City of Portsmouth, New Hampshire

REQUEST FOR PROPOSALS #40-15

Union Cemetery Enclosure Wall

The City of Portsmouth, New Hampshire ("Owner") seeks Proposals from firms qualified for conservation of the Union Cemetery Enclosure Wall in Portsmouth, NH. Sealed Proposals, plainly marked **RFP #40-15**, "Union Cemetery Enclosure Wall" on the outside of the mailing envelope, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, NH 03801 will be accepted until Thursday February 12, 2015 at 2 p.m.

A mandatory pre-proposal meeting will be held at **Thursday January 29, 2015 at 9:00 a.m.** Participants will meet at the Union Cemetery on Maplewood Ave. All individuals or firms interested in submitting a proposal must attend.

The City of Portsmouth reserves the right to reject any or all proposals, to waive technical or legal deficiencies, to proceed or not to proceed with any proposal, or to negotiate without further process any contract as may be in the best interest of the City.

GENERAL INFORMATION

The City of Portsmouth (City) is seeking proposals from a firm or team of firms qualified for the conservation of the Union Cemetery Enclosure Wall on Maplewood Ave. Work to be performed includes resetting the pillars and beams, wrought iron railing conservation and slate sign restoration.

All work must be in compliance with State of New Hampshire Division of Historic Resources preservation direction for municipally-owned historic burial grounds and cemeteries, and comply with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* and the American Institute for Conservation's *Code of Ethics and Guidelines for Practice*.

Copies of the RFP are available on the City's website http://www.cityofportsmouth.com/finance/purchasing.htm. Proposals must be received no later than **Thursday February 12, 2015 at 2 p.m.** Proposals received after the date and time indicated will be rejected.

All questions regarding this RFP should be directed to Lori MacGinnis, Purchasing Coordinator in writing, through email: purchasing@cityofportsmouth.com. Questions will be accepted until 4:30 p.m, Thursday February 5, 2015. Answers to questions will be posted by 4:30 p.m. Monday February 9, 2015. All questions, and their respective answers, raised during the RFP process will be available on-line at the Purchasing website http://www.cityofportsmouth.com/finance/purchasing.htm. Addenda will not be sent directly to proposers.

BACKGROUND

In 2013 the City of Portsmouth commissioned an assessment and existing conditions report of these properties by John B. Wastrom, a conservation mason and burial ground consultant from Rollinsford N.H., who took photographs, noted deficiencies and provided a scope of work for conservation repairs. Mr. Wastrom's assessment and work scope is the basis for work to be executed in this Request for Proposals

Work under the proposed contract will be done under the supervision of the City's Project Manager with

guidance from the New Hampshire Division of Historic Resources, and any consulting parties to the City. All work will be inspected and approved by these parties prior to acceptance.

SCOPE OF WORK

The Contractor will meet with the City's Project Manager to review project progress periodically throughout the duration of work performance. Meetings will be held on site.

Work under the proposed contract consists of:

- A. Attendance at a Preconstruction meeting with the City to determine schedule and review means and methods.
- B. Conservation of the Union Cemetery Enclosure Wall and Stonework
- C. An alternate work item to conserve and repair family plot granite post and iron rail enclosures.

SELECTION PROCESS and CRITERIA

Proposals are to be submitted in two parts, a technical proposal and a fee proposal. The Owner's selection team shall review all proposals, and rank the three most qualified applicants. The selection and ranking shall be based on the criteria listed below. The order in which the criteria appear does not indicate the importance, ranking or weighting that will be used in the evaluation.

- 1. Qualifications of Proposal lead firm
- 2. Qualifications for proposed consultants and subcontractors.
- 3. Proposed approach to the project.
- 4. Successful experience performing similar projects.
- 5. Experience and availability of assigned staff to perform the services required by the Project.
- 6. Cost and projected timeline to accomplish the scope of work.

The Owner will negotiate with the highest ranked applicant on the tasks, staffing, schedule and a maximum not-to-exceed fee consistent with the applicant's proposal and with what is considered fair and reasonable to the Owner. Negotiations may be terminated if they fail to result in a contract within a reasonable amount of time. Negotiations will then ensue with the second ranked applicant, and if necessary, the third ranked applicant. It is the City's intention that contract negotiations will be completed by **February 27, 2015** for work to commence as soon as weather permits.

Appended to this RFP is a form of contract and Specifications that may be a starting point for contract negotiations or contractor may suggest and alternative form.

RESERVATION OF RIGHTS

By submitting a proposal, the applicant consents to the City undertaking such investigation as it deems in its best interest to investigate the firm's qualifications. The submitting firm assumes all responsibility for any costs it incurs in preparing a response to this Request for Proposal.

The City of Portsmouth reserves the right to reject any and all proposals, to waive technical or legal deficiencies, and to accept any proposals that are deemed to be in the best interest of the city. The City reserves the right to amend this RFP by formal Addendum. All addenda will be posted on the City's website http://www.cityofportsmouth.com/finance/purchasing.htm as an addendum. Addenda will not be sent directly to proposers.

TECHNICAL PROPOSAL REQUIREMENTS

- 1. The identity of the individual, firm or firms submitting this proposal. If a team is submitting this proposal, the proposal should specify which firm would act as the lead consultant for purposes of assuming contractual responsibility. If the consultant intends to subcontract any work required in the scope of services, the sub-contractor must be identified.
- 2. A resume with at least five (5) projects similar in scope and importance to the work outlined in this RFP, including the name and date of execution of each. Names and telephone numbers of the references for each of the five (5) projects are also required.
- 3. Resume and list of similar projects for site subcontractor
- 4. A narrative of the applicant's approach to carrying out the project and add alternates.
- 5. The project schedule and definition of work to be carried out during each phase.
- 6. Any other information deemed relevant to the project, and which the consultant believes will further the competitiveness of the proposal.

