



Department of City Development

City Plan Commission
Historic Preservation Commission
Neighborhood Improvement
Development Corporation
Redevelopment Authority

Rocky Marcoux
Commissioner

Martha L. Brown
Deputy Commissioner

October 13, 2011

Gentlemen:

**Subject: Official Notice No.57318
Request for Informal Bid
Foundation Repair Services
3402 West St. Paul
City Of Milwaukee
Housing Infrastructure Preservation Program
Milwaukee, WI**

You are invited to submit an informal bid on the enclosed form for the Foundation Repair Services at 3402 West St. Paul Street, Milwaukee, WI. The project shall be completed within 14 days of execution of the contract and receipt by the contract of the Notice to Proceed. The liquidated damages for this project are \$75.00 per day. The Residents Preference Program (RPP) Requirement for this Project is 40% of the total worker hours on this project.

All of the provisions of the Department of Public Works General Specifications ("General Specifications") dated January 31, 1992, and subsequent addenda, except as may be modified or expanded upon in this informal bid, shall apply to all contractors and subcontractors working on the project. For the completion of this project, references to "Commissioner of Public Works" within the above mentioned General Specifications, shall be interpreted to mean "Commissioner of Department of City Development." For a copy, please go to the following link and click on "General Specifications":

http://www.mpw.net/services/bids_home

Your bid must meet and adhere to the requirements of the Official Notice, the Invitation to Bid, General Specifications, Detail Specifications, the Scope of this particular project and Addenda's, if any, for this particular project. Bidder assures the City and acknowledges that the Official Notice, the Invitation to Bid and Bid, General Specifications, Detail Specifications, the Scope of this particular project, the Plans, Drawings and Photos, and Addenda's, if any, of this particular project have been read and has a full understanding of the provisions therein. The bid must be signed as set forth in the General Specifications and must comply with all the requirements therein set forth, or it will not be considered. If submitted by a corporation, the bid proposal must bear the corporate seal.

This bid is your offer to perform or supply the subject matter described herein according to the terms and conditions set forth in this Informal Bid, Official Notice No.57318, General Specifications, Detailed Specifications, the Scope of this particular project, the Plans, Drawings and Photos, Addenda's, if any, and the proposed contract, and if successful, you hereby agree to

enter into a contract with the City of Milwaukee with such sureties as required and set forth in the aforesaid documents for the performance of said contract (said contract form being on file in the office of the Commissioner of Department of City Development), and in accordance with the terms and conditions set forth in the contract documents, to-wit: written agreement, official notice, invitation to bid, bid, instructions to bidders, general specifications, detail specifications, the scope of this particular project, schedule of fixed prices, supplemental agreements and all addenda.

You must agree to comply with all applicable requirements of the Americans with Disabilities Act of 1990, 42 U.S.C. Section 12101, et seq.

A Waiver of Lien is required with the final invoice for payment request.

BID SURETY REQUIREMENTS

Bid Security required: Bid Security in an amount 10% if the amount of the bid is required and **MUST ACCOMPANY BID**. The required security must be in the form of a certified or bank cashier's check made payable to Department of City Development a bid bond issued by a Surety licensed to conduct business in the State of Wisconsin and named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Department. **The bid bond must be accompanied by a copy of the power of attorney for the agent or attorney-in-fact signing the bid bond.**

Bid security hereinafter specified must be submitted with your bid. If a bid bond is used, it must be sealed by the bonding company and be accompanied by an affidavit of no interest and a copy of a power of attorney. Bonding agents must be licensed to do business in the State of Wisconsin.

BONDING REQUIREMENTS:

For contracts of \$10,000 or more, but not over \$25,000, the contractor may be requested, in lieu of 100% bonds, to provide an irrevocable letter of credit or a performance bond and a payment bond in an amount equal to 50% of the contract price. The bonds required on any contract will be based on the estimated contract amount and will be specified in the bid specifications. All bonds must be executed by a surety company authorized to do business in the State of Wisconsin and must be accompanied by a Power-of-Attorney for the Attorney-in-Fact. The performance bond and the payment bond must be submitted as separate instruments. The performance bond shall also cover all work required under the guarantee provisions of the contract.

For all Public Works contracts over \$25,000, the contractor is to submit to the Commissioner, prior to or at the time of execution of the contract, a performance bond and a payment bond in an amount equal to 100% of the Contract price.

INSURANCE

Before commencing work the Contractor/Vendor shall furnish the Department of City

Development (DCD), for review and approval, evidence of the insurance requirements in the General Specifications.

The Contractor/vendor shall provide the DCD with Certificates of Insurance evidencing the above referenced coverage. The insurance carrier must be licensed to do business in the State of Wisconsin. The City shall be named as an additional insured with respect to liability coverage, except for the Professional Liability. The Department of City Development shall be given thirty (30) days notice in advance of cancellation, non renewal, or material change in any insurance coverage. Failure to provide the insurance required shall permit the DCD terminate a Contract.

In addition, a notarized Affidavit of No Interest form must be completed and signed by the insurance agent who issued the Certificate of Insurance and submitted with the Certificate of Insurance, deposing that no officer, official or employee of the Department of City Development has any interest, directly or indirectly, or is receiving any premium, commission, fee or other thing of value on account of the sale or furnishing of said insurance certificate.

The contractor shall not permit the coverage to lapse and shall furnish evidence of coverage to the DCD.

The certificate holder shall be noted as:

City of Milwaukee
809 N. Broadway, 2nd Floor
Attn: Purchasing/Contract Services
Milwaukee, WI 53202

LIABILITY

The Contractor shall be responsible for and shall save the City harmless from, and defend the City against all liability for damages occasioned by the digging up, use or occupancy of the street, alley, highway, public grounds, and private grounds, or which may result therefrom or which may result in any way from the negligence or carelessness of the Contractor, the Contractor's agents, employees, workers, by reason of the elements, unforeseen or unusual difficulties, obstructions, or obstacles encountered in the prosecution of the work, and they shall indemnify the City for and save it harmless from all claims and liabilities, actions, causes of action, and liens for materials furnished or labor performed in the construction or execution of the work and from all costs, charges, and expenses incurred in defending such suits or actions and from and against all claims and liabilities for injury or damage to persons or property emanating from defective or careless work methods, or from and against all claims or liabilities for royalties, license fees, actions, suits, charges, and expenses or damage from infringement for reason of the use of any invention or improvement in tools, equipment or plant or any process, device or combination of devices used in the construction of the work.

Each Prime Contractor must furnish to the City of Milwaukee, prior to the start of work, certificates of insurance which confirm that the Prime Contractor has the types and amounts of insurance referenced in Sections (a) through (d). The Prime Contractor shall require all of its subcontractors to carry the same types and amounts of coverage as required of the Prime or may instead provide the coverage for any or all subcontractors. The Prime Contractor is fully responsible for assuring subcontractor compliance with all the insurance requirements specified herein.

Bids for the labor, equipment and material hereinafter described will be received at the Department of City Development BID DESK, located on the second floor at **809 N. Broadway**, Milwaukee, Wisconsin 53202, no later than **October 27, 2011 at 11:00 A.M.**

Bids received after the date and the time above specified will not be opened and read and will be deemed rejected.

All bids will be opened and read in a conference room of the same building. The bid is to be enclosed in the bid envelope. The bid envelope, if mailed, shall be inserted in an envelope and sent to the address above. Please allow sufficient time if you submit your proposal by mail.

Please contact Scott Stange, Compliance Officer, at sstang@milwaukee.gov if you need more information.

Sincerely,

DEPARTMENT OF CITY DEVELOPMENT

A handwritten signature in black ink, appearing to read "Rocky Marcoux", written in a cursive style.

Rocky Marcoux
Commissioner

Enclosures

FOR: **Foundation Repair Services**
3402 West St. Paul Street
Housing Infrastructure Preservation Program
Milwaukee, WI

ALL BIDS MUST BE TYPED OR PRINTED

BASE BID:

Each Bidder shall submit a lump sum price to include the labor, equipment and materials necessary and required to perform the Foundation Repair services, in accordance with the bid documents and specifications herein

LUMP SUM

(Bid in figures) \$ _____ LUMP SUM

(Bid in words) \$ _____ LUMP SUM

In signing and submitting this bid, the bidder assures the City of Milwaukee that the Official Notice, Notice to Bidders, the Invitation to Bid and Bid, General Specifications, Detail Specifications, the Scope of this particular project, the Plans, Drawings and Photos and Addenda's, if any, of this particular project have been read and understood and that the furnishing of the subject work, material, labor and services is under bidder's control. If the bidder's performance is contingent upon the acts of another party, the bidder assures that they have the necessary commitments to complete the contract which may be awarded.

Submitted by _____
Name of Bidder (person, firm or corporation)

Telephone No. _____

Fax No. _____

Address _____

(City, State, Zip Code)



MUST BE SIGNED

Signed per _____
(Manual signature required)

Official Capacity _____

BID DATED _____ EBE Contractor Yes _____ No _____

***** IMPORTANT NOTICE *****

ALL BID PRICES MUST BE ENTERED IN WORDS AND IN NUMERALS. IN CASE OF VARIATION BETWEEN THE TWO, THE WORDS WILL PREVAIL.

IN ADDITION, IF THERE IS A DISCREPANCY BETWEEN THE TOTAL INDICATED IN THE PROPOSAL AND THE AMOUNT OBTAINED BY ADDING THE PRODUCTS OF THE QUANTITIES TIMES THE UNIT PRICES, THE LATTER SHALL GOVERN. ANY ERRORS FOUND IN THE TOTAL INDICATED SHALL BE CORRECTED AND THE CONTRACT AWARD SHALL BE MADE TO THE LOWEST RESPONSIBLE BIDDER BASED ON THE CORRECTED TOTAL.

IF DOUBT EXISTS AS TO WHAT IS BID, THE BID WILL BE REJECTED.

NON-COLLUSION AFFIDAVIT

State of _____)
County of _____) ss.

_____, being first duly sworn, deposes and says that:

(1) He is _____
(owner, partner, officer, representative, or agent)

of _____, the Bidder that has submitted the attached Bid;

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly with any other Bidder, firm, or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm, or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit, or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against the Commissioner of Department of City Development or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Check One) _____
Signature of

_____ Bidder if the bidder is an individual;

_____ Partner if the bidder is a partnership;

_____ Officer if the bidder is a corporation.

Subscribed and sworn to before me this

_____ day of _____, 20_____.

Notary Signature

My commission expires _____, 20_____.

City of Milwaukee

Department of City Development

Residents Preference Program Provisions

I. General

- A. In accordance/recognition with Chapter 309 of the Milwaukee Code of Ordinances, residents preference hiring is required for all construction contracting activities of the Department of City Development. The ordinance requires that 40% of WORKER HOURS worked on a DPW contract be performed by UNEMPLOYED or UNDEREMPLOYED RESIDENTS of the City, except in special cases where the Commissioner of Department of City Development determines there is sufficient reason to impose lesser levels of participation. Further, the Commissioner of Department of City Development may increase the percentage of RESIDENT worker participation to more than 40% on specific contracts. For this contract, bidders are required to show that a minimum 40 % of WORKER HOURS will be performed by UNEMPLOYED or UNDEREMPLOYED RESIDENTS of the City. Up to one-third of required worker hours may be achieved by documenting the use of UNEMPLOYED or UNDEREMPLOYED RESIDENTS on projects undertaken by the contractor where such compliance is not required, or by hiring UNEMPLOYED or UNDEREMPLOYED RESIDENTS on a full-time permanent basis for non-construction job categories connected to the project. Such adjustments must be proposed in an affidavit on a form provided by the department setting forth the facts upon which the request for adjustment is based.
- B. The contractor, prior to commencing work, shall submit an affidavit (Form I) for proof of residency for all employees utilized by the contractor and subcontractors to meet the Residents Preference Program requirements, stating that each employee is either UNEMPLOYED or UNDEREMPLOYED and is a RESIDENT of the City. The contractor shall prepare and submit accurate and timely resident utilization forms and reports to the Department of City Development. Time Reports shall be submitted within ten (10) days following completion of work, or every three months, whichever comes first. The reports shall identify the name, address, race, gender, work classification, wage rates and hours worked of all employees utilized on the contract by the contractor and all subcontractors. Failure to submit the required forms and reports to the Department of City Development may result in disqualification of future bids, delay of payments, or other appropriate sanctions. Final contract payments will not be made until the summary of hours worked on the back of the Prime Contractor's Affidavit of Compliance is completed and on file with the Department of City Development.
- C. During the performance of this contract the Department of City Development reserves the right to conduct compliance reviews. If the contractor is not in compliance with the specifications, the Commissioner of Department of City Development will notify the contractor in writing of the corrective action that will bring the contractor into compliance. If the contractor fails or refuses to take corrective action as directed, or if the contractor, prime or sub, submits any documents which contain any false, misleading, or fraudulent information, or if the contractor or subcontractor fail to comply with this ordinance, the Department of Department of City Development may take one or more of the actions listed below.
1. Withhold payments on the contract.
 2. Terminate or cancel the contract, in whole or in part.
 3. Consider possible debarment of the contractor from bidding for a period of up to two years.

4. Any other remedy available to the City at law or in equity.
- D. The penalty for any person, firm, or corporation knowingly engaging in fraud, misrepresentation, or in any attempt directly or indirectly, to evade the provisions of this ordinance by providing false, misleading, or fraudulent information shall, upon conviction, forfeit not less than \$1,000 or more than \$5,000 together with the costs of prosecution and, upon default of payment, shall be imprisoned in the county jail or house of correction not to exceed 90 days, or until the forfeiture costs are paid.

II. Definitions

- A. RESIDENT – A person who maintains his or her place of permanent abode in the City of Milwaukee. Domiciliary intent is required to establish that a person is maintaining his or her place of permanent abode in the City. Mere ownership of real property is not sufficient to establish domiciliary intent. Evidence of domiciliary intent includes, without limitations, the location where a person votes, pays personal income taxes, or obtains a driver's license.
- B. UNEMPLOYED or UNDEREMPLOYED – a RESIDENT that has worked less than 1,200 hours in the preceding 12 months or has not worked in the preceding 30 days or, regardless of employment status, has household income at or below the federal poverty guidelines as adjusted by the Wisconsin Department of Public Instruction to define eligibility for reduced lunch in public schools. A RESIDENT will continue to qualify as unemployed or underemployed for five (5) years from the date he or she first participates in a contract under Chapter 309. If a RESIDENT becomes an apprentice for a contractor or becomes a participant in an on-the-job training program as determined by the City immediately after or in the course of performing on a particular construction contract, he or she shall continue to qualify as unemployed or underemployed for a period not exceeding 5 years from the date the person became an apprentice or participant in such on-the-job training program.
- C. WORKER HOURS – means the total hours worked on a construction contract by skilled and unskilled construction trade workers, whether those workers are employed by the contractor or any subcontractor. In determining the total worker hours to be furnished at a construction site, the number of hours devoted to all tasks customarily performed on a construction site shall be included, whether or not such tasks are performed on the construction site. "Worker hours" includes work performed by persons filling apprenticeships and participating in on-the-job training programs and excludes the number of hours of work performed by all non-Wisconsin residents.

III. Residency Utilization Requirements

- A. The contractor shall utilize UNEMPLOYED or UNDEREMPLOYED RESIDENTS of the City in a minimum amount equal to the percentage of the WORKER HOURS stated in paragraph IA above.
- B. The contractor, by signing and submitting a bid, certifies that it understands the provisions of Chapter 309 and knows of and intends to comply with them, and shall ensure that all subcontractors are also informed.
- C. The contractor shall maintain, and shall ensure that all subcontractors maintain, personnel records listing the name, address, race and gender of all employees utilized for this contract and any records demonstrating that the employees utilized by the contractor in meeting the residency requirements are actual residents of the City. These records

shall be maintained for seven (7) years after the contractor has received final payment under the contract and shall be made available to the Commissioner of Department of City Development upon reasonable notice.

