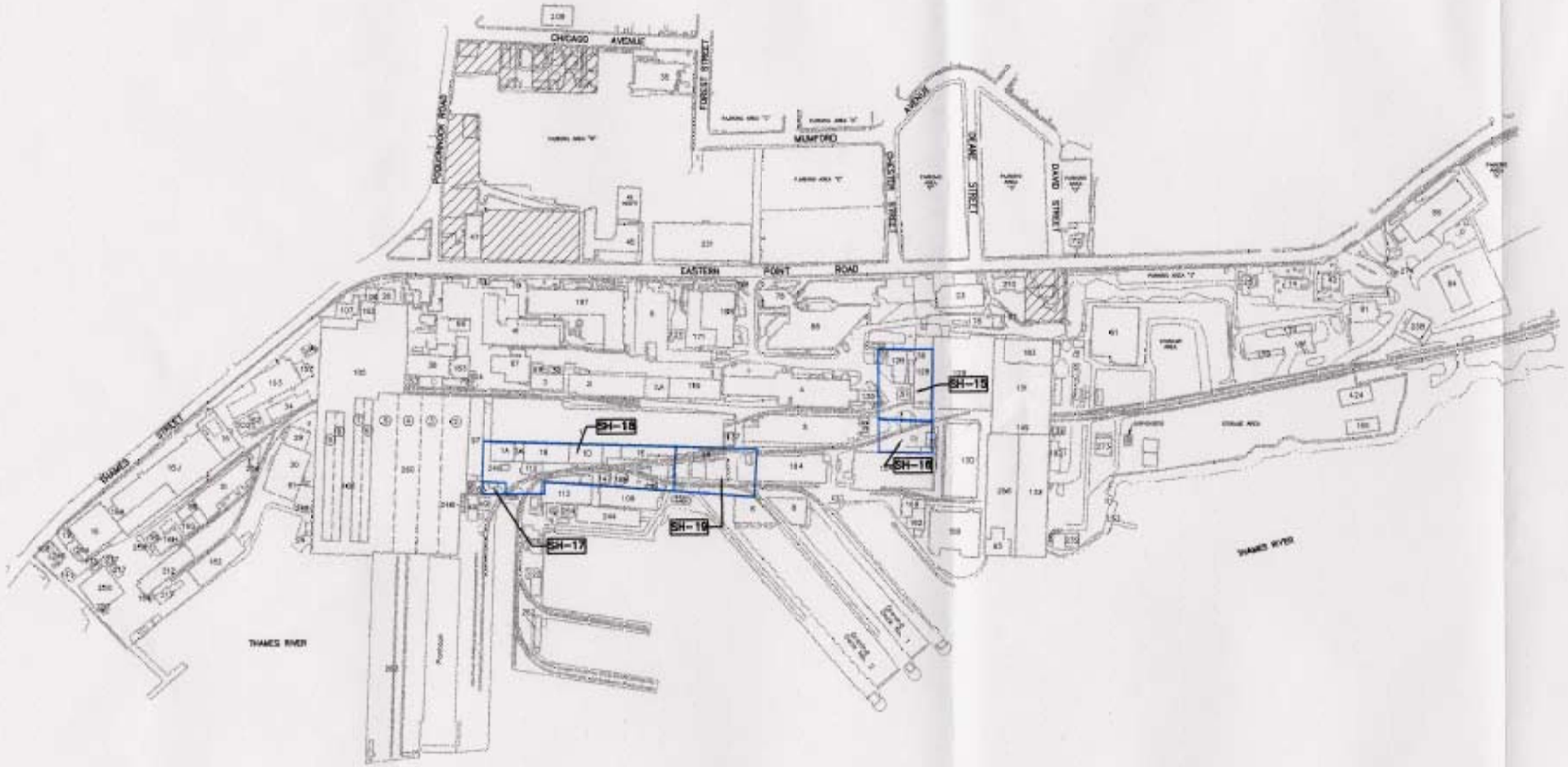
WOODARD & CURRAN
Engineering · Science · Operations

ELECTRIC BOAT CORPORATION
SHIPYARD FACILITY
GROTON, CONNECTICUT

MONITORING WELL LOCATIONS
USED IN THE COMPARISON TO THE SWPC

DRAWING NO. 5

PROJECT NO. 205223



LEGEND

- FORMER BUILDING/STRUCTURE LOCATION AND IDENTIFIER (AS OF MARCH 1998)
- CURRENT BUILDING/STRUCTURE LOCATION AND IDENTIFIER (AS OF MARCH 1998)
- FENCE LINE
- RAILROAD TRACKS
- SHORE LINE
- PROPERTY NOT OWNED BY ELECTRIC BOAT CORPORATION
- SH-25 INVESTIGATION AREA IDENTIFIER