The Technical Proposal must be submitted in a separate sealed envelope identified as "Technical Proposal". The project name, "**RFP 40-15 Union Cemetery Enclosure Wall**" must be clearly marked on the envelope, along with the applicant's name and address. Conservators must submit one complete original and three (3) complete copies of both the Fee Proposal and Technical Proposal to:

City of Portsmouth Purchasing Department 1 Junkins Ave Portsmouth, NH 03801

FEE PROPOSAL REQUIREMENTS

The Fee proposal MUST be submitted in a separate sealed envelope identified as "Fee Proposal." Refer to the final page in this RFP for the Fee Proposal Form.

Project fees must include all costs and expenses to complete the scope of work. Please note that the City will provide water for project work. The City will not provide electric power.

SUBMITTALS

The proposed contract will require the following submissions:

- 1) <u>Product Data:</u> Submit manufacturer's technical data for each product proposed in the treatment plan including recommendations for their application and use. Include test reports and certifications substantiating that products comply with requirements. Submit material safety data sheets for each product.
- 2) Written Description: Submit written schedule for each phase of conservation. Include items for coordination with the Owner and indication of how surrounding monuments and vital plantings will be protected. Describe materials and equipment to be used on site. Describe safety measures that will be taken to protect visitors while the work is underway and to protect the fence components from damage while they are out of the ground.
- 3) <u>Alternate Methods</u>: Written approval from the City is required prior to substituting any materials or methods.

FEE PROPOSAL FORM

The undersigned hereby submits a price proposal to perform the services outlined in the City of Portsmouth RFP 40-15. Each item will be priced separately (below), and the base price will be the aggregate of all items. Prices include all labor, materials, supervision, insurances, overhead and profit. Put this in a sealed envelope separate from the technical proposal.

| Contractor: | |
|---|--|
| Address: | |
| FEE PROPOSAL | |
| BASE BID | |
| Union Cemetery Enclosure Wall and Stonework | |
| In Figures \$ | |
| In Words \$ | |
| ADD ALTERNATE #1 Union Cemetery Granite Pillar Repair | |
| In Figures \$ | |
| In Words \$ | |
| ADD ALTERNATE #2 Restore slate sign above Entrance | |
| In Figures \$ | |
| In Words \$ | |
| Receipt of Addendum No Acknowledged by: | |
| Company Name: | |
| Address: | |
| Telephone #: | |
| Date: | |

CONTRACT AGREEMENT

| Union Cemetery Enclosure Wall | |
|--|--|
| THIS AGREEMENT made as of the day of in the year, by and between the City of Portsmouth, New Hampshire (hereinafter call the Owner) and (hereinafter called the Contractor), | |
| WITNESSETH; that the Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows: | |
| ARTICLE I- Work - The Contractor shall perform all work as specified or indicated in the Contract Documents for the completion of the Project. The Contractor shall provide, at his expense, all labor, materials, equipment and incidentals as may be necessary for the expeditious and proper execution of the Project. | |
| ARTICLE II - ENGINEER - The City Engineer shall mean the Facilities Project Manager, or his authorized representative will act as engineer in connection with completion of the Project in accordance with the Contract Documents. | |
| ARTICLE III - CONTRACT TIME – All work will be complete by | |
| ARTICLE IV - CONTRACT PRICE and PAYMENT- Upon final acceptance of the work and settlement of all claims, Owner shall pay the Contractor the Contract Price as shown in the Bid Proposal, subject to additions and deductions provided for in the Contract Documents. | |
| ARTICLE V - RETAINAGE — There will be no retainage on this contract. One full payment will be made upon satisfactory completion of the project. | |
| ARTICLE VI - LIQUIDATED DAMAGES - In event the Contractor fails to successfully complete the work within the specified contract time the Owner shall assess the Contractor liquidated damages in the amount of One Hundred Dollars (\$200.00) for each calendar day beyond the specified completion date. Liquidated damages shall be deducted from the Contract Price prior to final payment of the Contractor. | |
| ARTICLE VII – CONTRACT DOCUMENTS – The Contract Documents which comprise the contract between Owner and Contractor are attached hereto and made a part hereof and consist of the following: 8.1 This Agreement | |
| 8.2 Contractor's Bonds. | |
| 8.3 Insurance Requirements | |
| 8.4 Specifications | |
| 8.5 Any modifications, including change orders, duly delivered after execution of this Agreement. | |
| In the event of a conflict, the Technical Specifications will govern. | |

- ARTICLE VIII TERMINATION FOR DEFAULT Should contractor at any time refuse, neglect, or otherwise fail to supply a sufficient number or amount of properly skilled workers, materials, or equipment, or fail in any respect to prosecute the work with promptness and diligence, or fail to perform any of its obligations set forth in the Contract, Owner may terminate the employment of Contractor, giving notice to Contractor in writing of such election, and enter on the premises and take possession, for the purpose of completing the work included under this Agreement, of all the materials, tools and appliances belonging to Contractor, and to employ any other persons to finish the work and to provide the materials therefore at the expense of the Contractor.
- ARTICLE IX INDEMNIFICATION OF OWNER Contractor will indemnify Owner against all suits, claims, judgments, awards, loss, cost or expense (including without limitation attorneys' fees) arising in any way out of the Contractor's negligent performance of its obligations under this Contract. Contractor will defend all such actions with counsel satisfactory to Owner at its own expense, including attorneys' fees, and will satisfy any judgment rendered against Owner.
- ARTICLE X PERMITS The Contractor will secure at its own expense, all permits and consents required by law as necessary to perform the work and will give all notices and pay all fees and otherwise comply with all applicable City, State, and Federal laws, ordinances, rules and regulations.
- ARTICLE XI INSURANCE The Contractor shall secure and maintain, until acceptance of the work, insurance with limits not less than those specified in the Proposal.