- D. Compliance with these residency requirements is an element of bid responsiveness. Failure to meet the specified residency requirements will render the bid unresponsive, and the Commissioner of the Department of City Development may then recommend the award to the next apparent low bidder.
- E. The City recognizes the following three organizations which can be contacted for access to trained or qualified workers from the City. Other organizations or sources of qualified RESIDENTS can be used at the bidder's discretion.
 - 1. Esperanza Unida (EU), located at 1329 West National Avenue, Milwaukee, WI 53204. Telephone number 414-671-0251 Ext. 125, fax number 414-383-7392.
 - 2. Milwaukee Urban League, located at 435 West North Avenue, Milwaukee, WI 53212. Telephone number 414-374-5850 Ext. 103, fax number 414-374-1995.
 - 3. Big Step, located at 3841 West Wisconsin Avenue, Milwaukee, WI 53208. Telephone 414-342-9787, fax number 414-342-3546.
- F. If the prime contractor has problems in meeting the residency requirements or if any other problems relative to residency participation arise during the completion of this project, the prime contractor shall immediately contact the Commissioner of the Department of City Development.
- G. Right to Appeal – All contracts awarded under ss. 7-14-2 and 7-22 of the City Charter shall be awarded by the Commissioner of the Department of City Development to the lowest responsible bidder determined in accordance with any applicable City ordinances relating to the participation of Emerging Business Enterprise Programs or requiring participation of City RESIDENTS. Following the opening of any bid where the Commissioner has considered compliance with such City ordinances, the Commissioner shall publish in an official City newspaper his or her determination as to the lowest responsible bidder. Any bidder who objects to the determination based on the consideration of such City Ordinances, may appeal the recommendation by filing a written appeal with the Commissioner within five (5) working days of the date of publication. The appeal shall state the specific objection to the determination, including supporting documentation, and specify an alternative determination. Any appeals that do not conform to this section shall not be considered. The Commissioner shall schedule a hearing before the Public Works Contract Appeals Committee which shall be comprised of the chair of the Economic Development Committee or his or her designee and a member of the Economic Development Committee selected by the chair and the Director of Administration or his or her designee to be held within five days of receipt of the appeal. The Public Works Contract Appeals Committee shall have the authority by majority vote to affirm or set aside the determination of the Commissioner and their decision in this regard shall be final. In the event that a timely appeal meeting the requirements of this paragraph is not filed, or the Committee affirms the Commissioner's determination following a timely appeal, the Commissioner shall make an award in accordance with his or her determination.

Contractor Name

Contract No.

Employee Affidavit
Residents Preference Program

I certify that I maintain my permanent residence in the City of Milwaukee and that I vote, pay personal income tax, obtain my driver's license, etc. at _____, Milwaukee, WI _____
(Address) (Zip Code)

Residency status:

To verify my resident status, attached please find the following (check one)

- _____ Copy of my voter's certification form.
- _____ Copy of my last year's Form 1040.
- _____ Copy of my current Wisconsin Driver's License or State ID.
- _____ Copy of Other (i.e., Utility bill, Lease, etc.)

AND

Unemployment status:

I certify that I have been unemployed as follows: (Check those that apply)

- _____ I have worked less than 1,200 hours in the preceding 12 months.
- _____ I have not worked in the preceding 30 days.

OR

Underemployed status:

_____ I certify that based on the attached chart (Income Eligibility Guidelines), I am underemployed.

Print Name

Sign Name

Social Security Number

Home Telephone Number

Subscribed and sworn to me this _____ day

Of _____, _____ A.D.

My Commission Expires _____.

Notary Public Milwaukee County

**Income Eligibility Guidelines
July 1, 2011 thru June 30, 2012**

Eligibility determination is based on household size and income. Total income must be at or below the amount in the table.

Household Size	Yearly	Monthly	Twice per Month	Every 2 Weeks	Weekly
1	20,147	1,679	840	755	388
2	27,214	2,268	1,134	1,047	524
3	34,281	2,857	1,429	1,319	660
4	41,348	3,446	1,723	1,591	796
5	48,415	4,035	2,018	1,863	932
6	55,482	4,624	2,312	2,134	1,067
7	62,549	5,213	2,607	2,406	1,203
8	69,616	5,802	2,901	2,678	1,339
9	76,683	6,391	3,196	2,950	1,475
10	83,750	6,980	3,491	3,222	1,611
11	90,817	7,569	3,786	3,494	1,747
12	97,884	8,158	4,081	3,766	1,883
For each Additional Household Member Add	7,067	589	295	272	136

Source: Wisconsin Department of Public Instruction School Nutrition Programs

NOTICE TO CONTRACTORS

PLEASE NOTE: Effective December 28, 2005, the City of Milwaukee adopted an ordinance relative to the disclosure of participation in or profits derived from slavery by contractors. All contractors awarded a contract on behalf of the City of Milwaukee, whether or not subject to a competitive bid, shall complete an affidavit prior to entering into the contract verifying that the contractor has searched any and all records of the company or any predecessor company regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era. The names of any enslaved persons or slaveholders described in those records must be disclosed in the affidavit.

The City shall make the information contained in the affidavit available to the public. Any contract between the City and a contractor which fails to provide the requisite affidavit or which includes material false information on such affidavit shall be rendered null and void. To reference Milwaukee Code of Ordinances 310-14, please see:

<http://cctv25.milwaukee.gov/code/volume3/ch310.pdf>

CITY OF MILWAUKEE - DEPARTMENT OF DEPARTMENT OF CITY DEVELOPMENT

AFFIDAVIT OF COMPLIANCE

DISCLOSURE OF PARTICIPATION IN OR PROFITS DERIVED
FROM SLAVERY BY CONTRACTORS

COMPANY NAME: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

This affidavit of compliance will be the contractor's sworn statement that publicly discloses any slavery policies sold by any companies, or profits from slavery by industries or their predecessors who are doing business with the City of Milwaukee as defined in the Milwaukee Code of Ordinances 310-14.

Please check one:

_____ This business **was not** in existence prior to 1865.

_____ This business **was** in existence prior to 1865. I have searched any and all records for records of investments or profits from slavery and have found no such records.

_____ This business **was** in existence prior to 1865. I have searched any and all records for records of investments or profits from slavery and am disclosing the findings on the attached pages.

I hereby declare that all statements are true, accurate and complete as of the date furnished to the City of Milwaukee.

AUTHORIZED SIGNATURE: _____

PRINTED NAME: _____

Subscribed to before me this _____ day of _____, 20____

NOTARY PUBLIC _____ County, _____ State _____

SIGNATURE: _____

PRINT NAME: _____

(Seal)

My commission expires: _____

Ref: slaverydisclosureaffidavit

Specifications

**Department of Department of City
Development
Official Notice #57318**

**Foundation Repair Services
3402 West St. Paul Street
Housing Infrastructure Preservation
Program
Milwaukee, WI**

Technical Specifications

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PART 1

I. INSTRUCTIONS TO BIDDERS

A. **BID FORM:** Submit a lump sum price for the work as indicated and specified herein, complete in every respect. Bids will not be accepted in any form except on the bid form included with this project manual. The contractor must recognize and abide by the right of the Owner (City of Milwaukee) to accept or reject any or all bids in the best interests of the City.

B. **BID EVALUATION:** Lump Sum for Labor and materials shall include: overhead, Labor Insurance (which shall include Federal and State Unemployment Workers Compensation, and FICA Social Security Insurance and contributions paid by Employer Contractor for each employee), Sales Tax, Bonds, Property Insurance, Comprehensive General Liability Insurance, Industry Programs, other expenses, and profit on “Wage Rate” and/or “cost”.

C. **EXCLUSIVITY OF WORK:** The City reserves the right based on availability and need to acquire services outside this contract to best meet the needs of the City.

D. **CONTRACT AWARD:** The Commissioner of DCD will award the contract on the basis of the Lump Sum amount. The contract shall be awarded to the lowest responsible bidder whose bid complies with the bid specifications. The Commissioner reserves the right to reject all bids if it appears that the lowest bid for the work to be let is unreasonably high. The Commissioner further reserves the right to reject the bid of any bidder who is, in the judgment of said Commissioner, incompetent or otherwise unreliable for the performance of the work bid or who shall previously have willfully or negligently failed to complete any work or contract entered into with the City or any officer or department thereof or who shall have willfully or negligently failed to enter into a contract with satisfactory Surety for any work that shall have been previously awarded by said Commissioner. The Commissioner further reserves the right to disregard and reject any and all bids.

E. SITE VISIT: All contractors shall visit the project specific site, consult project manual, be familiar with the work of other contractors and determine for himself all conditions affecting the work.

Failure by a contractor to be familiar with the specific project shall not release him from any obligation under this contract to complete the work in strict conformity with the plans and project manual and all City, State and Federal Codes or regulations pertaining to the work.

F. **CONSTRUCTION START AND COMPLETION DATES:** The time allowed for completion is stated in the Specific Official Notice and shall start with the date on the Notice to Proceed which will be sent to the contractor following the signing of the contract. The time allowed includes the time required for fabricating and procuring material and doing the work at the building site.

G. **BASE BID EXCLUSIONS:** N.A. All work is to be performed under this contract.

H. **ADDITIONAL PLANS/PROJECT MANUALS:** The successful contractor will be responsible for furnishing all additional copies of plans, project manuals, addenda, etc., as may be needed by the contractor and subcontractors. Contractor shall have complete sets of plans and project manuals on the job site at all times. The City will cooperate by making originals available to the contractor/s printer of choice.

I. EXAMINE DOCUMENTS:

1. Before submitting a bid proposal, bidders should carefully examine the contract manual; fully inform themselves as to all existing conditions and limitations, including those of labor; and shall include in the bid proposal a sum sufficient to cover the cost of all items contemplated by the contract documents.

2. Each sub-bidder further represents that he is familiar with the scope of the proposed work to ascertain any obstacles that might be encountered and other matters and conditions relevant to this work.
3. Additional charges will not be as considered for work which, prior to bidding, could reasonably be inferred as appropriate by examination of the contract documents, and closely reviewing the work as indicated above.

J. DEPARTMENT OF PUBLIC WORKS GENERAL SPECIFICATIONS:

1. Provisions of the Department of Public Works General Specifications (“General Specifications”) dated January 31, 1992, and subsequent addenda, contained herein, except as may be modified or expanded upon in this project manual, shall apply to all contractors and subcontractors working on the project.(For a copy, please go to the following link and click on “General Specifications”
http://www.mpw.net/services/bids_home)
2. For the completion of this project, references to “Commissioner of Public Works” within the above mentioned General Specifications, shall be interpreted to mean “Commissioner of Department of City Development.”

II. GENERAL REQUIREMENTS:

A. BID GUARANTEE AND CONTRACT PERFORMANCE BOND:

No bid will be received unless a certified check or bank draft payable to the Department of City Development, or a satisfactory bid bond in the amount not less than ten percent (10%) of the bid, shall accompany each bid as a guarantee that if the bid is accepted. The bidder will execute and file the Agreement and a Performance Bond and Payment Bond in appropriate percentage of the Bid amount, pursuant to the City of Milwaukee ordinances (as stated earlier in the bid documents) within ten days after Notice of Award. If a bid bond is used, it must be sealed by the bonding company and be accompanied by an affidavit of no interest and a copy of a power of attorney. Bonding Agents must be licensed in the State of Wisconsin. In case the bidder fails to file such contract and bonds within the time set forth, the bid security shall be forfeited to the Department of City Development of the City of Milwaukee as liquidated damages.

B. INSURANCE

1. Before commencing work the Contractor/Vendor shall furnish the Department of City Development (DCD), for review and approval, evidence of the insurance requirements in the General Specifications.
2. The Contractor/vendor shall provide DCD with Certificates of Insurance evidencing the above referenced coverage. The insurance carrier must be licensed to do business in the State of Wisconsin. The City shall be named as an additional insured with respect to liability coverage, except for the Professional Liability. The Department of City Development shall be given thirty (30) days notice in advance of cancellation, non renewal, or material change in any insurance coverage. Failure to provide the insurance required shall permit the DCD terminate a Contract.
3. In addition, a notarized Affidavit of No Interest form must be completed and signed by the insurance agent who issued the Certificate of Insurance and submitted with the Certificate of Insurance, deposing that no officer, official or employee of the Department of City Development has any interest, directly or indirectly, or is receiving any premium, commission, fee or other thing of value on account of the sale or furnishing of said insurance certificate.
4. The contractor shall not permit the coverage to lapse and shall furnish evidence of coverage to the DCD.
5. The certificate holder shall be noted as:

City of Milwaukee
809 N. Broadway, 2nd floor
Attn: Purchasing/Contract Services,
Milwaukee, WI 53202

C. Contractor shall comply with all applicable state, federal and local codes, and pay all permits, licenses and certificates, and other fees as required by the work including but not limited to the following:

1. Safety Regulations: All work shall be done in accordance with the safety requirements referenced in the International Building Code, as adopted and amended by the State of Wisconsin and OSHA. Also, Contractor shall provide all barricades necessary to protect neighbors during the construction activities.

2. Contractor shall comply with all rulings, regulations and laws of the following shall be complied with in the completion of this project, including:

International Building Code, as amended and adopted by the State of Wisconsin
Plumbing and Drainage Codes of the City of Milwaukee
Ordinances of the City of Milwaukee
National Board of Fire Underwriters
OSHA
NFPA
FAA
NEC
IEEE
UL

3. **All work contained in this Invitation to Bid shall be completed according the standards adopted by the Southeast Wisconsin Municipal Building Inspectors (SWMBI) and the Wisconsin Association Foundation Repair Professionals (WAFRP) dated January 8, 2008 or most recent revision**

4. The City of Milwaukee will provide the general building and occupancy permits.

5. Contractors shall obtain, from the City of Milwaukee Department of City Development and/or other government or private agencies, all special permits as may be necessary in their work.

6. Contractor shall obtain a **Home Improvement Contractor's License** to perform this work.

7. Contractors shall obtain all permits to occupy or work in the public way as may be necessary for their work.

8. Contractors shall notify the City and/or appropriate utilities when making utility connections as part of the project.

D. Contractor should prepare and submit to the Owner, for approval, a schedule fixing dates for the work to begin and end. Efforts shall be made to perform all work during normal working hours unless otherwise specifically approved. If circumstances dictate overtime or holiday work the decision to direct work during non-normal working hours shall be by the DCD staff as assigned by the Commissioner of DCD. Contractor is cautioned to make every effort to protect and maintain it in a weathertight manner while executing the Foundation Repair work. The contractor will be held liable for any damage caused to the building(s) and ancillary structures, and/or injury to the occupants resulting from the execution of the work or from not exercising proper precautionary protective measures. Any cost of repair/replacement resulting from damages shall be at the contractor's expense.

E. Contractor shall furnish all labor and all materials as specified herein and/or required to complete the work. All materials shall be new unless otherwise noted. All labor shall be performed by persons qualified with at least 5 years of experience in the Foundation Repair trade

F. INSPECTIONS:

1. DCD Staff, or designee, may provide daily inspection to verify compliance with contract documents, identify contractors and crews on the job, verify compliance with contract conditions (EBE, residency, wage requirements), and record job progress and conditions.

2. Contractors shall arrange with the Department of Neighborhood Services/Construction Trades Division and permit issuing agencies for all code compliance inspections as required by all permits including, but not limited to, the general building and all special permits issued by that agency.

3. Contractors shall arrange with the appropriate City agency for compliance inspections, as required, for all permits including, but not limited to, curb and pavement cuts and patches, and public way occupancy and utility connections

G. Liquidated Damages: \$75.00 per calendar day. Should the CONTRACTOR fail to complete the work by the completion date of the contract or within such extra time as may have been allowed for delay by extensions granted as provided in the Contract, the Contractor shall reimburse the Owner for the additional expense and damage for each calendar day, Sundays and legal holidays included, that the Contract remains uncompleted after the specified completion date. The said amount agreed upon is not a penalty but are liquidated damages for the loss to the Owner on account of expense due to the employment of engineers, designers, inspectors, and other employees after the expiration of the time of completion, and if applicable, expenses incurred as a result of the impact of the Contractor on other Contractors under this project or other contracts, and on account of the value of the operation of the works dependent thereon. The Owner shall have the right to deduct such damages from any amount due, or that may become due the Contractor, or the amount of such damages shall be due and collectible from the Contractor.

H. WORK BY OTHERS:

1. Project roles are defined as follows:

a. OWNER – The City of Milwaukee.

b. OWNER's REPRESENTATIVE– Representative from the City of Milwaukee Department of City Development, or designee.

c. CONTRACTOR – The successful bidder of this contract.

d. CONTRACTOR's REPRESENTATIVE – The CONTRACTOR's Project Manager.

e. SUBCONTRACTOR(s) – Any lower-tiered CONTRACTOR to the CONTRACTOR.

2. The CONTRACTOR shall not obstruct or cause delay in progress of work by others on the Property. CONTRACTOR shall coordinate with others performing work at the property regarding access, material staging areas, and work schedules.

3. The CONTRACTOR shall coordinate all Work, or specifically identified portions of the Work, with the OWNER's REPRESENTATIVE to allow for entry to inside of the building, obtain direction for locating equipment and materials, and obtain prior approval from OWNER's REPRESENTATIVE for changes to the initial schedule

4. CONTRACTOR'S REPRESENTATIVE shall be experienced and shall be directly in charge of the installation, all staff, and staff contractors associated with this work.

I. SUPERVISION OF WORK:

1. Contractors shall furnish the services of an experienced foreman or superintendent.
2. He shall be constantly in charge of the installation of the work together with all subcontractors, skilled workers, helpers, and labor required to unload, transfer, erect, connect up, adjust, start, operate and test each system.
3. He shall be thoroughly acquainted with and be responsible for the various subcontractors' work so that it is properly coordinated and supervised to the satisfaction of the Commissioner of DCD or his representative.

J. INVOICING:

1. Pay applications to be submitted on a monthly basis. Applications shall include a summary of work occurring for previous month by unit cost.
2. Payments will be held if contract administrative requirements are not met, i.e. wages, EBE and/or RPP participation, or paper work for requirements are not up to date.
3. Contractor shall maintain individual invoices for each maintenance occurrence during previous month on a unit basis. These records must be submitted with monthly pay requests for request to be process.

