

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CONSTRUCTION CONTRACT

MARILYN GELBER
COMMISSIONER



ROBERT P. LEMIEUX
FIRST DEPUTY COMMISSIONER

BUREAU OF ENVIRONMENTAL ENGINEERING
DIVISION OF PLANT DESIGN

ADDENDA TO CONTRACT DOCUMENTS VOLUME NO. 3

FOR FURNISHING ALL LABOR AND MATERIAL
NECESSARY AND REQUIRED FOR:

CONTRACT 876-HP

GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
HUNTS POINT DRAINAGE AREA

BOROUGH OF THE BRONX
NEW YORK

MAY 1994



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This book contains addenda as listed below.

All bidders should check this book carefully to verify that all the addenda are included. Should any addenda be missing, notify the Commissioner in writing as soon as possible.

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NOTE: This Table of Contents should be signed, dated, detached from the book and submitted by the bidder with his bid.

Marilyn Gelber
Commissioner

NAME OF BIDDER

By_____

Date_____

CONTRACT 876-HP
GEOMEMBRANE AND GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX, NEW YORK

ADDENDA TO CONTRACT DOCUMENTS - VOLUME NO. 3 - MAY 1994

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 15 - Construction Signs

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. In compliance with the requirements of the Mayor's Transportation Construction Coordination Committee (MTCCC), provide a minimum of four (4) "Trucks Entering Road" signs. Each sign shall be diamond shaped and measure 48 inches by 48 inches. The sign lettering shall be black on orange background. The signs shall be placed on all access roads 500 feet from the entrance to the Pelham Bay Landfill site.

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 16 - New Topographic Survey

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

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1. Enclosed, at the end of this addenda volume, is the latest topographic survey of the Pelham Bay Landfill site (Drawing No. TS.1). The survey is dated April 5, 1994 and presents the existing and latest site conditions.

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 17 - Contractor's Qualifications

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Insert between pages 577 and 580 of the Specifications the Contractor's Qualifications requirements, attached.

PELHAM BAY LANDFILL
CONTRACT 876-HP

CONTRACTOR'S QUALIFICATIONS

All prospective bidders must submit a statement of qualifications addressing their experience in performing work, similar in scope and magnitude to that described herein and shown on the Contract Drawings.

As a minimum, the bidder must submit evidence of a minimum of five (5) years experience performing similar work, a list of three (3) completed projects within the past five (5) years, with appropriate references, similar in scope and magnitude to the proposed project, resumes of personnel that will be working on the project, and certification that the bidder has sufficient appropriate equipment and qualified personnel to perform the work. The certification shall include documentation showing the number and type of equipment owned by the Contractor or available to him to use on the project. It shall also include the number and qualifications of personnel to be used on the project and the percent of time they will be available.

Each bidder must also supply the Engineer with evidence, including operating procedures, training, and medical surveillance of personnel, and accident prevention, that he is familiar with all relevant safety protocols and associated regulations concerning performance of work on hazardous waste sites.

This submittal must be made to DEP after the bid opening and prior to the award of the Contract, within the time limits to be set by DEP. Failure to submit this information within the specified time period may result in a disqualification of the Contractor's bid.

The final determination and approval of the Contractor's qualifications shall be made by the DEP. Failure to meet these qualifications may result in a rejection of the Contractor's bid and non-award of Contract to him.

**NO
TEXT
ON
THIS
PAGE**

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 18 - Clarification on Addendum No. 13

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. The following clarifications apply to the drawing entitled: "Proposed Water Main in Borough of the Bronx, April 1994, New Temporary [24"] Water Main Offset Around Pelham Bay Landfill", presented in Addendum No. 13 and supplied by the City of New York, Department of Environmental Protection, Bureau of Water Supply and Wastewater Collection.
 - a. "Clean Sand" refers to "Sand Pack" as specified on page 666 of the Specifications, Part 2, paragraph 2.1 - Sand Pack.
 - b. "Gravel Bedding" refers to "Pipe and Manhole Bedding" as specified on page 685 of the Specifications, Part 2.1, paragraph 2.1A - Pipe and Manhole Bedding.
 - c. "Approve Backfill Material" refers to "Trench Backfill" as specified on page 685 of the Specifications, Part 2.1, paragraph 2.1C - Trench Backfill.
 - d. "CONT. 875-HP" should read "CONT. 876-HP".

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 19 - General Conditions - Schedule "A"

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Page 257 of the Specifications, for item that reads " Time of Completion" under "Requirements" (4th paragraph from the top) Replace "546" with "517".

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 20 - Addendum to Schedule of Prevailing Wages

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Page 248 of the Specifications... After this page, insert Addendum Number 3 to the New York City Schedule of Prevailing Wages, attached.



THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
1 CENTRE STREET
NEW YORK, N.Y. 10007-2341

ALAN G. HEVESI
COMPTROLLER

February 4, 1994

TO ALL CITY AGENCIES

Attached is ADDENDUM NO. 3 of the Section 220
Prevailing Wage Schedule, which Addendum covers
the period from February 4, 1994 through June 30,
1994. Please notify all contractors of these
changes.

Very truly yours,

THOMAS C. NODELL, Chief
Division of Labor Law

DEPT. OF CONTRACTS
MANAGEMENT DIVISION
94 FEB 16 PM 4:00

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK

ADDENDUM TO SECTION 220 NEW YORK STATE LABOR LAW

SCHEDULE OF PREVAILING RATES AND SUPPLEMENTAL BENEFITS

ADDENDUM NO. 3 DATED FEBRUARY 4, 1994

CARPENTERS, DOCKBUILDERS
PLASTERERS, HEAT & FROST INSULATOR

CLASSIFICATION:

	<u>Wage Rate</u> <u>Per Hour</u>	<u>Supplemental</u> <u>Benefit Rate</u> <u>Per Hour</u>
Carpenter	\$25.96	\$15.05
(Effective January 1, 1994)	\$26.47	\$15.55

OVERTIME:

Paid at time and a half after a seven hour day.

EFFECTIVE PERIOD FEBRUARY 4, 1994 THROUGH JUNE 30, 1994

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK

ADDENDUM TO SECTION 220 NEW YORK STATE LABOR LAW

SCHEDULE OF PREVAILING RATES AND SUPPLEMENTAL BENEFITS

ADDENDUM NO. 3 DATED FEBRUARY 4, 1994

CLASSIFICATION:

	<u>Wage Rate</u> <u>Per Hour</u>	<u>Supplemental</u> <u>Benefit Rate</u> <u>Per Hour</u>
Dockbuilder	\$25.96	\$15.05
(Effective January 1, 1994)	\$26.47	\$15.55

OVERTIME:

Paid at time and one half after a seven hour day.

EFFECTIVE PERIOD FEBRUARY 4, 1993 THROUGH JUNE 30, 1994
(2)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK

ADDENDUM TO SECTION 220 NEW YORK STATE LABOR LAW

SCHEDULE OF PREVAILING RATES AND SUPPLEMENTAL BENEFITS

ADDENDUM NO. 3 DATED FEBRUARY 4, 1994

CLASSIFICATION:

	<u>Wage Rate</u> <u>Per Hour</u>	<u>Supplemental</u> <u>Benefit Rate</u> <u>Per Hour</u>
Plasterer	\$24.05	\$12.01
(Effective January 1, 1994)		\$12.51

OVERTIME:

Paid at time and one half after a seven hour day.

PLASTERER REHABILITATION WORK ONLY

WAGE RATE PER HOUR

\$ 19.24

SUPPLEMENTAL BENEFIT RATE PER HOUR:

\$ 12.01

\$ 12.51 (Effective 1/1/94)

OVERTIME:

Paid at time and one half after an eight hour day.

EFFECTIVE PERIOD FEBRUARY 4, 1993 THROUGH JUNE 30, 1994

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK

ADDENDUM TO SECTION 220 NEW YORK STATE LABOR LAW

SCHEDULE OF PREVAILING RATES AND SUPPLEMENTAL BENEFITS

ADDENDUM NO. 3 DATED FEBRUARY 4, 1994

CLASSIFICATION:

	<u>Wage Rate</u> <u>Per Hour</u>	<u>Supplemental</u> <u>Benefit Rate</u> <u>Per Hour</u>
Heat & Frost Insulator	\$27.72	\$17.20
(Effective January 1, 1994)		\$17.55

OVERTIME:

Paid at double time after a seven hour day.

EFFECTIVE PERIOD FEBRUARY 4, 1993 THROUGH JUNE 30, 1994

(4)

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 21 - References to Section 02936 in Specifications

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
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GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Section 02936 - Seeding of the Specifications has been deleted in its entirety as per Addendum No. 3 (Addenda Volume No. 1) and replaced by Sections 02910, 02920, 02930, 02940, 02950, and 02960 (Addenda Nos. 4 to 9 of Addenda Volume No. 1, respectively). All references to Section 02936 and to work involving Vegetated Topsoil materials in the Specifications shall refer to the requirements of Sections 02910, 02920, 02930, 02940, 02950, and 02960, where applicable.

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 22 - Specification Section 01025

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Delete Section 01025 and replace with the revised version, attached. Revisions made to this Section occurred in paragraphs 1.4B and 1.5.

**SECTION 01025
MEASUREMENT AND PAYMENT**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Description of methods for measuring of and paying for work placed in accordance with the Contract Documents.

1.2 RELATED SECTIONS

- A. Section 00100 - Information for Bidders and Contract Agreement.

1.3 AUTHORITY

- A. Measurement methods delineated in the individual specification sections are intended to complement the criteria of this section.
- B. Take all measurements and compute quantities. The Resident Engineer will verify measurements and quantities.
- C. Assist Resident Engineer in verifying measurements and quantities by providing necessary equipment, workers, and survey personnel as required.

1.4 UNIT QUANTITIES SPECIFIED

- A. Quantities and measurements indicated in the bid form are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by the Resident Engineer shall determine payment.
- B. If the actual Work requires greater or fewer quantities than those quantities indicated, provide the required quantities at the unit sum/prices contracted, unless otherwise specified.

1.5 MEASUREMENT OF QUANTITIES

- A. Measurement Devices:
 - 1. Weight scales: inspected, tested, and certified by the New York State Weights and Measures department within the past year.
 - 2. Platform scales: of sufficient size and capacity to accommodate the conveying vehicle.

3. Metering devices: inspected, tested, and certified by the applicable New York State Weights and Measures department within the past year.
- B. Measurement by weight: Rolled or formed steel, or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
- C. Measurement by volume: Measured by cubic dimension using mean length, width, and height or thickness. Earthwork volumes will be calculated by the average end area method.
- D. Measurement by area: Measured by square dimension using mean length and width or radius.
- E. Linear measurement: Measured horizontally by linear dimension, at the item centerline or mean chord.
- F. Lump sum item/price measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed items or unit of the Work in place.
- G. The work measured for payment consists of furnishing all labor, supplies, materials, equipment, plant and incidentals and performing all work in strict accordance with but not limited to the Drawings, specifications, schedules, drawings and amendments forming part herein. The work will be measured for payment as follows:
 1. General Requirements will not be measured for payment but will be paid on a lump sum basis.
 2. Field Offices (Office Trailer Rental) will be paid on a fixed unit price per month at the unit price indicated on the Bid Form.
 3. Field Offices (Operation and Maintenance) will be paid on a unit price per month basis.
 4. Field Offices (Supply Allowance) will not be measured for payment but will be paid on a lump sum basis and subject to payment conditions under Specification Section 01590, paragraph 3.6 for the amount indicated on the Bid Form.
 5. Groundwater Sampling Equipment will not be measured for payment but will be paid for on a lump sum basis. Lump sum payment will include providing

and installing groundwater sampling equipment as specified in specification and Amendments to Section 01590.

6. Demolition (Existing Sheds) will not be measured for payment and will be paid for on a lump sum basis. Lump sum payment will include removal of the sheds superstructure, removal of substructures to a minimum of two (2) feet below finish grade, processing, handling, stockpiling, placing and compacting demolition debris in the Random Soil Class 1 zone.
7. Remove and Disposal (Curtain Drain and Pipe,Pond B) will be paid on a unit price per lineal foot basis. Measurement will include excavation, pipe removal, backfill with clean onsite material; processing, handling, stockpiling, placing and compacting removed materials and debris in the Random Soil Class 1 zone.
8. Remove and Dispose (Gravel Drain,Pond B) will be paid on a unit price per lineal foot basis. Measurement will include excavation, gravel and debris removal, backfill with clean onsite material; processing, handling, stockpiling, placing and compacting removed materials and debris in the Random Soil Class 1 zone.
9. Abandon (Underground Storage Tank) will be paid on a unit price per each basis. Measurement will include abandoned of each tank complete in place. Should contaminated soil be encountered, the change order process described in Chapter 6 of Section 00100 will be followed.
10. Site Clearing will be paid on a unit price per acre basis. Measurement will include clearing and grubbing vegetation and debris; processing, handling, stockpiling, placing and compacting vegetation and debris in the Random Soil Class 1 zone; excavating, loading, hauling and stockpiling the top six (6) inches of soil and handling, spreading and compacting the soil material in the first twelve (12) inches of fill above the geomembrane liner.
11. Gas Extraction Well will be paid on a unit price per lineal foot basis. Measurement will include installed drive point casing and screen, inner casing and screen and well packing materials complete in place. Limits for measurement will be from the top of the geomembrane liner to the termination point of the outer casing and screen.
12. Gas Extraction Well (Well Head) will be paid on a unit price per each basis. Measurement will included all well parts from the top of the geomembrane liner to the outlet end of the flexible coupling.

13. Gas Monitoring Well will be paid on a unit price per lineal foot basis. Measurement will include drilling and installation of well casing, screen and packing materials. Limits for measurement will be from finish grade elevation to the point of termination as determined by the Resident Engineer.
14. Gas Monitoring Well (Well Guard) will be paid on a unit price per each basis. Measurement will include concrete, guard casing, locking cap, pad lock, sanitary seal and painting of above ground steel casing.
15. Excavate Cover Soil will be paid on a unit price per cubic yard basis. Measurement will include test pit excavation and backfill, soil depth indicators, excavating, loading, hauling, stockpiling, spreading and compacting onsite cover soil in its final position. The volume of Cover Soil measured for payment will be determined in its original position. The volume will be determined by a minimum of one hundred depth test pits provided by the Contractor and calculated by cross section average end area method.
16. Excavate Waste will be paid on a unit price per cubic yard basis. Measurement will include providing temporary cover material, excavating, loading, hauling, stockpiling, spreading and compacting waste in its final position. The volume of Waste measured for payment will be determined in its original position. The volume of Waste will be determined by surveyed elevations taken in conjunction with test pit operations and calculated by cross section average end area method.
17. Borrow (Loamy Soil, Imported) will be paid on a unit price per cubic yard basis. Measurement will include royalties, hauling, handling spreading and compacting imported loamy soil. The volume measured for payment will be determined in its final position. The volume of Borrow will be determined by average end area method from thickness measured by Soil Depth Indicators installed under the Excavate Cover Soil item.
18. Crushed Aggregate Base Course will be paid on a unit price per square yard basis. Measurement will include subgrade preparation, proof rolling, undercutting and recompacting, providing crushed aggregate base course to the depths indicated in the Drawings and specifications, hauling, spreading, compacting and finish grading. The area measured for payment will be measured parallel with the crushed aggregate surface.
19. Crushed Stone Base will be paid on a unit price per square yard basis. Measurement will include subgrade preparation, proof rolling, undercutting and recompacting, providing crushed stone base to the depths indicated in the Drawings and specifications, hauling, spreading, compacting and finish

grading. The area measured for payment will be measured parallel with the crushed stone base surface.

20. Delineators will be paid on a unit price per each basis. Measurement will include providing and installing delineators.
21. Geotextile Fabric (10oz Non-Woven,Roadway) will be paid on a unit price per square foot basis. Measurement will include providing and installing geotextile fabric. Over lapping and material placed in anchor trenches will not be measured for payment but will be considered incidental to the work. Limits for measurement and payment of geotextile fabric will be areas under roadway surfacing.
22. Rip Rap (Class I) will be paid on a unit price per square yard basis. Measurement will include providing and placing rip rap and geotextile fabric underlayment material, excavating, fine grading compacting. Limits for measurement and payment are as indicated on the Drawings.
23. Rip Rap (Class II) will be paid on a unit price per square yard basis. Measurement will include providing and placing rip rap and geotextile fabric underlayment material, excavating, fine grading compacting. Limits for measurement and payment are as indicated on the Drawings.
24. Rip Rap (Class III) will be paid on a unit price per square yard basis. Measurement will include providing and placing rip rap and geotextile fabric underlayment material, excavating, fine grading compacting. Limits for measurement and payment are as indicated on the Drawings.
25. Rip Rap (Class IV) will be paid on a unit price per square yard basis. Measurement will include providing and placing rip rap material, excavating, fine grading compacting. Limits for measurement and payment are as indicated on the Drawings.
26. Rip Rap Bedding (6") will be paid on a unit price per square yard basis. Measurement will include providing and placing rip rap and geotextile fabric underlayment material, excavating, fine grading compacting. Limits for measurement and payment are as indicated on the Drawings.
27. Pipe (24" Ductile Iron MJ C1 52 150 psi, Cement Lined) will be paid on a unit price per lineal foot basis. Measurement will include providing and installing pipe and polyethylene sleeve complete in place.