ARTICLE XII - MISCELLANEOUS -

- A. Neither Owner nor Contractor shall, without the prior written consent of the other, assign, sublet or delegate, in whole or in part, any of its rights or obligations under any of the Contract Documents; and, specifically not assign any monies due, or to become due, without the prior written consent of Owner.
- B. Owner and Contractor each binds himself, his partners, successors, assigns and legal representatives, to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents.
- C. The Contract Documents constitute the entire Agreement between Owner and Contractor and may only be altered amended or repealed by a duly executed written instrument.
- D. The laws of the State of New Hampshire shall govern this Contract without reference to the conflict of law principles thereof.
- E. Venue for any dispute shall be the Rockingham County Superior Court unless the parties otherwise agree.

IN WITNESS WHEREOF, the parties hereunto executed this AGREEMENT the day and year first above written

| CONTRACTOR: | CITY OF PORTSMOUTH, NH |
|-------------|------------------------|
| BY: | By: |
| NAME: | John P. Bohenko, |
| TITLE: | City Manager |

INSURANCE REQUIREMENTS

Insurance shall be in such form as will protect the Contractor from all claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract whether such operation by himself or by anyone directly or indirectly employed by him.

Contractor shall require all subcontractors to be insured in commercially reasonable amounts.

AMOUNT OF INSURANCE

A) Comprehensive General Liability:

Bodily injury or Property Damage - \$2,000,000 Per occurrence and general aggregate

B) Automobile and Truck Liability:

Bodily Injury or Property Damage - \$2,000,000 Per occurrence and general aggregate Coverage requirements can be met with excess policies

Additionally, the Contractor shall purchase and maintain the following types of insurance:

- A) Full Workers Comprehensive Insurance coverage for all people employed by the Contractor to perform work on this project. This insurance shall at a minimum meet the requirements of the most current laws of the State of New Hampshire.
- B) Contractual Liability Insurance coverage in the amounts specified above under Comprehensive General Liability.
- C) Product and Completed Operations coverage to be included in the amounts specified above under Comprehensive General Liability.

Note: The City has available Builders Risk to cover its losses; contractor should evaluate coverage needs for its own losses.

ADDITIONAL INSURED

All liability policies (including any excess policies used to meet coverage requirements) shall include the City of Portsmouth, New Hampshire as named Additional Insureds.

- 1) The contractor's insurance shall be primary in the event of a loss.
- 2) City of Portsmouth shall be listed as a Certificate Holder. The City shall be identified as follows:

City of Portsmouth Attn: Legal Department 1 Junkins Avenue Portsmouth, NH 03801

| CHANGE ORDER | | |
|--|--|--|
| Change Order Number | Date of Issuance | |
| Owner: CITY OF PORTSMOUTH, N | N.H | |
| Contractor: | | |
| You are directed to make the following ch | anges in the Contract Documents: | |
| Description: | | |
| Purpose of Change Order: | | |
| Attachments: | | |
| CHANGE IN CONTRACT PRICE | CHANGE IN CONTRACT TIME | |
| Original Contract Price: | Original Completion Date: | |
| \$ | days | |
| Contract Price prior to this Change Order: | Contract Time prior to this Change Order: | |
| \$ | days | |
| Net Increase or Decrease of this Change C | Order: Net Increase or Decrease of this Change Order: | |
| \$ | | |
| | days | |
| Contract Price with all approved Change C | Orders: Contract Time with all approved Change Orders: | |
| \$ | days | |
| RECOMMENDED: APPROVED: | · | |
| | by by | |
| Business Administrator City Finance | City Manager Contractor | |

LABOR AND MATERIAL PAYMENT BOND

| (This format provided for convenience, actual Labor and Material Bond is accep | table in lieu, if compatible) |
|--|--|
| Bond Number | |
| KNOW ALL MEN BY THESE PRESENTS: | |
| that | |
| as Principal, hereinafter called Contractor, and corporation organized and existing under the laws of the State of and authorized to do Hampshire hereinafter called Surety, are held and firmly bound unto Obligee, hereinafter called Owner, for the use and benefit of claimant amount of the payment whereof Principal and Surety bind themselves, their heir successors and assigns, jointly and severally, firmly by these presents | b business in the State of New the City of Portsmouth, N.H. ts as herein below defined, in the Dollars (\$ |
| WHEREAS, Principal has by written agreement dated in a specifications prepared by the Public Works Department, 680 Peverly 03801, which contract is by reference made a part hereof, and is here | inafter referred to as the Contract. |
| NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is su make payment to all claimants as hereinafter defined, for all labor and required for use in the performance of the Contract and for the hire of things contracted for or used in connection therewith, then this obligate remain in full force and effect, subject however, to the following con- | d material used or reasonably f all equipment, tools, and all other tion shall be void, otherwise it shall |
| (1) A claimant is defined as one having a direct contract with the Prir Principal for labor, material, equipment, or other things used or reaso performance of the Contract. "Labor and material" shall include but n gas, power, light, heat, oil and gasoline, telephone service or rental of Contract. | nably required for use in the not be limited to that part of water, |
| (2) The above named Principal and Surety hereby jointly and severall claimant as herein defined, who has not been paid in full before the edays after the date on which the last of such claimant's work or labor were furnished by such a claimant, may sue on this bond for the use oby final judgment for such sum or sums as may be justly due claiman Owner shall not be liable for the payment of any such suit or any cost principal and surety shall jointly and severally indemnify, defend and such suit, costs or expenses. | xpiration of a period of ninety (90) was done or performed, or materials of such claimant, prosecute the suit at, and have execution thereon. The ts or expenses of any such suit, and hold the Owner harmless for any |
| (3) No suit or action shall be commenced hereunder by any claimant: | |

The Principal, the Owner and the Surety above named, within six (6) calendar months after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the

(a) Unless Claimant, other than one having a direct contract with the Principal, shall have given notice to all

the following:

materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of New Hampshire save that such service need not be made by a public officer.

