

BATTERY PARK CITY AUTHORITY

REQUEST FOR PROPOSALS

FOR

2014 ESPLANADE TREE PLANTING - SUPER STORM SANDY

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I. SUMMARY

Battery Park City Authority d/b/a Hugh L. Carey Battery Park City Authority (“BPCA”) requests proposals (each individually, a “Proposal” or collectively, the “Proposals”) from landscape contractors (each individually, a “Proposer” or collectively, the “Proposers”) to provide tree planting and transplanting services to BPCA. Services shall include, but not be limited to: supplying and installing thirty three (33) new trees and moving one (1) tree to a new location.

Minority-Owned Business Enterprises (“MBE”) and Women-Owned Business Enterprises (“WBE”) are encouraged to submit Proposals.

This request for proposals, the attachments and any additional information submitted herewith, (collectively, the “RFP”) does not obligate BPCA to complete the selection and contract award process. BPCA reserves the right: 1) to accept or reject any and all Proposals; 2) to request additional information from any or all Proposers to assist BPCA in its evaluation process; 3) to amend or withdraw this RFP prior to the announcement of the selected Proposer; and 4) to award the proposed services, in whole or in part, to one or more firms. In case of an amendment to the RFP, all Proposers will be provided with a copy of any such amendment(s) and will be afforded the opportunity to revise their Proposals in response to the RFP amendment.

II. DESCRIPTION OF BPCA

BPCA is a public benefit corporation created in 1968 under the laws of the State of New York for the purpose of financing, developing, constructing, maintaining, and operating a planned community development of the Battery Park City site as a mixed commercial and residential community.

Under the Battery Park City Authority Act (the “Act”), BPCA has the following powers, among others: to borrow money and to issue negotiable bonds, notes or other obligations and to provide for the rights of the holders thereof; to acquire, lease, hold, mortgage and dispose of real property and personal property or any interest therein for its corporate purposes; to construct, improve, enlarge, operate and maintain Battery Park City; to make bylaws for the management and regulation of its affairs, and, subject to agreements with bondholders, for the regulation of Battery Park City; to make contracts and to execute all necessary or convenient instruments, including leases and subleases; to accept grants, loans and contributions from the United States, or the State of New York or the City of New York (the “City”), or any agency or instrumentality of any of them, or from any other source and to expend the proceeds for any corporate purpose; to fix, establish and collect rates, rentals, fees and other charges; and to do all things necessary or convenient to carry out the powers expressly granted by the Act. BPCA has no taxing power.

Since its inception, BPCA has caused the staged development of Battery Park City, in individual parcels, creating a richly diversified mixed use community providing residential and commercial space, with related amenities such as parks, open spaces, plazas, recreational areas and a waterfront esplanade. Most individual parcels of land in Battery Park City were developed into residential and commercial buildings by tenants (“Ground Lease Tenants”) under long-term ground leases with BPCA. The Ground Lease Tenants are responsible for the maintenance, insurance and defense and indemnification of BPCA with regard to those leased parcels.

One of BPCA’s key responsibilities under the Act is to operate, maintain and repair the parks and opens spaces in and around Battery Park City’s residential and commercial areas. This function has been delegated by BPCA to the Battery Park City Parks Conservancy Corporation (“BPCPC”) through a written Management Agreement. BPCPC carries out its mission by maintaining 36 acres of parks, playgrounds and open spaces, including a mile-long waterfront esplanade. BPCPC also develops programs and manages public events for the Battery Park City

community. BPCA owns and has built out a commercial condominium unit in a residential building in Battery Park City, which serves as the BPCPC headquarters.

To obtain a copy of BPCA's most recently completed audited financial statements, please visit BPCA's official website at www.batteryparkcity.org. The audited financial statements and related reports found on BPCA's website will provide you with an overview of the operations for which BPCA is responsible and the areas of expertise in which the selected Proposer must be proficient. For an overview of BPCPC's operations, please visit its website at www.bpcparks.org.

III. SERVICES REQUIRED

- A. The selected Proposer will be required to perform the services set forth in Exhibit A (the "Scope of Work"), attached hereto.
- B. All work to be performed by the selected Proposer shall be performed under the supervision of a project manager of the firm in charge of this engagement (the "Lead Manager"), who must ensure that the work completed for BPCA is performed competently and in a timely manner.

IV. KEY DATES, CONTRACT TERM AND MINIMUM QUALIFICATIONS

A. Key Dates

The following is a list of key dates, up to and including the date Proposals are due to be submitted, which is subject to change at BPCA's discretion:

- Request for Proposals issued: January 30, 2014
- Pre-proposal meeting: February 7, 2014 at 10:30am. The meeting will be held at the BPCPC offices, located at 75 Battery Place, New York, NY 10280
- Deadline to submit questions to BPCA: Friday February 11, 2014 by 5:00 p.m. (by email only)
All questions regarding this RFP should be submitted in writing via email to the "Designated Contact": Della Lee, Administrative Assistant, Battery Park City Authority, at Della.Lee@bpca.ny.gov.
- Deadline for BPCA's response to substantive questions: Friday February 14, 2014 (via BPCA website)
- **DUE DATE FOR RESPONSES TO RFP: February 21, 2014 by 3:00 p.m. (the "Due Date")**
- Selection and notification of successful Proposer: To be determined.
- Contract start date: To be determined.

B. Anticipated Contract Term

It is anticipated that the term of the contract awarded pursuant to this RFP (the "Contract") will be a period of six (6) months. BPCA reserves the right to terminate the Contract at any time, with or without cause, upon thirty (30) days written notice. BPCA reserves the right to terminate the Contract at any time, without prior notice, if the Project Manager identified in the Proposal as the Lead Manager for this engagement ceases to be employed by the selected Proposer.

C. Minimum Qualification Requirements

The following are the Minimum Qualification Requirements for this RFP. **Proposals that fail to comply with these requirements will be rejected.**

- 1) The Proposer must have an office in New York State (a New York City office is preferred); and
- 2) The Proposer must be licensed in the State of New York; and
- 3) The Proposer must complete and submit all mandatory forms with its Proposal.

V. GENERAL REQUIREMENTS

A. Questions regarding MBE/WBE participation, joint ventures and sub-contracting goals

Please see **Exhibit B** (attached) for contractor requirements and procedures for business participation opportunities for New York State certified MBEs/WBEs and equal employment opportunities for minority group members and women.

For questions relating to MBE/WBE participation, joint ventures and sub-contracting goals ONLY, please contact “MBE/WBE Designated Contact” Mr. Anthony Peterson at 212.417.2337.

B. Restricted Period

Applicants are restricted from making contact with anyone other than the Designated Contact or MBE/WBE Designated Contact specified above during the period from the date of publication of the notice of this RFP in the New York State Contract Reporter through approval of the Contract by BPCA (the “Restricted Period”). Employees of BPCA are required to record certain contacts during the Restricted Period, including, but not limited to, any oral, written or electronic communication with a governmental entity under circumstances where a reasonable person would infer that the communication was intended to influence BPCA’s conduct or decision regarding the governmental procurement, and to make a determination of responsibility based, in part, upon any such contact. Failure to abide by this process may result in a finding that the firm is a non-responsive Proposer.

C. Submission of Proposals

Proposals are due no later than 3:00 p.m. on February 21, 2014

Proposers must submit five (5) paper copies of their Proposals and one (1) electronic CD-Rom copy in a sealed package clearly marked “**Proposal Enclosed - 2014 Esplanade Tree Planting Super Storm Sandy**” to the Designated Contact **by messenger, overnight courier or certified mail** to the following address:

Della Lee
Battery Park City Authority
One World Financial Center, 24th Floor
New York, NY 10281

BPCA is not responsible for any internal or external delivery delays which may cause any Proposal to arrive beyond the stated Due Date. To be considered, Proposals must arrive at the time and place specified herein and be time stamped by BPCA’s time stamp prior to the Due Date. Please leave ample time for building security, as late Proposals will not be accepted. Proposals submitted by fax or electronic transmission will NOT be accepted. A Proposer may, after submitting a Proposal, amend its Proposal by submitting a second,

amended Proposal, clearly labeled “**Amended Proposal Enclosed - 2014 Esplanade Tree Planting - Super Storm Sandy**,” as long as the amended Proposal is submitted by the Due Date.

Public access to Proposals shall be governed by the relevant provisions of the Freedom of Information Law, Article 6 of the New York State Public Officers Law, and regulations adopted pursuant thereto.

D. Mandatory Forms

Proposers must complete and include with their Proposal all “Mandatory Forms,” which can be found at the following URL address: http://www.batteryparkcity.org/pdf_n/Mandatory_Forms_Packet.pdf, by the Due Date.

These Mandatory Forms include the following:

1) NYS Standard Vendor Responsibility Questionnaire – **Submit with the Cost Proposal (as described below), one (1) original unbound set of a completed NYS Standard Vendor Responsibility Questionnaire with original ink signatures. Do not include the Standard Vendor Responsibility Questionnaire in the bound copies of the Cost Proposal.** The NYS Standard Vendor Responsibility Questionnaire must be notarized and signed by the individual(s) authorized to bind the firm contractually. Indicate the title or position that the signer holds within the firm.

2) State Finance Law § 139 Form 1 – **one original unbound completed SFL 139 Form 1: Professional’s Certifications Pursuant to SFL § 139-j and § 139-k with original signature.** State Finance Law § 139 Forms 1 must be signed by the individual(s) authorized to bind the firm contractually.

3) W-9 form.

4) Statement of Non-Collusion.

5) Diversity Forms.

VI. PROPOSAL FORMAT AND CONTENTS

A. Proposal Format

The Proposal must be printed on 8½” x 11” or 8 1/2" x 14" paper. Pages should be numbered. The Proposal will be evaluated on the basis of its content, not length. BPCA reserves the right to disqualify Proposals that fail to comply with any of these instructions.

B. Proposal Content

A Proposal in response to this RFP must include the following sections in the order listed:

1) A Transmittal Letter, as follows:

The Proposal must include a signed Transmittal Letter from a person within the Proposer who is authorized to bind the Proposer, preferably the Lead Manager. **Transmittal Letters must be signed. Proposals with unsigned Transmittal Letters will be rejected.**

The Transmittal Letter must include a representation by the Proposer that, except as disclosed in the Proposal, no officer or employee of the Proposer is directly or indirectly a party to or in any other manner interested financially or otherwise in this RFP.

- 2) Corporate Overview of the Proposer.
- 3) A discussion of the Proposer's understanding of the Services Required (see Section III).
- 4) Responses to the RFP Questions and RFP Additional Information Request, set forth below.
- 5) A Cost Proposal, as described below.
- 6) A response to the question regarding the use of New York State businesses set forth in Section C of the RFP.

C. RFP Questions for the Proposer

1. Briefly describe your background, size, and history as it may be relevant to the Services Required, with an emphasis on tree installation. If your offices are located in more than one city, indicate which office will provide the Services Required.
2. Describe the relevant special services you provide, particularly those that may not be offered by other Proposers.
3. Describe your experience and methodology for this project.
4. Please describe your experience handling the installation of trees in public spaces.
5. Within the past three years, have there been any significant developments in your business such as changes in ownership or restructuring? Do you anticipate any significant changes in the near future? If so, please describe.
6. Do you employ an ISA Certified Arborist or do you use a sub-consultant?
7. Have you or any of your partners/employees been disciplined or censured by any regulatory body within the last 5 years? If so, please describe the relevant facts.
8. Within the last five years, have you, or a partner or employee, been involved in litigation or other legal proceedings relating to the provision of landscape services? If so, please provide an explanation and the current status or disposition of the matter.
9. Are there any potential conflict of interest issues in representing BPCA?
10. List any professional or personal relationships you may have with BPCA's Board and/or staff members.
11. List all the employees you intend to assign to this engagement and the area(s) of specialization for each.
12. Identify the Lead Manager who will be the primary contact in providing the services to BPCA, and who will be listed as a "key person" in the Contract with BPCA.
13. Describe your proposed team's experience with similar work for other public agencies and authorities, with a particular emphasis on New York State agencies and authorities.
14. Describe your "backup plan" in the event the Lead Manager assigned to this engagement leaves your employ.
15. Identify any and all exceptions taken to BPCA's standard form of contract attached hereto as Exhibit C, detailing the reasons for such exceptions. No exceptions to the contract will be considered by BPCA after submission of the proposals. BPCA maintains the right to reject Proposals based on non-conformance with the standard form of contract.
16. In the past five years, have any public sector clients terminated their working relationship with you? If so, please provide a brief statement of the reasons. Provide the name of the client and each such client's in-house counsel's name, address and telephone number.

17. Please provide any additional information which would serve to distinguish you from other Proposers and that you believe may be relevant to this RFP and your capability to perform the Services Required.

D. RFP Additional Information Request

1) Insurance:

- a. Do you impose any limitations on liability through your contracts?
- b. Describe the levels of coverage for any insurance you carry. List the insurance carrier(s) or provide an insurance certificate showing your coverage in accordance with the following:
 - Commercial General Liability Insurance limits shall not be less than **\$1,000,000** per each occurrence and **1,000,000** in the aggregate;
 - Umbrella Liability limits shall not be less than **1,000,000**;
 - Automobile liability (Combined Single Injury, Bodily Injury and Property Damage) limits shall not be less than **\$1,000,000**;
 - Workman's Compensation shall not be less than statutory limits;
 - Employers Liability shall not be less than **\$1,000,000**; and
 - Disability Insurance as required by applicable provisions of law.

The costs of the insurance shall be included in the Proposal. BPCA, BPCPC and the State of New York shall be listed as Additional Insured on CG 2010 (11/85) or similar form and should be included as such on all subcontracts. Policies should contain no limitations/exclusions for Labor Law claims.

2) References:

Please provide the name, address and telephone number of at least three (3) clients/references for whom you have performed similar work to that requested in this RFP.

3) Financial Statements:

Please provide a copy of your most recent Audited Financial Statements (within the last year).

E. Cost Proposal

Each "Cost Proposal" must state a Lump Sum fee with an itemized schedule of values for the services contemplated herein.

VII. THE EVALUATION PROCESS

A. Objectives

The primary objective of the evaluation process is to select a Proposer that:

- Demonstrates a thorough understanding of the scope of the engagement and the specific responsibilities which it entails;
- Possesses adequate resources to handle assigned responsibilities and to handle unforeseen circumstances;
- Assigns highly skilled, experienced, diligent, responsible and professional personnel to perform the Services Required;

- Maintains high ethical standards and has an unblemished reputation;
- Has no conflict of interest between its representation of BPCA and that of other clients.

The selection process will begin with the review and evaluation of each of the written Proposals. The purpose of this evaluation process is twofold: (1) to examine the responses for compliance with this RFP, and (2) to identify the complying Proposers that have the highest probability of satisfactorily performing the Services Required at a reasonable cost to BPCA. The evaluation process will be conducted in a comprehensive and impartial manner. The evaluation process will be conducted by a committee of BPCA's employees selected by BPCA (the "Committee"). **The Committee will evaluate the Proposals based upon the evaluation criteria for selection set forth below.**

BPCA reserves the right to reject and return unopened to a Proposer any Proposal received after the RFP Due Date. All timely submitted Proposals will be reviewed to determine if they contain all required submittals specified herein. Incomplete Proposals may be rejected.

B. Interviews

BPCA reserves the right to determine whether interviews will be necessary for any or all of the Proposers. The purpose of the interview is to further document a Proposer's ability to provide the Services Required, and to impart to the Committee an understanding of how specific services will be furnished. The proposed Lead Manager, as well all other key personnel proposed to provide the services must be present and participate in the interview. The Proposer will be evaluated on the basis of whether the interview substantiates the characteristics and attributes claimed by the Proposer in its written Proposal and any other information requested by the Committee prior to the interview.

C. Evaluation Criteria for Selection

Selection will be based upon the following criteria:

- | | |
|---|-----|
| 1) Pricing: | 45% |
| 2) ISA Certified Arborist on Staff: | 15% |
| 3) Relevant Parks/Landscaping Experience: | 25% |
| 4) Proposed MBE/WBE utilization plan (the "Utilization Plan") and/or Firm MBE/WBE status: | 15% |

D. Basis for Contract Award

The Contract will be awarded to the highest technically rated Proposer whose Proposal is determined to be responsive and in the best interests of BPCA, subject to a determination that the Cost Proposal is fair and reasonable.

VIII. NON-COLLUSION

By submitting a Proposal, Proposers hereby warrant and represent that any ensuing Contract has not been solicited or secured directly or indirectly in a manner contrary to the laws of the State of New York, and that said laws have not been violated and shall not be violated as they relate to the procurement or the performance of the Contract by any conduct, including the paying or giving of any fee, commission, compensation, gift, or gratuity or consideration of any kind, directly or indirectly, to any member of the board of directors, employee, officer or official of BPCA.

IX. IRAN DISINVESTMENT ACT

By submitting a Proposal or by assuming the responsibility of any Contract awarded hereunder, Proposers hereby certify that they are not on the “Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012” list (“Prohibited Entities List”) posted on the New York State Office of General Services website at: <http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf> and further certify that they will not utilize any subconsultant that is identified on the Prohibited Entities List on this Contract. The selected Proposer agrees that should it seek to renew or extend any Contract awarded hereunder, it must provide the same certification at the time the Contract is renewed or extended. The selected Proposer also agrees that any proposed assignee of the Contract will be required to certify that it is not on the Prohibited Entities List before BPCA may approve a request for assignment of the Contract.

During the term of any Contract awarded hereunder, should BPCA receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, BPCA will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the New York State Iran Divestment Act of 2012 within 90 days after the determination of such violation, then BPCA shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, seeking compliance, recovering damages, or declaring the selected Proposer in default of the awarded Contract.

BPCA reserves the right to reject any request for renewal, extension, or assignment for an entity that appears on the Prohibited Entities List prior to the renewal, extension, or assignment of the Contract, and to pursue a responsibility review with the selected Proposer should it appear on the Prohibited Entities List hereafter.

X. ENCOURAGING USE OF NEW YORK STATE BUSINESSES IN CONTRACT PERFORMANCE

New York State businesses have a substantial presence in State contracts and strongly contribute to the economies of the state and the nation. In recognition of their economic activity and leadership in doing business in New York State, Proposers for this Contract for commodities, services or technology are strongly encouraged and expected to consider New York State businesses in the fulfillment of the requirements of the Contract. Such partnering may be as subcontractors, suppliers, protégés or other supporting roles.

Proposers need to be aware that all authorized users of this Contract will be strongly encouraged, to the maximum extent practical and consistent with legal requirements, to use responsible and responsive New York State businesses in purchasing commodities that are of equal quality and functionality and in utilizing services and technology. Furthermore, Proposers are reminded that they must continue to utilize small, minority and women-owned businesses, consistent with current State law.

Utilizing New York State businesses in State contracts will help create more private sector jobs, rebuild New York’s infrastructure, and maximize economic activity to the mutual benefit of the contractor and its New York State business partners. New York State businesses will promote the contractor’s optimal performance under the Contract, thereby fully benefiting the public sector programs that are supported by associated procurements.

Public procurements can drive and improve the State’s economic engine through promotion of the use of New York businesses by its contractors. The State therefore expects bidders/proposers to provide maximum assistance to New York businesses in their contracts. The potential participation by all kinds of New York businesses will deliver great value to the State and its taxpayers.

Proposers can demonstrate their commitment to the use of New York State businesses by responding to the question below:

Will New York State businesses be used in the performance of this contract? ☐ Yes ☐ No

If yes, identify New York State businesses that will be used and attach identifying information.

EXHIBIT A

Scope of Work

The successful Proposer will be required to, at its sole cost and expense, provide and perform the tree planting and relocating services set forth herein below (the “Scope of Work”) between March 15, 2014 and April 15, 2014 (the “Spring Planting Season”).

During the Spring Planting Season, the selected Proposer shall:

1. Adopt/employ stringent safety measures as the work will be performed in public parks and streets.
2. Coordinate with nurseries as to delivery dates to accommodate the installation work schedule.
3. Remove and stack all Belgian blocks located at the work site.
4. Protect in all cases and instances, BPCA property, including but not limited to surrounding lawns, plants, shrubs and trees during the performance of the work.
5. Replace or restore and all damaged or destroyed BPCA property, including but not limited to lawns, plants, shrubs or trees, as directed by BPCA’s Construction Manager.
6. Provide 33 trees in accordance with the specifications set forth in Exhibit F attached hereto.
7. Install 33 trees at the locations set forth in Exhibit F attached hereto.
8. Stake each tree with four 8’ high, 4” diameter rough sawn wooden stakes.
9. Move very carefully over surrounding plantings and/or lawns.
10. Replace Belgian blocks on a 1” sand setting bed.
11. No use any heavy machinery in the gardens.
12. Use small equipment on the lawn areas (nothing larger than a bobcat) and place plywood out beneath the equipment to protect lawn.
13. Carefully lift and reinstall iron tree gates, as applicable.
14. Move tree #34 on Exhibit F approximately 150’ to its new location using a telescoping front loader that can handle 4,000 lbs.
15. Clean up and mulch each planting area that has been worked on.
16. Obtain all necessary permits, including a BPCA permit to work within Battery Park City.
17. Provide all necessary equipment (safety cones, caution tape, blockades, etc.) and personnel to keep the site, park users and pedestrians safe.
18. Comply with each and every BPCPC planting and soil specification without exception. Such “Technical Specifications” are annexed hereto as Exhibit G, and labeled as SECTION 02950.