28. Pipe (20" Ductile Iron MJ C1 52 150 psi, Cement Lined) will be paid on a unit price per lineal foot basis. Measurement will include providing and installing pipe and polyethylene sleeve complete in place.
29. Pipe (12" Ductile Iron MJ C1 52 150 psi, Cement Lined) will be paid on a unit price per lineal foot basis. Measurement will include providing and installing pipe and polyethylene sleeve complete in place.
30. Pipe (6" Ductile Iron MJ C1 52 150 psi, Cement lined) will be paid on a unit price per lineal foot basis. Measurement will include providing and installing pipe and polyethylene sleeve complete in place.
31. Coupling (24" Baker) will be paid on a unit price per each basis. Measurement will include providing and installing coupling and polyethylene sleeve complete in place.
32. Fittings (Ductile Iron MJ C1 52 150 psi) will be paid on a unit price per ton basis. Measurement will include providing and installing fittings and polyethylene sleeve complete in place.
33. Valve (20" Gate Cast Iron MJ, Installation) will be paid on a unit price per each basis. Measurement will include handling and installing valve and retainer gland.
34. Valve (20" Gate Cast Iron MJ, Furnish and Deliver) will be paid on a unit price per each basis. Measurement will include furnishing valve and retainer gland and delivering to the Site.
35. Valve (12" Gate Cast Iron MJ Installation) will be paid on a unit price per each basis. Measurement will include handling and installing valve and retainer gland.
36. Valve (12" Gate Cast Iron MJ, Furnish and Deliver) will be paid on a unit price per each basis. Measurement will include furnishing valve and retainer gland and delivering to the Site.
37. Valve (6" Gate Cast Iron MJ, Installation) will be paid on a unit price per each basis. Measurement will include handling and installing valve and retainer gland.
38. Valve (6" Gate Cast Iron MJ, Furnish and Deliver) will be paid on a unit price per each basis. Measurement will include furnishing valve and retainer gland and delivering to the Site.

39. Trench Safety System (Tight Sheeting) will be paid on a unit price per square foot basis. Measurement will include providing and installing tight sheeting and bracing to OSHA standards. Limits for measurement and payment will be for placed tight sheeting each trench face from natural ground elevation to the bottom of the excavation.
40. Saw Cutting (Pavement) will be paid on a unit price per lineal foot basis. Measurement will include saw cutting to a minimum of one (1) inch depth or greater depth as necessary to provide a neat break line in existing pavement. Limits for measurement and payment will be approved by the Resident Engineer.
41. Remove Pavement (All Types) will be paid on a unit price per cubic yard basis.
42. Excavation (Soil) will be paid on a unit price per cubic yard basis. Measurement will include excavating and dewatering; loading, hauling, spreading and compacting of clean trenching spoils in Random Soil Class 1 zone. Limits of excavation for measurement and payment are indicated on the Drawings.
43. Excavation (Soil and Pavement) will be paid on a unit price per cubic yard basis. Measurement will include excavating and dewatering; loading, hauling, spreading and compacting of soil and pavement spoils in the Waste and below Random Soil Class 2 zone. Limits of excavation for measurement and payment are indicated on the Drawings.
44. Excavation (Rock) will be paid on a unit price per cubic yard basis. Measurement will include excavating and dewatering; loading, hauling, spreading and compacting of rock in the Waste and below Random Soil Class 2 zone. Limits of excavation for measurement and payment will be determined by the Resident Engineer.
45. Aggregate (Gravel Bedding) will be paid on a unit price per cubic yard basis. Measurement will include providing, placing and compacting Gravel Bedding. Limits for measurement and payment are indicated on the Drawings.
46. Aggregate (Clean Sand) will be paid on a unit price per cubic yard basis. Measurement will include providing, placing and compacting Clean Sand bedding. Limits for measurement and payment are indicated on the Drawings.
47. Backfill (Satisfactory Material) will be paid on a unit price per cubic yard basis.

48. Geotextile (10 oz Non-Woven, 24" Water Main) will be paid on a unit price per square foot basis. Measurement will include providing and installing geotextile fabric. Over lapping and material placed in anchor trenches will not be measured for payment but will be considered incidental to the work. Limits for measurement and payment of geotextile fabric will be as indicated on the Drawings for the twenty four (24) inch water main relocation.
49. Remove and Reset (Fire Hydrant) will be paid on a unit price per each basis. Measurement will include removal and installation of existing fire hydrant.
50. Remove (Fire Hydrant) will be paid on a unit price per each basis. Measurement will include removal of existing fire hydrant, cleaning and delivery to the Owners storage yard.
51. Fire Hydrant Fenders will be paid on a unit price per each basis. Measurement will include providing and installing fire hydrant fenders complete in place.
52. Sidewalk (Concrete) will be paid on a unit price per square foot basis. Measurement will include excavation, fine grading, sand cushion, forming, reinforcing, concrete and finishing. Limits for measurement and payment will be as directed by the Resident Engineer.
53. Concrete Base (6" Class B-32) will be paid on a unit price per square yard basis. Measurement will include excavation, fine grading, forming, reinforcing steel, concrete, concrete finishing and curing.
54. Asphalt Pavement (3" Asph Cone or Sheet Asph) will be paid on a unit price per square yard basis.
55. Tree removal will be paid on a unit price per each basis. Measurement will include tree removal, chipping and placing the debris in the landfill Waste material. Limits for measurement and payment will be as directed by Resident Engineer.
56. Well Abandonment will be paid on a unit price per each basis. Measurement will include removal of the well to two (2) feet below finish grade and plugging the well with grout.
57. Gas Extraction Well Pipe (3" HDPE) will be paid on a unit price per lineal foot basis. Measurement will include HDPE pipe and installation, excavation, fine grading and pipe bedding.

58. Gas Extraction Well Pipe (4" HDPE) will be paid on a unit price per lineal foot basis. Measurement will include HDPE pipe and installation, excavation, fine grading and pipe bedding.
59. Gas Extraction Well Pipe (6" HDPE) will be paid on a unit price per lineal foot basis. Measurement will include HDPE pipe and installation, excavation, fine grading and pipe bedding.
60. Gas Extraction Well Pipe (8" HDPE) will be paid on a unit price per lineal foot basis. Measurement will include HDPE pipe and installation, excavation, fine grading and pipe bedding.
61. Gas Extraction Well Pipe (10" HDPE) will be paid on a unit price per lineal foot basis. Measurement will include HDPE pipe and installation, excavation, fine grading and pipe bedding.
62. Gas Condensate Pipe (2"x4" HDPE) will be paid on a unit price per lineal foot basis.
63. Gas Collection Pipe (4" HDPE) will be paid on a unit price per lineal foot basis. Measurement will include HDPE pipe and installation, excavation, fine grading and crushed stone base.
64. Gas Extraction Valve Box will be paid on a unit price per each basis. Measurement will include each valve complete in place.
65. Gas Condensate Separator will not be measured for payment but will be paid on a lump sum basis.
66. Gas Collection Riser Connection (VB-6) will not be measured for payment but will be paid on a lump sum basis.
67. Gas Condensate Conveyance Connection (MH-D2) will not be measured for payment but will be paid on a lump sum basis.
68. Pipe (24" HDPE SDR21, Corrugated) will be paid on a unit price per lineal foot basis. Measurement will include providing and installing pipe, excavation, grading, fine grading, pipe bedding, geogrid, 60 mil HDPE liner, geotextile fabric, backfill.
69. Pipe (30" HDPE SDR21, Smooth) will be paid on a unit price per lineal foot basis. Measurement will include providing and installing pipe, excavation, grading, fine grading, pipe bedding, geogrid, 60 mil HDPE liner, geotextile fabric, backfill.

70. Manhole-Inlet (48" HDPE Class 160, All Depths) will be paid on a unit price per each basis. Measurement will include providing and installing HDPE manhole, excavation, grading, fine grading, pipe bedding, geogrid, 60 mil HDPE liner, geotextile fabric, backfill.
71. Infiltration Drainage Trench will be paid on a unit price per lineal ft. basis.
72. Curtain Drain will be paid on a unit price per lineal ft. basis.
73. Reinforced Concrete Pipe (24") will be paid on a unit price per lineal ft. basis. Measurement will include providing and installing pipe, excavation, bedding and backfill.
74. Reconstruction of Sewer (30" RCP) will be paid on a unit price per lineal ft. basis. Measurement will include cleaning of existing pipe and slip lining the interior.
75. Reconstruction of Sewer (72" RCP) will be paid on a unit price per lineal ft. basis. Measurement will include cleaning of existing pipe and slip lining the interior.
76. Geomembrane Liner (60 mil HDPE, Smooth) will be paid on a unit price per square ft. basis.
77. Geomembrane Liner (60 mil HDPE, Textured) will be paid on a unit price per square foot basis. Measurement will include fine grading, providing and placing the liner, heat fusion weld the seams, seam testing and anchor trench. Seam overlap, anchor trench, materials in anchor trenches will not be measured for payment and will be considered incidental to the work.
78. Geocomposite Liner will be paid on a unit price per square foot basis. Measurement will include fine grading, providing and placing the liner, heat fusion weld the seams, seam testing and anchor trench. Seam overlap, anchor trench, materials in anchor trenches will not be measured for payment and will be considered incidental to the work.
79. Chain Link Fence (8 ft. x 6 ga, Spiral Razor Wire Top) will be paid on a unit price per lineal foot basis.
80. Spiral Razor Wire Top (Existing Chain Link Fence) will be paid on a unit price per lineal foot basis.
81. Gate (8 ft. x 6 ga x 4 ft. Single Leaf, Spiral Razor Wire Top) will be paid on a unit price per each basis.

82. Gate (8 ft. x 6 ga x 6 ft. Single Leaf, Spiral Razor Wire Top) will be paid on a unit price per each basis.
83. Gate (8 ft. x 6 ga x 24 ft. Double Lead, Spiral Razor Wire Top) will be paid on a unit price per each basis.
84. Remove Fence (Chain Link) will be paid on a unit price per lineal ft. basis.
85. Remove Gate (Chain Link) will be paid on a unit price per each basis.
86. Landscaping Work (Vegetation Islands) will be paid on a unit price per each basis. Measurement will include providing and placing top soil as directed by the Resident Engineer, soil amendments, topical mulching, bedding preparation for plant materials and photographs.
87. Landscaping Work (Perimeter Bedding) will be paid on a unit price per square yard basis. Measurement will include soil amendments, topical mulching, bedding preparation for plant materials and photographs.
88. Topsoiling (6", Imported, Cap) will be paid on a unit price per cubic yard basis. Measurement will include providing, hauling, placing, spreading top soil on the cap area.
89. Topsoiling (6", Imported, Landscaping) will be paid on a unit price per cubic yard basis. Measurement will include providing, hauling, placing, spreading top soil for planting materials.
90. Seeding and Fertilizer will be paid on a unit price per acre basis. Measurement will include seeding, fertilizing, bedding preparation, soil amending and guarantee. Planting guarantee is subject to special payment conditions per specification Section 02910, paragraph 1.8.
91. Grass & Wildflower Seed Drilling (Herbaceous Seeding) will be paid on a unit price per acre basis. Measurement will include seeding, fertilizing, bedding preparation, soil amending and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
92. Tree (Pitch Pine, 5'- 6' B&B) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per specification Section 02910, paragraph 1.8.

93. Tree (Scrub Oak, 1.5" Caliper) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per specification Section 02910, paragraph 1.8.
94. Tree (Eastern Red Cedar, 4'-5' B&B) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
95. Tree (Black Cherry, 2" Caliper) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
96. Tree (Gray Birch, 2" Caliper) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
97. Tree (Hackberry, 1.5" Caliper) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
98. Tree (Quaking Aspen, 6'-8' B&B) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
99. Tree (Big-Tooth Aspen, 6'-8' B&B) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
100. Tree (Chestnut Oak, 1.5" Caliper) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
101. Tree (White Pine, 8'-10' B&B) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.

102. Tree (Flowering Dogwood, 6'-8' B&B) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
103. Shrub (Beach Plum, 2 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
104. Shrub (Staghorn Sumac, 2 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
105. Shrub (Arrowwood Viburnum, 2 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
106. Shrub (Arrowwood Viburnum, 3 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
107. Shrub (Northern Bayberry, 2 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
108. Shrub (Northern Bayberry, 3 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
109. Shrub (American Elderberry, 2 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
110. Shrub (American Elderberry, 3 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.

111. Shrub (Lowbush Blueberry, 1 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
112. Shrub (New Jersey Tea, 1 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
113. Shrub (Gray Dogwood, 2 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
114. Shrub (Black Huckleberry, 1 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
115. Shrub (Swamp Rose, 2 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
116. Shrub (Carolina Rose, 2 Gallon) will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
117. Live Stakes will be paid on a unit price per each basis. Measurement will include providing plant material, planting and guarantee. Planting guarantee is subject to special payment conditions per Specification Section 02910, paragraph 1.8.
118. Outlet Structure will be paid on a unit price per each basis. Measurement will include structural excavation and backfill, fine grading, forming, reinforcing steel, concrete, miscellaneous metal, fasteners and flap gate; installed complete in place.
119. Outlet-Inlet Structure will be paid on a unit price per each basis. Measurement will include structural excavation and backfill, fine grading, forming, reinforcing steel, concrete, miscellaneous metal, fasteners and trash rack; installed complete in place.

120. Baffled Outlet Structure will be paid on a unit price per each basis. Measurement will include structural excavation and backfill, fine grading, forming, reinforcing steel, concrete, miscellaneous metal, fasteners, trash rack and galvanized railing; installed complete in place.
121. Concrete Encasement Block will be paid on a unit price per each basis. Measurement will include fine grading, 60 mil HDPE liner pad, forming, providing and placing concrete.
122. Adjust Manhole (+/- 5 ft., Existing) will be paid on a unit price per each basis. Measurement will include excavation and backfill, removal and replacement of existing manhole ring and cover, extending manhole structure with formed concrete or masonry to planned elevation.
123. Temporary Storage Structure (Tractor Building) will not be measured for payment but will be paid on a lump sum basis. Lump sum payment will include erecting a wood structure as specified in Section 13141 complete in place.
124. Gas Flare Process Unit will not be measured for payment but will be paid on a lump sum basis. Lump sum payment will include structural excavation to a point two (2) feet below bottom of concrete foundation, backfill and compact subgrade to bottom of concrete slab, fine grading, balance of backfilling, forming, reinforcing steel, concrete, embedded items, pouring and finishing concrete, curing concrete; providing and installing flaring unit, blowers, piping, stainless steel piping, valves, fittings, pipe supports, propane storage tank, gas pressure regulator; provided, installed and tested.
125. Electrical (Gas Flare Unit) will not be measured for payment but will be paid on a lump sum basis.
126. Instrumentation and Controls (Gas Flare Unit) will not be measured for payment but will be paid on a lump sum basis.
127. Electrical Grounding (Chain Link Fence) will not be measured for payment but will be paid on a lump sum basis.

1.6 PAYMENT

- A. Payment includes: Full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

- B. Measurement and payment for items listed in Bid Form shall be for all work in place as shown on the Drawings and specified in the Specifications.
- C. Measurement and Payment for all work described in General Specifications is considered to be work that is incidental or subsidiary to the work as defined in the Detailed Specifications.

1.7 NON-PAYMENT

- A. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not in conformance with the contract documents.
 - 2. Products determined as not in conformance with the contract documents before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected Products.
 - 7. Multiple handling of on-site and off-site materials.

PART 2 PRODUCTS

(Not Used)

PART 3 EXECUTION

(Not Used)

END OF SECTION 01025

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 23 - Specification Section 01380

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Page 613 of the Specifications, paragraph 1.3A... Change "three (3) prints" to "two (2) prints and one (1) slide".
2. Page 614 of the Specifications, paragraph 1.3E... Delete "mounted on cloth with a flap for binding".
3. Page 614 of the Specifications, paragraph 1.3G... Change "Furnish three (3) hard-back binders for each set of prints" to "The prints, slides, and negatives shall be suitably mounted and labelled in loose-leaf type binders which have protective covers for the prints, slides, and negatives."

