



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 563-2005**

**SEWER CLEANING AND TELEVISIONING – WESTWOOD AND ST. CHARLES  
WASTEWATER SEWER DISTRICTS – CONTRACT NO. 41**

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## **PART B - BIDDING PROCEDURES**

### **B1. PROJECT TITLE**

- B1.1 SEWER CLEANING AND TELEVISIONING – WESTWOOD AND ST. CHARLES WASTEWATER SEWER DISTRICTS – CONTRACT NO. 41

### **B2. SUBMISSION DEADLINE**

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, November 2, 2005.
- B2.2 Bid Submissions determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.
- B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. SITE INVESTIGATION**

- B3.1 Further to GC:3.1, the Bidder may view the Site without making an appointment.
- B3.2 The Bidder is advised that sewers may be located in easements through private property or City owned parklands and Right-of Ways where there may exist no paved access. It will be the Contractors/Bidders responsibility to identify these sewers and arrange for access and to restore any surface damage to private and City owned property.

### **B4. ENQUIRIES**

- B4.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.
- B4.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.
- B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.
- B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

### **B5. ADDENDA**

- B5.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.
- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet site for addenda shortly before submitting his Bid.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B6. SUBSTITUTES**

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
  - (c) identify any anticipated cost or time savings that may be associated with the substitute;
  - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
  - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.

B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative shall base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B15.

B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

## **B7. BID SUBMISSION**

B7.1 The Bid Submission consists of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices;
- (c) Form G1: Bid Bond and Agreement to Bond, or  
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or  
a certified cheque or draft;

B7.2 All components of the Bid Submission shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely in ink, to constitute a responsive Bid.

B7.3 The Bid Submission shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.

B7.3.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.

B7.4 Bid Submissions submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B7.5 Bid Submissions shall be submitted to:

The City of Winnipeg  
Corporate Finance Department  
Materials Management Branch  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1

## **B8. BID**

B8.1 The Bidder shall complete Form A: Bid, making all required entries.

B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
- (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 12 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
  - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
  - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
  - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid shall be printed below such signatures.
- B8.4.2 All signatures shall be original and shall be witnessed except where a corporate seal has been affixed.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid Submission and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 Notwithstanding GC.12.2.3(c), prices on Form B: Prices shall not include the Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

## **B10. QUALIFICATION**

- B10.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba;
  - (b) be responsible and not be suspended, debarred or in default of any obligation to the City;
  - (c) be financially capable of carrying out the terms of the Contract;
  - (d) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract;
  - (e) have successfully carried out work, similar in nature, scope and value to the Work;

- (f) employ only Subcontractors who:
  - (i) are responsible and not suspended, debarred or in default of any obligation to the City (a list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>); and
  - (ii) have successfully carried out work similar in nature, scope and value to the portion of the Work proposed to be subcontracted to them, and are fully capable of performing the Work required to be done in accordance with the terms of the Contract;
- (g) have a written workplace safety and health program in accordance with The Workplace Safety and Health Act (Manitoba);

B10.2 Further to B10.1(g), the Bidder shall, within three (3) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

- (a) a valid COR certification number under the Certificate of Recognition (COR) Program - Option 1 administered by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
- (b) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association; or
- (c) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.)

B10.3 The Bidder shall be prepared to submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B10.4 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

## **B11. BID SECURITY**

B11.1 The Bidder shall provide bid security in the form of:

- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
- (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
- (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.

B11.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.

B11.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.

B11.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B11.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.

B11.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.

B11.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

## **B12. OPENING OF BIDS AND RELEASE OF INFORMATION**

B12.1 Bid Submissions will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Branch, or in such other office as may be designated by the Manager of Materials.

B12.1.1 Bidders or their representatives may attend.

B12.1.2 Bid Submissions determined by the Manager of Materials, or his designate, to not include the bid security specified in B11 will not be read out.

B12.2 After the public opening, the names of the Bidders and their Total Bid Prices as read out (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B12.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B12.4 The Bidder is advised that any information contained in any Bid Submission may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

## **B13. IRREVOCABLE BID**

B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.

B13.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid.

## **B14. WITHDRAWAL OF BIDS**

B14.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

- B14.1.1 Notwithstanding GC:23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B14.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials shall:
- (a) retain the Bid Submission until after the Submission Deadline has elapsed;
  - (b) open the Bid Submission to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
  - (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.
- B14.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B13.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

## **B15. EVALUATION OF BIDS**

- B15.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity (pass/fail);
  - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
  - (c) Total Bid Price;
  - (d) economic analysis of any approved alternative pursuant to B6.
- B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements if the interests of the City so require.
- B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid Submission or in other information required to be submitted, that he is responsible and qualified.
- B15.4 Further to B15.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B15.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

## **B16. AWARD OF CONTRACT**

- B16.1 The City will give notice of the award of the Contract by way of a letter of intent, or will give notice that no award will be made.

- B16.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B16.2.1 Without limiting the generality of B16.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
  - (b) the prices are materially in excess of the prices received for similar work in the past;
  - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
  - (d) only one Bid is received; or
  - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B16.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid.

## **PART C - GENERAL CONDITIONS**

### **C1. GENERAL CONDITIONS**

C1.1 The *General Conditions for Construction Contracts* (Revision 2000 11 09) are applicable to the Work of the Contract.

C1.1.1 The *General Conditions for Construction Contracts* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

## **PART D - SUPPLEMENTAL CONDITIONS**

### **GENERAL**

#### **D1. GENERAL CONDITIONS**

- D1.1 In addition to the *General Conditions for Construction Contracts*, these Supplemental Conditions are applicable to the Work of the Contract.
- D1.2 The General Conditions are amended by striking out "The City of Winnipeg Act" wherever it appears in the General Conditions and substituting "The City of Winnipeg Charter".
- D1.3 The General Conditions are amended by striking out "Tender Package" wherever it appears in the General Conditions and substituting "Bid Opportunity".
- D1.4 The General Conditions are amended by striking out "Tender Submission" wherever it appears in the General Conditions and substituting "Bid Submission".
- D1.5 The General Conditions are amended by deleting GC:6.16 and GC:6.17. The City of Winnipeg is now within the jurisdiction of the Manitoba Ombudsman pursuant to The Ombudsman Act.

#### **D2. SCOPE OF WORK**

- D2.1 The Work to be done under the Contract shall consist of cleaning and televising of all wastewater and combined sewers, and manholes in the Westwood and St. Charles Wastewater Sewer Districts in the City of Winnipeg.

#### **D3. DEFINITIONS**

- D3.1 When used in this Bid Opportunity:
- (a) "NAAPI" means North American Association of Pipeline Inspectors;
  - (b) "WRc" means "Water Research Centre". The NAAPI accepted standard for sewer condition coding and assessment was originally drafted by WRc.;

#### **D4. CONTRACT ADMINISTRATOR**

- D4.1 The Contract Administrator is Dillon Consulting Limited, represented by:  
Mr. John Ewing, P. Eng.  
200-895 Waverley Street  
Winnipeg, Manitoba R3T 5P4  
Telephone No. (204) 453-2301  
Facsimile No. (204) 452-4412
- D4.2 At the pre-construction meeting, Mr. Ewing will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

#### **D5. CONTRACTOR'S SUPERVISOR**

- D5.1 At the pre-construction meeting, the Contractor shall identify his designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

## **D6. NOTICES**

- D6.1 Except as provided for in GC:23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.
- D6.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.3, D6.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D4.1.
- D6.3 All notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following address or facsimile number:
- The City of Winnipeg  
Chief Administrative Officer Secretariat  
Administration Building, 3rd Floor  
510 Main Street  
Winnipeg MB R3B 1B9  
Facsimile No.: (204) 949-1174
- D6.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:
- The City of Winnipeg  
Corporate Services Department  
Legal Services Division  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

## **D7. FURNISHING OF DOCUMENTS**

- D7.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him at cost.

## **SUBMISSIONS**

### **D8. SAFE WORK PLAN**

- D8.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in GC:4.1 for the return of the executed Contract.
- D8.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

## **D9. INSURANCE**

- D9.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) all inclusive, with The City of Winnipeg being added as an additional insured, with a cross-liability clause, such liability policy to also contain a contractual liability, an unlicensed motor vehicle liability and a products and completed operations endorsement to remain in place at all times during the performance of the Work and throughout the warranty period;
  - (b) automobile liability insurance for owned and non-owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- D9.2 Deductibles shall be borne by the Contractor.
- D9.3 The Contractor shall provide the City Solicitor with a certificate of insurance of each policy, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in GC:4.1 for the return of the executed Contract.
- D9.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

## **D10. PERFORMANCE SECURITY**

- D10.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
  - (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
  - (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.
- D10.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.
- D10.2 If the bid security provided in his Bid Submission was not a certified cheque or draft pursuant to B11.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in GC:4.1 for the return of the executed Contract.

## **D11. SECURITY CLEARANCE**

- D11.1 Each individual proposed to perform Work:
- (i) on private property;
- shall be required to obtain a Criminal Record Search Certificate from the police service having jurisdiction at his place of residence.

- D11.2 Prior to the commencement of any Work, and during the term of the Contract if additional or replacement individuals are proposed to perform Work, the Contractor shall supply the Contract Administrator with a Criminal Record Search Certificate obtained not earlier than one (1) year prior to the Submission Deadline, or a certified true copy thereof, for each individual proposed to perform Work within City facilities or on private property.
- D11.3 Any individual for whom a Criminal Record Search Certificate is not provided, or for whom a Criminal Record Search Certificate indicates any convictions or pending charges related to property offences or crimes against another person, will not be permitted to perform any Work within City facilities or on private property.
- D11.4 Any Criminal Record Search Certificate obtained thereby will be deemed valid for the duration of the Contract subject to a repeated records search as hereinafter specified.
- D11.5 Notwithstanding the foregoing, at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require an updated criminal records search. Any individual who fails to provide a satisfactory Criminal Record Search Certificate as a result of a repeated criminal records search will not be permitted to continue to perform Work under the Contract within City facilities or on private property.

## **SCHEDULE OF WORK**

### **D12. COMMENCEMENT**

- D12.1 The Contractor shall not commence any Work until he is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.
- D12.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
    - (i) evidence that the Contractor is in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba;
    - (ii) evidence of the workers compensation coverage specified in GC:6.14;
    - (iii) the Safe Work Plan specified in D8;
    - (iv) evidence of the insurance specified in D9;
    - (v) the performance security specified in D10;
    - (vi) the security clearances specified in D11;
    - (vii) the sample inspection video and data file for each CCTV camera as specified in CW 2145;
    - (viii) operator and coder Certification as specified in CW 2145.
  - (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.
- D12.3 Commencement of the Work shall be at the discretion of the Contractor provided the commencement date will allow for the achievement of Substantial Performance in accordance with D15.

### **D13. HOURS OF WORK**

- D13.1 All Work shall be carried out between the hours of 07:00 and 22:00 Monday to Friday and between 09:00 and 21:00 Saturday.

