



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 404-2018**

**SNOW CLEARING ON REGIONAL AND LOCAL STREETS, BACK LANES AND  
SIDEWALKS WITHIN THE NORTH AREA (NORTH WEST)**

**Note to Bidders: Please be aware of revisions to B13.4**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 SNOW CLEARING ON REGIONAL AND LOCAL STREETS, BACK LANES AND SIDEWALKS WITHIN THE NORTH AREA (NORTH WEST)

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, July 9, 2018.

B2.2 Bids 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. ENQUIRIES**

B3.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.

B3.2 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 promptly notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.

B3.3 If the Bidder is unsure of the meaning or intent of any provision therein, the Bidder should request clarification as to the meaning or intent prior to the Submission Deadline.

B3.4 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.

B3.5 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.

B3.6 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

### **B4. CONFIDENTIALITY**

B4.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

- (a) was known to the Bidder before receipt hereof; or
- (b) becomes publicly known other than through the Bidder; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B4.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.

## **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 Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>
- B5.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 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 six (6) 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/her 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, to the Bidder who requested approval of the substitute.

- B6.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she 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 may base his/her 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 B16.
- 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.
- B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.8, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B15.1(a).

## **B7. BID SUBMISSION**

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices.
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid 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.
- B7.4 The Bid may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B7.5 If the Bid is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1
- B7.5.1 Samples or other components of the Bid 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.
- B7.6 If the Bid is submitted by facsimile transmission, it shall be submitted to 204-949-1178.
- B7.6.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.
- B7.7 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.8 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B16.1(a)
- B7.9 Bids submitted by internet electronic mail (e-mail) will not be accepted.

## **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/her own name, his/her 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/her 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 11 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/her 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;
  - (d) if the Bidder is carrying on business under a name other than his/her 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 should be printed below such signatures.
- B8.4.2 All signatures shall be original.
- 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 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.
- B9.2 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.
- B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B10. DISCLOSURE**

B10.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B10.2 The Persons are:

- (a) N/A

## **B11. CONFLICT OF INTEREST AND GOOD FAITH**

B11.1 Bidders, by responding to this Bid Opportunity, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.

B11.2 Conflict of Interest means any situation or circumstance where a Bidder or employee of the Bidder proposed for the Work has:

- (a) other commitments;
- (b) relationships;
- (c) financial interests; or
- (d) involvement in ongoing litigation;

that could or would be seen to:

- (i) exercise an improper influence over the objective, unbiased and impartial exercise of the independent judgment of the City with respect to the evaluation of Bids or award of the Contract; or
- (ii) compromise, impair or be incompatible with the effective performance of a Bidder's obligations under the Contract;
- (e) has contractual or other obligations to the City that could or would be seen to have been compromised or impaired as a result of its participation in the Bid Opportunity process or the Work; or
- (f) has knowledge of confidential information (other than confidential information disclosed by the City in the normal course of the Bid Opportunity process) of strategic and/or material relevance to the Bid Opportunity process or to the Work that is not available to other bidders and that could or would be seen to give that Bidder an unfair competitive advantage.

B11.3 In connection with its Bid, each entity identified in B11.2 shall:

- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Work;
- (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the Bid Opportunity process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Contract Administrator; and
- (c) provide the City with the proposed means to avoid or mitigate, to the greatest extent practicable, any perceived, potential or actual Conflict of Interest and shall submit any additional information to the City that the City considers necessary to properly assess the perceived, potential or actual Conflict of Interest.

B11.4 Without limiting B11.3, the City may, in its sole discretion, waive any and all perceived, potential or actual Conflicts of Interest. The City's waiver may be based upon such terms and conditions as the City, in its sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Bidder to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in its sole discretion, to avoid or mitigate the impact of such Conflict of Interest.

- B11.5 Without limiting B11.3, and in addition to all contractual or other rights or rights at law or in equity or legislation that may be available to the City, the City may, in its sole discretion:
- (a) disqualify a Bidder that fails to disclose a perceived, potential or actual Conflict of Interest of the Bidder or any of its employees proposed for the Work;
  - (b) require the removal or replacement of any employees proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in its sole discretion, determines cannot be avoided or mitigated;
  - (c) disqualify a Bidder or employees proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B11.4 to avoid or mitigate a Conflict of Interest; and
  - (d) disqualify a Bidder if the Bidder, or one of its employees proposed for the Work, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.
- B11.6 The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in its sole discretion.

## **B12. QUALIFICATION**

- B12.1 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, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business; and
  - (b) be financially capable of carrying out the terms of the Contract; and
  - (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B12.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) be responsible and not be suspended, debarred or in default of any obligations 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 Division website at <http://www.winnipeg.ca/matmgt/debar.stm>
- B12.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) have successfully carried out work similar in nature, scope and value to the Work; and
  - (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract;
  - (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba);
  - (d) have performed snow clearing services under contract that utilize similar equipment complement as stated in E4.1.
- B12.4 Further to B12.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
- (a) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) or
    - (i) a copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR)

- Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (ii) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program or

- (b) 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 Division website at <http://www.winnipeg.ca/matmgt/>).

B12.5 The Bidder shall 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.

B12.6 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.

### **B13. OPENING OF BIDS AND RELEASE OF INFORMATION**

B13.1 Bid Submissions will not be opened publicly.

B13.2 Following the Submission Deadline, the names of the Bidders and their bid prices (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 Division website at <http://www.winnipeg.ca/matmgt/>

B13.3 After award of Contract, the name(s) of the successful Bidder(s), their address(es) 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 Division website at <http://www.winnipeg.ca/matmgt/>

B13.4 The Bidder is advised that any information contained in any Bid may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).

B13.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

### **B14. IRREVOCABLE BID**

B14.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

B14.2 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 for the time period specified in Paragraph 9 of Form A: Bid.

### **B15. WITHDRAWAL OF BIDS**

B15.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

- B15.1.1 Notwithstanding C22.5, 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.
- B15.1.2 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 11 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B15.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
  - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 11 of Form A: Bid; and
  - (c) if the notice has been given by any one of the persons specified in B15.1.3(b), declare the Bid withdrawn.
- B15.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B14.2 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.

## **B16. EVALUATION OF BIDS**

- B16.1 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, or acceptable deviation therefrom (pass/fail);
  - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B12 (pass/fail);
  - (c) Total Bid Price;
  - (d) economic analysis of any approved alternative pursuant to B6;
- B16.2 Further to B16.1(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 or minor informalities or irregularities if the interests of the City so require.
- B16.3 Further to B16.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.
- B16.4 Further to B16.1(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.
- B16.4.1 Further to B16.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.
- B16.5 This Contract will be awarded as a whole.

## **B17. AWARD OF CONTRACT**

- B17.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B17.2 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.

- B17.2.1 Without limiting the generality of B17.2, 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.
- B17.3 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 in accordance with B16 .
- B17.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.
- B17.4 Notwithstanding C4.1, the City may issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B17.5 The Contract Documents, as defined in C1.1(n)(ii), in their entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that they are not necessarily attached to or accompany said Purchase Order.

## PART C - GENERAL CONDITIONS

### C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Supply of Services* (Revision 2007 04 12) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Supply of Services* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](http://www.winnipeg.ca/matmgt/gen_cond.stm)
- C0.2 A reference in the Bid Opportunity to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Supply of Services*.

## PART D - SUPPLEMENTAL CONDITIONS

### GENERAL

#### D1. GENERAL CONDITIONS

D1.1 In addition to the *General Conditions for Supply of Services*, these Supplemental Conditions are applicable to the Work of the Contract.

#### D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of snow clearing supplemental to the City of Winnipeg's snow clearing operations for the period of October 15, 2018 to April 15, 2022, with a one (1) year extension at the option of the City, under mutually agreeable terms.

D2.1.1 Snow clearing shall be performed on those regional streets, bus route and collector streets, residential streets, back lanes and sidewalks listed in Appendix A, Appendix B, Appendix C, shown on Drawing 1, Drawing 2 and Drawing 3, where full width snow clearing is required on all or a major portion of the above streets.

D2.2 The Contractor shall perform the Work of this Contract on an "as-required" basis for four (4) winter seasons from October 15, 2018 to April 15, 2022 except as hereinafter specified:

- (a) the Contractor may be required to remove snow which has fallen prior to October 15th and is on the streets as of that date;
- (b) the Contractor shall continue and complete all authorized Work for a snowfall that begins on or before April 15th, notwithstanding that the Work occurs after April 15th; and,
- (c) the Contractor shall remedy all damage and deficiencies such as curb damage by June 30th following the Contract year;
- (d) the above requirements will apply also to any extension mutually agreed upon.

D2.3 The major components of the Work are as follows:

- (a) full width snow clearing and hauling on the Priority I (Regional) Streets System identified in Appendix A and Drawing 1;
- (b) full width snow clearing on the Priority II (Bus Routes and Collectors) Streets System identified in Appendix B and Drawing 1;
- (c) full width snow clearing on the Priority III (Residential) Street System identified in Appendix C and Drawing 1;
- (d) 2.7 metre width snow clearing on back lanes identified on Drawing 2;
- (e) 1.5 metre width snow clearing on sidewalks on Priority I, II and III streets identified on Drawing 3;
- (f) opening and keeping streets and lanes open during a major snowfall and/or snow blizzard;
- (g) snow clearing using truck plows on the Priority I, Priority II and Priority III streets noted in Appendices A, B and C and identified on Drawing 1;
- (h) other winter maintenance activities as required between major snowfalls.

D2.4 The Contract Administrator reserves the right to perform routine winter maintenance on the streets listed in Appendices A, B and C, shown on Drawing 1, back lanes shown on Drawing 2, and sidewalks shown on Drawing 3 using City forces. Routine winter maintenance includes:

- (a) curb lane spot plowing of street sections;
- (b) full width spot plowing of street sections;
- (c) spot plowing of back lane sections;
- (d) spot plowing of sidewalk sections;

- (e) curb lane truck plowing;
- (f) full width truck plowing;
- (g) widening for snow storage;
- (h) snow hauling;
- (i) clearing of drainage inlets in spring.

### D3. DEFINITIONS

#### D3.1 When used in this Bid Opportunity:

- (a) **"User"** means a person, department or other administrative unit of the City authorized by the Contract Administrator to order Work under this Contract.
- (b) **"Highway"** means any place or way, including any structure forming part thereof, which or any part of which the public is ordinarily entitled or permitted to use for the passage of vehicles or pedestrians, with or without fee or charge therefore, and includes all the space between the boundary lines thereof, whether or not used for vehicular or pedestrian traffic; and, without restricting the generality of the foregoing, includes roads, road allowances, streets, lanes, thoroughfares and other means of communication dedicated to the public use as highways as so defined, and also includes all bridges, subways, underpasses, grade separations, piers, wharves, ferries, and squares, and the road improvements thereon, dedicated to the public use.
- (c) **"Roadway"** means the paved portion of the street that is used exclusively for the passage of motorized vehicles.
- (d) **"Street"** means a highway over which the City of Winnipeg has jurisdiction.
- (e) **"Sidewalk"** means the paved portion of the street that is used exclusively for a passage of pedestrians.
- (f) **"Back lane"** means a highway situated wholly within the limits of any city, town or village or restricted speed area or reduced restricted speed area which has been designated, constructed and intended to provide access to and service at the rear of places of residence or business and includes alleys having a right-of-way width of not more than 9 metres.
- (g) **"Boulevard"** means the area between the street line and the nearest edge of a roadway and/or the area separating the roadways or a divided highway.
- (h) **"Street Right-of-Way"** means the limit of the publicly-owned land acquired for and devoted to streets, boulevards, appurtenances, as well as underground facilities.
- (i) **"Private approach"** and **"Approach"** means a roadway, culvert crossing or other structure theretofore and hereafter, erected, installed or maintained in a street between the property of an owner and the nearest curb or edge of a roadway in the said street, for the use or benefit of the owner or occupant of the property adjoining or connected therewith, but does not include a roadway or other structure constructed for such purpose within an alley.
- (j) **"Traffic lane"** means a 3.6 metre or greater width of pavement.
- (k) **"Pavement"** or the adjective "Paved" when used to describe a street, road, alley or other area, means an area which has a surface constructed of Portland Cement concrete, asphaltic concrete, brick, tile or similar material.
- (l) **"Bare pavement"** means that the Contractor shall endeavour to completely clear the full pavement width of snow.
- (m) **"Face to face"** of curb on Priority I and II streets means the periodic exposure of the barrier curb vertical face with a maximum horizontal deviation of 150 mm (6 inches). This will enable the full width of the curb lane to be available for vehicular traffic.

- (n) "**Face to face**" of curb on Priority III streets means the periodic exposure of the top of the roll curb with a maximum horizontal deviation of 300 mm (12 inches) from the top of the curb into the traffic lane. Where barrier curb exists on Priority III streets, "face to face" curb means the periodic exposure of the barrier curb vertical face with a maximum horizontal deviation of 150 mm (6 inches).
- (o) "**Hauling**" means the relocation of cleared snow volumes by equipment normally employed for the snow clearing activity, but does not include the use of trucks.
- (p) "**Hauling away**" means the relocation of cleared snow volumes by use of trucks for purposes of transporting to a distant storage location.
- (q) "**Snow**" means all forms of frozen precipitation including ice associated with such snow.
- (r) "**Wing Back**" means the Contractor shall push back the windrow to create storage space for snow in future plowing operations.
- (s) "**Cross walk**" means any sidewalk at street intersections or at signed corridors.
- (t) "**Compacted snow surface**" of back lanes means a level, dense compacted layer of snow that will only allow minimal rutting from vehicular traffic and has a maximum thickness of 200mm from the compacted snow surface to underlying pavement.
- (u) "**Clearing Operation**" In this Contract, means each such direction by the Contract Administrator for clearing and hauling services for snow removal and the performance thereof by the Contractor.

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

##### **D4.1 The Contract Administrator is:**

Jean-Luc Lambert, P.Eng.  
Support Services Engineer  
Telephone No. 204- 986-7087  
Email Address: jeanlambert@winnipeg.ca

**D4.2** At the pre-commencement meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

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

**D5.1** Further to C6.19, the Contractor shall employ and keep on the Work, at all times during the performance of the Work, a competent supervisor and assistants, if necessary, acceptable to the Contract Administrator. The supervisor shall represent the Contractor on the Site. The supervisor shall not be replaced without the prior consent of the Contract Administrator unless the supervisor proves to be unsatisfactory to the Contractor and ceases to be in his/her employ.

**D5.2** Before commencement of Work, the Contractor shall identify his/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

**D5.2.1** Further to C5.5 Contract Administrator may give instructions or orders to the Contractor's supervisor and such instructions or orders shall be deemed to have been given to the Contractor.

#### **D6. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE**

**D6.1** The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.

**D6.2** The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

- D6.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;
- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
  - (b) the Contract, all deliverables produced or developed; and
  - (c) any statement of fact or opinion regarding any aspect of the Contract.
- D6.4 A Contractor who violates any provision of D6 may be determined to be in breach of Contract.

#### **D7. OPERATOR'S COMPETENCE AND PERFORMANCE**

- D7.1 The Contractor's operator shall maintain all equipment/trucks in good working order and shall perform all obligations expressed and implied in this Bid Opportunity in a good, safe and workmanlike manner. Where, in the opinion of the City Inspector, an operator fails to meet the obligations expressed or implied in this Bid Opportunity, and without limited the generality of the foregoing, the operator is:
- (a) unqualified, or
  - (b) operating in an unsafe manner, or
  - (c) not performing a satisfactory amount of Work, or
  - (d) engaged in activity outside the City's interests.
- D7.2 The equipment/truck and operator may be dismissed immediately and shall not be re-engaged until such time as the inadequacies that resulted in the dismissal have been remedied to the sole satisfaction of the Contract Administrator.

#### **D8. NOTICES**

- D8.1 Notwithstanding C22.3, all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer.

#### **SUBMISSIONS**

#### **D9. AUTHORITY TO CARRY ON BUSINESS**

- D9.1 The Contractor shall 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, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

#### **D10. INSURANCE**

- D10.1 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) inclusive, with The City of Winnipeg added as an additional insured; such liability policy to also contain a cross-liability clause, contractual liability, unlicensed equipment liability (Contractor's equipment) non-owned automobile liability and products and completed operations cover, to remain in place at all times during the performance of the Work;
  - (b) Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Service. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence;

- D10.2 Deductibles for commercial general liability must be expressly stated on the certificate of insurance and must not exceed \$5,000.00.
- D10.3 Deductibles shall be borne by the Contractor.
- D10.4 The certificate must clearly state: "Operations include snow removal on City right-of-way's during winter months" (i.e. insurance to cover snow removal and ice control of streets, roadways, back lanes/alleys, sidewalks, etc.). And confirmation that the operations include loading, unloading, hauling and dumping.
- D10.5 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, 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 C4.1 for the return of the executed Contract.
- D10.6 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

## **SCHEDULE OF WORK**

### **D11. COMMENCEMENT**

- D11.1 The Contractor shall not commence any Work until he/she is in receipt of a notice of award from the City authorizing the commencement of the Work.
- D11.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
    - (i) evidence of authority to carry on business specified in D9;
    - (ii) evidence of the workers compensation coverage specified in C6.14; and
    - (iii) evidence of the insurance specified in D10.
  - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.

### **D12. TOTAL PERFORMANCE**

- D12.1 The Contractor shall achieve Total Performance by June 30, 2022, for work specified in D2.
- D12.2 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 reinspected.
- D12.3 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.

## **CONTROL OF WORK**

### **D13. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

- D13.1 Further to C6.23, 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).

**D14. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS**

D14.1 Further to B12.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B12.4.

**D15. SAFETY**

D15.1 The Contractor shall be solely responsible for safety at the Site and for compliance with all laws, rules, regulations and practices required by the applicable safety legislation.

D15.2 The Contractor shall be solely responsible for securing the Site, and any existing facility thereon, and for the proper care and protection of the Work already performed.

D15.3 The Contractor shall do whatever is necessary to ensure that:

- (a) no person, property, right, easement or privilege is injured, damaged or infringed by reason of the Contractor's activities in performing the Work;
- (b) the health and safety of all persons employed in the performance of the Work or otherwise is not endangered by the method or means of its performance;
- (c) adequate medical services are available to all persons employed on the Work and at all times during the performance of the Work;
- (d) adequate sanitation measures are taken with respect to the Work; and
- (e) pedestrian and other traffic on any public or private road is not unduly endangered by the performance of the Work.

**MEASUREMENT AND PAYMENT**

**D16. PAYMENT**

D16.1 Further to C11, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

E1.1 These Specifications shall apply to the Work.