- (b) After the expiration of one (1) year following the date on which Principal ceased all work on said contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
- (c) Other than in a State court of competent jurisdiction in and for the county or other political subdivision of the State in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
- (4) The amount of this bond may be reduced by and to the extent of any payment of payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed on record against said improvement, whether or not claim for the amount of such lien by presented under and against this bond.

| Signed and seale | ed this day o | of, | 20 In the presence of: |
|------------------|------------------|--------------------|------------------------|
| | BY: | | |
| (Witness) | | (Principal) (Seal) | |
| | (Surety Company) | | |
| | BY: | | |
| (Witness) | | (Title) (Seal) | |

Note:

If the Principal (Contractor) is a partnership, the Bond should be signed by each of the partners.

If the Principal (Contractor) is a corporation, the Bond should be signed in its correct corporate name by its duly authorized Officer or Officers.

If this bond is signed on behalf of the Surety by an attorney-in-fact, there should be attached to it a duly certified City of his Power of Attorney showing his authority to sign such Bonds.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Agreement.

CONTRACTOR'S AFFIDAVIT

| STATE OF: |
|---|
| COUNTY OF: |
| Before me, the undersigned, a |
| (Notary Public, Justice of the Peace) |
| in and for said County and State personally appeared, |
| (Individual, Partner, or duly authorized representative of Corporate) |
| who, being duly sworn, according to law deposes and says that the cost of labor, material, and equipment and |
| outstanding claims and indebtedness of whatever nature arising out of the performance of the Contract between |
| CITY OF PORTSMOUTH, NEW HAMPSHIRE |
| and |
| (Contractor) |
| of |
| Dated: |
| has been paid in full for installation of |
| (Individual, Partner, or duly authorized representative of Corporate Contractor) |
| Sworn to and subscribed |
| before me thisday of20 |

CONTRACTOR'S RELEASE

| KNOW ALL MEN BY THESE PRE | |
|---|--|
| | (Contractor) of, |
| County of | and State of |
| | does hereby acknowledge |
| that | (Contractor) |
| has on this day had, and received from t | the CITY OF PORTSMOUTH NEW HAMPSHIRE, final and completed |
| payment for Union Cemetery Enclosure | e Wall. |
| NOW THEREFORE, the said(Co: | |
| (Co. | ntractor) |
| successors and assigns, of and from all dated, and of and from all and actions, suits, debts, dues, duties, successors, contracts, agreements, prometer demand, whatsoever in law of equity, of successors and assigns, which (I, my he now have or which (I, my heirs, executed) | forever discharge the City of Portsmouth, New Hampshire, its claims and demands arising from or in connection with the said Contract rom all, and all manners of action and actions, cause and causes of action am and sums of money, accounts, reckonings, bonds, bills, specifications ises, variances, damages, judgments, extents, executions, claims and r otherwise, against the City of Portsmouth, New Hampshire, its cirs, executors, or administrators) (it, its successors and assigns) ever had, ors, or administrators) (it, its successors and assigns) hereafter can shall any matter, cause, or thing whatsoever; from the beginning of record times |
| IN WITNESS WHEREOF, | |
| | Contractor: |
| | By: |
| print name of witness: | |
| Dated: | |

MAINTENANCE BOND

At the Owner's election, a maintenance bond may be substituted for retainage at the completion of the project.

If the Owner permits a maintenance bond, it shall be in the amount of Twenty Percent (20%) of the contract price with a corporate surety approved by the Owner. Such bond shall be provided at the time of Contract completion and shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the Contractor.

This guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the City of Portsmouth.

SPECIFICATIONS

SECTION 01000 - GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 INTENT OF CONTRACT

- A. The intent of the Contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the terms of the Contract.
- B. The Contractor shall be required to conform to the intent of the plans and specifications. No extra claims shall be allowed for portions of the work not specifically addressed in the plans and specifications but required to produce a whole and complete project, such work will be considered subsidiary to the bid items.

1.2 INCIDENTAL WORK

- A. Unless specifically excepted in the Bid or Technical Specifications, incidental work items for which separate payment is not measured includes, but is not limited to, the following items:
 - 1. Clean up
 - 2. Signs
 - 3. Mobilization
 - 4. Restoration of property
 - 5. Cooperation with other contractors, abutters and utilities.
 - 6. Accessories and fasteners or components required to make items complete and functional.

1.3 ALTERATION OF PLANS OR OF CHARACTER OF WORK

- A. The Owner reserves the right, without notice to Surety, to make such alterations of the plans or of the character of the work as may be necessary or desirable to complete fully and acceptably the proposed construction; provided that such alterations do not increase or decrease the contract cost.
- B. Within these cost limits, the alterations authorized in writing by the Owner shall not impair or affect any provisions of the Contract or bond.
- C. Any such increases or decreases of the quantities as a result from these alterations or deletions of certain items, shall not be the basis of claim for loss or for anticipated profits by the Contractor.
- D. The Contractor shall perform the work as altered at the contract unit price or prices.

1.4 EXTRA WORK ITEMS

- A. Extra work shall be performed by the Contractor in accordance with the specifications and as directed.
- B. Extra work performed will be paid for at the contract bid prices or at the price negotiated between the Owner and the Contractor if the item was not bid upon. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 15% (10% overhead and 5% profit). Costs shall be substantiated by invoices and certified payroll.
- C. Extra work will be paid for at a price as provided in the Contract documents or if such pay items are not applicable than at a price negotiated between the contractor and the Owner or at the unit Bid price.
- D. If the Owner determines that extra work is to be performed, a change order will be issued.

1.5 CHANGE ORDERS

- A. The Owner reserves the right to issue a formal change order for any increase, decrease, deletion, or addition of work or any increase in contract time or price.
- B. The Contractor shall be required to sign the change order and it shall be considered as part of the Contract documents.