EXHIBIT B

CONTRACTOR REQUIREMENTS AND PROCEDURES FOR BUSINESS PARTICIPATION OPPORTUNITIES FOR NEW YORK STATE CERTIFIED MBEs/WBEs AND EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITY GROUP MEMBERS AND WOMEN

Pursuant to New York State Executive Law Article 15-A, BPCA recognizes its obligation under the law to promote opportunities for maximum feasible participation of certified MBE/WBEs and the employment of minority group members and women in the performance of BPCA contracts.

In 2006, the State of New York commissioned a disparity study to evaluate whether minority and women-owned business enterprises had a full and fair opportunity to participate in state contracting. The findings of the study were published on April 29, 2010, under the title “The State of Minority and Women-Owned Business Enterprises: Evidence from New York” (the “Disparity Study”). The report found evidence of statistically significant disparities between the level of participation of minority-and women-owned business enterprises in state procurement contracting versus the number of minority-and women-owned business enterprises that were ready, willing and able to participate in state procurements. As a result of these findings, the Disparity Study made recommendations concerning the implementation and operation of the statewide certified minority- and women-owned business enterprises program. The recommendations from the Disparity Study culminated in the enactment and the implementation of New York State Executive Law Article 15-A, which requires, among other things, that BPCA establish goals for maximum feasible participation of New York State Certified MBEs/WBEs and the employment of minority groups members and women in the performance of New York State contracts.

Business Participation Opportunities for MBE/WBEs

For purposes of this solicitation, BPCA hereby establishes an overall goal of **20%** for MBE/WBE participation, **10%** for MBE participation and **10%** for WBE participation (based on the current availability of qualified MBEs and WBEs). A contractor (“Contractor”) on the Contract must document good faith efforts to provide meaningful participation by MBE/WBEs as subcontractors or suppliers in the performance of the Contract and Contractor agrees that BPCA may withhold payment pending receipt of the required MBE/WBE documentation. The directory of New York State Certified MBE/WBEs can be viewed at: <http://www.esd.ny.gov/mwbe.html>.

For guidance on how BPCA will determine a Contractor’s “good faith efforts,” refer to 5 NYCRR §142.8.

In accordance with 5 NYCRR §142.13, Contractor acknowledges that if it is found to have willfully and intentionally failed to comply with the MBE/WBE participation goals set forth in the Contract, such finding constitutes a breach of Contract and BPCA may withhold payment from the Contractor as liquidated damages.

Such liquidated damages shall be calculated as an amount equaling the difference between: (1) all sums identified for payment to MBE/WBEs had the Contractor achieved the contractual MBE/WBE goals; and (2) all sums actually paid to MBEs/WBEs for work performed or materials supplied under the Contract.

By submitting a bid or Proposal, a Proposer agrees to submit the following documents and information as evidence of compliance with the foregoing:

- A. Proposers are required to submit a Utilization Plan with their bid or Proposal. Any modifications or changes to the Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised Utilization Plan and submitted to BPCA.

- B. BPCA will review the submitted Utilization Plan and advise the Proposer of BPCA's acceptance or issue a notice of deficiency within 30 days of receipt.
- C. If a notice of deficiency is issued, Proposer agrees that it shall respond to the notice of deficiency within seven (7) business days of receipt by submitting to BPCA, at the address specified in this RFP, or by facsimile at 212-417-2279 a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by BPCA to be inadequate, BPCA shall notify the Proposer and direct the Proposer to submit, within five (5) business days, a request for a partial or total waiver of MBE/WBE participation goals. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or Proposal.
- D. BPCA may disqualify a Proposer as being non-responsive under the following circumstances:
 - 1) If a Proposer fails to submit a Utilization Plan;
 - 2) If a Proposer fails to submit a written remedy to a notice of deficiency;
 - 3) If a Proposer fails to submit a request for waiver; or
 - 4) If BPCA determines that the Proposer has failed to document good faith efforts.

Contractors shall attempt to utilize, in good faith, any MBE/WBE identified within its Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to the Contract award may be made at any time during the term of the Contract to BPCA, but must be made no later than prior to the submission of a request for final payment on the Contract.

Contractors are required to submit a Contractor's MBE/WBE Contractor Compliance & Payment Report to BPCA on a monthly basis over the term of the Contract documenting the progress made toward achievement of the MBE/WBE goals of the Contract.

Equal Employment Opportunity Requirements

The Contractor is required to ensure that it and any subcontractors awarded a subcontract over \$25,000 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor, shall undertake or continue programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, equal opportunity shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, and rates of pay or other forms of compensation. This requirement does not apply to: (i) work, goods, or services unrelated to the Contract or (ii) employment outside New York State.

Proposer further agrees, where applicable, to submit with the Proposal, a staffing plan identifying the anticipated work force to be utilized on the Contract and if awarded a Contract, will, upon request, submit to BPCA a workforce utilization report identifying the workforce actually utilized on the Contract, if known.

Further, pursuant to Article 15 of the Executive Law (the "Human Rights Law"), all other New York State and Federal statutory and constitutional non-discrimination provisions, the Contractor and sub-contractors will not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital

status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

Please Note: Failure to comply with the foregoing requirements may result in a finding of non-responsiveness, non-responsibility and/or a breach of the Contract, leading to the withholding of funds, suspension or termination of the Contract or such other actions or enforcement proceedings as are allowed by the Contract.

For questions on MBE/WBE participation, joint ventures and sub-contracting goals ONLY, please contact Mr. Anthony Peterson at 212.417.2337.

EXHIBIT C

(sample contract attached)

EXHIBIT D

COST PROPOSAL

(Proposer to submit executed Cost Proposal on its letterhead)

Date:

Battery Park City Authority
One World Financial Center - 24th Floor
New York, New York 10281

Attention: Ms. Della Lee
Administrative Assistant

Dear Ms Lee:

The undersigned (the "Proposer") hereby proposes to provide all specified work necessary to perform the work for the **2014 Esplanade Tree Planting - Super Storm Sandy** project.

A. Base Proposal

A total Lump sum amount of \$ _____ (_____ Dollars and _____ Cents) to perform all associated work as described in Exhibit A of the Authority's Request for Proposals ("RFP").

B. Schedule of Values and Labor Rates

1. The Proposer has submitted with its Proposal, a unit cost schedule for the Work, according to the attached schedule of values for the Scope of Work in Exhibit E of the RFP.
2. The Proposer has submitted with its Proposal, labor rates for all trades, including all costs except overhead and profit. Prices shown include base hourly rate, overtime rate, insurance and benefits.

Name of Proposer:

By: _____

Title: _____

EXHIBIT E

Schedule of Values

NOTE: All prices are for work furnished and installed, measured in place.

ITEM NO.	APPROXIMATE QUANTITY	PRICE PER UNIT COMPLETE IN PLACE ITEMS WITH UNIT PRICE WRITTEN IN WORDS	UNIT PROPOSAL PRICE		AMOUNT PROPOSED
			DOLLARS	CENTS	DOLLARS AND CENTS
1	1	Taxodium distichum 5"- 5 ½" FOR: _____/Each DOLLARS CENTS			
2	4	Quercus robur 5"- 5 ½" FOR: _____/Each DOLLARS CENTS			
3	8	Quercus acutissima 5"- 5 ½" FOR: _____/Each DOLLARS CENTS			
4	20	Quercus rubra 5"- 5 1/2" FOR: _____/Each DOLLARS CENTS			
5	1	Magnolia virginiana 5"-5 1/2" (Relocate existing tree) FOR: _____/Each DOLLARS CENTS			

EXHIBIT F

Tree Specification and Location Schedule

Tree #	Location within the Park	Tree Type	Caliper of New Tree
1	South Cove Pergola	Taxodium distichum	5" to 5 ½"
2	Planting Bed West of The Regatta	Quercus rubra	5" to 5 ½"
3	Planting Bed West of The Regatta	Quercus rubra	5" to 5 ½"
4	Planting Bed West of The Regatta	Quercus rubra	5" to 5 ½"
5	Esplanade Median Planting Bed West of The Liberty Terrace	Quercus rubra	5" to 5 ½"
6	Esplanade Median Planting Bed West of The Liberty Terrace	Quercus rubra	5" to 5 ½"
7	Planting Bed Adjacent to The Liberty Terrace	Quercus robur	5" to 5 ½"
8	Planting Bed Adjacent to The Liberty Terrace (Planting Bed K)	Quercus rubra	5" to 5 ½"
9	Esplanade Median Planting Bed West of The Liberty House	Quercus rubra	5" to 5 ½"
10	Esplanade Median Planting Bed West of The Liberty House	Quercus rubra	5" to 5 ½"
11	Planting Bed West of The Liberty House	Quercus rubra	5" to 5 ½"
12	Planting Bed West of The Liberty House	Quercus acutissima	5" to 5 ½"
13	Esplanade Median Planting Bed West of The Hudson Tower	Quercus acutissima	5" to 5 ½"
14	Esplanade North of the Upper Room Along Albany Street	Quercus acutissima	5" to 5 ½"
15	North of the Upper Room Along Albany Street	Quercus acutissima	5" to 5 ½"
16	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus acutissima	5" to 5 ½"
17	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus acutissima	5" to 5 ½"
18	Planting Bed West of The Gateway Plaza	Quercus acutissima	5" to 5 ½"
19	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus acutissima	5" to 5 ½"
20	Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
21	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
22	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
23	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
24	Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
25	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
26	Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
27	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
28	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
29	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
30	Esplanade Median Planting Bed West of The Gateway Plaza	Quercus rubra	5" to 5 ½"
31	Regent - Planting Bed J	Quercus robur	5" to 5 ½"
32	Regent - South Cove North Wall Planting Bed	Quercus robur	5" to 5 ½"
33	Regent - South Cove North Wall Planting Bed	Quercus robur	5" to 5 ½"
34	Relocate from Museum of Jewish Heritage	Magnolia virginiana	5" to 5 ½"

EXHIBIT G

Specifications

SECTION 00005
BATTERY PARK CITY AUTHORITY CONDITIONS

1. GENERAL

Notwithstanding anything in the other Contract Documents to the contrary, including the Specifications, all provisions hereof shall supersede any conflicting provisions in other Contract Documents. All other provisions of the Contract Documents shall remain in full force and effect. References to the "Authority" in these Conditions shall be deemed to mean "Owner/Owner's Representative" and vice versa.

2. CONDITIONS

- 2.1 Should questions of labor jurisdiction arise, this Contractor will immediately take steps to settle such disputes and will use such labor as may be determined to have jurisdiction, at no additional cost to the Owner. Should it fail to take expeditious action, it will be responsible for any time lost because of delays arising from such disputes.
- 2.2 All permits required for any part of the Contractor's work shall be procured and paid for by Contractor. This shall apply also to those permits required to be obtained in the name of the Authority.
- 2.3 The Contract includes the cost of all standby trades should Contractor work prior to or later than normal working hours on Saturdays, Sundays, and Holidays, if Contractor desires to work after hours.
- 2.4 Contractor shall comply with all legal regulations, including OSHA safety regulations and other government agencies having jurisdiction concerning the Work of this Contract.
- 2.5 Contractor shall comply with all federal and local laws regarding noise control. Mufflers and whisperized compressors shall be used throughout Contractor's Work.
- 2.6 Contractor has examined the site and the Contract Documents. Contractor agrees that the site and surrounding areas are satisfactory and sufficient for its needs in the prosecution of its work in conformance with the terms of this Contract.
- 2.7 Scaffolding, hoisting, and temporary and/or permanent power connections required for this Work shall be the responsibility of the Contractor.
- 2.8 This Agreement covers the complete scope for the type of work included herein. As "scope" documents, the drawings and specifications do not necessarily indicate or describe all work required for the full performance and completion of the work. This Agreement is let on the basis of such documents with the understanding that the Contractor is to furnish all items required for proper completion of the work without adjustment to the Contract Price. It is intended that the Work be of sound and quality construction and the Contractor shall be solely responsible for the inclusion of adequate amounts to cover installation of

all items indicated, described or implied.

- 2.9 The hours of permissible work shall be 7:00 am and 5:00 pm. Any work requiring excessive noise shall be restricted until after 8:00 am and shall be performed in accordance with NYC noise ordinances. Any variation from the work hours is subject to approval of Owner and is to be coordinated with the Owner. Any associated costs with regard to off-hour operation or fees required shall be the responsibility of the Contractor without adjustment to the Contract Price.
- 2.10 Contractor shall not store any material or equipment on site unless directed by the Owner/Owner's Representative.
- 2.11 Contractor shall not use the site for staging of construction materials or equipment except as approved by the Owner.
- 2.12 All engineering layout is the Contractor's obligation.
- 2.13 Contractor shall remove rubbish, debris, etc., offsite at the Contractor's expense on a daily basis.
- 2.14 The Contractor shall at all times keep the work area, including storage area used by it, free from accumulations of waste material or rubbish, and prior to completion of the work remove any rubbish from the premises and all tools, scaffolds, equipment and materials not the property of the Authority. Upon completion, the Contractor shall leave the work and premises in a clean, neat and workmanlike condition satisfactory to Authority.
- 2.15 Contractor shall submit within 10 calendar days from Contract or Notice to Proceed, unless otherwise noted, all shop drawings and samples required to the Owner's Representative for approval.
- 2.16 Contractor shall submit within two (2) weeks after receipt of Contract or Notice to Proceed a detailed schedule to the Owner's Representative conforming with the milestone construction dates, as specified in Specification 01310 – Construction Schedule.
- 2.17 The overall objective will be to perform the work with minimal to no disruption to the daily operation of the school.
- 2.18 Payment Requisitions for this project shall be due to the Owner by the 15th of every month on the forms included in Appendix VII
- 2.19 The Contractor shall follow any and all anti-terrorism security procedures, guidelines, instructions, and regulations with respect to ingress into and egress from the work site, transportation, and disposition of material that might be considered contraband as well as any emergency procedures. It is the Contractor's responsibility to make contingencies for the effect upon the scheduling and performance of their work of any and all such regulations and procedures. The cost of such contingencies shall be included in the Contract Price.
- 2.20 The Contractor shall take special care to provide for temporary damage protection for any and all existing conditions to remain in proximity to the work area. The

protection shall remain in place while performing the work shown or described herein or elsewhere in the Contract Documents. Any damage to existing conditions to remain as a result of work by the Contractor shall be repaired or replaced to the satisfaction of the Owner and at no cost to the Owner.

END OF SECTION 00005

SECTION 01010 SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Project, known as Fall 2011 Tree Planting, consists of planting trees as specified in Parks or as Street Trees.
 - 1. Project Location: Throughout Battery Park City.
 - 2. Owner: Battery Park City Authority (the "Authority" or "BPCA").
- B. The Work includes but is not limited to replacement of Street Trees following removal, as required of existing trees & stumps.
- C. The Contractor will be responsible for providing all materials, labor and equipment necessary for completing all work, and incidental related work, for proper completion of the Project.
- D. The Work shall be constructed in compliance of all applicable New York City, New York State and other codes and regulations.
- E. The Contract requires the use of environmentally sustainable materials, product, equipment and fuels as specified in these Contract Documents.
- F. The Work will be constructed under a single lump-sum prime contract.

1.3 WORK SEQUENCE

- A. Work shall be performed so as to not close any streets and to limit interruption and access to Park areas adjacent to planting.
- B. The Contractor shall submit a proposed construction schedule to the Authority for approval prior to performing any work. Refer to Section 01310 of these specifications.

1.4 CONTRACTOR USE OF PREMISES

- A. General: During the construction period the Contractor shall have full use of the premises for construction operations, including use of the site, while maintaining safe vehicular and pedestrian traffic flow around the site. The Contractor's use of the premises is limited only by the Owner's right to perform work or to retain other contractors on portions of the Project.
- B. Contractor shall not unreasonably encumber site and adjoining and/or adjacent areas.

Comply with the Owner's requirements for use of the site and other Battery Park City Authority (BPCA) areas and with regulatory requirements for use of public thoroughfares. Minimize and confine stockpiling of materials to areas indicated by the Owner and Construction Manager and as delineated by the special general conditions.

- C. Staging for the Work shall be in as defined by the Owner and Construction Manager. If additional space is required to the immediate construction area, Contractor shall obtain and pay for such space at no additional cost to the Owner.
- D. Working Hours: The normal working hours shall be eight (8) hours per day during the period of 7:00 a.m. to 5:00 p.m. and the normal working week is Monday to Friday. Submit requests to work other than regular working schedule to the Owner and Authority's Representative at least 48 hours prior to any proposed weekend work or scheduled extended workweeks. All costs for project supervision by the Authority's Representative for work beyond eight (8) hours per day and on weekends shall be borne by the Contractor. Maintenance and clean-up may be performed during hours other than regular working hours. Restrict use of noise-making tools and equipment prior to 8:00 a.m. to minimize complaints from persons or firms near the site.
- E. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
 - 1. Parking: There will be no off-site parking provided. Any vehicles that may be required to access project sites must have all applicable permits. The Owner is not responsible for any citations due to illegally parking on public streets. Lock automotive type vehicles and other mechanized or motorized construction equipment, when parked unattended, so as to prevent unauthorized use. Do not leave such vehicles unattended with the motor running or the ignition key in place.
 - 2. Driveways and Entrances: Keep all driveways and entrances serving adjacent areas clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- F. The Authority reserves the right to place and install items of material or equipment as necessary in completed areas of the Project and to occupy such completed areas prior to substantial completion, provided that such occupancy does not substantially interfere with completion of the Work. Such placing of material or equipment and partial occupancy shall not constitute acceptance of the Work or any part of the Project.

1.5 EXISTING SITE CONDITIONS

- A. Contractor shall verify all site data provided in the Contract Drawings, Technical Specifications, Reference Drawings and Information Available to Proposers.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Goals: The Owner intends that this project incorporate sustainable design concepts established for Battery Park City Authority in the reference document "Residential Environmental Guidelines". This Project will specifically emphasize Conserving Materials

and Resources, Water Conservation, and Site Management. To the extent possible, materials and requirements of these Specifications comply with environmental goals.

- B. Environmental requirements for this Project include resource conservation and pollution prevention.
 - 1. Resource conservation measures are achieved through the use of salvaged and recycled materials and use of abundant species from sustainably managed forests or rapidly renewable resources. Implementation requirements are defined in each Section, as well as in Division 1 "Environmental Impact of Materials" Section.
 - 2. Additional resource conservation measures are achieved through separation and recycling of construction waste as defined in Division 1 "Construction Waste Management and Recycling" Section.
 - 3. Products and installation techniques have been incorporated into each Section to reflect durability and to allow for material reuse. All environmental products shall be considered the same as other specified items and require submittal of manufacturer literature, affidavit, test results etc., as required by the specifications
 - 4. Pollution prevention measures are achieved through recycling requirements in Division 1 "Construction Waste Management and Recycling" Section and limited VOC off-gassing as defined Division 1 "Environmental Impact of Materials" Section. Additionally, materials have been selected to minimize embodied energy.
- C. Waste Management: It has been established that this Project shall minimize the creation of construction and demolition waste, as specified in Division 1 "Construction Waste Management and Recycling" Section.

PART 2 – PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.1 EXECUTION

- A. Execute the work in accordance with the requirements of all Drawings and Technical Specifications. If there are any discrepancies between the drawings and specifications, the more stringent of the two shall apply.

END OF SECTION 01010

**SECTION 01025
MEASUREMENT AND PAYMENT**

PART 1 GENERAL

1.1 DESCRIPTION

- A. The Contractor shall furnish all labor, materials, tools, equipment, appurtenances and all services necessary to perform all Work as required by the plans and specifications or as required by the Authority's Representative, for lump sum items listed herein, which are included in lump sum on the proposal form.
- B. The items listed below constitute pay items for completion of the Work. No direct or separate payment will be made for providing labor, equipment, materials, tools, delivery, storage and installation, and all other requirements of the Contract Documents. Compensation for all such services and materials shall be included in the prices stipulated for the lump sum pay items listed herein.
- C. The schedule of values (Itemized Proposal) shall be utilized solely to substantiate partial payment requests or additions.

1.2 RELATED SECTIONS

- A. Proposal form
- B. Section 01010-Summary of Work
- C. Section 01027-Applications for Payment

1.3 PAYMENT ITEMS

- 1. Lump Sum Contract Item Measurement and Payment:

All lump sum contract items shall be compensated by the percent work complete at time of payment requisition.

END OF SECTION 01025

SECTION 01027
APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment. Refer to the Construction Agreement for more detail.
- B. This Section specifies administrative and procedural requirements governing each prime contractor's Applications for Payment.
 - 1. Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, Submittal Schedule, and List of Subcontracts.
- C. Related Sections: The following Sections contain requirements that relate to this Section.
 - 1. Division 1 Section "Construction Schedule"
 - 2. Division 1 Section "Submittals"
 - 3. Construction Agreement

1.3 SCHEDULE OF VALUES

- A. The Contractor shall prepare and submit five (5) copies of the Schedule of Values to the BPCA for review and approval within 7 days of the Letter of Intent being issued. If revisions are required, revise and resubmit the Schedule of Values within (two) 2 working days for final acceptance. The Schedule of Values will be used by the Authority's Representative as the basis for approving Applications for Payment.
- B. Coordination: Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
 - a. Contractor's Construction Schedule.
 - b. Application for Payment forms, including Continuation Sheets.
 - c. List of subcontractors.