D13.2 No Work shall be performed outside the hours stated in D13.1 or on Sunday or statutory or civic holidays without written permission from the Contract Administrator. Approval will only be granted if it is in the best interests of the City to do so.

#### **D14. WORKING DAYS**

D14.1 Further to GC:1.1(gg), should the Contractor choose to work on a Saturday or be permitted to work on Sunday, or a statutory or civic holiday as specified in D13, these days shall be classified as Working Days.

D14.2 Further to GC:1.1(gg), the Contract Administrator's determination of whether or not atmospheric and Site conditions are such that a Working Day is deemed to have elapsed may be based at one time on one type of work while at another time a Working Day may be based on another type of work. When more than one type of major work is involved, the quantity of equipment that must be able to work in order to meet the requirements of a Working Day may vary considerably from that specified in the General Conditions.

D14.3 In the event that incidental work is behind schedule which, in the opinion of the Contract Administrator, should have been or could have been carried out by the Contractor in conjunction with or immediately following work of a major type, the City hereby reserves the right to charge Working Days on the incidental work until such time as it is up to schedule.

D14.4 When the major type of work involves restoration of the site to the condition it was prior to rainfall, Working Days shall not be charged.

D14.5 The Contract Administrator will furnish the Contractor with a daily record for each major type of work showing various information concerning the equipment, the time it worked, could have worked and Working Days charged. This report is to be signed each day by an authorized representative of the Contractor.

#### **D15. SUBSTANTIAL PERFORMANCE**

D15.1 The Contractor shall achieve Substantial Performance within fifty-five (55) consecutive Working Days of the commencement of the Work as specified in D12 or by October 2, 2006, whichever occurs first.

D15.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D15.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

#### **D16. TOTAL PERFORMANCE**

D16.1 The Contractor shall achieve Total Performance within ten (10) consecutive Working Days of the date of Substantial Performance as specified in D15.

D16.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D16.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

**D17. LIQUIDATED DAMAGES**

D17.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the City one thousand dollars (\$1000) per Working Day for each and every Working Day, following the day fixed herein for Substantial Performance during which such failure continues.

D17.2 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City five hundred dollars (\$500) per Working Day, for each and every Working Day, following the day fixed herein for Total Performance during which such failure continues.

D17.3 The amount specified for liquidated damages in D17.1 and D17.2 is based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Substantial or Total Performance by the days fixed herein for same.

D17.4 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

**CONTROL OF WORK**

**D18. JOB MEETINGS**

D18.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.

D18.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

**D19. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

D19.1 Further to GC:6.26, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

**FORM H1: PERFORMANCE BOND**  
(See D10)

KNOW ALL MEN BY THESE PRESENTS THAT

\_\_\_\_\_ ,  
(hereinafter called the "Principal"), and

\_\_\_\_\_ ,  
(hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), in the sum of

\_\_\_\_\_ dollars (\$\_\_\_\_\_.)

of lawful money of Canada to be paid to the Obligee, or its successors or assigns, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a written contract with the Obligee dated the

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, for:

BID OPPORTUNITY NO. 563-2005

SEWER CLEANING AND TELEVISIONING – WESTWOOD AND ST. CHARLES WASTEWATER SEWER DISTRICTS – CONTRACT NO. 41

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall:

- (a) carry out and perform the Contract and every part thereof in the manner and within the times set forth in the Contract and in accordance with the terms and conditions specified in the Contract;
- (b) perform the Work in a good, proper, workmanlike manner;
- (c) make all the payments whether to the Obligee or to others as therein provided;
- (d) in every other respect comply with the conditions and perform the covenants contained in the Contract; and
- (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, and demands of every description as set forth in the Contract, and from all penalties, assessments, claims, actions for loss, damages or compensation whether arising under "The Workers Compensation Act", or any other Act or otherwise arising out of or in any way connected with the performance or non-performance of the Contract or any part thereof during the term of the Contract and the warranty period provided for therein;

THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Surety shall not, however, be liable for a greater sum than the sum specified above.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as Principal, and that nothing of any kind or matter whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of Sureties to the contrary notwithstanding.

IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ .

SIGNED AND SEALED  
in the presence of:

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Name of Principal)

Per: \_\_\_\_\_ (Seal)

Per: \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

By: \_\_\_\_\_ (Seal)  
(Attorney-in-Fact)



All demands for payment shall specifically state that they are drawn under this Standby Letter of Credit.

Subject to the condition hereinafter set forth, this Standby Letter of Credit will expire on

\_\_\_\_\_  
(Date)

It is a condition of this Standby Letter of Credit that it shall be deemed to be automatically extended from year to year without amendment from the present or any future expiry date, unless at least 30 days prior to the present or any future expiry date, we notify you in writing that we elect not to consider this Standby Letter of Credit to be renewable for any additional period.

This Standby Letter of Credit may not be revoked or amended without your prior written approval.

This credit is subject to the Uniform Customs and Practice for Documentary Credit (1993 Revision), International Chamber of Commerce Publication Number 500.

\_\_\_\_\_  
(Name of bank or financial institution)

Per: \_\_\_\_\_  
(Authorized Signing Officer)

Per: \_\_\_\_\_  
(Authorized Signing Officer)

## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS, STANDARD DETAILS AND DRAWINGS

- E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.1.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- E1.1.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.1.3 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.2 The following Drawings are applicable to the Work:

Drawing No.	Drawing Name/Title
	Cover Sheet
055293, Drawing 1	Westwood Sewer Network Identifiers
055293, Drawing 2	Westwood Sewer Main Sizes
055293, Drawing 3	St. Charles Sewer Network Identifiers
055293, Drawing 4	St. Charles Sewer Main Sizes
D-8211	Water Supply Hose Traffic Ramp

- E1.3 Appendix A is applicable to the work.

#### E2. CONFINED SPACE ENTRY

- E2.1 The Contractor's attention is drawn to the Province of Manitoba Workplace Safety and Health Act ("the Act"), and the Regulations and Guidelines there-under pertaining to Confined Entry Work and in particular the requirements for conducting hazard/risk assessments and providing personal protective equipment (PPE).
- E2.2 Use Supplied Air Breathing Apparatus conforming to the requirements of the Act, Regulations and Guidelines where confined entry is required in sewers and manholes to allow for completion or inspection the Work.

#### E3. WATER SUPPLY

- E3.1 Further to specifications CW 1120, section 3.1, CW 2140 and CW 2145, water supply for the Work may be taken from City of Winnipeg hydrants in accordance with the following:
- Determine the number of hydrants to be used at any one time and arrange for an equal number of "various locations" hydrant use permits to be obtained for the contract. The number of hydrants used for water supply shall not exceed the number of permits taken out. The Bid Opportunity number shall be noted on each permit.
  - Submit a list of proposed hydrant locations to the City of Winnipeg Water Services Division (WSD) for approval. If a proposed hydrant location is not approved, the Contractor shall submit an alternate hydrant location for approval.
  - Only hydrants approved by WSD shall be used for water supply.

- (d) The Contractor is permitted to turn approved hydrants on and off provided the Contractor has received training by Water Services Division and the turn-ons and turn-offs are done in the presence of the Contract Administrator.
- (e) WSD may at their discretion, instruct the Contractor to make the following arrangements for hydrant turn-ons and turn-offs:
  - (i) Contact WSD for hydrant turn-ons and turn-offs required between 0800 hours and 1500 hours Monday to Friday. Notice for turn-ons and turn-offs shall be provided on the previous business day.
  - (ii) Contact Emergency Services Branch (986-2626) with a minimum of 2 hours notice for hydrant turn-ons and turn-offs required outside of the above hours.
  - (iii) The Contractor shall wait at the hydrant from the requested turn-on or turn-off time until the City arrives to turn on or turn off the hydrant.
- (f) Hydrants approved for use shall be considered to be "in the Contractor's control" from the time the City has turned the hydrant on until the City has turned the hydrant off.
- (g) Between November 1 and April 30 of any year the Contractor shall take all necessary precautions to prevent freezing of hydrants and related appurtenances for hydrants in their control and shall be responsible to pump out hydrants turned off by Emergency Services.
- (h) If a hydrant or appurtenance is damaged due to freezing or improper turn on or turn off procedures while in the Contractor's control, WSD will assess the damage and determine if WSD will repair the damage or if the Contractor will be responsible to repair the damage. Costs for repairs completed by WSD will be deducted from payments owing the Contractor. Repairs completed by the Contractor will be at the Contractor's expense.
- (i) Erect and maintain signage (bump signs) warning oncoming traffic of hose crossings to the satisfaction of the Contract Administrator and the Manual of Temporary Traffic Control. Construct ramps as shown on attached drawing D-8211.

E3.2 Further to Section 3.7 of CW 1120, charges incurred for the permit and water meters shall be paid for by the Contractor when taken out. The Contractor shall forward the invoice to the Contract Administrator for reimbursement. The billing for water usage sent to the Contractor shall be forwarded to the Contract Administrator for payment. The Bid Opportunity number shall be noted on each permit.

#### **E4. DEBRIS DISPOSAL**

E4.1 This specification amends and supplements specification CW 2140.

E4.2 If the Contractor intends to use a sewer debris transfer/dewatering facility, this facility must meet all Provincial and local government environmental regulations and requirements. If this facility is located within the City of Winnipeg it must also be approved by the Industrial Waste Control Branch of the Water and Waste Department.

E4.2.1 Provide the Contract Administrator with copies of any required licences, permits or relevant documentation prior to the use of any debris transfer facility.

E4.3 Revise clause 3.9.2 to read "Decant excess water from all debris removed from sewers and catch basins. Debris is to have a maximum slump of 150 millimetres, when tested in accordance with CSA A23.2-5C, prior to disposal."

E4.4 Further to clause 3.9.4, debris removed from City sewers may be taken to the BFI disposal facility in Rosser as an alternate disposal site to the Brady Road Landfill. The City does not guarantee that BFI will accept sewer debris and will not compensate the Contractor for extra travel time for disposal at Brady Road Landfill.

- E4.4.1 All liquid, either decanted from debris on site or from any dewatering facility, must be returned to the sewer of origin as soon as possible.
- E4.4.2 All vehicles used to transport liquid sewage within City limits must be licensed by the Industrial Waste Control Branch of the Water and Waste Department.
- E4.5 Further to clause 3.9.5, Brady Road Landfill will now be charging the Contractor for the disposal of all debris.
- E4.6 Further to clause 3.10.1, all debris removed from Catch Basins must be handled as specified in section 3.9 and shall be disposed of at a landfill facility as described herein for sewer debris.
- E4.7 Debris disposal shall be measured on a weight basis and paid for at the Contract Unit Price per tonne for "Debris Disposal". The Weight to be paid for shall be the total number of tonnes of sewer debris properly disposed of, accepted and measured by the Contract Administrator, which price shall be payment in full for performing all operations herein described and all other items incidental to the disposal of sewer or catch basin debris.
- E4.7.1 Provide weigh tickets obtained from disposal facility to the Contract Administrator. Payment will only be made upon receipt of weigh tickets.
- E4.7.2 The Contractor is to ensure that the tare weight given to the scale at the landfill includes any onboard flushing water. The Contract Administrator may require that combination units used to dispose of debris be weighed immediately after the debris has been dumped to confirm vehicle tare weights.
- E4.7.3 The Contractor is to ensure that only debris originating from sewers cleaned under this contract is measured for payment.