K. WORK NOT INCLUDED: The City reserves the right to contract for other foundation related services outside this contract. Nothing in these specifications shall be deemed to preclude this right the contractor shall not be entitled to compensation or -damages for such services rendered by others.

L. SCAFFOLDING: Scaffolding shall be provided and maintained by the contractors requiring same and shall be removed when no longer needed.

M. ELECTRICAL POWER: Contractor shall be responsible for providing their own power source

N. WATER: Contractor shall be responsible for providing their own water source

O. TOILET FACILITIES: Contractor shall be responsible for providing their own toilet facilities.

P. WEATHER PROTECTION: Contractor is also to furnish, install, and maintain a waterproof tarp that completely covers any area of work that may be exposed to prevent rain from entering the building. The tarp is to be securely fastened at the edges and secured against wind release.

Q. EQUIPMENT: The Contractor shall make sure that all employees and subcontractors assigned and approved to work under this contract have a complete set of tools of the trade. These tools shall be brought to the job on a daily basis. The Contractor employees and subcontractors shall provide all personal safety equipment required including hard hat, safety glasses, harnesses, goggles, gloves, etc.

PART 2

TECHNICAL SPECIFICATIONS:

DIVISION 1

GENERAL REQUIREMENTS

01010 SUMMARY OF WORK

PART 1 – GENERAL

1.1 CITY OF MILWAUKEE FUNDED RESIDENTIAL REHABILITATION AND REPAIR PROGRAMS

A. The Housing Infrastructure Preservation Fund ("HIPF")

- The purpose of the Housing Infrastructure Preservation Fund ("HIPF") established under s. 304-31.5 of the Code of Ordinances is to provide a permanent, dedicated funding source to finance City restoration, rehabilitation or mothballing of surplus, City-owned improved residential properties that are not habitable in their current condition and are unlikely to be restored by private purchasers, but are worthy of restoration, rehabilitation or preservation because of such factors as neighborhood context, architectural characteristics or quality, or historic status of the structures or their neighborhoods.
- All rehabilitation work funded by the CITY under the Housing Infrastructure Preservation program shall adhere to these **Specifications**.

B. PRESUMPTION OF LEAD: For the purposes of these **Specifications**, and unless the building was constructed in 1978 or later, or the building has undergone a Lead-Based Paint Risk Assessment by a properly licensed Lead-based Paint Inspector or Risk Assessor and is certified as being "Lead Free", the City of Milwaukee assumes that all painted surfaces contain lead-based paint. This presumption is made in lieu of a risk assessment. As a result of this presumption each rehabilitation project shall be conducted in a lead-safe manner as outlined herein.

C. All Sections in these **Specifications** are applicable to all the work listed in the **Scope**. All **Contractors** must abide by the requirements set forth herein. The Conditions of the Contract, the **Scope** of work, plans and drawings (if any), and these Specifications shall apply with equal force and effect to all **Contractors** engaged in this work.

1.2 DEFINITIONS

A. The following terms are used throughout these specifications:

- **Addendum** - An **Addendum** is used to add additional work (labor and/or materials) to the **Scope**.
- **Change Order** - A **Change Order** is used to exchange or modify materials and/or work listed on the **Scope** for other materials or work.
- **Contractor** – **Contractor** is the business entity under contract with the City Of Milwaukee and charged with the responsibility to complete all or part of the work outlined in the **Scope**. The **Contractor** may be a privately owned for-profit construction business.
- **DCD** – Department of City Development
- **Inspector** – When referring to the Housing Infrastructure Preservation Fund ("HIPF") program the term **Inspector** shall mean any City employee with identification or a City of Milwaukee and/or DCD owner's representative
- **Owner** – The **Owner** of the properties is the City of Milwaukee
- **Owner's Representative** – Representative from the Department of City Development, or designated by DCD
- **Scope** – The **Scope** is a complete list of work to be performed on the subject property. The **Scope** is typically developed and approved prior to proceeding with the project. The **Scope** along with the **Specifications** and construction plans (if necessary) constitute a complete set of construction documents.
- **Specifications** – The **Specifications** entitled "Technical Specifications and Performance Standards" are the City of Milwaukee's rehabilitation construction standards as currently published in January 2006 and as amended from time to time. A copy of these **Specifications** can be obtained from the City of Milwaukee Community Development Grants Administration (CDGA) website (www.city.milwaukee.gov).
- **Sub-contractor** – **Sub-contractor** is a business entity under contract with the **Contractor** to perform work listed on the **Scope**.

1.3 DEPARTMENT OF CITY DEVELOPMENT – SCOPE OF WORK for the HIPF fund

A. The Department of City Development will provide written scopes of work. Each property has a **Scope** of work that includes the following:

- Property address.
- **Inspector's** name and phone number.
- A detailed list of work items.
- **Inspector's** signature.

B. Each HIPF job will have a **Scope** that may include a list of general repairs to the property and can include carpentry, painting, roofing, lead abatement or lead hazard reduction, masonry or concrete work. The **Scope** may also include necessary repairs to the building's structure, i.e. bearing walls, support beams or columns, roof and floor structures, foundation repairs that require major masonry or concrete work, and extensive concrete flat work.

- A separate electrical, plumbing, and/or heating **Scope** is written if repairs are necessary to these systems.
- Inspection and oversight – Inspection and oversight of in-progress and completed work is done by the **Inspector**. Inspection, oversight and clearance of work involving the disturbance of painted surfaces and/or lead abatement is provided by the Milwaukee Health Department Childhood Lead Poisoning Prevention Program (MHD-CLPPP).

C. Unless noted otherwise, the subject of all imperative sentences in these specifications and the DCD **Scope** is the **Contractor**.

- R/R shall mean **Remove** old and **Replace** with new.
- F/I shall mean **Furnish** new and **Install** per specifications.
- A/A shall mean **Assorted Areas**.
- U/T shall mean **Up To**.
- SF shall mean **Square Foot**.
- Cu. Ft. shall mean **Cubic Foot**.
- SQ.YD. shall mean **Square Yard**.
- EA shall mean **Each**.
- LF shall Mean **Lineal Foot**.
- HT shall mean **Height**.
- T & G shall mean **Tongue and Groove**.
- Pb-N shall mean **Lead Notification Required**. **Contractor** shall notify the Milwaukee Health Department (MHD) Lead Section prior to starting work on this item. **Contractor** shall use lead safe work methods per [Section 01810 Lead Dust Hazards](#).
- Pb-A shall mean **Lead Abatement**. **Contractor** shall obtain a lead abatement permit from Milwaukee Health Department (MHD) Lead Section two (2) days prior to starting work on this item. **Contractor** shall use lead safe work methods per [Section 01810 Lead Dust Hazards](#).

D. THE CONTRACTOR IS RESPONSIBLE FOR, AND SHALL VERIFY ALL FIELD DIMENSIONS, SIZES, QUANTITIES, SQUARE FOOTAGES, LINEAL FOOTAGES, ETC. BEFORE ORDERING MATERIALS, PRODUCTS OR SUPPLIES. ANY QUANTITIES, SQUARE FOOTAGES, LINEAR FOOTAGES, ETC. LISTED ON THE SCOPE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE DEPARTMENT OF CITY DEVELOPMENT NEITHER MAKES NOR IMPLIES ANY GUARANTEE FOR THE ACCURACY OF THESE NUMBERS.

- **Contractor** and **Subcontractor** shall obtain complete data at the site and inspect surfaces that are to receive his work before proceeding with fabricating, assembling, fitting or erecting his work. **Contractor** shall be solely responsible for the accuracy of measurements and laying out his work and shall make good any errors, defects due to faulty measurements taken, information obtained, layout, or failure to report discrepancies.
- Starting of work by the **Contractor** or **Subcontractor** implies his acceptance of the work of others. Removal and replacement of work applied to defective surfaces, in order to correct defects, shall be done at the expense of the **Contractor** who applied work to defective surfaces.

E. Change orders – Addendums:

- All Changes orders and/or addendum work shall be approved by **DCD** in writing. **Contractor** may not authorize any changes or addendums to the **Scope**.
- **Contractor** shall not enter into separate side agreements with anyone else to do additional work outside of the **Scope**, or in exchange for work on the **Scope**.

F. The **Scope** is final. **In no case** shall the **Contractor** agree to, or initiate work on anything that is not listed in the **Scope** without the written approval of the **Inspector**. In emergency situations, or when time is of the essence, the **Inspector** may give verbal approval to deviate from the **Scope**. All verbal approvals will be put in writing by the **Inspector** when time allows.

1.4 PROJECT REQUIREMENTS

A. Notice to proceed:

- **Contractor** shall not begin work on a project without a written notice to proceed from DCD.
- **Contractor** shall notify DCD/Inspector of intent to start work a minimum of 24 hours before starting work or as outlined in [Section 01810 Lead Dust Hazards](#).
- **Contractor** shall notify the Milwaukee Health Department (MHD) prior to beginning work on any painted or otherwise coated surfaces as outlined in [Section 01810 Lead Dust Hazards](#).

B. Pre-construction conference:

- **Contractor** shall schedule a pre-construction meeting at the job site with the DCD and if necessary the **Inspector**.

- The pre-construction conference is the **Contractor's** opportunity to ask questions about the **Scope**, **Specifications**, permits required, inspections, etc.

C. Facilities:

- **Contractor** shall have access to the site during normal business hours, 7:00 AM–5:00 PM Monday through Friday. **Contractor** shall not work on weekends or holidays without the approval of **DCD**, the **Inspector** and Milwaukee Health Department Lead Section.
- **Contractor** shall be responsible for providing their own **power source, water source, toilet facilities, and telephone**.

D. Rebuilding/replacing of porches, decks, exterior stairs, and jump porches unless otherwise stated in the **Scope**, shall be constructed to the same size (footprint) as the original.

1.5 CONTRACTING REQUIREMENTS

A. General **Contractors** and **Sub-contractors** shall possess all required licenses prior to accepting and/or entering into any contracts to perform work on City of Milwaukee funded rehabilitation projects.

- General **Contractors** and **Sub-contractors** shall have a current City of Milwaukee Home Improvement Contractors License.
- General **Contractors** and **Sub-contractors** shall have a current State of Wisconsin Dwelling Contractor Financial Responsibility Certification.
- General **Contractors** and **Sub-contractors** performing lead abatement work or work that will disturb painted or otherwise coated surfaces in excess of two (2) square feet shall hold a valid State of Wisconsin Lead (Pb) Company Certification.

B. Trade **Contractors**, i.e. electrical, HVAC, plumbing, etc. shall have the following licenses and/or certifications:

- Electrical contractors shall have a valid State of Wisconsin Master Electrician's license in addition to a City of Milwaukee Electrical Contractor's License. Electrical contractors possessing only a valid City of Milwaukee Master Electrician's license shall be considered in compliance with this requirement.
- Heating, ventilating, and air conditioning (HVAC) contractors shall hold a valid State of Wisconsin HVAC Contractor license.
- Plumbing contractors shall have a valid State of Wisconsin Master Plumber License.

C. **Contractor** shall provide all required proof of insurance prior to accepting or entering into any contracts to perform work on City of Milwaukee funded rehabilitation projects.

- The **Contractor** shall provide additional proof of insurance and/or proof of insurance renewal when any changes to **Contractor's** insurance coverage occur while the **Contractor** is under contract with the City Milwaukee

D. **Contractor** shall provide **DCD** with a completed and signed IRS W-9 form at time of contract execution.

E. At the time payments are made to the **Contractor**, the **Contractor** shall provide **DCD** with a signed lien waiver or (when contracted work is not fully completed) signed partial lien waiver.

1.6 TIMELINESS

A. Work shall be completed within the time frames specified in the contract.

- When performing work involving disturbance of painted or otherwise coated surfaces, **Contractor** shall safely expedite the work in strict accordance with [Section 01810 Lead Dust Hazards](#) so as to limit the risk of exposure to lead-based paint hazards.

B. Sequence of operations shall be as determined by the **Contractor**, subject to the approval of the **Inspector**.

- **Contractor** shall perform his work in proper sequence in relation to that of other **Contractors** or trades. Any cost caused by defective or ill-timed work shall be borne by the **Contractor** responsible.

1.7 PERMITS

A. Obtain all applicable permits prior to starting the work covered under the permit.

B. Provide a copy of each permit to the **Inspector**.

C. The work shall comply with State of Wisconsin Uniform Dwelling Code, HVAC, Electrical, and Plumbing Codes and the City of Milwaukee Code of Ordinances, Volumes 1 and 2.

1.8 QUALITY STANDARDS

A. Provide experienced, well-trained workers competent to complete the work as specified.

B. Provide a certified lead abatement supervisor and certified lead abatement workers for any work involving suspected or known lead-based painted or otherwise coated surfaces, including but not limited to the following: installation of containment measures, demolition, removal, encapsulation, enclosure, debris removal or clean-up per the **Scope**, [Section 01810 Lead Dust Hazards](#) and as specified herein.

C. All work shall comply with the governing lead-based paint regulations and OSHA Worker Safety Regulations.

PART 2 – PRODUCTS AND MATERIALS

2.1 PRODUCT INFORMATION:

- A. All products and materials shall be new in unopened containers and/or packaging.
- B. Supply **DCD/Inspector** with all product owner manuals, operating instructions, maintenance instructions, and product warranties.
- C. Supply **DCD/Inspector**, product specifications to prove compliance with these specifications.
- D. All materials and products installed by the **Contractor** shall be approved for its intended use by a recognized testing laboratory.

PART 3 – INSTALLATION

3.1 INSPECTIONS

- A. Progress inspections and final inspections of work
 - Progress inspections and final inspections are done by the **Inspector**
 - Progress inspections and final inspections of mechanical work under permit are done by the Department of Neighborhood Services district trade inspectors, i.e. construction, HVAC, electrical, plumbing.
- B. Milwaukee Health Department inspections:
 - Daily progress inspections and final clearance testing are performed by Milwaukee Health Department Lead Risk Assessors in accordance with [Section 01810 Lead Dust Hazards](#).
- C. Completions :
 - A completed project includes a sign off of the **Scope** by the **Inspector**, a final passing lead clearance test by the Milwaukee Health Department (MHD) Lead Section and all required permits including mechanical permits (if any) signed off by the appropriate district trade inspector.
 - The final completion date of a HIPF project is determined by the **Inspector** and is based on the sign off requirements listed above.

3.2 PERFORMANCE STANDARDS

- A. Performance standards shall be as specified by the product manufacturers and as stated herein:
 - **Contractor** shall warrant his/her labor and materials for a period of one year after date of completion. The date of completion is the date in which the **Inspector** signs off on the **Scope** of work. When work scopes require a permit, the **Contractor** shall be responsible for obtaining all permit sign-offs from the appropriate DNS district trade inspector.
 - **Contractor's** quality of materials and workmanship shall meet a 5 year performance standard as outlined in the Milwaukee Metropolitan Builders Association of Greater Milwaukee, Inc. "Construction Industry Quality Standards".
 - Complaints of non-compliance with the Performance Standards within the one year warranty period and verified by the **Inspector** shall call for corrective action by the **Contractor** at the **Contractor's** expense. This one (1) year guarantee shall be transferrable to any new owner of the property in the event the property is sold within one-year's time of the completion.

PART 4 – PROJECT DESCRIPTION

4.1 PERFORMANCE STANDARDS

A. All work contained in this Invitation to Bid shall be completed according the standards adopted by the Southeast Wisconsin Municipal Building Inspectors (SWMBI) and the Wisconsin Association Foundation Repair Professionals (WAFRP) dated January 8, 2008 or most recent revision.

4.2 INSPECTION REPORT AND REQUIRED REPAIRS

A. Summary of Project:

The front porch is 19'-4" long by 5'-4" wide and is made of stone block and cream city brick masonry. The porch is covered with a gable roof that is made out of roof that also has a wood lath board soffit. The gable roof spans the long direction to the short walls, and the height from grade to the underside of the roof at bearing is 11'-6". The

height from the center of the porch slab to the roof peak is 18'-8". The porch has a wood floor made of deck boards and joists that span the short direction. It is very likely that the foundations of the porch are shallow in comparison to the rest of the house, because it is evident that the porch has settled significantly and is pulling away from the house.

B. Observations:

At the southern face, the front entry porch has settled in excess of 4" from the rear of the porch. After excavating a small hole, the depth of the footing was verified at 2'-8" below grade. This is less than the 4'0" required by current building code. However, frost levels are listed as having a 2'-6" depth in the Milwaukee Area. Therefore, the depth of existing footing is likely adequate to resist the freezing effects of frost.

The neighbors of this property mentioned that the previous owner had tried to lift the porch by using a "cherry picker" type lift approximately 6 years ago. Evidence was seen of this with various steel beams sticking through the stone wall foundation, which were likely the lift points. It is our opinion that more harm was done than good, and many stones were removed to insert the beams, and it is obvious that the technique used did not work.