- d. M/WBE Monthly Report forms.
 - e. List of products.
 - f. List of principal suppliers and fabricators.
 - g. Schedule of submittals.
- C. Format and Content: The Schedule of Values shall be a reasonable reflection of actual value for each activity. Provide at least one line item for each Specification Section. Upon the Authority's Representative's request, the Contractor shall support the individual values to substantiate their correctness. The Schedule of Values shall be presented on 8 ½" by 11" white paper.
- 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of the Owner.
 - c. Project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 - 2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value.
 - 1) Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several separate line items.
 - 4. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.
 - 5. Schedule of Values shall list the installed value for component parts of the Work in sufficient detail to serve as a basis for computing values for substantiating progress payments.
 - 6. Provide separate line items on the Schedule of Values for cost of the materials, labor, and for total installed value of that part of the Work.
 - 7. Margins of Cost: Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete. Include the total cost and proportionate share of general overhead and profit margin for each item.
 - 8. Schedule Updating: The Contractor shall update and resubmit the Schedule of Values prior to each Application for Payment. Additionally, the Schedule of Values

is to be updated when Change Orders or Construction Change Directives result in a change in the Contract Sum. The Schedule of Values is to be made available to Authority and the Authority's Representative upon request.

1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with Article 5 of the Construction Agreement. The Contractor shall adhere to any additional information or formatting requests made by the Authority.

PART 2 -- PRODUCTS
(Not Applicable)

PART 3 - EXECUTION
(Not Applicable)

END OF SECTION 01027

SECTION 01040 COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
 - 1. General project coordination procedures.
 - 2. Conservation.
 - 3. Coordination Drawings.
 - 4. Administrative and supervisory personnel.
 - 5. Cleaning and protection.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Project Meetings"
 - 2. Division 1 Section "Submittals"
 - 3. Division 1 Section "Materials and Equipment"
 - 4. Division 1 Section "Contract Closeout"
 - 5. Division 1 Section "Construction Schedules"

1.3 COORDINATION

- A. Prior to proposing for this Project, the Contractor shall have made itself fully aware of the nature and extent of the work being performed by other contractors and specifically how such work will effect the Work under this Contract.
- B. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
 - 3. Make provisions to accommodate items scheduled for later installation.

- C. The Contractor shall coordinate all Contract Work and shall not delegate responsibility for coordination to any subcontractor.
 - 1. Anticipate the interrelationships of all subcontractors and their relationship with the Work.
 - 2. Resolve differences or disputes between subcontractors concerning coordination, interference, or extent of Work.
 - 3. Coordinate the Work of subcontractors so that portions of the Work are performed in a manner that minimizes interference with progress of the overall Work.
- D. Contractor may be required to coordinate activities with other contractors working on other projects that may be concurrently performed near the project site.
 - 1. Cooperation and adjustments with such other contractors is essential. In case of interference between the operations of different contractors, utility owners or subcontractors, the Authority's Representative will be the sole judge of the rights of each and the sequence of work necessary to expedite the completion of the Project, and in all cases the Authority's Representative's decision shall be accepted as final.
- E. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
 - 1. Prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.
- F. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of schedules.
 - 2. Installation and removal of temporary facilities.
 - 3. Preparation of submittals.
 - 4. Project closeout activities.
- G. Remove and replace all Work which does not comply with Contract Documents. Repair or replace any other work or property damaged by operations of Contract Work to original conditions prior to the start of Work at no increase in Contract Sum.
- H. Components of assemblies, fabrications, installations and other details of the Work shall be accurately laid out and installed within the tolerances specified for the type of work and materials indicated. Contractor shall use established and confirmed lines and elevations for all work.
- I. Conservation: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water, and materials.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work.

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components.
 - 1. Show the relationship of components shown on separate Shop Drawings.
 - 2. Indicate required installation sequences.
 - 3. Comply with requirements contained in Section "Submittals."
- B. Staff Names: Within 10 days of commencement of construction operations, submit a list of the Contractor's principal staff assignments, including the superintendent and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.
- C. The Contractor shall prepare and submit to the Authority's Representative within 24 hours of the occurrence the following reports when necessary:
 - 1. Unusual Events: When an event of an unusual and significant nature occurs at the site, prepare and submit a written report listing chain of events, persons participating, response by Contractor's personnel, evaluation of results and/or effects. Notify the Authority's Representative in advance when such events are known or predictable.
 - 2. Accident Reports: Prepare and submit reports detailing significant accidents at the site and anywhere Work is in progress. Record and document all data and actions. For this purpose, a significant accident is defined to include events where personal injury is sustained, property loss of substance is sustained or where the event posed a significant threat of loss or personal injury.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Installer of each major component is to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner. Notify the Authority's Representative at least 24 hours prior to the inspection.
- B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.
- C. Do not cover any installations which will be concealed in the finished work until they have been inspected and approved by the Authority's Representative.
- D. The Contractor shall supervise the performance of all Work in such a manner and by such means that will ensure the public will not be subjected to harmful or dangerous exposure

throughout the duration of the construction period.

3.2 CLEANING AND PROTECTION

- A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.
- B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- C. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 - 1. Excessive static or dynamic loading.
 - 2. Excessive internal or external pressures.
 - 3. Excessively high or low temperatures.
 - 4. Thermal shock.
 - 5. Excessively high or low humidity.
 - 6. Air contamination or pollution.
 - 7. Water or ice.
 - 8. Solvents.
 - 9. Chemicals.
 - 10. Light.
 - 11. Radiation.
 - 12. Puncture.
 - 13. Abrasion.
 - 14. Heavy traffic.
 - 15. Soiling, staining, and corrosion.
 - 16. Bacteria.
 - 17. Rodent and insect infestation.
 - 18. Combustion.
 - 19. Electrical current.
 - 20. High-speed operation.
 - 21. Improper lubrication.
 - 22. Unusual wear or other misuse.
 - 23. Contact between incompatible materials.
 - 24. Destructive testing.
 - 25. Misalignment.
 - 26. Excessive weathering.
 - 27. Unprotected storage.
 - 28. Improper shipping or handling.
 - 29. Theft.
 - 30. Vandalism.

END OF SECTION 01040

SECTION 01094
WASTE MANAGEMENT/RECYCLING ALTERNATES DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitability, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitability, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the Project site to another site for re-manufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the Project site.
- K. Salvage: To remove a waste material from the Project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Volatile Organic Compounds (VOCs): Chemical compounds common in and emitted by many building products over time through outgassing: solvents in paints and other coatings; wood preservatives; strippers and household cleaners; adhesives in particleboard, fiberboard, etc.

END OF SECTION 01094

SECTION 01096
DEFINITIONS AND STANDARDS

PART 1 - GENERAL

1.1 SECTION SUMMARY

- A. This Section includes procedural and administrative definitions, explanations, and requirements for compliance with Contract Documents, governing regulations, and codes and standards that may be imposed upon the Work. The provisions of this Section include the following:
1. Specification Format and Content Explanations.
 2. Definitions.
 3. Standards and References.
 4. Abbreviations for Industry Standards.
- B. Terms not defined in this Section shall have the meanings as set forth in the Construction Agreement (including General Conditions) between Authority and Contractor (the "Agreement") and as may be otherwise defined in other Sections of the Contract Documents for specific reference.

1.2 SPECIFICATION FORMAT AND CONTENT EXPLANATIONS

- A. The following is to help the user of the specifications more readily understand the format, language, implied requirements, and similar conventions of content. None of the following explanations shall be interpreted to modify the substance of the Contract Documents. The specifications are organized based upon the Construction Specifications Institute's (CSI) 16 Division format. The organization of the specifications into Divisions and Sections conforms generally to recognized industry practice.
- B. Sections and Divisions: For convenience, a basic unit of specification text is a "section", each unit of which is named and numbered. These are organized into related families of sections, and various families of sections are organized into "divisions".
1. A section title is not intended to limit meaning or content of the section, or to be fully descriptive of requirements specified therein, or to be an integral part of text.
 2. Sections of Division I include general requirements for administration, procedures, and temporary facilities for the Works of the Project.
 3. Sections in Division 2 include specific requirements for units of the Work.
 4. Section Numbering: Used to facilitate cross-references in Contract Documents, sections are placed in the Project Manual in numeric sequence. If the numbering sequence is not complete, the list of sections (Index, Table of Contents, or the like) at the beginning of Project Manual must be consulted to determine numbers and names of specification sections in the Contract Documents.
 5. Page Numbering: Each section is numbered independently in the Project Manual. The Section number is shown with page number at bottom of each page to facilitate location of text in Project Manual. The final page of each section is identified by END OF SECTION.

- C. Section Format: Each section of the specifications has been subdivided into 3 (or less) "parts" for uniformity and convenience (Part 1 - General, Part 2 - Products, and Part 3 - Execution). These titles do not limit the meaning of the specified requirements.
1. Part 1 - General: Usually defines the specific administrative and procedural requirements unique to the section.
 2. Part 2 - Products: Describes, generally in some detail, the quality of items that are required for incorporation into the Project under the section.
 3. Part 3 - Execution: Describes, generally in some detail, preparatory actions and how the products are to be incorporated into the Project.
 4. Article: An Article is usually a major subject consisting of related paragraphs within a Part of a specification section.
 5. Paragraph: A Paragraph is usually one or more sentences, dealing with a particular item or point, separated from the preceding text by beginning on a new line. Groups of paragraphs of related information usually constitutes an Article.
- D. Language of Technical Specifications: Except as otherwise indicated, requirements expressed are to be performed by the Contractor. For clarity of reading at certain locations, contrasting language is used to describe responsibilities which must be fulfilled indirectly by Contractor, or, when so noted, by others.

1.3 DEFINITIONS

- A. General Explanation: A substantial amount of specification language constitutes definitions for terms found in other portions of the Contract Documents, including Drawings and other documents. Drawings must be recognized as diagrammatic in nature and not completely descriptive of requirements indicated thereon. Certain terms used in Contract Documents are defined generally in this Article.

Definitions and explanations of this Section are not necessarily either complete or exclusive, but are general for the Work to extent not stated more explicitly in other provision of Contract Documents.

- B. The following are definitions of terms as may be used in the technical specifications:

"Authority": the Hugh L. Carey Battery Park City Authority

"Authority's Representative": URS Corporation

"Approval", also "approve", "approved", "acceptable", "satisfactory", "proper", or other general qualifying terms: Shall be understood to mean approved by, acceptable to, or satisfactory to the Owner's Representative/Engineer unless otherwise expressly stated.

"BPCA": the Hugh L. Carey Battery Park City Authority.

"BPCPC": Battery Park City Parks Conservancy.

"Concealed": Items or work below, within, or behind various construction elements, such as in crawl spaces, trenches, and like conditions, and which is not exposed to view.

"Contaminates": Relating to concrete, water, and concrete spoil, contaminate shall mean to come in contact with.

"Contractor's Engineer": Professional Engineer licensed in the State of New York employed or engaged by the Contractor.

"Deliver", also "delivery", "delivered", or words of like import: These shall be understood to mean the transport, unloading, and storing with proper protection at the Project Site.

"Directed", also required", "designated", or words of like import: The direction, requirement, or designation of the Owner's Representative is intended unless otherwise expressly stated.

"Drawings": The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

"Engineer": URS Corporation

"Exposed": Open to view (including items behind louvers, grilles, registers and the like) as opposed to concealed.

"Furnish": To purchase and deliver items or materials to the Project site including proper storage without installation.

"General Requirements": Provisions and requirements of other Division 1 sections apply to the entire work of the Contract and, where so indicated, to other elements which are included in the Project.

"Governing Regulations": Refer to the Agreement for additional requirements related to compliance with governing regulations.

"Indicated": The term "indicated" is a cross-reference to graphic representations, notes or schedules on the drawings, to other paragraphs or schedules in the specifications, and to similar means of recording requirements in Contract Documents. Where terms such as "shown", "noted", "scheduled", and "specified" are used in lieu of "indicated", it is for the purpose of helping the reader locate the cross-reference, and no limitation of location is intended except as may be specifically noted.

"Install": Application, connection, or erection of items or materials that have been furnished.

"Installer": The entity (person or firm) engaged by the Contractor, its subcontractor or sub-subcontractor for performance of a particular element of construction at the project site, including installation, erection, application and similar required operations. It is a requirement that installers are experienced in the operations they are engaged to perform.

"Landscape Area": Any portion of the Contract Limits that is not covered by a hardscape surface finish.

"Owner": See "Authority".

"Owner's Representative": See "Authority's Representative"

"Paved Area": Any portion of the Contract Limits that is covered by a hardscape finish (i.e. granite pavers, concrete, asphalt pavers, Belgian block, etc.)

"Product": Refers to materials, systems, and equipment to be provided for the Work of this Project.

"Product Data": Illustrations, standard schedules, performance charts, instructions, brochures, catalogs, diagrams, and other information furnished by the Contractor to illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged.

"Project Manual": The volume(s) of written documents assembled for the Work which may include the RFP/bidding requirements, sample forms, Conditions of the Contract, Schedules, Specifications, and other written data.

"Project Site": The term "project site" means the space available to the Contractor for performance of the Work, either exclusively or in conjunction with others performing other construction as part of the Project. The extent of the project site is shown on the Drawings, and may or may not be identical with the description of the land upon which the Project is to be built.

"Provide": In addition to "Agreement" definition and as used in technical specifications, shall be understood to mean provide complete in place, that is, "furnished and installed" or "supplied and installed".

"Regulations": The term is defined to include laws, statutes, ordinances, and lawful orders issued by governing authorities, as well as those rules, conventions and agreements within the construction industry which effectively control the performance of the Work regardless of whether they are lawfully imposed by governing authority or not.

"Required": See "directed".

"Samples": Physical examples that illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged.

"Shop Drawings": Drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or any Contractor's subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

"Specifications": That portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

"Standards": See Article 1.4, herein.

"Subcontractor": A person or entity who has a direct contract with the Contractor to perform a portion of the Works. The term 'Subcontractor' does not include a separate contractor or subcontractors of a separate contractor.

"Submittals": Shop Drawings, Product Data, Samples, and other data required by the Contract Documents to be submitted by Contractor for review by the Owner and Owner's Representative/ Engineer. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Submittals are not Contract Documents. Review by the Owner's Representative and Design Consultant is subject to the limitations stated in the Contract Documents.

"Supply": To furnish.

"Surveyor": Professional Land Surveyor licensed in the State of New York.

"Testing Laboratories": A "testing laboratory" is an independent entity engaged by the Contractor to perform specific tests of the work, either at the Project Site or elsewhere, and to report, and (if required) interpret results of those tests.

"Unit Price": amount stated as a price per unit of measurement for materials or services as described in the Contract Documents.

"Work": Reference "Agreement" definition. In addition thereto, the Work may constitute the whole or a part of the Project.

1.4 STANDARDS AND REFERENCES

A. Product or Execution References

1. Any material or installation specified by reference to published specifications of a society, association, code, or other standard shall comply with the latest requirements of the referenced publication in effect, unless other publication date is identified in the Contract Documents.
2. Applicable standards of construction industry have the same force and effect and are made a part of Contract Documents by reference as if copied directly into the Contract Documents, or as if published copies were bound into the Contract Documents.

3. Reference standards (referenced directly in Contract Documents or by governing regulations) have precedence over non-referenced standards that are recognized in the construction industry for applicability to work.
4. Non-referenced standards recognized in the construction industry are hereby defined, except as otherwise limited in Contract Documents, to have direct applicability to the Work, and will be so enforced for performance of the Work.
5. Contractor shall obtain copies of Standards and References, where needed for proper performance of the work, directly from publication sources.

B. Conflicting and Overlapping Requirements

1. In a conflict between referenced publications which are a kind that are not enforced by governmental authority and the Contract Documents, the Contract Documents shall govern.
2. In a conflict between referenced publications or between referenced publications and codes, the more stringent requirements shall govern.
3. In a conflict between Contract Documents and Manufacturer's latest published technical data, storage and handling requirements, installation instruction, and other product data, the more stringent requirements shall govern.

1.5 ABBREVIATIONS FOR INDUSTRY STANDARDS

A. The following abbreviations may be used in the Contract Documents.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturer's Association
AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACIL	American Council of Independent Laboratories
ACPA	American Concrete Pipe Association
AGA	American Gas Association
AISC	American Institute of Steel Construction, Inc.
AISI	American Iron and Steel Institute
ALSC	American Lumber Standards Committee
ANSI	American National Standards Institute
APA	American Plywood Association
ARI	Air Conditioning and Refrigeration Institute
ASA	American Standards Association
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWPB	American Wood Preservers Bureau
AWPI	American Wood Preservers Institute
AWS	American Welding Society, Inc.
AWWA	American Water Works Association, Inc.
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Institute of America

CISPI	Cast Iron Soil Pipe Institute
CPSC	Consumer Product Safety Commission
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards of NBS (U.S. Dept. of Commerce)
DHI	Door and Hardware Institute
DOT	Department of Transportation
EPA	Environmental Protection Agency
ETL	Electrical Testing Laboratories
FCC	Federal Communications Commission
FGMA	Flat Glass Marketing Association
FM	Factory Mutual Engineering and Research Organization
FS	Federal Specification
GA	Gypsum Association
GTA	Glass Tempering Association
HMMA	Hollow Metal Manufacturers Association
ICBO	International Conference of Building Officials
ICKA	Insulated Cable Engineering Association
IEEE	Institute of Electrical and Electronic Engineers
IEC	International Electric Code
IES	Illuminating Engineers Society
MIL	Military Standardization Documents
NAAMM	National Association of Architectural Metal Manufacturers
NBS	National Bureau of Standards (U. S. Dept. of Commerce)
NCPWB	National Certified Pipe Welding Bureau
NEC	National Electrical Code by NFPA
NEMA	National Electrical Manufacturers Association
NETA	National Electrical Testing Association
NFPA	National Fire Protection Association
NIOSH	National Institute of Occupational Safety and Health
NRC	Noise Reduction Coefficient
NSF	National Sanitation Foundation
OSHA	Office of Safety and Health Administration
PCA	Portland Cement Association
PDI	Plumbing and Drainage Institute
PPI	Plastic Pipe Institute
PS	Product Standard of NBS (U.S. Dept. of Commerce)
SDI	Steel Door Institute
SMACNA	Sheet Metal & Air Conditioning Contractors National Association
SSPC	Steel Structures Painting Council
TCA	Tile Council of America
UFAS	Uniform Federal Accessibility Standards
UL	Underwriters' laboratories Inc.
USDA	United States Department of Agriculture
USSG	United States Steel Gauge

B. Refer to Drawings for additional abbreviations and for symbols.

PART 2 - PRODUCTS

(NOT USED)

PART 3 - EXECUTION

(NOT USED)

END OF SECTION 01096

SECTION 01200
PROJECT MEETINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:
1. Preconstruction conferences.
 2. Progress meetings.
 3. Coordination meetings.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 1 Section "Coordination"
 2. Division 1 Section "Submittals"
 3. Division 1 Section "Construction Schedules"

1.3 PRECONSTRUCTION CONFERENCE

- A. The Authority will schedule a preconstruction conference before the start of construction. The location for the conference will be determined by the Authority. The Authority will conduct the meeting to review responsibilities and personnel assignments.
- B. Attendees: The Authority; The Authority's Representative; the Engineer; the Contractor and its superintendent; major subcontractors; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
- C. Agenda: Discuss items of significance that could affect progress, including the following:
1. Establish relationships of all parties
 2. Overview of Contractor's approach to the work
 3. Construction schedule.
 4. Identify major subcontractors and suppliers
 5. Critical work sequencing.
 6. Designation of responsible personnel.
 7. Procedures for processing field decisions and Change Orders.

8. Procedures for processing Applications for Payment.
9. Procedures for processing Proposal Requests.
10. Adequacy of distribution of Contract Documents.
11. Submittal of Shop Drawings, Product Data, and Samples.
12. Preparation of record documents.
13. Use of the premises.
14. Parking availability.
15. Construction facilities, controls and construction aids.
16. Temporary utilities.
17. Existing materials to be taken over by Contractor.
18. Erosion and spoil control.
19. Laboratory testing requirements
20. Work, and storage areas.
21. Equipment deliveries and priorities.
22. Site health and safety plan.
23. Emergency response and contingency plans.
24. Security.
25. Quality control.
26. Housekeeping.
27. Check of required bond and insurance certifications.
28. Liquidated damages.
29. Working hours.

1.4 PROGRESS MEETINGS

- A. The Authority's Representative will schedule and chair regular progress meetings. The progress meetings will be held every fourteen (14) days or less with the first meeting being held no later than seven (7) days after the pre-construction meeting. The progress meetings will be held at a location convenient for all parties.
- B. Additional meetings may be scheduled as required by the Authority's Representative.
- C. Attendees: The Authority, the Authority's Representative, a member of the design team, Contractor's superintendent, subcontractors as required by the Authority, suppliers as required, and other entities concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
- D. The Authority's Representative will prepare specific agendas for each progress meeting. The following issues will be discussed:
 1. Review of work in progress since previous meeting
 2. Contractor's Construction Schedule.
 3. Field observations and issues.
 4. Issues that may cause delay.
 5. Corrective measures to stay on schedule.
 6. Revisions to construction schedule.
 7. Upcoming work.
 8. Schedule coordination.