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 24 - Specification Section 01528

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

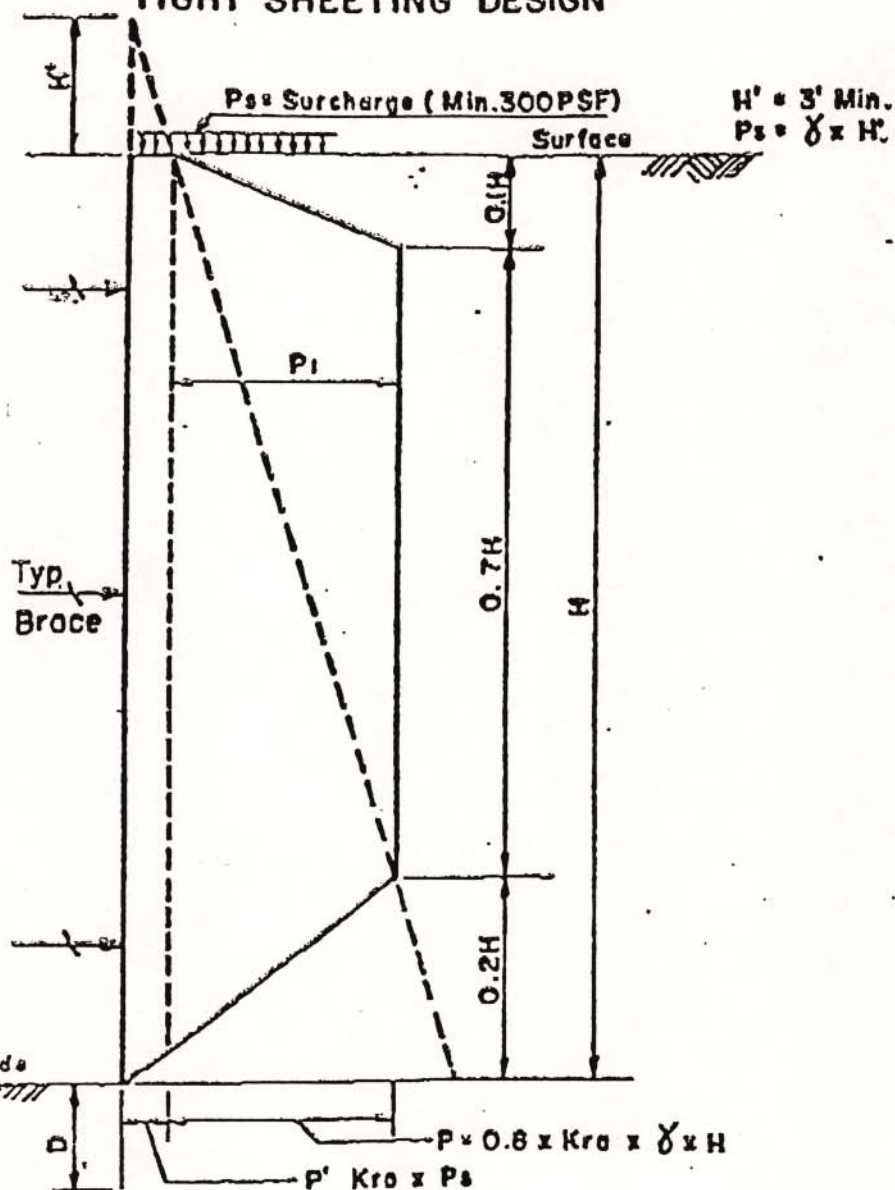
**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Page 628 of the Specifications, paragraph 1.8 - Open Excavations... Add the following paragraphs:
 - C. The sheeting and bracing working drawings submitted by the Contractor shall include, but not be limited to, the following: the density of the soil, the internal angle of friction of the soil, the stress grade and type of lumber, the allowable stresses, and sequence of construction operation where required.
 - D. In designing the sheeting, the Contractor's engineer shall take note of the following minimum load diagram requirements of the Department of Environmental Protection, attached.

MINIMUM LOAD DIAGRAM FOR NON-WATER TIGHT SHEETING DESIGN

(Revised 9/88)



γ = Unit Weight of Soil

γ_w = Unit Weight of Water

γ_s = Unit Weight of Submerged Soil

ϕ = Angle of Internal Friction of Soil

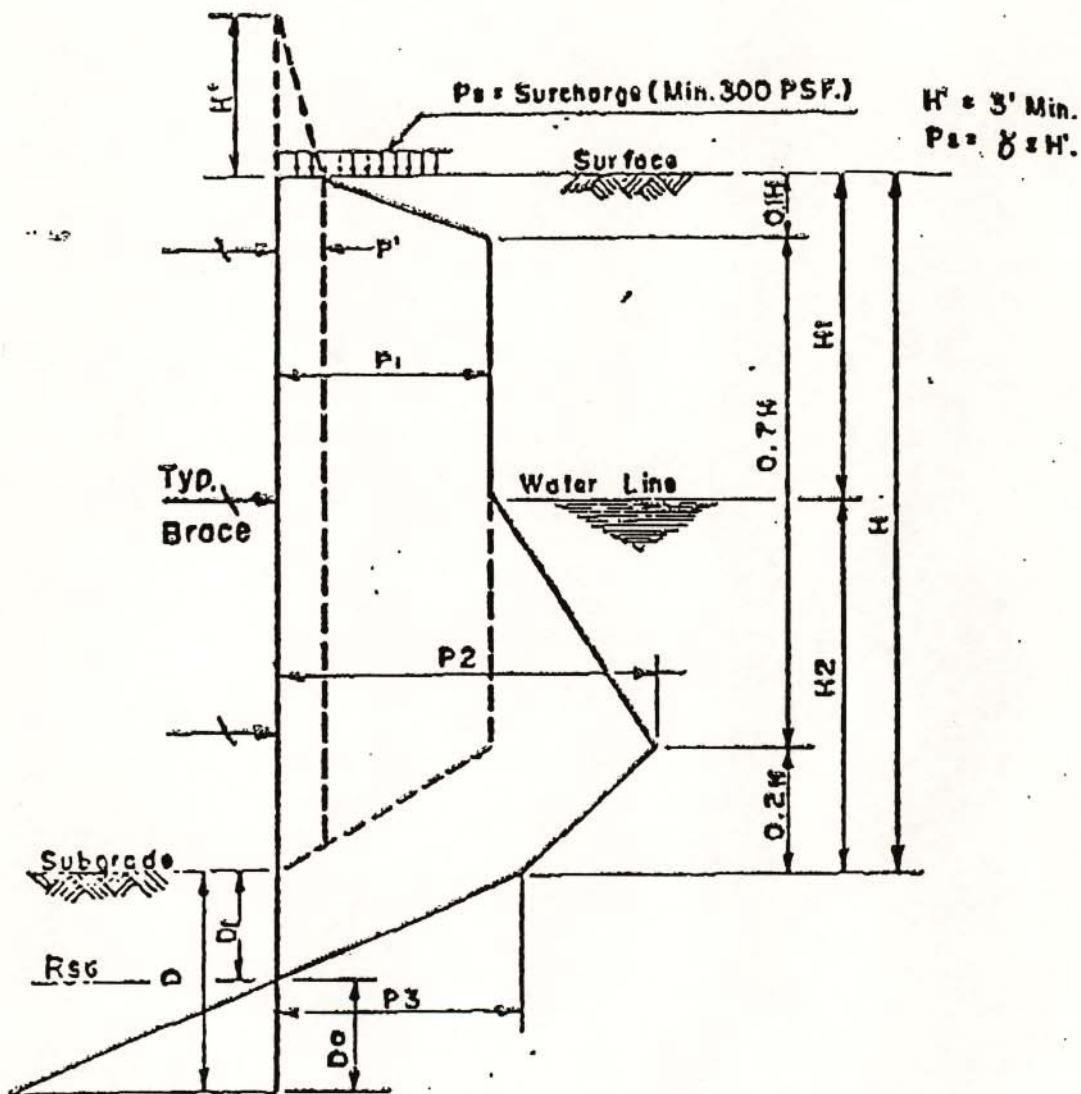
$K_{ra} = \frac{(1 - \sin \phi)}{(1 + \sin \phi)}$ For Active Earth Pressure

$K_{rp} = \frac{(1 + \sin \phi)}{(1 - \sin \phi)}$ For Passive Earth Pressure

$D = \sqrt{\frac{2 R_{sg}}{\gamma (K_{rp} - K_{ra})}} \quad (1.3)$
(Min. 2'-0")

(Revised 9/84)

MINIMUM LOAD DIAGRAM FOR WATER TIGHT SHEETING DESIGN



$$P' = K_{ro} \times P_s$$

$$P_1 = P' + 0.8 \times K_{ro} \times (\gamma H_1 + \gamma_s H_2)$$

$$P_2 = P_1 + \gamma_w (H_2 - 0.2H)$$

$$P_3 = \gamma_w \times H_2$$

$$D_1 = \frac{P_3}{\gamma_s (K_{rp} - K_{ro})}$$

$$D_0 = \sqrt{\frac{2 R_{st}}{\gamma_s (K_{rp} - K_{ro})}}$$

$$D = (D_1 + D_0) (1.3)$$

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 25 - Specification Section 01590

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Delete Section 01590 and replace with the revised version, attached. Revisions made to this Section occurred in paragraphs 1.3, 3.6, and 3.8.

SECTION 01590 FIELD OFFICES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Rental, operation and maintenance of existing field offices, furnishing and maintaining Resident Engineer's vehicles, Contractor's field offices, sheds, and employee shelters, and allowance for existing field offices.

1.2 EXISTING FACILITIES

- A. Field offices for the Engineer, Resident Engineer, and the New York State Department of Environmental Conservation (NYSDEC) have been provided under separate contract (Contract Number 875-HP). Utilities (electric, water, sanitary, etc.) and equipment (telephones, fax machines, etc.) have also been furnished.
- B. A complete fire, panic, and intrusion alarm system for the Resident Engineer's office has been furnished and installed under separate contract (Contract Number 875-HP).

1.3 CONTRACTOR'S RESPONSIBILITIES

- A. Rent, for the duration of the Work, the Resident Engineer field offices from the Contractor for Contract 875-HP. The rental fee shall be \$1,150 per month. Contractor shall not be responsible for the rental of field offices of the Engineer and the NYSDEC. Rental agreement shall begin at date of Notice to Proceed.
- B. Maintain and service existing facilities and all three (3) field offices for the duration of the Work in accordance with Part 3 of this Section.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Materials, equipment, and furnishings shall be new and serviceable, adequate for intended purposes, and shall meet applicable codes and regulations.

PART 3 EXECUTION

3.1 RESIDENT ENGINEER'S VEHICLE SPECIFICATION

- A. Provide two (2) vehicles for use by the Resident Engineer for the duration of the Contract.
- B. Each vehicle shall be a new four-door GMC Jimmy, or approved equal, equipped with: a six- cylinder engine, four-wheel drive, automatic transmission, power steering, anti-lock brake system, steel-belted all-weather black radial tires, heavy duty suspension, heavy duty battery, air conditioning, driver's side air bag, passenger side air bag (if available), AM/FM radio, intermittent wipers, electric rear window defroster, left and right side view mirrors, and front and rear floor mats. The vehicles shall be one of the following colors: White or Dark Blue.
- C. Provide fuel, oil, proper maintenance, tires, and replacement parts to keep the vehicles in a safe operating condition. Undertake all repairs, including repairs arising from vandalism, accidents, or other damages. In the event that any vehicle requires maintenance or repairs which cannot be completed the same day, provide a comparable replacement vehicle while the vehicle is out of service. If the vehicles are lost or stolen, replace the vehicles within 5 business days with comparable vehicles.
- D. Provide the vehicles for the entire duration of this Contract. The vehicles will be returned to the Contractor within thirty days after Contract completion. Vehicles shall be leased by the Contractor and shall remain the property of the lessor throughout the Contract period, but shall be registered in the City's name and liability insurance afforded through the City's "self-insurance" program. The City's self-insurance program pertains only to third party insurance, arising from the Department's use of the vehicles, and does not include any damage to the vehicles.
- E. Within 5 days of receipt of notice to provide specified vehicles, make the vehicles available for inspection by the Department. Upon inspection and determination by Fleet Administration that the vehicles meet specifications, make arrangements through the Department's Fleet Administration for transmission to the Department. Submit to Fleet Administration a signed MV-82 (4/90) "Vehicle Registration/Title Application," authorizing registration in the unregistered vehicles, the Manufacturer's Certification of Origin, Odometer Verification, New York State Sales Tax clearance or, in the case of a currently registered vehicle, a copy of the Title.

- F. The garage designated for repair and maintenance shall be subject to the approval of the Department's Fleet Administration, and may not be changed without the prior written approval of the Department's Fleet Administration. The garage must maintain and show evidence of insurance as provided in Section II and Section III of garage form CA 99 95 91/87, as set forth in Schedule A of the General Conditions.

- G. Make all required transmittals to Fleet Administration as follows:

Michael Murphy
Director, Fleet Administration
56-01, 55th Avenue
Maspeth, NY 11378
Telephone: 718-326-2981
Fax: 718-326-3031

- H. No direct payment will be made for the vehicles, or associated costs. All costs shall be included in the lump sum price bid for the Contract, except that Auto Liability insurance for vehicles registered in the City's name may not be included in the lump sum costs. The Contractor may, if desired, include the costs of comprehensive insurance, theft, and collision insurance for loss or damage of the vehicles provided under this Contract.

3.2 CONTRACTOR'S OFFICE AND FACILITIES

- A. Contractor shall determine size, furnishings, equipment, and facilities for his own and provide space for project meetings.
- B. Provide at a minimum a conference table and chairs to seat at least eight (8) persons and racks and files for Contract Documents, submittals, and Project Record Documents.
- C. A minimum of four (4) sets of personnel protective health and safety field equipment for visitors shall be provided by the Contractor.

3.3 STORAGE AREAS AND SHEDS

- A. Size to storage requirements for products of individual Sections. Allow for access and orderly provision for maintenance and for inspection of products.

3.4 EMPLOYEE SHELTERS

- A. Provide a room where employees can eat and drink. Smoking within the limits of the Site is strictly prohibited at all times for the duration of the Work.

3.5 MAINTENANCE AND CLEANING

- A. Maintain copy and facsimile machines, and furnish ancillary supplies for the duration of the Work. Maintain and service as necessary the fire, panic, and intrusion alarm system installed in the Resident Engineer's office.
- B. Insure, maintain, and repair trailers (i.e., Engineer's, Resident Engineer's, and NYSDEC's trailers) and their equipment to the satisfaction of the Resident Engineer during the performance of the Work. Keep trailers in first class condition. Promptly replace any damaged or defective parts (electrical, structural, and plumbing), including appliances and fixtures directed by the Resident Engineer.
- C. Provide and pay in full for heat, sanitary, water, and telephone services for calls within New York City, as well as outside the City limits until the end of the Contract. Submit a monthly tabulation of all long distance charges and the Resident Engineer will reimburse the Contractor for any calls not deemed to be for official business. Expenses associated with heat, sanitary, water, and telephone services after the completion of the Contract shall not be the responsibility of the Contractor.
- D. Provide janitorial services daily for all offices. Janitorial personnel must be health and safety briefed as appropriate. Wash windows, hang, remove, and store screens, storm windows, and screen and storm doors as requested by the Resident Engineer. Provide paper products for the bathroom and kitchen as well as bottled water and cups.
- E. Provide for satisfactory disposal of sanitary and other wastes.
- F. Maintain approach walks and parking areas free of mud, water, and snow.

3.6 ALLOWANCES

- A. As stipulated in the Bid Form, Contractor shall include in his bid the rental cost of the Resident Engineer's field offices at the fixed fee of \$1,150 per month for the duration of the Work.
- B. Contractor shall also include in his bid the fixed sum of \$15,000 to cover the cost of miscellaneous equipment and office supplies required for the Engineer's, Resident Engineer's, and NYSDEC's offices. If the sum of \$15,000 is exceeded, the excess will be paid to the Contractor by the Change Order procedure. The balance of monies not expended shall be returned to the City as a credit.

- C. Contractor will be reimbursed for maintaining and servicing (Operation and Maintenance) all three (3) field offices, as specified in this Section, based on the Unit Price stipulated in the Bid Form.

3.7 WELL SAMPLING EQUIPMENT

- A. When directed by the Resident Engineer the Contractor shall purchase and have Shipped to the Site the following well sampling equipment.
1. Seventeen (17) Well Wizard Bladder Pumps, model No. P-1201, or approved equal.
 2. Seven hundred (700) feet of Well Wizard Teflon Lined Tubing, Model No. PT-5100, or approved equal.
 3. Seventeen (17) Well Wizard Well Cap Assemblies, model No. 2120-C, or approved equal.
 4. Well Wizard Well Controller and Driver, model No. 3111HR or approved equal.
 5. Well Wizard Portable Water Level Meter Model No. 6000MSS (300 foot length) or approved equal.

Well Wizard equipment is manufactured by QED Environmental Systems Inc., 6095 Jackson Road, PO Box 3726, Ann Arbor, MI 48106. Phone: (800) 624-2026.