C. Conclusions/Scope of Work (see also attached Plans/Drawings/Photos):

The foundation of the porch settled because the depth of the porch was much less than that of the rest of the house. The footings appear to be segmented stone that cannot be used for directly lifting against. The cobble stones that make up the foundation wall are loose and the mortar that once kept them together is failing. Therefore a system was devised to keep the existing foundation in place and surround the stone wall and slab with poured concrete. The existing wall will act like formwork to pour the concrete against, and by passing dowels through the wall as specified, the concrete foundation walls will tie everything together. After the new concrete walls have been poured and cured to 3000 psi compressive strength, the foundation can be jacked up to its original position prior to settlement. The technique recommended is to use a micro pile system, called resistance piers. After the foundation has stabilized, work can continue on restoring the brick and stone above grade and rebuilding the porch inside the walls.

END OF SECTION – 01010 SUMMARY OF WORK

01153 CHANGE ORDER AND ADDENDUM PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

- A. Changes from the **Scope** may, from time to time, be required. Any changes from the **Scope** must be authorized by the **Inspector** in writing.
- A **Change Order** is used to exchange or modify materials and/or work listed on the **Scope** for other materials or work.
 - An **Addendum** is used to add additional work (labor and/or materials) to the **Scope**.
- B. **Change orders** and **Addendums** will include equivalent changes in the project cost and allow for extensions to the projected time of completion.
- The **Contractor** shall submit to the **Inspector** a breakdown of the cost for each **Change Order** or **Addendum**.
 - The **Contractor** shall submit to the **Inspector** a revised date of completion taking into account the **Change Order** or **Addendum**.
- C. **Change Orders** and **Addendums** shall be numbered in sequence, dated and signed.
- D. Emergency authorization for **Change Orders** and **Addendums**:
- May be verbally authorized by the **Inspector** to address immediate health or safety concerns.
 - May be verbally authorized by the **Inspector** to expedite repairs of unforeseen conditions during the course of construction.
 - Verbal authorization of emergency **Change Orders** and **Addendums** shall be followed up in writing as soon as possible, usually by the next business day.
- E. A request for estimates for possible changes is not a **Change Order** or **Addendum**. These requests are not an authorization to proceed with the proposed changes or addendums. Except for an emergency authorization, a signed **Change Order** or **Addendum** must be executed prior to any deviation from the **Scope**.

END OF SECTION – 01153 CHANGE ORDER AND ADDENDUM PROCEDURE

01800 CLEANING AND MAINTENANCE

GENERAL

1.1 SUMMARY

- A. Keep the buildings and site well organized and clean throughout the construction period.
- B. When work under this section involves cleaning and disposal of construction debris presumed, or known to contain lead-based paint, the work shall be in accordance with [Section 01810 Lead Dust Hazards](#).
- C. When work under this section involves cleaning and disposal of construction debris containing asbestos or asbestos containing material, the work shall be in accordance with [Section 02080 Asbestos Removal](#).
- D. Provide all related materials, equipment, and labor required to maintain the job site in a neat and orderly condition in accordance with the **Scope** and as specified herein.
- E. Provide general clean up daily and removal of all scrap and debris from the site. Exception: Reusable scrap shall be stored in a neatly maintained, designated storage area.
- F. Daily pick up shall include a thorough broom-clean sweep or HEPA vacuum per [Section 01810 Lead Dust Hazards](#) of all paved areas on site and public paved areas adjacent to the site. Completely remove swept dirt and debris.
- G. Daily cleaning shall not replace the required clean up after the work of specific trades as specified herein.
- H. At completion of work, remove from the job site all tools, equipment, surplus materials, scrap and debris.
- I. Inspect both interior and exterior surfaces and remove all waste materials, paint droppings, or other debris remaining from the work performed under the **Scope** and as specified herein.
- J. Glass: Clean inside and outside so there are no spots or dirt, and no smudges or streaks remaining, from the cleaning process.
- K. Schedule final cleaning and clearance testing as outlined in [Section 01810 Lead Dust Hazards](#).

END OF SECTION – 01800 CLEANING AND MAINTENANCE

01810 LEAD DUST HAZARDS

PART 1 – GENERAL

1.1 WORK

- A. **PRESUMPTION OF LEAD:** For the purposes of these **Specifications**, and unless the building was constructed in 1978 or later, or the building has undergone a Lead-Based Paint Risk Assessment by a properly licensed Lead-based Paint Inspector or Risk Assessor and is certified as being “Lead Free”, the City of Milwaukee assumes that all painted surfaces contain lead-based paint. This presumption is made in lieu of a risk assessment. As a result of this presumption each rehabilitation project shall be conducted in a lead-safe manner as outlined herein.
- B. Work under this section **does not** apply to painted or coated surfaces when the lead content of that surface coating is determined to be below 0.7 mg/cm² as measured by an x-ray fluorescence (XRF) analyzer, or less than .06% lead by weight as determined by a certified laboratory paint chip analysis.
- C. Work under this section is limited to painted or coated surfaces that are presumed or known to contain lead based paint per the City of Milwaukee Presumption of Lead notice.
- D. Provide all related materials, equipment, and labor required to complete the work in a lead safe manner in accordance with the **Scope** and as specified herein.
- E. After the work under this section is complete, provide all materials, equipment and labor necessary to clean and prepare the property for lead (Pb) clearance testing. It is the **Contractor's** responsibility to achieve lead clearance per the Department of Housing and Urban Development Lead-Based Paint Regulation [24 CFR Part 35] standards.
- F. **Contractor** shall be responsible for compliance with Department of Housing and Urban Development Lead-Based Paint Regulation [24 CFR Part 35], State of Wisconsin, Department of Health and Family Services Lead-Based Paint Regulations [Chapter HFS 163], and the City of Milwaukee Code of Ordinances, Lead based Paint Hazard Control Regulations, [Chapter 66-47].
- G. **Contractor** shall obtain a Lead Abatement Permit from the Milwaukee Health Department at least two (2) business days prior to starting any **lead abatement** work.

1.2 QUALITY STANDARDS

- A. Provide experienced, well-trained workers competent to complete the work as specified.
- B. Provide a certified lead abatement supervisor and certified lead abatement workers for any containment installation, demolition, removal, encapsulation, enclosure, debris removal or clean-up of suspected lead containing materials per the **Scope** and as specified herein.
- C. All work shall comply with the governing lead-based paint regulations and OSHA Worker Safety Regulations.
- D. Lead abatement and lead reduction work is time sensitive. **Contractor** shall complete the abatement work in quickly and safely as possible to minimize potential exposure to lead.

1.3 SUBMITTALS

- A. **Contractor** shall notify the Milwaukee Health Department (MHD) – Lead Section (414-286-5033) **at least 24 hours prior to starting any work that involves disturbance of painted or otherwise coated surfaces**. MHD will assign a Lead Risk Assessor to monitor the work to document lead safe rehabilitation procedures were followed.
- B. **Contractor** shall obtain a Lead Abatement Permit from the Milwaukee Health Department **at least two (2) business days prior to starting any lead abatement work**.
- C. **Contractor** shall complete an **Occupant Protection Plan** form and submit it to the Milwaukee Health Department along with their Lead Abatement Permit application.
- D. Prior to starting work under this section, **Contractor** shall present to the **inspector** for the purpose of making a copy, a current State of Wisconsin Lead (Pb) Company license and all Lead Supervisor(s) or Lead Worker(s) licenses of individuals employed by the **Contractor** or the **Contractor's Sub-contractors**.
- E. At the completion of the job and prior to final payment to the **Contractor**, the **Contractor** shall provide copies of all lead clearance testing results to the **Inspector**.

1.4 PRECONSTRUCTION AND PREPARATION

- A. Examine and verify that job conditions are satisfactory for speedy and acceptable work.
- Post in an obvious location, Lead Hazard Warning Signs, and a copy of the Lead Abatement Permit at the entrances to containment areas. Note: Lead Hazard Warning Signs are available from MHD.

- All containment measures shall be in place prior to starting any work which will disturb painted or otherwise coated surfaces.

PART 2 – MATERIALS AND EQUIPMENT

2.1 CONTAINMENT MATERIALS

- A. All materials used for containment shall be new and unused.
- Plastic shall be new, free of rips, tears and holes.
 - Tape shall be a minimum of 2” wide and of sufficient quality to serve its intended purpose.

2.2 CONTAINMENT MEASURES

- A. Provide all materials and equipment required to safely contain lead dust hazards on the exterior of the building.
- Cover the ground in work areas with 6 mil plastic secured continuously along the foundation and extended out from the building a minimum of 6 feet and in all cases adequate to contain any falling debris. If adjacent structures are less than 6 feet away, contractor shall allow 6 mil plastic to extend up the side of the adjacent structure.
 - Cover all shrubbery, plantings, etc. with a minimum of 1-2 mil plastic.
 - All storm windows, windows and doors shall be closed to prevent the movement of lead dust and debris into or out of the building.
 - All storm windows, windows and doors in adjacent buildings closer than 6 feet to the work area shall be closed to prevent the movement of lead dust and debris into the building.
 - Maintain a HEPA vacuum in the containment area to periodically clean up dust and debris generated during the course of work.
- B. Provide all materials and equipment required to safely contain lead dust hazards in the interior of the building.
- Cover floors up to the top of the baseboard in work areas with 6 mil plastic secured continuously along the edges with duct tape.
 - All built in cabinets, countertops, bookshelves, plumbing, electrical, HVAC fixtures, etc. shall be covered with 1-2 mil plastic secured in place with duct tape.
 - Entrances to containment areas used by workers shall have two (2) layers of 6 mil plastic attached to the top edges of the doorway and at opposite sides of the doorway to form a z-door.
 - Provide continuous 6 mil plastic floor runners into and out of work areas, secured in place with duct tape.
 - Provide and use 6 mil plastic bags to transport sash from the containment area to other areas in and around the premises.
 - All storm windows, windows and doors shall be closed to prevent the movement of lead dust and debris into or out of the building or work area.
 - All HVAC registers and vents shall be closed and covered with 6 mil plastic secured with duct tape.
 - Provide tacky mats where necessary to control tracking of debris and dust hazards.
 - Maintain a HEPA vacuum in the containment area to periodically clean up dust and debris generated during the course of work.

2.3 MATERIALS AND EQUIPMENT – LIMITATIONS ON USE

- A. Equipment and procedures not allowed.
- Do not use grinders, sandblasters, open flames, torches, power sanders, power washers or other abrasive type paint removal methods to remove paint or other coatings.
 - Do not use heat guns that provide temperatures above 1,100 degrees Fahrenheit.
 - Do not use solvents or chemical strippers that contain methylene chloride.
 - Do not dry sweep dust or debris in areas not properly contained and sealed.
 - Do not use standard house vacuums or shop vacuums that are not HEPA equipped.
 - Do not use any method that allows leaded dust to become airborne.
- B. Permissible methods and equipment.
- Wet scraping with a sharp scraping tool using a spray bottle with water to first wet the surface.
 - Wet sanding (by hand) using a spray bottle with water to first wet the surface.
 - The use of a power planer with a HEPA vacuum attachment to collect the dust and debris.
 - Using a heat gun with temperatures less than 1,100 degrees Fahrenheit.
 - Chemical methods which do not contain methylene chloride.

2.4 WORKING CONDITIONS

- A. Maintain a lead safe working environment.

- Do not allow excessive accumulation of dust and debris in work area.
- Maintain containment area free of airborne construction dust.
- Do not allow uncertified workers or other unauthorized individuals to enter containment areas.
- Do not allow tracking of dust and debris out of the containment areas. Tacky mats are required at any active unit entryways and outside of any contained work area.
- Do not perform exterior lead-based paint removal when weather conditions are unacceptable. Exterior work is not permitted in adverse weather conditions such as strong winds, or in any condition that would allow lead dust and debris to cause a hazard or escape the containment area.

PART 3 – DISPOSAL AND CLEAN-UP

3.1 DISPOSAL

A. Disposal of painted components:

- Place construction debris in 6 mil plastic bags. Seal bags with duct tape.
- Debris too large for bags shall be wrapped in 6 mil plastic and secured with duct tape.
- Items too large to fit in the green garbage carts should be neatly stored on the property in an area accessible for City of Milwaukee pick-up. If necessary **Contractor** shall call the City of Milwaukee, Department of Public Works Sanitation Division (414) 286-8282 for a special pick-up.
- For large quantities of debris, **Contractor** shall remove debris from property and dispose of debris at **Contractor's** expense.
- At the end of each work day, **Contractor** shall not leave more than six (6) unabated window sash at the property. **Contractor** is responsible for removing and properly disposing of these additional sashes at the **Contractor's** expense.

3.2 CLEAN-UP

A. Clean-up and removal of containment measures:

- All construction debris shall be wrapped and removed from the containment area.
- Clean and remove all unused materials, tools and power cords from containment area.
- Clean with a HEPA vacuum containment area to remove excessive paint chips and dust prior to removing containment measures.
- Remove containment from furniture, walls, etc. and carefully roll-up plastic and seal with duct tape.
- Remove containment from floors by carefully rolling up plastic to prevent lead dust and debris from becoming airborne. Seal plastic with duct tape.
- HEPA vacuum all surfaces including floors and windows after containment measures have been removed.

B. **Contractor** shall supply all materials, equipment and labor necessary to safely clean and prepare properties for lead (Pb) clearance testing.

- Use cleaning solutions mixed from water and standard household cleaning products.
- Use clean buckets and mops with disposable mop heads.
- Use disposable towels, rags, mop heads or sponges for cleaning and rinsing surfaces.

C. Washing and cleaning surfaces:

- All horizontal surfaces including floors and windows shall be washed and rinsed using a mixture of water, soap or other household cleaning solutions.
- Use a separate bucket for cleaning and a bucket for rinsing surfaces.
- Frequently change the cleaning and rinse solutions. Do not allow wash solution or rinse water to become saturated with dust and dirt.
- Frequently dispose dirty or saturated towels, rags, mop heads or sponges.
- Repeat wash and rinse process multiple times to assure that all residue and dust has been removed and surface will pass a clearance test.
- Carpeted floors shall be thoroughly HEPA vacuumed in one direction overlapping each row and repeated in a perpendicular direction.
- Walls and other vertical surfaces shall be washed as specified herein.
- Window glass shall be free of dust, dirt, streaks, spots, paint and excess glazing material.
- Used cleaning materials shall be disposed of in a plastic bag sealed with duct tape.

3.3 INSPECTION TOUCH-UP AND REPAIRS

A. The **Contractor** is responsible for contacting the Milwaukee Health Department to schedule final inspections and clearance testing.

- All work involving the disturbance of painted or otherwise coated surfaces shall be completed prior to the final clearance test.
- Clearance testing shall be scheduled with the Milwaukee Health Department – Lead Section (414) 286- 5033 a minimum of 24 hours in advance.
- All cleaning and preparation work shall be completed a minimum of one hour prior to the scheduled clearance appointment.
- The **Contractor**'s abatement supervisor or other licensed representative shall be present during the final clearance test.

3.4 CLEARANCE

- A. The property must first pass a visual inspection by the Risk Assessor prior to clearance sampling.
- B. Clearance wipes samples will only be taken if the property passes the visual inspection.
- C. The Risk Assessor will determine the number, location and type (i.e. floor, sill, well, other) of clearance wipes taken.
- D. Clearance test results shall be provided to the **Contractor** by the Milwaukee Health Department Laboratory.
 - Upon completion of the job and before final payment to the **Contractor**, the **Contractor** shall provide copies of **all clearance results** to the **Inspector**.
 - **Contractor** shall maintain copies of all clearance results.

3.5 CLEARANCE FAILURES

- A. Failure of visual inspection:
 - **Contractor**, at **Contractor**'s expense, shall make all necessary repairs as directed by the Risk Assessor upon failure of the visual inspection.
 - After completion of defects found during the visual inspection, **Contractor** shall reschedule final clearance testing as outlined herein.
- B. Failure of clearance test:
 - Upon notification from Milwaukee Health Department – Lead Section of clearance failure(s), the **Contractor** shall re-clean the failed surface(s) and schedule another clearance test within 72 hours.
 - **Contractor** shall re-clean failed surface(s) at contractors expense.
 - Continued clearance failure(s) by the **Contractor** may result in citations, notification being sent to the State of Wisconsin Health and Family Services Lead Section and/or the levying of clearance testing and laboratory fees to the **Contractor**.

END OF SECTION – 01810 LEAD DUST HAZARD

DIVISION 2 SITEWORK

02050 DEMOLITION

PART 1 – GENERAL

1.1 WORK

- A. Provide all related materials, equipment, and labor required to complete the work specified.
- B. Work involving the removal of painted or otherwise coated building components shall be in accordance with [Section 01810 Lead Dust Hazards](#) and as specified herein.
- C. Work involving the removal of asbestos or asbestos containing material shall be in accordance with [Section 02080 Asbestos Removal](#) and as specified herein.
- D. Demolition of garages shall be in accordance with the City of Milwaukee Code of Ordinances [Chapter 218] and as specified herein.

1.2 QUALITY OF WORK

- A. Provide experienced, well-trained workers competent to complete the work as specified.
- B. All work shall comply with governing building and safety codes and OSHA Worker Safety Regulations.