## **E5. SEWER AND MANHOLE INSPECTION**

- E5.1 This specification amends and supplements specification CW 2145.
- E5.2 Further to section 3.8, the requirements stated for capture of digital inspections are a minimum only. The Contractor may need to record at a higher resolution in order to achieve the required video quality.
- E5.3 Further to section 3.17, inspections must be made with adequate lighting free of shadows or glare with two full pipe segments illuminated and visible at all times. Picture quality must be such that the condition of the sewer can be accurately assessed. Dark, grainy, out-of-focus inspections will not be accepted.
- E5.4 Further to section 3.17, a flusher must be used during all inspections to remove any debris in the pipe that may have accumulated since cleaning and to reduce the flow in the pipe to a minimum.
- E5.5 The contract drawings are based on information contained in the City's GIS database. If the Contractor has trouble interpreting the drawings, or if they believe them to be wrong, the on-site inspector should be approached for assistance/clarification.
- E5.5.1 The Contractor shall note the exact details and measurements of any discrepancies on a "GIS Error Identification Form" which will be provided in MS Word or another format suitable to the Contractor along with a "PDF" map of the district for use in the Inspection Vehicle.
- E5.5.2 GIS Error Identification Forms should be submitted to the on-site inspector the same day that the error is discovered.

## **E6. TRAFFIC CONTROL AND MAINTENANCE OF ACCESS**

- E6.1 Further to section 3.7 of CW 1130 of the General Requirements the Contractor shall be responsible to redirect and maintain traffic with appropriate signing in accordance with The City of Winnipeg, "Manual of Temporary Traffic Control in Work Areas on City Streets" at all times.
- E6.2 Work shall not be carried out on Regional Streets between 07:00 to 09:00 hours and 15:30 to 17:30 hours Monday to Friday and other hours as directed by the Contract Administrator.
- E6.3 Should the City of Winnipeg require that work on Regional Streets be carried out at night, on Sundays or on public holidays, the Contractor shall comply without additional compensation being considered to meet these requirements.
- E6.4 Further to section 3.8 of CW 1130 of the General Requirements parking restriction signing on Regional Streets will be done by The City of Winnipeg, Traffic Services Branch.
- E6.5 The following is a list of the Regional Streets in the Westwood and St. Charles Wastewater Sewer Districts:
- (a) Portage Avenue
- E6.6 The Contractor will be responsible for parking restriction signing required to perform the Work on non-regional and local residential streets. "No Parking" signs will be provided for the Contractor's use.
- E6.7 Erect signs no sooner than 24 hours before the work commences at a particular location.
- E6.8 Record the license plate numbers of vehicles already parked within the limits where the parking restriction signs are placed and fax the information to Winnipeg Police Services, Traffic Branch at 986-6998.
- E6.9 Promptly remove parking restriction signs once the Work at that location is completed. Signs shall not be left in place over a weekend if no work will be done at that location.
- E6.10 Return signs immediately upon completion of the Work.
- E6.11 Further to section 3.6 of CW 1130 of the General Requirements, maintain safe pedestrian crossing at intersections at all times. Only one pedestrian crossing at an intersection is to be blocked at any one time. If more than one pedestrian crossing is blocked at an intersection at the same time the Contractor shall provide flag persons to safely escort pedestrians across the intersection.
- E6.12 Do not park company or private vehicles inside the signed work zone in a manner that will block sightlines for vehicles and pedestrians approaching and crossing intersections.

## **E7. NOTICES TO RESIDENTS**

- E7.1 This specification amends and supplements specifications CW 2140 and CW 2145.
- E7.2 The Contractor shall deliver notices, provided by the Contract Administrator, to residents connected to sewers where high pressure flushing is to be used for either cleaning or inspection.
- E7.2.1 Notices will explain the cleaning and inspection program and how it may affect residences as well as some precautions to take to prevent backup.
- E7.2.2 Notices will contain the phone numbers of the Contractor's 24-hour cleaning contact as specified in E8 and the Water and Waste Department's Call Centre.

E7.3 Deliver notices 48 hours prior to the use of flushing equipment or as directed by the Contract Administrator.

E7.4 All costs associated with delivering notices shall be included in the price bid for "Sewer Cleaning".

**E8. SEWER BACKUP ON RESIDENTIAL SERVICES**

E8.1 This specification amends and supplements specifications CW 2140 and CW 2145.

E8.2 Further to section 3.5 of CW 2140, sewer backup or blow-back on residential services resulting from cleaning or inspection activities is not acceptable and shall be avoided at all costs.

E8.3 The Contractor is responsible for any damage caused to private property as a result of cleaning or inspection operations and the cost of repairs shall be at the Contractors own expense.

E8.4 It is expected that where a possibility exists for sewer service backup or blow-back the Contractor shall take appropriate measures such as turning down the pressure on cleaning equipment and taking additional time to clean such sewers.

E8.5 Upon being notified by a resident or the City of a sewer service backup the Contractor must take immediate action to completely clean and disinfect all flooded or contaminated areas and replace or make any required repairs to contaminated building materials such as drywall, insulation, carpets or sub-floors.

E8.5.1 Cleanup of affected residences shall be done by cleaning professionals. Under no circumstances are cleaning equipment operators to enter residences unless they are neat and presentable and the Contract Administrator has received a criminal record search for that individual.

E8.5.2 The Contractor shall provide the Contract Administrator with a 24hr contact number of a cleaning service or individual for residents to call to arrange for immediate clean-up of sewer service back-ups. This contact number will be included in the residential notices described in E7.

E8.6 If required repairs are not made in a timely manner or to the satisfaction of the Contract Administrator the City may hire a qualified water damage restoration contractor to investigate, cleanup and make any required repairs to residences affected by sewer backups caused by the Contractor. The cost of all repairs and fees shall be deducted from future progress payments owing to the Contractor.

**WESTWOOD WASTEWATER SEWER DISTRICT**  
**Work Program**

Bid Opportunity 563-2005  
Appendix A

STREET	ASSET_NUMBER	US_NODE	DS_NODE	MaxMainSize	MATERIAL	Length	FLOW	Depth	MAP_KEY
Addison CRES	MA20003522	MH20003234	MH20004104	200	CONCRETE	79.839	WWS	2.887	C-5
Addison CRES	MA20004464	MH20004104	MH20004198	200	CONCRETE	81.351	WWS	3.015	C-5
Addison CRES	MA20004568	MH20004198	MH20004213	200	CONCRETE	87.714	WWS	2.975	C-5
Addison CRES	MA20003490	MH20003199	MH20003200	200	CONCRETE	92.812	WWS	3.289	C-6
Addison CRES	MA20003495	MH20003198	MH20003199	200	CONCRETE	43.591	WWS	2.865	C-7
Addison CRES	MA20003488	MH20003200	MH20003235	200	CONCRETE	92.74	WWS	3.307	C-6
Addison CRES	MA20003523	MH20003235	MH20003234	200	CONCRETE	81.08	WWS	3.161	C-6
Aldrich AVE	MA20004060	MH20003733	MH20003734	250	*UNKNOWN	85.57	WWS	3.535	I-5
Aldrich AVE	MA20004061	MH20003729	MH20003733	300	*UNKNOWN	85.71	WWS	2.758	I-5
Allard AVE	MA20004646	MH20004270	MH20004261	200	CONCRETE	13.078	WWS	2.813	C-2
Allard AVE	MA20004540	MH20004175	MH20004270	200	CONCRETE	76.69	WWS	2.715	C-2
Allard AVE	MA20004538	MH20004178	MH20004175	200	CONCRETE	75.22	WWS	2.725	B-2
Amundsen BAY	MA20004122	MH20003789	MH20003802	200	CONCRETE	96.78	WWS	3.182	G-2
Amundsen BAY	MA70031429	MH20003889	MH20003935	200	CONCRETE	79.53	WWS	3.401	H-2
Amundsen BAY	MA20004139	MH20003802	MH20003889	200	CONCRETE	107.15	WWS	3.478	G-2
Amundsen BAY	MA20004213	MH20003871	MH20003930	250	CONCRETE	79.81	WWS	3.581	H-3
Amundsen BAY	MA20004124	MH20003789	MH20003871	250	CONCRETE	106.39	WWS	3.569	G-2
Assiniboine AVE	MA70000014	MH20002663	MH70000004			5.645	WWS	0	G-10
Assiniboine AVE	MA20002904	MH20002650	MH20002635	*UNKNOWN	CONCRETE	7.783	WWS	4.298	F-10
Assiniboine AVE	MA20002952	MH20002673	MH20002674	200	CONCRETE	54.65	WWS	4.13	H-10
Assiniboine AVE	MA20002951	MH20002667	MH20002673	200	CONCRETE	62.79	WWS	3.993	H-10
Assiniboine AVE	MA20002943	MH20002681	MH20002667	200	CONCRETE	94.18	WWS	3.582	I-10
Assiniboine AVE	MA20002962	MH20002683	MH20002681	200	CONCRETE	63.68	WWS	3.186	I-10
Assiniboine AVE	MA20002963	MH20002682	MH20002683	200	CONCRETE	29.14	WWS	2.533	I-10
Assiniboine AVE	MA20003349	MH20003057	MH20003060	375	CONCRETE	88.01	WWS	3.804	C-9
Assiniboine AVE	MA20003331	MH20003060	MH20003039	375	CONCRETE	89.642	WWS	5.538	C-9
Assiniboine AVE	MA20003319	MH20003039	MH20003032	375	CONCRETE	89.98	WWS	5.377	D-9
Assiniboine AVE	MA20003317	MH20003032	MH20003043	375	CONCRETE	89.05	WWS	5.669	D-9
Assiniboine AVE	MA20003337	MH20003043	MH20003047	375	CONCRETE	61.27	WWS	6.255	E-9
Assiniboine AVE	MA20003342	MH20003047	MH20002624	375	CONCRETE	62.37	WWS	6.547	E-9
Assiniboine AVE	MA20002929	MH20002656	MH20002661	375	CONCRETE	106.24	WWS	6.48	G-10
Assiniboine AVE	MA20002927	MH20002657	MH20002656	375	CONCRETE	104.97	WWS	4.273	G-10
Assiniboine AVE	MA20002892	MH20002624	MH20002639	375	CONCRETE	68.793	WWS	6.617	E-9
Assiniboine AVE	MA20002905	MH20002641	MH20002639	375	CONCRETE	68.88	WWS	6.004	E-9