NOTES

1. THE TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN HEREON WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED MAY 2, 1990 BY L. ROBERT KIMBALL AND ASSOCIATES OF EBENSBURG, PA. THESE FEATURES HAVE NOT BEEN RESURVEYED TO VERIFY THE ACCURACY OF THE SAME. ADDITIONAL FEATURES WERE ADDED BASED ON A FIELD CHECK OF THE ABOVE MENTIONED BASE MAP ALONG WITH VARIOUS FIELD SURVEYS CONDUCTED AS PART OF THE INVESTIGATION.
2. THE GRID SYSTEM USED IS THE CONNECTICUT STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD 83), EXPRESSED IN FEET (GRID NOT SHOWN ON DRAWING).
3. THE VERTICAL DATUM IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29), EXPRESSED IN FEET.
4. EXISTING SITE HORIZONTAL AND VERTICAL SURVEY CONTROL AND MONUMENTATION WAS ESTABLISHED FROM FIELD SURVEYS CONDUCTED FROM SEPTEMBER 1993 THROUGH DECEMBER 1997.
5. SAMPLING POINTS SHOWN ON THIS DRAWING WERE LOCATED THE FIELD USING GROUND CONTROL CLOSED TRAVERSE SURVEYS WITH AN ELECTRONIC TOTAL STATION.
6. THE SURVEY DATA AS PRESENTED ON THIS PLAN WAS CORRECT AT THE TIME THIS PLAN WAS PRODUCED. ANY AND ALL DATA IS SUBJECT TO CHANGE WITH TIME AND WE ASSUME NO RESPONSIBILITY FOR THE USE OF INCORRECT OR OUTDATED INFORMATION. FOR VERIFICATION OR UPDATE OF SURVEY DATA FOR THIS SITE CONTACT WOODARD & CURRAN.

0 200 400
SCALE IN FEET

REV	DATE	DESCRIPTION	DRN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 1/8/01 DRN BY EWR DES BY JAH CHK BY APP BY

WOODARD & CURRAN
Engineering · Science · Operations

ELECTRIC BOAT CORPORATION
SHIPYARD FACILITY
GROTON, CONNECTICUT

INVESTIGATION AREAS WITH
SEPARATE PHASE PETROLEUM PRODUCT

DRAWING NO. 6
PROJECT NO. 205223

HIGH TIDE

LOW TIDE

0 300 600
SCALE IN FEET

LEGEND

34	FORMER BUILDING/STRUCTURE LOCATION AND IDENTIFIER (AS OF MARCH 1996)
197	CURRENT BUILDING/STRUCTURE LOCATION AND IDENTIFIER (AS OF MARCH 1996)
	FENCE LINE
	SHORE LINE
	RAILROAD TRACKS
SHOW-MW01	MONITORING WELL LOCATION AND IDENTIFIER R = BEDROCK WELL SCREEN C = REPLACEMENT WELL
	ALTITUDE OF WATER TABLE SURFACE ON NOVEMBER 20, 1997 IN FEET ABOVE OR BELOW (-) NATIONAL GEODETIC VERTICAL DATUM OF 1929. GROUNDWATER ALTITUDE REPORTED FOR OVERBURDEN WELLS SCREENED ACROSS THE TOP OF THE GROUNDWATER SURFACE AND BEDROCK WELLS WHERE THE FIRST WATER ENCOUNTERED IS AT OR NEAR THE SCREEN INTERVAL. ASTERISK (*) INDICATES THE MEASURED GROUNDWATER ALTITUDE WAS ADJUSTED DUE TO THE PRESENCE OF FLOATING SEPARATE PHASE PRODUCT.
	GROUNDWATER CONTOUR - SHOWS APPROXIMATE ALTITUDE OF THE WATER TABLE SURFACE ON NOVEMBER 20, 1997. CONTOUR INTERVAL = 10 FEET. ARROWS INDICATE GENERALIZED DIRECTION OF GROUNDWATER FLOW. DATUM IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.