E1.2 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
1.	North Area (North West) Snow Clearing Priority Streets
2.	North Area (North West) Snow Clearing Back Lanes
3.	North Area (North West) Snow Clearing Sidewalks

E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B6.

#### E2. SNOW CLEARING REQUIREMENTS

E2.1 General Work

E2.1.1 The entire shoulder width of highway type pavement shall be cleared of snow during the snow clearing operation.

E2.1.2 The entire length of the curb along the centre median shall be cleared to the face of the curb.

E2.1.3 Snow shall be cleared from centre median crosswalks and shall be stored on the side boulevards.

E2.1.4 Snow from centre median openings and traffic storage lanes shall be removed and stored in the side boulevards.

E2.1.5 Windrows at all intersections, cross walks, corridors, railway crossing and private approaches shall be removed in the initial clearing operations. The windrows shall be pushed downstream of traffic or into available storage area on the street right-of-way in order to eliminate blind spots for motorists. Snow shall not be placed on boulevards at or near corners so as to block visibility of vehicles moving through the intersection.

E2.1.6 Windrows at pedestrian corridors shall be cleared for a distance of fifteen (15) metres approaching the corridor and five (5) metres leaving the corridor on undivided roadways and for a distance of fifteen (15) metres approaching the corridor on divided roadways.

E2.1.7 Windrows at bus stops shall be removed to a distance specified in E2.1.7(i) or E2.1.7(ii) from the bus stop sign. The bus stop platform and walk area connecting to the adjacent sidewalk shall be level to provide a safe footing for pedestrians.

(i) At bus stops that accommodates a non-articulated bus the windrow shall be removed to a distance of twelve (12) meters upstream of the bus stop sign;

(ii) At bus stops that accommodates an articulated bus the windrow shall be removed to a distance of eighteen (18) meters upstream of the bus stop sign;

E2.1.8 Snow windrows at hydrants shall be removed one (1) loader bucket width.

E2.1.9 Snow windrows shall be removed a loader bucket width and a path cleared by back blading to a hard surface from the curb to the sidewalk at a limited number of locations designated as handicapped access. Actual addresses will be supplied to the Contractor after Contract award.

- E2.1.10 Snow shall be removed around all G.R.E.A.T. (Guard Rail Energy Absorbing Terminal), Energite Barrel installations and between the curb and any adjacent guard rail that is within 3m of the curb and in the right-of-way. The G.R.E.A.T. units are used as crash cushions on the ends of guard rails to avoid abrupt stoppage of a vehicle. The Energite Barrel installations are used as crash cushions near overhead signs or any posts which do not have breakaway bases. This Work must be done carefully (by hand where necessary) such that the installations are not hit by snow clearing equipment or left covered in snow. The location of a limited number of installations will be supplied to the Contractor after the award.
- E2.1.11 Where adequate storage exists adjacent to the street, snow spillage onto the street as a result of the snow clearing operation shall be removed immediately by the Contractor. Any snow not removed may be removed by the City and the cost of the Work charged to the Contractor.
- E2.1.12 The City reserves the right, at its sole discretion, to allow windrow snow storage on the curb lane where no storage exists, provided that a reasonable attempt, satisfactory to the Contract Administrator or his designate, is made to minimize the extent of the encroachment during the Contractor's snow clearing operation. This storage shall only be utilized when specifically directed to do so by the Contract Administrator or his designate and only during unusual snow and blizzard conditions.
- E2.1.13 Snow shall not be deposited on islands between a yield or turnoff and the main roadway.
- E2.1.14 Snow shall not be stored or deposited on private property.
- E2.1.15 Snow from snow clearing operations shall not be deposited in sidewalk areas. All blocked sidewalk ends at intersections must be immediately cleared of snow in order to provide access for pedestrians and sidewalk plows. Any snow not immediately removed may be removed by the City and the resulting cost of the Work charged against the Contractor.
- E2.1.16 Snow from intersection windrows shall not be placed in bus stop areas.
- E2.1.17 The Contractor shall remove snow from the centre median (median cut) for snow storage and snow thaw purposes as directed by the Contract Administrator. The median cut shall be to a width of 0.6 m from the curb face and shall not expose, but be within 100 mm of the median surface. The median cut shall be carried out in conjunction with the adjacent grader plow operations, and shall be included in the lane km price.
- E2.1.18 Snow removal at traffic circles shall include the removal of snow from the inner shoulder area, which shall be considered incidental to the full width snow clearing operation.
- E2.1.19 Work for each snow clearing operation shall commence only upon the instructions of the Contract Administrator.
- E2.1.20 Normally, Priority I (Regional) Streets shall receive the highest priority for snow clearing followed by Priority II (Bus Routes and Collectors) Streets and then Priority III (Residential) Streets. However, the Contact Administrator may direct otherwise and the Contractor shall conform to all such directives, either oral or written.
- E2.1.21 Back lane and sidewalk snow clearing operations will normally be undertaken concurrently with street and street priority operations. However, the Contract Administrator may direct otherwise and the contractor shall conform to all such directives.
- E2.1.22 The Contractor shall respond immediately to rectify snow clearing deficiencies which generate citizens' complaints. If in the opinion of the Contract Administrator, the response is inadequate, then the City shall have the option of performing the necessary Work and the costs of such Work shall be borne by the Contractor.
- E2.1.23 The Contractor shall coordinate residential plowing location to minimize conflicts with the Waste/Recycling collection. Where conflicts are unavoidable the Contract Administrator will give instructions to the Contractor to relocate Waste/Recycling containers during the plowing operations. The relocation work shall consist of moving the container behind area affected by snow clearing and then placing back to original position.

## E2.2 PRIORITY I (REGIONAL) STREETS (See Appendix A)

### E2.2.1 Snow clearing activities on Priority I streets includes:

- (a) full width snow clearing and hauling;
- (b) curb lane snow clearing;
- (c) truck plow snow clearing;
- (d) interim plowing during major snowfalls; and
- (e) other winter maintenance Work.

### E2.2.2 Snow clearing on Priority I streets may be required after:

- (a) a recent accumulation of 3 cm or more of snowfall;
- (b) poor street conditions caused by less than 3 cm of recent snow accumulation accompanied by snow drifting; and
- (c) a gradual accumulation of snowfall that results in poor street conditions.

### E2.2.3 Priority I streets, shall be completed within a twenty-four (24) hour period for a clearing operation following the time of commencement designated by the Contract Administrator.

### E2.2.4 Snow clearing on the Priority I street system shall normally be undertaken during the night shift (1900 hours to 0700 hours) unless otherwise directed.

### E2.2.5 Priority I streets shall be cleared to bare pavement over the full pavement width and plowed to the sides as shown in Appendix A. The Contractor shall wing back snow windrows in order to create the required storage as directed by the Contract Administrator.

### E2.2.6 The Contractor shall clear and haul away snow from the street and lane intersections, crosswalks, corridors, railroad crossings, private approaches and bus stops on those Priority I streets noted in Appendix A during the initial clearing operation. The snow must be hauled away immediately where there is insufficient site storage. The snow shall be removed to within 300 mm of the existing ground elevation. Where there is on-site storage within the street right-of-way, and the on-site storage will not cause interruptions to either vehicular or pedestrian traffic or create a safety hazard, the snow may be stored for up to seventy-two (72) hours from the time commencement designated by the Contract Administrator for a snow clearing operation on Priority I, II and III streets and up to thirty-six (36) hours for a snow clearing operation on Priority I and II streets and bus loops. Snow from bus stops on those Priority I streets listed for hauling away in Appendix A shall be hauled away immediately and hauling completed by 0700 hours on the day following the commencement.

### E2.2.7 Payment for the full width snow clearing and hauling away of snow on Priority I streets will be made at the unit price per lane kilometre and all the Work herein described shall be considered as incidental to the Contract and no further compensation will be considered.

## E2.3 PRIORITY II (BUS ROUTES/COLLECTORS) STREETS (See Appendix B)

### E2.3.1 Snow clearing activities on Priority II streets includes:

- (a) full width snow clearing and hauling;
- (b) curb lane snow clearing;
- (c) truck plow snow clearing;
- (d) interim plowing during major snowfalls; and
- (e) other winter maintenance Work.

### E2.3.2 Snow clearing on Priority II streets may be required after:

- (a) a recent accumulation of 5 cm or more of snowfall;
- (b) poor street conditions caused by less than 5 cm of recent snow accumulation accompanied by snow drifting; and
- (c) gradual accumulation of snowfall that results in poor street conditions.

- E2.3.3 Priority II streets shall be completed within a twenty-four (24) hour period for a clearing operation of a recent accumulation following the time of commencement designated by the Contract Administrator.
- E2.3.4 When Priority II streets are plowed within the same snow clearing operation as Priority I streets, the Priority II streets shall be completed within thirty-six (36) hours following the commencement time for the snow clearing operation.
- E2.3.5 Priority II streets shall be cleared to bare pavement over the full pavement width. The Contractor shall wing back snow windrows in order to create the required storage and perform the 0.6 m median cut as directed by the Contract Administrator. Where the Contractor is unable to meet the requirements of this specification due to parked vehicles, he shall arrange for a sign and tow operation with City forces to facilitate completion in these areas.
- E2.3.6 Payment for the full width snow clearing of Priority II streets will be made at the unit price per lane kilometre and all the Work herein described shall be considered as incidental to the Contract and no further compensation will be considered.
- E2.4 PRIORITY III (RESIDENTIAL) STREETS (See Appendix C)
- E2.4.1 Residential streets shall normally be cleared after:
- (a) a recent snow accumulation of 10 cm or more;
  - (b) poor street conditions caused by less than 10 cm of recent snow accumulation accompanied by snow drifting; and
  - (c) gradual accumulation of snowfall that results in poor street conditions.
- E2.4.2 Residential streets shall normally be cleared after Priority I and II streets.
- E2.4.3 Priority III streets shall be completed within a thirty-six (36) hour period following the commencement time designated by the Contract Administrator.
- E2.4.4 When Priority III streets are plowed within the same clearing operation as Priority II streets, the Priority III streets shall be completed within sixty (60) hours following the commencement time for the clearing of the Priority II streets.
- E2.4.5 When Priority III streets are plowed within the same snow clearing operation as Priority I and Priority II streets, the Priority III streets shall be completed within seventy-two (72) hours following the commencement time for the snow clearing of the Priority I and II streets.
- E2.4.6 Priority III streets shall be cleared to bare pavement over the full pavement width. The Contractor shall wing back snow windrows in order to create the required storage as directed by the Contract Administrator. Where the Contractor is unable to meet the requirements of this specification due to parked vehicles, he shall arrange for a sign and tow operation with City forces to facilitate completion in these areas.
- E2.4.7 Notwithstanding the requirements of this specification, abnormal snow and ice conditions may make it impossible to adequately clear the Priority III streets to bare pavement. On those occasions, the Contract Administrator shall determine the level of snow clearing required and the time required to complete the operation.
- E2.4.8 Payment for the full width snow clearing of Priority III streets will be made at the unit price per lane kilometre and all the Work herein described shall be considered as incidental to the Contract and no further compensation will be considered.
- E2.4.9 Prior to October 15<sup>th</sup> of the Contract year:
- (a) the Contract Administrator shall provide to the Contractor a grouping of streets to be completed in each twelve (12) hour shift. Each twelve (12) hour shift will be recognized as a Designated Snow Clearing Zone;

- (b) the Contract Administrator shall assign a letter to each Designated Snow Clearing Zone based upon the Residential Parking Ban. Commencement date and time will determine whether the Designated Snow Clearing Zone is cleared between 0700 to 1900 hours or 1900 to 0700 hours; and
- (c) the Contractor shall provide a start point and equipment deployment schedule for each Designated Snow Clearing Zones.

E2.4.10 The Contractor is responsible to ensure timeframes are adhered to when clearing operations have commenced as per the Residential Parking Ban.

E2.5 BACK LANES (see Drawing 2)

E2.5.1 Back lanes shall normally be cleared after:

- (a) a recent snow accumulation of 5 cm or more;
- (b) poor back lane conditions caused by less than 5 cm of recent snow accumulation accompanied by snow drifting; and
- (c) gradual accumulation of snowfall resulting in poor back lane conditions.

E2.5.2 Back lanes shall normally be cleared concurrently with Priority I and II street snow clearing operations and shall normally be undertaken during the day shift (0700 hours to 1900 hours) unless otherwise directed by the Contract Administrator.

E2.5.3 Back lanes shall be completed within a forty-eight (48) hour period following the commencement time designated by the Contract Administrator.

E2.5.4 Back lanes shall be cleared to a width of 2.7m and maintained to a compacted snow surface as defined in D3.

E2.5.5 Payment for back lane snow clearing will be made at the unit price per kilometre and all work herein described shall be considered incidental to the contract and no further compensation will be considered.

E2.6 SIDEWALKS (see Drawing 3)

E2.6.1 Sidewalks shall normally be cleared after:

- (a) a recent snow accumulation of 5 cm or more for sidewalks on Priority I and II streets and 8 cm or more for sidewalks on Priority III streets;
- (b) poor sidewalk conditions caused by less than 5 cm of recent snow accumulation accompanied by snow drifting, and
- (c) gradual accumulation of snowfall resulting in poor sidewalk conditions.

E2.6.2 Sidewalks on Priority I and II streets shall normally be cleared concurrently with Priority I and II street clearing operations.

E2.6.3 Sidewalk snow clearing on Priority I and II streets shall be completed within a thirty-six (36) hour period following the commencement time designated by the Contract Administrator. Sidewalk snow clearing on Priority III streets shall be completed within one hundred and twenty (120) hours of the commencement time designated by the Contract Administrator.

E2.6.4 Sidewalks in the immediate vicinity of schools, hospitals and seniors complexes shall be given their highest priority when scheduling and routing sidewalk clearing operations. Where a senior complex is situated on a Priority III street, the sidewalk to the most logical Priority I or II street shall be cleared within thirty-six (36) hours of any walk clearing operation.

E2.6.5 Sidewalks shall be cleared to a width of 1.5 m and maintained to a compacted snow surface.

E2.6.6 Payment for sidewalk snow clearing will be made at the unit price per kilometre and all work herein described shall be considered incidental to the contract and no further compensation will be considered.

### E3. HOURLY EQUIPMENT SERVICES

#### E3.1 General

- E3.1.1 Snow clearing equipment shall be supplied on an hourly basis when requested by the Contract Administrator for winter maintenance activities between storms and opening up streets, back lanes and sidewalks and keeping them open during major snow storms and blizzards.
- E3.1.2 Snow hauling equipment shall be supplied on an hourly basis when requested by the Contract Administrator for the loading and hauling away of snow between major snowfalls.
- E3.1.3 Any equipment supplied by the Contractor on an hourly basis shall meet the following specifications:
- (a) **Semi-Trailer Dump Trucks:** Category 3 GVW 36,500 kg;
  - (b) **J2 Class Loaders:** Rubber Tired - 4 Wheel Drive Loader;
    - (i) SAE Net Horsepower Minimum 75 H.P.;
    - (ii) Operating Weight 15,000 - 21,000 lbs. (6803.9 kg – 9525.4 kg); and
    - (iii) Bucket Size 1.5 – 2.25 cu. yd.
  - (c) **J3 Class Loaders:** Rubber Tired - 4 Wheel Drive Loader;
    - (i) SAE Net Horsepower Minimum 100 H.P.;
    - (ii) Operating Weight 21,000 - 30,500 lbs. (9,525.4 kg – 13,834.6 kg); and
    - (iii) Bucket Size 2.25 – 3.0 cu. yd.
  - (d) **J5 Class Loaders:** Rubber Tired - 4 Wheel Drive Loader;
    - (i) SAE Net Horsepower Minimum 150 H.P.;
    - (ii) Operating Weight 30,500 – 42,500 lbs. (13,834.6 kg – 19,277.7 kg); and
    - (iii) Bucket Size 2.7m (8'9") width.
  - (e) **K4 Class Motor Graders:** Minimum 140 - 159 Flywheel Horsepower;
  - (f) **K5 Class Motor Graders:** Minimum 160 – 179 Flywheel Horsepower;
  - (g) **K6 Class Motor Graders:** Minimum 180 and over Flywheel Horsepower;
  - (h) **J14 Sidewalk Plows:** Trackless Tractors for Sidewalk Snow Clearing;
    - (i) Snow Blade – maximum 60" width;
    - (ii) Two way blade controlled inside cab; and
    - (iii) Minimum 30" blade height.
  - (i) **V4 Sidewalk Blowers:** Snow Blowers Mounted on Trackless Tractors;
    - (i) Cutting Width – Maximum 60";
    - (ii) Cutting Height – Approximately 30";
    - (iii) Discharge Chute – Minimum 270-degree rotation; and
    - (iv) Full remote control from inside cab for chute while blowing snow.
  - (j) **Truck Plows:** As specified in E3.2 and E4.7 of the Specifications.
- E3.1.4 Contract supervision shall be as specified in E6.
- E3.1.5 The Contract Administrator may request snow clearing equipment on an hourly basis up to the number and type of pieces of equipment specified in E4.
- E3.1.6 The Contractor shall respond to the assigned location within two (2) hours of official notice from the Contract Administrator or be subject to penalties as outlined in E14.
- E3.1.7 Contractors will be required to fill out approved Work tickets showing hours of Work, type of equipment, equipment model and serial number. All Work tickets must be signed by the City inspector and a representative of the Contractor to be valid.

E3.1.8 Payment for hourly equipment will be made based on the hours actually worked and the unit price per hour shown in Form B: Prices. There will be no overtime premium for Work under this Contract.

## E3.2 TRUCK PLOW CLEARING OPERATIONS

E3.2.1 Notwithstanding the requirements of E2 of the Specifications, the clearing of snow using truck plows shall be in accordance with the following:

- (a) Truck plowing on Priority I, Priority II and Priority III streets may be required during and after any measurable snowfall. The decision to perform a snow clearing operation will be made by the Contract Administrator or his designate;
- (b) Priority I (Regional) streets shall normally receive the highest priority for snow clearing followed by Priority II (Bus Routes and Collectors) streets and then Priority III (Residential) streets. However, there may be circumstances when Collectors and Bus Routes would be cleared before Regional streets. This shall only be done when so directed by the Contract Administrator;
- (c) Priority I, Priority II and Priority III streets shall be cleared to bare pavement over the full width, except at isolated locations where parked cars make the plowing of the curb lane(s) impossible;
- (d) Notwithstanding E7 the Contractor may be directed to clear only the travel lanes;
- (e) Windrows at all intersections, crosswalks, corridors, railway crossings and private approaches shall be removed if the Contract Administrator or his designate deem that they present a hazard to traffic;
- (f) Reasonable care shall be taken so that snow from the truck plow clearing operations shall not be deposited in sidewalk areas. Snow deposited on the sidewalk areas unnecessarily shall be removed by the Contractor at his expense; and
- (g) Snow may be deposited on centre medians when allowed by the Contract Administrator.