1.6 FINAL CLEAN UP

- A. Before acceptance of the work, the Contractor shall remove from the site all machinery, equipment, surplus materials, rubbish, temporary buildings, barricades and signs.
- B. All parts of the work shall be left in a neat and presentable condition.
- C. On all areas used or occupied by the Contractor, regardless of the contract limits, the Bidder shall clean-up all sites and storage grounds.

1.7 ERRORS AND INCONSISTENCY IN CONTRACT DOCUMENTS

- A. Any provisions in any of the Contract Documents that may be in conflict with the paragraphs in these General Requirements shall be subject to the following order of precedence for interpretation.
 - 1. Specifications will govern General Requirements.

PART 2 CONTROL OF WORK

2.1 AUTHORITY OF THE CITY ENGINEER

- A. All work shall be done under supervision of the City Engineer and to his satisfaction. The City Engineer will decide all questions which may arise as to:
 - 1. the quality and acceptability of materials furnished and work performed;
 - 2. the rate of progress of the work;
 - 3. the interpretation of the plans and specifications;

- 4. the acceptable fulfillment of the Contract by the Contractor.
- B. The City Engineer will have the authority to suspend the work wholly or in part for such periods as he may deem necessary
 - 1. due to the failure of the Contractor to correct conditions unsafe for workers or the general public;
 - 2. for failure to carry out provisions of the Contract;
 - 3. for failure to carry out orders;
 - 4. for conditions considered unsuitable for the prosecution of the work, including unfit weather; or for any other condition or reason deemed to be in the public interest.
- C. The Contractor shall not be entitled any additional payments arising out of any such suspensions.
- D. The Owner reserves the right to demand a certificate of compliance for a material or product used on the project. When the certificate of compliance is determined to be unacceptable to the City Engineer the Contractor may be required to provide engineering and testing services to guarantee that the material or product is suitable for use in the project, at its expense.

2.2 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPES

- A. The Contractor shall be responsible for all damage or injury to property of any character:
 - 1.during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work,
 - 2.or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.
 - 3. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or as a result of the failure to perform work by the Contractor, the Contractor shall restore, at its own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing rebuilding, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.
 - 4.If the Contractor fails to repair, rebuild or otherwise restore such property as may be deemed necessary, the Owner, after 48 hours' notice, may proceed to do so, and the cost thereof may be deducted from any money due or which may become due the Contractor under the contract.

2.3 MAINTENANCE DURING CONSTRUCTION

- A. The Contractor shall maintain the work during construction and until the project is accepted. ALL AREAS WILL BE CLEANED AT THE END OF EACH WORK DAY.
- B. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and workers to ensure that the structure is kept in satisfactory conditions at all times.

2.4 SAFETY PRECAUTIONS

A. Upon commencement of work, the Contractor shall be responsible for initiating, maintaining and supervising all safety precautions necessary to ensure the safety of employees on the site, other persons who may be affected thereby, including the public, and other property at the site or adjacent thereto.

2.5 PERMITS

A. It will be the responsibility of the Contractor to obtain all permits required for the completion of the Project.

2.6 BARRICADES AND WARNING SIGNS

- A. The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the building occupants and the public.
- B. Closed off areas shall be protected by effective barricades. Obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic in a proper manner, as approved by the engineer.
- C. The Contractor will be held responsible for all damage to the work due to lack of adequate controlling devices.

2.7 TEMPORARY FACILITIES

A. STORAGE FACILITIES

- 1. The Contractor shall not store materials or equipment in a public right-of-way beyond the needs of one working day. Equipment and materials shall be stored in an approved location.
- 2. The Contractor shall protect all stored materials from damage by weather or accident and shall insure adequate drainage at and about the storage location.
- 3. Prior to final acceptance of the work all temporary storage facilities and surplus stored materials shall be removed from the site.

B. WATER FACILITIES

1. The Owner shall provide the Contractor with reasonable access to water necessary for construction operations at the site.

2.8 TEMPORARY ELECTRICITY

A. The Owner shall provide the Contractor with reasonable access to electrical power necessary for construction operations at the site.

PART 3 - MEASUREMENT AND PAYMENT

3.1 MEASUREMENT OF QUANTITIES (As may be applicable to the Project)

- A. All work completed under the contract will be measured according to the United States standard measure.
- B. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice. Unless otherwise stated all quantities measured for payment shall be computed or adjusted for "in place" conditions.

3.2 SCOPE OF PAYMENT

- A. The Contractor shall receive and accept compensation provided for work in the contract as full payment for furnishing all materials and for performing all work under the contract in a complete and acceptable manner and for all risk, loss, damage or expense of whatever character arising out of the nature of the work or the prosecution thereof.
- B. The Contractor shall be liable to the Owner for failure to repair, correct, renew or replace, at his own expense, all damage due or attributable to defects or imperfections in the construction which defects or imperfections may be discovered before or at the time of the final inspection and acceptance of the work.
- C. No monies, payable under the contract or any part thereof, shall become due or payable if the Owner so elects, until the Contractor shall satisfy the Owner that the Contractor has fully settled or paid all labor performed or furnished for all equipment hired, including trucks, for all materials used, and for fuels, lubricants, power tools, hardware and supplies purchased by the Contractor and used in carrying out said contract and for labor and parts furnished upon the order of said Contractor for the repair of equipment used in carrying out said contract; and the Owner, if he so elects, may pay any and all such bills, in whole or in part.

3.3 PAYMENT PROCEDURES

A. Submit final Application for Payment after completion of Project closeout procedures with release of liens and supporting documentation. Include consent of surety to final payment and insurance certificates.