**WESTWOOD WASTEWATER SEWER DISTRICT**  
**Work Program**

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STREET	ASSET_NUMBER	US_NODE	DS_NODE	MaxMainSize	MATERIAL	Length	FLOW	Depth	MAP_KEY
Assiniboine AVE	MA20002906	MH20002641	MH20002650	375	CONCRETE	81.88	WWS	4.566	F-10
Assiniboine AVE	MA20002919	MH20002635	MH20002657	375	CONCRETE	78.26	WWS	3.146	F-10
Assiniboine AVE	MA20002773	MH20002663	MH20002531	900	*UNKNOWN	30.37	WWS	6.254	G-10
Assiniboine AVE	MA20002939	MH20002661	MH20002663	900	*UNKNOWN	56.926	WWS	0	G-10
Assiniboine AVE	MA20002936	MH20002674	MH20002661	900	CONCRETE	68.792	WWS	6.056	H-10
Assiniboine GROVE	MA20003387	MH20003088	MH20003090	200	CONCRETE	18.41	WWS	2.926	B-7
Assiniboine GROVE	MA20003388	MH20003089	MH20003090	200	CONCRETE	58.58	WWS	2.454	B-6
Assiniboine GROVE	MA20003423	MH20003121	MH20003181	200	CONCRETE	85.84	WWS	0	C-7
Assiniboine GROVE	MA20003385	MH20003087	MH20003121	200	CONCRETE	86.26	WWS	3.39	B-7
Assiniboine GROVE	MA20003389	MH20003090	MH20003087	200	CONCRETE	24.933	WWS	3.057	B-7
Barron DR	MA20003459	MH20003162	MH20003163	200	CONCRETE	86.534	WWS	2.88	D-7
Barron DR	MA70023289	MH20003162	MH20003154	200	CONCRETE	87.606	WWS	0	D-7
Barron DR	MA20003448	MH20003179	MH20003154	200	CONCRETE	76.7	WWS	3.408	E-7
Barron DR	MA20003345	MH20003110	MH20003052	200	CONCRETE	85.951	WWS	3.724	D-8
Barron DR	MA20003313	MH20003052	MH20003032	200	CONCRETE	63.8	WWS	0	D-9
Barron DR	MA20003410	MH20003163	MH20003110	200	CONCRETE	87.234	WWS	0	D-8
Barron DR	MA20002883	MH20002720	MH20003179	200	CONCRETE	89.76	WWS	3.216	E-7
Bedson ST	MA20004615	MH20004245	MH20004242	200	CONCRETE	94.89	WWS	3.392	C-3
Bedson ST	MA20004609	MH20004270	MH20004245	200	CONCRETE	69.575	WWS	2.487	C-3
Bedson ST	MA20003476	MH20003190	MH20004110	200	CONCRETE	82.631	WWS	3.206	C-5
Bedson ST	MA20004471	MH20004110	MH20004196	200	CONCRETE	84.003	WWS	3.511	C-5
Bedson ST	MA20003480	MH20003190	MH20003191	200	CONCRETE	83.8	WWS	3.128	C-6
Bedson ST	MA20004562	MH20004239	MH20004192	250	CONCRETE	91.66	WWS	3.453	C-4
Bedson ST	MA20004613	MH20004242	MH20004239	250	CONCRETE	68.9	WWS	3.203	C-3
Bedson ST	MA20004564	MH20004194	MH20004192	250	CONCRETE	81.419	WWS	4.136	C-4
Bedson ST	MA20003479	MH20003188	MH20003189	250	CONCRETE	85.334	WWS	3.944	C-6
Bedson ST	MA20003440	MH20003145	MH20003144	300	CONCRETE	93.73	WWS	5.035	C-7
Bedson ST	MA20003447	MH20003181	MH20003145	300	CONCRETE	93.71	WWS	6.051	C-7
Bedson ST	MA20003473	MH20003182	MH20003181	300	CONCRETE	91.74	WWS	5.926	C-6
Bedson ST	MA20003472	MH20003182	MH20003189	300	CONCRETE	81.386	WWS	6.05	C-6
Bedson ST	MA20003352	MH20003094	MH20003058	300	CONCRETE	92.51	WWS	3.027	C-8
Bedson ST	MA20003393	MH20003144	MH20003094	300	CONCRETE	93.73	WWS	4.197	C-8
Belcourt BAY	MA20002881	MH20002732	MH20003254	200	CONCRETE	83.45	WWS	3.514	E-5
Belcourt BAY	MA20003906	MH20003579	MH20004200	200	CONCRETE	83.85	WWS	3.301	E-5

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Belcourt BAY	MA20003899	MH20002732	MH20003579	200	CONCRETE	85.31	WWS	3.127	E-5
Belcourt BAY	MA20003552	MH20003254	MH20003256	200	CONCRETE	83.5	WWS	3.862	E-5
Belcourt BAY	MA20004569	MH20004200	MH20004199	200	CONCRETE	83.56	WWS	3.599	E-5
Bering AVE	MA20003108	MH20002824	MH20002826	200	CONCRETE	92.94	WWS	4.24	G-8
Bering AVE	MA20003090	MH20002810	MH20002824	200	CONCRETE	93.57	WWS	3.664	G-8
Bering AVE	MA20003105	MH20002821	MH20002810	200	CONCRETE	91.84	WWS	3.314	F-8
Braid PL	MA20002819	MH20002563	MH20002564	250	CONCRETE	51.58	WWS	3.846	K-6
Browning BLVD	MA20003277	MH20002996	MH20002995	200	CONCRETE	79.72	WWS	4.511	H-6
Browning BLVD	MA20003513	MH20002617	MH20003225	200	CONCRETE	60.53	WWS	2.846	E-6
Browning BLVD	MA20002901	MH20002633	MH20002872	200	CONCRETE	106.69	WWS	3.252	E-6
Browning BLVD	MA20003297	MH20003015	MH20003018	200	CONCRETE	32.925	WWS	3.185	I-6
Browning BLVD	MA20003296	MH20003018	MH20003014	200	CONCRETE	84.27	WWS	2.996	I-6
Browning BLVD	MA20003275	MH20003014	MH20002996	200	CONCRETE	85.74	WWS	3.858	I-6
Browning BLVD	MA20003502	MH20003212	MH20003211	200	CONCRETE	8.171	WWS	0	D-6
Browning BLVD	MA20003501	MH20003211	MH20003210	200	CONCRETE	60.899	WWS	1.954	D-6
Browning BLVD	MA20003498	MH20003210	MH20003224	200	CONCRETE	54.62	WWS	2.776	D-6
Browning BLVD	MA20003499	MH20003225	MH20003224	200	CONCRETE	61.08	WWS	2.511	E-6
Browning BLVD	MA20003252	MH20002967	MH20002968	250	CONCRETE	69.1	WWS	3.929	G-6
Browning BLVD	MA20003253	MH20002968	MH20002975	250	CONCRETE	62.03	WWS	4.795	H-6
Browning BLVD	MA20003184	MH20002926	MH20002967	250	CONCRETE	67.66	WWS	3.779	G-6
Browning BLVD	MA70034482	TE70015142	MH20002926	250	CONCRETE	33.83	WWS	3.344	G-6
Browning BLVD	MA70034481	MH20002924	TE70015142	250	CONCRETE	42.85	WWS	3.624	G-6
Browning BLVD	MA20003195	MH20002918	MH20002924	250	CONCRETE	76.41	WWS	3.374	F-6
Browning BLVD	MA20003254	MH20002995	MH20002972	300	CONCRETE	53.92	WWS	4.684	H-6
Byrd AVE	MA20004010	MH20003685	MH20003688	200	CONCRETE	61.31	WWS	2.987	F-1
Byrd AVE	MA20004014	MH20003688	MH20003801	250	CONCRETE	85.92	WWS	2.78	G-1
Byrd AVE	MA20004236	MH20003891	MH20003936	250	CONCRETE	88.845	WWS	2.688	H-2
Byrd AVE	MA20004238	MH20003894	MH20003891	250	CONCRETE	89.35	WWS	2.652	G-2
Byrd AVE	MA20004136	MH20003801	MH20003894	250	CONCRETE	89.2	WWS	2.03	G-2
Byron BAY	MA20004195	MH20003854	MH20003855	200	CONCRETE	4.35	WWS	2.584	J-3
Byron BAY	MA20004195	MH20003854	MH20003855	200	CONCRETE	60.56	WWS	3.008	J-3
Byron BAY	MA20004193	MH20003854	MH20003850	200	CONCRETE	86.82	WWS	2.765	J-4
Byron BAY	MA20004188	MH20003849	MH20003845	250	CONCRETE	66.81	WWS	3.371	I-4
Byron BAY	MA20004194	MH20003855	MH20003856	250	CONCRETE	65.81	WWS	2.828	I-3

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Byron BAY	MA20004189	MH20003850	MH20003849	250	CONCRETE	65.93	WWS	3.073	J-4
Carlyle BAY	MA20003178	MH20002899	MH20002895	200	CONCRETE	43.66	WWS	2.819	I-7
Carlyle BAY	MA20003225	MH20002945	MH20002941	200	CONCRETE	100.05	WWS	3.066	I-6
Carlyle BAY	MA20003181	MH20002900	MH20002899	200	CONCRETE	70.99	WWS	3.264	I-7
Carlyle BAY	MA20003180	MH20002900	MH20002945	200	CONCRETE	91.53	WWS	3.176	I-7
Carlyle BAY	MA20003227	MH20002941	MH20002943	250	CONCRETE	66.37	WWS	3.545	I-7
Carlyle CRES	MA20003177	MH20002898	MH20002943	200	CONCRETE	56.39	WWS	2.908	H-7
Carroll RD	MA20003114	MH20002831	MH20002841	200	CONCRETE	65.04	WWS	3.052	H-8
Carroll RD	MA20003124	MH20002852	MH20002841	200	CONCRETE	76.42	WWS	2.792	H-7
Carroll RD	MA20003211	MH20002930	MH20002936	900	CONCRETE	39.081	WWS	5.645	H-6
Carroll RD	MA20003210	MH20002975	MH20002930	900	CONCRETE	46.72	WWS	6.039	H-6
Carroll RD	MA20003258	MH20002974	MH20002975	900	CONCRETE	27.214	WWS	5.874	H-6
Carroll RD	MA20003259	MH20002972	MH20002974	900	CONCRETE	13.781	WWS	5.785	H-6
Carroll RD	MA20002967	MH20002702	MH20002674	900	CONCRETE	92.7	WWS	6.001	H-9
Carroll RD	MA20002985	MH20002712	MH20002702	900	CONCRETE	19.203	WWS	6.791	H-9
Carroll RD	MA20002997	MH20002764	MH20002712	900	CONCRETE	69.71	WWS	6.626	H-9
Carroll RD	MA20003045	TE20000388	MH20002764	900	CONCRETE	48.5	WWS	6.754	H-9
Carroll RD	MA20003044	MH20002766	TE20000388	900	CONCRETE	37.99	WWS	0	H-8
Carroll RD	MA20003046	MH20002790	MH20002766	900	CONCRETE	54.28	WWS	6.575	H-8
Carroll RD	MA20003078	MH20002791	MH20002790	900	CONCRETE	33.21	WWS	6.44	H-8
Carroll RD	MA20003076	MH20002840	MH20002791	900	CONCRETE	84.953	WWS	6.535	H-8
Carroll RD	MA20003129	MH20002850	MH20002840	900	CONCRETE	82.894	WWS	6.011	H-7
Carroll RD	MA20003142	MH20002897	MH20002850	900	CONCRETE	85.74	WWS	6.248	H-7
Carroll RD	MA20003176	MH20002936	MH20002897	900	CONCRETE	44.06	WWS	6.023	H-7
Coleridge Park DR	MA20003371	MH20003074	MH20003078	200	CONCRETE	12.9	WWS	3.76	B-8
Coleridge Park DR	MA20003372	MH20003075	MH20003074	200	CONCRETE	82.54	WWS	3.8	B-7
Coleridge Park DR	MA20003368	MH20003128	MH20003075	200	CONCRETE	97.81	WWS	3.017	B-7
Coleridge Park DR	MA20003365	MH20003078	MH20003067	200	CONCRETE	93.58	WWS	4.095	B-8
Coleridge Park DR	MA20003360	MH20003067	MH20003070	200	CONCRETE	13.716	WWS	4.121	B-8
Coleridge Park DR	MA20003308	MH20003070	MH20003024	200	CONCRETE	96.23	WWS	4.626	B-8
Coleridge Park DR	MA20003307	MH20003024	MH20003023	200	CONCRETE	8.51	WWS	2.85	B-9
Coleridge Park DR	MA20003305	MH20003023	MH20003026	300	CONCRETE	46.17	WWS	2.94	B-9
Coleridge Park DR	MA20003310	MH20003026	MH20003022	300	CONCRETE	59.73	WWS	3.584	B-9
Coleridge Park DR	MA20003303	MH20003022	MH20003056	300	CONCRETE	17.96	WWS	3.63	B-9