3.8 REMOVAL

- A. At completion of Work, remove and disconnect utilities to Contractor's field offices and sheds only. Removal of the Engineer's, Resident Engineer's, and NYSDEC's offices and facilities as well as utilities connected to such offices and facilities shall not be the responsibility of the Contractor.

END OF SECTION 01590

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 26 - Specification Section 02169

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Page 667 of the Specifications, Part 2 - Materials.... Add paragraph 2.5 as follows:

2.5 CRUSHED STONE
 - A. Crushed stone material shall consist of 1/2 inch to 1-1/2 inch diameter stone and shall be washed and free of fine materials.
 - B. A sample of the crushed stone material shall be retained and placed in a 50-pound bag and stored onsite with the soil samples for a one year period.
2. Page 667 of the Specifications, paragraph 3.2A should read as follows:
 - A. "A 36-inch diameter, heavy wall, steel casing shall be installed at the location of each gas extraction well shown on the Drawings. The installation method, such as augering or driving, shall be the responsibility of the Contractor.
3. Page 667 of the Specifications, paragraph 3.2B... Delete the word "driven" from the first sentence.

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 26 - Specification Section 02169 (continued)

4. Page 668 of the Specifications, paragraph 3.2D... Delete "by reversing the action of the impact driver" and "and leaving the drive point at the bottom of the well bore."
5. Page 668 of the Specifications, paragraph 3.3E... Delete "A No. 1".

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 27 - Specification Section 02210

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Page 676 of the Specifications... Add paragraph 3.12 as shown on next page.

<u>Soil Test</u>	<u>Standard</u>	<u>Minimum Frequency</u>
Maximum Dry Density	ASTM D698	1 per structure and when material changes
In-Place Density	ASTM D1556 or ASTM D2922	1 per lift per structure, up to 5 per structure

- E. If tests indicate Work does not meet specified requirements, remove Work, replace, and retest at no additional cost to the City.

3.12 GAS FLARE SYSTEM SUBGRADE PREPARATION

- A. Overexcavate the subgrade of the gas flare and the 100-gallon propane tank shown on the Drawings by two (2) feet below design bottoms of the foundation systems. Extend the overexcavation to a minimum of five (5) feet beyond the lateral limits of the concrete slabs for the flare and the propane tank. Once the bottom of the excavation is reached, proof-roll the subgrade with a minimum of six (6) passes of a 10-ton smooth drum vibratory roller under the observation of the Engineer. Soft or loose areas that cannot be improved by additional compaction shall be undercut, replaced with Crushed Stone Base material specified in Section 02231 of the Specifications, and compacted as described above. Repeat as necessary until the subgrade is firm and acceptable to the Engineer.
- B. Place Structural Backfill material specified in paragraph 2.1D of this Section in the overexcavated area. Place in a maximum 6-inch thick loose lifts and compact to at least 95 percent of maximum dry density and within two (2) percent of optimum moisture content as determined by ASTM D698.
- C. Upon completion of the placement of Structural Backfill material in the overexcavated area, proceed with the installation of the foundation elements for the gas flare and propane tank as shown on the Drawings.

END OF SECTION 02210

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 28 - Specification Section 02831

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Page 763 of the Specifications, paragraph 2.2A... Change "Class 25" to "2,500 psi".

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 29 - Specification Section 02920

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. In Specification Section 02920 presented as Addendum No. 5 (in Addenda Volume No. 1), at the end of paragraph 3.1A, add the following:

"Topsoil shall be compacted with two (2) passes of a dozer having track pressure of 10 pounds per square inch (psi)."

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 30 - Contract Drawing C.1

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace Contract Drawing C.1 with revised version (Drawing C.1R1), attached at the end of this package. Revisions made to this Drawing are described below:
 - A. All three legs of the "3' WIDE CURTAIN DRAIN" are constructed as shown on "EXISTING CURTAIN DRAIN - SECTION D" of Drawing C.13R1 (revised version of Drawing C.13 as per addendum No. 35).
 - B. The note referring to the middle leg as "BELOW GRADE CONVEYANCE PIPE" has been removed.
 - C. Monitoring wells MW-115B and MW-120B shall remain as part of the final landfill closure and shall be extended to meet final cap elevation.
 - D. Monitoring well MW-121B, previously identified to remain as part of the final landfill closure, shall be plugged and abandoned.
 - E. Locations of gas extraction wells EW-1, EW-2, and EW-3 were added to the Drawing. These wells shall be abandoned as described in the Specifications.

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 31 - Contract Drawing C.2

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Revise Contract Drawing C.2 to show that monitoring well MW-119B, previously identified to remain as part of the final landfill closure, shall be plugged and abandoned.

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 32 - Contract Drawing C.8

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Note 5 on Contract Drawing C.8 is herein revised and should read as follows (underlined text has been added):

"Soil depth indicators to be safe-hit Type 3 approximately 48" in length with a 15" diameter twist lock base or equivalent placed on the HDPE geomembrane. The indicators are to be black colored with the surveyor being responsible for placing different color reflecting tape at depths for placement of Loamy Soil and Vegetated Topsoil. These indicators are to be spaced at a distance no greater than 100 feet in each direction. Place at the grade break points and 5 feet from the upslope limit of the stormwater drainage ditch. Upon completion of soil placement, remove and properly dispose of the vertical post of the depth indicator; base is to remain in place. Fill resulting void with Loamy Soil and Vegetated Topsoil material and hand compact in place."

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

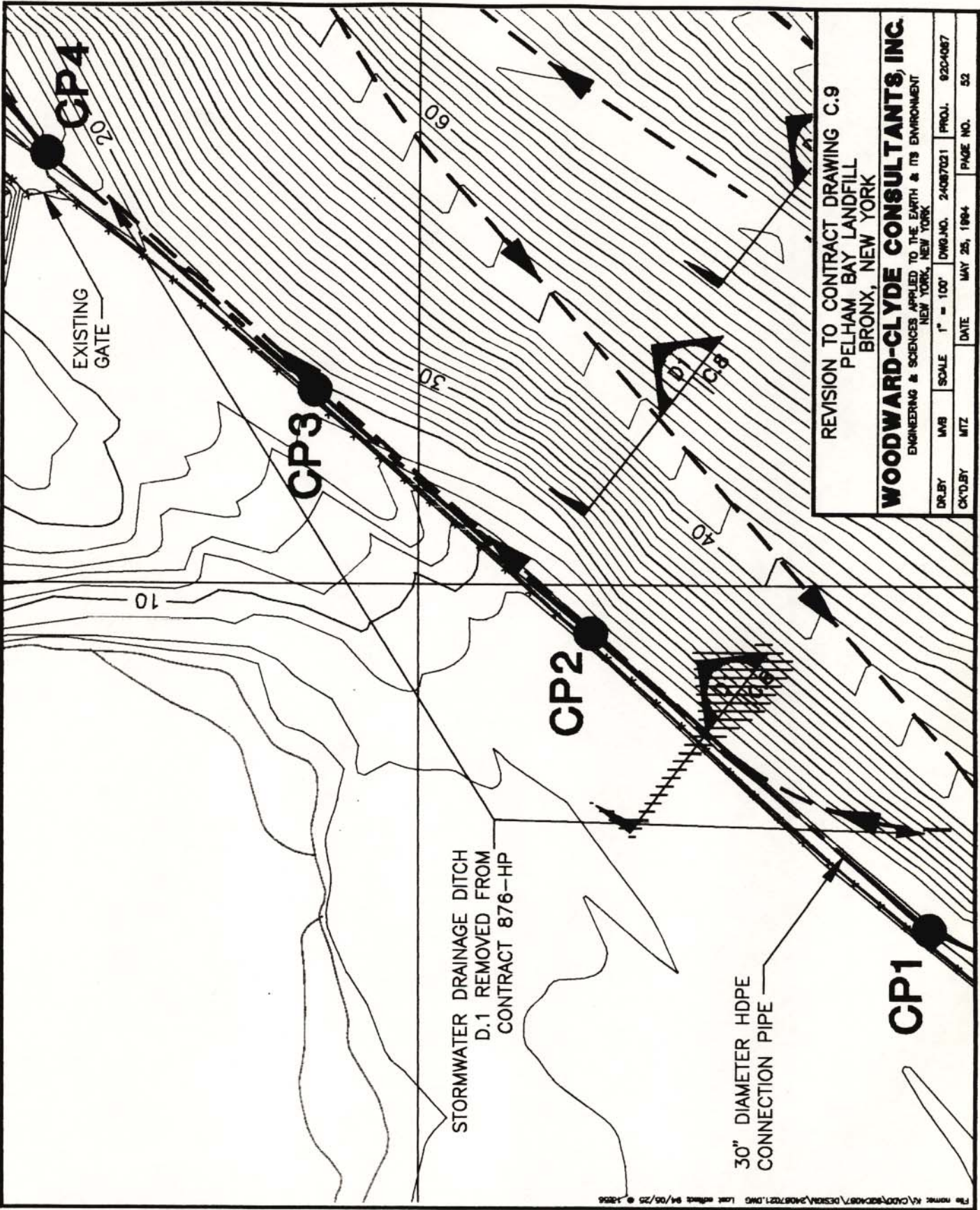
ADDENDUM NO. 33 - Contract Drawing C.9

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Revise Contract Drawing C.9 as described below and shown on the drawing attached on the following page.
 - A. Remove the stormwater drainage ditch shown adjacent to Pelham Bridge Road along the northwest boundary of the landfill, extending from manhole CP1 to CP4.



**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 34 - Contract Drawing C.11

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace Contract Drawing C.11 with revised version (Drawing C.11R1), attached at the end of this package. Revisions made to this Drawing are described below:
 - A. New details (mainly spacing) for the Welded Pipe Railing.
 - B. Revisions to "BAFFLED OUTLET - SECTION A".

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 35 - Contract Drawing C.13

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace Contract Drawing C.13 with revised version (Drawing C.13R1), attached at the end of this package. Revisions made to this Drawing are described below:
 - A. "EXISTING CURTAIN DRAIN SEE TYPICAL SECTION D THIS SHEET" and "EXISTING GRAVEL DRAIN SEE TYPICAL SECTION E THIS SHEET" were added to the "SEDIMENTATION POND B - PLAN".
 - B. EXISTING CURTAIN DRAIN - SECTION D and EXISTING GRAVEL DRAIN - SECTION E were added to clarify the existing drains at the location of Sedimentation Pond B.

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 36 - Contract Drawing C.14

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace Contract Drawing C.14 with revised version (Drawing C.14R1), attached at the end of this package. Revisions made to this Drawing are described below:
 - A. A note regarding final grading at base of slope was added to "SEDIMENTATION POND B TO C CONNECTION PIPE - PLAN".
 - B. Notes 5 and 6 were added to clarify final grading and contouring associated with the sedimentation pond connection piping.
 - C. The note referring to the trashrack attachment detail was deleted from "30" CONNECTION PIPE OUTLET OR INLET".
 - D. Notes were added to "CONNECTION PIPE OUTLET OR INLET - SECTION A" to show the location of trashrack details.
 - E. A note in the "TYPICAL MANHOLE INSTALLATION" detail and Note 2 were modified to provide for drain inlets at manholes CP1 and CP4.

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

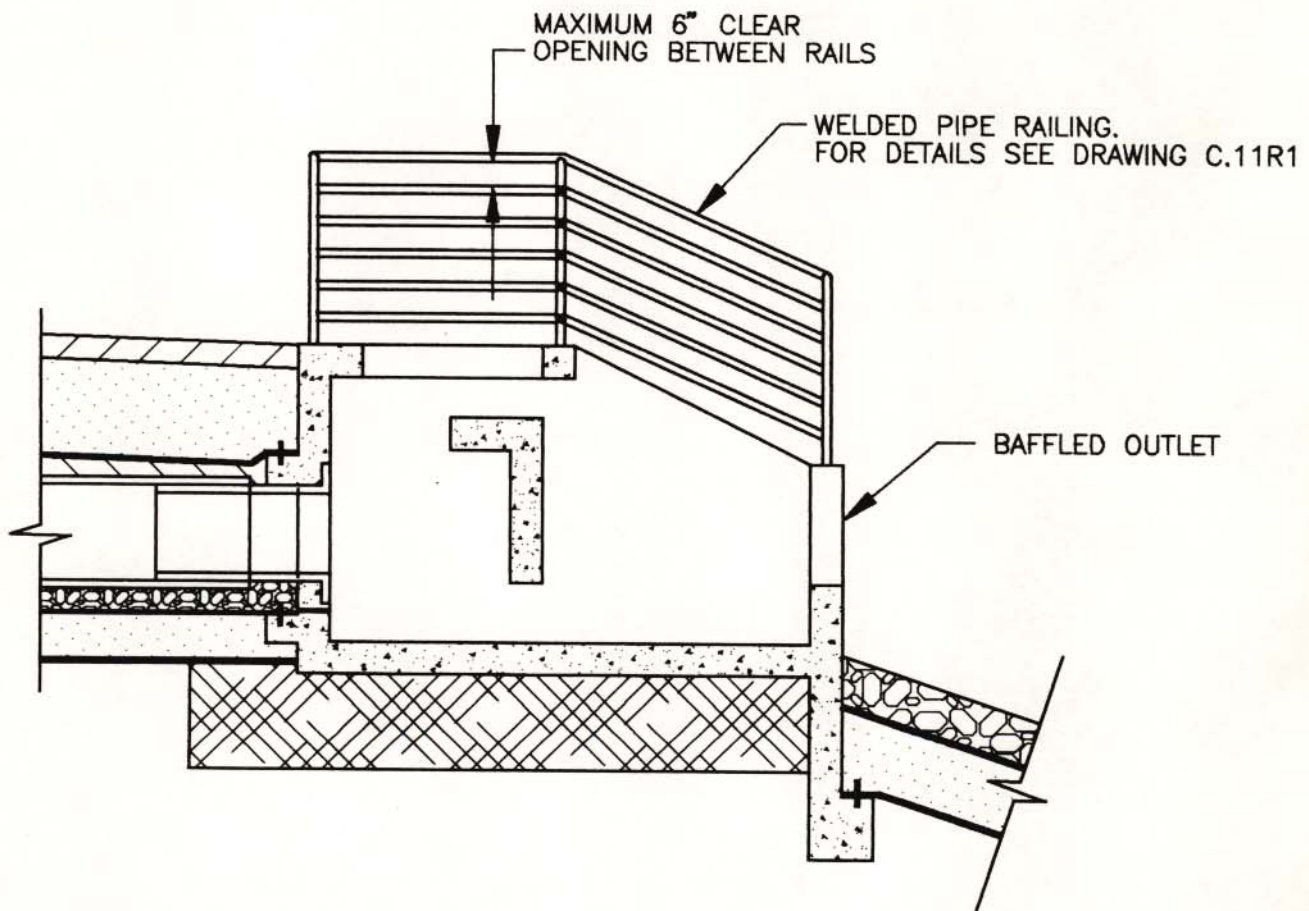
ADDENDUM NO. 37 - Contract Drawing C.16

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace the Welded Pipe Railing details for Baffled Outlets BO1, BO2, BO3, and BO4 with the revised version, attached on the following page.



NOTE:

1. TYPICAL HANDRAIL DETAIL FOR BAFFLED OUTLETS B01, B02, B03 AND B04.

REVISION TO CONTRACT DRAWING C.16
PELHAM BAY LANDFILL, BRONX, NEW YORK

WOODWARD-CLYDE CONSULTANTS, INC.