## E4. EQUIPMENT

E4.1 The Contractor shall provide the following minimum quantity and type of equipment in first class working condition:

- (a) 6 motor graders;
- (b) 8 loaders;
- (c) 6 truck plows;
- (d) 2 sidewalk snow plows; and
- (e) 1 sidewalk snow blower.

E4.2 All equipment shall be made available for inspection by the Contract Administrator or his designate prior to the award of Contract.

E4.3 The Bidder is not required to own the equipment at the time of the Submission Deadline. The Bidder shall, however, provide the Contract Administrator, within seventy-two (72) hours of being requested, the name of the registered owner of each proposed piece of equipment and a copy of a binding contract, or option to purchase or to contract, for the use of the equipment for the duration of the Contract.

## E4.4 LIGHTING

E4.4.1 Each vehicle and each piece of equipment shall be provided with all of the necessary lighting prescribed by the motor vehicle laws of the Province of Manitoba.

E4.4.2 Notwithstanding the generality of the foregoing, the Contractor shall ensure that all equipment is equipped with working lighting systems sufficient to facilitate the Work. At a minimum, all equipment must be equipped with the following lighting:

- (a) at least two headlights;
- (b) at least two rear running lights;
- (c) turning signals front and rear;
- (d) stop light at rear;
- (e) at least one flashing or oscillating blue or amber light, clearly visible in all directions (360 degrees);
- (f) if the machine is in excess of two (2) metres wide, at least four clearance lights (one blue or amber light on each side at the front, facing the front, and one red light on each side at the rear facing rear-ward).
- (g) All equipment must maintain proper lighting though out the entire shift or be removed from hired and contract work.

#### **E4.5 IDENTIFICATION**

- E4.5.1 All equipment shall be clearly labelled, indicating the Contractor's name and unit number. Letters and numbers used for identification purposes must be a minimum of 100 mm in height and positioned in such a manner as to be clearly visible when standing at either side of the machine.

#### **E4.6 COMMUNICATION**

- E4.6.1 At least one piece of equipment in a crew working in a specific area must have a means of two-way communications with the Contractor's Supervisor and office.

#### **E4.7 TRUCK PLOWS**

- E4.7.1 Each truck plow shall conform to the following:
- (a) be capable of providing a level of performance consistent with the front-mounted truck plows currently in use by the City;
  - (b) be equipped with a hydraulically reversible straight blade that will ride on the pavement surface;
  - (c) the plow blade shall be suitable for clearing a minimum 2.4 m wide path when fully angled (approximately 40°); and
  - (d) the plow blade and/or cutting edges shall be spring loaded or flexible to allow deflection when an obstacle is encountered. This deflection shall cause the blade to raise to clear manholes, catch basins, curbs and other obstructions protruding above pavement, without damage.

#### **E5. DRIVERS LICENSE FOR ALL HIRED HOURLY EQUIPMENT**

- E5.1 The City requires that the Contractor's supervisor is to ensure all drivers and operators have the appropriate driver's license for all Hired Hourly and Contract Equipment supplied under this contract.

#### **E6. CONTRACTOR'S SUPERVISION AND COMMUNICATION**

- E6.1 The Contractor shall have a qualified Supervisor on duty during all snow clearing activities regardless of the type and magnitude of the operation. The Supervisor shall be able to attend, monitor and respond to all operational and equipment concerns throughout the contract area.
- E6.2 The Contractor's Supervisor shall have two-way communications with the Contractor's office and field crews, and continuously direct, coordinate and inspect the work of the field crews.
- E6.3 The Supervisor, or his designate, shall provide a means of cellular communications with City staff involved in the inspection of contract snow clearing operations. Failure by the Contractor to provide cellular communication to the City staff by first call-out will result in the City furnishing such equipment and deducting costs from the Contract payment.

E6.4 The Contractor shall have the capability of receiving email, text, and facsimile transmission (fax machine) and shall supply the email address, cellular number, and facsimile number to the Contract Administrator.

## **E7. EXTREME SNOWFALL AND BLIZZARD CONDITIONS**

E7.1 The Contractor shall provide snow clearing equipment to keep streets, sidewalks and back lanes open during extreme snowfall events if requested by the Contract Administrator. The Contract Administrator shall evaluate field conditions and at his discretion, continue or terminate the hourly snow clearing operations.

E7.2 Time utilized by the Contractor to keep streets, sidewalks and back lanes open during the snow storm shall not be part of the time limits established in E2.2, E2.3, E2.4, E2.5, and E2.6.

E7.3 During or after extreme snowfall and/or blizzards, the Contract Administrator may require that Regional and Collector streets, sidewalks and back lanes be opened using both Contract and City forces in order to open such streets and emergency routes as quickly as possible. The Contractor may be required to dispatch his equipment to work inside and outside the contract area with and under the direction of City forces.

E7.4 Once notified by the Contract Administrator of the official start time for the formal snow clearing operations following extreme snowfall and/or blizzards the Contractor shall immediately initiate the snow clearing operation.

## **E8. QUANTITIES**

E8.1 Further to B9 of the Bidding Procedures, the estimated quantities identified on Form B: Prices for the clearing and hauling of snow on the Priority I, II and III street systems, sidewalks and back lanes are based on the following:

- (a) **Item No. 1 - Priority I (Regional) Street System:** The approximate quantity is based on 47.72 lane km of street for one (1) clearing operation of 0-10 cm;
- (b) **Item No. 2 - Priority II (Bus Routes and Collector) Street System:** The approximate quantity is based on 75.74 lane km of street for three (3) clearing operations of 0-10 cm;
- (c) **Item No. 3 - Priority III (Residential) Street System:** The approximate quantity is based on 164.54 lane km of street for three (3) clearing operations of 0-10 cm;
- (d) **Item No. 4 – Back Lanes:** The approximate quantity is based on 21.03 linear km of back lanes for six (6) clearing operations of 0-10 cm;
- (e) **Item no. 5 – Sidewalks (on Priority I Streets):** The approximate quantity is based on 20.31 km of sidewalks for eight (8) clearing operations of 0-10 cm; and
- (f) **Item No. 6 – Sidewalks (on Priority II Streets):** The approximate quantity is based on 50.44 km of sidewalks for eight (8) clearing operations of 0-10 cm; and
- (g) **Item No. 7 – Sidewalks (on Priority III Streets):** The approximate quantity is based on 44.99 km of sidewalks for three (3) clearing operations of 0-10 cm.

E8.2 The total length of lane kilometres, as established by the Public Works Department, are provided in Appendix A - Priority I Streets, Appendix B - Priority II Streets, and Appendix C - Priority III Streets. Drawing 1 indicates the inventory of streets, Drawing 2 indicates the inventory of back lanes, and Drawing 3 indicates the inventory of sidewalks. In the event that streets, back lanes or sidewalks are either added or deleted, then the total length shall be adjusted correspondingly for the purpose of measurement and payment.

E8.3 Appendix D showing the annual accumulation of snow based on the meteorological summary of the Records kept by the City of Winnipeg for the last forty four (44) years is provided strictly for the information of Bidders.

## **E9. TRAFFIC MOVEMENT AND PARKING**

- E9.1 After a significant snowfall, overnight parking may be restricted on Priority I and II streets with the declaration of the Declared Snow Route Parking Ban. This By-Law, when declared by the Director of Public Works, prohibits parking on Priority I and Priority II streets between the hours of midnight and 07:00 am. The ban will normally last for twenty-four (24) hours but may be extended.
- E9.2 During snow clearing and hauling operations, the Contractor shall take all reasonable measures to facilitate the movement of traffic in accordance with the Manual of Temporary Traffic Control.

## **E10. MEASUREMENT AND PAYMENT**

- E10.1 This section will govern payment for full width street clearing and back lane clearing of snow and hauling services for snow removal performed by the Contractor which include:
- (a) clearing and hauling services for snow after a recent accumulation of snow;
  - (b) clearing and hauling services after a gradual accumulation of snow where, in the opinion of the Contract Administrator, such clearing and hauling services are warranted;
  - (c) clearing and hauling services after a recent accumulation of snow combined with a gradual accumulation of snow; and
  - (d) maintenance snow clearing services between storms and keeping streets and back lanes open during major snow storms and/or blizzards on the streets specified in this Contract.
- E10.2 If there is additional precipitation before the expiration of the specified time period, the Contract Administrator will define the end of the most recent snowfall and will set another time limit based on the quantity of precipitation.
- E10.3 Where in the opinion of the Contract Administrator the amount of snowfall and/or accompanying severe drifting conditions makes it impractical to complete the full width snow clearing, sidewalk clearing and back lane clearing operations with the Contractor's full complement of equipment and continuous effort, the Contract Administrator may, at his sole discretion, extend the time limits specified.
- E10.4 Payment will be made for back lane and sidewalk clearing operations based on the unit price per kilometre. The payment for such clearing operations will be based on multiplying the unit bid price for Item No. 4, 5, 6, or 7 on Form B: Prices by the length in kilometres of back lanes and sidewalk cleared.
- E10.5 The Contract Administrator will have the authority to determine whether any clearing and hauling operation constitutes a recent accumulation, a gradual accumulation or a combination of the two. The guideline to be utilized by the Contract Administrator for determining whether a clearing operation is a recent accumulation or a gradual accumulation will be that, where 5 cm or more of snow has fallen over the forty-eight (48) hour period preceding the direction to commence clearing services, the accumulation will be considered a recent accumulation. Otherwise, the clearing operation will be considered a gradual accumulation.
- E10.6 Payment will be made for full width clearing and hauling operations on Priority I (Regional) Streets, Priority II (Collector) Streets, Priority III (Residential) streets based on the unit price per lane kilometre and a snow accumulation factor (F) which is dependent on the quantity of snowfall and the type of snow accumulation. The payment for all such clearing operations will be based on multiplying the unit price (R) for Item No. 1, 2, or 3, on Form B: Prices, as the case may be, by the length in kilometres cleared (L), as determined by the Contract Administrator, multiplied by the snow accumulation factor (F), as determined by the Contract Administrator; or  $\text{Payment} = R \times L \times F$ .

- E10.7 The snow accumulation for purposes of payment for a recent accumulation shall be the quantity of snow deemed to be cleared/hailed by the Contractor as determined by the Contract Administrator in accordance with this section. There may be hourly snow hauling, plowing and/or salting operations carried on by others on some portions of the street systems affected by this Contract. Therefore, the depth of the snow accumulation to be used for payment for the removal of a recent accumulation will be that portion of snow that has recently fallen immediately preceding the start of a clearing operation and during the said operation, but not including cleared or removed by others or by environmental processes, as determined solely by the Contract Administrator. The duration and depth of snowfall will be based on official reports from a weather consulting service. Notice of any dispute by the City arising from the amount of snow accumulation used to calculate payments for a recent clearing operation shall be forwarded to the Contract Administrator within fifteen (15) days of the City notifying the Contractor of the amounts used for payment for a given clearing operation. Failure by the Contractor to give notice of such dispute within the time specified shall preclude the Contractor from disputing the amount for which the City will pay.
- E10.8 The snow accumulation for purposes of payment for a gradual accumulation or combination of a recent and gradual accumulation shall be the quantity of snow deemed to be cleared/hailed by the Contractor as determined by the Contract Administrator in accordance with this section. There may be hourly snow hauling, plowing and/or salting operations carried on by others on some portions of the street systems affected by this Contract. Therefore, the depth of the snow accumulation to be used for payment for the removal of a gradual accumulation will not include snow that has been melted by environmental affects, chemical action, or both as determined by the Contract Administrator
- E10.9 No payment will be made for gradual accumulation after March 15 of the Contract year in the event that all of the gradual accumulation has completely melted and does not physically exist on the street at the time of a plowing operation initiated by a recent accumulation. This determination will be made by the Contract Administrator.
- E10.10 The snow accumulation factor will be determined by the appropriate formula based on the type of accumulation and the quantity of snowfall. The formula to be used to calculate the snow accumulation factor for each payment scenario are identified in Table 1 below and are further detailed in E10.10.1, E10.10.2, E10.10.3, E10.10.4, and E10.10.5.

Type of Accumulation	Snowfall Measurement	Snow Accumulation Factor Calculation
(1) Recent	0-10.0 cm	$F = 1.000$
(2) Recent	Greater than 10.0 cm	$F = 1 + (0.90 \times (x - 10) / 10)$ where $x$ is the number of centimeters of recent accumulation snowfall. $F = 1 + \left[ 0.90 \left( \frac{x - 10}{10} \right) \right]$
(3) Gradual	Starting after December 15th of Contract year or since the preceding clearing operation, whichever is later.	$F = 1.000$ or $F = (0.30 \times y) / 10$ , whichever value is greater, where $y$ is the number of centimeters of gradual accumulation snowfall.
(4) Combination of Recent and Gradual	0-10.0 cm ( $x$ ) of recent and ( $y$ ) cm of gradual starting after December 15 <sup>th</sup> of Contract year or since the preceding clearing operation, whichever is later.	$F = 1.000$ or $F = (x + (0.30 \times y)) / 10$ , whichever value is greater, where $x$ is the number of centimeters of recent accumulation snowfall and $y$ is the number of centimeters of gradual accumulation snowfall.
(5) Combination of Recent and Gradual	Greater than 10.0 cm of recent ( $x$ ) and ( $y$ ) cm of gradual starting after December 15 <sup>th</sup> of Contract year or since the preceding clearing operation, whichever is later.	$F = 1 + (0.90 \times (x - 10) / 10) + ((0.30 \times y) / 10)$ , where $x$ is the number of centimeters of recent accumulation snowfall and $y$ is the number of centimeters of gradual accumulation snowfall.

E10.10.1 For a clearing operation required as a result of a Recent Accumulation of 10 cm or less (0-10 cm), the accumulation factor (F) is 1.00. Payment will be made at the unit price multiplied by the length in kilometres of traffic lanes cleared multiplied by 1.000.

Example: The total payment for a clearing operation after 9.3 cm of Recent Accumulation would be unit price x lane kilometres x 1.000).

E10.10.2 For a clearing operation required as a result of a Recent Accumulation in excess of 10 cm, the accumulation factor will be determined by adding 1.000 (which is the factor for the first 10 cm) to 90% of the snow accumulation in excess of 10 cm divided by ten (10). Payment will be made at the unit price multiplied by the length in kilometres of traffic lanes cleared multiplied by the snow accumulation factor.

Example: The snow accumulation factor for a clearing operation after 14.3 cm of Recent Accumulation, would be based on the calculation,  $F=1 + (0.9 \times (14.3 - 10)/10) = 1.387$ . The total payment for the clearing operation would be (unit price x lane kilometres x 1.387).

E10.10.3 For a clearing operation required as a result of a Gradual Accumulation, excluding salted or chemically cleared snow, the snow accumulation factor would be 1.000 or 30% of the Gradual Accumulation divided by ten (10), whichever value is greater. Payment will be made at the unit price multiplied by the length in kilometres of traffic lanes cleared multiplied by the snow accumulation factor.

Example: Assume that, on February 28<sup>th</sup>, the condition of the Priority III streets was such that a plowing operation was required and that no snowfall had occurred in the past 48 hours. The date of the last clearing operation was January 28<sup>th</sup> and 19 cm of snowfall (Gradual Accumulation) had fallen since that date. The snow accumulation factor would be 30% of 19 cm divided by 10, or  $F = (0.30 \times 19) / 10 = 0.570$ . Since the calculated factor is less than 1.000, the greater value of 1.000 would be used and the total payment for the clearing operation would be (unit price x lane kilometres x 1.000).

E10.10.4 For a clearing operation required as result of a Recent Accumulation of 10 cm or less (0-10 cm) and where there has also been Gradual Accumulation, excluding Gradual Accumulation that was salted or chemically treated, measured starting after December 15<sup>th</sup> of the Contract year or since the immediately preceding clearing operation, whichever is later, the snow accumulation factor will be 1.000 or the value calculated by adding the recent accumulation to 30% of the Gradual Accumulation and dividing the sum by ten (10), whichever value is greater. Payment will be made at the unit price multiplied by the length in kilometres of traffic lanes cleared multiplied by the snow accumulation factor.

Example: Assume that during the Contract year there has been a snowfall on January 20<sup>th</sup> of 5.0 cm with severe winds, and in the opinion of the Contract Administrator, there is a need for a snow clearing operation. Assume further that 14.5 cm of snow has Gradually Accumulated between December 15<sup>th</sup> and the commencement of the Recent Accumulation on January 20<sup>th</sup>. The snow accumulation factor and payment would be calculated as follows:

- (i) The Recent Accumulation of 5.0 cm is added to 30% of the Gradual Accumulation of 14.5 cm and the sum divided by 10 or  $F = (5.0 + (0.30 \times 14.5)) / 10 = 0.935$ . Since the calculated factor is less than 1.000, the total payment for the clearing operation would be (unit price  $\times$  lane kilometres  $\times$  1.000).

Assume that in the above scenario the snowfall on January 20<sup>th</sup> was 8.0 cm. Then the snow accumulation factor and payment would be calculated as follows:

- (ii) The Recent Accumulation of 8.0 cm is added to 30% of the Gradual Accumulation of 14.5 cm and the sum divided by 10 or  $F = (8.0 + (0.30 \times 14.5)) / 10 = 1.235$ . The total payment for the clearing operation would be (unit price  $\times$  lane kilometres  $\times$  1.235).

E10.10.5 For a clearing operation required as result of a Recent Accumulation of greater than 10 cm and where there has also been Gradual Accumulation measured starting after December 15<sup>th</sup> of the Contract year or since the immediately preceding clearing operation, whichever is later, the snow accumulation factor will be determined by adding 1.000 (which is the factor for the first 10 cm of Recent Accumulation) to 90% of the Recent Accumulation in excess of 10 cm divided by ten (10) and then adding 30% of the Gradual Accumulation and divided by ten (10). Payment will be made at the unit price multiplied by the length in kilometres of traffic lanes cleared multiplied by the snow accumulation factor.