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Coleridge Park DR	MA20003348	MH20003056	MH20003057	300	CONCRETE	39.05	WWS	0	C-9
Coleridge Park DR	MA20003350	MH20003058	MH20003057	300	CONCRETE	9.69	WWS	3.109	C-9
Coleridge Park PL	MA20003424	MH20003145	MH20003128	200	CONCRETE	97.41	WWS	3.404	B-7
Columbus CRES	MA20003026	MH20002751	MH20002748	200	CONCRETE	65.46	WWS	3.85	G-9
Columbus CRES	MA20003031	MH20002756	MH20002751	200	CONCRETE	95.52	WWS	3.527	F-9
Columbus CRES	MA20003034	PL20000387	MH20002756	200	CONCRETE	26.94	WWS	2.896	F-9
Columbus CRES	MA20003028	MH20002748	MH20002763	200	CONCRETE	67.39	WWS	4.386	G-8
Columbus CRES	MA20003040	MH20002762	MH20002787	250	CONCRETE	96.8	WWS	4.798	G-8
Columbus CRES	MA20003041	MH20002763	MH20002762	250	CONCRETE	85.47	WWS	4.435	G-8
Columbus CRES	MA20003074	MH20002787	MH20002790	300	CONCRETE	80.98	WWS	4.989	H-8
Compton PL	MA20003247	MH20002951	MH20002962	250	CONCRETE	45.48	WWS	3.846	J-6
Connor PL	MA20002992	MH20002706	MH20002707			70.65	WWS	0	I-9
Cook RD	MA20003037	MH20002756	MH20002759	200	CONCRETE	100.4	WWS	2.442	F-8
Cook RD	MA20003036	MH20002759	MH20002821	200	CONCRETE	100.98	WWS	3.487	F-8
Cora AVE	MA20003415	MH20003114	MH20003115	200	CONCRETE	45.23	WWS	3.054	E-8
Cora AVE	MA20003414	MH20002621	MH20003114	200	CONCRETE	73.49	WWS	2.999	E-8
Cortez BAY	MA20003099	MH20002817	MH20002821	200	CONCRETE	82.13	WWS	3.408	F-7
Cortez BAY	MA20003137	MH20002890	MH20002848	200	CONCRETE	94.83	WWS	3.874	G-7
Cortez BAY	MA20003098	MH20002886	MH20002817	200	CONCRETE	94.23	WWS	2.6	F-7
Cortez BAY	MA20003171	MH20002889	MH20002890	200	CONCRETE	75.18	WWS	3.962	G-7
Cortez BAY	MA20003167	MH20002883	MH20002889	200	CONCRETE	76.05	WWS	3.539	G-7
Cortez BAY	MA20003170	MH20002886	MH20002883	200	CONCRETE	76.66	WWS	3.301	F-7
Country Club BLVD	MA20003650	MH20003347	MH20003352	250	CONCRETE	78.64	WWS	2.88	K-5
Country Club BLVD	MA20003646	MH20003345	MH20003347	250	CONCRETE	25.235	WWS	2.804	K-5
Country Club BLVD	MA20003639	MH20003340	MH20003345	250	CONCRETE	90.82	WWS	2.871	L-4
Country Club BLVD	MA20002803	MH20003352	MH20002543	250	CONCRETE	97.37	WWS	3.798	K-5
Country Club BLVD	MA20002785	MH20002536	MH20002573	300	CONCRETE	98.24	WWS	4.816	K-6
Country Club BLVD	MA20002780	MH20002547	MH20002536	300	CONCRETE	69.61	WWS	4.084	K-6
Country Club BLVD	MA20002799	MH20002543	MH20002547	300	CONCRETE	98.2	WWS	3.621	K-6
Country Club BLVD	MA20002823	MH20002573	MH20002572	300	CONCRETE	71.11	WWS	4.816	K-7
Country Club BLVD	MA20002812	MH20002572	MH20002561	300	*UNKNOWN	97.84	WWS	0	L-7
Davis CRES	MA20004015	MH20003689	MH20003694	200	CONCRETE	60.47	WWS	2.673	F-2
Davis CRES	MA20004114	MH20003777	MH20003801	250	CONCRETE	68.53	WWS	3.064	G-2
Davis CRES	MA20004020	MH20003694	MH20003777	250	CONCRETE	87.48	WWS	2.89	G-2

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Dickens DR	MA20003381	MH20003082	MH20003081	200	CONCRETE	83.04	WWS	3.484	B-6
Dickens DR	MA20003390	MH20004107	MH20003082	200	CONCRETE	85.35	WWS	2.969	B-5
Dickens DR	MA20003378	MH20003081	MH20003080	200	CONCRETE	15.39	WWS	3.6	B-6
Dickens DR	MA20004465	MH20004107	MH20004116	250	CONCRETE	80.62	WWS	2.856	B-5
Dickens DR	MA20004480	MH20004116	MH20004119	250	CONCRETE	69.95	WWS	3.048	B-4
Dickens DR	MA20004481	MH20004119	MH20004120	250	CONCRETE	69.65	WWS	3.057	B-4
Dickens DR	MA20004476	MH20004120	MH20004196	250	CONCRETE	61.97	WWS	3.649	C-5
Dickens DR	MA20004566	MH20004196	MH20004194	250	CONCRETE	9.856	WWS	3.746	C-4
Dickens DR	MA20003433	MH20003136	MH20003189	250	CONCRETE	67.89	WWS	3.959	C-6
Dickens DR	MA20003430	MH20003133	MH20003136	250	CONCRETE	69.34	WWS	3.777	B-6
Dickens DR	MA20003377	MH20003080	MH20003133	250	CONCRETE	59.22	WWS	3.923	B-6
Drummond PL	MA20003271	MH20002990	MH20002989	200	CONCRETE	30.38	WWS	2.697	I-5
Ericsson BAY	MA20003975	MH20003652	MH20003760	200	CONCRETE	71.63	WWS	3.094	G-3
Ericsson BAY	MA20003973	MH20003654	MH20003652	200	CONCRETE	76.05	WWS	2.756	F-3
Ericsson BAY	MA20003976	MH20003655	MH20003761	200	CONCRETE	70.77	WWS	3.844	G-2
Ericsson BAY	MA20003980	MH20003697	MH20003655	200	CONCRETE	76.51	WWS	3.051	F-2
Ericsson BAY	MA20004094	MH20003761	MH20003760	250	CONCRETE	69.06	WWS	3.368	G-2
Ericsson BAY	MA20004105	MH20003760	MH20003881	250	CONCRETE	95.763	WWS	3.331	G-3
Erlandson DR	MA20003135	MH20002848	MH20002845	200	CONCRETE	49.93	WWS	4.12	G-7
Erlandson DR	MA20003134	MH20002847	MH20002848	200	CONCRETE	82.75	WWS	3.861	G-7
Erlandson DR	MA20003093	MH20002813	MH20002847	200	CONCRETE	75.9	WWS	3.703	F-7
Erlandson DR	MA20003106	MH20002817	MH20002813	200	CONCRETE	69.34	WWS	3.573	F-7
Erlandson DR	MA20003072	MH20002826	MH20002787	250	CONCRETE	68.75	WWS	4.746	G-8
Erlandson DR	MA20003109	MH20002844	MH20002826	250	CONCRETE	46.83	WWS	4.48	G-8
Erlandson DR	MA20003128	MH20002845	MH20002844	250	CONCRETE	35.23	WWS	4.148	G-7
Franklin BAY	MA70001844	MH70000740	MH70000742	250	PVC	111.76	WWS	3.58	G-8
Franklin BAY	MA70001845	MH20000742	MH70002787	250	PVC	17.57	WWS	4.4	G-8
Franklin BAY	MA70001842	MH70000740	MH70000741	250	PVC	99.93	WWS	3.47	G-9
Franklin BAY	MA70001843	MH70000741	MH70000738	250	PVC	107.91	WWS	0	G-8
Franklin BAY	MA70001840	MH20002738	MH70000762	250	PVC	23.978	WWS	0	G-8
Frost AVE	MA20003077	MH20002801	MH20002791	250	CONCRETE	69.49	WWS	4.115	H-8
Frost AVE	MA20003081	MH20002799	MH20002801	250	CONCRETE	67.88	WWS	3.899	H-8
Frost AVE	MA20003121	MH20002837	MH20002799	250	CONCRETE	87.02	WWS	2.947	I-8
Galinee BAY	MA20003960	MH20003641	MH20003650	200	CONCRETE	75.474	WWS	2.704	F-3