ENGINEERING & SCIENCES APPLIED TO THE EARTH & ITS ENVIRONMENT
NEW YORK, NEW YORK

DR. BY	WVB	SCALE	1/4" = 1'-0"	DWG. NO.	24087018	PROJ.	92C4087
CHK'D BY	MTZ	DATE	MAY 25, 1994	PAGE NO.	57		

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

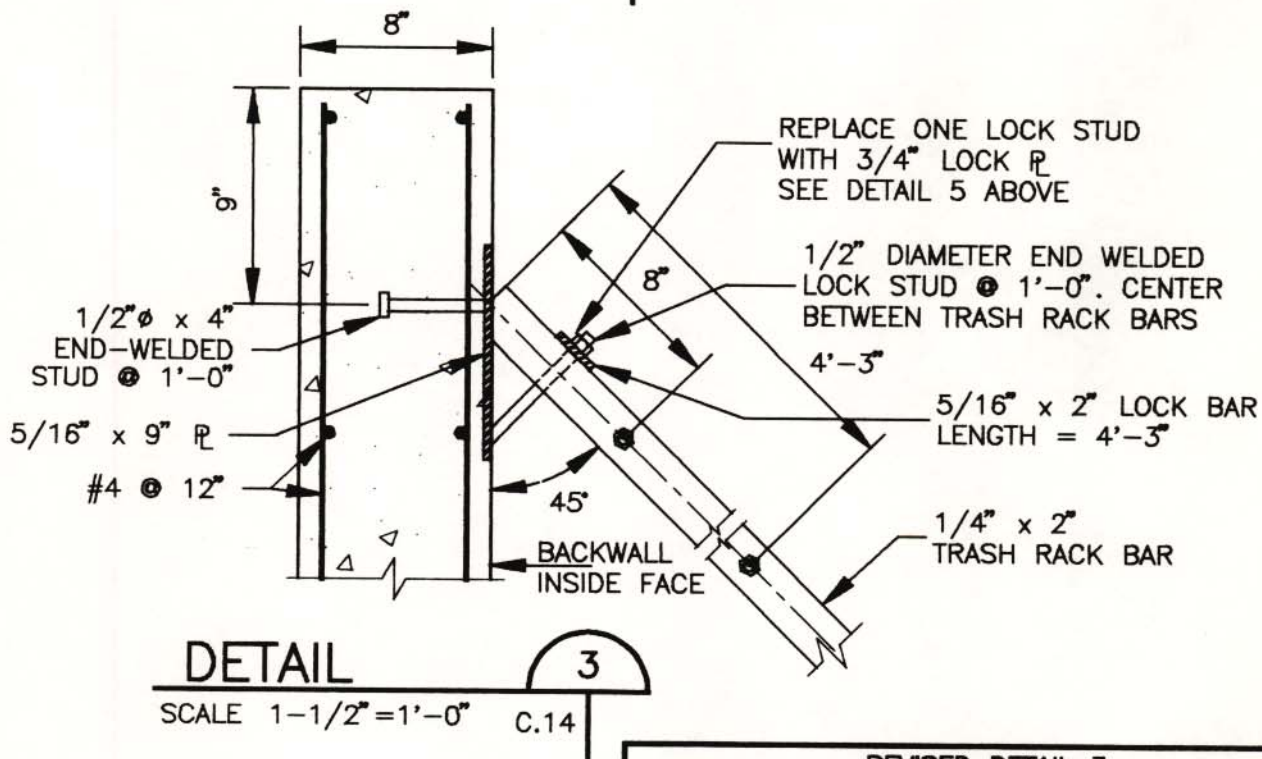
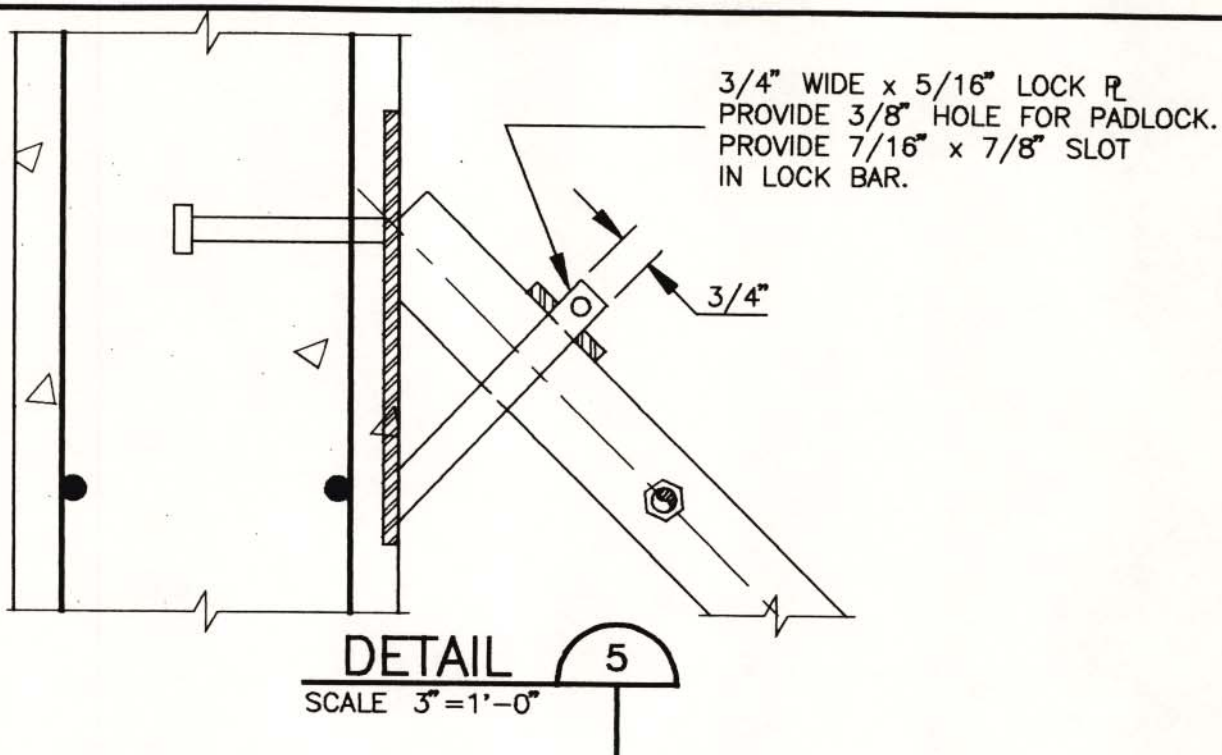
ADDENDUM NO. 38 - Contract Drawing C.17

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

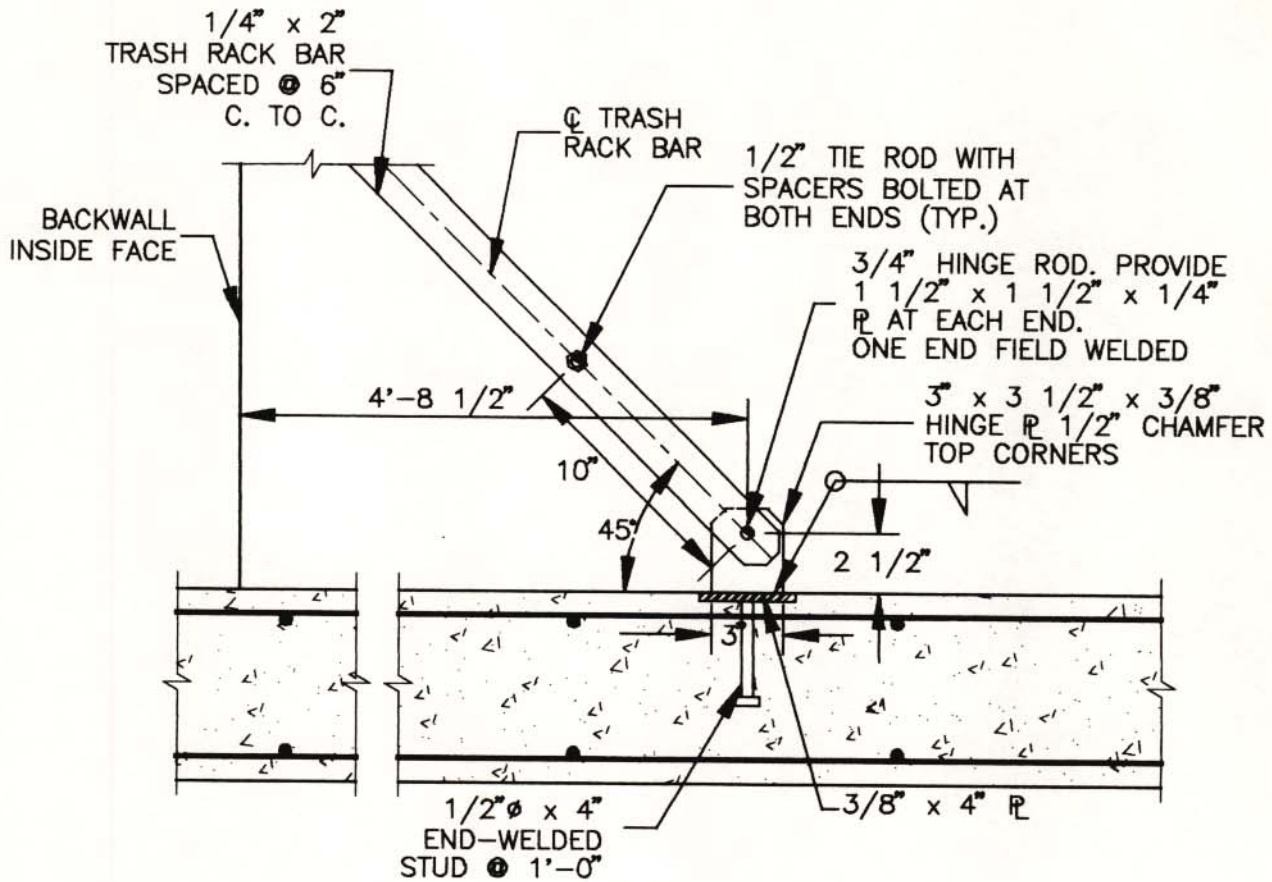
This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace Detail 3 and Detail 4 with the revised versions, attached on the following pages.
2. Delete Lighting Plan - 5 from Contract 876-HP.



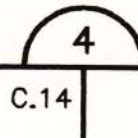
File name: K:\GARD\92C4087\DESIGN\24087028.DWG Last edited: 94/05/25 @ 1408

REVISED DETAIL 3			
CONTRACT DRAWING C.17			
PELHAM BAY LANDFILL, BRONX, NEW YORK			
WOODWARD-CLYDE CONSULTANTS, INC.			
ENGINEERING & SCIENCES APPLIED TO THE EARTH & ITS ENVIRONMENT NEW YORK, NEW YORK			
DR. BY	WVB	SCALE	AS SHOWN
CHK'D BY	WTZ	DATE	MAY 25, 1994
DWG. NO.	24087028	PROJ.	92C4087
FIG. NO.	59		



DETAIL

SCALE 1-1/2" = 1'-0"



NOTE:

1. CONTRACTOR SHALL PROVIDE DISCONTINUOUS HINGE ROD FOR TRASH RACK OR POUR STRUCTURE SIDEWALLS AFTER INSTALLATION OF TRASH RACK TO AVOID CONFLICT.

REVISED DETAIL 4			
CONTRACT DRAWING C.17			
PELHAM BAY LANDFILL, BRONX, NEW YORK			
WOODWARD-CLYDE CONSULTANTS, INC.			
ENGINEERING & SCIENCES APPLIED TO THE EARTH & ITS ENVIRONMENT NEW YORK, NEW YORK			
DR. BY	MVB	SCALE 1-1/2" = 1'-0"	DWG. NO. 24087024
CK'D. BY	MTZ	DATE MAY 25, 1994	PAGE NO. 80

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

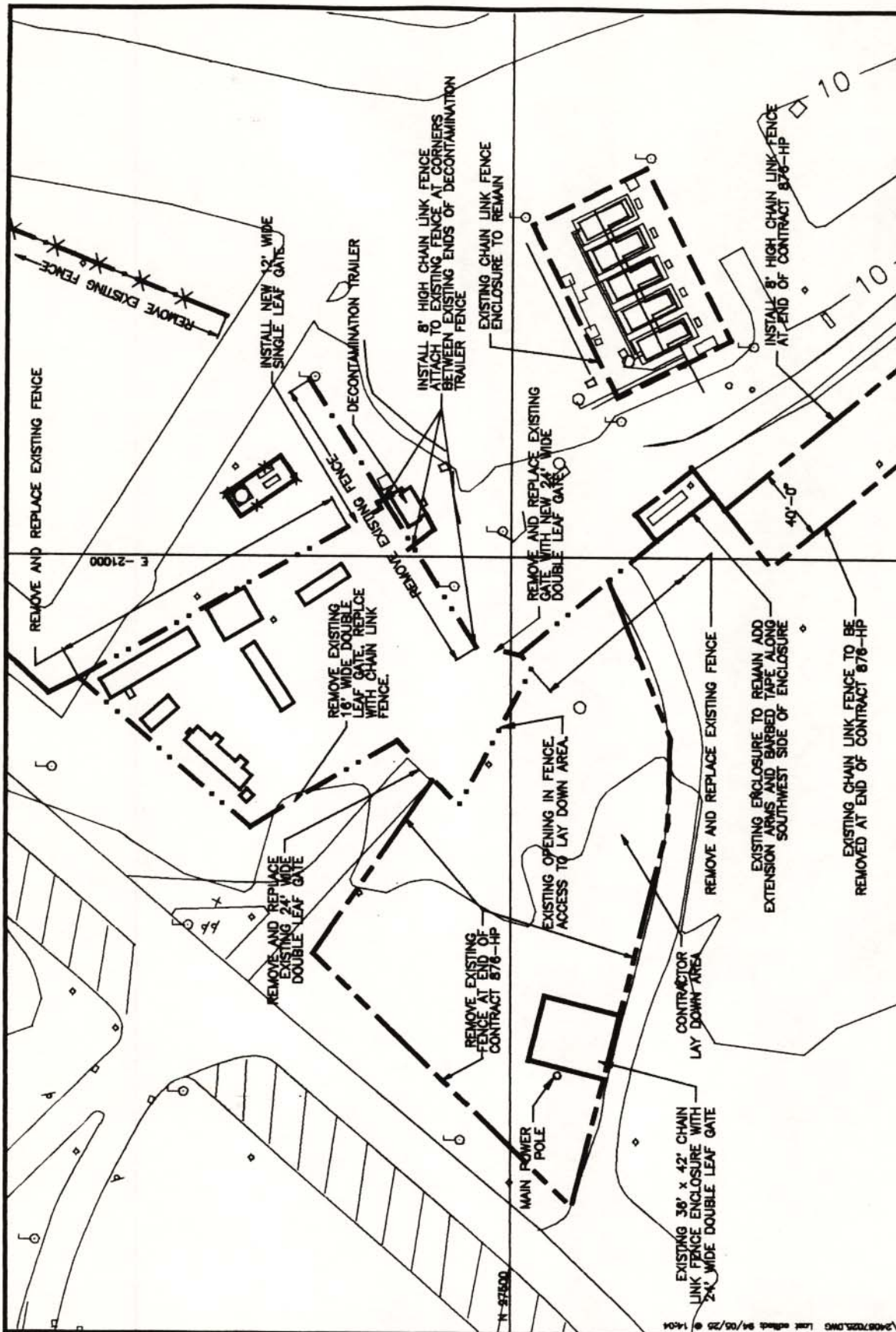
ADDENDUM NO. 39 - Contract Drawing C.18

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace Trailer Area Fence Plan with the revised version, attached on the following page. Revision made to this Plan is described below:
 - A. Existing fence condition around the contractor's lay-down area has been modified.



TRAILER AREA FENCE PLAN 1

NOT TO SCALE

REVISED PLAN 1			
CONTRACT DRAWING C.18			
PELHAM BAY LANDFILL, BRONX, NEW YORK			
WOODWARD-CLYDE CONSULTANTS, INC.			
ENGINEERING & SCIENCES APPLIED TO THE EARTH & ITS ENVIRONMENT			
NEW YORK, NEW YORK			
DATE	SCALE	DWG. NO.	PROJ.
04/01/84	1/8" = 1'-0"	24087025	9204087
CK'D BY	DATE	MAY 25, 1984	PAGE NO.
MTZ			82

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 40 - Contract Drawing LS.1

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace Contract Drawing LS.1 with revised version (Drawing LS.1R1), attached at the end of this package. Revisions made to this Drawing are described below:
 - A. Add "SECTION - LIVE STAKE PLANTING" and "LIVE STAKE DETAIL".
 - B. Add "VEGETATION ISLAND FINAL CONFIGURATION - DETAIL 3".
 - C. Add "Plant Schedule for Vegetation Islands Only".
 - D. Add Notes 1, 2, 3, and 4.
 - E. Add additional planting areas on north and west sides of the landfill on the "LANDSCAPE PLAN".
 - F. Delete Vegetation Island No. 22 and renumber vegetation islands 23 through 27 to 22 through 26, respectively.

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 41 - Contract Drawing GS.1

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace Contract Drawing GS.1 with revised version (Drawing GS.1R1), attached at the end of this package. Revisions made to this Drawing are described below:
 - A. Delete fence shown within Sedimentation Pond B.
 - B. Delete "IRM MAIN" located adjacent to the intersection of grid E-20500 and N27000.
 - C. Modify location of extraction wells EW-11 and EW-20.
 - D. Change northing and easting coordinates for extraction wells EW-11 and EW-20 in Gas Extraction Well Schedule.
 - E. Adjust Well Depth numbers in Gas Extraction Well Schedule.
 - F. Show 2-ft contour lines.
 - G. Add Note 9.