Example: Assume that during the Contract year there has been a snowfall on January 20<sup>th</sup> of 16.8 cm and, in the opinion of the Contract Administrator, there is need for a snow clearing operation. Assume further that 20.5 cm of snow has Gradually Accumulated between December 15<sup>th</sup> and the commencement of the Recent Accumulation on January 20<sup>th</sup>. The snow accumulation factor and payment would be calculated by adding 1.000 for the first 10 cm of Recent Accumulation to 90% of 6.8 cm (which is the Recent Accumulation in excess of 10 cm) divided by 10 and then adding 30% of 20.5 cm (which is the Gradual Accumulation) divided by 10, or  $F = 1.000 + (0.90 \times (16.8 - 10) / 10) + ((0.30 \times 20.5) / 10) = 2.227$ . The total payment for the clearing operation would be (unit price  $\times$  lane kilometres  $\times$  2.227).

E10.11 Payment shall be made for snow clearing services, such as truck plowing or maintenance snow clearing between snow storms and snow clearing during major storms/blizzards, as specified in E2.6.6 of the Specifications at the Bid hourly rate per equipment class on Form B: Prices, as the case may be, multiplied by the hours actually worked for each specific class as determined by the Contract Administrator.

E10.12 Payment for wings, ice blades, and/or straight blades for Motor Graders engaged in snow clearing operations shall be included in the unit price per lane kilometre or kilometre respectively in Form B: Prices, Item no. 1, 2, and 3.

E10.13 Ice blades and wings specifically requested for Hourly work by the Contract Administrator or his designate will be compensated for at the same rate per hour as those specified in the "Hourly Rental Rate for Public Works Department for the 2018 to 2019 Snow Season".

- E10.14 The City shall guarantee to pay to the Contractor a minimum amount, referred to as the "Guaranteed Minimum Amount", equal to 60% of the unit price shown on Form B: Prices.
- E10.14.1 Payment for Work done shall be as provided in E8 and all such payments shall be deducted from the Guaranteed Minimum Amount.
- E10.14.2 On December 31<sup>st</sup>, all payments received by the Contractor under this Contract will be totalled and the total compared with 10% of the Total Bid Price. If the total of the payments received is less than 10% of the Total Bid Price, then the difference between the aforesaid figures will be paid to the Contractor as an advance on the Guaranteed Minimum Amount. The amount of the advance will be set off against subsequent payments for work done by the Contractor.
- E10.14.3 On February 28<sup>th</sup>, all payments received by the Contractor under this Contract for Work done and as an advance on the Guaranteed Minimum Amount will be totalled and that total compared with 35% of the Total Bid Price. If the total of the payments received is less than 35% of the Total Bid Price, then the difference will be paid to the Contractor as an advance on the Guaranteed Minimum Amount. The amounts of any advances received by the Contractor will be set off against subsequent payments for Work done by the Contractor pursuant to the Contract.
- E10.14.4 At the conclusion of the Contract year, all payments received by the Contractor or under this Contract for Work done or as an advance on the Guaranteed Minimum Amount will be totalled and that total compared with the Guaranteed Minimum Amount. Only when the total of the payments received is less than the Guaranteed Minimum Amount will additional monies be payable by the City to the Contractor under the terms of this Contract.
- E10.14.5 The Contractor will not be compensated for any inconvenience and costs which may result from excavation Work on the streets, sidewalks or back lanes, the parking of vehicles on the roadway, vehicle movement, or any other obstruction to his Work.
- E10.14.6 The Contractor shall note that on the Regional Streets System portion of this Contract, the unit price shall include the cost of all necessary hauling for Priority I (Regional) Streets as specified in the Contract, identified in Appendix A with an asterisk.
- E10.14.7 The Contractor shall note that on the Priority I and Priority II street system portion of this Contract, the unit price bid shall include the cost of the 0.6 m median cut as specified in the contract.
- E10.14.8 It is the City of Winnipeg's intent to hold back five percent (5%) of progress estimates for all Work performed under this Contract as a damage deposit relating to E13 of the Specifications. These funds will be released when damages are rectified in accordance with E13.

## **E11. ANNUAL REVIEW – INFLATIONARY ADJUSTMENT**

- E11.1 The unit prices specified on Form B: Prices will be adjusted on the first Contract anniversary date, and subsequent anniversary dates based on the percentage increase or decrease in unit prices for the Contract year from the All-items Consumer Price Index for Winnipeg, normally referred to by Statistics Canada as Table 326-0001. The calculation of the adjustment will be based on October 1<sup>st</sup> of the previous year to October 1<sup>st</sup> of the current year. The first inflationary adjustment shall occur on October 1, 2019. The maximum annual adjustment shall not exceed ten percent (10%).
- E11.2 The index used will be that prepared by Statistics Canada. Since the index may not be available until sometime after the adjustment date, the adjustment will be retroactive.

## **E12. PRICE ADJUSTMENT – FUEL COSTS**

- E12.1 Notwithstanding C11.2, price adjustments for unforeseen fuel cost changes will include increases or decreases in the price of diesel fuel.

- E12.2 The City of Winnipeg will determine the Base Price of fuel costs based on the average diesel fuel price for the month of July of 2018 charged to the Streets Maintenance Division by the City of Winnipeg Fleet Management Agency.
- E12.3 Price adjustments will be assessed on October 1<sup>st</sup> and on January 1<sup>st</sup> of each contract year.
- E12.3.1 Price adjustments will only be made for any fuel price increase or decrease in excess of three percent (3%).
- E12.3.2 The actual diesel fuel price (Actual Price) will be determined on the dates indicated in E12.3 using the average fuel price of the previous month (e.g. for October 1<sup>st</sup> the average price for the month of September will be used and for January 1<sup>st</sup> the average price for December will be used).
- E12.4 Price adjustments will be applied to seventeen percent (17%) of the unit price by the Contractor on all items, which is the portion of the bid price that is attributable to fuel.
- E12.4.1 If fuel prices increase by more than three percent (3%) of the Base Price identified in E12.2, then a price adjustment for fuel will be made and paid for based on the quantity of eligible work on each progress estimate following the date of adjustment in accordance with the following formula:
- $$\text{Price Adjustment} = (\text{Actual Price} - (1.03 \times \text{Base Price}))$$
- E12.4.2 If fuel prices decrease by more than three percent (3%) of the Base Price, then a price adjustment for fuel will be made and paid for based on the quantity of eligible Work on each progress estimate following the date of adjustment in accordance with the following formula:
- $$\text{Price Adjustment} = ((0.97 \times \text{Base Price}) - \text{Actual Price})$$
- E12.4.3 Unit Price is as follows:
- $$\text{Unit Price Adjustment} = \text{Unit Price} - (\text{Price Adjustment} \times 0.17 \times \text{Unit Price}).$$

### **E13. DAMAGE TO PUBLIC AND PRIVATE PROPERTY**

- E13.1 The Contractor will be held responsible for any damage to City or private property sustained as a result of his snow clearing operation. Prior to commencement of the first clearing operation, the Contractor shall document and/or photograph all existing damage to pavements, curbs, utilities, street furniture, street signs, parking meters, etc., and shall provide this information to the Contract Administrator for verification.
- E13.2 The Contractor shall immediately report damages to City or private property to the Contract Inspector.
- E13.3 Any damage to pavements, boulevards, trees, etc. that in no way present a hazard to either pedestrian or vehicular traffic shall be reported to the Contract Administrator and rectified by the Contractor in accordance with City of Winnipeg specifications prior to June 30<sup>th</sup> following the snow clearing season. Damages not rectified by June 30<sup>th</sup> may be rectified by the City or its agents and all costs shall be borne by the Contractor and shall be deducted from monies owing.
- E13.4 The Contractor shall repair all curbs damaged as a result of snow clearing operations. The repairs will be conducted at the exact locations at which the curb damage was assessed. The Contractor shall remove and dispose of any loose curb material prior to April 15<sup>th</sup> of each year.

- E13.5 Any damage to street appurtenances such as, but not limited to, street light standards, signal lights, hydrants, valve boxes, railway signal arm protective devices shall be rectified immediately. If in the process of clearing snow from a street, the Contractor dislodges a manhole frame, it must be restored immediately. Failure to rectify damages immediately may result in the damages being rectified by the City or its agents and the associated costs borne by the Contractor. In the event that the manhole frame is damaged beyond replacement, the Contractor shall immediately install temporary warning devices to protect pedestrians and vehicles and notify the City at 311, so that a repair can be made by City forces. The costs for such repair will be borne totally by the Contractor.
- E13.6 The Contractor shall repair any sod damage caused by his snow clearing operations with top soil and seed or with sod as directed by the Contract Administrator. All restorations shall be in accordance with City of Winnipeg Standard Construction Specifications.
- E13.7 The Contractor shall replace with equal, any recycling bins or refuse containers destroyed, lost or misplaced by his operations at least one (1) day prior to the next refuse day cycle.

#### **E14. PENALTIES**

- E14.1 Where the Contractor does not satisfactorily complete the Work on Priority I, II or III streets, sidewalks or back lanes in accordance with the time and quality requirements specified in E2, the Contractor shall be assessed a penalty.
- E14.1.1 For Priority I streets, the penalty shall be in the amount of \$3,000.00 or an amount equal to fifty percent (50%) of the unit price per lane kilometre multiplied by the lane kilometres not satisfactorily completed multiplied by the snow accumulation factor, whichever is greater.
- E14.1.2 For Priority II and Priority III streets, the penalty shall be in the amount of \$2,000.00 or an amount equal to twenty-five percent (25%) of the unit price per lane kilometre multiplied by the lane kilometres not satisfactorily completed multiplied by the snow accumulation factor, whichever is greater.
- E14.1.3 For sidewalks and back lanes, the penalty shall be in the amount of \$1,500.00 or an amount equal to twenty-five percent (25%) of the unit price per kilometre times the kilometres not satisfactorily completed, whichever is greater for each back lane or sidewalk.
- E14.1.4 Streets, sidewalks and back lanes that the Contract Administrator deems to be deficient in whole and not in part will be considered incomplete and may be subject to the above penalty.
- E14.2 Where the Contractor does not supply up to the minimum quantity and type of equipment identified in E4 within two hours as outlined in E3.1.6 of the Specifications, the Contractor shall be assessed a penalty of five hundred dollars (\$500.00) per piece of equipment per call out below the minimum number as specified in E4. The minimum requirement shall apply throughout the duration of the operation from call-out to release of equipment.
- E14.3 Where the Contractor does not satisfactorily perform any snow clearing operation in accordance with the requirements of E2, particularly in reference to the quality of the Work following an inspection by the Contract Administrator the Work shall be declared a deficiency. The Contractor shall be requested to rectify the portion of streets, sidewalks or back lanes found to be unsatisfactory in quality within twenty-four (24) hours of notification or in a time period to be agreed to by the Contract Administrator. Failure to respond may result in the City performing the required Work and charging the cost of such Work back to the Contractor.
- E14.4 Any performance deficiency related to E2 such as, but not limited to, depositing snow in unauthorized locations, depositing snow on private property, or not removing snow windrows from approaches, shall be rectified immediately by the Contractor. Failure to respond will result in the City or its agent rectifying the deficiencies and charging the costs back to the Contractor.
- E14.5 Where the Contractor fails to replace recycling bins or refuse containers as described in E13.7, the City will replace these items and assess a penalty of \$100.00 per item.

## APPENDIX A – NORTH AREA (NORTH WEST) PRIORITY I STREETS

STREET NAME	FROM STREET	TO STREET	SNOW ROUTE	PRIORITY	LANE KM
Bunting St	Inkster Bv	Inkster Bv	Regional	P1	0.05
Burrows Av	Edgecombe Cv	Inkster Bv	Regional	P1	0.03
Burrows Av	Inkster Bv	Larkspur Dr	Regional	P1	0.03
Burrows Av	Keewatin St	Keewatin St	Regional	P1	0.03
Burrows Av	Keewatin St	Keewatin St	Regional	P1	0.03
Church Av	Keewatin St	Keewatin St	Regional	P1	0.03
Dr Jose Rizal Wy	Waterford Green Cmn	Old Commonwealth Pa	Regional	P1	0.26
Dr Jose Rizal Wy	Jefferson Av	Jefferson Av	Regional	P1	0.02
Dr Jose Rizal Wy	Jefferson Av	Jefferson Av	Regional	P1	0.02
Dr Jose Rizal Wy	Dzogan Cv	Jefferson Av	Regional	P1	0.39
Dr Jose Rizal Wy	Waterford Green Cmn	Adsum Dr	Regional	P1	0.26
Dr Jose Rizal Wy	Waterford Green Cmn	Highwater Pa	Regional	P1	0.38
Dr Jose Rizal Wy	Highwater Pa	Dzogan Cv	Regional	P1	0.20
Dr Jose Rizal Wy	Water Ridge Pa	Jefferson Av	Regional	P1	0.44
Dr Jose Rizal Wy	Jefferson Av	Dzogan Cv	Regional	P1	0.39
Dr Jose Rizal Wy	Dzogan Cv	Highwater Pa	Regional	P1	0.21
Dr Jose Rizal Wy	Highwater Pa	Waterford Green Cmn	Regional	P1	0.38
Dr Jose Rizal Wy	Old Commonwealth Pa	Dr Jose Rizal Wy	Regional	P1	0.52
Dr Jose Rizal Wy	Santa Fe Dr	Adsum Dr	Regional	P1	0.52
Dr Jose Rizal Wy	Adsum Dr	Adsum Dr	Regional	P1	0.02
Dr Jose Rizal Wy	Dr Jose Rizal Wy	Adsum Dr	Regional	P1	0.11
Dr Jose Rizal Wy	Old Commonwealth Pa	Old Commonwealth Pa	Regional	P1	0.02
Dr Jose Rizal Wy	Jefferson Av	Water Ridge Pa	Regional	P1	0.45
Dunlop Av	Inkster Bv	Inkster Bv	Regional	P1	0.05
Fife St	Inkster Bv	Inkster Bv	Regional	P1	0.05
Groverdale Av	Inkster Bv	Burdick Pl	Regional	P1	0.03
Hekla Av	Keewatin St	Keewatin St	Regional	P1	0.03

Hutchings St	Inkster Bv	Inkster Bv	Regional	P1	0.05
Inksbrook Dr	Inkster Bv	Inkster Bv	Regional	P1	0.03
Inksbrook Dr	Brookside Bv	Brookside Bv	Regional	P1	0.04
Inksbrook Dr	Inkster Bv	Inkster Bv	Regional	P1	0.03
Inkster Bv	Mandalay Dr	Wyatt Rd	Regional	P1	0.51
Inkster Bv	Inkster Bv	Brookside Bv	Regional	P1	0.21
Inkster Bv	Brookside Bv	Inksbrook Dr	Regional	P1	0.87
Inkster Bv	Burrows Av	Groverdale Av	Regional	P1	0.63
Inkster Bv	Cleveland St	Groverdale Av	Regional	P1	0.50
Inkster Bv	Brookside Bv	Tallman St	Regional	P1	0.48
Inkster Bv	Inksbrook Dr	Inksbrook Dr	Regional	P1	0.02
Inkster Bv	Inksbrook Dr	Inksbrook Dr	Regional	P1	0.02
Inkster Bv	Inkster Bv	King Edward St	Regional	P1	0.44
Inkster Bv	Keewatin St	King Edward St	Regional	P1	1.65
Inkster Bv	Burrows Av	Cleveland St	Regional	P1	0.13
Inkster Bv	King Edward St	Keewatin St	Regional	P1	1.65
Inkster Bv	Inksbrook Dr	Brookside Bv	Regional	P1	0.87
Inkster Bv	Brookside Bv	Tallman St	Regional	P1	0.48
Inkster Bv	King Edward St	King Edward St	Regional	P1	0.01
Inkster Bv	Tallman St	Mobile St	Regional	P1	0.33
Inkster Bv	King Edward St	King Edward St	Regional	P1	0.01
Inkster Bv	Groverdale Av	King Edward St	Regional	P1	0.44
Inkster Bv	Tallman St	Mobile St	Regional	P1	0.32
Inkster Bv	Brookside Bv	Brookside Bv	Regional	P1	0.03
Inkster Bv	Paramount Rd	Keewatin St	Regional	P1	0.42
Inkster Bv	Keewatin St	Paramount Rd	Regional	P1	0.42
Inkster Bv	McPhillips St	Lansdowne Av	Regional	P1	0.57
Inkster Bv	Keewatin St	Keewatin St	Regional	P1	0.03
Inkster Bv	Inkster Bv	Inkster Bv	Regional	P1	0.04
Inkster Bv	Hutchings St	Sheppard St	Regional	P1	0.57
Inkster Bv	Fife St	Lansdowne Av	Regional	P1	0.43

Inkster Bv	Lansdowne Av	McPhillips St	Regional	P1	0.57
Inkster Bv	Lansdowne Av	Fife St	Regional	P1	0.43
Inkster Bv	Keewatin St	Keewatin St	Regional	P1	0.03
Inkster Bv	Brookside Bv	Brookside Bv	Regional	P1	0.03
Inkster Bv	Inkster Bv	Keewatin St	Regional	P1	0.06
Inkster Bv	Mandalay Dr	Hutchings St	Regional	P1	0.50
Inkster Bv	Inkster Bv	Keewatin St	Regional	P1	0.07
Inkster Bv	Hutchings St	Mandalay Dr	Regional	P1	0.52
Inkster Bv	Milner St	Bunting St	Regional	P1	0.52
Inkster Bv	Plymouth St	Paramount Rd	Regional	P1	0.27
Inkster Bv	Bunting St	Milner St	Regional	P1	0.52
Inkster Bv	Milner St	Sheppard St	Regional	P1	0.54
Inkster Bv	Wyatt Rd	Plymouth St	Regional	P1	0.59
Inkster Bv	Fife St	Bunting St	Regional	P1	0.43
Inkster Bv	Dunlop Av	Mandalay Dr	Regional	P1	0.50
Inkster Bv	Plymouth St	Dunlop Av	Regional	P1	0.60
Inkster Bv	Sheppard St	Hutchings St	Regional	P1	0.57
Inkster Bv	Bunting St	Fife St	Regional	P1	0.43
Inkster Bv	Paramount Rd	Plymouth St	Regional	P1	0.27
Inkster Bv	Sheppard St	Milner St	Regional	P1	0.54
Inkster Bv	Burrows Av	Burrows Av	Regional	P1	0.03
Inkster Bv	Burrows Av	Burrows Av	Regional	P1	0.03
Inkster Bv	Inkster Bv	King Edward St	Regional	P1	0.05
Inkster Bv	Inkster Bv	King Edward St	Regional	P1	0.04
Inkster Bv	Inkster Bv	Inksbrook Dr	Regional	P1	0.16
Inkster Bv	Burrows Av	Mobile St	Regional	P1	0.01
* Keewatin St	Hekla Av	Gallagher Av W	Regional	P1	0.32
* Keewatin St	Hekla Av	Gallagher Av W	Regional	P1	1.07
* Keewatin St	Gallagher Av W	Hekla Av	Regional	P1	0.32
* Keewatin St	Gallagher Av W	Hekla Av	Regional	P1	1.08
* Keewatin St	Inkster Garden Dr	Inkster Bv	Regional	P1	0.70