9. Submittal status.
10. Quality control issues.
11. Pending changes and substitutions.
12. Potential changes.
13. Review of emergency response plan
14. Other business

- E. The Contractor shall bring five (5) copies of the construction schedule, inclusive of updates from the previous meeting, to each meeting for review and discussion.

1.5 COORDINATION MEETINGS

- A. The Contractor will be required to attend coordination meetings as requested by the Authority's Representative. Coordination meetings will be scheduled to address specific issues related to adjacent facilities and other issues that may arise.
- B. The Authority's Representative shall prepare and distribute meeting minutes to all necessary parties.

1.6 SUBMITTALS

- A. The Contractor shall submit the following to the Authority's Representative 48 hours prior to each progress meeting:
 1. Bi-weekly construction schedule outlining detailed operations
 2. Overall construction schedule
 3. Suggested agenda items

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

(Not Applicable)

END OF SECTION 01200

SECTION 01300 SUBMITTALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:
 - 1. Contractor's construction schedule.
 - 2. Submittal schedule.
 - 3. Daily construction reports.
 - 4. Product Data.
 - 5. Samples.
 - 6. Quality assurance submittals.
- B. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
 - 1. Permits.
 - 2. Applications for Payment.
 - 3. Performance and payment bonds.
 - 4. Insurance certificates.
 - 5. List of subcontractors.
 - 6. Working Drawings.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Applications for Payment"
 - 2. Division 1 Section "Coordination"
 - 3. Division 1 Section "Project Meetings"
 - 4. Division 1 Section "Construction Schedules"
 - 5. Division 1 Section "Quality Control"
 - 6. Division 1 Section "Contract Closeout"

1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of

construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Authority reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
 3. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
 - a. Allow 2 weeks for initial review. Allow additional time if the Authority's Representative must delay processing to permit coordination with subsequent submittals.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. Allow 2 weeks for reprocessing each submittal.
 - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Authority's Representative sufficiently in advance of the Work to permit processing.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
1. Provide four (4) sets of each submittal to the Authority's Representative.
 2. Provide a space approximately 4 by 5 inches on the label or beside the title block on Shop Drawings to record the review and approval markings and the action taken.
 3. Include the following information on the label for processing and recording action taken.
 - a. Project name.
 - b. Date.
 - c. Name and address of the Authority.
 - d. Name and address of the Contractor.
 - e. Name and address of the subcontractor.
 - f. Name and address of the supplier.
 - g. Name of the manufacturer.
 - h. Number and title of appropriate Specification Section.
 - i. Drawing number and detail references, as appropriate.
- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Authority's Representative using a transmittal form. The Architect will not accept submittals received from sources other than the Contractor.

1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.
2. Each submittal shall be signed and sealed by the Contractor's Professional Engineer, licensed in the State of New York, certifying approval and compliance with Contract Documents.

1.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart-type, contractor's construction schedule in accordance with "Section 01310 Construction Schedules".
- B. Include submittal review process on construction schedule.
- C. Distribution: Following response to the initial submittal, print and distribute copies to the Authority's Representative, subcontractors, and other parties required to comply with scheduled dates.
 1. When revisions are made, distribute to the same parties. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- B. Schedule Updating: Revise the schedule after each meeting, event, or activity where revisions have been recognized or made. Issue the updated schedule to all required parties.

1.5 SUBMITTAL SCHEDULE

- A. After development and acceptance of the Contractor's Construction Schedule, prepare a complete schedule of submittals. Submit the schedule within 5 days of acceptance of the Contractor's Construction Schedule.
 1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values, and the list of products as well as the Contractor's Construction Schedule.
 2. Prepare the schedule in chronological order. Provide the following information:
 - a. Scheduled date for the first submittal.
 - b. Related Section number.
 - c. Submittal category (Shop Drawings, Product Data, or Samples).
 - d. Name of the subcontractor.
 - e. Description of the part of the Work covered.
 - f. Scheduled date for resubmittal.
 - g. Scheduled date for the Authority's final release or approval.
- B. Distribution: Following response to the initial submittal, print and distribute copies to the Authority's Representative, subcontractors, and other parties required to comply with submittal dates indicated. Maintain a current copy on site for review by the Authority's Representative at all times.

1. When revisions are made, distribute to the same parties. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- C. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule to all necessary parties.

1.6 DAILY CONSTRUCTION REPORTS

- A. Prepare a daily construction report recording the following information concerning events at the site, and submit duplicate copies to the Authority's Representative at weekly intervals:
1. List of subcontractors at the site.
 2. Number of personnel at the site, listing trade and time on site.
 3. Equipment at the site and time utilized on site.
 4. High and low temperatures, general weather conditions.
 5. Accidents and unusual events.
 6. Meetings and significant decisions.
 7. Stoppages, delays, shortages, and losses.
 8. Meter readings and similar recordings.
 9. Emergency procedures.
 10. Orders and requests of governing authorities.
 11. Change Orders received, implemented.
 12. Services connected, disconnected.
 13. Equipment or system tests and startups.
 14. Partial Completions, occupancies.
 15. Substantial Completions authorized.

1.7 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, diagrams, templates, illustrations and performance curves.
1. Mark each copy to identify applicable choices and options including materials, product, models, etc. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of performance, characteristics and capacities.
 - g. Notation of coordination requirements.

2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed by Contractor's Professional Engineer.
3. Submittal: Submit four (4) copies of each required submittal and/or maintenance manuals. The Authority's Representative will return one copy marked with action taken and corrections or modifications required.
4. Where product data is printed in color and requires color for evaluation, all copies shall be original colors as published.
3. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
 - a. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
 - b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.8 SAMPLES

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the specified material or product proposed. Samples shall be of sufficient size and quantity to clearly illustrate the functional characteristics of product or material, including integral related parts and attachment devices.
 1. Mount or display Samples in the manner to facilitate review of qualities indicated. Include the following:
 - a. Specification Section number and reference.
 - b. Generic description of the Sample.
 - c. Sample source.
 - d. Product name or name of the manufacturer.
 - e. Compliance with recognized standards.
 - f. Availability and delivery time.
 2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics.
 - a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least two (2) multiple units that show approximate limits of the variations.
 - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
 - c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.
 - d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.

3. Submittals: Submit a full set of choices where Samples are submitted for selection of color, pattern, texture, or similar characteristics from a range of standard choices.
 - a. The Authority will review and return preliminary submittals with notation, indicating selection and other action.
 4. Maintain sets of Samples, as returned, at the Project Site, for quality comparisons throughout the course of construction.
 - b. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
 - c. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.
1. Field samples are full-size examples erected on-site to illustrate finishes, coatings, or finish materials and to establish the Project standard.
 - a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.9 QUALITY ASSURANCE SUBMITTALS

- A. Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.
- B. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
1. Signature: Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.
- C. Inspection and Test Reports: Requirements for submittal of inspection and test reports from independent testing agencies are specified in Division 1 Section "Quality Control."

1.10 EMERGENCY RESPONSE AND CONTINGENCY PLAN

- A. Prepare and submit a Health and Safety Plan specific to the project conditions in accordance with OSHA requirements. Include the address and telephone number for the nearest hospital, police and fire departments.
- B. Submit to the Authority's Representative an Emergency Response and Contingency Plan ("ERCP") that details measures to be taken in the event of potential spills of construction related materials such as diesel fuels, grout, and accidental uncontrolled discharges into the

Hudson River.

- C. The Authority's Representative will review the Contractor's ERCP in accordance with these specifications. The approved Contractor's ERCP shall be used in the event of spills and discharges that may occur during the course of the Work.

1.11 CONTRACTOR'S RESPONSIBILITIES

- A. Contractor shall review shop drawings, product data, samples and all other submittals prior to submission. Coordinate each submittal with requirements of the Work and of the Contract Documents:
- B. Determine and verify:
 - 1. Field measurements
 - 2. Field construction criteria
 - 3. Catalog numbers and similar data
 - 4. Conformance with Specifications
 - 5. Review by Contractor
- C. Check equipment against drawings and field conditions for:
 - 1. Clearance
 - 2. Connections
 - 3. Accessibility
 - 4. Servicing
 - 5. Maintenance
- D. Notify in writing at least ten (10) days prior to time of submission any deviation in the submittals from the requirements of the Contract Documents.
- E. Begin no fabrication or work, which has a submittal requirement until return of submittal with Engineer's action stamp of approval.
- F. Make submittals promptly in accordance with approved schedule and as to cause no delay in the Work.
- G. Prior to submission, the Contractor shall affix to each submittal the Contractor's stamp, initialed or signed, dated and numbered for identification. Contractor's stamp shall be for certifying review and approval of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the Work and Contract Documents. This certification as stated herein shall be indicated on each submittal as follows:

"Material submitted for approval has been checked for conformance with the Contract Documents for this Project.

Any deviations from the Contract Documents have been noted on the material or listed in

the transmittal letter.

Signed: (Contractor)

Dated: (date of submission)"

- H. Cost of submittal, delivery and distribution shall be paid by the Contractor.
- I. Should any mark or correction in any submittal be made that would or could result in incorrect fit of any part or result in insufficient strength or stability of the Work, the Contractor shall promptly notify the Authority's Representative in writing so as to expedite the required correction or modification. Failure by the Contractor to provide prompt and immediate notification shall result in responsibility for the incorrect mark or correction resting solely with the Contractor.

1.12 PROCESSING BY THE AUTHORITY'S REPRESENTATIVE

- A. Upon receipt of submittal from the Contractor, the Authority's Representative will review the submittal for compliance with Contract Documents, procedures and requirements and will then transmit to the Engineer for final review.

1.13 ENGINEER'S ACTION

- A. Except for submittals for the record or information, where action and return is required, the Engineer will review each submittal, mark to indicate action taken, and return to the Contractor within seven (7) calendar days of receipt.
- B. Action Stamp: The Authority's Representative or Engineer will stamp each submittal with a uniform, action stamp. The Engineer will mark the stamp appropriately to indicate the action taken, as follows:
 - 1. Final Unrestricted Release: When the Engineer marks a submittal "Approved," the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
 - 2. Final-But-Restricted Release: When the Engineer marks a submittal "Approved as Noted," the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance. A revised copy is to be submitted to the Authority's Representative for the record.
 - 3. Returned for Resubmittal: When the Engineer marks a submittal "Not Approved, Revise and Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.
 - a. Do not use, or allow others to use, submittals marked "Not Approved, Revise and Resubmit" at the Project Site or elsewhere where Work is in progress.
 - 4. Other Action: Where a submittal is for information or record purposes or special processing or other activity, the Engineer will return the submittal marked "Action Not Required."

- C. Unsolicited Submittals: The Authority's Representative or Engineer will return unsolicited submittals to the sender without action.
- D. The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Authority's Representative's or Engineer's approval of shop drawings, product data or material samples unless the Contractor has specifically informed the Authority's Representative and Engineer in writing of such deviation at the time of submission and the Engineer has given written approval for the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the shop drawings, product data or material samples by the Engineer's approval thereof.

1.14 RESUBMISSION REQUIREMENTS

- A. Identification of Changes: Clearly identify all changes made from the initial submittal, other than those requested by the Authority's Representative. The Authority's Representative or Engineer will review only those changes he/she requested and those identified by the Contractor.
- B. Procedure for re-submittals shall be the same as initial submittals.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

(Not Applicable)

END OF SECTION 01300

SECTION 01310 CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for construction schedule submissions.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Applications for Payment"
 - 2. Division 1 Section "Coordination"
 - 3. Division 1 Section "Project Meetings"
 - 4. Division 1 Section "Submittals"
 - 5. Division 1 Section "Quality Control"
 - 6. Division 1 Section "Contract Closeout"

1.3 SUBMITTALS

- A. Proposed Construction Schedule: In proposing for the Work under this Schedule, the schedule shall be a computer generated bar-chart type with appropriate detail for a project of this scale. The schedule shall include, but not be limited to the following items:
 - 1. Project information: Client, project name, location, date
 - 2. Individual line items for each major component of the Work
 - 3. Activity durations, with none greater than 20 working days
 - 4. Submittal schedule
 - 5. Permit acquisition schedule
 - 6. Work items are to be grouped appropriately by phase, area, etc.
 - 7. Milestones for start and completion of each major component

The Proposed Construction Schedule will be reviewed by the Authority and the Authority's Representative for accuracy and feasibility during review of the proposal. The Proposed Construction Schedule shall be discussed at the Preconstruction Conference, modified as required by the Authority and used as the basis in preparing the Project Construction Schedule.

- B. Project Construction Schedule: The Contractor shall prepare and submit for approval a fully developed, horizontal bar-chart-type, construction schedule prior to the start of Work.
 - 1. The Project Construction Schedule shall be used to measure the progress of the work and to provide the basis of all progress payments.

2. The use of Critical Path Method ("CPM") network calculations shall be used to generate the Project Construction Schedule.
 3. The schedule shall include the appropriate level of detail as required by the Authority's Representative. Failure to develop or update the schedule as specified by the Authority's Representative will result in disapproval of the schedule.
 4. All major items of Work shall be shown as individual activities.
 5. Activity durations shall be accurate, with none longer than 20 working days.
 6. Permit acquisitions must be shown as unique activities.
 7. Procurement of items, including submittal review times, shall be shown as unique activities.
 8. Close-out documents shall be shown on the schedule.
 9. Activities shall be categorized by work areas, phase of work, responsibility or as determined by the Authority's Representative.
 10. The Project Construction Schedule shall be computer generated, neatly organized and free of hand-written notes.
 11. The Project Construction Schedule shall be printed in color on white paper.
 12. A copy of the Project Construction Schedule is to be available on the project site at all times and presented to the Authority or the Authority's Representative upon request.
- C. Project Construction Schedule Updates: The Contractor shall bring four (4) copies of the current schedule to each progress meeting. The schedule will be discussed and the Contractor will be responsible for updating the schedule according to any revisions required within three (3) days after each progress meeting.
- D. If it is determined by the Authority or The Authority's Representative that the project is not on schedule, the Contractor will be informed of such and shall prepare a Recovery Schedule within three (3) days. The Recovery Schedule shall clearly indicate how the Contractor plans to complete the project on time.
- E. All schedules are to be made available to the Authority or the Authority's Representative in digital format upon request.
- F. Any deviation from the Project Construction Schedule shall only be with the approval of the Authority or the Authority's Representative.
- G. A copy of the current Project Construction Schedule, accurately showing all progress to date, shall be submitted with each Application for Payment.

1.4 PROJECT MILESTONES

- A. The following dates are known by the Authority and shall be incorporated into the Contractor's schedule submissions:

Project Milestone	<u>Date</u>
Pre-Proposal Conference	March 7, 2011 3:00 PM
All Questions Due	March 10, 2011 12:00pm
Addenda Issued (if required)	March 14, 2011
Proposal Due	March 21, 2011 5:00pm

Pre-Award Meetings
Kick Off Meeting
Project Complete/Final Inspection
Contract Close-Out

March 24, 2011, 2 – 4:00pm
on or about April 1st, 2011
TBD
TBD

- B. Liquidated Damages: Failure to complete the Work by the date indicated above as “Construction Complete/Final Inspection” shall result in the enforcement of liquidated damages of \$1,000 per day.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

(Not Applicable)

END OF SECTION 01310

SECTION 01400 QUALITY CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality-control services.
- B. Quality-control services include inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
 - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-control services required by the Authority, the Authority's Representative, or authorities having jurisdiction are not limited by provisions of this Section.

1.3 RESPONSIBILITIES

- A. Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, Contractor shall provide inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction. The Contractor shall employ and pay a qualified independent testing agency, certified by the State of New York, to perform quality-control services. Costs for these services are included in the Contract Sum.
- B. Retesting: The Contractor is responsible for retesting where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility.

1. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements.
- C. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:
1. Provide access to the Work.
 2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.
 3. Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.
 4. Provide facilities for storage and curing of test samples.
 5. Deliver samples to testing laboratories.
 6. Provide the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
 7. Provide security and protection of samples and test equipment at the Project Site.
- D. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
1. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.
- E. The Contractor shall monitor Quality Assurance and Quality Control ("QA/QC") over all suppliers, manufacturers, products, services, site conditions and workmanship to produce Work of the specified quality.
- F. Comply with manufacturer's instructions, including each step in sequence.
- G. Request clarification from the Authority's Representative before proceeding with Work if the manufacturer's instructions conflict with the Contract Documents.
- H. Comply with specified standards as a minimum quality for the Work, except where more stringent tolerances, codes, standards, or precise workmanship is required.
- I. All Work shall be performed by persons qualified to produce workmanship of specified quality.
- J. For products or workmanship specified by association, trade or other standards, comply with requirements of the standard, except where more rigid requirements are specified or are required by applicable code.
- K. Conform to reference standard by date of issue current of date for receiving proposals, except where a specific date is established by codes.
- L. Obtain copies of standards where required by product specification sections.

- M. The contractual relationship, duties and responsibilities of the parties in the Contract and those of the Authority's Representative shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.
- N. The omission of a reference standard in any section of the Specifications does not relieve the Contractor from adhering to all applicable reference standards associated with the Work.

1.4 SUBMITTALS

- A. The Contractor shall submit a Quality Assurance and Quality Control Plan establishing all guidelines for quality assurance and quality control monitoring during progress of the work. Submit the QA/QC Plan to the Authority's Representative within seven (7) days following the Letter of Intent/Award of Contract. The QA/QC Plan shall specifically address all QA/QC requirements of the Contract Documents.
- B. The Contractor is responsible for insuring that, independent testing agencies submit a certified written report, in duplicate, of each inspection, test, or similar service. If the Contractor is responsible for conducting the testing, submit a certified written report, in duplicate, of each inspection, test, or similar service.
 - 1. Submit two (2) copies of each required report and field test to the Authority's Representative within three (3) days of completion of the test. The Authority's Representative may direct the Contractor to submit tests and reports directly to the Engineer if deemed necessary.
 - 2. Submit additional copies of each written report directly to the governing authority, when the Authority so directs.
 - 3. Report Data: Written reports of each inspection, test, or similar service include, but are not limited to, the following:
 - a. Date of issue.
 - b. Project title and number.
 - c. Name, address, and telephone number of testing agency.
 - d. Dates and locations of samples and tests or inspections.
 - e. Names of individuals making the inspection or test.
 - f. Official stamp or seal of individual conducting test.
 - g. Designation of the Work and test method.
 - h. Identification of product and Specification Section.
 - i. Complete inspection or test data.
 - j. Test results and an interpretation of test results.
 - k. Ambient conditions at the time of sample taking and testing.
 - l. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.
 - m. Name and signature of laboratory inspector.
 - n. Recommendations on retesting.

1.5 QUALITY ASSURANCE

- A. Qualifications for Service Agencies: Engage inspection and testing service agencies,

including independent testing laboratories, that are certified in the State of New York and that specialize in the types of inspections and tests to be performed.

1. Each independent inspection and testing agency is subject to review and approval by the Authority's Representative. Submit qualifications to the Authority's Representative prior to utilizing each agency.
- B. Testing devices shall be calibrated at reasonable intervals by devices of accuracy traceable to either the National Bureau of Standards of accepted values of natural physical constants.

1.6 LIMITS OF AUTHORITY OF SERVICE AGENCIES

- A. Service agencies, including testing laboratories, are not authorized to:
 1. Release, revoke, alter or enlarge requirements of Contract Documents.
 2. Approve or accept any portion of the Work.
 3. Perform any duties of the Contractor.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore all finishes. Comply with Contract Document requirements.
- B. Protect construction exposed by or for quality-control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

END OF SECTION 01400

SECTION 01475
ENVIRONMENTAL IMPACT OF MATERIALS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The requirements identified within this Section supplement those identified in corresponding Sections.
- B. Requirements: To minimize environmental impacts of the construction and operation, the Contractor during the construction phase of this project is encouraged to implement the following procedures singly or in combination:
 - 1. Select products that minimize consumption of non-renewable resources, consume reduced amounts of energy, and minimize amounts of pollution to produce, and employ recycled and/or recyclable materials.
 - 2. Obtain Owner's approval of all materials listed in Part 2 prior to placing the order with the manufacturer of the material.

1.3 QUALITY ASSURANCE

- A. General: Perform the work of this Section as a supplement and in accordance with applicable requirements of Division 1 "Quality Control" Section.

PART 2 PRODUCTS

2.1 ENVIRONMENTAL PERFORMANCE REQUIREMENTS

- A. General: The following health and environmental impact requirements apply to materials specified in their respective Specification Sections.
- B. Salvaged/Refurbished Materials: Substitutions with salvaged/refurbished materials are encouraged. All proposed substitutions must be submitted to the Authority or the Authority's Representative for approval following regular submittal procedures.

PART 3 EXECUTION
(NOT USED)

END OF SECTION 01475

SECTION 01505
CONSTRUCTION WASTE MANAGEMENT AND RECYCLING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of each prime Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The General Contractor shall implement procedures to minimize the creation of construction and demolition waste on the job site. As many of the waste materials as economically feasible shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized.
- B. The General Contractor shall develop a Waste Management Plan as defined in this Section.