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Galinee BAY	MA20003958	MH20003637	MH20003636	200	CONCRETE	75.838	WWS	3.347	F-3
Galinee BAY	MA20003957	MH20003650	MH20003767	200	CONCRETE	71.019	WWS	2.569	G-3
Galinee BAY	MA20003954	MH20003636	MH20003770	250	CONCRETE	70.439	WWS	3.252	G-3
Galinee BAY	MA20004095	MH20003770	MH20003767	250	CONCRETE	69.61	WWS	2.996	G-3
Galinee BAY	MA20004096	MH20003767	MH20003788	250	CONCRETE	95.7	WWS	3.06	G-4
Galsworthy PL	MA20003426	MH20003125	MH20003123	200	CONCRETE	14.78	WWS	2.994	B-8
Galsworthy PL	MA20003367	MH20003123	MH20003078	200	CONCRETE	99.18	WWS	3.428	B-8
Hagen DR	MA20002789	MH20002551	MH20002550	250	CONCRETE	21.99	WWS	3.78	J-6
Hagen DR	MA20002790	MH20002552	MH20002551	250	CONCRETE	23.49	WWS	3.734	J-6
Hagen DR	MA20002792	MH20002553	MH20002552	250	CONCRETE	80.83	WWS	3.597	J-6
Hagen DR	MA20002787	MH20003290	MH20002553	250	CONCRETE	83.15	WWS	2.957	J-5
Hagen DR	MA20003582	MH20003289	MH20003290	250	CONCRETE	81.94	WWS	3.081	J-5
Hagen DR	MA20002793	MH20002550	MH20002547	250	CONCRETE	74.46	WWS	3.938	K-6
Haliburton BAY	MA20003087	MH20002803	MH20002804	200	CONCRETE	45.72	WWS	3.09	I-8
Haliburton BAY	MA20003064	MH20002804	MH20002780	200	CONCRETE	105.1	WWS	0	I-9
Haliburton BAY	MA20003065	MH20002780	MH20002781	200	CONCRETE	78	WWS	4.306	I-9
Haultain CRES	MA20003559	MH20003266	MH20003267	200	CONCRETE	42.73	WWS	2.585	D-5
Haultain CRES	MA20003560	MH20003267	MH20003268	250	CONCRETE	88.087	WWS	2.835	D-5
Haultain CRES	MA20004473	MH20003268	MH20004209	250	CONCRETE	88.42	WWS	2.819	D-5
Haultain CRES	MA20004582	MH20004209	MH20004213	250	CONCRETE	102.43	WWS	2.701	D-5
Henday BAY	MA20004121	MH20003881	MH20003787	200	CONCRETE	69.64	WWS	3.255	G-3
Henday BAY	MA20004125	MH20003787	MH20003885	200	CONCRETE	87.74	WWS	3.63	G-3
Henday BAY	MA20004156	MH20003885	MH20003818	200	CONCRETE	88.09	WWS	3.13	H-3
Henday BAY	MA20004217	MH20003875	MH20003924	250	CONCRETE	87.26	WWS	3.383	H-3
Henday BAY	MA20004222	MH20003875	MH20003881	250	CONCRETE	87.72	WWS	3.636	G-3
Holt DR	MA20003444	MH20003150	MH20003151	200	CONCRETE	36.85	WWS	0	C-7
Holt DR	MA20003445	MH20003151	MH20003152	200	CONCRETE	103.808	WWS	0	C-7
Holt DR	MA20003395	MH20003096	MH20003104	200	CONCRETE	72.365	WWS	3.435	C-8
Holt DR	MA20003396	MH20003152	MH20003096	200	CONCRETE	104.638	WWS	3.243	C-8
Jolliett CRES	MA20004042	MH20003714	MH20002971	200	CONCRETE	100.61	WWS	3.545	G-5
Jolliett CRES	MA20004047	MH20002971	MH20003808	200	CONCRETE	97.87	WWS	4.164	H-5
Jolliett CRES	MA20004038	MH20003714	MH20003718	200	CONCRETE	83.82	WWS	2.85	G-5
Jolliett CRES	MA20003902	MH20003718	MH20003589	200	CONCRETE	83.67	WWS	3.13	F-5
Jolliett CRES	MA20003913	MH20003589	MH20003585	250	CONCRETE	85.85	WWS	3.731	F-5

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Keats WAY	MA20004597	MH20004165	MH20004242	200	CONCRETE	63.8	WWS	3.371	C-3
Keats WAY	MA20004527	MH20004167	MH20004165	200	CONCRETE	63	WWS	2.874	B-3
Keats WAY	MA20004529	MH20004167	MH20004160	200	CONCRETE	96.83	WWS	3.1	B-3
Keats WAY	MA20004521	MH20004160	MH20004229	200	CONCRETE	64.37	WWS	2.762	B-3
Keats WAY	MA20004601	MH20004229	MH20004245	200	CONCRETE	62.31	WWS	2.576	C-3
Kilmer AVE	MA20002998	MH20002713	MH20002712	200	CONCRETE	102.57	WWS	5.568	H-9
Kilmer AVE	MA20002996	MH20002707	MH20002713	200	CONCRETE	98.2	WWS	4.651	I-9
Kilmer AVE	MA20002968	MH20002712	MH20002693	200	CONCRETE	174.94	WWS	3.075	G-9
Kirkfield ST	MA20004172	MH20003845	MH20003833	250	CONCRETE	65.55	WWS	2.769	I-4
Kirkfield ST	MA20004198	MH20003856	MH20003845	250	CONCRETE	104.21	WWS	2.406	I-4
Leacock AVE	MA20003132	MH20002841	MH20002840	*UNKNOWN	CONCRETE	14.944	WWS	4.52	H-8
Leacock AVE	MA20003127	MH20002841	MH20002840	*UNKNOWN	CONCRETE	14.944	WWS	4.52	H-8
Leacock AVE	MA20003147	MH20002855	MH20002854	250	CONCRETE	66.79	WWS	3.941	H-8
Leacock AVE	MA20003131	MH20002854	MH20002840	250	CONCRETE	75.58	WWS	4.416	H-8
Leacock AVE	MA20003143	MH20002853	MH20002855	250	CONCRETE	87.42	WWS	3.657	I-7
Longfellow BAY	MA20002933	MH20002692	MH20002656	200	CONCRETE	64.23	WWS	0	G-10
Longfellow BAY	MA20002977	MH20002693	MH20002692	200	CONCRETE	55.96	WWS	2.99	G-9
Longfellow BAY	MA20002976	MH20002693	MH20002697	200	CONCRETE	102.038	WWS	3.588	F-9
Longfellow BAY	MA20002931	MH20002698	MH20002657	200	CONCRETE	70.05	WWS	3.146	F-10
Longfellow BAY	MA20002973	MH20002697	MH20002698	200	CONCRETE	58.04	WWS	2.948	F-9
Magellan BAY	MA20004088	MH20003812	MH20003756	200	CONCRETE	71.98	WWS	3.192	G-4
Magellan BAY	MA20004087	MH20003756	MH20003788	200	CONCRETE	68.92	WWS	3.307	G-4
Magellan BAY	MA20004143	MH20003811	MH20003812	200	CONCRETE	73.35	WWS	1.832	H-4
Magellan BAY	MA20004089	MH20003788	MH20003826	250	CONCRETE	86.32	WWS	3.959	G-4
Magellan BAY	MA20004167	MH20003826	MH20003821	250	CONCRETE	88.21	WWS	3.795	H-4
Masefield PL	MA20003361	MH20003101	MH20003070	200	CONCRETE	74.55	WWS	3.53	B-8
Masefield PL	MA20003399	MH20003099	MH20003101	200	CONCRETE	16.79	WWS	3.173	B-8
Maureen ST	MA20003450	MH20003154	MH20003158	200	CONCRETE	86.207	WWS	4.038	D-7
Maureen ST	MA20003338	MH20003065	MH20003043	250	CONCRETE	84.4	WWS	5.478	D-9
Maureen ST	MA20003358	MH20003115	MH20003065	250	CONCRETE	88.44	WWS	5.097	D-8
Maureen ST	MA20003416	MH20003158	MH20003115	250	CONCRETE	84.133	WWS	4.352	D-8
Park Meadows DR	MA20003643	MH20003353	MH20003347	250	CONCRETE	71.01	WWS	2.617	K-5
Park Meadows DR	MA20003651	MH20003376	MH20003353	250	CONCRETE	77.31	WWS	3.05	K-4
Peary CRES	MA20003961	MH20003645	MH20003632	200	CONCRETE	73.42	WWS	2.725	F-4

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Peary CRES	MA20003956	MH20003632	MH20003752	200	CONCRETE	74.14	WWS	2.819	G-4
Peary CRES	MA20004081	MH20003752	MH20003749	200	CONCRETE	75.52	WWS	3.886	G-4
Pine Valley DR	MA20003652	MH20003346	MH20003342	250	CONCRETE	33.9	WWS	2.755	L-5
Pine Valley DR	MA20003640	MH20003346	MH20003345	250	CONCRETE	61.63	WWS	0	K-5
Pine Valley DR	MA20002829	MH20002578	MH20002573	250	CONCRETE	61.966	WWS	4.816	K-6
Pine Valley DR	MA20002824	MH20002574	MH20002578	250	CONCRETE	35.3	WWS	4.237	K-6
Pine Valley DR	MA20002825	MH20002564	MH20002574	250	CONCRETE	45.26	WWS	4.127	K-6
Pine Valley DR	MA20002818	MH20002567	MH20002564	250	CONCRETE	49.88	WWS	3.81	K-6
Pine Valley DR	MA20002817	MH20002585	MH20002567	250	CONCRETE	89.57	WWS	3.758	K-6
Pine Valley DR	MA20002832	MH20002584	MH20002585	250	CONCRETE	43.48	WWS	2.859	K-5
Pine Valley DR	MA20002833	MH20003342	MH20002584	250	CONCRETE	56.42	WWS	2.929	K-5
Pinehurst CRES	MA20004072	MH20003839	MH20003741	250	CONCRETE	81.75	WWS	2.652	J-5
Pinehurst CRES	MA20003584	MH20003291	MH20003352	250	CONCRETE	103.18	WWS	3.487	K-5
Pinehurst CRES	MA20003237	MH20003001	MH20002962	250	CONCRETE	102.53	WWS	0	J-6
Pinehurst CRES	MA20003284	MH20003021	MH20003001	250	CONCRETE	81.95	WWS	0	J-5
Pinehurst CRES	MA20003301	MH20003741	MH20003021	250	CONCRETE	82.2	WWS	0	J-5
Pinehurst CRES	MA20002798	MH20002962	MH20002535	300	CONCRETE	100.59	WWS	4.161	J-6
Pinehurst CRES	MA20002788	MH20002535	MH20002536	300	CONCRETE	108.88	WWS	4.072	K-6
Poole DR	MA20004175	MH20003835	MH20003836	200	CONCRETE	30.31	WWS	2.545	I-5
Raquette ST	MA20003534	MH20003244	MH20004101	200	CONCRETE	81.55	WWS	3.301	D-5
Raquette ST	MA20004458	MH20004101	MH20004213	200	CONCRETE	81.686	WWS	3.304	D-5
Raquette ST	MA20003462	MH20003168	MH20003172	200	CONCRETE	88.148	WWS	0	D-7
Raquette ST	MA20003465	MH20003205	MH20003168	200	CONCRETE	93.696	WWS	4.106	D-7
Raquette ST	MA20003497	MH20003207	MH20003208	200	CONCRETE	68.13	WWS	3.295	D-6
Raquette ST	MA20003496	MH20003208	MH20003245	200	CONCRETE	92.574	WWS	3.786	D-6
Raquette ST	MA20003533	MH20003245	MH20003244	200	CONCRETE	80.376	WWS	2.954	D-6
Raquette ST	MA20003346	MH20003104	MH20003054	200	CONCRETE	58.437	WWS	0	D-8
Raquette ST	MA20003330	MH20003054	MH20003039	200	CONCRETE	48.148	WWS	0	D-9
Raquette ST	MA20003403	MH20003172	MH20003104	200	CONCRETE	101.773	WWS	3.18	D-8
Raquette ST	MA20004581	MH20004213	MH20004204	250	CONCRETE	88.292	WWS	3.063	D-4
Reynolds BAY	MA20003563	MH20002616	MH20003273	200	CONCRETE	60.66	WWS	2.932	E-5
Reynolds BAY	MA20003564	MH20003273	MH20003274	200	CONCRETE	61.23	WWS	3.553	E-5
Robert Service BAY	MA20003053	MH20002797	MH20002768	200	CONCRETE	96.15	WWS	4.389	H-9
Robert Service BAY	MA20003083	MH20002798	MH20002797	200	CONCRETE	59.95	WWS	3.941	H-8