* Keewatin St	Paramount Rd	Inkster Garden Dr	Regional	P1	0.25
* Keewatin St	Inkster Garden Dr	Inkster Garden Dr	Regional	P1	0.03
* Keewatin St	Sante Fe Dr	Paramount Rd	Regional	P1	0.51
* Keewatin St	Kinver Av	Inkster Bv	Regional	P1	0.55
* Keewatin St	Gallagher Av W	Logan Av	Regional	P1	0.19
* Keewatin St	Tyndall Av	Burrows Av	Regional	P1	0.71
* Keewatin St	Inkster Bv	Inkster Bv	Regional	P1	0.04
* Keewatin St	Keewatin St	Keewatin St	Regional	P1	0.04
* Keewatin St	Old Commonwealth Pa	Paramount Rd	Regional	P1	0.51
* Keewatin St	Inkster Bv	Inkster Garden Dr	Regional	P1	0.70
* Keewatin St	Inkster Bv	Inkster Bv	Regional	P1	0.04
* Keewatin St	Inkster Bv	Kinver Av	Regional	P1	0.55
* Keewatin St	Burrows Av	Tyndall Av	Regional	P1	0.71
* Keewatin St	Keewatin St	Inkster Bv	Regional	P1	0.06
* Keewatin St	Manitoba Av	Tyndall Av	Regional	P1	0.36
* Keewatin St	Pritchard Av	Manitoba Av	Regional	P1	0.20
* Keewatin St	Keewatin St	Inkster Bv	Regional	P1	0.07
* Keewatin St	Manitoba Av	Manitoba Av	Regional	P1	0.12
* Keewatin St	Pritchard Av	Selkirk Av	Regional	P1	0.23
* Keewatin St	Hekla Av	Selkirk Av	Regional	P1	0.57
* Keewatin St	Church Av	Kinver Av	Regional	P1	0.52
* Keewatin St	Church Av	Burrows Av	Regional	P1	0.54
* Keewatin St	Burrows Av	Burrows Av	Regional	P1	0.03
* Keewatin St	Burrows Av	Burrows Av	Regional	P1	0.03
* Keewatin St	Tyndall Av	Manitoba Av	Regional	P1	0.36
* Keewatin St	Inkster Garden Dr	Paramount Rd	Regional	P1	0.25
* Keewatin St	Selkirk Av	Hekla Av	Regional	P1	0.57
* Keewatin St	Inkster Garden Dr	Inkster Garden Dr	Regional	P1	0.03
* Keewatin St	Manitoba Av	Manitoba Av	Regional	P1	0.13
* Keewatin St	Manitoba Av	Pritchard Av	Regional	P1	0.20
* Keewatin St	Kinver Av	Church Av	Regional	P1	0.52

* Keewatin St	Selkirk Av	Pritchard Av	Regional	P1	0.22
* Keewatin St	Burrows Av	Church Av	Regional	P1	0.54
* Keewatin St	Logan Av	Gallagher Av W	Regional	P1	0.19
* Keewatin St	Keewatin St	Logan Av	Regional	P1	0.06
King Edward St	Inkster Bv	Inkster Bv	Regional	P1	0.03
King Edward St	Inkster Bv	Inkster Bv	Regional	P1	0.03
Kinver Av	Keewatin St	Keewatin St	Regional	P1	0.03
* Leila Av	Agnes Arnold Pl	Manila Rd	Regional	P1	0.48
* Leila Av	Pipeline Rd	Herron Rd	Regional	P1	0.62
* Leila Av	Pipeline Rd	Simkin Dr	Regional	P1	1.04
* Leila Av	McPhillips St	Watson St	Regional	P1	0.06
* Leila Av	Leila Av	Pipeline Rd	Regional	P1	0.07
* Leila Av	Pipeline Rd	Pipeline Rd	Regional	P1	0.03
* Leila Av	Leila Av	Pipeline Rd	Regional	P1	0.30
* Leila Av	Leila Av	Leila Av	Regional	P1	0.02
* Leila Av	Leila Av	Leila Av	Regional	P1	0.15
* Leila Av	Leila Av	Leila Av	Regional	P1	0.03
* Leila Av	Watson St	Watson St	Regional	P1	0.02
* Leila Av	Simkin Dr	Watson St	Regional	P1	0.42
* Leila Av	Pipeline Rd	Simkin Dr	Regional	P1	1.06
* Leila Av	McPhillips St	Watson St	Regional	P1	0.63
* Leila Av	Watson St	McPhillips St	Regional	P1	0.63
* Leila Av	Simkin Dr	Watson St	Regional	P1	0.42
* Leila Av	Leila Av	Leila Av	Regional	P1	0.02
* Leila Av	Leila Av	Pipeline Rd	Regional	P1	0.07
* Leila Av	James Carleton Dr	Altamont St	Regional	P1	0.25
* Leila Av	Simkin Dr	Pipeline Rd	Regional	P1	0.03
* Leila Av	Watson St	Watson St	Regional	P1	0.02
* Leila Av	Altamont St	Herron Rd	Regional	P1	0.30
* Leila Av	Allan Blye Dr	James Carleton Dr	Regional	P1	0.65
* Leila Av	Leila Av	Leila Av	Regional	P1	0.03

Mandalay Dr	Inkster Bv	Inkster Bv	Regional	P1	0.05
Manitoba Av	Keewatin St	Keewatin St	Regional	P1	0.03
Manitoba Av	Keewatin St	Keewatin St	Regional	P1	0.03
McPhillips St	McPhillips St	Leila Av	Regional	P1	0.07
Milner St	Inkster Bv	Inkster Bv	Regional	P1	0.05
Old Commonwealth Pa	Old Commonwealth Pa	Dr Jose Rizal Wy	Regional	P1	0.09
Paramount Rd	Inkster Bv	Inkster Bv	Regional	P1	0.04
Pipeline Rd	Leila Av	Leila Av	Regional	P1	0.03
Pipeline Rd	Leila Av	Leila Av	Regional	P1	0.03
Plymouth St	Inkster Bv	Inkster Bv	Regional	P1	0.04
Pritchard Av	Pritchard Av	Keewatin St	Regional	P1	0.03
Selkirk Av	Keewatin St	Keewatin St	Regional	P1	0.03
Sheppard St	Inkster Bv	Inkster Bv	Regional	P1	0.05
Simkin Dr	Leila Av	Leila Av	Regional	P1	0.03
Tallman St	Alsip Dr	Inkster Bv	Regional	P1	0.03
Tyndall Av	Keewatin St	Keewatin St	Regional	P1	0.03
Watson St	Leila Av	Leila Av	Regional	P1	0.01
Watson St	Leila Av	Leila Av	Regional	P1	0.01
<b>Total</b>					<b>47.72</b>

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**Note:** “\*” denotes snow to be cleared from streets and lane intersections, pedestrian crosswalks and corridors, private approaches, railway crossings and bus stops to be hauled away when street cleared.

**APPENDIX B - NORTH AREA (NORTH WEST) PRIORITY II STREETS**

STREET NAME	FROM STREET	TO STREET	SNOW ROUTE	PRIORITY	LANE KM
Adsum Dr	Adsum Dr	Dr Jose Rizal Wy	Non Regional	P2	0.09
Adsum Dr	Larter Cr	Pipeline Rd	Non Regional	P2	0.17
Adsum Dr	Dr Jose Rizal Wy	Khalsa St	Non Regional	P2	0.16
Adsum Dr	Khalsa St	Dr Jose Rizal Wy	Non Regional	P2	0.16
Adsum Dr	Santa Fe Dr	Khalsa St	Non Regional	P2	0.29
Adsum Dr	Mariner Cr	Larter Cr	Non Regional	P2	0.16
Adsum Dr	Ashmore Dr	Prince Philip Cr	Non Regional	P2	0.16
Adsum Dr	Jefferson Av	Manila Rd	Non Regional	P2	0.67
Adsum Dr	Khalsa St	Santa Fe Dr	Non Regional	P2	0.29
Adsum Dr	Mandalay Dr	Sorokin St	Non Regional	P2	0.17
Adsum Dr	Duval St	Scarfe St	Non Regional	P2	0.18
Adsum Dr	Blechner Dr	Mariner Cr	Non Regional	P2	0.35
Adsum Dr	Sorokin St	Streilein Cr	Non Regional	P2	0.24
Adsum Dr	Citadel Cr	Mandalay Dr	Non Regional	P2	0.29
Adsum Dr	Herron Rd	Nicholson Cr	Non Regional	P2	0.15
Adsum Dr	Derbyshire Pl	End	Non Regional	P2	0.27
Adsum Dr	Desharnais St	Prince Philip Cr	Non Regional	P2	0.13
Adsum Dr	Jefferson Av	Jefferson Av	Non Regional	P2	0.02
Adsum Dr	Desharnais St	Manila Rd	Non Regional	P2	0.36
Adsum Dr	Jefferson Av	Mankato Cr	Non Regional	P2	0.17
Adsum Dr	Ashmore Dr	Citadel Cr	Non Regional	P2	0.20
Adsum Dr	Mankato Cr	Nicholson Cr	Non Regional	P2	0.30
Adsum Dr	Sasaki Cr	Streilein Cr	Non Regional	P2	0.15
Adsum Dr	Derbyshire Pl	Duval St	Non Regional	P2	0.16
Adsum Dr	Blechner Dr	Herron Rd	Non Regional	P2	0.13
Adsum Dr	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.03
Allan Blye Dr	Leila Av	Amber Tl	Non Regional	P2	0.52
Amber Tl	Allan Blye Dr	Verona Dr	Non Regional	P2	0.25
Amber Tl	Verona Dr	Ambergate Dr	Non Regional	P2	0.74

Ambergate Dr	Pipeline Rd	Vistula Wy	Non Regional	P2	0.33
Ambergate Dr	Amber Tl	Vistula Wy	Non Regional	P2	0.33
Anglia Av	Heft Cr	Mandalay Dr	Non Regional	P3S	0.18
Anglia Av	Heft Cr	Leahcrest Cr	Non Regional	P3S	0.40
Argate Dr	Bachman By	Jefferson Av	Non Regional	P3S	0.19
Argate Dr	Bachman By	Leahcrest Cr	Non Regional	P3S	0.16
Argate Dr	Bachman By	Bachman By	Non Regional	P3S	0.16
Beauty Av	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.03
Blechner Dr	Doubleday Dr	Nicholson Cr	Non Regional	P3S	0.10
Blechner Dr	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.03
Blechner Dr	Adsum Dr	Nicholson Cr	Non Regional	P3S	0.38
Bridgeford Pa	Kaur Umber Tl	Waterford Green Cmn	Non Regional	P3S	0.37
Bridgeford Pa	Kaur Umber Tl	Waterford Green Cmn	Non Regional	P3S	0.36
Coatstone Dr	Castlebury Meadows Dr	King Edward St	Non Regional	P2	0.14
Coatstone Dr	Castlebury Meadows Dr	King Edward St	Non Regional	P2	0.14
Court Av	Pipeline Rd	McPhillips St	Non Regional	P3S	1.56
Court Av	Pipeline Rd	McPhillips St	Non Regional	P2	0.86
Court Av	Court Av	McPhillips St	Non Regional	P2	0.17
Doubleday Dr	Leamen Cr	Kushner Cr	Non Regional	P3S	0.31
Doubleday Dr	Leamen Cr	Kushner Cr	Non Regional	P3S	0.17
Doubleday Dr	Blechner Dr	Kushner Cr	Non Regional	P3S	0.16
Doubleday Dr	Pipeline Rd	Kushner Cr	Non Regional	P3S	0.17
Doubleday Dr	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.03
Dr Jose Rizal Wy	Dr Jose Rizal Wy	Jefferson Av	Non Regional	P2	0.13
Dr Jose Rizal Wy	Dr Jose Rizal Wy	Old Commonwealth Pa	Non Regional	P2	0.11
Dr Jose Rizal Wy	Dr Jose Rizal Wy	Jefferson Av	Non Regional	P2	0.10
Fife St	Inkster Bv	Mapleglen Dr	Non Regional	P2	0.60
Findlay Pl	Inkster Garden Dr	Inkster Garden Dr	Non Regional	P2	0.03
Galaxy Wy	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.03
Garton Av	Old Commonwealth Pa	Old Commonwealth Pa	Non Regional	P3S	0.02
Garton Av	Inkster Garden Dr	Rose Hill Wy	Non Regional	P2	0.45
Garton Av	Belton St	Rose Hill Wy	Non Regional	P2	0.57

Garton Av	Inkster Garden Dr	Mount Auburn By	Non Regional	P2	0.65
Garton Av	Old Commonwealth Pa	Mount Auburn By	Non Regional	P2	0.26
Garton Av	Marianne Rd	Mount Auburn By	Non Regional	P2	0.21
Garton Av	Belton St	King Edward St	Non Regional	P2	0.18
Heronswood Pa	Jefferson Av	Jefferson Av	Non Regional	P2	0.01
Inksbrook Dr	Inksbrook Dr	Inkster Bv	Non Regional	P2	0.18
Inksbrook Dr	Meridian Dr	Inkster Bv	Non Regional	P2	0.79
Inksbrook Dr	Brookside Bv	Meridian Dr	Non Regional	P2	0.65
Inksbrook Dr	Inkster Bv	Inksbrook Dr	Non Regional	P2	0.26
Inkster Garden Dr	Marianne Rd	White Pine Pl	Non Regional	P2	0.04
Inkster Garden Dr	Findlay Pl	Keewatin St	Non Regional	P2	0.17
Inkster Garden Dr	Keewatin St	Findlay Pl	Non Regional	P2	0.16
Inkster Garden Dr	Rose Hill Wy	Findlay Pl	Non Regional	P2	0.22
Inkster Garden Dr	Belton St	Meadowland Dr	Non Regional	P2	0.10
Inkster Garden Dr	King Edward St	Belton St	Non Regional	P2	0.18
Inkster Garden Dr	Pebblestone Pl	Garton Av	Non Regional	P2	0.19
Inkster Garden Dr	Inkster Garden Dr	Pebblestone Pl	Non Regional	P2	0.16
Inkster Garden Dr	Findlay Pl	Rose Hill Wy	Non Regional	P2	0.21
Inkster Garden Dr	Elm Grove Dr	Mallard Wy	Non Regional	P2	0.18
Inkster Garden Dr	Mallard Wy	Mallard Wy	Non Regional	P2	0.32
Inkster Garden Dr	Meadowland Dr	White Pine Pl	Non Regional	P2	0.10
Inkster Garden Dr	Garton Av	Mallard Wy	Non Regional	P2	0.16
Inkster Garden Dr	Pebblestone Pl	Rose Hill Wy	Non Regional	P2	0.16
Inkster Garden Dr	Pebblestone Pl	Rose Hill Wy	Non Regional	P2	0.17
Inkster Garden Dr	Elm Grove Dr	Marianne Rd	Non Regional	P2	0.16
Jefferson Av	Dr Jose Rizal Wy	Heronswood Pa	Non Regional	P2	0.33
Jefferson Av	Jefferson Av	Heronswood Pa	Non Regional	P2	0.36
Jefferson Av	Heronswood Pa	Kaur Umber Tl	Non Regional	P2	0.17
Jefferson Av	Cail By	Dr Jose Rizal Way	Non Regional	P2	0.52
Jefferson Av	Jefferson Av	Dr Jose Rizal Wy	Non Regional	P2	0.11
Jefferson Av	Jefferson Av	Heronswood Pa	Non Regional	P2	0.36
Jefferson Av	Kaur Umber Tl	Dr Jose Rizal Wy	Non Regional	P2	0.16

Jefferson Av	King Edward St	Jefferson Av	Non Regional	P2	0.90
Jefferson Av	Dr Jose Rizal Wy	Jefferson Av	Non Regional	P2	0.47
Jefferson Av	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.03
Jefferson Av	Jefferson Av	Dr Jose Rizal Wy	Non Regional	P2	0.13
Jefferson Av	McPhillips St	Watson St	Non Regional	P2	0.71
Jefferson Av	Massena Pl	Sheppard St	Non Regional	P2	0.28
Jefferson Av	Ritchie St	Skrypnyk Cr	Non Regional	P2	0.18
Jefferson Av	Idlewild By	Lavender By	Non Regional	P2	0.16
Jefferson Av	Mansard Cs	Marbury Rd	Non Regional	P2	0.17
Jefferson Av	Adsum Dr	Jefferson Av	Non Regional	P2	0.25
Jefferson Av	Watson St	McPhillips St	Non Regional	P2	0.71
Jefferson Av	Cannes Cr	Lavender By	Non Regional	P2	0.08
Jefferson Av	Cannes Cr	Mandalay Dr	Non Regional	P2	0.18
Jefferson Av	Massena Pl	Maevista Pl	Non Regional	P2	0.17
Jefferson Av	Gardenia By	Idlewild By	Non Regional	P2	0.17
Jefferson Av	Marnie Pl	Sheppard St	Non Regional	P2	0.32
Jefferson Av	Sheppard St	Massena Pl	Non Regional	P2	0.28
Jefferson Av	Jefferson Av	Adsum Dr	Non Regional	P2	0.25
Jefferson Av	Jefferson Av	Jefferson Av	Non Regional	P2	0.03
Jefferson Av	Pipeline Rd	Watson St	Non Regional	P2	0.26
Jefferson Av	Maevista Pl	Adsum Dr	Non Regional	P2	0.60
Jefferson Av	Hiddleston Cr	Adsum Dr	Non Regional	P2	0.10
Jefferson Av	Idlewild By	Lavender By	Non Regional	P2	0.18
Jefferson Av	Mandalay Dr	Olford Cr	Non Regional	P2	0.32
Jefferson Av	Adsum Dr	Maevista Pl	Non Regional	P2	0.60
Jefferson Av	Maberley Rd	Maynard Cs	Non Regional	P2	0.17
Jefferson Av	Mansard Cs	Mansard Cs	Non Regional	P2	0.17
Jefferson Av	Maevista Pl	Massena Pl	Non Regional	P2	0.18
Jefferson Av	Watson St	Pipeline Rd	Non Regional	P2	0.25
Jefferson Av	Pipeline Rd	Maynard Cs	Non Regional	P2	0.12
Jefferson Av	Mansard Cs	Maberley Rd	Non Regional	P2	0.17
Jefferson Av	Maynard Cs	Martindale Pl	Non Regional	P2	0.17