1.3 DEFINITIONS

- A. Waste Materials: construction materials that are excess to the contract requirements and which can not be effectively used in the Work.
- B. Salvage Materials: waste materials or materials that are existing on the site that can be reused, either on site or by another entity.
- C. Recyclable Waste: waste materials that are existing on site or are generated during the construction process that can be recycled/remanufactured into another material.
- D. Categories of salvageable or recyclable waste include the following:
 - 1. Existing Vegetation: includes shrubs, plants, and trees that will be disturbed or removed during construction.
 - 2. Land Clearing Debris: solid waste generated from land clearing operations, such as stumps, woody debris, limbs and brush, clean soil, etc. Does not include rock, concrete or chemically treated landscape timbers.
 - 3. Concrete, Masonry, and Other Inert Fill Material: concrete, brick, vitrified clay pipe, rock, broken up asphalt pavement, clay, and other inert (non-organic) materials.
 - 4. Metals: metal scrap including iron, steel, copper, brass, and aluminum; includes beverage containers, packaging materials (such as metal banding), fencing, reinforcing bar, wiring, plumbing, etc.
 - 5. Untreated Wood: unpainted, untreated dimensional lumber, wood edging, wood shipping pallets, etc. Does not include pressure treated or creosote treated wood.

6. Engineered Wood Products: plywood, oriented strand board, masonite, particleboard, manufactured trusses and beams, and glue-laminated timbers.
7. Gypsum Wallboard: excess drywall construction materials including cuttings, other scrap, and excess materials.
8. Cardboard: clean, corrugated cardboard such as used for packaging, etc.
9. Paper Goods:
 - a. Office paper: includes any paper, such as manufacturer instruction, specification sheets, files, correspondence, packaging, stiffeners, etc.
 - b. Newsprint: shredded or whole newspaper goods.
10. Plastic: HDPE, beverage containers, packaging materials (such as polystyrene "peanuts" and expanded polystyrene), containers (other than those used for hazardous materials), vinyl products, etc.
11. Glass: includes glass beverage containers, and recyclable glass building materials.
12. Insulation: rigid foam, batt, and loose fill insulation materials.
13. Carpet: face fiber, backing, padding, and carpet cushion scrap.
14. Paints: unused portions of paints and coatings applied on-site.
15. Fabric: uncontaminated fabric scraps.
16. Rubber: uncontaminated rubber scraps, including but not limited to recycled-content rubber flooring, rubber edging, tires that are no longer serviceable, etc.
17. Other: any additional materials identified on-site to be valued for salvage, reuse, or recycling by the Contractor, Owner, Construction Manager, or Architect.
18. Non-Recyclable Waste: All waste materials that are not able to be recycled, due to contamination, lack of recycling facilities or salvage options, or high cost.
19. Source Separated: Materials that are separated on-site by category.
20. Co-Mingled: Several types of construction waste that are combined in a single container. Co-mingling of recycling waste must be approved by the identified recycling facility.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with all applicable federal, state, and local ordinance and regulation requirements for recycling and waste management.
- B. Disposal Sites, Recyclers, and Waste Materials Processors: Use only facilities properly permitted by state and local authorities.
- C. Preconstruction Waste Management Conference: Prior to beginning work at the site, as part of the Preconstruction Conference, discuss procedures, schedules and specific requirements for waste materials recycling and disposal.
- D. Implementation:
 1. Include waste management and recycling in worker orientation.
 2. Provide on-site instruction on appropriate separation, handling, recycling, and salvaging methods to be used by all parties at the appropriate stages of the work at the site.

3. Include waste management and recycling discussion in pre-fabrication meetings with subcontractors and fabricators.
4. Also include discussion of waste management and recycling in regular job meetings and job safety meetings conducted during the course of work at the site.

1.5 STORAGE AND HANDLING

- A. Salvage Materials: Provide protective handling and storage as required for all items identified for salvage and reuse by the Owner, Owner's Representative, or Engineer.
- B. Recyclable Waste: Remove all recyclable materials, as identified in the Waste Management Plan, from the work location to approved containers daily. Failure to remove waste materials will be considered cause for withholding payment and/or termination of Contract.
- C. Provide separate collection containers as required by recycling haulers and to prevent contamination of materials, including protection from rain as applicable.
- D. Replace loaded containers with empty ones as demand requires but not less than weekly.
- E. All Containers utilized for rubbish collection must be rodent proof including steel construction and lids, and shall be emptied a minimum of two times a week.
- F. Handling: Deposit all indicated recyclable materials in the containers in a clean (no mud, adhesives, solvents, petroleum contamination), debris-free condition. Do not deposit contaminated materials into the containers until such time as such materials have been cleaned.
- G. If contamination chemically combines with the material so that it can not be cleaned, do not deposit into the recycle containers.

1.6 PROJECT/SITE CONDITIONS

- A. Environmental Requirements: Transport recyclable waste materials from the Work Area to the recycle containers and carefully deposit in the containers in a manner to minimize noise and dust. Close container covers immediately after materials are deposited. Do not place recyclable waste materials on the ground adjacent to a container.
- B. Existing Conditions: Coordinate with "Instructions to Proposers".

PART 2 PRODUCTS

2.1 CONSTRUCTION WASTE MANAGEMENT PLAN

- A. Waste Materials: The following materials shall be salvaged or recycled if possible.

1. Salvage Materials: Salvage materials currently existing on the Project site shall be removed, protected, and stored as indicated on the plans and specifications. (See definitions under this specification.)
- B. Recyclable Materials: If applicable, the following materials, at a minimum, shall be salvaged or recycled if possible. Applies to all such listed waste materials produced during the course of this Contract. (see definitions in this specification section.)
 1. Topsoil
 2. Concrete, Masonry, and Other Inert Fill Material
 3. Crushed Stone and Gravel
 4. Asphalt
 5. Metals
 6. Untreated Wood
 7. Cardboard
 8. Paper Goods
 9. Beverage Containers
 10. Plastic
 11. Glass
- C. Delivery Receipts: Maintain copies of delivery receipts for waste materials salvaged and sent to permitted waste materials processors or recyclers that indicate the location and name of firm accepting recyclable waste materials, types of materials, net weights of each type, date of delivery and value of materials.

PART 3 EXECUTION

3.1 WASTE MANAGEMENT

- A. General: Implement waste management procedures in accordance with requirements set forth in the Contract Documents. Maintain procedures throughout the life of this Contract.
- B. Source Separation: Separate, store, protect, and handle at the project site all identified recyclable and salvageable waste products to prevent contamination of materials and maximize recyclability and salvageability of materials.
- C. Collection: Arrange for timely pickups from the site or deliveries to clear and prevent contamination of recyclable materials. Maintain records accessible to the Owner's Representative for verification of construction waste materials recycling.
- D. Delivery Receipts: Keep and maintain records of all deliveries to recycling facilities and all pickups of waste materials at the site by others as specified above.
- E. Salvage and Reuse: Identify salvage and reuse all materials that are deemed to be reusable.

- F. Non-Recyclable Waste: Collect and segregate non-recyclable waste for delivery to a permitted landfill site.
- G. Hazardous Waste: Control and dispose of hazardous waste in accordance with local, state, and federal regulations.

END OF SECTION 01505

SECTION 01600 MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes:
 - 1. Administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
 - 2. Transportation, handling, storage and protection of materials and equipment.
 - 3. The use of environmentally sustainable materials, equipment and equipment fuels.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Definitions and Standards"
 - 2. Division 1 Section "Submittals"

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 2. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
 - 3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.4 SUBMITTALS

- A. Product List: Contractor shall prepare a list showing products specified in tabular form acceptable to the Authority's Representative. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed.
 - 1. Coordinate product list with the Project Construction Schedule and the Schedule of

Submittals.

2. Format: Prepare product list with information on each item tabulated under the following column headings:
 - a. Related Specification Section number.
 - b. Generic name used in Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date or time span of delivery period.
3. Initial Submittal: Within 7 days after date of commencement of the Work, submit 3 copies of an initial product list to the Authority's Representative. Provide a written explanation for omissions of data and for known variations from Contract requirements.
4. Completed List: Within 30 days after date of commencement of the Work, submit 3 copies of the completed product list to the Authority's Representative. Provide a written explanation for omissions of data and for known variations from Contract requirements.
5. Engineer's Action: The Engineer will respond in writing to Contractor within 2 weeks of receipt of the completed product list. No response within this period constitutes no objection to listed manufacturers or products but does not constitute a waiver of the requirement that products comply with Contract Documents. The Engineer's response will include a list of unacceptable product selections, containing a brief explanation of reasons for this action.

1.5 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
 1. When specified products are available only from sources that do not, or cannot, produce a quantity adequate to complete project requirements in a timely manner, consult with the Authority's Representative and the Engineer to determine the most important product qualities before proceeding. Qualities may include attributes, such as visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources producing products that possess these qualities, to the fullest extent possible.
- B. Compatibility of Options: When the Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- C. Foreign Product Limitations: Except under one or more of the following conditions, provide domestic products, not foreign products, for inclusion in the Work:
 1. No available domestic product complies with the Contract Documents.

2. Domestic products that comply with the Contract Documents are available only at prices or terms substantially higher than foreign products that comply with the Contract Documents.
- D. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.
1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units. Keep all seals and labels intact and legible.
 6. Store heavy materials in a manner that will not endanger the supporting construction.
 7. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.
 8. Store loose granular material on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
 9. Arrange products to permit access for inspection. Periodically inspect to assure products are undamaged and maintained under specified conditions. The Authority's Representative may request inspection of stored products at any time.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.
 - 1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
 - 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
 - 1. Proprietary Specification Requirements: Where Specifications name only a single product or manufacturer, provide the product indicated. No substitutions will be permitted.
 - 2. Semiproprietary Specification Requirements: Where Specifications name 2 or more products or manufacturers, provide 1 of the products indicated. No substitutions will be permitted.
 - a. Where Specifications specify products or manufacturers by name, accompanied by the term "or equal" or "or approved equal," comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
 - 3. Nonproprietary Specifications: When Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
 - 4. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
 - 5. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.
 - a. Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.
 - 6. Compliance with Standards, Codes, and Regulations: Where Specifications only

require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.

7. Visual Matching: Where Specifications require matching an established Sample, the Engineer's decision will be final on whether a proposed product matches satisfactorily.
 - a. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category.
8. Visual Selection: Where specified product requirements include the phrase "... as selected from manufacturer's standard colors, patterns, textures ..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Engineer will select the color, pattern, and texture from the product line selected.

PART 3 – EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated to the extent that these instructions and recommendations are more stringent or explicit than the requirements indicated in the Construction Documents. Anchor each product securely in place, accurately located and aligned with other Work.
 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Final Acceptance.
 2. Maintain one set of complete instructions at the job site during installation and until project completion.
 3. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with the Authority's Representative and Engineer for further instructions. Contractor shall not proceed without clear instructions.

END OF SECTION 01600

SECTION 01630 PRODUCT OPTIONS & SUBSTITUTIONS

PART 1 GENERAL

1.1 SECTION SUMMARY

- A. Product quality standards related to the Work of this Project.
- B. Contractor's options in selection of products.
- C. Procedures for Contractor's substitution requests and approvals.

1.2 RELATED REQUIREMENTS

- A. Related Requirements in Other Parts of Project Manual
 - 1. Instruction to Proposers and Request for Proposal.
 - 2. Conditions of Contract.
 - 3. Unit Prices.

1.3 RELATED SECTIONS

- A. Section 01010-Summary of Work.
- B. Section 01300-Submittals.
- C. Section 01500-Temporary Facilities and Controls.
- D. Section 01600-Materials and Equipment.

1.4 DEFINITIONS

- A. Substitutions
 - 1. Any item by a manufacturer other than manufacturers cited in the Contract Documents, or of brand name, or model number, or of generic species other than those cited in the Contract Documents will be considered a substitution.
 - 2. Proposed changes or modifications to generic systems and concepts of design that are consistent with the design intent and the construction Contract Documents, and do not require a substantial revision, but require additional Design Professional services of design, redesign or administration, shall be considered a substitution.
- B. Deviations: Refer to Conditions of "Agreement".

1.5 PRODUCT QUALITY STANDARDS

- A. The products, materials, and equipment of manufacturers referred to in the Specifications and on the Drawings are intended to establish the standard of quality and design for the Work of this Project.

1. Conform to applicable specifications and standards.
2. Comply with size, make, type, and quality specified, or as specifically approved in writing by the Authority or the Authority's Representative.
3. Manufactured and Fabricated Products:
 - a. Design, fabricate, and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gauges, and to be interchangeable.
 - c. Two or more items of the same kind shall be identical and by the same manufacturer.
 - d. Products shall be suitable for service conditions.
 - e. Equipment capacities, sizes, and dimensions shown or specified shall be adhered to unless Authority or the Authority's Representative specifically approves variations in writing.
4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.6 SUBSTITUTIONS

A. Summary of Proposing and Contract Conditions

1. All Proposals and Work shall be based on the products, materials, and equipment described in the Proposing and Contract Documents.
2. Proposer or Contractor initiated requests for substitution of products, materials, and equipment specified or shown on drawings will be reviewed by the Authority or the Authority's Representative in accordance General Conditions of the Contract for Construction and in accordance with the requirements and procedures specified herein.
3. After Contract Award or Owner's Notice to Proceed, requests for substitution, if approved by the Authority or the Authority's Representative, shall be understood to be "Changes in the Work" in accordance with the Contract Construction Agreement and will require the issue of a "Change Order".
4. The Contractor will be responsible for reimbursement, to Authority or the Authority's Representative for additional review and redesign costs.
5. Refer to "Schedule of Substitution Submissions", herein for restrictive periods for Contractor's submittal of substitutions.

B. General Requirements

1. Prior to proposing any substitute item, the Contractor shall be satisfied through investigation that the item(s) the Contractor proposes for the substitution complies with the following:
 - a. That the proposed substitution is in fact, equal to or better than the product specified; that it will fit into the space allocated; that it affords comparable ease of operation, maintenance, and service; that its appearance, longevity, and suitability for the climate and use are comparable to that specified; and that it is compatible with adjacent conditions and products;
 - b. That the substitution is in the interest of the Authority.
 - c. The Contractor will provide the same guarantee/warranty for the substitution that the Contractor would be required to furnish by original specifications.
 - d. The Contractor certifies that the cost data presented is complete and includes all

related costs under this Contract, but excludes costs under separate contracts and excludes the Owner's redesign and related costs and waives all claims for additional costs related to the substitution which may subsequently become apparent.

- e. The Contractor will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects as approved by the Authority or the Authority's Representative.
2. Acceptance of any substitution by Authority or the Authority's Representative shall not relieve the Contractor from responsibility for compliance with all the requirements of Contract Documents. The Contractor shall be responsible, at Contractor's own expense, for any changes in other parts of the Contract Work or the work of other contractors and any delay costs caused by Contractor's requested substitutions, including cost of design and redesign services related thereto incurred by the Authority's Representative and the Engineer as determined necessary by the Authority.

C. Contract Time Extensions and Costs

1. The Contract completion time shall not be extended by any circumstance resulting from a Contractor proposed substitution, except as authorized in writing by Change Order. In addition, the Contractor will not be entitled to any compensation for any delay caused by, or related to, a substitution.
2. All costs related to submission of proposed substitutions including but not limited to reviews, product data, testing, samples, and drawing presentations shall be at the expense of the Contractor, whether the substitution is approved or not.

D. Substitution Submittal Procedures

1. The Contractor shall submit substitution requests to the Authority's Representative, which conform to the design intent and product quality standards of the Contract Documents. Each submittal shall include a complete description of the proposed substitution including effect on contract costs and time schedules. Data included with substitution submittals for evaluation will not be considered if:
 - a. They are indicated or implied on shop drawings, product data, or sample submissions without prior formal request for substitution as required herein.
 - b. The request for substitution is incomplete or does not describe adequate data for evaluation.
 - c. For implementation, the proposed substitution requires a substantial revision of the Contract Documents in order to accommodate use as proposed.
2. If the Contractor desires to use a substitute item, application shall be made to the Authority's Representative, in writing, in sufficient time as scheduled herein (having regard to the progress of the Work, the period of delivery of the products concerned, and adequate time for the Authority's Representative) stating and fully identifying the proposed substitution, cost changes (if any), and submitting substantiating data, samples, brochures, and other descriptions of item proposed. It is the Contractor's responsibility to furnish sufficient evidence by tests or other means to support any request for approval of substitutions.
3. The burden of proof that a proposed substitution is equal to a specified item shall be upon

the Contractor, who shall support the request with sufficient test data and other means to permit Authority or the Authority's Representative to make a fair and equitable decision on the merits of the proposal.

4. Materials and methods proposed as substitutions for specified items shall be supported by certification of their acceptance for use by any authority, person, or persons having jurisdiction over the use of the specified material or method.
5. Submit substitution submittal requests on Contractor's letterhead in the quantities and format as specified for "Submittals" in Section 01300.
6. Schedule of Substitution Submissions - Submission of requests for Substitution shall be received by the Authority's Representative according to the following:
 - a. After Proposal Opening and before Contract Award: Submit only as requested by Authority's Representative for the purpose of reducing Proposal Amounts and when in the Authority's interest.
 - b. After Contract Award or Notice to Proceed: Submission of requests for substitution shall be received by the Authority's Representative no later than 7 days after Contract Award or prior to scheduled first submittal of specified item proposed for substitution, whichever is sooner.
 - c. Authority will not entertain substitutions after the number of days specified herein.

E. Substitution Approval Procedures

1. The Authority's Representative will be the sole judge of equivalency of proposed substitute products, materials, and equipment.
2. The Authority's Representative will make written recommendation of acceptance or rejection to the Authority. The Authority will then authorize and issue to Contractor a written approval or rejection of the substitution.
3. Form of written approval for substitution shall be subject to conditions specified herein:
 - a. Prior to Contract Award or Notice to Proceed: Written approval will be in the form of an Addendum prepared by the Design Engineer.
 - b. After Contract Award or Notice to Proceed: Written approval will be in the form of a Change Order in accordance with the Conditions of Contract.
4. Where manufacturer's shop drawings, product data, literature, finish samples, and the like are required by Contract Documents to be submitted, final approval of proposed substitutions or deviations will be contingent upon the submittal and subsequent approval of Shop Drawings, Product Data, Samples, and other data requested.
 - a. Additional Product Data, Reports, Samples, and Shop Drawings, in addition to specified submittal requirements (in specifications sections) for originally specified items, may be required to be submitted for items of allowed substitution.

PART 2 - PRODUCTS
NOT USED

PART 3 - EXECUTION
NOT USED

END OF SECTION 01630

SECTION 02950

STREET TREE PLANTING

PART 1 – GENERAL1.01 GENERAL

- A. Perform the work in accordance with the requirements of the Contract Documents and Special Conditions.
- B. Hazardous Materials – Provide materials that do not contain asbestos, PCB or other hazardous materials.
- C. Provide certification in accordance with the Special Conditions from the Contractor, manufacturers, and installers that materials provided for the Work comply with the above requirements.
- D. Coordinate work with that of other trades affecting or affected by work of this Section and cooperate to assure the steady progress of work.

1.02 SECTION SUMMARY

- A. Furnishing and installing all plantings of new street trees in continuous soil trenches as specified herein.
- B. Provide additional mulch, fertilizer, and soil amendment(s) if and as required.
- C. Staking and guying including necessary hardware and deadman as specified or shown.
- D. Pest and disease control.
- E. Maintenance under contract and guarantee.
- F. Testing of soil materials including off-site borrow soil, mulch, and amendment materials and manufactured soils for approved use in tree planting soil mix. Verification testing of on-site sub-soils as required.
- G. Percolation Test in tree pits.
- H. Furnishing material from approved off-site source(s) as a base component for tree planting soil mix and furnishing other soil amendment materials.
- I. Amending, preparing, and mixing planting soils for tree planting, throughout the life of the contract.
- J. Preparing sub-grade.

1.03 RELATED SECTIONS

A. Site Salvaged Granite Cobble Paving Section 02518

1.04 SUBMITTALS

A. Notices and Scheduling:

1. Notice of intent to perform work shall be submitted to the Battery Park City Authority (BPCA)/Battery Park City Parks Corporation (BPCPC) representative at least 14 calendar days prior to installation of soil and planting.
2. Within 15 calendar days after Contract Notice to Proceed, submit to BPCA/BPCPC invoices or certificates of deposit from nursery(ies) guaranteeing timely delivery of all specified and tagged plant materials. If any plant materials are unavailable at the time of submittal, Contractor shall contact BPCA and BPCPC to determine acceptable alternatives. Indicate the following:
 - a. Confirm size and grade of materials to be planted.
 - b. Indicate source of origin and the health of trees each type.
3. Submit to BPCA/BPCPC a schedule itemizing landscape planting work to be performed. This schedule shall be submitted within 15 calendar days after Contract Notice to Proceed.
 - a. Include in this schedule anticipated dates for commencement and sequencing of landscape planting work, including but not limited to selections and tagging, layouts and layout approval, placement of trees, and commencement of maintenance period.
 - b. Schedule shall also include, and relate to, work being performed under separate contracts, as applicable.
 - c. If planting is delayed more than 24 hours after delivery, set balled and burlapped plants on the ground in a "shade house", erected by Contractor, with rootballs well protected with soil or other acceptable material. Protect balls and roots from freezing, sun, drying winds, and/or mechanical damage. Water as necessary until planted.