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

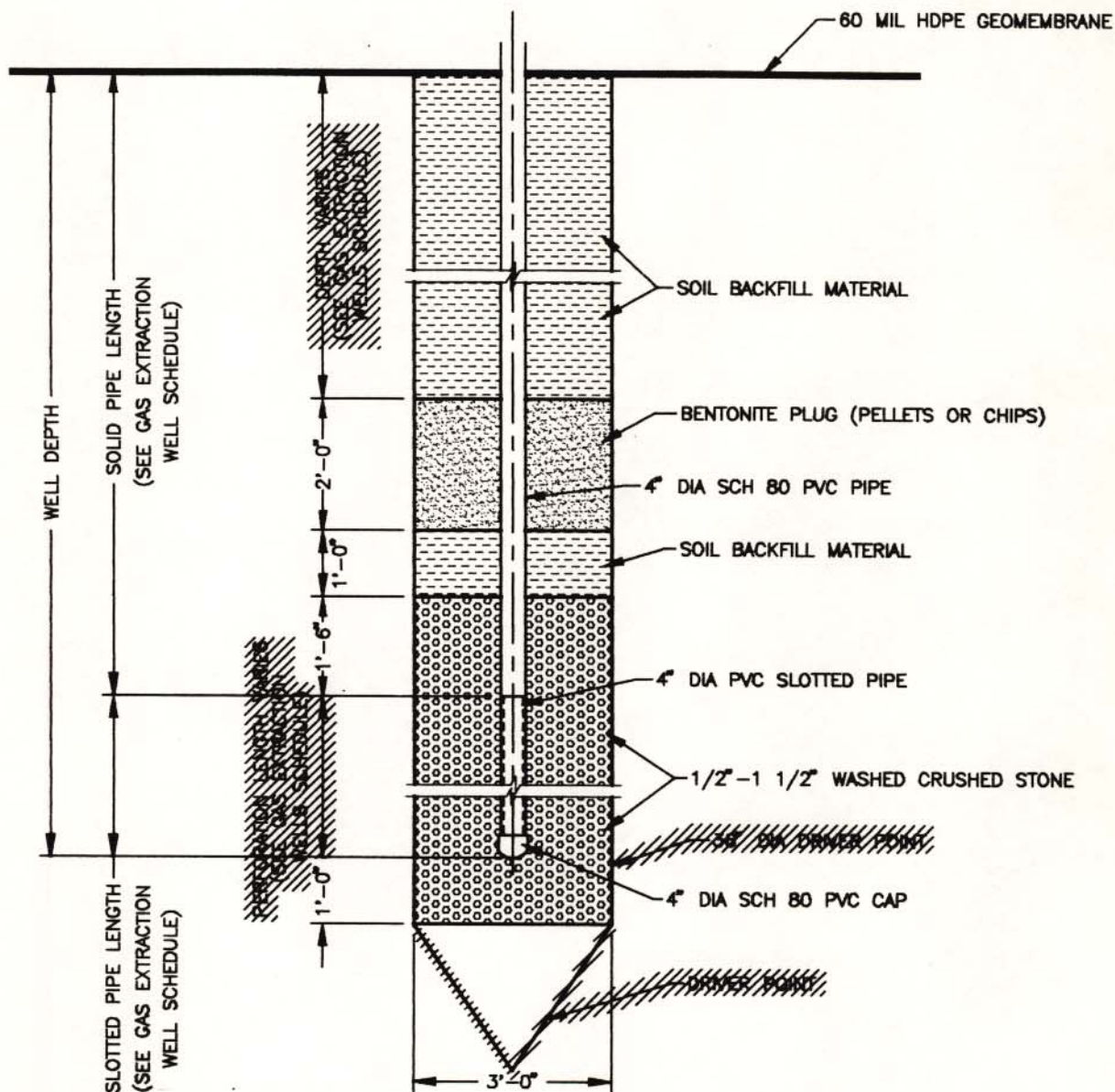
ADDENDUM NO. 42 - Contract Drawing GS.3

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace Detail 2 and Detail 4 with the revised versions, attached on the following pages.



GAS EXTRACTION WELL DETAIL

SCALE 3/8" = 1'-0"

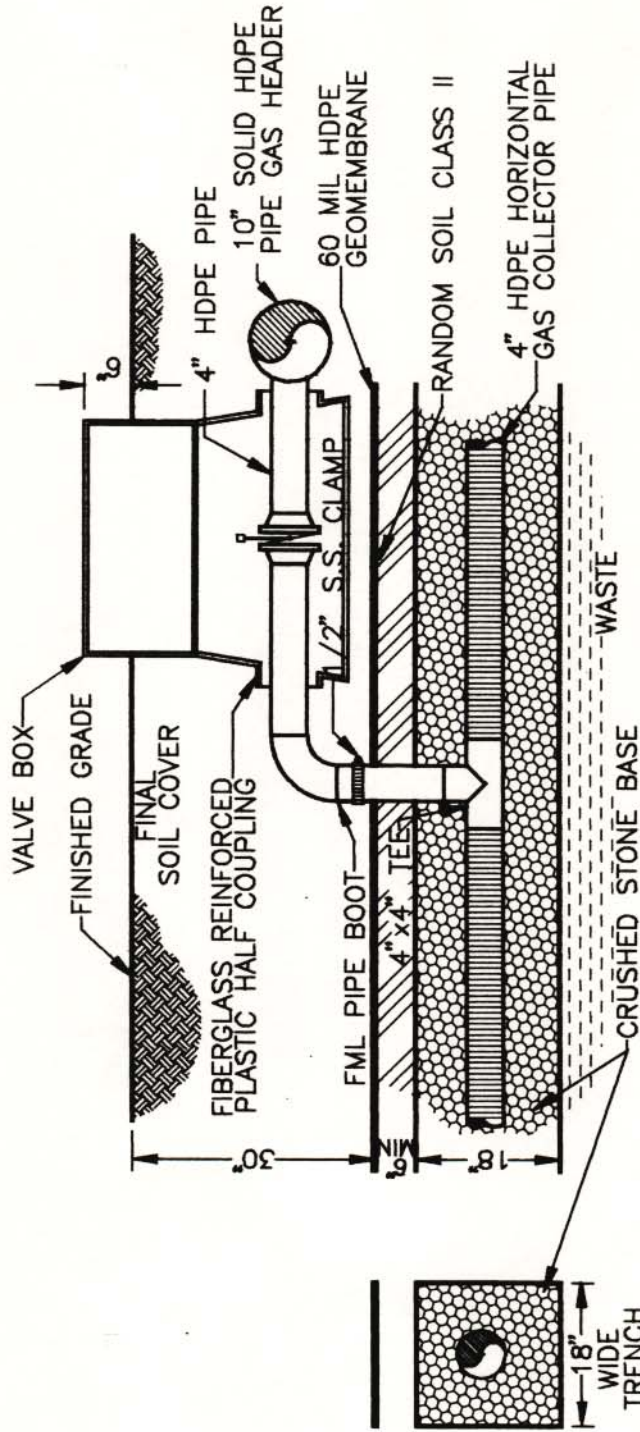
2
GS.1

REVISED DETAIL 2
CONTRACT DRAWING GS.3
PELHAM BAY LANDFILL, BRONX, NEW YORK

WOODWARD-CLYDE CONSULTANTS, INC.

ENGINEERING & SCIENCES APPLIED TO THE EARTH & ITS ENVIRONMENT
NEW YORK, NEW YORK

DR. BY	WVB	SCALE	3/8" = 1'-0"	DWG. NO.	24087028	PROJ.	92C4087
CK'D BY	MTZ	DATE	MAY 25, 1994	PAGE NO.	66		



HDPE CORRUGATED HORIZONTAL GAS
COLLECTION PIPE/RISER CONNECTION DETAIL 4

SCALE 1/2" = 1'-0"

GS. 1

REVISED DETAIL 4			
CONTRACT DRAWING GS.3			
PELHAM BAY LANDFILL, BRONX, NEW YORK			
WOODWARD-CLYDE CONSULTANTS, INC.			
ENGINEERING & SCIENCES APPLIED TO THE EARTH & ITS ENVIRONMENT NEW YORK, NEW YORK			
DR.BY	WAB	SCALE 1/2" = 1'-0"	PROJ. 9204087
CK'D BY	MTZ	DATE MAY 25, 1994	PAGE NO. 87

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

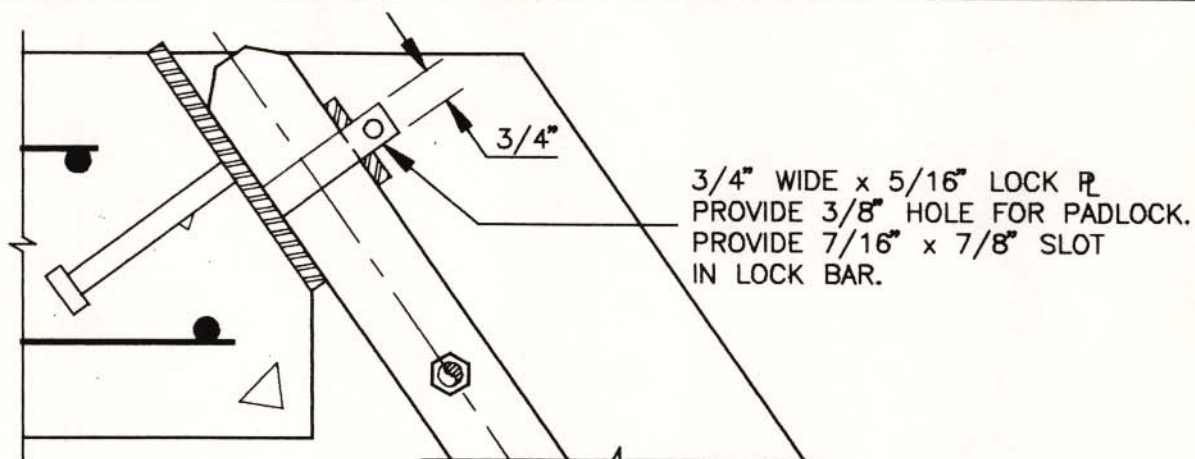
ADDENDUM NO. 43 - Contract Drawing C.12

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

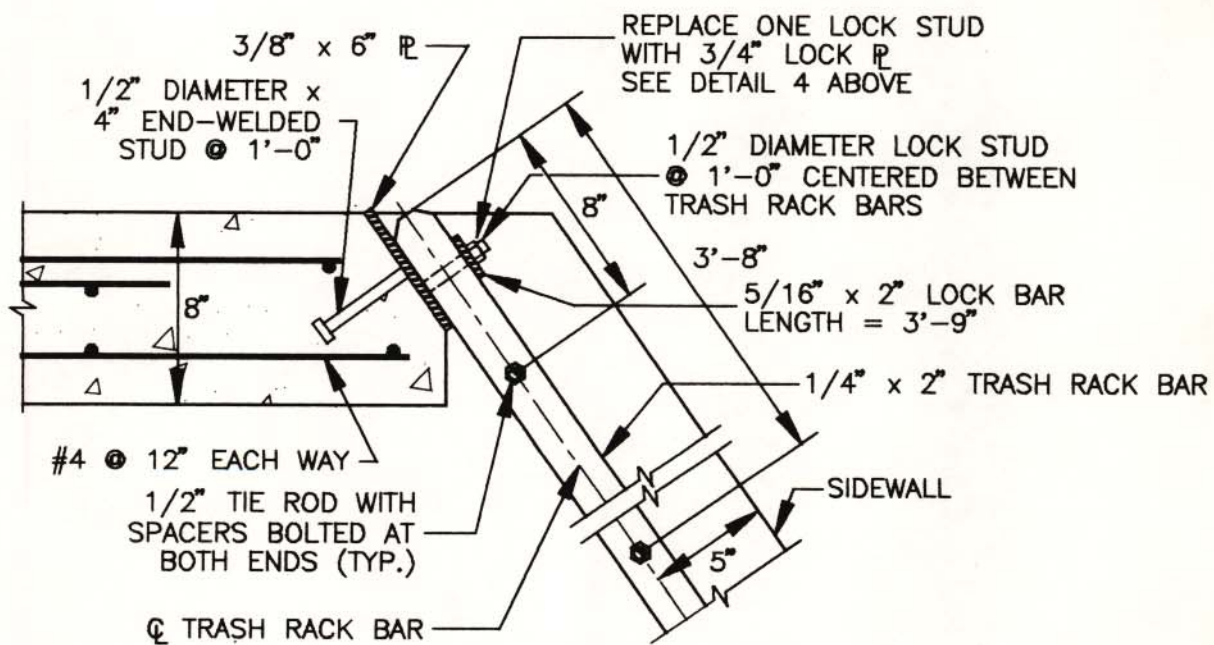
**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Replace Detail 2 with the revised version, attached on the following page.



DETAIL 4
SCALE 3" = 1'-0"



DETAIL 2
SCALE 1-1/2" = 1'-0"

REVISED DETAIL 2			
CONTRACT DRAWING C.12			
PELHAM BAY LANDFILL, BRONX, NEW YORK			
WOODWARD-CLYDE CONSULTANTS, INC.			
ENGINEERING & SCIENCES APPLIED TO THE EARTH & ITS ENVIRONMENT NEW YORK, NEW YORK			
DR. BY	MWB	SCALE	AS SHOWN
CHK'D BY	MTZ	DATE	MAY 25, 1994
DWG. NO.	24087029	PROJ.	92C4087
FIG. NO.	69		

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 44 - Specification Section 02779

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

1. Delete Section 02779 and replace with the revised version, attached on the following pages. Revisions made to this Section are described below:
 - A. Paragraph 1.3, add ASTM D1777 and ASTM D4595 to the list of reference standards and renumber references accordingly.
 - B. Paragraph 2.1A, delete the last sentence "The geocomposite material..., or equal".
 - C. Paragraph 2.2A, geotextile properties have been changed.
 - D. Paragraph 2.2B, model number and manufacturer of geotextile have been changed.
 - E. Paragraph 2.3A, add "Thickness" requirements in table of geonet properties.
 - F. Paragraph 2.3B, modify the sentence.
 - G. Paragraph 3.1, add paragraph C and renumber accordingly.
 - H. Paragraph 3.3A, modify first sentence.

SECTION 02779 GEOCOMPOSITE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Manufacture, fabrication, furnishing, and installation of geocomposite composed of geotextile/geonet to provide drainage above the geomembrane.

1.2 RELATED SECTIONS

- A. Section 02210 - Earthwork.

1.3 REFERENCE STANDARDS

- A. ASTM D413: Standard Test Methods for Rubber Property - Adhesion to Flexible Substrate.
- B. ASTM D792: Test Method for Specific Gravity (Relative Density) and Density of Plastics by Displacement.
- C. ASTM D1238: Standard Test Method for Flow Rates of Thermoplastics by Extrusion Plastometer.
- D. ASTM D1505: Test Method for Density of Plastics by the Density-Gradient Technique.
- E. ASTM D1603: Test Method for Carbon Black in Olefin Plastics.
- F. ASTM D1777: Method for Measuring Thickness of Textile Materials.
- G. ASTM D3786: Standard Test Method for Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics - Diaphragm Bursting Strength Tester Method.
- H. ASTM D4355: Standard Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus).
- I. ASTM D4491: Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
- J. ASTM D4533: Test Method for Trapezoidal Tearing Strength of Geotextiles.

- K. ASTM D4595: Test Method for Tensile Properties of Geotextiles by the Wide Width Strip Method.
- L. ASTM D4632: Test Method for Breaking Load and Elongation of Geotextiles (Grab Method).
- M. ASTM D4716: Standard Test Method for Constant Head Hydraulic Transmissivity (In-plane Flow) of Geotextiles and Geotextile Related Products.
- N. ASTM D4751: Test Method for Determining Apparent Opening Size of Geotextile.
- O. ASTM D4833: Test Method for Index Puncture Resistance of Geotextiles, Geomembrane, and Related Products.
- P. ASTM D4873: Standard Guide for Identification, Storage, and Handling of Geotextiles.
- Q. GRI (Geosynthetic Research Institute) GS6: Standard Test Method for Interface Friction Determination by Direct Shear Testing.

1.4 SUBMITTALS

- A. Submit to the Engineer for review and comment geocomposite samples and list of minimum property values, including certified test results . Material properties shall be in conformance with those defined in Part 2 of this Section. Any deviation shall be documented. Submit thread properties to the Engineer if thread is used for sewing seams.
- B. Submit, if requested by the Resident Engineer, a list of completed facilities for which Contractor has installed a minimum of 100,000 square feet (sq.ft) of geocomposite.
- C. Submit to the Engineer a copy of warranty obtained from Manufacturer and/or Installer, if requested by Engineer.
- D. Submit written documentation to the Engineer that the geocomposite has been installed according to the Drawings and Specifications and that in-place materials meet generally accepted standards of practice.
- E. Prior to delivery to Site, submit samples of the geocomposite to the Engineer for interface friction angle and transmissivity conformance testing listed in Part 2 of this Section. No geocomposite shall be delivered to Site until approval is given by the Engineer.

- F. Submit a layout plan indicating roll numbers and corresponding lengths similar to those for the geomembrane.