1.3 SUBMITTALS

- A. **Contractor** shall notify the Milwaukee Health Department (MHD) – Lead Section (414-286-5033) **at least 24 hours prior to starting any demolition work that involves disturbance of painted or otherwise coated surfaces**. MHD will assign a Lead Risk Assessor to monitor the work to document lead safe demolition procedures were followed.
- B. **Contractor** shall obtain a Raze Permit from the City of Milwaukee Department of City Development Permit Center (809 N. Broadway, 1st floor) prior to starting building demolition. This applies to dwelling units and garages.

PART 2 – MATERIALS

2.1 PROTECTIVE BARRIERS AND COVERS

- A. Provide demolition materials, barriers, protective covers, etc. to complete the work assigned.
- B. Install lead-based paint containment measures per [Section 01810 Lead Dust Hazards](#) and as specified herein when demolition will disturb painted or otherwise coated surfaces.
- C. Any asbestos or asbestos containing materials shall be removed from the structure, building components, etc. prior to the start of demolition in accordance with [Section 02080 Asbestos Removal](#).

PART 3 – CONSTRUCTION

3.1 SITEWORK PREPARATION

- A. Protection of property:
 - Close all windows and doors adjacent to demolition work area.
 - Don't allow debris or dust to contaminate interior areas of building or adjacent property.
 - Locate any hidden utilities, electric, water, sewer, heat, etc. and disconnect or cap off utilities prior to start of demolition.
 - Provide sturdy barriers and covers as necessary for safety and to protect remaining work.
 - Provide braces or shores wherever structural elements will be removed in partial demolition.
 - Do not allow any dislodged materials to fall outside demolition area.
 - Protect all public areas and adjacent property with secure protective barriers.
 - Provide tree and shrub protectors.
- B. Demolish and remove all work indicated on **Scope**.
 - Start demolition at top most level, and proceed downward.
 - Provide water supply and hoses for spray, to control dust.
- C. Cleanup:
 - Completely control and remove all demolition debris, scraps, and dust.
 - Disposal of painted or otherwise coated debris and dust shall be per [Section 01810 Lead Dust Hazards](#).

- Properly wrapped debris can be placed in the green garbage containers for City of Milwaukee pick-up.
- Items too large to fit in the green garbage carts should be neatly stored on the property in an area accessible for City of Milwaukee pick-up. If necessary **Contractor** shall call the City of Milwaukee, Department of Public Works Sanitation Division (414) 286-8282 for a special pick-up.
- For large quantities of debris, **Contractor** shall remove debris from property and dispose of debris at **Contractor's** expense.

END OF SECTION – 02050 DEMOLITION

02080 ASBESTOS REMOVAL

PART 1 – GENERAL

1.1 WORK

- A. Work includes the removal of asbestos and asbestos containing materials in excess of 160 square feet or 260 lineal feet.
- B. Provide all related materials, equipment, and labor required to complete the work specified.

1.2 QUALITY OF WORK

- A. Provide experienced, well-trained and certified asbestos abatement supervisor and certified asbestos workers to complete the work.
- B. All work shall comply with the City of Milwaukee Code of Ordinances, Chapter 66, “Asbestos Hazard Control” regulations.
- C. Work shall also comply with State of Wisconsin Department of Natural Resources (DNR), Chapter NR 447 Asbestos Removal Regulations, Federal Environmental Protection Agency (EPA) Clean Air Act, and Occupational Safety and Health Administration (OSHA) worker safety codes and regulations.

1.3 SUBMITTALS

- A. When the asbestos removal is to occur in a building of three (3) or more dwelling units, the **Contractor** shall obtain an Asbestos Abatement Permit from the City of Milwaukee Department of City Development Permit Center (809 N. Broadway, 1st floor) prior to starting asbestos removal. This permit is not required for one and two family dwellings.
- B. When asbestos removal is subject to the provisions of this Section, notification shall be made to the State of Wisconsin DNR in accordance with Chapter NR 447.
- C. **Contractor** shall supply a detailed abatement plan along with their permit application to the City of Milwaukee Department of City Development Permit Center.
- D. Supply **Inspector** with a copy of the Asbestos Abatement Permit.
- E. **Contractor** shall clearly post in plain view asbestos abatement warning signs outside of the entrance to containment areas.
- F. **Contractor** shall provide **Inspector** a minimum of two (2) days advance notice prior to starting any asbestos removal.
- G. **Contractor** shall provide the **Inspector** with copies of:
 - All final clearance testing.
 - The waste disposal tickets and the Hazardous Waste Manifest from the Wisconsin DNR.

PART 2 – MATERIALS

2.1 PROTECTIVE BARRIERS AND COVERS

- A. Provide demolition materials, barriers, protective covers, etc. to complete the work assigned.
- B. Provide all necessary containment measures necessary to protect occupants, workers, and property.
- C. Install asbestos containment measures as required by State and Local regulations. See [Section 01810 Lead Dust Hazards](#) for additional containment information.

2.1 STANDARD TREATMENTS

- A. Remove asbestos containing materials as listed in the **Scope**.
 - Removal of pipe and duct wrap.
 - Removal of slate siding or roofing materials.
 - Building components containing pipe or duct wrap.
 - Flooring tile and/or flooring adhesives
 - Plaster, stucco and mastics.
- B. Stabilization of asbestos or asbestos containing materials as listed in the **Scope**.
 - Use an approved “Lockdown” product.
 - Use an approved enclosure or containment method.
- C. Prohibited practices:
 - Use of non-HEPA approved vacuum.

- Dry removal methods such as scraping, sanding, or sweeping. Use only wet methods when disturbing asbestos and asbestos containing materials.
- Asbestos debris shall not be stored on site unless it is properly protected in approved containment devices.
- Creating asbestos hazards.
- Disposal of asbestos and/or asbestos containing materials in City of Milwaukee trash containers.

PART 3 – CONSTRUCTION

3.1 SITEWORK PREPARATION AND CONTAINMENT

A. Protection of property:

- Close all windows and doors adjacent to asbestos removal work area.
- Don't allow debris or dust to contaminate interior areas of building or adjacent property.
- Locate any hidden utilities, electric, water, sewer, heat, etc. and disconnect, cover, or cap off utilities prior to start of asbestos removal.
- Provide sturdy barriers and covers as necessary for safety and to protect remaining work.
- Provide braces or shores wherever structural elements will be removed in partial demolition.
- Do not allow any dislodged materials to fall outside the containment area.

B. Provide all materials and equipment required to safely contain asbestos hazards.

- Containment areas shall be constructed using 6 mil polyethylene and duct tape in such a fashion as to prevent the dispersion of asbestos dust and particles.
- Cover ground or floor areas with two layers of 6 mil polyethylene.
- Shut down forced air heating systems and seal all hot and cold air returns with 6 mil polyethylene and duct tape.
- Cover and seal all surfaces not to be worked on in the containment area.
- Entrances to containment areas used by workers shall have two (2) layers of 6 mil polyethylene attached to the top edges of the doorway and at opposite sides of the doorway to form a z-door.
- Provide all necessary worker decontamination equipment.

C. All containment measures shall be in place prior to the commencement of asbestos removal.

3.1 REMOVAL AND DISPOSAL

A. Asbestos removal as indicated on **Scope**.

- Start removal at top most level, and proceed downward.
- Provide water supply and hoses for spray, to control dust.
- Use wet methods for removal.
- Do not allow excessive amounts of asbestos and asbestos containing materials to collect inside the containment area.
- Properly wrap asbestos and asbestos containing materials in approved containers for disposal.

B. Asbestos and asbestos containing materials shall be:

- Disposed of in properly labeled double 6 mil polyethylene bags sealed with duct tape.
- Dumpsters shall be lined with 6 mil polyethylene to prevent asbestos dispersion during transportation.
- Disposal shall be in compliance with State of Wisconsin DNR regulations.
- No debris shall be stored outside the building while awaiting disposal.
- Dumpsters shall be promptly removed from the site so as to prevent asbestos contamination.

3.2 CLEARANCE

A. Daily cleanup:

- Use HEPA vacuuming and wet cleaning methods.
- The work area shall be cleaned daily throughout the entire asbestos removal project.
- The **Contractor** is responsible for preventing other areas in and around the containment area from becoming contaminated.
- Exterior containment measures shall be removed and disposed in an approved manner of on a daily basis unless adequate measures have been taken to prevent unauthorized entrance to the contained areas and the containment measures are adequately protected from vandalism, weather conditions, etc.

B. Final cleaning:

- Completely control and remove all asbestos, asbestos debris, etc.
- Disposal of asbestos and asbestos containing materials shall be done in compliance with all Local and State regulations.

- Final cleaning requires thorough HEPA vacuuming and wet washing followed by the use of lockdown to seal any fibers that may remain.
- C. A final clearance shall be conducted at the completion of the asbestos removal work.
- In the event of a final clearance failure, the **Contractor** shall at **Contractor's** expense shall provide all additional cleaning and preparation work necessary for re-testing.
 - The **Contractor** shall be responsible for the cost of additional final clearance testing including laboratory fees.
 - **Contractor** shall be responsible for all clean up of other areas contaminated as a result of **Contractor's** work.

END OF SECTION – 02080 ASBESTOS REMOVAL

02200 EXCAVATION, GRADING, AND BACKFILL

PART 1 – GENERAL

1.1 WORK

- A. Provide all related materials, equipment, and labor required to complete the work specified.
- B. All excavation, trenching, compaction, backfill, and landscaping shall be as listed in the **Scope** and as specified herein.

1.2 QUALITY OF WORK

- A. Provide experienced, well-trained workers competent to complete the work as specified.
- B. All work shall comply with governing building and safety codes.

1.3 SUBMITTALS

- A. Depending on the **Scope**, an erosion control permit maybe required. **Contractor** is required to obtain all required permits from the City of Milwaukee DCD Development Center (809 N. Broadway, 1st Floor) prior to starting any work.
- B. **Contractor** shall contact Diggers Hotline at 414-259-1181, or visit the Diggers Hotline website at www.diggershotline.com to request that the site be marked for underground utilities a minimum of three business days prior to starting any excavation work.
- C. When work involves excavation of public property, i.e. water or sewer connections, underground electrical lines, etc., the **Contractor** shall obtain all required permits and approvals from the City of Milwaukee Department of Public Works, Milwaukee Water Works, and/or WE energies prior to starting any work.

1.4 PRECONSTRUCTION AND PREPARATION

- A. Examine and verify that job conditions are satisfactory for speedy and acceptable work.
- B. Confirm there is no conflict between this work and work of other trades.
- C. Confirm that the work of other trades that must precede this work has been completed.

PART 2 – MATERIALS

2.1 FILL

- A. Fill materials shall be:
 - Uniform.
 - From an approved source.
 - Clean, free of debris or organic matter.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Protection:
 - Contact Diggers Hotline at least three business days prior to starting excavation work.
 - Protect overhead lines from damage by trucks and cranes.
 - If utility lines are damaged, they shall be repaired or replaced at the **Contractor's** expense.
 - Existing utilities that will interfere with construction shall be relocated.
 - Provide all necessary shoring and bracing as required by site conditions.
 - Provide temporary drains and/or pumps to remove ground and rain water.
- B. **Contractor** shall put in place all necessary erosion control measures as required by State and local building codes.

3.2 GRADING AND EXCAVATION

- A. Grade and excavate to lines, grades, and elevations as listed in the **Scope** and as specified herein.
- B. Grading for slabs shall be level and not crowned toward center portion of slab.
- C. Topsoil shall be placed at a depth of no less than 6 inches.
 - Topsoil shall be clean, free of rock and debris.

- Topsoil removed from building perimeter shall be removed from the site and properly disposed of by the **Contractor. Do not** reuse this topsoil.

3.3 EXCAVATION

- A. Excavate areas required to complete the work as listed in the **Scope**, and as specified herein.
 - Footings shall be excavated to a depth of 4 feet below finished ground elevation.
 - Footing size shall be as required by building code.
- B. Excavation control:
 - Contact the Department of Neighborhood Services construction inspector at 286-2513 for all necessary inspections prior to pouring footing concrete.
 - Keep footing and foundation trenches uniform in width and direction.
 - Clean excavations of debris and loose dirt, and keep clean before pouring concrete.
 - Immediately remove dirt, rock, or other debris that spills onto paving or planting areas.
 - Take frequent measurements to prevent over-excavation.
 - Provide temporary drainage as necessary to prevent ponding, erosion, or spillover.

3.4 SITE MAINTENANCE DURING EXCAVATION AND GRADING

- A. Control excavation dust:
 - With water spray.
 - Through controlled demolition.
 - Using and installing approved barriers.
 - No dust shall be allowed to blow onto the neighboring property.
- B. Cleaning:
 - Do frequent and thorough cleanups.
 - Identify potentially harmful substances that might be uncovered during excavation.
 - Handle potentially harmful substances strictly according to governing regulations.
 - Contact the Milwaukee Health Department Lead Section at 286-5033 when suspected lead soil hazards will be disturbed.
 - Excavation and grading work shall be in compliance with Section 01810 Lead Dust Hazards and as directed by Milwaukee Health Department.
 - Suspected hazardous substances shall be removed from the site as per the governing regulations.

3.5 BACKFILL AND COMPACTION

- A. Before backfilling:
 - All inspections must be completed and approved.
 - Drains, drain tile, etc. shall be installed, inspected, and approved.
 - All exterior waterproofing has been completed, inspected, and approved.
 - Exterior foundation insulation has been installed (if required).
 - All formwork shall be removed.
 - All trash and debris shall be removed.
- B. Perform backfill and compaction in a systematic pattern, to assure complete and consistent work.
 - If any over excavation accidentally occurs, correct it with well-compacted backfill.
 - Fill and thoroughly compact holes from root and stump removal pits.
 - Do not allow any debris to be mixed with the fill.
- C. Protect foundation and retaining walls during backfilling.
 - Brace foundation or retaining walls to prevent damage from backfilling.
 - Do not allow damage to waterproofing or wall insulation board from backfilling.

3.6 SUBGRADE PREPARATION FOR PAVING

- A. Provide graded slopes as required for:
 - Positive pavement slopes as required for driveways, patios, garages, walks, etc.
 - Backfill in layers, and thoroughly compact trenches or pits beneath paving.
 - Install base course firmly, and wet it down prior to concrete application.

3.7 SURFACE DRAINAGE

- A. Provide drainage catchers for roof water as well as surface runoff.

- B. Provide surface storm drainage free of impediments to smooth drain flow.
- Continuous
 - No narrow restrictions
 - No barriers
 - No sharp changes in direction
 - No sharp drops in grade
 - No level areas or depressions
- C. Provide erosion control measures as required by State and local building codes.

3.8 REPAIR AND CLEANUP

- A. Repair or replace work not in compliance with the **Scope** or these **Specifications**.
- Repairs shall be made at the direction of the **Inspector**.
 - Repairs shall be made at the **Contractor's** expense.
- B. **Contractor** is responsible for removal of all debris and excess material from site.
- C. Landscape disturbed areas as indicated in the **Scope** and as specified in [Section 02900 Landscaping](#).

END OF SECTION – 02200 EXCAVATION, GRADING, AND BACKFILL

02510 CONCRETE

PART 1 – GENERAL

1.1 WORK

- A. Provide all related materials, equipment, and labor required to complete the work specified.
- B. Demolition and removal of existing concrete shall be in accordance with [Section 02050 Demolition](#) and as specified herein.
- C. All excavation, trenching, compaction, backfill, and landscaping shall be as listed in the **Scope** and as specified herein.

1.2 QUALITY OF WORK

- A. Provide experienced, well-trained workers competent to complete the work as specified.
- B. Concrete shall be from manufacturers and suppliers who specialize in concrete products.

1.3 SUBMITTALS

- A. Depending on the **Scope**, a building permit maybe required. **Contractor** is required to obtain all required permits from the City of Milwaukee DCD Development Center (809 N. Broadway, 1st Floor) prior to starting any work.
- B. When concrete work involves paving in publicly owned areas (i.e. driveway aprons, curb cuts, carriage walks, etc.) the **Contractor** shall obtain all required permits and approvals from the City of Milwaukee Department of Public Works prior to starting any work.
- C. **Contractor** shall contact the City of Milwaukee Department of Neighborhood Services at 286-2513 for all necessary inspections prior to pouring concrete.
- D. Supply **Inspector** with a copy of the concrete delivery ticket from concrete supplier showing the concrete mix delivered to the job site.
- E. **Contractor** shall, upon request of the **Inspector**, submit manufacturer's specifications to prove compliance with these **Specifications**.

1.4 PRECONSTRUCTION AND PREPARATION

- A. Examine and verify that job conditions are satisfactory for speedy and acceptable work.
- B. Confirm there is no conflict between this work and work of other trades.
- C. Confirm that the work of other trades that must precede this work has been completed.
- D. At all stairways to porches, service walk steps, stoops, door entrances, etc. confirm finished riser height will be uniform throughout stairway and within code allowed maximum (8 inches).