3.4 COMPENSATION FOR ALTERED QUANTITIES

- A. Except as provided for under the particular contract item, when the accepted quantities of work vary from the quantities in the bid schedule, the Contractor shall accept as payment in full, so far as contract items are concerned, at the original contract unit prices for the accepted quantities of work done. No allowance will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense on the part of the Bidder and subsequent loss of expected reimbursements therefore or from any other cause.
- B. Extra work performed will be paid for at the contract bid prices or at the price negotiated between the Owner and the Contractor if the item was not bid upon. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 15% (overhead and profit). Costs shall be substantiated by invoices and certified payroll.

PART 4 - FINAL ACCEPTANCE AND FINAL PAYMENT

4.1 CITY INSPECTION

- A. Upon due notice from the Contractor of presumptive completion of the entire project, the City Engineer will make an inspection. If all construction provided for and contemplated by the contract is found complete to his satisfaction, this inspection shall constitute the final inspection and the City Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of the final inspection.
- B. If the City Engineer's inspection discloses any work in whole or in part, as being unsatisfactory, the City Engineer will give the Contractor the necessary instructions for correction of such work, and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed. In such event, the City Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

4.2 GENERAL GUARANTY AND WARRANTY OF TITLE

- A. Neither the final certification of payment nor any provision in the contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express or implied warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of twelve (12) months from the date of final acceptance of the work. The Owner will give notice of defective materials and work with reasonable promptness.
- B. No material, supplies or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease purchase or other agreement by which an interest therein or in any part thereof is retained by the Seller or supplier. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have the right to a lien upon any improvements or appurtenances thereon.
- C. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontractors and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

4.3 NO WAIVER OF LEGAL RIGHTS

A. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor

shall the Owner be precluded or be stopped from recovering from the Contractor or his Surety, or both, such overpayment as it may sustain by failure on the part of the Contractor to fulfill his obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

B. The Contractor, without prejudice to the Contract, shall be liable to the Owner for latent defects, fraud or such gross mistakes as may amount to fraud, and as regards the Owner's right under any warranty or guaranty.

4.4 TERMINATION OF CONTRACTOR'S RESPONSIBILITY

A. Whenever the improvement provided for by the Contract shall have been completely performed on the part of the Contractor and all parts of the work have been released from further obligations except as set forth in his bond and as provided in Section 4.5 above.

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- A. Project: Union Cemetery Entrance Fence
- B. Owner: City of Portsmouth NH
- C. The Work consists of:
 - 1. Photographing, numbering and removing cast iron and stone fence components
 - 2. Furnishing and installing new granite curb below existing granite fence base.
 - 3. Cleaning and resetting existing components
 - 4. Restoring original slate sign at entrance gate

1.2 WORK RESTRICTIONS

- A. Contractor's Use of Premises: During construction, Contractor will have full use of area indicated by the City which will be determined in the field. Contractor's use of premises is limited only by Owner's right to perform work on portions of Project.
 - 1. Perform construction only during normal working hours (7 AM to 6 PM Monday thru Friday), unless otherwise agreed to in advance by Owner. Clean up work areas and return to a useable condition at the end of each work day.
- B. All work will be executed from the street side of the enclosure wall. Excavation on the cemetery side of the fence is not allowed.
- C. Access will be from the street side of the fence. Permit to obstruct sidewalk and occupy adjacent parking spaces is required.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 011000

SUMMARY 011000 - 1

SECTION 024500 - SELECTIVE STRUCTURE REMOVAL

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Notify **DIG SAFE** utility locator service for area where Project is located before excavation.
- B. Traffic: Minimize interference with adjoining streets, walks, and other adjacent facilities during site-clearing operations.
 - 1. Obtain sidewalk obstruction permit and parking space obstruction permit from the City.
- C. Do not begin site-clearing operations until temporary erosion and sedimentation control measures are in place.
- D. Salvable Improvements: Carefully remove items indicated to be salvaged.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 PREPARATION

- A. Photograph existing fence components, measure and number them for reassembly.
- B. Determine sequence of fence construction for removal in reverse sequence.
- C. Protect and maintain benchmarks and survey control points from disturbance.
- D. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
- E. Protect site from construction damage. Restore damaged improvements to condition existing before start of site clearing.
- F. Locate and clearly flag trees and vegetation to remain or to be relocated.
- G. Protect remaining trees and shrubs from damage and maintain vegetation. Employ a licensed arborist to repair tree and shrub damage. Restore damaged vegetation. Replace damaged trees that cannot be restored to full growth, as determined by arborist.
- H. Do not store materials or equipment or permit excavation within drip line of remaining trees.

3.2 FENCE DISMANTLING

- A. Carefully remove slate sign above entrance gate and remove off site for restoration.
- B. Protect granite pillars and footing stones from damage by moving with quilted blankets/ canvas tarps and lifting with canvas straps.
- C. Remove fence components to an off-site area for cleaning and conservation.
- D. Remove obstructions, paving, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
- E. Remove slabs, paving, curbs, gutters, and aggregate base as needed to reinstall granite pillars.

- 1. Neatly saw-cut length of existing sidewalk pavement to remain before removing existing pavement.
- F. In areas not to be further excavated, fill depressions resulting from site clearing. Compact satisfactory soil materials in 6-inch thick layers to density of surrounding original ground.
- G. Dispose of waste materials, including trash, debris, and excess topsoil, off Owner's property. Burning waste materials on-site is not permitted.
 - 1. Separate recyclable materials produced during site clearing from other non-recyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

END OF SECTION 024500

SECTION 044300 - STONE MASONRY

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Summary:
 - 1. Realign granite components of entrance fence,
 - 2. Restore slate sign over gate.
 - Rejoin 10 broken pillars with pins and adhesive
- B. Submittals:
 - 1. Product Data for concrete mix, rust stain removal solution.
 - 2. Means and methods for sign restoration, including a sample of slate to be used.
- C. Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- D. Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- 1.2 REFERENCE STANDARDS-The awarded vendor must use the following:
 - A. Aggregates for concrete: ASTM C33
 - B. Mortar Sand: ASTM C144
 - C. Bricks: ASTM C216
 - D. Mortar: ASTM C270
 - E. Stainless Steel Threaded Rod: ASTM A276

1.3 JOB CONDITIONS

- A. Prevent mortar and patching compounds, adhesives, resins etc. used in conservation work from staining the stones under treatment or any adjacent stones, masonry, bronze etc. Prevent damage from other materials or chemicals used on the project.
- B. Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- C. Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 GENERAL

A. Comply with referenced standards and other requirements indicated applicable to each type of material required.

STONE MASONRY 044300 - 1

- B. Reference in the specifications to materials by trade name is to establish a standard of quality. It is not intended to exclude other manufacturers whose materials are, in the judgment of the project conservator and based on sample panels, equivalent to those named.
- C. Materials shall be used only at the manufacturer's recommended temperature and humidity tolerances. In case of conflict between standards on the project, the more stringent shall apply.