Jefferson Av	Dunham St	Wentwood Cr	Non Regional	P2	0.16
Jefferson Av	Skrypnyk Cr	Wentwood Cr	Non Regional	P2	0.16
Jefferson Av	Manila Rd	Roberts Cr	Non Regional	P2	0.18
Jefferson Av	Hiddleston Cr	Manila Rd	Non Regional	P2	0.69
Jefferson Av	Burnside Wy	Cail By	Non Regional	P2	0.18
Jefferson Av	Marbury Rd	Marnie Pl	Non Regional	P2	0.29
Jefferson Av	Roberts Cr	Gardenia By	Non Regional	P2	0.15
Jefferson Av	Argate Dr	Cail By	Non Regional	P2	0.16
Jefferson Av	Maynard Cs	Pipeline Rd	Non Regional	P2	0.13
Jefferson Av	Dunham St	Olford Cr	Non Regional	P2	0.16
Jefferson Av	Gardenia By	Gardenia By	Non Regional	P2	0.16
Jefferson Av	Martindale Pl	Masterton Cr	Non Regional	P2	0.17
Jefferson Av	Marbury Rd	Mansard Cs	Non Regional	P2	0.17
Jefferson Av	Sheppard St	Marnie Pl	Non Regional	P2	0.32
Jefferson Av	Marnie Pl	Marbury Rd	Non Regional	P2	0.29
Jefferson Av	Mansard Cs	Martindale Pl	Non Regional	P2	0.17
Khalsa St	Adsum dr	Sewa Cr	Non Regional	P2	0.02
King Edward St	Old Commonwealth Pa	Swiftwater Tl	Non Regional	P2	0.45
King Edward St	Coatstone Dr	Millpond Pa	Non Regional	P2	0.32
King Edward St	Millpond Pa	Old Commonwealth Pa	Non Regional	P2	0.18
King Edward St	Coatstone Dr	Coatstone Dr	Non Regional	P2	0.03
King Edward St	Jefferson Av	Coatstone Dr	Non Regional	P2	0.27
King Edward St	Inkster Bv	King Edward St	Non Regional	P2	0.32
King Edward St	Garton Av	Inkster Bv	Non Regional	P2	0.55
King Edward St	Swiftwater Tl	Inkster Garden Dr	Non Regional	P2	0.39
King Edward St	Chapman Av	Garton Av	Non Regional	P2	0.52
King Edward St	Inkster Garden Dr	Chapman Av	Non Regional	P2	0.56
Kingsbury Av	McPhillips St	Watson St	Non Regional	P2	0.60
Leahcrest Cr	Baker By	Argate Dr	Non Regional	P3S	0.36
Leahcrest Cr	Anglia Av	Baker By	Non Regional	P3S	0.16
Leila Av	Amberstone Rd	Sava Wy	Non Regional	P2	0.73
Leila Av	Sava Wy	Strasbourg Cr	Non Regional	P2	0.67

Leila Av	Strasbourg Cr	Agnes Arnold Pl	Non Regional	P2	0.75
Maberley Rd	Jefferson Av	Jefferson Av	Non Regional	P2	0.02
Maberley Rd	Jefferson Av	Maynard Cs	Non Regional	P2	0.35
Maberley Rd	Maynard Cs	Manorview Cs	Non Regional	P2	0.34
Maberley Rd	Mapleglen Dr	Manorview Cs	Non Regional	P2	0.24
Maevista Pl	Jefferson Av	Jefferson Av	Non Regional	P2	0.02
Mandalay Dr	Bondar By	Bondar By	Non Regional	P2	0.16
Mandalay Dr	Abraham By	Margate Rd	Non Regional	P2	0.19
Mandalay Dr	Mapleton Dr	Rolmount Rd	Non Regional	P2	0.16
Mandalay Dr	Anneville Cr	Playgreen Cr	Non Regional	P2	0.17
Mandalay Dr	Anneville Cr	Ashmore Dr	Non Regional	P2	0.16
Mandalay Dr	Playgreen Cr	Anglia Av	Non Regional	P2	0.16
Mandalay Dr	Abraham By	Arthur Wright Wy	Non Regional	P2	0.17
Mandalay Dr	Mapleton Dr	Wyatt Rd	Non Regional	P2	0.30
Mandalay Dr	Abraham By	Rolmount Rd	Non Regional	P2	0.16
Mandalay Dr	Bondar By	Margate Rd	Non Regional	P2	0.17
Mandalay Dr	Adsum Dr	Bondar By	Non Regional	P2	0.34
Mandalay Dr	Inkster Bv	Wyatt Rd	Non Regional	P2	0.35
Mandalay Dr	Adsum Dr	Anglia Av	Non Regional	P2	0.51
Mandalay Dr	Jefferson Av	Ashmore Dr	Non Regional	P2	0.30
Manila Rd	Councillor By	Adsum Dr	Non Regional	P2	0.18
Manila Rd	Maddin Cr	Maddin Cr	Non Regional	P2	0.16
Manila Rd	Jefferson Av	Maddin Cr	Non Regional	P2	0.17
Manila Rd	Councillor By	Councillor By	Non Regional	P2	0.48
Manila Rd	Councillor By	Jefferson Av	Non Regional	P2	0.16
Manila Rd	Cartwright Rd	Maddin Cr	Non Regional	P2	0.17
Manila Rd	Leila Av	Cartwright Rd	Non Regional	P2	0.20
Manren Cr	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.03
Mansard Cs	Jefferson Av	Jefferson Av	Non Regional	P2	0.02
Mansard Cs	Jefferson Av	Jefferson Av	Non Regional	P2	0.02
Mapleglen Dr	Mapleglen Dr	McPhillips St	Non Regional	P2	0.19
Mapleglen Dr	Manorview Cs	Dobrinsky Dr	Non Regional	P2	0.36

Mapleglen Dr	Dobrinsky Rd	McPhillips St	Non Regional	P2	0.37
Mapleglen Dr	Mapleglen Dr	McPhillips St	Non Regional	P2	0.05
Mapleglen Dr	Bender By	Bender By	Non Regional	P2	0.17
Mapleglen Dr	Fife St	Manorview Cs	Non Regional	P2	0.18
Mapleglen Dr	Fife St	Maberley Rd	Non Regional	P2	0.20
Mapleglen Dr	Maberley Rd	Manor House Ct	Non Regional	P2	0.39
Mapleglen Dr	Marlow Ct	Sheppard St	Non Regional	P2	0.22
Mapleglen Dr	Manor House Ct	Marbury Rd	Non Regional	P2	0.18
Mapleglen Dr	Marbury Rd	Marlow Ct	Non Regional	P2	0.48
Mapleton Dr	Mandalay Dr	Rozmus By	Non Regional	P2	0.23
Mapleton Dr	Neville St	Rozmus By	Non Regional	P2	0.10
Mapleton Dr	Neville St	Rozmus By	Non Regional	P2	0.27
Mapleton Dr	Madrill Cs	Madrill Cs	Non Regional	P2	0.16
Mapleton Dr	Manford Cs	Sheppard St	Non Regional	P2	0.18
Mapleton Dr	Madrigal Cs	Manford Cs	Non Regional	P2	0.16
Mapleton Dr	Manford Cs	Manford Cs	Non Regional	P2	0.16
Mapleton Dr	Madrill Cs	Rozmus By	Non Regional	P2	0.16
Marbury Rd	Jefferson Av	Jefferson Av	Non Regional	P2	0.02
Margate Rd	Massena Cr	Majorca Pl	Non Regional	P2	0.16
Margate Rd	Massena Cr	Sheppard St	Non Regional	P2	0.18
Margate Rd	Saratoga Cr	Desharnais St	Non Regional	P2	0.19
Margate Rd	Desharnais St	Neville St	Non Regional	P2	0.13
Margate Rd	Pickley Cr	Sardelle Cr	Non Regional	P2	0.16
Margate Rd	Massena Cr	Pickley Cr	Non Regional	P2	0.16
Margate Rd	Saratoga Cr	Sardelle Cr	Non Regional	P2	0.17
Margate Rd	Mandalay Dr	Neville St	Non Regional	P2	0.63
Margate Rd	Massena Cr	Majorca Pl	Non Regional	P2	0.16
Mariner Cr	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.03
Marnie Pl	Jefferson Av	Jefferson Av	Non Regional	P2	0.02
Massena Pl	Jefferson Av	Jefferson Av	Non Regional	P2	0.02
Maynard Cs	Jefferson Av	Jefferson Av	Non Regional	P2	0.02
Old Commonwealth Pa	Wellspring Cv	Kaur UMBER Tl	Non Regional	P2	0.18

Old Commonwealth Pa	Kaur Umber Tl	Waterford Green Cmn	Non Regional	P2	0.39
Old Commonwealth Pa	Wildbrook By	Wellspring Cv	Non Regional	P2	0.35
Old Commonwealth Pa	Garton Av	Dr Jose Rizal Wy	Non Regional	P2	0.35
Old Commonwealth Pa	Garton Av	Dr Jose Rizal Wy	Non Regional	P2	0.33
Old Commonwealth Pa	Old Commonwealth Pa	Garton Av	Non Regional	P2	0.30
Old Commonwealth Pa	Wildbrook By	King Edward St	Non Regional	P2	0.51
Pebblestone Pl	Inkster Garden Dr	Inkster Garden Dr	Non Regional	P2	0.02
Pipeline Rd	Doubleday Dr	Leamen Cr	Non Regional	P2	0.16
Pipeline Rd	Simkin Dr	Adsum Dr	Non Regional	P2	0.45
Pipeline Rd	Templeton Av	Court Av	Non Regional	P2	0.92
Pipeline Rd	Blechner Dr	Stardust Cr	Non Regional	P2	0.09
Pipeline Rd	Doubleday Dr	Simkin Dr	Non Regional	P2	0.16
Pipeline Rd	Mariner Cr	Leila Av	Non Regional	P2	0.18
Pipeline Rd	Leila Av	Mariner Cr	Non Regional	P2	0.20
Pipeline Rd	Court Av	Leila Av	Non Regional	P2	0.52
Pipeline Rd	Pipeline Rd	Leila Av	Non Regional	P2	0.04
Pipeline Rd	Jefferson Av	Jefferson Av	Non Regional	P2	0.03
Pipeline Rd	Kirk Cr	Stardust Cr	Non Regional	P2	0.06
Pipeline Rd	Leila Av	Pipeline Rd	Non Regional	P2	0.11
Pipeline Rd	Pipeline Rd	Leila Av	Non Regional	P2	0.03
Pipeline Rd	Blechner Dr	Beauty Av	Non Regional	P2	0.12
Pipeline Rd	Adsum Dr	Mariner Cr	Non Regional	P2	0.37
Pipeline Rd	Jefferson Av	Beauty Av	Non Regional	P2	0.41
Pipeline Rd	Manren Cr	Galaxy Wy	Non Regional	P2	0.14
Pipeline Rd	Stardust Cr	Stardust Cr	Non Regional	P2	0.19
Pipeline Rd	Leamen Cr	Galaxy Wy	Non Regional	P2	0.00
Pipeline Rd	Mariner Cr	Adsum Dr	Non Regional	P2	0.37
Pipeline Rd	Beauty Av	Jefferson Av	Non Regional	P2	0.40
Pipeline Rd	Galaxy Wy	Manren Cr	Non Regional	P2	0.16
Pipeline Rd	Simkin Dr	Doubleday Dr	Non Regional	P2	0.17
Pipeline Rd	Stardust Cr	Blechner Dr	Non Regional	P2	0.10
Pipeline Rd	Galaxy Wy	Doubleday Dr	Non Regional	P2	0.18

Pipeline Rd	Stardust Cr	Manren Cr	Non Regional	P2	0.04
Pipeline Rd	Adsum Dr	Simkin Dr	Non Regional	P2	0.44
Pipeline Rd	Manren Cr	Kirk Cr	Non Regional	P2	0.16
Pipeline Rd	Beauty Av	Blechner Dr	Non Regional	P2	0.12
Pipeline Rd	Jefferson Av	Jefferson Av	Non Regional	P2	0.03
Ritchie St	Ritchie St	Leila Av	Non Regional	P2	0.06
Ritchie St	Leila Av	Foxwarren Dr	Non Regional	P2	0.18
Ritchie St	Prelest Pl	Chochinov Av	Non Regional	P2	0.18
Ritchie St	Boundary By	Boundary By	Non Regional	P2	0.19
Ritchie St	Boundary By	Chochinov Av	Non Regional	P2	0.17
Ritchie St	Boundary By	Foxwarren Dr	Non Regional	P2	0.16
Ritchie St	Foxwarren Dr	Prelest Pl	Non Regional	P2	0.20
Ritchie St	Foxwarren Dr	Jefferson Av	Non Regional	P2	0.29
Rose Hill Wy	Inkster Garden Dr	Inkster Garden Dr	Non Regional	P2	0.03
Sheppard St	Jefferson Av	Jefferson Av	Non Regional	P2	0.02
Sheppard St	Mapleglen Dr	Mapleton Dr	Non Regional	P2	0.17
Sheppard St	Mannerley Wy	Mapleton Dr	Non Regional	P2	0.18
Sheppard St	Mannerley Wy	Margate Rd	Non Regional	P2	0.34
Sheppard St	Madera Cr	Margate Rd	Non Regional	P2	0.22
Sheppard St	Mapleglen Dr	Inkster Bv	Non Regional	P2	0.58
Sheppard St	Jefferson Av	Madera Cr	Non Regional	P2	0.24
Simkin Dr	Oakburn Pl	Willowood Rd	Non Regional	P2	0.10
Simkin Dr	Strewchuk By	Willowood Rd	Non Regional	P2	0.59
Simkin Dr	Strewchuk By	Strewchuk By	Non Regional	P2	0.19
Simkin Dr	Oakburn Pl	Pipeline Rd	Non Regional	P2	0.13
Simkin Dr	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.03
Simkin Dr	Monty Hall Dr	Strewchuk By	Non Regional	P2	0.21
Simkin Dr	Leila Av	Monty Hall Dr	Non Regional	P2	0.11
Stardust Cr	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.03
Strasbourg Dr	Thorn Dr	Templeton Av	Non Regional	P2	0.42
Strasbourg Dr	End	Leila Av	Non Regional	P2	0.16
Strasbourg Dr	Basel St	Amber Tl	Non Regional	P2	0.20

Strasbourg Dr	Thorn Dr	Tessler By	Non Regional	P2	0.44
Strasbourg Dr	Tessler By	Amber Tl	Non Regional	P2	0.16
Templeton Av	Templeton Av	Pipeline Rd	Non Regional	P2	0.20
Templeton Av	Pipeline Rd	Pipeline Rd	Non Regional	P2	0.36
Templeton Av	Pipeline Rd	Innsbruck Wy	Non Regional	P2	0.42
Templeton Av	Bitterfield Dr	Allincite Rd	Non Regional	P2	0.22
Templeton Av	Bitterfield Dr	Trieste Wy	Non Regional	P2	0.36
Templeton Av	Barneveld Rd	Thorn Dr	Non Regional	P2	0.28
Templeton Av	Trieste Wy	Barneveld Rd	Non Regional	P2	0.33
Templeton Av	Novara Dr	Pipeline Rd	Non Regional	P2	0.22
Templeton Av	Novara Dr	Pipeline Rd	Non Regional	P2	0.40
Templeton Av	Thorn Dr	Novara Dr	Non Regional	P2	0.44
Waterford Green Cmn	Old Commonwealth Pa	Bridgeford Pa	Non Regional	P3S	0.16
Waterford Green Cmn	Bridgeford Pa	Bridgeford Pa	Non Regional	P3S	0.02
Waterford Green Cmn	Bridgeford Pa	Dr Jose Rizal Wy	Non Regional	P3S	0.27
Watson St	Leila Av	Kingsbury Av	Non Regional	P2	0.69
Watson St	Jefferson Av	Beauty Av	Non Regional	P2	0.37
Watson St	Jefferson Av	Jefferson Av	Non Regional	P2	0.03
Watson St	Watson St	Leila Av	Non Regional	P2	0.20
Watson St	Beauty Av	Stardust Av	Non Regional	P2	0.20
Watson St	Stardust Av	Kingsbury Av	Non Regional	P2	0.88
<b>Total</b>					<b>75.74</b>

## APPENDIX C – NORTH AREA (NORTH WEST) PRIORITY III STREETS

STREET NAME	FROM STREET	TO STREET	SNOW ROUTE	PRIORITY	LANE KM
Abraham By	Mandalay Dr	Mandalay Dr	N/A	P3	0.63
Agnes Arnold Pl	Cartwright Rd	Leila Av	N/A	P3	0.20
Agnes Arnold Pl	Roberts Cr	Cartwright Rd	N/A	P3	0.16
Agnes Arnold Pl	Roberts Cr	Roberts Cr	N/A	P3	0.47
Allan Blye Dr	Allan Blye Dr	Allan Blye Dr	N/A	P3	0.32
Allincite Rd	Templeton Av	Dana Cr	N/A	P3	0.32
Alonza St	Amber Tl	Basel St	N/A	P3	0.20
Altamont St	Verona Dr	Leila Av	N/A	P3	0.24
Alton Wy	Templeton Av	Dana Cr	N/A	P3	0.24
Amber Tl	Strasbourg Dr	Alonza St	N/A	P3	0.31
Amber Tl	Alonza St	Tessler By	N/A	P3	0.16
Amber Tl	Ambergate Dr	Mike Ruta Ct	N/A	P3	0.25
Amber Tl	Mercedes Dr	Mike Ruta Ct	N/A	P3	0.53
Amber Tl	Danube Dr	Tessler By	N/A	P3	0.19
Amber Tl	Templeton Av	Mercedes Dr	N/A	P3	0.21
Amber Tl	Allan Blye Dr	Novara Dr	N/A	P3	0.13
Amber Tl	Courland By	Danube Dr	N/A	P3	0.33
Amber Tl	Amber Tl	Amber Tl	N/A	P3	0.57
Amber Tl	Amber Tl	Amber Tl	N/A	P3	0.50
Amber Tl	Courland By	Novara Dr	N/A	P3	0.18
Ambergate Dr	Ambergate Dr	Ambergate Dr	N/A	P3	0.26
Ambergate Dr	Ambergate Dr	Ambergate Dr	N/A	P3	0.56
Ambergate Dr	Ambergate Dr	Ambergate Dr	N/A	P3	0.30
Amberstone Rd	Amberstone Rd	Silkwood Cr	N/A	P3	0.43
Amberstone Rd	Morava Wy	Leila Av	N/A	P3	0.32
Amberstone Rd	Silkwood Cr	Lakebourne Dr	N/A	P3	0.18
Amberstone Rd	Amberstone Rd	Amberstone Rd	N/A	P3	0.25