B. Product Data: Submit technical descriptive data for each manufactured or packaged product of this Section. Include manufacturer's product testing and analysis and installation instructions for manufactured or processed items and materials.

C. Locations: Submit locations of material sources. Submit location of mixing sites.

1. BPCA/BPCPC shall have the right to reject any soil supplier.

2. Soil Mix supplier shall have a minimum of five years experience in supplying custom planting soil mixes.
3. Submit supplier name, address, telephone and fax numbers and contract name.
4. Submit certification that accepted supplier is able to provide sufficient quantities of materials and mixes for the entire project.

D. Certificates:

1. Submit certified analysis for each treatment, amendment, and fertilizer material specified and as used. Include guaranteed analysis and weight for packaged material.
2. Furnish certification that each tree is true to name and in conformance with these Specifications. In addition, furnish certificates of inspection as may be required by Federal, State or other authorities that plant material is free of disease or hazardous insects.
3. Furnish certificates/cultivars by supplying nursery.
4. The use of chemical insect control materials is strictly prohibited.
5. Prior to job acceptance submit to BPCA/BPCPC written certifications for the following total quantities by weight as used on Project Site for Project materials:
 - a. Quantity of organic amendment.
 - b. Quantity of additional soil amendments.
 - c. Quantity of antidesiccant.

E. Test Reports – Soil Analysis: The Contractor shall submit representative samples of all soil materials and organic material components which are intended to be used for planting soil mixes and final mixes, to a Soil and Plant Testing Laboratory acceptable to the Battery Park City Parks Conservancy. All reports shall be sent to the BPCA/BPCPC for approval. Samples of all soil materials to be brought to the site must be approved before delivery. Deficiencies in the soils shall be corrected organically (peatmoss is not acceptable) by the Contractor, as directed by the BPCA/BPCPC after review of the testing agency report. Testing reports shall include the following:

1. Date issued.
2. Project Title and names of Contractor and material supplier.
3. Testing laboratory name, address and telephone number, and name(s), as applicable, of each field and laboratory inspector.
4. Date, place, and time of sampling or test, with record of temperature and weather conditions.
5. Location of material source.
6. Type(s) of test.
7. Results of tests including identification of deviations from acceptable ranges.

8. Particle size analysis to include sand sieve analysis shall be performed and compared to the USDA Soil Classification System per ASTM D422 (hydrometer test) or ASTM F1632 (pipette test). The silt and clay content shall be determined on soil passing the #270 sieve and shall be reported separately.
9. Percent of organic shall be determined by an Ash Burn Test or Walkley/Black Test, ASTM F1647.
10. Saturated hydraulic conductivity per any of the test methods stated in ASTM F1815.
11. Chemical analysis shall be undertaken for Nitrate, Ammonium, Nitrite, Phosphorous, Potassium, Calcium, Magnesium, Iron, Manganese, Zinc, Copper, Soluble Salts, Cation Exchange Capacity, and acidity (pH).
12. Soil analysis tests shall show recommendations for soil additives, including organic and inorganic soil amendments, necessary to accomplish particular planting objectives noted.
13. All tests shall be performed in accordance with the current standards of the Association of Official Agriculture Chemists.
14. Certified reports on analysis from producers of composted organic materials are required, particularly when sources are changed. The analysis performed shall include pH, density, salinity, total organic nitrogen, C:N Ratio, Solvita Maturity Index, moisture, sodium, potassium, calcium, magnesium, and phosphorous.
15. Soil Components and Soil Mix Sampling requirements: At middle height of wind row/pile, remove sample two feet into the pile. Place sample in clean container. Repeat gathering methods for five to ten times at equidistant spacing on both sides of the pile. Mix gathered samples with clean utensils. Remove approximately 500g of composite samples and place that final sample by overnight courier to the testing laboratory. Submit sample with completed testing laboratory submission form.
16. Biological Tests for organisms in compost and mixes:
 - a. Contact the testing laboratory to review testing and sampling requirements before sending samples.
 - b. Sampling requirements: At middle height of wind row, remove sample two feet into the pile. Place sample in clean container. Repeat gathering methods for five to ten times at equidistant spacing on both sides of the compost pile. Mix gathered samples with clean utensils. Remove approximately 500g of composite samples and place that final sample by overnight courier to the testing laboratory. Submit sample with completed testing laboratory submission form.
 - c. Maintain clear and concise records for testing and sampling procedures.
 - d. Compost samples shall be testing for the following:
 - 1) Active bacterial biomass.
 - 2) Total bacterial biomass.
 - 3) Active fungal biomass.
 - 4) Total fungal biomass.
 - 5) Protozoa, to include flagellates, amoebae, and ciliates.
 - 6) Total nematode numbers.
 - 7) Hyphal diameter

17. Testing Agencies: The following firms are acceptable testing agencies for the various components.
 - a. Compost testing: Woods End Research Laboratory, PO Box 297, Mt. Vernon, ME 04352, phone 800-451-0337, fax 207-293-2488.
 - b. Soil physical and chemical analysis, all components and planting soil mixes: *physical soil analysis including particle size analysis shall be determined by an A2LA Accredited Lab.* Soil chemical analysis can be performed at University of Massachusetts West Experiment Station, Amherst, MA 01003, phone 413-545-2311, fax 413-545-1931.
 - c. Compost/Biological Testing: Soil Foodweb New York, 555 Hallock Avenue, Rte 25A, Suite #7, Port Jefferson Station, NY 11776, tel. 631-474-8848, fax 631-474-8847.
 18. Although the report(s) may contain the laboratory's comments or recommendations regarding amendment requirements or procedures, the report shall not be interpreted to prescribe or dictate procedures or quantities of soil materials for the work of this Contract.
- F. All approved samples to be submitted to Battery Park City Parks Conservancy:
1. Leaf mold, each source, 5 lb. packaged.
 2. Sand, each source, 5 lb. packaged.
 3. Loam, each source, 5 lb. packaged.
 4. Base component material, each source, 5 lb. packaged.
 5. Yard Waste Compost, each source, 5 lb. packaged.
 6. Each mix type specified 5 lb. packaged.
- G. Statement(s) of Qualifications: Submit within 45 days of notice to proceed to confirm qualifications as specified in Article 1.05, herein.
- H. Equipment Data: Submit descriptive information with wheel load data for each proposed item of equipment to be used for execution of earthwork of this Contract. Equipment Data will be evaluated for conformance to site restriction of use.
- I. Schedule and Protection Plan: Submit a detailed plan for scheduling and sequencing of all contract work and for protection of soil mixes and other completed work including coordination with contractors requiring access through the site. Indicate with schedules and plans the utilization of finished work protection measures (wooden protection boards or other approved methods) over the work area of construction operations concurrent with all construction operations until substantial completion.
- J. Schedule for performing percolation tests.

1.05 QUALITY ASSURANCE

A. Qualifications:

1. Installation and maintenance foreman on the job shall be competent English-speaking supervisor(s) and an ISA certified arborist, experienced in landscape installation and maintenance and a permanent employee of the firm. Perform work with personnel totally familiar with planting soil preparation and planting installations under the supervision of a foreman experienced with landscape work.
2. Agricultural Chemist/Soil Scientist: Experienced person or persons employed by public or private soils testing laboratory, qualified and capable of performing tests, making soil recommendations, and issuing reports as specified. The Testing Laboratory shall be as approved by the Battery Park City Parks Conservancy.
3. It shall be the responsibility of the Contractor to see that the specifications are being adhered to. Failure of the BPCA/BPCPC to immediately reject unsatisfactory workmanship or to notify the Contractor of his/her deviation from the specifications shall not relieve the Contractor of his/her responsibility to repair and/or replace unsatisfactory work.

B. References:

1. Association of Official Agricultural Chemists.
2. American Society for Testing and Materials (ASTM) using test criteria as specified or required by other references.
3. Soil Science Society of America, Methods of Soil Analysis.
4. Tree and shrub transplanting manual, latest edition, International Society of Arboriculture.
5. American Standard for Nursery Stock, latest edition, American Association of Nurserymen, Inc.

C. Pre-Installation Conferences: Person(s) responsible for soil preparation and mixes of this Section shall attend Pre-Installation Conference(s) to coordinate with work of other sections.

D. Inspections and Testing

1. Soil, leaf mold, mulch and other material testing and soil mix testing required in this Section or additionally required by Battery Park City Parks Conservancy, shall be furnished and paid for by Contractor.
2. BPCA/BPCPC reserves the right to take and analyze at any time such additional samples of materials as deemed necessary for verification of conformance to specification

requirements. Contractor shall furnish samples for this purpose upon request and shall perform testing as requested.

1.06 REGULATORY REQUIREMENTS

- A. Comply with all rules, regulations, laws and ordinances of local, state and federal authorities having jurisdiction. Provide labor, materials, equipment and services necessary to produce soil as per specification. Work shall comply with such requirements without additional cost to Owner.
- B. Procure and pay for permits and licenses required for work of this section.

1.07 PROJECT/SITE CONDITIONS

- A. The Contractor shall be responsible for pedestrian and vehicular safety and control within the work site. He/she shall provide the necessary warning devices and ground personnel needed to give safety, warning and protection to persons and vehicular traffic within the area.
- B. During site preparation, soil installation and protection, the Contractor shall be responsible for all damage to existing features above and below ground (benches, utility lines, irrigation pipes, lampposts, path surfaces, existing vegetation) incurred as a result of work operations. Repairs and/or replacements shall be made to the satisfaction of the BPCA/BPCPC.
- C. Investigate the conditions of public thoroughfares and roads as to availability, clearances, loads, limits, restrictions, and other limitations affecting transportation to, ingress and egress of this work site. Conform to all government regulations in regard to the transportation of materials to, from, and at the job site, and secure in advance such permits as may be necessary.
- D. Should the Contractor, in the course of Work, find any discrepancies between Contract Drawings and physical conditions or any omissions or errors in Drawings, or in layout as furnished by the Owner, it will be Contractor's duty to inform the BPCA/BPCPC immediately in writing for clarification. Work done after such discover, unless authorized by BPCA/BPCPC, shall be done at the Contractor's risk.
- E. Environmental Requirements for Soils:
 - 1. Perform both off-site mixing and on-site soil work only during suitable weather conditions. Do not work soil when frozen, excessively wet (maximum 18% moisture) or in otherwise unsatisfactory condition.
 - 2. Soil mixes shall not be handled, hauled or placed during rain or wet weather or when near or above the point where maximum compaction will occur (as defined by BPCA/BPCPC).
- F. Environmental Requirements for Soil: Sequencing and Scheduling: Adjust, relate together and otherwise coordinate work of this Section with work or Project and all other Sections of Project Specifications.

G. Environmental Requirements and Planting Schedule: Plant only within the following dates, weather permitting. Do not plant when the ground is frozen, excessively wet, or the soil is otherwise in an unsatisfactory condition for planting:

1. The Spring season for all planting materials shall be that period from March 1 through May 15.
2. The Fall season is divided into two parts made necessary by the handling characteristics of two plant types. Contractor shall define all fall digging hazard plants and plant them in the spring planting season.
 - a) September 1 through October 15 shall be the fall planting season for evergreen materials.
 - b) October 15 through December 1 shall be the fall planting season for deciduous materials.

1.08 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Packaged Materials: Deliver packaged materials to the location where soils are to be mixed, in unopened bags or containers, each clearly bearing the name, guarantee, and trademark of the producer, material composition, manufacturers' certified analysis, and the weight of the material. Retain packages for BPCA/BPCPC.
- B. Soil or amendment materials stored on site temporarily in stockpiles prior to placement shall be protected from intrusion of contaminants and erosion. All temporary storage means and methods shall be approved by BPCA/BPCPC.
- C. Store and handle packaged materials in strict compliance with manufacturer's instructions and recommendations. Protect all materials from weather, damage, injury and theft.
- D. In addition, the following provision is established: Material should not be handled or hauled, placed or compacted when it is wet as after a heavy rainfall or is frozen. Soil should be handled only when the moisture content is less than the point where maximum compaction will occur (as defined by BPCA/BPCPC).
- E. After mixing, soil materials shall be covered with a tarpaulin until time of actual use and protected from contamination or erosion.
- F. Inspection
 1. Plants shall be subject to inspection and approval by BPCPC representative at the place of growth and again upon delivery and prior to planting for conformity to specification requirements as to quality, size and variety. Approval at the place of growth shall not impair the right of rejection due to damage suffered in handling, transportation and/or planting. Rejected plants shall be removed immediately from the site. Inspection outside the State of New York shall be made at the expense of the Contractor. A Contractor's representative shall be present at all inspections.

Written requests for inspection of plant material at their place of growth shall be submitted to the BPCPC representative at least 14 days prior to digging. The BPCPC representative may refuse inspection if in his/her judgment a sufficient quantity of plants is not available for inspection. The Contractor shall, at his expense, supply the BPCPC representative with such labor and assistance as may be necessary in the handling of material for proper inspection.

2. Tagging of trees shall be as follows: for every 10 trees planted, 11 trees will be tagged assuring appropriate replacement for (a) trees damaged prior to transplanting and (b) trees requiring replacement under terms of the one-year guarantee.

G. Plant Material, Conditions of Moving and Delivery:

1. The use of an antidesiccant shall not be allowed except by written approval and consent by BPCA/BPCPC.
 - a. If approved, spray deciduous plants with an antidesiccant, immediately before moving plant material from its source, applying an adequate film over trunks, branches, twigs, and foliage.
 - b. Approval shall be required for any subsequent instance of use.
2. Dig and handle plants with care to prevent injury to trunks, branches and roots.
3. Do not prune prior to delivery. Do not bend or bind-tie trees in such manner as to damage bark, break branches or destroy natural shape. Pack and ship to ensure arrival at site in good condition. Provide protective covering during delivery. No plants will be accepted if the rootball is cracked or broken, or trunks scarred, or branches broken.
4. Trees:
 - a. Deliver after preparations of planting areas have been completed and approved and place plants immediately.
 - b. If planting is delayed more than 24 hours after delivery, set balled and burlapped plants on the ground in a "shade house", erected by Contractor, with rootballs well protected with soil, wet peat, or other acceptable material. Protect balls and roots from freezing, sun, drying winds, and/or mechanical damage. Water as necessary until planted.

1.09 GUARANTEE PERIOD AND REPLACEMENTS

- A. The guarantee period for trees shall begin at the date of final acceptance.
- B. All plant material shall be guaranteed by the Contractor for a period of one year from the date of final acceptance to be in good, healthy and flourishing condition.

- C. When work is accepted in parts, the guarantee periods extend from each of the partial acceptance to the terminal date of the last guarantee period. Thus, all guarantee periods terminate at one time.
- D. The Contractor shall replace, without cost, and as soon as weather conditions permit, and within a specified planting period all plants determined dead and/or dying by a BPCPC representative during and at the end of the guarantee period.
 - 1. Plants shall be replaced that are not free of dead or dying branches and bearing foliage of normal density, size and color.
 - 2. Trees having lost their central leader or exhibiting crown dieback at the end of the one-year guarantee shall be replaced.
 - 3. Replacements shall match adjacent specimens of the same species. Replacements shall be subject to all requirements stated in this specification. Labor and all materials needed for installation of replacements are included in the guarantee.
- E. The guarantee of all replacement plants shall extend for an additional period of one year from the date of their acceptance after replacement.
- F. The Contractor shall make periodic inspections, at no extra cost, during the guarantee period to determine what changes, if any, should be made in the maintenance program. Any recommended changes shall be submitted in writing to the BPCA/BPCPC representative.

PART 2 - PRODUCTS

2.01 PLANT MATERIAL

A. General Requirements

- 1. The Contractor shall furnish and plant all plants as specified and in quantities listed.
- 2. All plants shall be nursery grown.
- 3. Plants shall be true to species and cultivar specified. Certification of cultivars by supplying nursery must be supplied in writing to BPCPC representative.
- 4. Plants shall be in accordance with the American Nurserymen Association Standards in all ways, unless otherwise specified in writing by BPCPC representative.
- 5. All plants shall be of specimen quality, symmetrical, so trained or favored in development and appearance as to be unquestionably and outstandingly superior in forms and compactness. They shall indicate vigorous growth, be well branched and densely foliated when in leaf, free of disease, insects, eggs, larvae and shall have well developed root systems.

6. Trees with multiple leaders will not be accepted. Trees with a damaged or crooked leader, bark or abrasions, sun-scald, disfiguring knots, insect damage will not be accepted.
7. The depth of planting must be checked for all trees being tagged at the nursery. If the trunk flare is not visible, the trunk flare (the intersection of the trunk and the buttress roots) must be located. Any tree with significant adventitious root growth or evidence of girdling roots shall be subject to rejection by the BPCPC on a case by case basis. Any soil above the root/trunk flare shall be removed prior to digging (see root ball preparation detail drawing). After the removal of any excess soil above the root/trunk flare, the tree shall be hand dug and drum laced. Machine digging must receive preapproval of BPCPC. The rootball size shall be determined from the elevation of the root/trunk flare in accordance with American Standard for Nursery Stock for the caliper size of the tree.
8. Size: Caliper measurement shall be taken on the trunk 6" above the natural ground line for trees over 4" in caliper. Height and spread dimensions refer to the main body of the plant and not from branch tip to tip. If a range of size is given, no plant shall be less than the minimum size and not less than 50% of the plants shall be as large as the maximum size specified. Plants that meet measurements but do not possess a normal balance between height and spread shall be rejected.

Plants larger than specified may be used only if approved by BPCPC representative. Use of such plants shall not increase the contract price. If larger plants are approved, the root ball shall be increased in proportion to the size of the plant, in accordance with the American Standard for Nursery Stock.

9. Substitution shall not be permitted without preapproval of BPCPC.

2.02 SOIL MIX MATERIALS

A. General

1. All soil mix material shall fulfill the requirements for new soil mixes as specified.
2. Samples of individual components of soil mixes and also blended soil mixes shall be submitted by the Contractor for testing and analysis to the approved testing laboratory. Include verification testing of on-site sub soils. Comply with specific materials requirements specified.
 - a. No base component or soil components for soil mixes shall be used until certified test reports by an approved agricultural chemist have been received and approved by the BPCA/BPCPC.
 - b. As necessary, make any and all soil mix amendments and resubmit tests reports indicating amendments until approved.
3. The BPCA/BPCPC may request additional testing by Contractor for confirmation of mix quality and/or soil mix amendments at any time until completion.

B. Base Component Material

1. Base Component Material shall be a sand that meets the requirements outlined below mixed by volume with loam material that meets the requirements outlined below. Base component materials shall not be site salvaged and must be off-site borrow material.
2. Test Base Component Materials, both individual components and mixed materials, for compliance with material specifications. These test criteria and results, when approved, shall establish the standard to which all subsequent Base Component Material tests must conform.
3. Prior to mixing Base Component Material with organic matter (leaf mold or yard waste compost), have one (1) composite sample tested from each 50 c.y. of material intended for use in soil mixes of planting work.
4. Sand for Base Component Material shall meet the following requirements:

a. Texture:

<u>Sand Fraction</u>	<u>Size (mm)</u>	<u>Sieve Size</u>	<u>% Passing</u>
Gravel	> 2.0	#10	95 – 100%
Very coarse sand	1.0 – 2.0	#18	90 – 100%
Coarse sand	0.5 – 1.0	#35	65 – 75%
Medium sand	0.25 – 0.5	#60	15 – 20%
Fine sand	0.1 – 0.25	#140	0 – 4%
Very fine sand	0.05 – 0.1	#270	0 – 2%

b. Chemical Analysis:

- 1) Soil reaction (pH) - $5.0 - 6.5 \pm 0.5$
- 2) Soluble salt content (Conductivity) - $< 1.5 \text{ dSm}^{-1}$

- c. Material shall have a saturated hydraulic conductivity rate of no less than 30 inches per hour, per ASTM 1815.