NOTES

1. THE TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN HEREON WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED MAY 2, 1990 BY L. ROBERT KIMBALL AND ASSOCIATES OF PITTSBURG, PA. THESE FEATURES HAVE NOT BEEN RESURVEYED TO VERIFY THE ACCURACY OF THE SAME. ADDITIONAL FEATURES WERE ADDED BASED ON A FIELD CHECK OF THE ABOVE MENTIONED BASE MAP ALONG WITH VARIOUS FIELD SURVEYS CONDUCTED AS PART OF THE INVESTIGATION.
2. THE GRID SYSTEM USED IS THE CONNECTICUT STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD 83), EXPRESSED IN FEET (GRID NOT SHOWN ON DRAWING).
3. THE VERTICAL DATUM IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29), EXPRESSED IN FEET.
4. EXISTING SITE HORIZONTAL AND VERTICAL SURVEY CONTROL AND MONUMENTATION WAS ESTABLISHED FROM FIELD SURVEYS CONDUCTED FROM SEPTEMBER 1993 THROUGH DECEMBER 1997.
5. SAMPLING POINTS SHOWN ON THIS DRAWING WERE LOCATED THE FIELD USING GROUND CONTROL CLOSED TRAVERSE SURVEYS WITH AN ELECTRONIC TOTAL STATION.
6. THE SURVEY DATA AS PRESENTED ON THIS PLAN WAS CORRECT AT THE TIME THIS PLAN WAS PRODUCED. ANY AND ALL DATA IS SUBJECT TO CHANGE WITH TIME AND WE ASSUME NO RESPONSIBILITY FOR THE USE OF INCORRECT OR OUTDATED INFORMATION. FOR VERIFICATION OR UPDATE OF SURVEY DATA FOR THIS SITE CONTACT WOODARD & CURRAN.

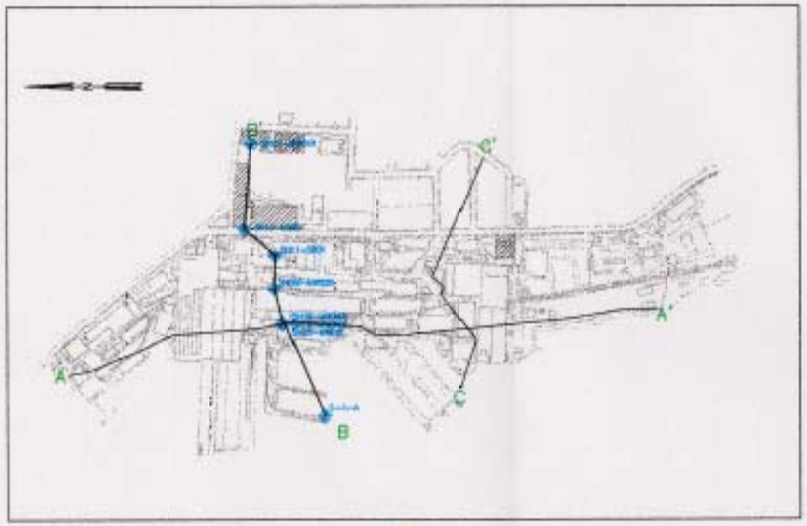
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 1/8/01 DWN BY CVW CHK BY
DES BY APP BY