PART 2 – MATERIALS

2.1 CONCRETE FLAT WORK

- A. Concrete:
 - **Contractor** shall supply ready-mixed concrete in compliance with ASTM C 94.
 - On-site mixed concrete will conform to ASTM C 685.
 - Concrete shall have a 28 day compressive strength as follows:
 - Walks, steps, garbage can and storage area slabs: 3500 psi
 - Parking slabs and driveways: 4000 psi
 - Retaining walls: 4000 psi
 - Foundations and footings: 3500 psi
 - Interior slabs 3000 psi
 - No admixtures or curing materials will be allowed unless specifically approved for use by the concrete manufacturer.
 - Ready-mixed concrete shall be delivered to the site of the work and be completely discharged from the transporting vehicle within 1-½ hours.
- B. Forms:
 - Provide metal or wood formwork for borders and curbs with profiles to match required concrete thickness.
 - Earth forms are not permitted for paving.

- Formwork shall be installed to replicate layout of the concrete that was removed, in accordance with the **Scope**, and as specified herein.
- C. Concrete reinforcing:
- Use number 10 welded wire mesh, plain type in coiled rolls, unfinished.
 - Use rebar where required, number 3 or larger as required by code.
- D. Aggregate:
- Maximum size is ¾", compacted to 95%.
 - Sub-base aggregate to depth as listed:
- Walks, steps, garbage can and storage area slabs: 3 inches
 Parking slabs and driveways: 4 inches
 Interior slabs 4 inches

PART 3 – CONSTRUCTION

3.1 SITEWORK PREPARATION

- A. Remove and dispose of existing concrete as indicated in the **Scope**.
- B. Provide demolition materials, barriers, protective covers, etc. to complete the work assigned.
- C. All demolition work shall be in accordance with [Section 02050 Demolition](#).
- D. Install lead-based paint containment measures per [Section 01810 Lead Dust Hazards](#) and as specified herein when demolition will disturb painted or otherwise coated surfaces.
- E. **Contractor** shall take all necessary precautions to minimize damage to surrounding yard and landscaping.
- F. Examine site conditions and correct any conditions detrimental to the work.
- Do not do work when new paving might be harmed by rain, snow or low temperatures.
 - Concrete shall be protected from frost or rapid drying.
 - Concrete shall not be placed on frozen ground or when temperature is below 32 degrees Fahrenheit or will be below 32 degrees within 72 hours.
 - Verify that all necessary sub-grade preparation is completed.
 - Keep area free of scraps, trash, and organic matter.
- G. Install related work before concrete pour, and protect from damage.
- Formwork
 - Anchors
 - Baseplates
 - Inserts
 - Bolts
 - Expansion joints
 - Sleeves for bollards and fence posts
 - Utility boxes
 - Drains
 - Electrical conduit or boxes
 - Pipe and plumbing
 - Separation joints
 - Headers/screeds
- H. **Contractor** shall make all repairs necessary to restore owner's property and any adjacent properties damaged as a result of the contractor's work.

3.2 EXCAVATION

- A. Excavate areas as listed in the **Scope**, [Section 02200 Excavation, Grading and Backfill](#) and as specified herein.
- B. **Contractor** is responsible for contacting the building construction inspector for all applicable inspections and approvals prior to pouring concrete.

3.3 AGGREGATE

- A. Install aggregate to specified depth.
- Granular shall be clean mineral aggregate.
- B. Compact aggregate as specified in [Section 02200 Excavation, Grading and Backfill](#) and as specified herein.

3.4 FORMS

- A. Construct forms to the exact sizes, shapes, lines and dimensions as listed in the **Scope** or specified herein.
- Construct and brace forms to maintain work in correct line, proper grade height, and pitch.
 - Install screed boards at correct height for paving thickness.

- Construct forms for all exposed concrete surfaces with smooth faced materials to provide continuous, straight, smooth surfaces.
 - Furnish forms in the largest practicable sizes to minimize the number of joints.
 - Secure forms against dislocation during concrete pour.
 - Forms shall be of sufficient thickness and strength to withstand pressure of newly placed concrete without excessive and objectionable bow or deflection.
 - Design and build forms to adequately and safely support vertical and lateral loads that might be applied.
 - Provide form-coating compounds that will not bond with, stain, or adversely affect concrete surfaces or impede the wetting of surfaces to be cured with water.
 - Provide form work sufficiently tight to prevent leakage of cement during concrete placement.
 - Provide for all openings, offsets, sinkages, keyway recesses, moldings, reglets, chamfers, blocking, bulkheads, anchorages, inserts, and other features.
 - Avoid small or angular concrete paving sections, or install extra reinforcing to prevent cracking.
- B. Formwork shall be installed to duplicate as closely as possible the size and configuration of original concrete footprint as listed in the **Scope**, and as specified herein.
- C. Fabricate forms for easy removal without hammering or prying against concrete surfaces.
- Form work not supporting concrete may be removed after cumulatively curing at not less than 50 degrees Fahrenheit for at least 24 hours after placing concrete, providing that concrete is sufficiently hard to not be damaged by form removal operation.
 - Other formwork may not be removed in less than 14 days or until concrete has attained design minimum 28-day compressive strength.
 - After removal of forms restore finish grade as outlined in Section 02200 Excavation, Grading and Backfill.
 - Finish grading shall be flush with top of the slab, providing for proper drainage and eliminating any trip hazards.
- D. Side forms of footings may be omitted and concrete placed directly against excavation provided an additional one (1) inch of concrete is added to each side of the minimum required footing size.

3.5 CONCRETE PLACEMENT

- A. Provide protection (i.e. plastic, plywood sheets, etc.) to ensure nearby walls, buildings, porches, doors, windows, etc. are not sprayed or splashed with concrete during pour or subsequent concrete finishing work.
- B. Verify concrete supplier mix is certified for proportions.
- Don't allow trucks to wait beyond the time limits before pour.
 - Don't allow unauthorized watering; do not over-water.
 - Don't permit segregation.
 - Verify that visual slump is correct.
 - Do compaction, consolidation, and vibration as required.
 - Deposit concrete continuously or as to avoid placing concrete on or adjacent to concrete which has hardened sufficiently to cause formation of seams or planes of weakness within the section.
- C. Provide movement and relief joints in locations, depths, and widths as detailed;
- At contact of pavement with other work.
 - For thermal expansion/contraction.
 - To control movement and settlement cracks.
 - At breaks in the construction sequence.
 - Make joint lines straight and uniform.
 - Coordinate and align sawn joint work with other work.
- D. Concrete shall be placed in accordance with the **Scope** as specified herein.
- Walks: 4 inch thick with control joints 5'-0" on center. Width of walks shall be as indicated in **Scope**. Concrete may be poured on undisturbed soil. If soil is disturbed provide 3" thick compacted sand or gravel aggregate.
 - Parking slabs/driveways: 4 inch thick with control joints every 400 square feet. Wire mesh reinforcement required.
 - Interior slabs on grade: 4 inch thick with control joints every 400 square feet. Wire mesh reinforcement and vapor barrier required.
 - Steps and stoops: Minimum of 4 inch thick with control joints at building and at walks and slabs surrounding the steps or stoop. Step treads shall be uniform in rise and run with rounded nosings. Maximum riser height is 8 inches and minimum tread size is 9 inches. In addition all treads and risers shall conform to the following formula, 2 risers heights + 1 tread length = 24 to 25 inches. Treads to receive fine broom finish.
 - Footings shall be placed on undisturbed soil, free of organic material at a depth of 4 feet below grade, sized and reinforced as required by building code.
 - Retaining walls shall be designed to sustain required loads. Concrete shall be vibrated during

placement. Retaining walls in excess of 3' in height or longer than 24' in length shall include plastic drain tile inside the perimeter of the wall with 6" of gravel above the drain tile. Bleeders shall be provided for drain tile installations.

E. Finished concrete flat work shall be free of depressions or low spots to prevent the pooling of water. Concrete shall be pitched 1/8" per foot to shed water.

3.6 CURING

A. Curing

- Start curing procedures promptly after pour, to protect concrete from premature drying.
- Control curing methods, covers, and wetting, with special attention to weather conditions.
- Use proper wet spray or moist curing methods as required and as appropriate to weather.
- Where formwork is exposed to sun, maintain moisture on formwork until removal.

3.7 FINISHING

A. Match up finish work to adjacent or nearby surfaces at:

- Joints.
- Edges.
- Corners.

B. Joints:

- Coordinate sawn joints, to keep all joints straight and continuous.
- Keep joint lines uniform and free of damage.
- Do not make any cuts in finished concrete that might affect structural integrity or strength.

C. Floating, troweling, and special finishes shall be as indicated on the **Scope** or as specified herein.

- A medium broom finish across traffic path is required for exterior concrete work such as sidewalks, patios, driveways, driveway aprons, etc.
- Troweled finish is required for interior concrete floors in basements, enclosures, or living areas.
- A non-slip finish for steps, landings, platforms, and ramps.
- Do not begin floating until bleed water is gone.
- Do not over-trowel.
- Do not dust cement to expedite troweling start time.
- Remove any marks left by finishing tools.

3.8 PROTECTION AND COMPLETION

A. Curing, protection, and sealing:

- Protect concrete from heat or cold, to maintain temperature between 50 and 70 degrees Fahrenheit.
- Protect concrete from inclement weather or running water.
- Protect concrete from damage caused by construction equipment.
- Protect concrete from shock.
- Protect concrete from movement or vibration.
- Protect concrete from load stress.
- Protect fresh slab work from foot or traffic damage.
- Seal concrete surfaces as recommended by concrete supplier.

3.9 REPAIR AND CLEANUP

A. Repair or replace work not in compliance with the **Scope** or these **Specifications**.

- Repairs shall be made at the direction of the **Inspector**.
- Repairs shall be made at the **Contractor's** expense.

B. Clean work surfaces, and completely remove debris and excess material from site.

- **Contractor** is responsible for cleaning, removing, and repairing any surfaces sprayed or splashed with concrete, or otherwise damaged as a result of the **Contractor's** work.

C. Backfill as indicated on the **Scope** and as specified in [Section 02200 Excavation, Grading, and Backfill](#).

D. Landscape disturbed areas as indicated in the **Scope** and as specified in [Section 02900 Landscaping](#).

END OF SECTION – 02510 CONCRETE

02900 LANDSCAPING

PART 1 – GENERAL

1.1 WORK

- A. Provide and install trees, plants, and ground cover as listed on the **Scope** and as specified herein.
- B. Provide all related materials, equipment, and labor required to complete the work as specified.

1.2 QUALITY OF WORK

- A. Provide experienced, well-trained workers competent to complete the work as specified.
- B. Use products from a supplier who specializes in landscaping materials.
- C. All work shall comply with governing building and safety codes.

1.3 SUBMITTALS

- A. Submit a list of materials to be provided for this work.
- B. Submit supplier's planting and care instructions to **Inspector**.

1.4 MATERIALS HANDLING

- A. Provide all materials required to complete the work as listed on the **Scope** and as specified herein.
 - Deliver, store, and transport materials to avoid damage to the product or to any other work.
 - Return any materials delivered in an unsatisfactory condition.
 - Materials delivered will be certified by the supplier to be as specified.
- B. Store materials in a safe, secure location, protected from weather.

1.5 PRECONSTRUCTION AND PREPARATION

- A. Examine and verify that job conditions are satisfactory for speedy and acceptable work.
- B. Confirm there is no conflict between this work and work of other trades.
- C. Confirm that the work of other trades that must precede this work has been completed.

PART 2 – MATERIALS

2.1 PLANTS, SOD, AND RELATED MATERIALS

- A. Provide plants, and related materials from a fully qualified plant supply nursery.
- B. Provide approved grade cultivated grass sod with a strong fibrous root system; machine cut with a ½ to 1 inch topsoil base.
- C. Provide and install fertilizer per supplier's instructions.

PART 3 – LANDSCAPE INSTALLATION

3.1 COORDINATION AND PREPARATION

- A. Coordinate planting with other site improvements installed or not yet installed.
 - Contact Diggers Hotline at least three days prior to starting any excavation work required for trees, shrubbery, or other plantings.
 - Provide topsoil as per instructions of plant supplier and as specified in [Section 02200 Excavation, Grading, and Backfill](#).
 - Till and loosen subsoil, to bond with topsoil.

3.2 PLANTING PROCEDURES

- A. Prepare soil, provide water, and install plants according to the instructions of the plant supplier.
- B. Protect plantings from damage according to suppliers instructions and from:
 - Foot or machine traffic.
 - Other construction activities.

3.3 WARRANTY AND REPLACEMENT

- A. **Contractor** shall warrant and if necessary replace any trees or shrubbery that die as a result of improper handling or installation.
- B. **Contractor** is responsible for removal of all debris and excess material from site.
- C. **Contractor** shall not be responsible for plantings including grass seed or sod that fails to germinate or grow as a result of **Owner** neglect.
- D. **Owner** is responsible for following supplier's instructions for watering and caring for new plantings.
- New grass seed shall be watered per supplier's instructions.
 - Newly installed sod shall be watered as necessary and according to supplier's instructions.
 - New plantings including grass seed and sod shall be protected from foot and other traffic.

END OF SECTION – 02900 LANDSCAPING

DIVISION 4 MASONRY

04000 MASONRY PART 1 – GENERAL

1.1 WORK

- A. Provide all related materials, equipment, and labor required to complete the work specified.
- B. Demolition and removal of existing masonry shall be in accordance with [Section 02050 Demolition](#) and as specified herein.
- C. All excavation, trenching, compaction, backfill, and landscaping shall be as listed in the **Scope** and as specified in [Section 02200 Excavation, Grading, and Backfill](#), and as specified herein.

1.2 QUALITY OF WORK

- A. Provide experienced, well-trained workers competent to complete the work as specified.
- B. All masonry materials shall be new from manufacturers and suppliers who specialize in masonry products.

1.3 SUBMITTALS

- A. Depending on the work listed in **Scope**, a building permit may be required. **Contractor** is responsible for obtaining all required permits from the City of Milwaukee DCD Development Center (809 N. Broadway, 1st Floor) prior to starting any work.
- B. **Contractor** shall, upon request of the **Inspector**, submit manufacturer's specifications to prove compliance with these **Specifications**.

1.4 MATERIALS HANDLING

- A. Deliver, store, and transport materials to avoid damage to the product or to any other work.
 - Return any product or materials delivered in a damaged or unsatisfactory condition.
- B. Store masonry materials:
 - Supported off the ground.
 - Protected from weather or moisture.
 - Protected from occupant and construction traffic.
 - Stored neatly with level support to prevent toppling.
 - Store metal connectors and fasteners in a dry location safe from physical damage.

1.5 PRECONSTRUCTION AND PREPARATION

- A. Examine and verify that job conditions are satisfactory for speedy and acceptable work.
- B. Confirm there is no conflict between this work and work of other trades.

PART 2 – MATERIALS

2.1 MORTAR

- A. Mortar as per manufacturer's instructions and as specified herein:
 - Type S.
 - Type M mortar for below grade applications
 - One part Portland cement.
 - One-half part lime.
 - Not more than four and one half parts sand, measured damp and loose.
 - Compressive strength of 1800 psi at 28 days.
- B. Masonry used below grade or subject to high lateral or compressive loads or severe frost should use Type M mortar, high strength mortar with 2500 psi compressive strength.
- C. No admixtures or curing materials will be allowed unless specifically approved for use by the mortar manufacturer.
- D. Mortar materials:
 - Portland cement: Type I or II.
 - Aggregate: Clean, sharp sand.

- Lime: Hydrated Type S.
- Water: Clean and potable.

2.2 ACCESSORIES AND OTHER RELATED MATERIALS

A. Install reinforcing and anchoring as required by code and as specified herein:

- Reinforcing bars: Grade 40, or as approved by the building code.
- Deformed bars for No. 3 and larger.
- Single wythe joint reinforcement: Truss type.
- Multiple wythe joint reinforcement: Truss type with moisture drip.
- Joint reinforcement: Unprotected cold-drawn steel.
- Strap anchors: Bent steel, 1/4" thick, galvanized.
- Sheet metal wall ties: Corrugated galvanized steel.
- Steel wire wall ties: Galvanized steel-formed wire.
- Dovetail anchors: Bent strap, 1/4" thick galvanized steel.

B. All flashing shall be non-corrosive sheet metal.

2.3 BRICK MASONRY

A. Provide brick masonry as listed in the **Scope** and as specified herein.

B. New brick type, grade, and size shall match as closely as possible to original brick.

C. Major brick foundation wall, facade, and column replacement shall require new brick as specified herein.

D. Brick masonry maybe reused provided:

- Reused brick shall only be used for repairing or patching small areas of foundations, facade, guardrails, retaining walls, etc.
- Reused brick is whole, intact and free of cracks or other defects.
- Reused brick is cleaned prior to installation by completely removing old mortar and debris.

2.4 CONCRETE UNIT MASONRY (BLOCK)

A. Provide new concrete unit masonry as listed in the **Scope** and as specified herein.

B. Concrete unit masonry used for load bearing shall comply with the following:

- Grade and type shall be: Hollow, load-bearing units Grade N, Type I, Medium Weight.
- Pattern and size to match as closely as possible to original.