5. Loam for Base Component Material shall meet the following requirements:

- a. Soil Texture per ASTM D422 or ASTM F1632, as determined on material passing a 2 mm screen:

Main Fractions	Size (mm)	Percent
Sand	0.05-2.0	83 - 87
Silt	0.002-0.05	7 - 10
Clay	<0.002	4 - 8

In addition, maximum size shall be ½", the total gravel (> 2 mm) shall be less than 10% of the total material, and the sand passing the 2 mm screen shall have the following particle size distribution:

<u>Sand Fraction</u>	<u>Size (mm)</u>	<u>Sieve Size</u>	<u>% Passing</u>
Very coarse	1.0 – 2.0	#18	87-90
Coarse	0.5 – 1.0	#35	65-71
Medium	0.25 – 0.5	#60	34-42
Fine	0.10 – 0.25	#140	17-23
Very fine	0.05 – 0.10	#270	14-18

b. Chemical Analysis:

- 1) Organic matter content (%) oven dry weight of soil shall be within the range of 4 to 10%.
 - 2) Soil reaction (pH) - 6.0 ± 0.5
 - 3) Soluble salt content (Conductivity) - $< 1.5 \text{ dSm}^{-1}$
6. Before base sand-loam mix (base component) is used for mixing with organic amendments, handle and pile the mix in the following manner:
- a. Mix the base sand with base loam in a ratio of 3 parts sand to 1 part loam. Adjustments to the ratio may have to be made to meet the specifications for the base component. Homogenize to make a uniform mix, free of subsoil lenses and other irregularities.
 - b. Aerate the base component to make a friable planting medium.
 - c. Screen out all clay lumps, stones, roots, and other debris.
7. Material Requirements, Base Component Mix: The final mix of sand and loam materials shall substantially conform to the following:
- a. Soil Texture per ASTM D422 or ASTM F1632, as determined on material passing a 2 mm screen:

<u>Main Fractions</u>	<u>Size (mm)</u>	<u>Percent</u>
Sand	0.05-2.0	95.0
Silt	0.002-0.05	3.0
Clay	<0.002	<u>2.0</u>

In addition, maximum size shall be ½", the total gravel (> 2 mm) shall be less than 5% of the total material, and the sand passing the 2 mm screen shall have the following particle size distribution:

<u>Sand Fraction</u>	<u>Size (mm)</u>	<u>Sieve Size</u>	<u>% Passing</u>
Very coarse sand	1.00	#18	92-95
Coarse sand	0.50	#35	67-73
Medium sand	0.25	#60	20-26
Fine sand	0.10	#140	5-9
Very fine sand	0.05	#270	5

b. Chemical Analysis:

- 1) Organic matter content (%) oven dry weight of soil: 1- 4%
- 2) Soil reaction (pH): 6 - 7
- 3) Soluble salt content (Conductivity) - < 1.5 dSm⁻¹

c. Saturated hydraulic conductivity of no less than 15 inches per hour per ASTM 1815.

C. Organic Matter: Organic matter for amending planting media shall be a stable, material produced from the aerobic decomposition and curing of yard wastes. The compost shall meet the following criteria

- 1) Organic matter content of no less than 40% as determined by ASTM 2974
- 2) Moisture content of 35 to 70% as determined by ASTM D2974.
- 3) Carbon to nitrogen ratio of 15:1 to 30:1
- 4) Soluble salts not exceeding 4 dSm⁻¹
- 5) Solvita Maturity Index 6 to 8
- 6) 95 – 100% passing a 3/8" screen
- 7) pH 6 to 7.5
- 8) Biological Organisms: The compost shall have the following levels of organisms (direct microscopy). Refer to Article 1.04 E.15 for testing and sampling requirements.
 - 15 to 25 or more µg active bacteria /g dry weight (dw) compost
 - 100 µg (fungal compost) to 300 or more µg (bacterial compost) total bacteria /g dw compost
 - 15 to 25 µg or more active fungi /g dw compost
 - 100 to 300 µg total fungal biomass /g dw compost
 - 10,000 or more flagellates
 - 10,000 or more amoebae
 - 50 - 100 ciliates.
 - 20 – 30 Total nematodes (No root feeding nematodes)

D. Nutrient Analysis:

1. Ammonium(NH₄) and Nitrate (NO₃): below 100 ppm
2. Phosphorous
3. Potassium
4. Calcium (CA), Magnesium (Mg): ratio of 7 part Ca to 1 part Mg
5. Iron (Fe) 1 to 4 ppm
6. Manganese (Mn) 3 to 20 ppm
7. Zinc (Zn) 0.1 to 70 ppm
8. Copper (Cu) 0.3 to 8 ppm

2.03 SOIL AMENDMENT MATERIAL

A. Ground Limestone: Ground Limestone as a soil amendment material will only be used pending results of analysis.

1. Provide a Ground Agricultural Limestone with a minimum of 88% of calcium and magnesium carbonates.
2. Ground Limestone material shall have a total 100% passing the 10 mesh sieve, minimum of 90% passing the 20 mesh sieve and a minimum of 60% passing the 100 mesh sieve.

B. Solite Lightweight Aggregate: Provide an expanded shale as supplied by Northeast Solite Corporation, or approved equal in accordance with the following:

1. Aggregate size shall be 3/4" to - #4 size and, shall conform to the following sieve analysis:

<u>Sieve Size</u>	<u>% Passing</u>
1"	100
3/4"	96.9
1/2"	52.7
3/8"	25.8
#4	2.6

- a. Dry loose weight: 50.8 lbs./cu.ft.
- b. Dry rotted weight: 50.5 lbs./cu.ft
- c. Specific Gravity: SSD+1. 51
2. Sulfur: Granular, biodegradable with a minimum 99 percent passing through No. 6 sieve and a maximum 10 percent passing through No. 40 sieve.
3. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.

4. Sand: Clean, washed, natural or manufactured, free of toxic materials, of a size as specified.

2.04 PLANTING SOIL MIXES

- A. Adequate quantities of mixed planting soil materials shall be provided to attain, after compaction and natural settlement, all design finish grades.
- B. Uniformly mix ingredients using a mechanical soil blender designed for such purpose as specified for each Mix Type (Base Component Material, compost, and other ingredients deemed to be necessary as a result of testing). Wind rowing/tilling on an approved hard surface area may also be used as an alternative. Organic matter shall be maintained moist, not wet during mixing.
 1. Mixing of Amendments: Add organic amendment in proportions as specified and as confirmed by testing. Other amendments shall not be added unless approved to extent and quantity by Battery Park City Parks Conservancy and additional tests have been conducted to verify type and quantity of amendment is acceptable.
- C. Testing of Plant Mixes:
 1. Perform initial tests to confirm compliance with base material and mix specifications. These test results, when approved, will establish the standard to which all other test results must conform.
 2. Follow-up Testing: Have one (1) composite sample delivery and upon arrival to the site from each 500 c.y. or as required by BPCA/BPCPC for use in each type plant mix to include the following:
 - a. Particle size analysis: Use sieve sizes as specified for Base Component Material.
 - b. Organic matter content as per mix specified.
 - c. Nutrient Analysis:
 - 1) Have nutrient levels (pH, ammonium nitrogen, nitrate nitrogen, nitrite nitrogen, phosphorus, potassium, magnesium, calcium, magnesium, zinc, iron, copper, and manganese) tested, and request testing laboratory recommendations for additional fertilizer requirements at all plant areas if nutrient levels are below average. Soluble salts shall also be tested.
 - 2) Contractor shall not use amendments to correct nutrient deficiencies.
 - d. Biological Organisms: The mixes shall have the following levels of organisms (direct microscopy). Refer to Article 1.04 E.15 for testing and sampling requirements. Mix shall have microbiological populations as listed below. Acceptance or rejection of mixes based on these test values will be determined by Battery Park City Parks Conservancy.

Plant Material	Active Bacteria 1 Biomass (ug/g)	Total Bacterial Biomass (ug/g)	Active Fungal Biomass (ug/g)	Total Fungal Biomass (ug/g)	Hyphal Diameter (ug/g)	Protozoa Numbers/g			Total Beneficial Nematode Numbers (#/g)
						Flagellates	Amoebae	Ciliates	
Deciduous Trees	15-25	100-300	15-25	100-300	3.0	10,000	10,000	50-100	20-30

D. Soil Mix Types: Provide the following planting soil mix types at the locations indicated on plan. Percentages of components, unless otherwise noted, will be established upon completion of individual test results for components of the various mixes. The controlling factor will be the percent (%) organic matter as specified for each mix. Note that percent (%) by volume of components will be, in large part, determined by the compost. Specifically the bulk density of the compost will directly impact the organic matter readings that have been specified for each mix.

1. Soil A:

- a. Organic Component shall be mixed with the Base Component (sand-loam) mix at a rate necessary to provide an organic matter content of 4-6% by weight, as determined by ASTM F1647. pH shall be 6.5 to 7.0. Cation Exchange Capacity shall be between 10 and 15. Natural nutrient cycling will be a minimum of 150 lbs per acre, available Nitrogen from microbial activity.

2. Planting Soil Mix S1:

- a. Soil A: 40%
- b. Solite Lightweight Aggregate: 60%.
- c. Other amendments as required by test results and as approved.

3. Soil B:

- a. Organic Component shall be mixed with the Base Component (sand-loam) mix at a rate necessary to provide an organic matter content of 6-8% by weight, as determined by ASTM F1647. pH shall be 6.5 to 7.0. Cation Exchange Capacity shall be between 10 and 15. Natural nutrient cycling will be a minimum of 150 lbs per acre, available Nitrogen from microbial activity.

4. Planting Soil Mix S2:

- a. Soil B: 60%.
- b. Solite Lightweight Aggregate: 40%.
- c. Other amendments as required by test results and as approved

E. Stockpiling

1. General: Stockpiling on-site, off-site, and at source should be restricted to no more than the needs of what can be used in a 24-hr. period. Under no circumstances shall on-site or off-site stored material exceed 500 c. y. Stockpiles should be no more than 6 feet in height to prevent anaerobic conditions within the pile(s). Composts should be turned weekly BPCA/BPCPC to prevent anaerobic conditions within the piles. Stockpiles shall be sheltered from weather to prevent excessive water absorption and blowing by winds.
- 2.05 MULCH
- A. Mulch: Provide type specified by Battery Park City Parks Conservancy.
- 2.06 STAKES AND GUYS
- A. General: Stakes and guys shall only be required if directed by BPCPC to prevent wind overturn of proposed trees.
 - B. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, redwood, or pressure-preservative-treated softwood, free of knots, holes, cross grain, and other defects, 2 by 2 inches (50 by 50 mm) by length indicated, pointed at one end, 4 per tree.
 - C. Guying Material: Flat woven polypropylene material $\frac{3}{4}$ " wide, 900 lb. break strength, white in color as provided by Deep Root Partners, L.P., 345 Lorton Avenue #103, Burlingame, CA (800-458-7668) or approved equivalent.
 - D. Ground Anchor: Duckbill Cable Anchor System or approved equal. Provide Model 40 (for trees up to 3" caliper), Model 68 (for trees for trees between 3" and 6" caliper) or Model 88 (for trees between 6" and 10" caliper) as required for each instance. Each anchor system shall include 3 ground anchors, 3 galvanized steel cables assemblies each with galvanized turnbuckles, cable clamps, and protective collars.
 - E. Hose Chafing Guard: Reinforced rubber or plastic hose at least $\frac{1}{2}$ inch (13 mm) in diameter, black, cut to lengths required to protect tree trunks from damage.
 - F. Flags: Standard surveyor's plastic flagging tape, noticeable bright color, 6 inches (150 mm) long.

PART 3 - EXECUTION

3.01 VERIFICATION

- A. Prior to construction and soil placement operations tree pits, ascertain the location of all electric cables conduits under-drainage systems and utility lines. Take proper precaution so as not to disturb or damage sub-surface elements. Contractor failing to take these precautions shall be responsible for making requisite repairs to damaged utilities at Contractor's own expense.
- B. It is the specific intent of this specification to use continuous trenches of Planting Soil S1 between individual tree pits. Interruption of continuous trenches is permitted only at driveways, fire hydrants and major utility interferences, or as otherwise determined by BPCA/BPCPC.

- C. Verify that required underground utilities are available, located, and ready for use. Coordinate with other trades.
- D. Verify that all work requiring access through or adjacent to areas where plant mixes are to be placed has been completed and no further access will be required. In the event that access will be required, this must be coordinated with BPCA/BPCPC.

3.02 PERCOLATION TEST

- A. Contractor to perform percolation test after digging the trench to the appropriate depth and prior to placing any soil mixes.
- B. A percolation test shall be conducted by performing the following steps in sequence:
 - 1. Prepare a test hole located within the proposed tree pit. The test hole shall have a diameter of 12 inches, as precisely as possible, with vertical sides 18 inches deep not including any allowable liners or filter layers on either the bottom or sides.
 - 2. Establish a fixed point at the top or bottom of the test hole from which all measurements will be taken.
 - 3. Scratch the bottom and sides of the test hole to remove any smeared soil surfaces, taking care not to significantly change the whole dimensions. Add two inches of coarse sand to protect the bottom from scouring, or insert a board or other impervious object in the hole so that water may be poured down or on it during the filling operation. A mesh or perforated liner deigned to maintain the test hole dimensions in extremely loose soils while allowing essentially unrestricted flow of water may be used with permission of BPCA/BPCPC.
 - 4. Carefully fill the hole with clear water to a minimum depth of 12 inches from the bottom of the hole. Maintain this minimum 12-inch or greater water level by adding water as necessary in order to saturate surrounding soils for a period no less than 15 minutes after first filling the hole.
 - 5. After saturation, if the water level drops to a depth of nine inches in fewer than 30 minutes, measure the length of time in minutes for it to drop from a depth of nine inches to a depth of six inches. If the rate is erratic in the opinion of BPCA/BPCPC, the hole shall be refilled and soaked until the drop per increment of time is steady. The time for the level to drop from a depth of nine inches to a depth of six inches, divided by three, is the percolation rate in minutes per inch.
 - 6. If the initial three-inch drop requires more than 30 minutes (rate equal to more than ten minutes per inch) the soil shall be saturated by filling the hole to the top and maintaining it full for at least four hours. The soil should then be permitted to swell a minimum of 12 hours so that the soil conditions will approach those which exist during the wettest season of the year. After the 12-hour swelling period, the test shall be made again by filling the hole to a 12-inch depth and maintaining that level for 15 minutes, letting the level drop to nine inches, then timing the drop between nine inches and six inches. The time elapsed between nine inches and six inches, divided by three, shall be the percolation rate.

7. In certain soils, particularly coarse sands, the soil may be so pervious as to make a percolation test difficult, impractical, and meaningless. At the discretion of BPCA/BPCPC and with the concurrence of the approving authority, the percolation test may be discontinued and a rate of two minutes per inch or less can be assumed provided that at least 24 gallons of water has been added to the percolation hole within 15 minutes and it is impossible to obtain a liquid depth of nine inches.

3.03 PREPARATION OF TREE PIT IN TRENCH

- A. Prior to laying and spreading Planting Soil Mixes S1 or S2, the Contractor shall verify as-constructed or existing Controlled Fill elevations and do whatever additional grading is necessary to bring the subgrade to a true, smooth, slope as indicated on Drawings.
 1. Clean up subgrade, remove and dispose of all debris and garbage prior to inspection, and prior to spreading S1 and S2.
- B. Any soils polluted by gasoline, oil, plaster, construction debris, unacceptable soils, or other substances, which would render Controlled Fill unsuitable for a proper plant growth, shall be removed from the premises whether or not such pollution occurs or exists prior to or during the Contract period. In the event that such material is placed, this material shall be removed and replaced with approved material. All remedial operations associated with soil mixes and controlled fill shall be reviewed and approved by the BPCA/BPCPC.

3.04 PLANTING MIXTURES

- A. Planting Soil Mix S1 shall be used within continuous tree trenches paved with granite blocks. Planting Soil Mix S2 shall be used within the tree pit and, after tree installation, shall be covered with mulch as specified herein.
- B. All amendments shall be thoroughly incorporated into the mixture to assure uniform distribution.
- C. Additional amendments shall be mixed into the soil as recommended by the testing laboratory and as approved by the Battery Park City Parks Conservancy for each tree type and condition of installation.

3.05 PLACING PLANTING SOIL

- A. Remove all large clods lumps, brush, roots stumps, litter, and other foreign material and stones one-half inch (1/2") in diameter or larger. Dispose of removed material legally off-site.
- B. Do not place a muddy or wet soil mix, moisture excessive of 18%.
- C. Place and spread Planting Soil Mix S1 specified over approved compacted subgrade to a depth sufficiently greater than the depth required for indicated subbase and granite blocks as indicated, so that after natural settlement, compaction and misting and/or light rolling as previously approved by BPCA/BPCPC, the completed work will conform to the lines grades, and elevations shown or otherwise indicated.

- D Place Planting Soil S1 in maximum 6-inch lifts and compact each lift to 95% maximum, 92% minimum, standard proctor density. Do not over compact.
- E. Grading Tolerances: Planting areas shall be fine graded within $\pm 1/10$ (0.10) feet of grades indicated on drawings. Maintain all flat areas and slopes to allow free flow of surface drainage without ponding.

3.06 PLANTING OPERATION

- A. For purpose of inspection, the BPCA/BPCPC representative shall have free access to all parts of work involved in planting operation. No work shall be covered or concealed prior to inspection.
- B. Trees shall be protected at all times from sun or drying winds. Trees that cannot be planted immediately upon delivery shall be kept in the shade and well watered by the Contractor. Trees shall not remain unplanted for longer than one day after delivery.
- C. Planting Depth

Trees shall be placed on compacted subgrade. If trees cannot be set on compacted subgrade, place tree on Planting Soil Mix S2 at the depth where roots spread from trunk as shown in diagram. The flair must be located and placed at the correct level before continuing planting procedures. Expose flare of trunk by removing excess fill on top of rootball. All ropes and strings must be cut, non-biodegradable material must be removed and the burlap folded back from the top of the ball completely remove drum lacing and wire baskets. This must be approved by the BPCPC representative. When placement of the trees has been approved by the BPCPC representative and only at that time, Planting Soil Mix S2 shall be placed within tree pit zone. Soil must be firmed at 6 to 8 inch intervals and thoroughly settled with water. Trees shall stand plumb after guying.

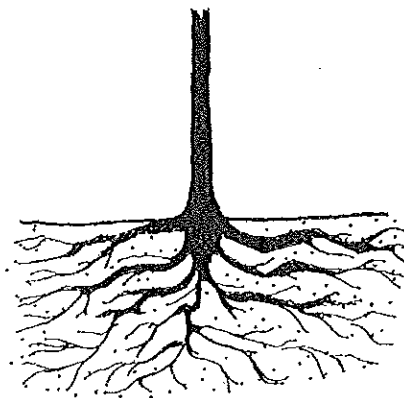


Fig 1.1

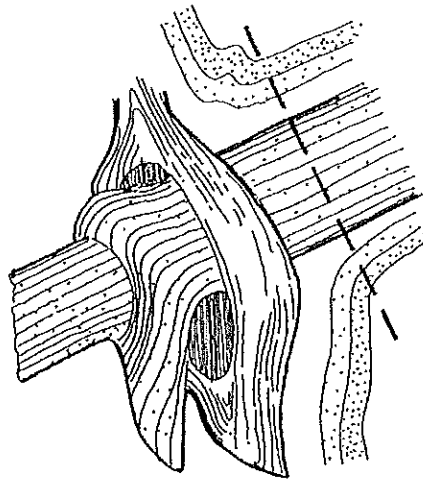


Fig 1.2

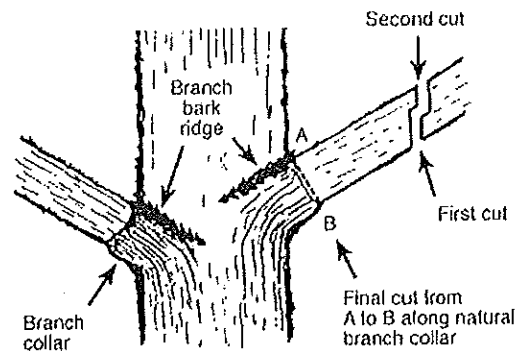


Fig 1.3

D. Staking, Guying and Wrapping

If directed by BPCPC four 6' straight, sound, rough sawn wooden stakes are to be used per tree. Galvanized steel wire shall be used to complete the support system. Wire shall be encased in 3/4" high quality rubber hose to prevent direct contact with the bark of the tree.

Tree wrap shall not be used on the trees.

E. Pruning

1. As per ISA, it is not recommended to prune before or directly after planting, if on-site pruning is required, it shall be supervised by a BPCPC Representative.
2. Each cut should be made carefully, at the correct location, leaving a smooth surface with no jagged edges or torn bark. The correct anatomical location is just beyond the branch collar. (See Figures 1.2 and 1.3).
3. Large or heavy limbs should be removed using three cuts. The first cut undercuts the limb one or two feet from the parent branch or trunk. The second cut is the top cut which is made slightly further out on the limb than the undercut. The third cut is to remove the stub. (See Figure 1.3.).

(Figures 1.2 and 1.3 taken from the I.S.A. certification study manual).

4. The natural character of the plant shall be preserved.
5. All deadwood, suckers, broken or badly bruised branches shall be removed.
6. Excessive pruning at the time of transplanting must be avoided. The extent of top pruning should be based upon the ability of the plant roots to function and the judgment of the BPCPC Representative.

7. Pruning shall be done with clean, sharp tools. No leaders shall be cut.

3.07 MAINTENANCE OF TREES AFTER PLANTING

- A. Maintenance shall begin immediately after each plant is planted and shall continue until acceptance.
- B. Maintenance shall consist of watering, mulching, tightening and repairing of guys and stakes, resetting plants to proper grade and application of horticultural oils during dormant season.

3.08 ACCEPTANCE

- A. BPCA/BPCPC shall inspect all work for acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date of inspection.
- B. Upon completion and re-inspection of all repairs or renewals necessary, BPCA/BPCPC shall certify in writing as to the acceptance of the work.

3.09 FINAL INSPECTION AND FINAL ACCEPTANCE

At the end of the guarantee period, the BPCA/BPCPC will inspect all guaranteed work at the written request of the Contractor. The request shall be received 10 calendar days before the anticipated date for final inspection. Upon completion and re-inspection of all repairs or renewals necessary, the BPCA/BPCPC shall certify in writing as to the final acceptance of the project.