WOODARD & CURRAN
Engineering · Science · Operations

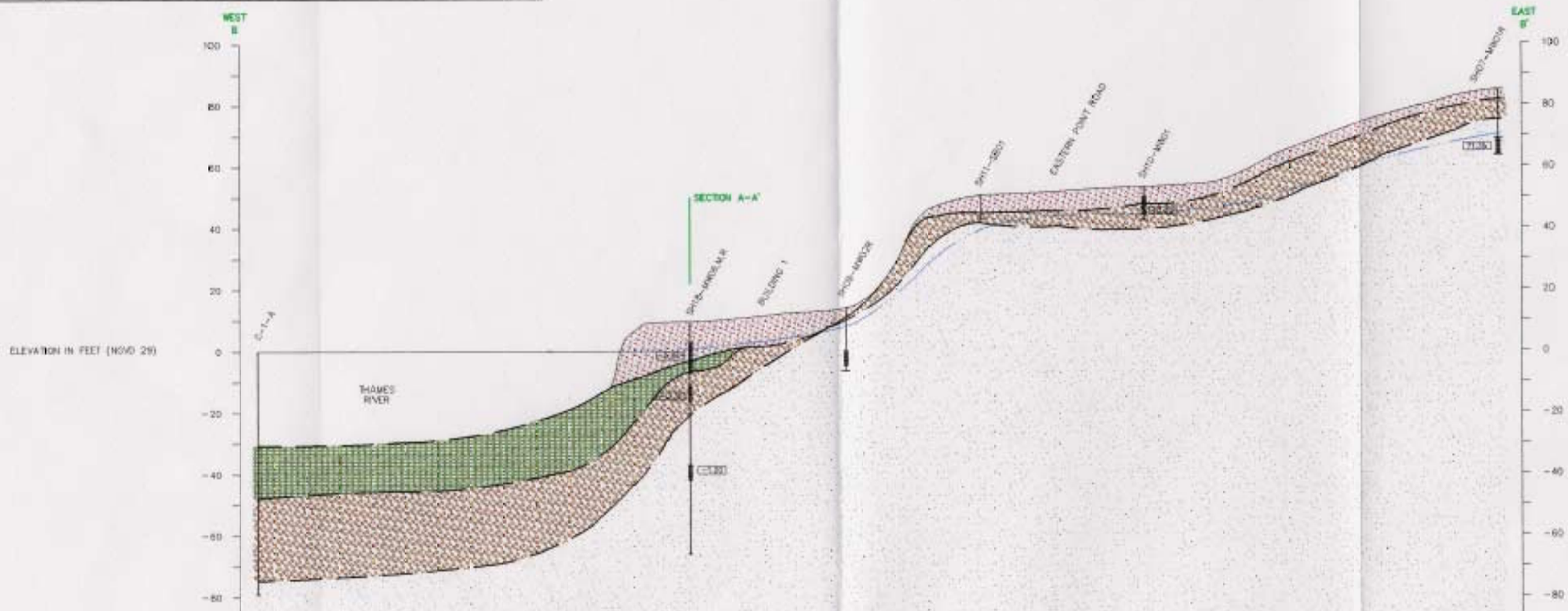
ELECTRIC BOAT CORPORATION
SHIPYARD FACILITY
GROTON, CONNECTICUT
APPROXIMATE CONFIGURATION OF THE WATER TABLE SURFACE AT HIGH AND LOW TIDE
NOVEMBER 20, 1997

DRAWING NO. 7
PROJECT NO. 295203



LEGEND

SH18-MW08 / SH18-MW08M / SH18-MW08R	MONITORING WELL LOCATION AND IDENTIFIER M – INTERMEDIATE WELL SCREEN R – BEDROCK WELL SCREEN NO LETTER DESIGNATION INDICATES A WATER TABLE WELL
	MONITORING WELL SCREEN INTERVAL
SH09-SB03	SOIL BORING LOCATION AND IDENTIFIER
	APPROXIMATE GROUNDWATER SURFACE ALTITUDE AT LOW TIDE ON AUGUST 13, 1997.
9.35	POTENTIOMETRIC HEAD ALTITUDE MEASURED AT LOW TIDE ON AUGUST 13, 1997. ASTERIX INDICATES ALTITUDE ADJUSTED DUE TO PRESENCE OF SEPARATE PHASE PRODUCT. ALL ELEVATIONS ARE IN FEET ABOVE OR BELOW (–) NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
	INFERRED GEOLOGIC CONTACT
B B'	SECTION IDENTIFIER
FILL	BROWN TO BLACK, COARSE TO FINE SAND AND GRAVEL, WITH VARYING AMOUNTS OF SILT OR CLAY AND OCCASIONAL DEBRIS (WOOD, METAL ASPHALT, ETC.)
ORGANIC SILT	GRAY CLAYEY SILT WITH A LITTLE FINE SAND AND ORGANIC MATERIAL
TILL	BROWN TO GRAY, COARSE TO FINE SAND AND GRAVEL WITH VARYING AMOUNTS OF SILT AND CLAY IN A POORLY SORTED, DENSE MATRIX
BEDROCK	LIGHT GRAY TO DARK GRAY, MODERATELY HARD TO VERY HARD, MEDIUM TO FINE GRAINED, GNEISS. NEW LONDON GNEISS FORMATION.



0 20 40 VERTICAL SCALE IN FEET

0 100 200 HORIZONTAL SCALE IN FEET

VERTICAL EXAGGERATION 5X

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 1/8/01 DWN BY EVR DES BY JAH CHK BY APP BY