1.5 QUALITY CONTROL

- A. Geocomposite shall be free of defects, rips, holes, or flaws.
- B. Geocomposite shall be manufactured in widths and lengths that will permit installation of geocomposite with as few laps as possible. Geocomposite shall be of such length to allow installation from one anchor trench to the next, up or down slope, on slopes greater than 12 percent to avoid seaming cross slope.
- C. During shipment and storage, geocomposite shall be wrapped in relatively impermeable and opaque protective covers.
- D. Geocomposite shall be marked with Manufacturer's name, product identification, lot number, roll number, and roll dimensions.
- E. Storage area shall be such that geocomposite is protected from mud, dirt, dust, debris, moisture, and exposure to ultraviolet (UV) light and heat.

1.6 QUALIFICATIONS

- A. Manufacturer shall have at least five (5) years continuous experience in manufacture of geonets and geotextiles and/or experience totaling a minimum of two (2) million sq. ft of geonet and geotextile manufacture.
- B. Installation shall be performed under direction of Contractor's installation supervisor who shall remain onsite and be in responsible charge throughout geocomposite installation. A replacement supervisor acceptable to the Resident Engineer shall be available when the supervisor cannot be present. Notify the Resident Engineer when the replacement supervisor is in charge. Contractor's installation supervisor shall have installed or supervised installation of a minimum of 100,000 sq. ft of geocomposite.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Transportation of geocomposite is responsibility of Contractor, who shall be liable for all damages to geocomposite prior to and during transportation to Site.
- B. Storage, handling, and care of geocomposite onsite is responsibility of Contractor prior to, during, and after geocomposite installation. Contractor shall be liable for all damages to geocomposite incurred prior to final acceptance of installation by the

Resident Engineer, except for those due to negligent actions on part of the Resident Engineer.

- C. Contractor shall retain ownership of geocomposite until installation is accepted by the Resident Engineer.

PART 2 PRODUCTS

2.1 MANUFACTURE

- A. The geocomposite shall be manufactured by heat bonding the geotextile to the top side of the geonet. No burn through geotextile nor glue or adhesive shall be permitted.
- B. The bond between the geotextiles and the geonet shall exhibit a minimum peel strength of 2 pounds per inch (lb/in) (ASTM D413).

2.2 GEOTEXTILE

- A. Provide products for the geotextile portions of the geocomposite comprised of polyester or polypropylene. Provide a nonwoven product for the geotextile portions of the geocomposite meeting the following minimum average roll values:

GEOTEXTILE PROPERTIES

<u>PROPERTY</u>	<u>UNITS</u>	<u>VALUE²</u>	<u>TEST</u>
Apparent opening size	Standard Sieve Size	No. 100-140	ASTM D4751
Grab Strength, MD/CD ³	lb	≥500/380	ASTM D4632
Grab Elongation, MD/CD ³	%	≥65/65	ASTM D4632
Trapezoidal Tear			
Strength, MD/CD ³	lb	≥150/130	ASTM D4533
Puncture Resistance	lb	≥150	ASTM D4833
Mullen Burst Strength	lb/sq in.	≥600	ASTM D3786
Wide Width Tensile			
Strength, MD/CD ³			
Ultimate	lb/in	≥175	ASTM D4595
Secant modulus @			
10% strain	lb/in	≥400	ASTM D4595
Permeability	cm/s	≥1x10 ⁻¹	ASTM D4491
UV Resistance	% strength retained after 500 hours exposure	≥70	ASTM D4355
Porosity	%	≥30	Volume of voids divided by total volume
Interface Friction	degrees	24	GRI GS6 ¹
Angle with Geomembrane			
Interface Friction	degrees	24	GRI GS6 ¹
Angle with Loamy Soil			
Layer Material			

¹ GRI GS6, normal stress = 180-720 lb/sq ft, wet interface

² Typical or average values

³ MD = Machine Direction, CD = Cross machine Direction

- B. Provide TREVIRA 1145 as manufactured by Hoechst Celanese Corporation of Spartanburg, South Carolina, or equal.

2.3 GEONET

- A. Provide products for the geonet portion of the geocomposite to be comprised of high-density polyethylene (HDPE). The geonet shall be manufactured by extruding two sets of stands to form a three dimensional structure providing planar flow and shall meet the following minimum average roll values except as noted:

GEONET PROPERTIES

<u>PROPERTY</u>	<u>UNITS</u>	<u>VALUE¹</u>	<u>TEST</u>
Density	g/cc	0.93	ASTM D792 or D1505
Melt Flow Index	g/10 min.	1.0 max.	ASTM D1238
Carbon Black Content	%	2-3 range	ASTM D1603
Transmissivity	m ² /s	2x10 ⁻⁴	ASTM D4716 ²
Thickness	in	≥0.25	ASTM D1777

NOTES:

¹ Typical or average values

² ASTM D4716; using normal stresses of 240, 360, and 720 lb/sq ft; hydraulic gradients of 0.04, 0.5, and 1, respectively; and HDPE geomembrane material below geocomposite and loamy soil material above geocomposite.

- B. Provide Poly-Net 4000 heat bonded with Trevira 1145 geotextile filter fabric as furnished by National Seal Company of Aurora, Illinois, or equal.

PART 3 EXECUTION

3.1 GEOCOMPOSITE PLACEMENT AND HANDLING

- A. Handle all geocomposite in such a manner as to ensure it is not damaged in any way. Follow manufacturer's written instructions.
- B. Install geocomposite with the machine direction parallel to the lines of maximum slope. Geocomposite rolls shall be numbered similar to the rolls indicated on the layout plans.

- C. Geocomposite rolls shall be of such length as to extend from the anchor trench at the top of slope to the toe of slope in a single continuous section. Cross-slope seams or breaks in the continuity of the geocomposite on the side slope are not permitted.
- D. Completely cover geocomposite with a minimum 12-inch thick layer of earthen material within 20 days of removing protective wrapping from geocomposite.
- E. In the presence of wind, geocomposites shall be weighted with sandbags or equivalent. Such sandbags shall be installed during placement and shall remain until replaced with earthen cover material.
- F. Cut geocomposites using an approved cutter only. If in place, take special care to protect geomembrane from damage which could be caused by cutting of geocomposites.
- G. During placement, take care not to entrap in geocomposite stones, excessive dust, or moisture that could hamper subsequent seaming. If geocomposite is not free of debris and soil prior to installation, Installer shall clean geocomposite prior to installation.
- H. Examine geocomposite over entire surface, after installation, to ensure that no potentially harmful foreign objects, such as needles, are present. Remove any foreign objects so encountered, or remove geocomposite from the Site and replace.
- I. Take precautions against "snowblindness" of personnel if light or white-colored geotextile is used for the geocomposite.
- J. Do not weld or tack weld geocomposite to the underlying geomembrane.

3.2 GEOCOMPOSITE CONFORMANCE TESTING

- A. Samples of geocomposite delivered to Site may be collected for testing to confirm conformance with geotextile and geonet properties in Part 2 of this Section, at the Resident Engineer's discretion.
- B. Samples, if required, shall be taken across entire width of geocomposite roll and shall not include the first three (3) feet. Samples shall be three (3) ft long by roll width. Machine direction shall be marked on sample with an arrow. Include in the roll length sufficient material to reach from anchor trench to anchor trench and allow a sample to be taken in the first and last 10 feet.
- C. Samples of on-site geocomposite, when required, shall be taken at rate of one per lot or one per 100,000 sq. ft, whichever is less.

3.3 GEOCOMPOSITE SEAMS AND OVERLAPS

- A. Overlap the geonet portion of geocomposite approximately two (2) to four (4) inches where adjacent rolls abut. Join the geonet by plastic ties every five (5) ft along the roll length six (6) inches along end to end seams and in anchor trench, or by methods meeting Manufacturer's written recommendations for joining geocomposite material.
- B. Overlap the geotextile portion of the geocomposite a minimum of two (2) inches. Continuously sew or thermally bond the geotextile portion.
- C. Perform any sewing using polymeric thread with chemical resistance properties equal to or exceeding those of geotextile.
- D. Anchor geocomposite materials in anchor trenches with geomembrane as indicated on the Drawings.

3.4 GEOTEXTILE REPAIR

- A. Repair any holes or tears in geotextile as follows:
 - 1. A patch made from same geotextile shall be thermally bonded into place.
 - 2. Should any tear exceed 10% of width of roll on a sideslope, that roll shall be removed from slope and replaced.

3.5 PLACEMENT OF EARTHEN MATERIALS OVER GEOCOMPOSITE

- A. Place all earthen materials, such as Loamy Soil, located on top of geocomposite in such a manner as to ensure:
 - 1. No damage to geocomposite or underlying geomembrane.
 - 2. Minimal slippage of geocomposite on underlying layers.
 - 3. No excess tensile stresses in geocomposite.
 - 4. No unnecessary wrinkles in geocomposite or geomembrane.
- B. Place Loamy Soil material over geocomposite by pushing material out over geocomposite ahead of equipment in 12-inch thick loose lifts in accordance with Section 02210. On sideslopes, earthen material placement shall begin at toe of slope and proceed upslope to top of slope. Equipment used to install earthen material over the geocomposite shall have a maximum contact pressure of 10

pounds per square inch (psi) on earthen material. Thickness of earthen material over geocomposite shall be 12 inches or more before tracked equipment used to place earthen material shall be permitted to cross areas where geocomposite has been installed. On access roads and slopes less than 12 percent, thickness of cover material over geocomposite shall be a minimum of two (2) feet before vehicles with contact pressure greater than 10 psi shall be permitted to cross areas where geocomposite has been installed.

- C. On slopes steeper than 12 percent, only Caterpillar Model D4 dozers, or equal, will be permitted based on overall weight and track pressure regardless of cover thickness over geosynthetics. Dozers shall not work within 100 feet horizontally of each other in the same reach between slope benches. Avoid excessive braking and braking in a down slope direction during and following soil placement operations.

END OF SECTION 02779

**THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

ADDENDUM NO. 45 - Answers to Contractors' Questions

**TO ALL BIDDERS FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND
REQUIRED FOR:**

**CONTRACT 876-HP
GEOMEMBRANE CAPPING AND
GAS COLLECTION SYSTEM
PELHAM BAY LANDFILL REMEDIATION
BOROUGH OF THE BRONX
NEW YORK**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein.

Question 1

Is a Performance and Payment Bond required, and if so, what form of security is acceptable, i.e., Treasury Listed, etc.

Answer

A Performance and Payment Bond is not required by the City.

Question 2

It was stated that "No off-site disposal will be allowed." Does it mean that spent protective clothing, miscellaneous trash, etc. will be disposed of on site?

Answer

Spent protective clothing, miscellaneous trash, etc. shall be disposed of offsite. Construction-related materials (e.g., debris from demolition work, unsuitable soils) shall be disposed of onsite; in other words, shall not leave the Site. The Site has been classified as an Inactive Hazardous Waste Site Class 2 - Significant threat to public health and the environment - because the New York State Department of Environmental Conservation

possessed information that hazardous waste was disposed of at the landfill. As such, any material obtained and/or unearthed from the landfill shall remain onsite.

Question 3

It was stated that no permits will be required of the Contractor. Does it include general construction permits, discharge permits, wetland permits, fuel storage permits, or any waterfront/USACOE permitting?

Answer

The New York State Department of Environmental Conservation will not require the Contractor to obtain all permits normally needed to complete a job of this type. However, the Contractor will have to work in the "spirit" of the permits, i.e., apply for the permit, fill out the required forms, and submit to the NYSDEC all forms without fees for review. The permits will not be issued. Contractor is required to obtain New York City permits, but no fees will be assessed. New York City permits will be issued.

Question 4

Will work be allowed to proceed on a 24-hour-per-day, 7-day-per-week basis if required by the Contractor?

Answer

Normally, construction does not occur on a 24-hour basis. However, if the Contractor can show a considerable advantage in time and money saved by a 24-hour work day, the proposal will be seriously considered. Normal approved hours for construction are 7 AM thru 6 PM monday thru friday. Any time after that will require written permission from the Commissioner.

Question 5

For process design of the landfill gas flare system, what is the Methane Percentage and BTU content expected for gas extraction?

Answer

Methane Percentage expected for gas extraction is 54 percent by volume.
BTU content expected for gas extraction is 540 BTU/scf.

Question 6

Will an extension of time for the bid due date be granted if requested?

Answer

An extension of time for the bid due date will not be granted, if requested. However, the bid due date has been changed from May 24, 1994 to June 7, 1994 as per Addendum No. 14.

Question 7

During waste excavation, if high levels of Methane Gas release is encountered which would require equipment operators to upgrade personal protective equipment from Level "D" to Level "C" or "B", how will the Contractor be compensated for these additional costs?

Answer

The Contractor shall be aware of the inherent nature of the Work and price his bid accordingly and, under certain conditions, Section 00100 Information for Bidders and Contract Agreement, Chapter VI, Article 25 will apply.

Question 8

Under General Conditions, Schedule "A", subcontracting is not to exceed 40% of contract price. Would the procurement of the liners on an installed basis be considered a material purchase?

Answer

The procurement of the liner on an installed basis would be classified as subcontracting work. The total price for the subcontracting work will be used for the MBE/WBE percentage goals (if qualified). For the 40% subcontracting limit, only the installation cost and not the material cost will be considered.

Question 9

Section 02221, Page 3, Part 3, Item 3.2 - Transportation. This section states that there may be a limit imposed for the total daily transportation (import) of offsite borrow material. Please advise as to what this limit (if any) will be.

Answer

There will be no imposed limit on the total daily import of off-site borrow material.

Question 10

Reference Item #9 Gas Extraction Wells. On drawing sheet GS.3 Detail 2 (gas extraction well detail) indicates to work this detail with drawing GS.1 which has on it the Gas Extraction Well Schedule.

- A. Is the well depth indicated on the schedule the depth of the well measured from the 60-mil HDPE geomembrane liner to the bottom of the well? Or is the well depth measured along the PVC pipe length?
- B. Or do we work the schedule and detail by inserting the liner footage at the indicated portions?

Example EW-1, Well depth 45 LF
Slotted Pipe Length 23 LF
Solid Pipe Length 23 LF

Depth Varies (see Gas Extraction Schedule)	23	LF
Bentonite Pellet Plug	2	LF
Soil Backfill	1	LF
Crushed Stone	1.5	LF
Perforation Length Varies (see Gas Extraction Schedule)	23	LF
Crushed Stone	<u>1</u>	<u>LF</u>
	51.5	LF?

Answer

- A. The well depth is measured from the 60-mil HDPE geomembrane liner.
- B. Backfilling is independent of the depth of the extraction well. See drawing entitled "Revised Detail 2, Contract Drawing GS.3", on page 66 of this package. The revised detail addresses modifications below the 60-mil HDPE geomembrane liner only.

Question 11

Section 01025 Measurement and Payment page 01025-2 item J states gas extraction and monitoring wells will be paid on a unit price per linear foot basis, complete in place.

However, item 9 gas extraction well and item 10 gas monitoring well are paid by the each. Please clarify as to which is correct.

Answer

Refer to Addenda Nos. 22 and 49 for revised versions of Specification Section 01025 and Bid Form, respectively.

Question 12

Section 01025 Measurement and Payment page 01025-3 items R and U state that material will be paid on a unit price per ton basis, compacted to specifications, in place. However, item 15 crushed aggregate base course and items 19, 20, 21, 22, and 23 Rip Rap are paid by the square yard. Please clarify as to which is correct.

Answer

Refer to Addenda Nos. 22 and 49 for revised versions of Specification Section 01025 and Bid Form, respectively.

Question 13

Section 01025 Measurement and Payment page 01025-2 item L states that topsoil stripping will be paid on a per cubic yard basis. Does Item #11 excavate cover soil include this quantity?

Answer

Refer to Addendum No. 22, revised Section 01025, Item #10 and Item #15.

Question 14

Section 02210 Earthwork page 02210-3, Part 3 Execution, 3.1 Preparation outlines a procedure for excavating and grading of the existing landfill area. Will this procedure be followed? If so, does Item #11 include all of this excavation? This procedure also appears to be in conflict with Detail D5 shown on sheet C.8 which shows a 9" min. soil cover over the waste layer.

Answer

Refer to Addendum No. 22, the specification and procedure have been revised.

Question 15

Reference the geocomposite specification Part 2, Paragraph 2.1B. Could you please define the minimum property value required for peel strength. Is this a minimum average roll value, a minimum based on the average results from any sampling unit (per ASTM D4769-88), or the minimum of any single peel test result? The latter definition causes extreme difficulty for manufacturers due to the variable nature of the peel test.

Answer

The minimum property value required for peel strength is the minimum average roll value.

Question 16

Refer to Section A Cover Page and Invitation to Bid instructions, p. 1, and Schedule "A", p. 000257: with regards to the performance and payment bonds, what is the meaning of N/AP?

Answer

N/AP stands for Not Applicable. A Performance and Payment Bond is not required by the City.