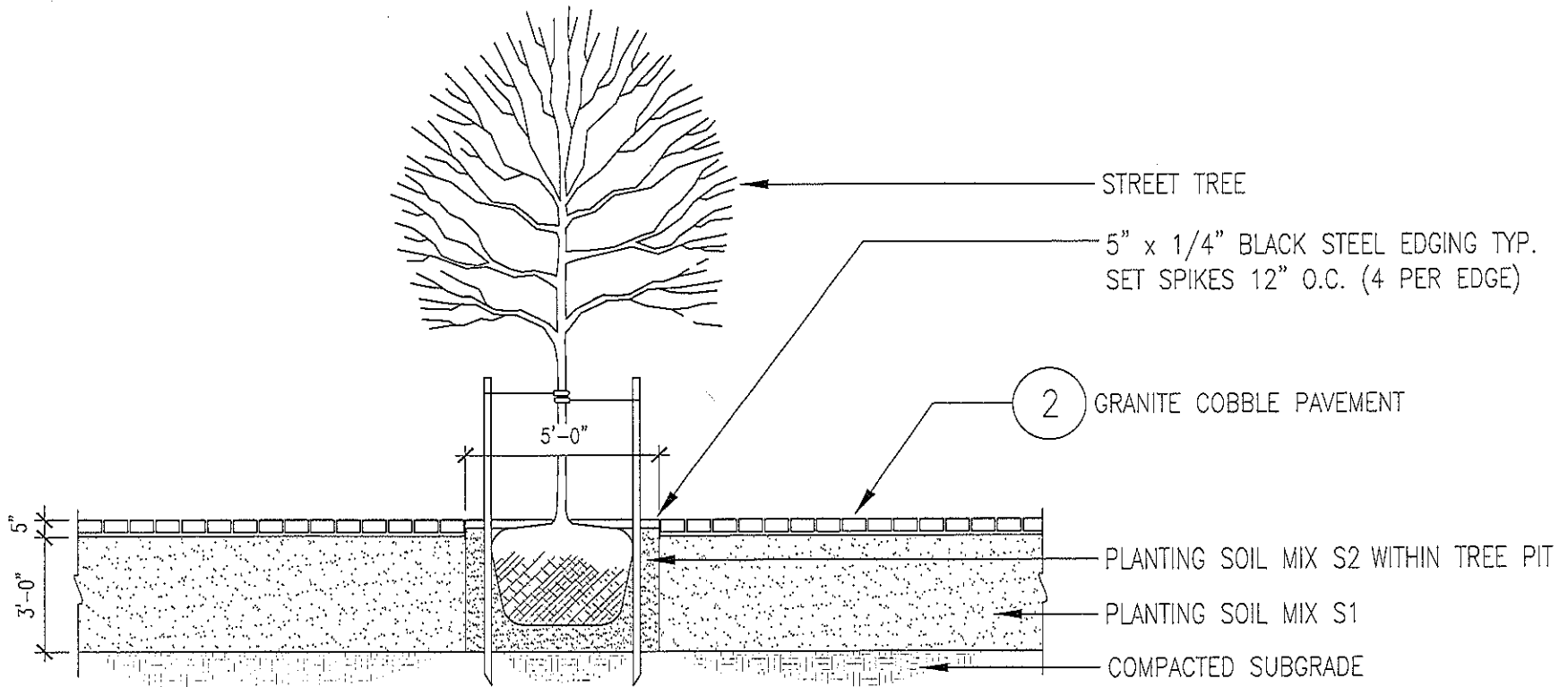
3.10 DISPOSAL AND CLEAN UP

- A. Promptly remove soil and debris created by soil work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Legally dispose of off-site all refuse and debris from these operations. Do not dump or burn materials on site.
 - 1. The Contractor shall remove waste materials, unsuitable and excess materials from the Owner's property and shall recycle and provide for reuse as specified, and when deemed unsuitable for recycling and reuse, legally dispose of off-site.
- C. Maintain the site in an orderly condition during the progress of the Work. Continuously and promptly remove excess waste materials; keep walks and streets clear. Store materials and equipment where directed. Promptly remove equipment, surplus materials and debris and trash resulting from operations under this Contract upon completion and prior to initial acceptance of Work. Leave the site in a neat, order condition "broom clean".

END OF SECTION

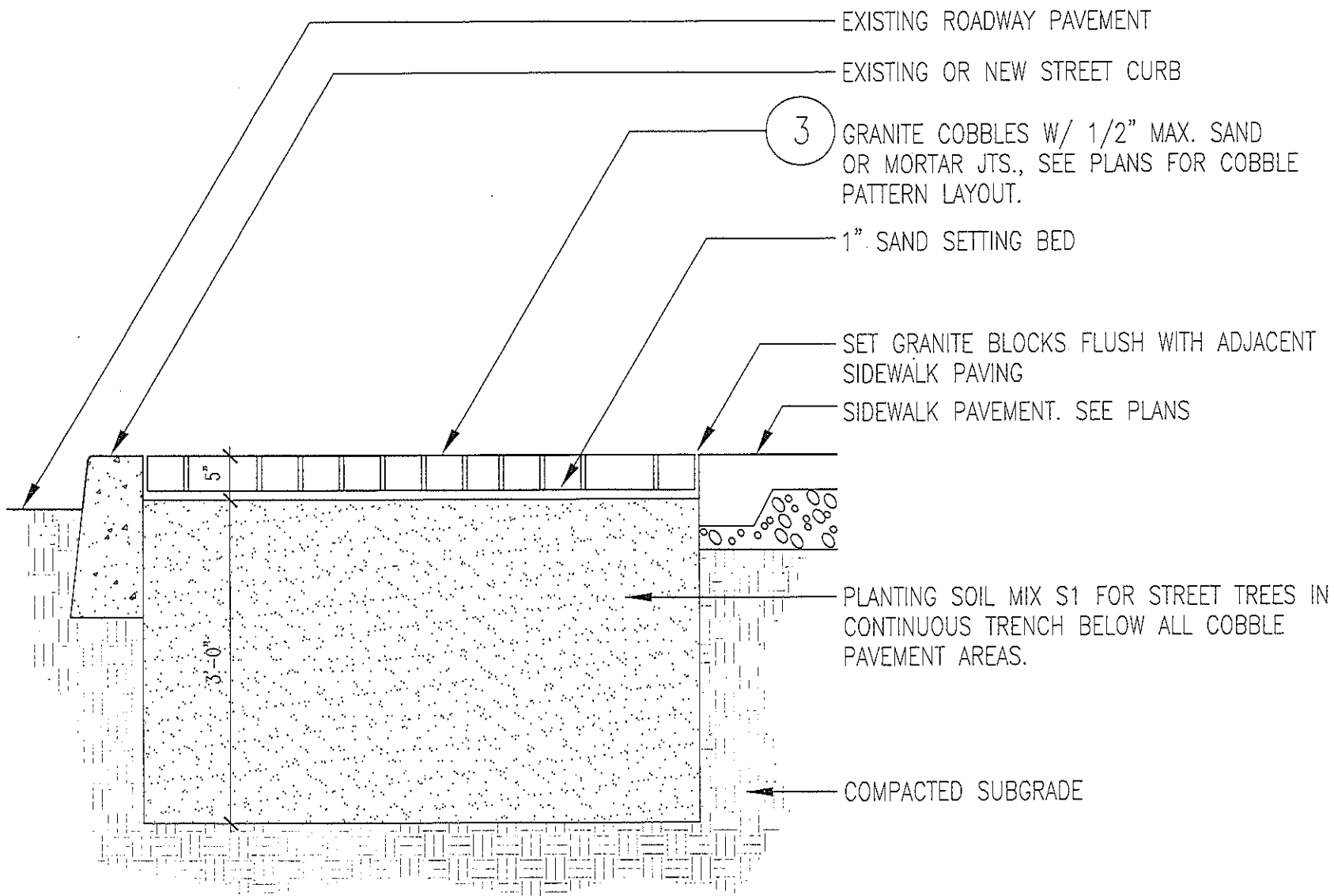
NOTES:

PROVIDE CONTINUOUS TRENCH
OF PLANTING SOIL MIX S1
BELOW ALL COBBLE PAVEMENT AREAS



1 LONGITUDINAL SECTION TREE PIT
1/4" = 1'-0"

Battery Park City Authority/Battery Park City
Parks Conservancy
Standard Street Tree Planting Details
April 16, 2004



CROSS SECTION GRANITE COBBLE PAVING IN CONTINUOUS TREE TRENCH

2

NOT TO SCALE

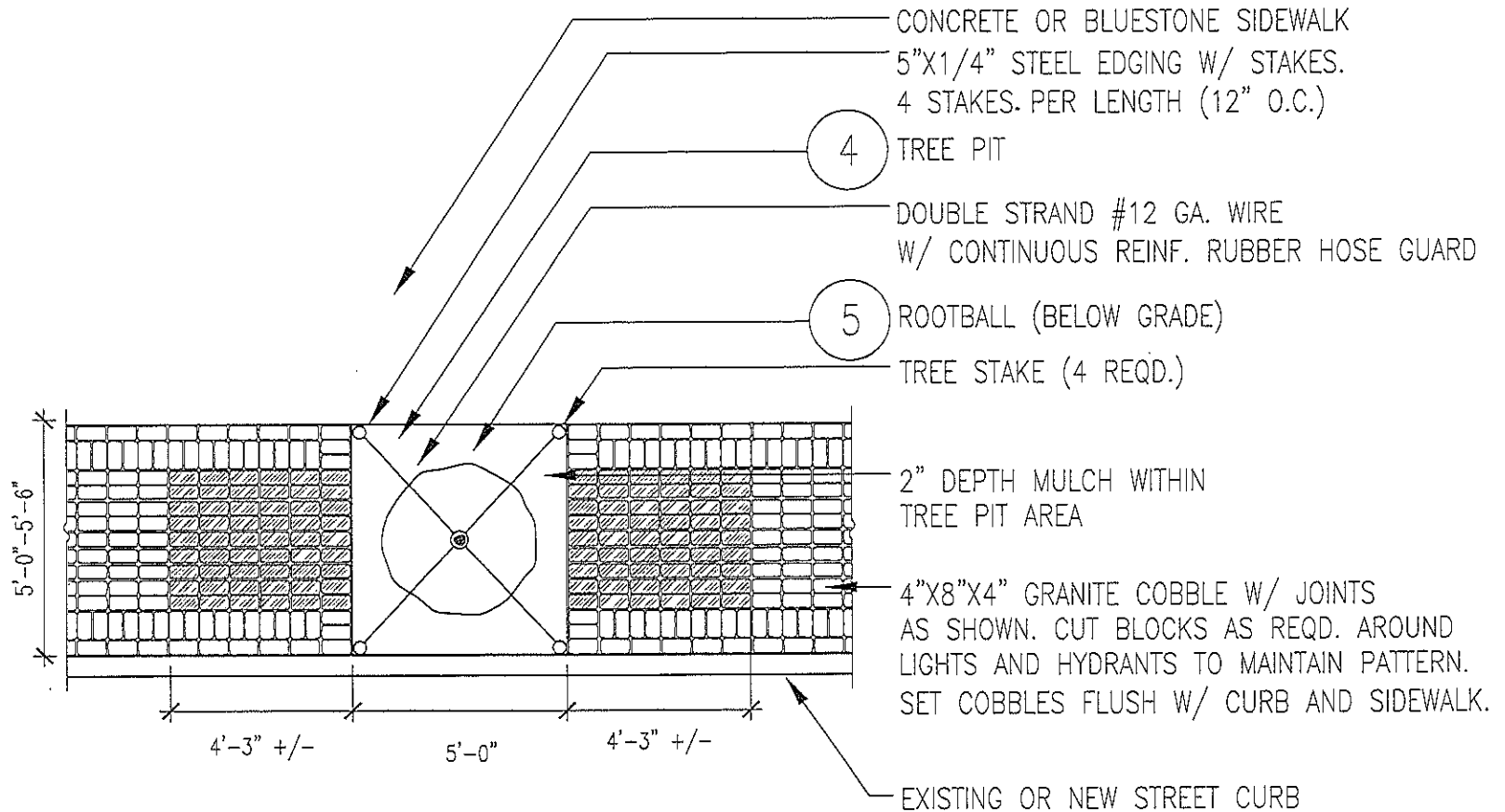
Battery Park City Authority/Battery Park City
Parks Conservancy
Standard Street Tree Planting Details
April 16, 2004

LEGEND:

- MORTAR JOINTS
- ▨ SAND JOINTS

NOTES:

IN AREAS OF SAND JOINTS, TO BE MADE AS TIGHT AS POSSIBLE AND WORKED FROM OUTSIDE EDGE INTO THE CENTER OF COBBLE BAND TO PREVENT COBBLES SET IN SAND FROM SHIFTING OR MOVING.



3

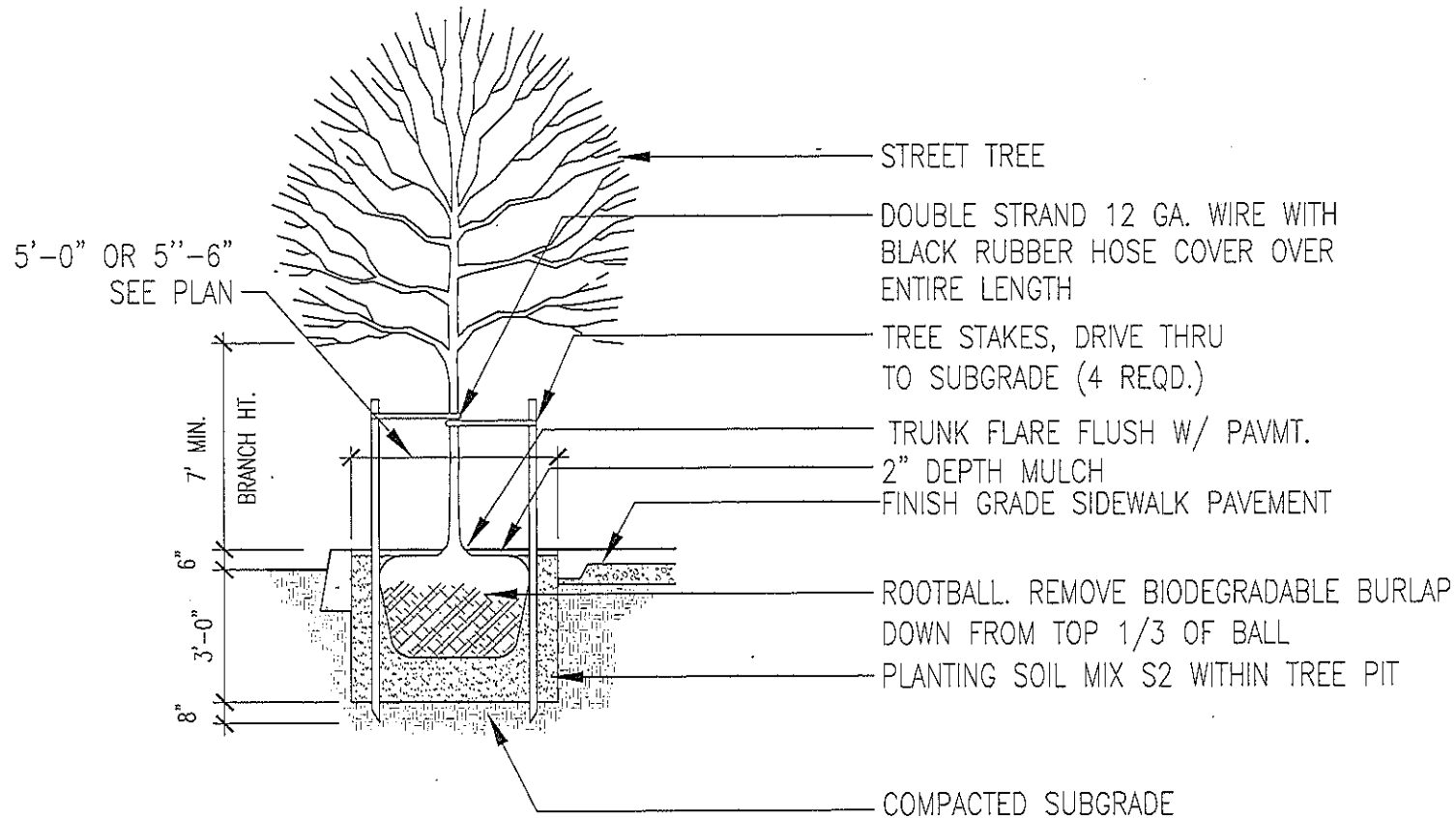
PLAN—GRANITE COBBLES, TREE TRENCH, AND TREE PIT

NOT TO SCALE

Battery Park City Authority/Battery Park City
Parks Conservancy
Standard Street Tree Planting Details
April 16, 2004

NOTES:

REMOVE ALL WIRE, PLASTIC, TAGS
OR OTHER SYNTHETIC MATERIAL
FROM TREE PRIOR TO PLANTING



4

CROSS SECTION TREE PIT

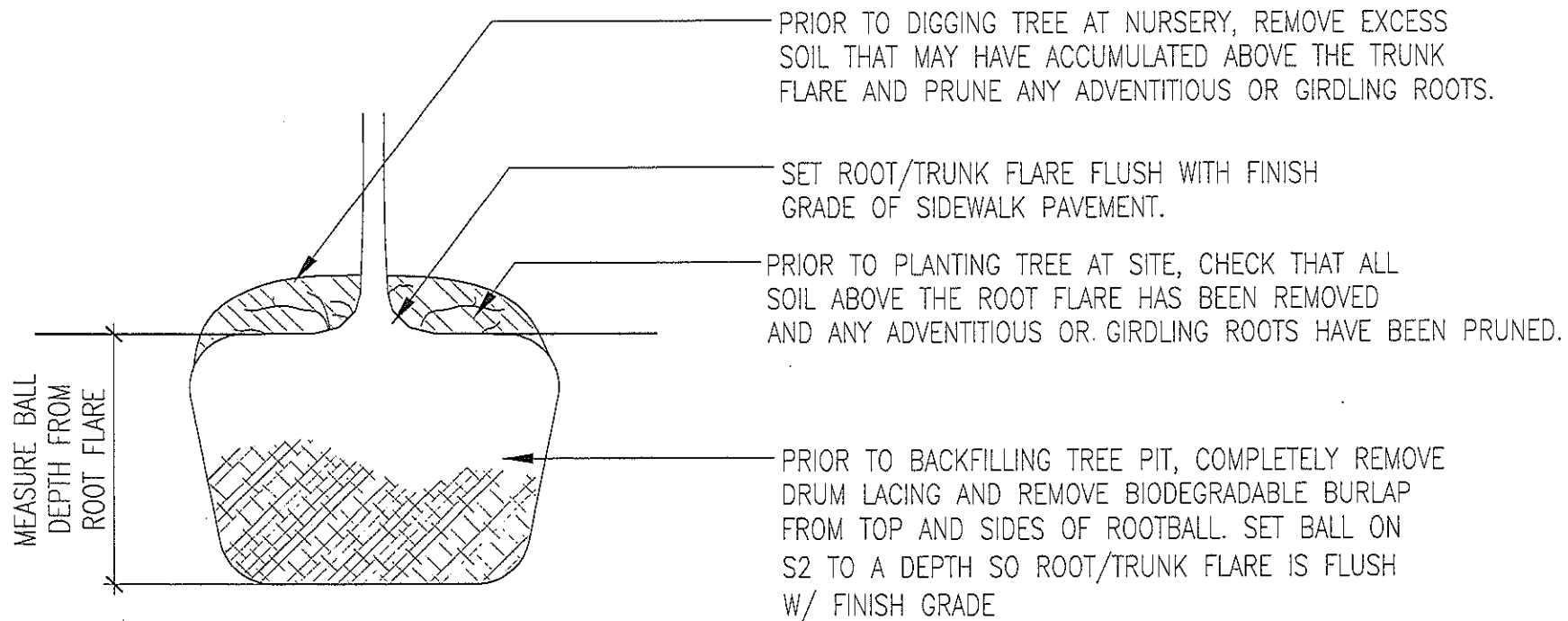
NOT TO SCALE

Battery Park City Authority/Battery Park City
Parks Conservancy
Standard Street Tree Planting Details
April 16, 2004

NOTES:

ALL TREES SHALL BE HAND DUG AND DRUM LACED.

BALL SIZE (WIDTH AND DEPTH) AFTER REMOVAL OF EXCESS SOIL ABOVE THE ROOT/TRUNK FLARE SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK FOR THE CALIPER SIZE OF THE TREE.



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ROOT BALL PREPARATION

NOT TO SCALE

Battery Park City Authority/Battery Park City
Parks Conservancy
Standard Street Tree Planting Details
April 16, 2004

Tree and Stump Removal – Tree and stumps are to be removed in their entirety by the contractor and disposed of off site in a legal manner. Stump removal shall be to the full confines of the tree pit and/or as directed by the resident engineer. All tree and stump removals shall be performed in accordance with the Asian Longhorn Beetle Quarantine restrictions. The Contractor shall be responsible for all damage to existing features above and below ground (benches, utility lines, irrigation pipes, lampposts, path surfaces, existing vegetation) incurred as a result of work operations. All damages shall be repaired or replaced at the contractor's expense to the satisfaction of the BPCA/BPCPC.