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Robert Service BAY	MA20003082	MH20002805	MH20002798	200	CONCRETE	62.79	WWS	3.014	I-8
Robert Service BAY	MA20003047	MH20002768	MH20002775	200	CONCRETE	66.05	WWS	4.752	H-9
Robert Service BAY	MA20003059	MH20002775	MH20002781	200	CONCRETE	64.44	WWS	4.349	I-9
Rouge RD	MA20003156	MH20002875	MH20002872	200	CONCRETE	109.4	WWS	3.097	F-6
Rouge RD	MA20003158	MH20002872	MH20002880	200	CONCRETE	91.96	WWS	2.826	F-6
Rouge RD	MA20003165	MH20002880	MH20002879	200	CONCRETE	91.44	WWS	3.271	F-5
Rouge RD	MA20003904	MH20002879	MH20003585	200	CONCRETE	90.78	WWS	4.075	F-5
Rouge RD	MA20003898	MH20003585	MH20003620	250	CONCRETE	93.21	WWS	4.13	F-4
Rouge RD	MA20002908	MH20002739	MH20002642	250	CONCRETE	99.06	WWS	4.53	F-9
Rouge RD	MA20002907	MH20002642	MH20002641	250	CONCRETE	16.246	WWS	6.035	F-9
Rouge RD	MA20003018	MH20002743	MH20002739	250	CONCRETE	93.41	WWS	4.191	F-9
Rouge RD	MA20003021	MH20002735	MH20002743	250	CONCRETE	97.83	WWS	3.904	F-8
Rouge RD	MA20003016	MH20002736	MH20002735	250	CONCRETE	86.81	WWS	3.843	F-8
Rouge RD	MA20003015	MH20002868	MH20002736	250	CONCRETE	92.76	WWS	3.027	F-7
Rouge RD	MA20003155	MH20002875	MH20002868	250	CONCRETE	90.11	WWS	2.798	F-7
Sandburg BAY	MA20003123	MH20002832	MH20002837	200	CONCRETE	59.68	WWS	2.755	I-8
Sandburg BAY	MA20003122	MH20002832	MH20002856	200	CONCRETE	91.5	WWS	3.356	I-8
Sandburg BAY	MA20003145	MH20002856	MH20002853	250	CONCRETE	56.6	WWS	3.432	I-7
Sansome AVE	MA20004494	MH20004132	MH20004192	200	CONCRETE	72.79	WWS	4.136	C-4
Sansome AVE	MA20004487	MH20004126	MH20004132	200	CONCRETE	84.37	WWS	3.295	B-4
Sansome AVE	MA20004489	MH20004128	MH20004126	200	CONCRETE	77.6	WWS	3.158	B-4
Sansome AVE	MA20004559	MH20004192	MH20004191	300	CONCRETE	64.253	WWS	4.264	C-4
Sansome AVE	MA20004587	MH20004208	MH20004222	300	CONCRETE	103.04	WWS	3.96	D-4
Sansome AVE	MA20004561	MH20004191	MH20004204	300	CONCRETE	109.897	WWS	3.468	C-4
Sansome AVE	MA20004575	MH20004204	MH20004208	300	CONCRETE	87.161	WWS	4.087	D-4
Sansome AVE	MA70034341	MH20003748	MH20003808	375	CONCRETE	89.55	WWS	4.941	G-4
Sansome AVE	MA20004588	MH20004222	MH20003605	375	CONCRETE	104.91	WWS	4.252	E-4
Sansome AVE	MA20003928	MH20003605	MH20003622	375	CONCRETE	92.6	WWS	4.389	E-4
Sansome AVE	MA20003943	MH20003622	MH20003620	375	CONCRETE	38.072	WWS	4.483	F-4
Sansome AVE	MA20003942	MH20003620	MH20003648	375	CONCRETE	82.69	WWS	0	F-4
Sansome AVE	MA20003969	MH20003648	MH20003749	375	CONCRETE	82.94	WWS	4.152	F-4
Sansome AVE	MA20004078	MH20003749	MH20003748	375	CONCRETE	90.37	WWS	4.307	G-4
Sansome AVE	MA20004035	MH20003808	MH20003727	375	CONCRETE	89.91	WWS	4.681	H-5
Scalena PL	MA20002917	MH20002649	MH20002651	200	CONCRETE	30.48	WWS	2.896	F-9

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Scalena PL	MA20002918	MH20002651	MH20002650	200	CONCRETE	104.67	WWS	0	F-9
Shakespeare BAY	MA20003420	MH20003129	MH20003138	200	CONCRETE	63.58	WWS	2.774	B-5
Shakespeare BAY	MA20003421	MH20004106	MH20003129	200	CONCRETE	91.6	WWS	3.301	B-5
Shakespeare BAY	MA20004466	MH20004106	MH20004111	200	CONCRETE	65.35	WWS	3.072	B-5
Shakespeare BAY	MA20003435	MH20003138	MH20003188	200	CONCRETE	63.14	WWS	3.097	C-5
Shakespeare BAY	MA20004468	MH20004111	MH20004110	200	CONCRETE	63.98	WWS	0	C-5
Shelley ST	MA20004210	MH20003917	MH20003863	200	CONCRETE	98.33	WWS	2.899	I-4
Shelley ST	MA20004174	MH20003838	MH20003836	250	CONCRETE	40.24	WWS	3.709	I-4
Shelley ST	MA20004176	MH20003863	MH20003838	250	CONCRETE	98.33	WWS	3.572	I-4
Shelley ST	MA20003274	MH20002989	MH20002996	250	CONCRETE	109.14	WWS	4.454	I-5
Shelley ST	MA20004070	MH20003734	MH20002989	250	CONCRETE	64.38	WWS	4.109	I-5
Shelley ST	MA20004067	MH20003836	MH20003734	250	CONCRETE	42.57	WWS	3.721	I-5
Thackary AVE	MA20003150	MH20002895	MH20002864	250	CONCRETE	68.31	WWS	3.849	I-7
Thackeray AVE	MA20003151	MH20002864	MH20002865	250	CONCRETE	58.03	WWS	4.267	H-7
Thackeray AVE	MA20003139	MH20002865	MH20002850	250	CONCRETE	52.91	WWS	5.008	H-7
Trigwell BAY	MA20003456	MH20003161	MH20003214	200	CONCRETE	62.27	WWS	3.395	D-7
Trigwell BAY	MA20003503	MH20003214	MH20003213	200	CONCRETE	61.84	WWS	3.49	D-6
Trigwell BAY	MA70023287	MH20003213	MH20003212	200	CONCRETE	76.99	WWS	0	D-6
Trigwell BAY	MA20003504	MH20003215	MH20003213	200	CONCRETE	53.17	WWS	2.938	D-6
Trigwell BAY	MA20003509	MH20003221	MH20003220	200	CONCRETE	38.1	WWS	2.689	D-7
Trigwell BAY	MA20003506	MH20003220	MH20003215	200	CONCRETE	96.74	WWS	3.039	D-7
Twain DR	MA20004507	MH20004142	MH20004162	200	CONCRETE	97.58	WWS	3.258	B-4
Twain DR	MA20004505	MH20004140	MH20004142	200	CONCRETE	87.88	WWS	2.92	B-3
Twain DR	MA20004499	MH20004140	MH20004137	200	CONCRETE	78.26	WWS	2.796	
Twain DR	MA20004502	MH20004137	MH20004145	200	CONCRETE	68.58	WWS	3.082	
Twain DR	MA20004523	MH20004162	MH20004239	250	CONCRETE	100.92	WWS	3.203	C-4
Vardon PL	MA20002814	MH20002583	MH20002584	250	CONCRETE	51.45	WWS	2.914	K-5
West AVE	MA20003451	MH20003177	MH20003158	200	CONCRETE	60.53	WWS	2.709	E-8
West AVE	MA20003469	MH20003178	MH20003177	200	CONCRETE	48.46	WWS	2.74	E-8
Westboine PL	MA20002964	MH20002684	MH20002683	200	CONCRETE	45.903	WWS	2.755	I-10
Westwood DR	MA20004155	PL20000561	MH20003818	150	*UNKNOWN	8.343	WWS	0	H-3
Westwood DR	MA70012261	MH20002977	MH20002995	200	CONCRETE	92.56	WWS	0	H-6
Westwood DR	MA20002994	MH20002781	MH20002707	200	CONCRETE	75.71	WWS	4.185	I-9
Westwood DR	MA20003240	MH20002957	MH20002995	250	CONCRETE	103.1	WWS	4.249	H-6