Anneville Cr	Mandalay Dr	Ashmore Dr	N/A	P3	0.52
Arthur Wright Cr	Arthur Wright Wy	Filkow By	N/A	P3	0.44
Arthur Wright Cr	Arthur Wright Wy	Margate Rd	N/A	P3	0.81
Arthur Wright Cr	Duval St	Margate Rd	N/A	P3	0.56
Arthur Wright Cr	Filkow By	Margate Rd	N/A	P3	0.48
Arthur Wright Cr	Filkow By	Filkow By	N/A	P3	0.36
Arthur Wright Wy	Mandalay Dr	Arthur Wright Cr	N/A	P3	0.17
Ashmore Dr	Adsum Dr	Piney Cr	N/A	P3	0.25
Ashmore Dr	Piney Cr	Prince Philip Cr	N/A	P3	0.21
Ashmore Dr	Kenville Cr	Prince Philip Cr	N/A	P3	0.18
Ashmore Dr	Kenville Cr	Anneville Cr	N/A	P3	0.32
Ashmore Dr	Mandalay Dr	Anneville Cr	N/A	P3	0.36
Bachman By	Argate Dr	Argate Dr	N/A	P3	0.63
Baker By	Leahcrest Cr	Leahcrest Cr	N/A	P3	0.69
Baltic By	Templeton Av	Moselle Dr	N/A	P3	0.22
Baltic By	Moselle Rd	Innsbruck Wy	N/A	P3	0.13
Baltic By	Innsbruck Wy	Innsbruck Wy	N/A	P3	0.92
Barneveld Rd	Elbe Rd	Templeton Av	N/A	P3	0.14
Barneveld Rd	Jutland Rd	Elbe Rd	N/A	P3	0.19
Basel St	Strasbourg Dr	Alonza St	N/A	P3	0.31
Beauty Av	Pipeline Rd	Watson St	N/A	P3	0.37
Beauty Av	McPhillips St	Watson St	N/A	P3	0.74
Belton St	Chapman Av	Garton Av	N/A	P3	0.52
Belton St	Chapman Av	Elm Grove Dr	N/A	P3	0.22
Belton St	Elm Grove Dr	Inkster Garden Dr	N/A	P3	0.33
Bender By	Bender By	End	N/A	P3	0.15
Bender By	Mapleglen Dr	Joy Pl	N/A	P3	0.11
Bender By	Mapleglen Dr	Joy Pl	N/A	P3	0.63
Bitterfield Dr	Dana Cr	Dana Cr	N/A	P3	0.81
Bitterfield Dr	Bitterfield Dr	Bitterfield Dr	N/A	P3	0.10
Bitterfield Dr	Bitterfield Dr	Templeton Av	N/A	P3	0.39

Bitterfield Dr	Bitterfield Dr	Bitterfield Dr	N/A	P3	0.03
Bitterfield Dr	Dana Cr	Bitterfield Dr	N/A	P3	0.19
Bitterfield Dr	Templeton Av	Lakebourne Dr	N/A	P3	0.18
Bitterfield Dr	Moselle Rd	Templeton Av	N/A	P3	0.14
Bitterfield Dr	Mosselle Dr	Dana Cr	N/A	P3	0.23
Blechner Dr	Maevista Pl	Martell Cr	N/A	P3	0.36
Blechner Dr	Doubleday Dr	Maevista Pl	N/A	P3	0.11
Blechner Dr	Manren Cr	Pipeline Rd	N/A	P3	0.42
Blechner Dr	Manren Cr	Marnie Pl	N/A	P3	0.36
Blechner Dr	Marnie Pl	Martell Cr	N/A	P3	0.15
Bloomfield Pa	Old Commonwealth Pa	Swiftwater Tl	N/A	P3	0.27
Bondar By	Mandalay Dr	Mandalay Dr	N/A	P3	0.72
Boundary By	Ritchie St	Ritchie St	N/A	P3	0.49
Brenner By	Novara Dr	Amber Tl	N/A	P3	0.55
Bridgewell Cv	Luzon By	Luzon By	N/A	P3	0.19
Brooksmere Tl	Millpond Pa	Old Commonwealth Pa	N/A	P3	0.15
Brooksmere Tl	Malwa Cv	Millpond Pa	N/A	P3	0.15
Brooksmere Tl	Jefferson Av	Malwa Cv	N/A	P3	0.68
Burnside Wy	Lasker Pl	Jefferson Av	N/A	P3	0.12
Burnside Wy	Foxwarren Dr	Lasker Pl	N/A	P3	0.16
Burrowing Owl Cv	Kaur Umber Tl	Kaur Umber Tl	N/A	P3	0.24
Cail By	Jefferson Av	Jefferson Av	N/A	P3	0.82
Calvert Cs	Chapparal Cr	End	N/A	P3	0.15
Cannes Cr	Jefferson Av	Merlon Pl	N/A	P3	0.18
Cannes Cr	Merlon Pl	Mandalay Dr	N/A	P3	0.35
Carr Cs	Penny Ln	End	N/A	P3	0.22
Cartwright Rd	Manila Rd	Hiddleston Cr	N/A	P3	0.66
Cartwright Rd	Hiddleston Cr	Hiddleston Cr	N/A	P3	0.56
Cartwright Rd	Agnes Arnold Pl	Manila Rd	N/A	P3	0.49
Caslon Pl	Councillor By	Councillor By	N/A	P3	0.40
Castlebury Meadows Dr	Hazelton Dr	Hillbrook Dr	N/A	P3	0.53

Castlebury Meadows Dr	Hazelton Dr	Squire Pl	N/A	P3	0.38
Castlebury Meadows Dr	Squire Pl	Hillbrook Dr	N/A	P3	0.29
Castlebury Meadows Dr	Coatstone Dr	Hazelton Dr	N/A	P3	1.29
Castlebury Meadows Dr	Hillbrook Dr	Hazelton Dr	N/A	P3	0.44
Castlebury Meadows Dr	Hillbrook Dr	Coatstone Dr	N/A	P3	0.51
Castlebury Meadows Dr	Coatstone Dr	Coatstone Dr	N/A	P3	0.03
Chaffey Pl	Rose Hill Wy	End	N/A	P3	0.19
Chapman Av	Belton St	King Edward St	N/A	P3	0.18
Chapparal Cr	Dunham St	Calvert Cs	N/A	P3	0.31
Chapparal Cr	Calvert Cs	Cirrus Cs	N/A	P3	0.19
Chochinov Av	Dunham St	Cirrus Cs	N/A	P3	0.42
Chochinov Av	Cirrus Cs	Ritchie St	N/A	P3	0.18
Cirrus Cs	Chapparal Cr	Chochinov Av	N/A	P3	0.16
Cirrus Cs	Chapparal Cr	End	N/A	P3	0.30
Citadel Cr	Adsum Dr	Desharnais St	N/A	P3	0.66
Cleveland St	Inkster Bv	End	N/A	P3	0.15
Councillor By	Caslon Pl	Caslon Pl	N/A	P3	0.62
Councillor By	Manila Rd	Caslon Pl	N/A	P3	0.17
Councillor By	Caslon Pl	Manila Rd	N/A	P3	0.17
Courland By	Amber Tl	Novara Dr	N/A	P3	0.77
Dana Cr	Bitterfield Dr	Allincite Rd	N/A	P3	0.22
Dana Cr	Alton Wy	Bitterfield Dr	N/A	P3	0.28
Dana Cr	Alton Wy	Allincite Rd	N/A	P3	0.23
Danube Dr	Desna Pl	Desna Pl	N/A	P3	0.25
Danube Dr	Desna Pl	Thorn Dr	N/A	P3	0.24
Danube Dr	Amber Tl	Desna Pl	N/A	P3	0.19
Darbrett By	Morava Wy	Morava Wy	N/A	P3	0.69
Daylan Marshall Gt	Templeton Av	Templeton Av	N/A	P3	1.30
Deepwater Cv	Dunham St	End	N/A	P3	0.33
Degner Pl	Lakebourne Dr	Templeton Av	N/A	P3	0.17
Degner Pl	End	Lakebourne Dr	N/A	P3	0.28

Delta Pl	Rozmus By	End	N/A	P3	0.18
Derbyshire Pl	Adsum Dr	End	N/A	P3	0.24
Desharnais St	Kowall By	Margate Rd	N/A	P3	0.18
Desharnais St	Adsum Dr	Citadel Cr	N/A	P3	0.18
Desharnais St	Citadel Cr	Kowall By	N/A	P3	0.16
Desharnais St	Kowall By	Kowall By	N/A	P3	0.16
Desna Pl	Danube Dr	Danube Dr	N/A	P3	0.55
Discovery Pl	Meridian Dr	End	N/A	P3	0.73
Dobrinsky Dr	Mapleglen Dr	Nyberg Pl	N/A	P3	0.14
Dobrinsky Dr	Mapleglen Dr	Nyberg Pl	N/A	P3	1.07
Driftwater Tl	Greenfield Cv	Water Ridge Pa	N/A	P3	0.17
Driftwater Tl	Jefferson Av	Greenfield Cv	N/A	P3	0.40
Driftwater Tl	Water Ridge Pa	Water Ridge Pa	N/A	P3	0.19
Dunham St	Chochinov Av	Deepwater Cv	N/A	P3	0.16
Dunham St	Chochinov Av	Jefferson Av	N/A	P3	0.77
Dunham St	Leila Av	Deepwater Cv	N/A	P3	0.11
Duval St	Arthur Wright Cr	Margate Rd	N/A	P3	0.41
Duval St	Adsum Dr	Arthur Wright Cr	N/A	P3	0.28
Dzogan Cv	Keewatin St	Khalsa St	N/A	P3	0.24
Elbe Rd	Rockmore Rd	Barneveld Rd	N/A	P3	0.33
Elm Grove Dr	Belton St	Inkster Garden Dr	N/A	P3	0.39
Fair Acres Cv	Driftwater Tl	Driftwater Tl	N/A	P3	0.15
Filkow By	Arthur Wright Cr	Arthur Wright Cr	N/A	P3	0.64
Filkow By	Arthur Wright Cr	Wyatt Rd	N/A	P3	0.12
Findlay Pl	Inkster Garden Dr	End	N/A	P3	0.23
Forest Cove Dr	Quill By	Piper Pl	N/A	P3	0.39
Forest Cove Dr	Jonathan Cr	Jonathan Cr	N/A	P3	0.44
Forest Cove Dr	Quill By	Garton Av	N/A	P3	0.18
Forest Cove Dr	Jonathan Cr	Piper Pl	N/A	P3	0.16
Foxwarren Dr	Gelhorn Pl	Malanchuk Pl	N/A	P3	0.40
Foxwarren Dr	Gelhorn Pl	Burnside Wy	N/A	P3	1.00

Foxwarren Dr	Foxwarren Dr	Foxwarren Dr	N/A	P3	0.08
Foxwarren Dr	Foxwarren Dr	Foxwarren Dr	N/A	P3	0.08
Foxwarren Dr	Burnside Wy	Ritchie St	N/A	P3	0.33
Foxwarren Dr	Foxwarren Dr	Foxwarren Dr	N/A	P3	0.12
Foxwarren Dr	Malanchuk Pl	Ritchie St	N/A	P3	0.12
Galaxy Wy	Pipeline Rd	Stardust Cr	N/A	P3	0.44
Gardenia By	Jefferson Av	Jefferson Av	N/A	P3	0.80
Gardenton Av	Sedona Cr	Sedona Cr	N/A	P3	0.37
Garton Av	Garton Av	Garton Av	N/A	P3	0.15
Garton Av	Garton Av	Garton Av	N/A	P3	0.13
Gelhorn Pl	Foxwarren Dr	End	N/A	P3	0.18
Gemstone Cv	Jutland Rd	Jutland Rd	N/A	P3	0.26
Gemstone Cv	Moselle Rd	Jutland Rd	N/A	P3	0.22
Greenfield Cv	Driftwater Tl	Driftwater Tl	N/A	P3	0.15
Haggart Av	Meridian Dr	End	N/A	P3	0.80
Haggart Av	Haggart Av	End	N/A	P3	0.76
Hartley Pl	Kushner Cr	Kushner Cr	N/A	P3	0.41
Hazelton Dr	Hillbrook Dr	Castlebury Meadows Dr	N/A	P3	0.26
Hazelton Dr	Squire Pl	Hillbrook Dr	N/A	P3	0.18
Hazelton Dr	Squire Pl	Castlebury Meadows Dr	N/A	P3	0.17
Heft Cr	Streilein Cr	Streilein Cr	N/A	P3	0.38
Heft Cr	Anglia Av	Streilein Cr	N/A	P3	0.17
Heronswood Pa	Kaur Umber Tl	Jefferson Av	N/A	P3	0.40
Herron Rd	Mandan Rd	James Carleton Dr	N/A	P3	0.16
Herron Rd	James Carleton Dr	Leila Av	N/A	P3	0.20
Herron Rd	Mandan Rd	Mankato Cr	N/A	P3	0.37
Herron Rd	Adsum Dr	Mankato Cr	N/A	P3	0.18
Hiddleston Cr	Cartwright Rd	Jefferson Av	N/A	P3	0.18
Hiddleston Cr	Cartwright Rd	Cartwright Rd	N/A	P3	1.10
Highwater Pa	Kaur Umber Tl	Dr Jose Rizal Wy	N/A	P3	0.28
Highwater Pa	Dr Jose Rizal Wy	Dr Jose Rizal Wy	N/A	P3	0.03

Hillbrook Dr	Hazelton Dr	Castlebury Meadows Dr	N/A	P3	0.19
Hillbrook Dr	Hazelton Dr	Castlebury Meadows Dr	N/A	P3	0.83
Hood Av	Scarfe St	Leahcrest Cr	N/A	P3	0.39
Idlewild By	Jefferson Av	Jefferson Av	N/A	P3	0.77
Inkster Garden Dr	Inkster Garden Dr	Inkster Garden Dr	N/A	P3	0.21
Innsbruck Wy	Templeton Av	Innsbruck Wy	N/A	P3	0.30
Innsbruck Wy	Baltic By	Baltic By	N/A	P3	0.38
Jack Kolt Pl	Willowood Rd	End	N/A	P3	0.19
James Carleton Dr	Mandan Rd	Herron Rd	N/A	P3	0.69
James Carleton Dr	Leila Av	Herron Rd	N/A	P3	0.74
Jonathan Cr	Forest Cove Dr	Rose Hill Wy	N/A	P3	0.17
Jonathan Cr	Forest Cove Dr	Forest Cove Dr	N/A	P3	0.41
Joy Pl	Bender By	End	N/A	P3	0.15
Jutland Rd	Mosselle Rd	Rockmore Rd	N/A	P3	0.18
Jutland Rd	Barneveld Rd	Gemstone Cv	N/A	P3	0.18
Jutland Rd	Rockmore Rd	Barneveld Rd	N/A	P3	0.33
Kaur Umber Tl	Burrowing Owl Cv	Park Springs By	N/A	P3	0.19
Kaur Umber Tl	Heronswood Pa	Jefferson Av	N/A	P3	0.23
Kaur Umber Tl	Park Springs By	Heronswood Pa	N/A	P3	0.33
Kaur Umber Tl	Bridgeford Pa	Park Springs By	N/A	P3	0.09
Kaur Umber Tl	Park Springs By	Burrowing Owl Cv	N/A	P3	0.08
Kaur Umber Tl	Old Commonwealth Pa	Bridgeford Pa	N/A	P3	0.18
Kaur Umber Tl	Bridgeford Pa	Bridgeford Pa	N/A	P3	0.02
Kenville Cr	Ashmore Dr	Keystone Cr	N/A	P3	0.32
Kenville Cr	Manila Rd	Keystone Cr	N/A	P3	0.55
Keystone Cr	Kenville Cr	Prince Philip Cr	N/A	P3	0.45
Khalsa St	Sewa Cr	Sewa Cr	N/A	P3	0.26
Khalsa St	Adsum dr	Sewa Cr	N/A	P3	0.11
Khalsa St	Dzogan Cv	End	N/A	P3	0.39
Khalsa St	Dzogan Cv	Sewa Cr	N/A	P3	0.62
King Edward St	King Edward St	King Edward St	N/A	P3	0.43

King Edward St	King Edward St	King Edward St	N/A	P3	0.54
King Edward St	King Edward St	King Edward St	N/A	P3	0.50
Kingsbury Av	Watson St	End	N/A	P3	0.19
Kirk Cr	Manren Cr	Pipeline Rd	N/A	P3	0.33
Kowall By	Desharnais St	Desharnais St	N/A	P3	0.79
Kushner Cr	Hartley Pl	Hartley Pl	N/A	P3	0.62
Kushner Cr	Hartley Pl	Doubleday Dr	N/A	P3	0.16
Kushner Cr	Doubleday Dr	Hartley Pl	N/A	P3	0.16
Lakebourne Dr	Lakebourne Pl	Bitterfield Dr	N/A	P3	0.19
Lakebourne Dr	Bitterfield Dr	Massalia Dr	N/A	P3	0.18
Lakebourne Dr	Silkwood Cr	Amberstone Rd	N/A	P3	0.40
Lakebourne Dr	Amberstone Rd	Morava Wy	N/A	P3	0.23
Lakebourne Dr	Massalia Dr	Degner Pl	N/A	P3	0.33
Lakebourne Pl	Lakebourne Dr	Lakebourne Dr	N/A	P3	0.24
Lansdowne Av	McPhillips St	End	N/A	P3	0.74
Larter Cr	Adsum Dr	Mariner Cr	N/A	P3	0.39
Lasker Pl	Burnside Wy	End	N/A	P3	0.21
Lavender By	Jefferson Av	Jefferson Av	N/A	P3	0.61
Leahcrest Cr	Scarfe St	Hood Av	N/A	P3	0.51
Leahcrest Cr	Hood Av	Scarfe St	N/A	P3	0.74
Leamen Cr	Doubleday Dr	Pipeline Rd	N/A	P3	0.65
Linden Park By	Wildes Ln	End	N/A	P3	0.27
Linden Park By	Rose Hill Wy	Wildes Ln	N/A	P3	0.34
Luzon By	Jefferson Av	Bridgewell Cv	N/A	P3	0.30
Luzon By	Luzon By	Jefferson Av	N/A	P3	0.52
Luzon By	Water Ridge Pa	Bridgewell Cv	N/A	P3	0.16
Maddin Cr	Manila Rd	Manila Rd	N/A	P3	0.76
Madera Cr	Mannerley Wy	Sheppard St	N/A	P3	0.94
Madrigal Cs	Mapleton Dr	Marquis Cr	N/A	P3	0.16
Madrigal Cs	Marquis Cr	Marquis Cr	N/A	P3	0.67
Madrill Cs	Mapleton Dr	Mapleton Dr	N/A	P3	0.88