2.2 MORTAR

A. Composite Repair Mortars:

- Polymer Modified Composite Repair Mortars for Mortar Caps and Seam Fills on Slate Markers: Edison Custom System 45 from Edison Chemical Systems, Inc. 25 Grant Street, Waterbury, CT 06704 (203) 597-8044
- 2. Hydraulic Lime Based Repair Mortar for Filling Seams and areas of Loss on Marble and Sandstone Markers: Lithomix from St Astier available from LimeWorks.us, 215-536-6706 Email LimeWorks.us
- 3. Conproco MIMIC, non-polymer single component repair mortar formulated to replicate existing surface. Manufactured by Conproco Inc., www.conproco.com.
- B. Mortar for setting pins and setting stones in slot bases: A soft mortar that is durable but can be reversed in the future containing either Type I/II White or Light Gray Portland Cement and Type S lime and aggregate, or Naturally Hydraulic Lime (NHL 3.5) and aggregate.
- C. Cementitious grout for setting stainless steel pins or setting upright markers in slot bases

2.3 ADHESIVES

- A. Stone Adhesive for Structural Repairs and Pinning
 - 1. Exterior grade flowable and paste epoxies that are moisture tolerant and specifically manufactured for the structural repair of stone and masonry. Akemi Akepox 2000, 2010, 2030, 5000, 5010 from Akemi North America (877) 462-5364 available from Stone Boss Industries, 26-04 Borough Place, Woodside, NY 11377 (718)278-2677 Fax (718) 267-1997 or approved equal.

2.4 STONE

- A. Granite: 5" granite curbing per ASTM C 615.
 - 1. Match existing granite fence components for stone characteristics relating to aesthetic effects.
 - 2. Granite shall be hard, durable, reasonably uniform in appearance, and free from weak seams. Solid quartz or feldspar veins will not be cause for rejection.
 - Exposed surfaces of each stone shall have a smooth finish.
- B. Slate: Match existing slate sign

2.5 ACCESSORIES

- A. Anchors: Match existing anchors
- B. Pins for structural repair of fragments: Stainless steel threaded rod grade 304 or better.

2.6 GRAVEL

A. Construction grade gravel ranging in size from 1/4" to 1" as required.

2.7 CLEANING AGENTS

- A. Water: All water shall be clean potable water. If potable water is not available at jobsite contractor must provide clean potable water.
- B. Non-Ionic Detergents: Triton X 100 available from Talas, 568 Broadway, New York, NY 10012 (212) 219-0770
- C. Concentrated Soap: Vulpex Soap available from Talas, 568 Broadway, New York, NY 10012 (212) 219-0770
- D. Prosoco Revive. www.prosoco.com or approved equal.

PART 3 - EXECUTION

3.1 SETTING STONE MASONRY, GENERAL

A. Execute stone masonry by skilled masons experienced with the kind and form of stone and installation method indicated. Arrange stones for good fit, in pattern indicated.

3.2 SLATE SIGN

- A. Replicate damaged entrance sign with new slate to match existing and install on top of entrance gate.
- B. Deliver existing sign to Owner.

3.3 GRANITE PANEL INSTALLATION

- A. This work consists of installing dry laid granite panels (curbing) below the existing granite rails, between granite footings.
- B. Determine sequence of deconstruction necessary to reduce potential damage to components.
- C. Excavation for curb shall be made to the required depth, and the base upon which the curb is to be set shall be compacted to a firm even surface.
- D. Installation of curbing shall be so that the front top arris line conforms to the line and grade required. All spaces under the curbing shall be filled with material conforming to the requirements for roadway base course. This material shall be thoroughly tamped.

STONE MASONRY 044300 - 3

- E. Concrete Class A in accordance with 520 may be substituted for aggregate base course and hot bituminous base courses in the curb patch on the roadway side of granite curb. Concrete thickness shall be not less than that of the adjacent pavement.
- F. Granite panels shall be set on a mortar bed of non-shrink, non-metallic grout. The front face shall be plumb and the top shall conform to the required line and grade.
- G. Backfilling shall be accomplished immediately after the curb is set and jointed. Backfill shall be of approved material, placed and thoroughly tamped.
- H. Execute stone masonry by skilled masons experienced with the kind and form of stone and installation method indicated. Arrange stones for good fit, in pattern indicated.
- I. Maintain uniform joint widths except for variations due to different stone sizes and minor variations required to maintain bond alignment. Lay panels with joints not more than 1/2 inch at widest points.

3.4 CLEANING

- A. Cleaning rust stains from granite shall be accomplished with a wire brush and mild detergent approved by the Owner. Sand blasting or shot blasting is not permitted.
- B. Wet wall surfaces with water before applying cleaner; remove cleaner promptly by rinsing thoroughly with clear water.
- C. Final Cleaning: After mortar is thoroughly cured, remove large mortar particles, scrub, and rinse stone masonry veneer.