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Westwood DR	MA70011060	MH20002943	MH20002895	250	*UNKNOWN	103.59	WWS	0	I-7
Westwood DR	MA20004268	MH20003929	MH20003924	750	CONCRETE	75.56	WWS	3.944	H-3
Westwood DR	MA20004277	MH20003930	MH20003929	750	CONCRETE	5.212	WWS	4.017	H-3
Westwood DR	MA20004284	MH20003935	MH20003930	750	CONCRETE	98.93	WWS	4.011	H-2
Westwood DR	MA20004285	MH20003936	MH20003935	750	CONCRETE	67.4	WWS	3.91	H-2
Westwood DR	MA20004286	MH20003937	MH20003936	750	CONCRETE	34.934	WWS	3.054	H-2
Westwood DR	MA20004141	MH20003821	MH20003806	750	CONCRETE	41.544	WWS	4.878	H-4
Westwood DR	MA20004163	MH20003820	MH20003821	750	CONCRETE	49.743	WWS	0	H-4
Westwood DR	MA20004154	MH20003818	MH20003820	750	CONCRETE	41.281	WWS	4.282	H-3
Westwood DR	MA20004152	MH20003919	MH20003818	750	CONCRETE	50.536	WWS	4.222	H-3
Westwood DR	MA20004266	MH20003924	MH20003919	750	CONCRETE	23.08	WWS	4.072	H-3
Westwood DR	MA20004055	MH20003807	MH20003727	900	CONCRETE	38.91	WWS	5.169	H-5
Westwood DR	MA20004142	MH20003806	MH20003807	900	CONCRETE	81.06	WWS	0	H-4
Westwood DR	MA20003260	MH20002977	MH20002972	900	CONCRETE	93.574	WWS	5.937	H-6
Westwood DR	MA70034462	TE70015122	MH20002977	900	CONCRETE	19.99	WWS	5.571	H-5
Westwood DR	MA70034461	MH20003726	TE70015122	900	CONCRETE	73.8	WWS	5.294	H-5
Westwood DR	MA20004053	MH20003727	MH20003726	900	CONCRETE	41.86	WWS	5.178	H-5
Whitegates CRES	MA20002890	MH20002628	MH20003048	*UNKNOWN	CONCRETE	40.63	WWS	0	E-9
Whitegates CRES	MA20002895	MH20002614	MH20002628	*UNKNOWN	CONCRETE	14.021	WWS	2.802	E-9
Whitegates CRES	MA20002882	MH20002728	MH20003228	200	CONCRETE	81.89	WWS	0	E-6
Whitegates CRES	MA20003500	MH20003228	MH20003209	200	CONCRETE	83.85	WWS	2.974	E-6
Whitegates CRES	MA70023288	MH20003209	MH20003224	200	CONCRETE	90.2	WWS	0	E-6
Whitegates CRES	MA20003356	MH20003064	MH20003065	200	CONCRETE	60.96	WWS	4.484	E-9
Whitegates CRES	MA20003334	MH20003048	MH20003064	200	CONCRETE	59.59	WWS	0	E-9
Whitegates CRES	MA20002879	MH20002724	MH20002614	200	CONCRETE	77.64	WWS	2.725	E-8
Whitegates CRES	MA20003006	MH20002722	MH20002724	200	CONCRETE	76.2	WWS	2.682	E-8
Whitegates CRES	MA20003001	MH20002719	MH20002720	200	CONCRETE	96.7	WWS	3.158	E-7
Whitegates CRES	MA20003002	MH20002721	MH20002720	200	CONCRETE	70.3	WWS	2.89	E-7
Whitegates CRES	MA20003003	MH20002729	MH20002721	200	CONCRETE	59.15	WWS	2.905	E-7
Whitegates CRES	MA20003008	MH20002729	MH20002728	200	CONCRETE	36.29	WWS	0	E-7
Whitegates CRES	MA20003545	MH20003274	MH20003256	250	CONCRETE	84.136	WWS	3.712	E-5
Whitegates CRES	MA20004475	MH20003256	MH20004199	250	CONCRETE	84.61	WWS	3.944	E-5
Whitegates CRES	MA20004584	MH20004199	MH20004222	250	CONCRETE	92.96	WWS	3.862	E-4
Whitegates CRES	MA20003512	MH20003224	MH20003274	250	CONCRETE	104.7	WWS	3.441	E-6

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STREET	ASSET_NUMBER	US_NODE	DS_NODE	MaxMainSize	MATERIAL	Length	FLOW	Depth	MAP_KEY
Wordsworth PL	MA20003286	MH20003005	MH20003004	200	CONCRETE	75.44	WWS	2.814	I-5
Wordsworth WAY	MA20003238	MH20002954	MH20003018			98.41	WWS	0	I-6
Wordsworth WAY	MA20003209	MH20002913	MH20002911	200	CONCRETE	81.08	WWS	2.886	F-5
Wordsworth WAY	MA20003901	MH20002911	MH20003589	200	CONCRETE	81.43	WWS	3.185	F-5
Wordsworth WAY	MA20003212	MH20002956	MH20002936	200	CONCRETE	90.89	WWS	3.457	H-6
Wordsworth WAY	MA20003186	MH20002909	MH20002939	200	CONCRETE	59.04	WWS	3.902	G-6
Wordsworth WAY	MA20003191	MH20002904	MH20002909	200	CONCRETE	75.8	WWS	3.453	G-6
Wordsworth WAY	MA20003204	MH20002903	MH20002904	200	CONCRETE	78.21	WWS	3.325	F-6
Wordsworth WAY	MA20003196	MH20002903	MH20002918	200	CONCRETE	83.97	WWS	3.021	F-6
Wordsworth WAY	MA20003197	MH20002913	MH20002918	200	CONCRETE	88.39	WWS	2.947	F-6
Wordsworth WAY	MA20004170	MH20003831	MH20003833	200	CONCRETE	77.85	WWS	3.356	I-4
Wordsworth WAY	MA20004057	MH20003831	MH20003729	200	CONCRETE	82.1	WWS	2.579	I-5
Wordsworth WAY	MA20003239	MH20002954	MH20002955	200	CONCRETE	76.66	WWS	3.005	I-6
Wordsworth WAY	MA20003219	MH20002937	MH20002936	200	CONCRETE	73.7	WWS	0	H-6
Wordsworth WAY	MA20003222	MH20002939	MH20002937	200	CONCRETE	65.44	WWS	3.81	G-6
Wordsworth WAY	MA20003245	MH20002985	MH20002957	250	CONCRETE	44.44	WWS	3.267	I-6
Wordsworth WAY	MA20004178	MH20003833	MH20003838	250	CONCRETE	93.4	WWS	3.249	I-4
Wordsworth WAY	MA20003267	MH20002955	MH20002985	250	CONCRETE	75.77	WWS	2.972	I-6
Wordsworth WAY	MA20003294	MH20003004	MH20003018	250	CONCRETE	86.9	WWS	3.164	I-5
Wordsworth WAY	MA20004056	MH20003004	MH20003729	250	CONCRETE	84.99	WWS	3.076	I-5

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STREET	ASSET_NUMBER	US_NODE	DS_NODE	MaxMainSize	MATERIAL	Length	FLOW	Depth	MAP_KEY
Gagnon ST	MA20004845	MH20004459	MH20004456	250	CONCRETE	15.794	WWS	0	B-4
Gagnon ST	MA20004842	MH20004452	MH20004456	200	CONCRETE	83.55	WWS	2.719	B-3
Sansome AVE	MA20004843	MH20004490	MH20004456	250	CONCRETE	25.063	WWS	5.407	B-4
Sansome AVE	MA20004880	MH20004490	PL20000710	*UNKNOWN	CONCRETE	17.316	WWS	0	B-4
Sansome AVE	MA20004882	MH20004497	MH20004490	250	CONCRETE	69.39	WWS	3.672	C-4
St Charles ST	MA20004884	MH20004497	MH20004491	250	CONCRETE	84	WWS	4.212	C-3
Gagnon ST	MA20004828	MH20004428	MH20004456	200	CONCRETE	83.746	WWS	3.38	B-4
Jeannette BAY	MA20004809	MH20004427	MH20004428	250	CONCRETE	67.03	WWS	0	B-4
St Charles ST	MA20004824	MH20004443	MH20004497	250	CONCRETE	81.69	WWS	4.629	C-4
Gagnon ST	MA20004818	MH20004429	MH20004428	200	CONCRETE	83.21	WWS	3.176	B-4
St Charles ST	MA20004825	MH20004444	MH20004443	250	CONCRETE	85.71	WWS	4.181	C-4
St Charles ST	MA20003567	MH20003277	MH20004444	250	CONCRETE	119.63	WWS	4.02	C-5
St Charles ST	MA20004901	MH20004514	MH20004513	250	CONCRETE	75.9	WWS	3.158	C-1
St Charles ST	MA20004909	MH20004513	MH20004518	250	CONCRETE	74.25	WWS	3.466	C-2
St Charles ST	MA70017995	MH20004518	MH20004520	250	PVC	84.37	WWS	4.424	C-2
St Charles ST	MA70017996	MH20004520	MH20004516	250	PVC	83.12	WWS	4.539	C-3
Lepine AVE	MA20004902	MH20004515	MH20004516	200	CONCRETE	42.276	WWS	3.85	C-3
St Charles ST	MA20004883	MH20004516	MH20004491	250	CONCRETE	84.03	WWS	4.203	C-3
Lepine AVE	MA20004894	MH20004505	MH20004516	200	CONCRETE	80.99	WWS	4.02	B-3
Allard AVE	MA70012262	MH20004518	MH20004503	250	*UNKNOWN	95.86	WWS	2.825	C-2
Gagnon ST	MA20004891	MH20004503	MH20004502	200	CONCRETE	83.45	WWS	0	B-2
Lepine AVE	MA20004866	MH20004478	MH20004505	200	CONCRETE	15.423	WWS	0	B-3
Gagnon ST	MA20004868	MH20004502	MH20004478	200	CONCRETE	83.861	WWS	0	B-3
Gagnon ST	MA20004865	MH20004507	MH20004484	250	CONCRETE	121.27	WWS	2.889	B-2
Gagnon ST	MA20004836	MH20004478	MH20004452	200	CONCRETE	84.43	WWS	3.402	B-3
Gagnon ST	MA20004879	MH20004484	MH20004485	250	CONCRETE	54.865	WWS	3.182	B-2
Gagnon ST	MA20004878	MH20004485	MH20004480	250	CONCRETE	103.485	WWS	3.389	B-3
Gagnon ST	MA20004839	MH20004480	MH20004455	250	CONCRETE	79.11	WWS	3.197	B-3
Gagnon ST	MA20004841	MH20004455	MH20004459	250	CONCRETE	72.238	WWS	3.499	B-3
Dennis BAY	MA20004863	MH20004476	MH20004485	250	CONCRETE	51.907	WWS	3.182	B-2
Brendalee BAY	MA20004860	MH20004471	MH20004480	250	CONCRETE	52.121	WWS	3.389	B-3
Suzanne BAY	MA20004838	MH20004454	MH20004455	250	CONCRETE	51.968	WWS	3.197	B-3
Buchanan BLVD	MA20004928	MH20004574	MH20004527	250	CONCRETE	82.65	WWS	2.881	D-1
Buchanan BLVD	MA20004926	MH20004527	MH20004540	250	CONCRETE	104.546	WWS	3.118	D-2

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STREET	ASSET_NUMBER	US_NODE	DS_NODE	MaxMainSize	MATERIAL	Length	FLOW	Depth	MAP_KEY
Stewart ST	MA20004929	MH20004572	MH20004541	250	CONCRETE	91.14	WWS	3.304	D-1
Allard AVE	MA20004924	MH20004540	MH20004539	250	CONCRETE	93.917	WWS	3.438	D-2
Stewart ST	MA20004925	MH20004541	MH20004539	250	CONCRETE	94.63	WWS	3.011	C-2
Allard AVE	MA20004927	MH20004539	MH20004533	250	CONCRETE	87.939	WWS	4.005	C-2
Allard AVE	MA20004911	MH20004533	MH20004518	250	CONCRETE	51.245	WWS	4.287	C-2
Buchanan BLVD	MA20004967	MH20004575	MH20004574	*UNKNOWN	*UNKNOWN	20.998	WWS	0	D-1