PART 3 – CONSTRUCTION AND INSTALLATION

3.1 WORK PREPARATION AND CONDITIONS

A. All demolition work shall be in accordance with [Section 02050 Demolition](#) and as specified herein.

- Remove and dispose of existing masonry as indicated in the **Scope**.
- Provide demolition materials, barriers, protective covers, etc. to complete the work assigned.
- Install lead-based paint containment measures per [Section 01810 Lead Dust Hazards](#) and as specified herein when demolition will disturb painted or otherwise coated surfaces.
- Contractor shall take all necessary precautions to minimize damage to building, other work and surrounding areas of the building, yard, etc.

B. Examine site conditions and correct any conditions detrimental to the work.

- Do not do work when masonry might be harmed by rain, snow or low temperatures.
- Verify that all necessary sub-grade preparation is completed.
- Protect concrete masonry units from moisture, and keep them dry during installation.

C. Cold weather:

- Masonry work shall be protected from frost or rapid drying.
- No masonry or concrete footings shall be placed on or with frozen materials. Before placing masonry on older work, apply heat in such a manner that frost, ice, snow will be completely removed and temperature of the surface is brought to a minimum temperature of 50 degrees F. Spreading of salts or chemicals on older work to remove ice and snow is not permitted.
- After the first frost and until the mean daily temperature falls below 40 degrees Fahrenheit for more than one day, freshly laid masonry shall be protected from freezing for not less than 72 hours after it is laid. Similarly protect in the spring.
- No masonry shall be laid when the temperature outside is below 40 degrees Fahrenheit, unless suitable means are provided and used to heat the newly completed work against damage or defacement from frost or freezing.

- When outside temperature drops below 40 degrees Fahrenheit, all masonry units and mortar intended for use shall be heated to a minimum temperature of 50 degrees F. and used when at a temperature of between 40 to 60 degrees F. The temperature of the separate mixing materials shall not exceed 150 degrees F.
- Masonry sand shall be heated to at least the minimum mortar temperature required above. The sand shall be heated slowly and evenly to prevent scorching. Scorched sand shall not be used in mortar.
- No anti-freeze or other ingredients shall be used to lower the freezing temperature of mortars. Admixtures except for those specified by the manufacturer are not allowed.
- All newly placed masonry shall be kept from freezing for a period of at least 72 hours (3 days) after it is laid.
- The **Contractor** shall supply temporary enclosures, artificial heat and such other protective methods as needed to protect masonry from cold temperatures.
- The **Contractor** is responsible for danger to workers and carbonization of masonry and concrete resulting from the use of salamanders or other heating devices, which directly exhaust CO gases.

3.2 WORK LAYOUT AND PREPARATION

- A. Examine and layout work to establish and assure correct:
- Coursing and patterns.
 - Elevation of base course.
 - Opening sizes and locations.
 - Sill and header heights and sizes.
 - Location and sizing of beam pockets, or other openings.
- B. Check and if necessary correct building structural members that support masonry to assure they are:
- Correctly located.
 - Plumb.
 - Aligned.
 - Braced.
 - Clean.
- C. Install attachments that support masonry as required by building code or as specified herein.
- D. Put in place, anchor, plumb and level metal work that will be embedded in masonry:
- Angles.
 - Lintels.
 - Bucks and frames.
- E. Put appurtenances in place, anchoring them and protecting them from damage.
- Flashing and counter flashing.
 - Expansion felt.
 - Piping and conduit.
 - Ductwork.
 - Sleeves.

3.3 UNIT MASONRY INSTALLATION AND MORTAR APPLICATION

- A. Lay masonry plumb, level, square, and true to line, matching existing workmanship, joints and bond.
- Rebuild walls, etc. to match the original design.
 - Lay out work so minimum cutting is required, using only whole brick or block where possible.
 - Where cutting is necessary, cut brick or block to neat, true line without chips on exposed faces.
 - Conceal cut faces where possible.
 - Do not lay brick or block less than 1/4" in length in exposed work.
 - If any brick or block must be removed or shifted after it has been laid, remove setting mortar, clean brick or block thoroughly, apply fresh mortar and re-lay.
 - Solidly fill with mortar intersections between bricks or blocks and other materials.
 - Solidly fill joints and line pin holes.
- B. When brick or block laying has been delayed for more than one hour, clean masonry of exposed mortar, then wet by water spray when necessary .
- C. Amount of wetting depends on rate of absorption of brick or block at time of laying.
- When being laid, brick or block shall have a suction sufficient to hold mortar and absorb excess moisture, yet leave mortar sufficiently damp so it remains plastic enough to permit brick to be leveled and plumbed after being laid without breaking mortar bond.
- D. Mortar joints:
- Do mortar applications promptly.
 - Construct mortar joint sizes to match original joint style.
 - Provide full head and bed joints.

- Properly butter masonry unit edges.
 - Completely fill joints: bed, cross, end, and head.
 - Do not tool joints prematurely before initial mortar set.
 - Tool joints without damaging mortar.
 - Promptly point holes, such as for line nails, as work proceeds.
 - Fully bed copings, blocks, and caps, and completely point joints.
 - Remove wedges as work progresses.
 - Repair defective units as work progresses.
 - Completely fill and level bed joints on lintels.
 - Lay brick or block courses in reference to a level line.
 - Align and plumb vertical joint lines in alternate courses.
 - Keep wall face plumb and aligned story by story.
- E. Install caulking, control joints, lintels, and flashing as listed in the **Scope**, required in building code, and as specified herein.
- Keep caulking spaces at window and doorframes uniform and of acceptable size.
 - Keep spaces for expansion/contraction control joints uniform and of acceptable size.
 - Recess window and door lintels from face of wall.
 - Tightly mortar chimney, parapet wall or other flashings into masonry work.
 - Repoint counterflashing after roofers have turned it back over base flashing.

3.4 TUCKPOINTING BRICK AND BLOCK

- A. Rake clean all mortar joints that are cracked and/or deteriorated as listed in the **Scope**.
- Rake clean to a point where solid, but to a minimum of ½ inch deep.
 - Tuckpoint cleaned joints with new mortar.
 - Strike all mortar joints to match existing joint style.
- B. Mortar (Type S or M) should be as listed herein.
- Mortar color shall match as closely as possible to existing.

3.5 MASONRY ACCESSORIES AND REINFORCING

- A. Provide and install metal ties for bonding as required by building code and as specified herein.
- Assure compliance in types, sizes, spacing, depth of anchoring, and corrosion resistance.

3.6 FOUNDATION PARGING AND WATERPROOFING

- A. Parge and waterproof foundation walls as listed in the **Scope**, required by the building code, or specified herein.
- Parging shall be smooth, consistent, and provide full coverage.
 - Parge or otherwise treat walls as required to receive backfill.
 - Do not backfill prior to proper curing of parging.
 - Use waterproofing manufacturer's recommended curing procedures.
- B. Backfill as indicated on the **Scope** and as specified in [Section 02200 Excavation, Grading, and Backfill](#).

3.7 WORK PROTECTION AND CLEANING

- A. Clean all surfaces during work and immediately upon completion:
- Don't allow mortar to enter expansion joints.
 - Don't allow any mortar droppings on sills, copings, and projecting courses.
 - Scrape mortar extrusions off inside wall.
 - Clean mortar droppings from brick, anchors and straps, to avoid water bridges.
 - Clean or replace any finished brick or block damaged by spilled concrete or mortar.
- B. Clean work site, and completely remove debris and excess material from site.

3.8 REPAIR

- A. After installation, inspect all work for improper installation or damage.
- B. Repair or replace work not in compliance with the **Scope** or these **Specifications**.
- Repairs shall be made at the direction of the **Inspector**.
 - Repairs shall be made at the **Contractor's** expense.
 - Repair work should be undetectable.
- C. **Contractor** shall make all repairs necessary to restore **Owner's** property and any adjacent properties damaged as a result of the **Contractor's** work.

END OF SECTION – 04000 MASONRY

BID BOND
CITY OF MILWAUKEE, WISCONSIN
LICENSED SURETY CORPORATION BID BOND

KNOW ALL MEN BY THESE PRESENTS, That we,

.....

of
(Street and Number) (City) (State)

as principal and of
(Home Office)

as surety are held and firmly bound unto the City of Milwaukee, Wisconsin, hereinafter called City in
the penal sum of

..... Dollars,

to be paid to the City: its successors and assigns, for which payment well and truly to be made, we bind ourselves, and our heirs,
executors, and, administrators, or successors and assigns, as the case may be, jointly and severally, firmly by these presents.

WHEREAS, the above bounden principal is making a proposal in writing dated
20, to the Commissioner of City Development of the City, according to Official Notice No
20, of said Commissioner for furnishing all material, equipment, labor and everything necessary for the
completion of the work of...

according to plans, specifications and the other contract documents on file in the office of said Commissioner, a copy
of which proposal is by reference made a part hereof, and the said proposal is
accompanied with this bond.

NOW, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden principal shall execute the
contract in quadruplicate, in accordance with the proposal as accepted, with approved licensed surety corporation
bound thereto for the faithful performance and proper fulfillment

of such contract, and return the same to the office of the said Commissioner within the time limit specified in said proposal, then the above obligation shall be void, otherwise it shall be and remain in full force and effect.

In witness whereof, the above bounden parties have executed this instrument under their several seals at Milwaukee, Wisconsin, this day of 20, the name and corporate seal of each corporate party being hereto affixed and this instrument signed by its duly authorized representative.

Bidder Witnesses **(Seal)**
(Bidder)

.....
By
.....
(Name and Title)

Surety Witnesses
(Surety)

.....
..... By
.....
(Attorney-in-Fact or Agent)

(Seal of Surety)

Name of Surety Contact Person _____ and Phone Number _____
(Please Print)

NOTE: The affidavit on the following page must be properly executed before this bond will be approved.

AFFIDAVIT

**STATE OF WISCONSIN }
MILWAUKEE COUNTY }**

SS

.....

being first duly sworn, on oath deposes and says that he is

(Attorney-in-Fact or Agent)

of

(Surety)

surety on the within bid bond executed by

Affiant further deposes and says that no city official or city employee of the City of Milwaukee has any interest, directly or indirectly in, or is receiving any premium, commission, fee or other thing of value on account of, the sale or furnishing of said bid bond.

.....

Subscribed and sworn to before me this

..... day of 20

.....

Notary Public, Milwaukee County, Wisconsin

My commission expires

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal,
(Corporation, Partnership, or Individual)

and _____

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

(Name of Owner)

(Address of Owner)

hereinafter called Owner, .in the penal sum of _____

_____ Dollars, \$ (_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____ 20____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and .if he shall satisfy all claims and demands incurred Under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any wise effect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in four (4) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20_____.

Principal (SEAL)

Witnesses

_____ By _____

_____ Title

_____ Address

_____ Surety

Surety Witnesses

_____ Surety - Contract MAILING Address

_____ By _____
Attorney-in-Fact or Agent

(SEAL OF SURETY)

Name of Surety Contact Person _____ and Phone Number _____
(Please Print)

NOTE: The affidavit on the following page must be properly executed before this bond will be approved. Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list and be authorized to transact business in the State where the project is located.

AFFIDAVIT

(With Performance Bond)

STATE OF WISCONSIN)
MILWAUKEE COUNTY)

_____, being first duly sworn,
on oath deposes and says that he/she is _____
(attorney-in-fact

_____ of _____
or agent) (Bonding Company)

and is duly authorized to sign for and on behalf of said company, surety on the attached contract, executed by ____

(Contractor)

Affiant further deposes and says that no city official, or city employee, of the City of Milwaukee has an), interest, directly or indirectly, or is receiving any premium, commission, fee, or other thing of value, on account of the sale or furnishing of this bond, undertaking or contract of indemnity, guaranty, or suretyship, in connection with the above-mentioned contract.

(Signature)

Subscribed and sworn to before me this
_____ day of _____, 20____.

Notary Public, Milwaukee Co. Wisconsin

My commission expires _____.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal,
(Corporation, Partnership, or Individual)

and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

(Name of Owner)

(Address of Owner)

hereinafter called Owner, .in the penal sum of _____

_____ Dollars, \$ (_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____ 20____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and .if he shall satisfy all claims and demands incurred Under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any wise effect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in four (4) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20_____.

Principal (SEAL)

Witnesses

_____ By _____

_____ Title

_____ Address

_____ Surety

Surety Witnesses

_____ Surety - Contract MAILING Address

_____ By _____
Attorney-in-Fact or Agent

(SEAL OF SURETY)

Name of Surety Contact Person _____ and Phone Number _____
(Please Print)

NOTE: The affidavit on the following page must be properly executed before this bond will be approved. Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list and be authorized to transact business in the State where the project is located.

AFFIDAVIT

(With Payment Bond)

STATE OF WISCONSIN)
MILWAUKEE COUNTY)

_____, being first duly sworn,
on oath deposes and says that he/she is _____
(attorney-in-fact

_____ of _____
or agent) (Bonding Company)

and is duly authorized to sign for and on behalf of said company, surety on the attached contract,
executed by _____

(Contractor)

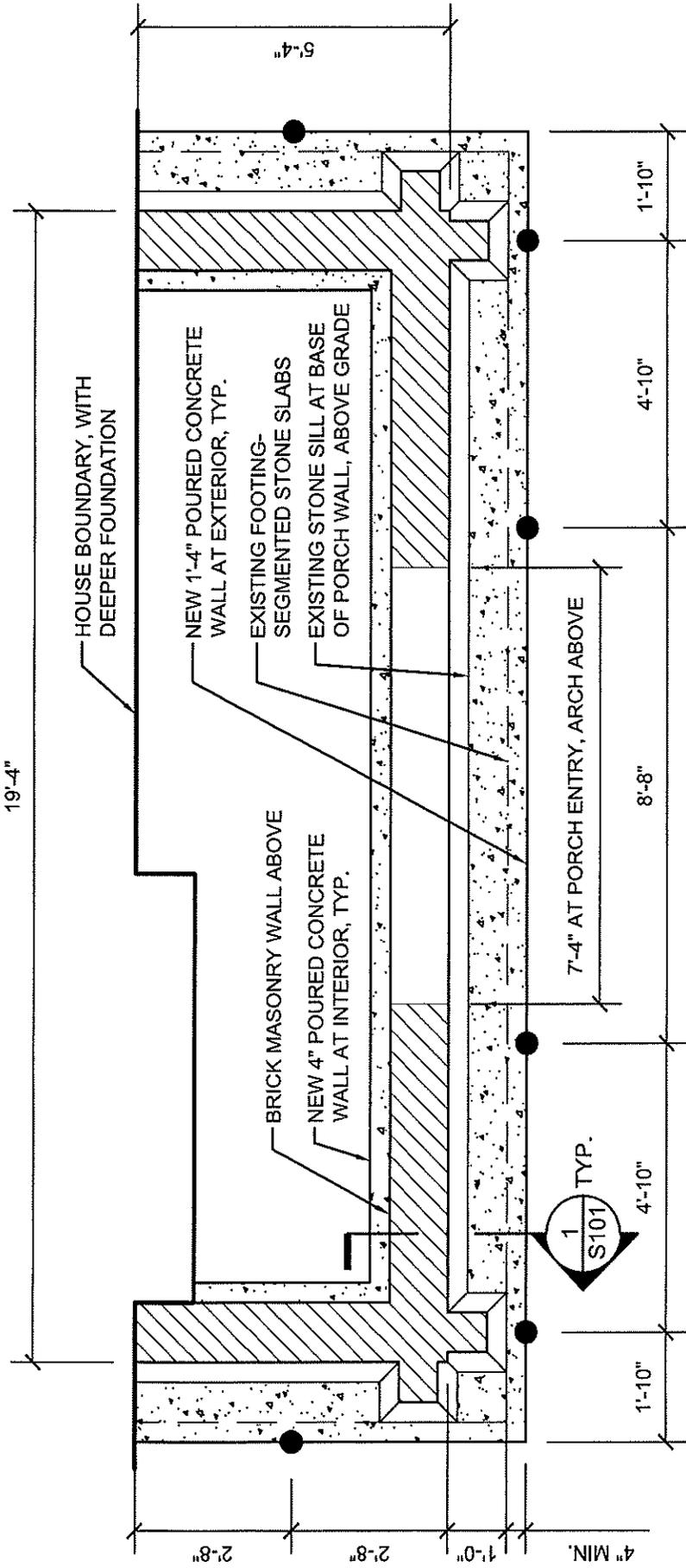
Affiant further deposes and says that no city official, or city employee, of the City of Milwaukee has an), interest, directly or indirectly, or is receiving any premium, commission, fee, or other thing of value, on account of the sale or furnishing of this bond, undertaking or contract of indemnity, guaranty, or suretyship, in connection with the above-mentioned contract.

(Signature)

Subscribed and sworn to before me this
_____ day of _____, 20_____.

Notary Public, Milwaukee Co. Wisconsin

My commission expires _____.