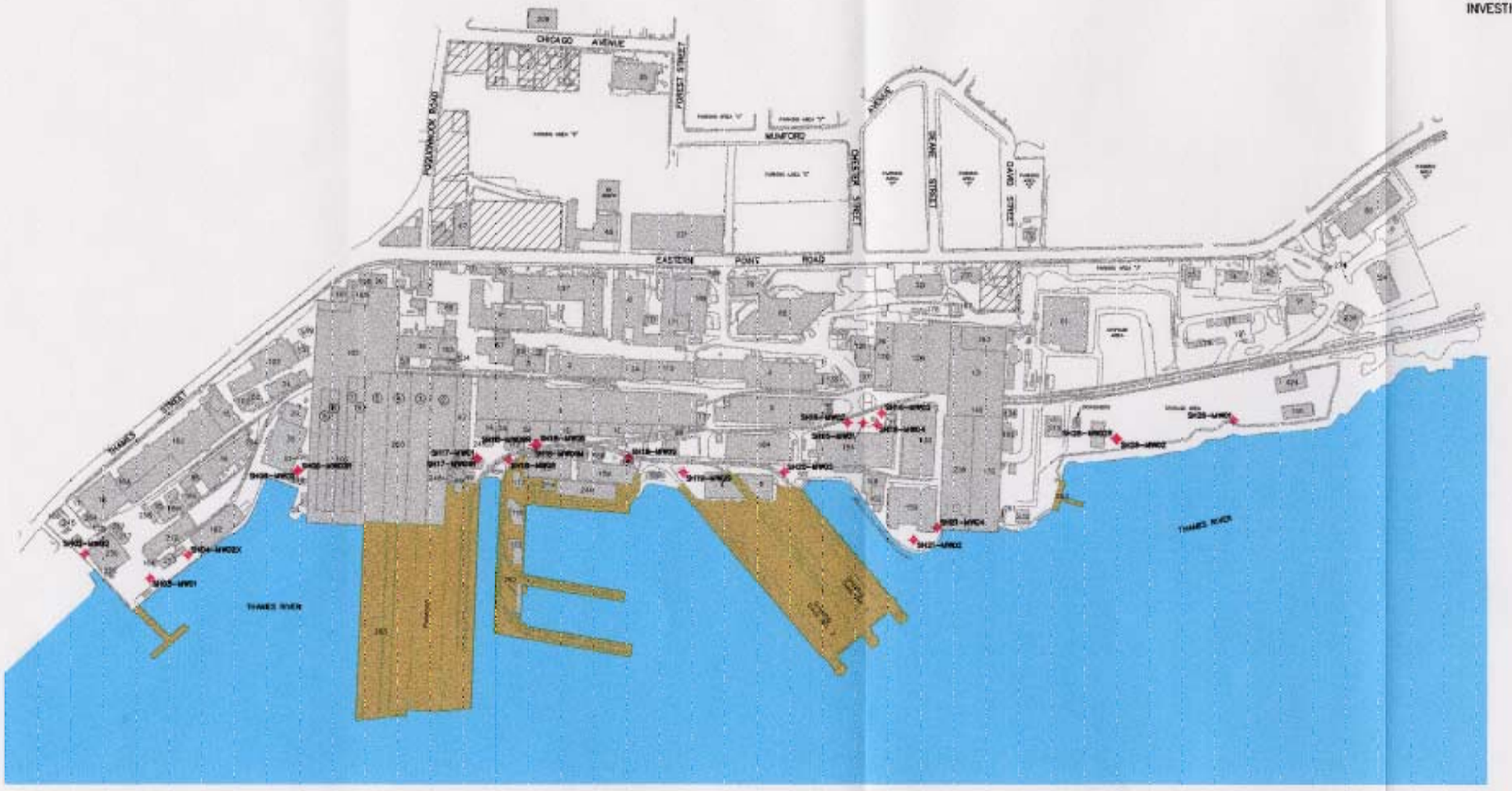
WOODARD & CURRAN
Engineering · Science · Operations

ELECTRIC BOAT CORPORATION
SHIPYARD FACILITY
GROTON, CONNECTICUT

HYDROGEOLOGIC SECTION B-B'

DRAWING NO. **8**

PROJECT NO. 395223



LEGEND

SH26-MW01R — MONITORING WELL LOCATION AND IDENTIFIER

INACCESSIBLE/RESTRICTED ACCESS AREAS

BUILDINGS/STRUCTURES

GRAVING DOCKS/WET DOCKS/PIERS

CONDITIONS DEPICTED AT TIME OF RFI FIELD INVESTIGATION (1993-1998).

0 200 400
SCALE IN FEET

REV	DATE	DESCRIPTION	DRN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 1/8/01 — DRN BY EVR — DES BY — CHK BY — APP BY

WOODARD & CURRAN
Engineering · Science · Operations

ELECTRIC BOAT CORPORATION
SHIPYARD FACILITY
GROTON, CONNECTICUT

MONITORING WELL PROGRAM SAMPLE LOCATIONS

DRAWING NO. 9

PROJECT NO. 205233