Question 17

Refer to Add. #1 thru #13 and the BID FORM pages 1 thru 7: There are several new "items" of work (i.e., water main relocation, warm season grass and wildflower seed drilling, live stakes, etc.) which have been added by addenda for which there are no bid items. Please add items to the BID FORM or describe how the Contractor is to be compensated for these additions.

Answer

Refer to Addendum No. 49 for revised Bid Form.

Question 18

Refer to p. 000014, TABLE OF CONTENTS p. xiv: Reference is made at bottom of the page to "CONTRACTOR'S QUALIFICATIONS". Gentlemen, we picked up 3 sets of bid documents and none has p. 000578 and 000579. Please provide us with these pages A.S.A.P.

Answer

Contractor's Qualifications is provided as Addendum No. 17.

Question 19

Refer to p. 000585, Section 01010, p. 01010 - 3 and 4: In Art. 1.4, A.2. (actually starts on p. 000584) reference is made to "A second access...". Shall this entrance be available for Contractor's use.

Answer

The second access, located at the northern end of the landfill, is available for Contractor's use provided that the Contractor ensures Site security and prevent unauthorized entry, vandalism, or theft as specified in paragraph 1.10 of Section 01510 (page 626 of the Specifications).

Question 20

Refer to p. 000588, Sect. 01025, #1.4, B: There seems to be a conflict between # 1.4.B and #/§ 36. UNIT PRICE CONTRACTS, of the info. for bidders and constr. agreement on p. 000035 and 000036. Please clarify. Without clarification we shall assume that the "...unit sum/prices contracted." shall prevail.

Answer

The statement in paragraph 1.4B of Section 01025 has been modified as per Addendum No. 22. The requirements of paragraph 36 "UNIT PRICE CONTRACTS" of the Information for Bidders and Construction Agreement on p. 000035 and 000036 shall prevail. In other words, the Contractor will be compensated at the unit price bid in the Bid Form up to 125 percent of the estimated quantities listed on the Bid Form. If the actual quantities exceed 125 percent of the estimated quantities listed on the Bid Form, the requirements of paragraph 36 of the Information for Bidders and Construction Agreement will be enforced.

Question 21

Refer to p. 000589, Sect. 01025, p. 01025-2: it seems rather odd to pay for "earthwork....on a unit price per cubic yard basis, compacted to specifications, in place" as indicated in #K. Likewise for #L with regards to topsoil and cover soil materials stripping. In #L reference is made to agreeing to a depth prior to excavation. This subject was raised at the mandatory pre-bid meeting on 9 May 1994 and those in attendance were told the Owner's

representative(s) would look into this. It seems to me the most practical way would be to measure excavation at the cut. Please clarify.

Answer

Refer to Addendum No. 22, revised Section 01025.

Question 22

Refer to p. 000590, Sect. 01025, p. 01025-3: "N. Borrow excavation and transportation will be considered subsidiary to the Work." Please describe how measurement shall be made for compensation of borrow excavation. It is normal to pay for borrow excavation by sections in the borrow pit.

Answer

Refer to Addendum No. 22, revised Section 01025; cross-sectioning the borrow pit would require a dedicated pit, the Engineer has opted to install soil depth indicators to determine the soil thickness.

Question 23

Refer to p. 000590, Sect. 01025, p. 01025-3: My comments, regarding excavation, in Questions 21 and 22 above would also apply to # O regarding handling of waste.

Answer

Refer to Addendum No. 22, revised Section 01025.

Question 24

Refer to p. 000590, Sect. 01025, p. 01025-3, # R: Paying for crushed aggregate base course on a per ton, compacted, basis an only lead to problems. There will be constant disagreement regarding the factors. The BID FORM, p. 2, Items 15 and 16, it says that this material is paid by the square yard. A much more practical way. Please clarify.

Answer

Refer to Addenda Nos. 22 and 49 for revised versions of Specification Section 01025 and Bid Form, respectively.

Question 25

Refer to p. 000590, Section 01025, p. 01025-3, # U: How can you pay for Rip Rap per ton, in place? Bid Form Item 19, 20, 21, 22, and 23. It's by the square yard. A much more practical way. Please clarify.

Answer

Refer to Addenda Nos. 22 and 49 for revised versions of Specification Section 01025 and Bid Form, respectively.

Question 26

Refer to p. 000589, #1.5 MEASUREMENT OF QUANTITIES and the BID FORM: The more I read the more problems I see. Please compare the methods of payment on the Bid Form with those on p. 000589 to 000591. Seems to be some differences. Please clarify.

Answer

Refer to Addenda Nos. 22 and 49 for revised versions of Specification Section 01025 and Bid Form, respectively.

Question 27

Refer to p. 0000594, Sect. 01026, P. 01026-2, # 1.4.D: In the 4th line reference is made to "... Article 40b of Section 00100" which relates to LBE or maybe it's Article 40b on p. 000007/000087 which relates to certification of prices.

Answer

"Article 40b of Section 00100" refers to Certification of Prices, page 000087 of the Specifications.

Question 28

Refer to p. 000643, Sect. 01590, #3.2.B: In #1.2.A it states that field offices for the Engineer, Resident Engineer and NYSDEC shall be provided under separate contract. At the mandatory pre-bid it was disclosed that the Contractor for 876-HP would assume responsibility (I guess that is the word) at \$575.00/mo/ea. In # 3.5.B it states that the Contractor shall insure the trailers.

Answer

The answer to this question is addressed in Addendum No. 25.

Question 29

Refer to Bid Form, p. 1, Item 1: Is there a maximum amount that a Contractor can bid on Item 1, General Requirements? If there is could you please call it to my attention as I have been unable to find a maximum.

Answer

There is no maximum amount that a Contractor can bid on Item 1, General Requirements. However, all bids will be reviewed to ensure that they are not "front-end" loaded. Refer to Section 00100, Article 22, REJECTION OF BIDS.

Question 30

Refer to p. 000671, 02210-2, # 2.1.B: In the space between subparagraphs A & B it appears as though someone has written in something about topsoil. It is difficult to read! If it does in fact belong there please tell us what it is supposed to say. Please make it legible.

Answer

Disregard handwritten notes in paragraph 2.1B of Section 02210.

Question 31

Refer to Addenda # 13: Note 5 on the NEW TEMPORARY [24"] WATER MAIN. Drawing refers to the shut down time of the existing main being kept at "...an extreme minimum." Unless otherwise informed by addenda prior to bid we shall assume that we can shut down at the Contractor's option and/or convenience keeping in mind the"... extreme minimum."

Answer

The shut down time of the existing water main should be kept to an extreme "minimum" not to exceed a continuous two hour period.

Question 32

Refer to Bid Form, Item 1: I see no method of payment for item 1. Normally the Owner sets forth a schedule of payment. Attached is a copy of the schedule of payment for the recently bid Fresh Kills Landfill Project.

Answer

After the award of the Contract, the Contractor will produce a Detailed Estimate Breakdown. The Detailed Estimate Breakdown will contain all items that are covered in the lump sum price (Bid Item No. 1). It will also contain all unit price items found on the Bid Form. The City will review and approve the Detailed Estimate Breakdown. Once approved, the Detailed Estimate Breakdown will become the basis for all partial payments submitted by the Contractor.

Question 33

Refer to sheets 21 and 23/28. Horizontal perimeter gas collection pipe, Section 02715 and Bid Form p. 4, Item 31: Item 31 indicates the horizontal perimeter gas collection pipe is 4" HDPE. The pipe is shown on sheet 21/28 as being a 4" HDPE CORRUGATED GAS COLLECTION PIPE. On detail 4 of sheet 23/28 this pipe is shown as a 6" HDPE pipe. Which size is correct? Also, there is nothing to indicate if this pipe is solid or perforated. Further, are the joints on the horizontal perimeter gas collection pipe to be fusion welded, coupling (as shown on detail 4) or slip-on?

Answer

The horizontal perimeter gas collection pipe shall be 4-inch diameter, HDPE perforated and corrugated pipe. Joints on the horizontal perimeter gas collection pipe shall be fusion welded. See drawing entitled "Revised Detail 4, Contract Drawing GS.3", attached on page 67 of this package to reflect changes to the diameter of the pipe as well as the connecting tee.

Question 34

Refer to p. 000710, Sect. 02715, p. 02715-4, # 2.5.A: Do you really want "... a 2-inch thick...." metallic-lined tape? Perhaps it should be 2-inch wide. Please clarify.

Answer

The metallic-lined warning tape shall be 2-inch wide.

Question 35

Refer to sheet 23/28, Detail 2: How does one put a 4" test port on a 4" x 4" x 3" PVC tee?

Answer

Change "4" TEST PORT" to "3/4" TEST PORT".

Question 36

Refer to p. 000713, Sect. 02715, p. 02715-7, # 3.8: The Contractor is responsible for testing "...all the gas pipes." One of the required tests is the pressure test. How do you do a pressure test on a perforated pipe? How do you do a hydrostatic test on the perforated pipe?

Answer

Pressure testing shall be conducted on all solid portions of the gas pipes.

Question 37

Refer to p. 000710, Sect. 02715, p. 02715-4, #2.6: A 12" diameter or 16" diameter steel pipe is to be provided at road and swale crossings. There is no drawing showing the size required at each location. Is the purpose of this pipe to act as a sleeve or is it to be connected, at either side of the crossing, to the "through" pipe?

Answer

For gas pipe diameters of three (3) to eight (8) inches, use a 12-inch diameter Schedule 80 carbon steel pipe (i.e., sleeve). For gas pipe diameters larger than eight (8) inches, use a 16-inch diameter Schedule 80 carbon steel pipe (sleeve). Each sleeve shall be a minimum of 20 ft long. The gas pipe shall be centered in the sleeve with supports at minimum 10 ft spacing. The annular space between the gas pipe and the sleeve shall be filled using Structural Backfill material specified in Section 02210 of the Specifications, paragraph 2.1D.

Question 38

Refer to sheets 14 and 17/28, SEDIMENTATION POND B-PLAN, NEW CURTAIN DRAIN DETAIL 1 and NEW 6" DIAMETER PIPE CONVEYANCE TRENCH DETAIL 2: What is the type of pipe to be used in the conveyance trench, solid or slotted? Is the conveyance pipe to be included with Item 40, curtain drain? If not please indicate payment

method for the conveyance pipe.

Answer

The pipe in the conveyance trench shall be 6-inch diameter solid HDPE as shown on Sheet 17 of 29, Detail 2. Refer to Addenda Nos. 22 and 49 for revised versions of Specification Section 01025 and Bid Form, respectively.

Question 39

Refer to Bid Form, Item 42 and Sheet 3/28: On Bid Form p. 5 the Spec. No. for Item 42 is 02722. This spec. sect. refers to reinforced concrete piping. The description is "Reconstruction of Sewer (30" RCP)". The only item for new RCP seems to be Item 40 which is for 24" diameter RCP. Section 02722 refers only to 24" diameter RCP. Is it possible that something got a bit messed up and the spec. no. for Item 42 should be 02766 rather than 02722 and that the existing 30" diameter RCP should be lined as is Item 43, Sect. 02766, Reconstr. of Sewer (72" RCP)? In the event it is a new 30" diameter RCP from MH-1 to MH-4 how will the Contractor be compensated?

Answer

Refer to Addendum No. 49 for revised Bid Form.

Question 40

Refer to sheets 6, 7 and 8/28: The notes indicate that Woodward-Clyde anticipated settlement. Please provide the Contractor with the amount/depth of settlement W.C.C.I. anticipated.

Answer

Based on recent landfill settlement rates (1987-1992), WCCI is anticipating an average of about two (2) feet of settlement in the upper reaches of the landfill between October 1992 and June 1995.

Question 41

Refer to drawings and specifications: Is it necessary to excavate the existing cover soil in the fill area?

Answer

Yes. The waste material must be graded first.

Question 42

Refer to Sheets 6, 7 and 8/28: There is a note w/leader which indicates Estimated Top of Waste Surface. Please describe the meaning of Estimated Top of Waste Surface. Is this the top of the MSW or is it the top of the existing cover material.

Answer

Estimated top of waste surface is the estimated top of landfill refuse (which you refer to in your question as Municipal Solid Waste). It was estimated based on a limited amount of data (approximately 50 test pits and borings).

Question 43

Refer to Section 02910: On p. 02910-13 there is reference to WOOD EDGING AND GRAVEL. Reference is also made to these items, plus others, as being shown on the drawings. I have only one (1) landscaping drawing, that being Sheet 27/28, LANDSCAPE PLAN, which shows the location, only, of the Vegetation Islands. Please provide the Contractor with the necessary drawings to bid and build the project.

Answer

Section 02910, paragraph 2.8 "WOOD EDGING" and paragraph 2.9 "GRAVEL" are not necessary and shall be deleted in their entirety. Sheet 27/28 of the Drawings "LANDSCAPE PLAN" has been revised as per addendum No. 40.

Question 44

Refer to Section 02930, 02940 and Bid Form p. 6, Item 54: The word "Meadow" is used throughout. Please define "Meadow" with regard to its use in these specifications. Next, I am confused, along with others, on when to seed, with which seeds and how payment will be made. I realize there is one seeding item, Item 54, but do not understand how many or what to seed with, not to mention how the Contractor gets paid. Please clarify!

Answer

The term "Meadow" refers to all areas of the final cover other than the vegetation islands.

The proper seed to use is defined by Section 02930, paragraph 2.3 H: Meadows. Payment for seeding will be covered under Bid Item 1 in a lump sum price.

Question 45

Refer to Section 02950: I reckon someone must know the various species and sizes of the trees and shrubs described, but, I can't seem to find the list. Please, help!

Answer

The species, sizes, and number of trees and shrubs required are located on Drawing LS.1R1 (issued as per addendum No. 40) in addition to Section 02960 Live Stakes.

Question 46

- A. You should ask the engineer about the Bentonite Pellets for the seal in the gas extraction holes. The standard practice in the field is to use Bentonite Chips because the annular space is so large between the outside of the 4 inch pvc pipe and the wall of the 36 inch diameter hole and the void space in the landfill waste will take many more buckets of pellets. See Section 02169, Part 2, item 2.2 A & B. This specification is written for monitoring wells, not landfill gas extraction wells. Item 2.2 A reads "less than one-half the width of the annular space". Pellet sizes are small 3/8 inch diameter, 1/2 inch diameter, etc.
- B. Item 2.2B says "Tremie method". The annular space will be so large that tremie method is not a standard practice. Also "30 minute set time before placement of any-grout". No grout is specified on the drawings for the gas extraction wells. Also see part 3, 3.2 Item E. "backfilling with bentonite pellets."

Answer

- A. Bentonite chips are acceptable in lieu of the specified bentonite pellets for the gas extraction wells. The chips shall be hydrated during installation. For gas monitoring wells, bentonite pellets shall be used.
- B. No grout shall be used in the installation of the gas extraction wells. Grout shall be used in the installation of the gas monitoring wells (refer to Detail 1, Sheet 23 of 28).

Question 47

- A. It is not clear how we will be paid for the well installation, by each or by the foot.

We have been pricing by the foot.

- B. What happens because of field conditions, leachate in hole, construction debris, refusal, etc. and you have to abandon the hole and redrill, cut the hole short or go beyond the depth specified? Are there adds and deducts? Is there an abandon well price?
- C. The bottom of the well in the drawings show a 1 foot distance between the bottom of the cap and the top of the casing point. Is this distance added into the footage on sheet 21 of the drawings? Is the hole depth measured from the steel tip which may be another 2 feet, plus or minus? Is the total depth of the hole measured from the 60 mil HDPE Geomembrane to the tip of the driver point? There is an additional few feet of Schedule 80, 4" Diameter PVC riser pipe above the 60 mil HDPE Geomembrane to the well head. We would price to the 60 mil HDPE Geomembrane and put a cap on top.
- D. The stone for the slotted well section should be clean, washed stone. Non-washed stone may clog up the slots. It does not specify.
- E. Under Material Disposal, Part 3, Item 3.4 A & B. If drilling the hole with Standard industry methods, landfill buckets or augers, there may be liquids that come to the surface. How do you want these liquids contained and who will dispose of the contaminated materials? The spec's say, the liquids be considered contaminated unless we can show otherwise? There should be no well development for the gas extraction wells?
- F. If we do not cover all of the potential questions now and leave something out, how will we handle additional questions at a later date, prior to bid opening?

Answer

- A. Refer to Addendum No. 22, revised Section 01025.
- B. Refer to Section 00100 Information for Bidders and Contract Agreement, Chapter VI, Article 25.
- C. Refer to Question 10, above.
- D. Stone for the slotted well section shall be washed crushed stone as per addendum No. 26 and drawing entitled "Revised Detail 2, Contract Drawing GS.3", attached on page 66 of this package.
- E. The Contractor shall be responsible for the collection and disposal of liquids generated during the installation of the gas extraction and monitoring wells. Disposal