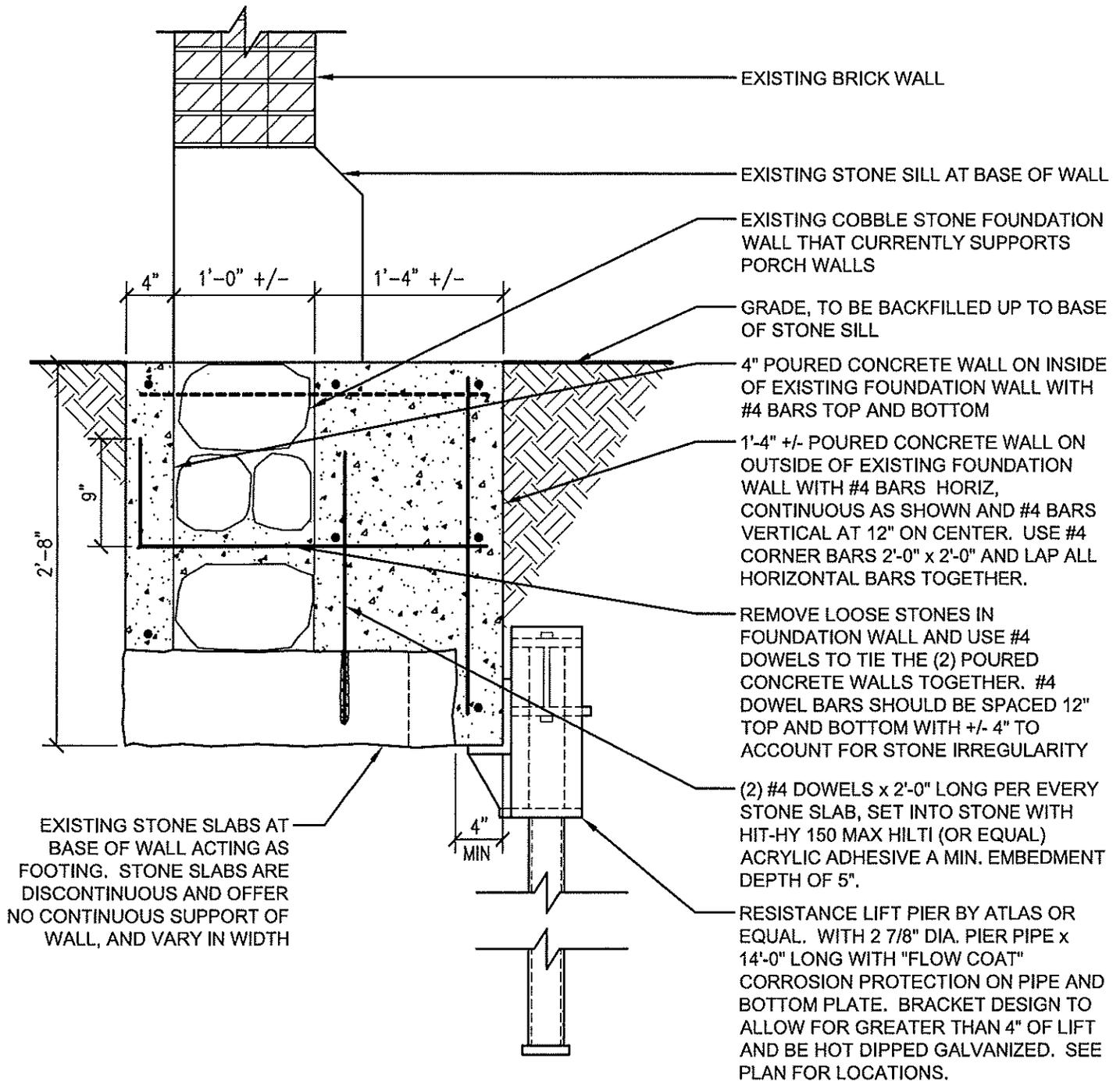
KEY	
●	AP-CL-UF2875.16 (GA) [14'-0"] RESISTANCE LIFT PIER BY ATLAS OR EQUAL. A TOTAL OF (6) REQUIRED.

1 FOUNDATION PLAN

SCALE: 3/8" = 1'-0"

REF.

CITY OF MILWAUKEE DEPT OF CITY DEVELOPMENT REDEV. AUTHORITY 809 N. BROADWAY MILWAUKEE, WI 53202	 BLOOM COMPANIES, LLC Infrastructure Innovation and Ingenuity <small>10501 W. Research Drive Milwaukee, WI 53228 Phone: (414) 771-3390 Fax: (414) 771-4480</small>	PORCH MODIFICATION 3402 W. ST. PAUL AVE MILWAUKEE, WI 53208		<small>Graphic Scale</small> 
		<small>Project Number</small> BM1-3134	<small>Set Type</small> REPORT	<small>Date Issued</small> 08/26/11
<small>Sheet Title:</small> Foundation Plan				



1 SECTION- FOUNDATION WALL

REF.

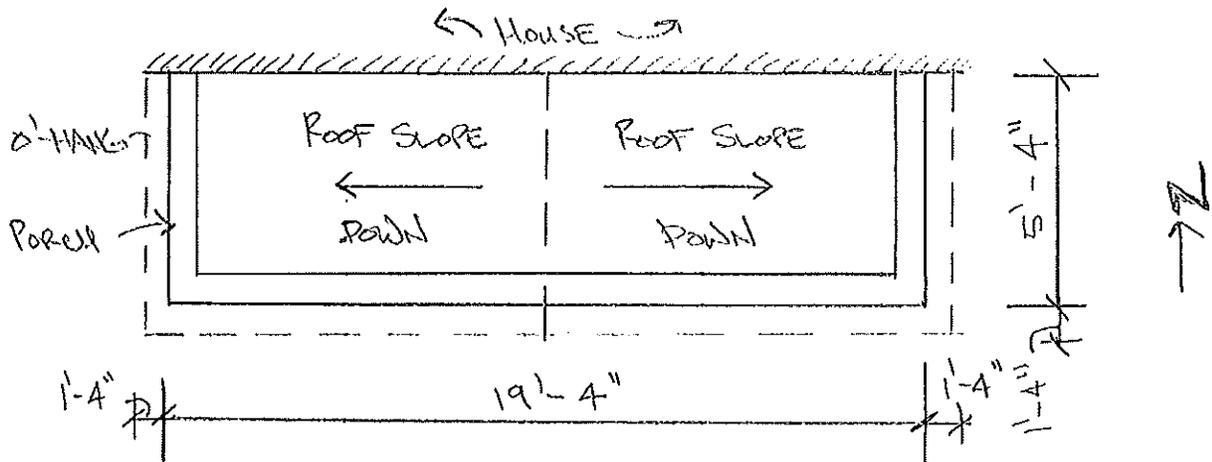
SCALE: 1" = 1'-0"

<p>CITY OF MILWAUKEE DEPT OF CITY DEVELOPMENT REDEV. AUTHORITY</p> <p>809 N. BROADWAY MILWAUKEE, WI 53202</p>	 <p>BLOOM COMPANIES, LLC Infrastructure. Innovation and Ingenuity</p> <p>10501 W. Research Drive Milwaukee, WI 53226 Phone: (414) 771-3390 Fax: (414) 771-4490</p>	<p>PORCH MODIFICATION 3402 W. ST. PAUL AVE MILWAUKEE, WI 53208</p>	<p>Graphic Scale 0 1' 2' 3' 6' 1'</p>
			<p>Project Number BM1-3134</p>
			<p>Set Type REPORT</p>
			<p>Date Issued 08/26/11</p>
		<p>Sheet Title: Section Details</p>	<p>Sheet Number S101</p>

Client: CITY OF MILWAUKEE	Page: 1/4
Project: 2402 W. ST. PAUL	Proj. No:
Calculations For:	Prepared By: JLG
	Date: 8-24-11
	Reviewed By:
	Date:

DESIGN SUPPLEMENTAL FOUNDATIONAL SYSTEM
AT FRONT PORCH

OVERALL PLAN & DIMENSIONS:



ROOF DEAD LOAD = 15 #/SF
ROOF SNOW LOAD = 30 #/SF

CALC LOADS + WEIGHTS

LOAD TO END WALLS = $(15 + 30)(11') = 495 \text{ #/LF}$
END WALLS ARE 10'-2" OF BRICK + 2'-0" GROUND
BRICK IS (3) WYTHES WIDE ∴

$$\text{WALL WEIGHT} = (40)(3 \text{ WYTHES})(10.167') + 180(1.33)(2')$$

$$= 1700 \text{ #/LF}$$

FRONT WALL, TRIB ROOF WIDTH = $1.33 + 1.33 = 2.67'$
LOAD TO FRONT WALL = $(15 + 30)(2.67) = 120.2 \text{ #/LF}$
WEIGHT OF PORCH FLOOR = $(15 + 40)(5.33/2) = 146.66$

FRONT WALL PIERS ARE 14'-2" OF BRICK + 2'-0" GROUND

$$\text{WALL WEIGHT} = (40)(3 \text{ WYTHES})(14.167') + 180(1.33)(2')$$

$$= 2180 \text{ #/LF}$$



Client: CITY OF MILWAUKEE	Page: 2/4
Project: 3402 W. ST. PAUL	Proj. No:
Calculations For:	Prepared By: JLG
	Reviewed By:
	Date: 8-24-11
	Date:

DETERMINE WEIGHT OF BRICK AT ARCHED OPENING (BRICK + ROOF ABOVE)

WIDTH OF ARCHED OPENING = 7'-4"
 HEIGHT OF BRICK ABOVE ARCH = 6'-8"

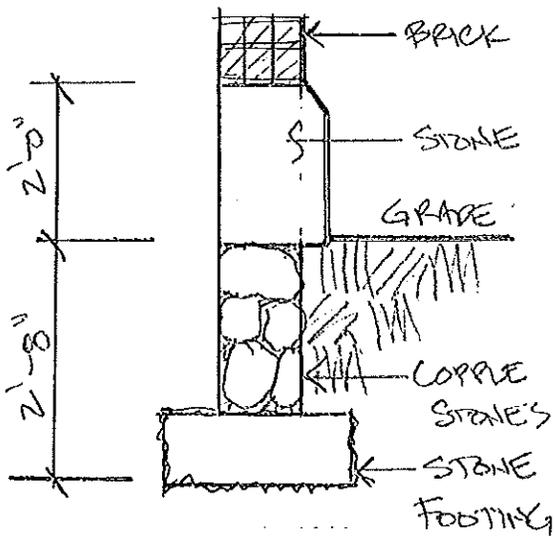
ROOF + BRICK ARCH $(120.2 + (3)40(6.67)) \times 7.33/2$
 PORTION AT ENDS = 3375.4 #

CALCULATE WEIGHT OF BRICK, PORCH BELOW ARCH

HEIGHT OF BRICK = 2'-0" + 2' OF STONE
 WALL WEIGHT = $(40)(3 \text{ WYTHES})(2') + 180(1.33)(2')$
 = 720 #/LF
 + PORCH = $(15 + 40)(5.33/2) = 146.7$

CALCULATE WEIGHT OF EXISTING + SUPPLEMENTAL FOUNDATION SYSTEM

FOUNDATION GOES DOWN 2'-8" FROM GRADE



EXISTING FOUNDATION

WEIGHT OF COPPER STONES & STONE FOOTINGS

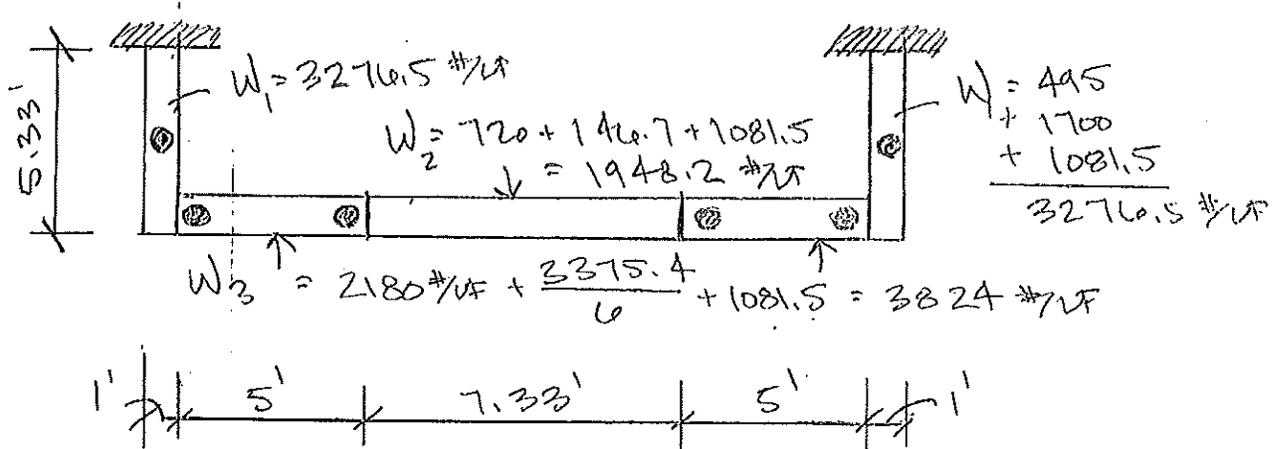
$180(1')(2') + 180(1.67)(2')$
 = 681.2 #/LF

ADD CONCRETE WALL
 ASSUME 1'-0" THICK

+ $150(1')(2.67) = 400.5 \text{ #/LF}$

$\Sigma \text{ FOUNDATION} = 681.2 + 400.5$
 = 1081.5 #/LF

LOAD / WEIGHT PORCH PLAN:



TOTAL WEIGHT OF PORCH STRUCTURE + FOUNDATION
 $= (2)5.33(3276.5) + (2)5'(3824) + 7.33(1948.2)$
 $= 87,453.6 \text{ \#}$

USE (6) RESISTANCE PIERS = 
 MAX LOAD ON A RESISTANCE PIER

$P_{MAX} = (2.5')(3824) + (3.5')(1928.4) = 16,309 \text{ \#} \leftarrow$
 OR

$P_{MAX} = (2.5')(3824) + (1.78')(3276.5) = 15,392 \text{ \#}$

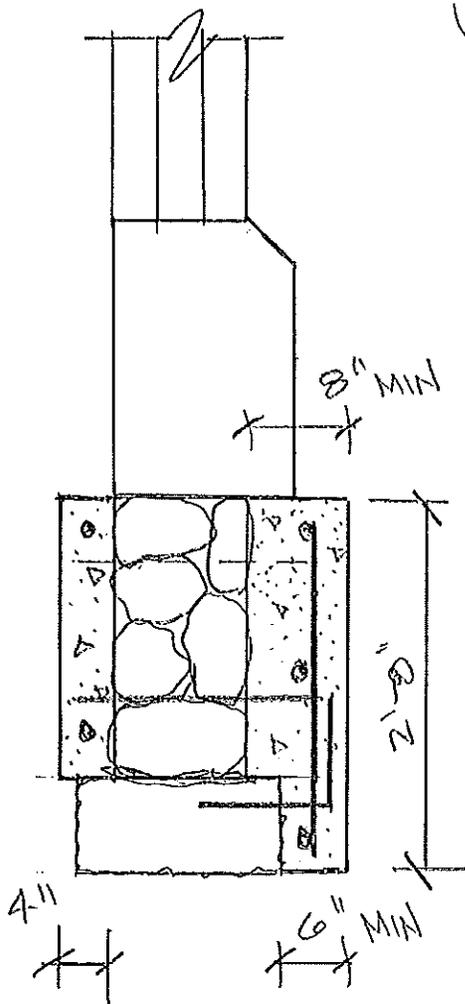
$P_{MAX} = 16.31 \text{ K}$ USE - ATLAS CONTINUOUS LIFT PIER

AP-CL-UF 2875.165 (GA) [14'-0"]
 RATED FOR 20K ALLOWABLE > 16.31 K OK.

USE (6) 27/8" DIA. ATLAS RESISTANCE LIFT
 PIERS WITH HOT RIPPED GALV. BRACKETS
 & "FLOW CONT" COLLISION PROTECTION ON
 PIER PIPE (14'-0" LONG)

Client: CITY OF MILWAUKEE	Page: 4/4
Project: 3402 ST. PAUL	Proj. No:
Calculations For:	Prepared By: JLG
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	Reviewed By:
	Date:

DESIGN CONCRETE WALL TO HOLD STONE WALL
FOUNDATION TOGETHER AND TO TRANSFER
WALL WEIGHT TO RESISTANCE PIERS



$$W_u = 1.4(1948.5) = 2728 \text{ #/LF}$$

SPAN, 8'-0" @ FRONT

$$M_u = \frac{W_u L^2}{8} = \frac{2728(8)^2}{8}$$

$$= 21,824 \text{ #-ft}$$

$$d = 32" - 3" = 29"$$

$$\#4 \text{ BAR} = 1.20 \text{ in}^2$$

$$d M_u = \frac{(1.20)(60)}{12} \left(29 - \frac{(1.20)(60)}{17(3)(8)} \right)$$

$$= 25.84 \text{ #-ft}$$

> 21,824 #-ft ok.

USE #4 BAR AT BOTTOM OF OUTSIDE WALL, CONTINUOUS, ALSO REMOVE LOOSE STONES AND PATCH THROUGH COBBLES FROM ONE WALL TO THE OTHER TO MAKE WALL COMPOSITE