END OF SECTION 044300

STONE MASONRY 044300 - 4

SECTION 055200 - WROUGHT IRON FENCING and RAILS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Summary:

- 1. Clean iron fencing and gate, prep for refinishing and reinstall.
- 2. Clean six (6) family enclosure iron rails, prep for refinishing and reinstall.
- B. Submittals: Product Data.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Anchors: Cast or formed of same type of material and finish as supported rails, unless otherwise indicated.

2.2 CLEANERS

A. Wrought iron cleaning agent: Diluted ferric acid by Osvo Corp.

PART 3 - EXECUTION

3.1 REMOVAL AND RESETTING

- A. Determine sequence of deconstruction necessary to reduce potential damage to components.
- B. Fit exposed connections accurately together to form tight, hairline joints.
- C. Set railings accurately in location, alignment, and elevation and free of rack.
- D. Coat concealed surfaces of railings that will be in contact with cementitious materials or dissimilar metals, with a heavy coat of bituminous paint.
- E. Anchor sections in granite utilizing existing methods.

3.2 CLEANING

- A. Clean iron railings with a wire brush; do not sand blast or shot blast.
- B. Wash with diluted ferric acid (Osvo Co. or approved equal) before applying primer.

END OF SECTION 055200

METAL RAILINGS 055200 - 1

SECTION 099100 - PAINTING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Summary: Paint wrought iron fencing and rail components.
- B. Submittals:
 - 1. Product data.
- C. MPI Standards:
 - 1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
 - 2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.
- D. Mockups: Full-coat finish Sample of each type of coating, color, and substrate, applied where directed.
- E. Extra Materials: Deliver to Owner 1 gal. of each color and type of finish coat paint used on Project, in containers, properly labeled and sealed.

PART 2 - PRODUCTS

2.1 PAINT

- A. Available Products:
 - 1. Sherwin Williams Industrial primer (red).
 - 2. Sherwin Williams Industrial gloss black paint
- B. Material Compatibility: Provide materials that are compatible with one another and with substrates.
 - 1. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Remove hardware, lighting fixtures, and similar items that are not to be painted. Mask items that cannot be removed. Reinstall items in each area after painting is complete.
- B. Clean and prepare surfaces in an area before beginning painting in that area. Schedule painting so cleaning operations will not damage newly painted surfaces.

PAINTING 099100 - 1

3.2 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
 - 1. Use brushes only for exterior painting and where the use of other applicators is not practical.
- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
 - 1. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

3.3 EXTERIOR PAINT APPLICATION SCHEDULE

- A. Wrought Iron and steel:
 - 1. High-Gloss, Quick-Dry Enamel: Two coats over rust-inhibitive primer: MPI EXT 5.1A.

END OF SECTION 099100

PAINTING

APPENDIX

Union Cemetery - Maplewood Avenue - Existing Conditions Assessment



Cemetery Enclosure Fence and Stonework:

There has been a noticeable subsidence of the sidewalk in front of the two cemeteries over the years. This change in elevation in the landscape around the Union Cemetery's front fence has caused some of the stonework to shift out of alignment especially at its western end. All of the pillars are no longer plumb and the westernmost pillar is now leaning noticeably.

Union Cemetery – Maplewood Avenue - Existing Conditions Assessment



Cemetery Enclosure Fence and Stonework: Exposed wall support masonry



Union Cemetery - Maplewood Avenue Existing Conditions Assessment



Cemetery Enclosure Fence and Stonework: Slots were cut into the sides of the pillars to support the iron fence panels. Shelves were also cut into the unfinished pillar bases to support the ends of the curb stones. The curb stones were also supported by a rubble stone footing and rough granite blocks. There are two flat landing stones in the front entrance opening that have a chamfered edge on the street side.

Union Cemetery - Maplewood Avenue Existing Conditions Assessment



Because of its size and its location on a city sidewalk, the poor condition of the stone components of this fence would make their realignment a high priority repair. The decorative wrought iron fence sections, gates and entrance arch appeared to have not been maintained for many years. The fence has rusted enough to stain the curb stones in places but overall this ironwork is intact enough to restore.

Union Cemetery Restoration Plan and Repair
The restoration of the Union Cemetery's front
enclosure fence and the partial removal of the
receiving tomb are also high priority projects. After
measuring, photo documenting and numbering the front
enclosure fence, the four iron fence panels, the two gates
and the iron strap arch, (and the slate keystone) should be
carefully removed to an offsite area where these pieces can
be cleaned and conserved. This process will also require
the removal of the existing lead anchoring material in the
stone pillars. It recommended that these fence components
not be sand or shot blasted. They should be wire brushed
and cleaned with a mild detergent. The wrought iron should
then paint with diluted ferric acid, (made by the Osvo Co.)



which will treat the surface rust. The prepared fence components should be finished with a coat of Sherwin Williams's Industrial primer, (red) and two coats of Sherwin Williams Industrial gloss black paint, (Peter Hapny-Blacksmith). Most of this removal and reconstruction work will be completed with a small crane, a flatbed truck and a small excavator. In addition to the machine operators, two stonemasons and one laborer will be needed for the project. To safely remove the fence components the masonry crew will also need to excavate around the stone pillars to free them up. This will make their eventual realignment possible. It will also allow for the removal of the fence panels and horizontal footing stones. Basically this enclosure wall/fence was originally constructed in sequence. Based on prior experience this project will be a challenging puzzle to solve. Because of the stonework's self-supporting design, an extensive new concrete footing will not be needed. After the granite curbstones are removed and cleaned, (rust staining), a compacted crushed stone footing will be installed except where the granite footing blocks are located. These stones will be re-installed on concrete footings. The two existing concrete footing blocks will be replaced with an in kind granite piece.

After the pillar bases have been excavated, the pillars will be wrapped in quilted blankets/canvas tarps and lifted with canvas straps using the small crane. They will be realigned and reset in place as a mix of crushed stone and stone dust is compacted around the pillar bases. This is a time consuming process and each pillar will require a different strategy.