Maevista Pl	Martell Cr	Blechner Dr	N/A	P3	0.27
Maevista Pl	Martell Cr	Jefferson Av	N/A	P3	0.29
Magenta Cr	Mannerley Wy	Marbury Rd	N/A	P3	0.67
Majorca Pl	Margate Rd	End	N/A	P3	0.31
Malanchuk Pl	Foxwarren Dr	End	N/A	P3	0.30
Malden Cs	Mannerley Wy	Mannerley Wy	N/A	P3	0.75
Mallard Wy	Inkster Garden Dr	Inkster Garden Dr	N/A	P3	0.66
Malwa Cv	Brooksmere Tl	Brooksmere Tl	N/A	P3	0.23
Mandalay Dr	Olford Cr	Roshni By	N/A	P3	0.18
Mandalay Dr	Cannes Cr	Penny Ln	N/A	P3	0.16
Mandalay Dr	Jefferson Av	Penny Ln	N/A	P3	0.25
Mandalay Dr	Roshni By	Leila Av	N/A	P3	0.22
Mandan Rd	James Carleton Dr	Mariner Cr	N/A	P3	0.16
Mandan Rd	Herron Rd	James Carleton Dr	N/A	P3	0.60
Manford Cs	Mapleton Dr	Mapleton Dr	N/A	P3	0.88
Mankato Cr	Adsum Dr	Herron Rd	N/A	P3	0.62
Mannerley Wy	Magenta Cr	Malden Cs	N/A	P3	0.17
Mannerley Wy	Madera Cr	Marbury Rd	N/A	P3	0.17
Mannerley Wy	Sheppard St	Magenta Cr	N/A	P3	0.19
Mannerley Wy	Madera Cr	Malden Cs	N/A	P3	0.17
Manor House Ct	Mapleglen Dr	Mapleglen Dr	N/A	P3	0.74
Manorview Cs	Maberley Rd	Mapleglen Dr	N/A	P3	0.80
Manren Cr	Blechner Dr	Kirk Cr	N/A	P3	0.41
Manren Cr	Kirk Cr	Pipeline Rd	N/A	P3	0.18
Mansard Cs	Jefferson Av	Jefferson Av	N/A	P3	0.91
Marbury Rd	Jefferson Av	Mannerley Wy	N/A	P3	0.60
Marbury Rd	Magenta Cr	Mannerley Wy	N/A	P3	0.17
Marbury Rd	Magenta Cr	Mapleglen Dr	N/A	P3	0.17
Margate Rd	Arthur Wright Cr	Arthur Wright Cr	N/A	P3	0.16
Margate Rd	Sorokin St	Duval St	N/A	P3	0.43
Margate Rd	Mandalay Dr	Sorokin St	N/A	P3	0.17

Marianne Rd	Garton Av	Valewood Cr	N/A	P3	0.24
Marianne Rd	Valewood Cr	Inkster Garden Dr	N/A	P3	0.81
Mariner Cr	Mandan Rd	Adsum Dr	N/A	P3	0.18
Mariner Cr	Larter Cr	Pipeline Rd	N/A	P3	0.40
Mariner Cr	Larter Cr	Mandan Rd	N/A	P3	0.14
Marlow Ct	Mapleglen Dr	Mapleglen Dr	N/A	P3	0.83
Marlyn Pl	Sorokin St	End	N/A	P3	0.18
Marnie Pl	Masterton Cr	Jefferson Av	N/A	P3	0.17
Marnie Pl	Blechner Dr	Masterton Cr	N/A	P3	0.16
Marquis Cr	Margate Rd	Madrigal Cs	N/A	P3	0.53
Marquis Cr	Madrigal Cs	Madrigal Cs	N/A	P3	0.16
Marseilles Cs	Novara Dr	End	N/A	P3	0.35
Martell Cr	Maevista Pl	Blechner Dr	N/A	P3	0.63
Martindale Pl	Jefferson Av	Jefferson Av	N/A	P3	0.53
Massalia Dr	Thorn Dr	Lakebourne Dr	N/A	P3	0.38
Massalia Dr	Moldan By	Morava Wy	N/A	P3	0.18
Massalia Dr	Thorn Dr	Moldan By	N/A	P3	0.28
Massena Cr	Margate Rd	Massena Pl	N/A	P3	0.47
Massena Cr	Margate Rd	Massena Pl	N/A	P3	0.65
Massena Pl	Jefferson Av	Massena Cr	N/A	P3	0.17
Masterton Cr	Jefferson Av	Marnie Pl	N/A	P3	0.57
Maynard Cs	Jefferson Av	Maberley Rd	N/A	P3	0.83
McInnes Pl	Rose Hill Wy	End	N/A	P3	0.23
Meadowland Dr	Stillmeadow Cv	Swiftwater Tl	N/A	P3	0.18
Meadowland Dr	Inkster Garden Dr	Stillmeadow Cv	N/A	P3	0.21
Mercedes Dr	Oneida Pl	Oneida Pl	N/A	P3	0.03
Mercedes Dr	Novara Dr	Oneida Pl	N/A	P3	0.18
Mercedes Dr	Oneida Pl	Amber Tl	N/A	P3	0.39
Meridian Dr	Haggart Av	Inksbrook Dr	N/A	P3	0.37
Meridian Dr	Discovery Pl	Haggart Av	N/A	P3	0.44
Merlon Pl	Cannes Cr	End	N/A	P3	0.19

Mike Ruta Ct	End	AmberTrail	N/A	P3	0.43
Millpond Pa	Prairie Springs By	Prairie Springs By	N/A	P3	0.16
Millpond Pa	Prairie Springs By	King Edward St	N/A	P3	0.13
Millpond Pa	Brooksmere Tl	Prairie Springs By	N/A	P3	0.25
Mobile St	Inkster Bv	Wolf Av	N/A	P3	0.41
Moldan By	Massalia Dr	End	N/A	P3	0.46
Monty Hall Dr	Oakstone Pl	Oakhurst Cr	N/A	P3	0.18
Monty Hall Dr	Oakglen Pl	Oakhurst Cr	N/A	P3	0.18
Monty Hall Dr	Oakstone Pl	Simkin Dr	N/A	P3	0.24
Monty Hall Dr	Oakglen Pl	Oakhurst Cr	N/A	P3	0.17
Morava Wy	Darbrett By	Lakebourne Dr	N/A	P3	0.17
Morava Wy	Lakebourne Dr	Darbrett By	N/A	P3	0.18
Morava Wy	Amberstone Rd	Darbrett By	N/A	P3	0.21
Morava Wy	Sava Wy	Massalia Dr	N/A	P3	0.27
Morava Wy	Massalia Dr	Strasbourg Dr	N/A	P3	0.42
Morvara Wy	Darbrett By	Sava Wy	N/A	P3	0.18
Mosselle Dr	Gemstone Cv	Mosselle Pl	N/A	P3	0.86
Mosselle Dr	Jutland Rd	Gemstone Cv	N/A	P3	0.91
Mosselle Dr	Jutland Rd	Bitterfield Dr	N/A	P3	0.37
Mosselle Dr	End	Baltic By	N/A	P3	0.19
Mosselle Pl	Mosselle Dr	Mosselle Dr	N/A	P3	0.16
Mount Auburn By	Garton Av	Rose Hill Wy	N/A	P3	0.20
Mount Auburn By	Rose Hill Wy	Garton Av	N/A	P3	0.68
Neville St	Sardelle Cr	Saratoga Cr	N/A	P3	0.18
Neville St	Sardelle Cr	Rolmount Rd	N/A	P3	0.16
Neville St	Rolmount Rd	Mapleton Dr	N/A	P3	0.16
Neville St	Saratoga Cr	Margate Rd	N/A	P3	0.17
Nicholson Cr	Adsum Dr	Blechner Dr	N/A	P3	0.54
Nihal By	Mandalay Dr	Mandalay Dr	N/A	P3	0.53
Novara Dr	Courland By	Mercedes Dr	N/A	P3	0.26
Novara Dr	Marseilles Cs	Templeton Av	N/A	P3	0.20

Novara Dr	Amber Tl	Brenner By	N/A	P3	0.55
Nyberg Pl	Dobrinsky Dr	End	N/A	P3	0.17
Nyree Cv	Verona Dr	End	N/A	P3	0.17
Oakburn Pl	Simkin Dr	End	N/A	P3	0.22
Oakglen Pl	Monty Hall Dr	End	N/A	P3	0.14
Oakhurst Cr	Monty Hall Dr	End	N/A	P3	0.13
Oakhurst Cr	Monty Hall Dr	Monty Hall Dr	N/A	P3	0.87
Oakstone Pl	Monty Hall Dr	End	N/A	P3	0.15
Odessa Cv	Thorn Dr	Thorn Dr	N/A	P3	0.28
Old Commonwealth Pa	Old Commonwealth Pa	Old Commonwealth Pa	N/A	P3	0.39
Olford Cr	Jefferson Av	Penny Ln	N/A	P3	0.73
Olford Cr	Mandalay Dr	Penny Ln	N/A	P3	0.30
Oneida Pl	Mercedes Dr	Mercedes Dr	N/A	P3	0.16
Paramount Rd	Inkster Bv	Keewatin St	N/A	P3	1.30
Park Springs By	Kaur Umber Tl	Kaur Umber Tl	N/A	P3	0.59
Pavia Pl	Amberstone Rd	Amberstone Rd	N/A	P3	0.29
Pebblestone Pl	Inkster Garden Dr	End	N/A	P3	0.22
Penny Ln	Carr Cs	Mandalay Dr	N/A	P3	0.18
Penny Ln	Carr Cs	Olford Cr	N/A	P3	0.24
Petriw By	Rose Hill Wy	Chaffey Pl	N/A	P3	0.76
Philiman Pl	Ritchie St	End	N/A	P3	0.20
Pickley Cr	Rolmount Rd	Margate Rd	N/A	P3	0.78
Piney Cr	Playgreen Cr	Playgreen Cr	N/A	P3	0.51
Piney Cr	Ashmore Dr	Playgreen Cr	N/A	P3	0.16
Pipeline Rd	Pipeline Rd	Pipeline Rd	N/A	P3	0.09
Piper Pl	Forest Cove Dr	End	N/A	P3	0.17
Playgreen Cr	Mandalay Dr	Piney Cr	N/A	P3	0.18
Playgreen Cr	Piney Cr	Piney Cr	N/A	P3	0.46
Poznan Cr	Sava Wy	Morava Wy	N/A	P3	0.48
Prairie Springs By	Millpond Pa	Millpond Pa	N/A	P3	1.05
Prelest Pl	Ritchie St	End	N/A	P3	0.17

Prince Philip Cr	Ashmore Dr	Keystone Cr	N/A	P3	0.37
Prince Philip Cr	Adsum Dr	Keystone Cr	N/A	P3	0.18
Quill By	Forest Cove Dr	End	N/A	P3	0.22
Riga Cv	Thorn Dr	Thorn Dr	N/A	P3	0.29
Ritchie St	Ritchie St	Ritchie St	N/A	P3	0.20
Roberts Cr	Agnes Arnold Pl	Jefferson Av	N/A	P3	0.17
Roberts Cr	Agnes Arnold Pl	Agnes Arnold Pl	N/A	P3	0.47
Robins Nest By	Sedona Cr	End	N/A	P3	0.24
Rockmore Rd	Jutland Rd	Elbe Rd	N/A	P3	0.19
Rockmore Rd	Elbe Rd	Templeton Av	N/A	P3	0.14
Rolmount Rd	Mandalay Dr	Neville St	N/A	P3	0.51
Rose Hill Pl	Rose Hill Wy	End	N/A	P3	0.11
Rose Hill Wy	Jonathan Cr	McInnes Pl	N/A	P3	0.19
Rose Hill Wy	Wildes Ln	Linden Park By	N/A	P3	0.16
Rose Hill Wy	Inkster Garden Dr	Linden Park By	N/A	P3	0.28
Rose Hill Wy	Garton Av	Jonathan Cr	N/A	P3	0.23
Rose Hill Wy	McInnes Pl	Rose Hill Pl	N/A	P3	0.58
Rose Hill Wy	Wildes Ln	Linden Park By	N/A	P3	0.10
Rose Hill Wy	Wildes Ln	Mount Auburn By	N/A	P3	0.35
Rose Hill Wy	Chaffey Pl	Rose Hill Pl	N/A	P3	0.15
Rose Hill Wy	Petriw By	Inkster Garden Dr	N/A	P3	0.33
Rose Hill Wy	Chaffey Pl	Petriw By	N/A	P3	0.17
Roshni By	Mandalay Dr	Mandalay Dr	N/A	P3	0.41
Rozmus By	Delta Pl	Mapleton Dr	N/A	P3	0.20
Rozmus By	Delta Pl	Mapleton Dr	N/A	P3	0.65
Sam Sorokin Pl	Sorokin St	End	N/A	P3	0.18
Sante Fe Dr	Sendona Cr	Adsum Dr	N/A	P3	0.32
Sante Fe Dr	Keewatin St	Sedona Cr	N/A	P3	0.13
Sante Fe Dr	Sedona Cr	Sedona Cr	N/A	P3	0.37
Saratoga Cr	Margate Rd	Neville St	N/A	P3	0.40
Sardelle Cr	Margate Rd	Neville St	N/A	P3	0.59

Sasaki Cr	Adsum Dr	Sorokin St	N/A	P3	0.52
Sava Wy	Poznan Cr	Leila Av	N/A	P3	0.16
Sava Wy	Morava Wy	Poznan Cr	N/A	P3	0.18
Scarfe St	Anglia Av	Hood Av	N/A	P3	0.16
Scarfe St	Adsum Dr	Leahcrest Cr	N/A	P3	0.18
Scarfe St	Hood Av	Leahcrest Cr	N/A	P3	0.16
Sedona Cr	Robins Nest By	Gardenton Av	N/A	P3	0.29
Sedona Cr	Sante Fe Dr	Gardenton Av	N/A	P3	0.19
Sedona Cr	Gardenton Av	Robins Nest By	N/A	P3	0.27
Sedona Cr	Sante Fe Dr	Gardenton Av	N/A	P3	0.33
Sewa Cr	Khalsa St	Khalsa St	N/A	P3	0.71
Silkwood Cr	Stoddart Ct	Stoddart Ct	N/A	P3	0.03
Silkwood Cr	Amberstone Rd	Stoddart Ct	N/A	P3	0.21
Silkwood Cr	Stoddart Ct	Lakebourne Dr	N/A	P3	0.26
Simkin Dr	Monty Hall Dr	Strewchuk By	N/A	P3	0.14
Singh Tl	Old Commonwealth Pa	Bloomfield Pa	N/A	P3	0.63
Singh Tl	Bloomfield Pa	Swiftwater Tl	N/A	P3	0.65
Skrypnyk Cr	Ritchie St	Wentwood Cr	N/A	P3	0.43
Skrypnyk Cr	Jefferson Av	Wentwood Cr	N/A	P3	0.38
Sochie Pl	Burnside Wy	End	N/A	P3	0.16
Sorokin St	Sam Sorokin Pl	Margate Rd	N/A	P3	0.16
Sorokin St	Sam Sorokin Pl	Marlyn Pl	N/A	P3	0.16
Sorokin St	Marlyn Pl	Sasaki Cr	N/A	P3	0.16
Sorokin St	Adsum Dr	Sasaki Cr	N/A	P3	0.19
Squire Pl	Hazelton Dr	Castlebury Meadows Dr	N/A	P3	0.50
Stardust Av	McPhillips St	Watson St	N/A	P3	0.75
Stardust Cr	Galaxy Wy	Pipeline Rd	N/A	P3	0.63
Stardust Cr	Galaxy Wy	Pipeline Rd	N/A	P3	0.20
Stillmeadow Cv	Meadowland Dr	Swiftwater Tl	N/A	P3	0.36
Stoddart Ct	Silkwood Cr	Silkwood Cr	N/A	P3	0.13
Strasbourg Dr	Strasbourg Dr	Strasbourg Dr	N/A	P3	0.34

Strasbourg Dr	Strasbourg Dr	Strasbourg Dr	N/A	P3	0.38
Strasbourg Dr	Strasbourg Dr	Strasbourg Dr	N/A	P3	0.30
Streilein Cr	Adsum Dr	Heft Cr	N/A	P3	0.19
Streilein Cr	Heft Cr	Heft Cr	N/A	P3	0.38
Strewchuk By	Simkin Dr	Simkin Dr	N/A	P3	0.87
Swiftwater Tl	King Edward St	End	N/A	P3	0.18
Swiftwater Tl	King Edward St	End	N/A	P3	0.13
Templeton Av	Bitterfield Rd	Alton Way	N/A	P3	0.55
Templeton Av	Allincite Rd	Alton Wy	N/A	P3	0.20
Tennant Gt	Templeton Av	Templeton Av	N/A	P3	1.28
Tessler By	Amber Tl	Strasbourg Dr	N/A	P3	0.60
Thorn Dr	Moldan By	Strasbourg Dr	N/A	P3	0.21
Thorn Dr	Odessa Cv	Riga Cv	N/A	P3	0.18
Thorn Dr	Trieste Wy	Odessa Cv	N/A	P3	0.22
Thorn Dr	Massalia Dr	Moldan By	N/A	P3	0.18
Thorn Dr	Danube Dr	Trieste Wy	N/A	P3	0.16
Thorn Dr	Riga Cv	Strasbourg Dr	N/A	P3	0.20
Thorn Dr	Danube Dr	Templeton Av	N/A	P3	0.63
Trieste Wy	Templeton Av	Thorn Dr	N/A	P3	0.30
Valewood Cr	Valewood Cr	End	N/A	P3	0.14
Valewood Cr	Valewood Cr	Inkster Garden Dr	N/A	P3	0.40
Valewood Cr	Marianne Rd	Valewood Cr	N/A	P3	0.51
Verona Dr	Vistula Wy	Nyree Cv	N/A	P3	0.19
Verona Dr	Altamont St	Nyree Cv	N/A	P3	0.18
Verona Dr	Altamont St	Ambergate Dr	N/A	P3	0.97
Verona Dr	Vistula Wy	End	N/A	P3	0.09
Vistula Wy	Ambergate Dr	Verona Dr	N/A	P3	0.27
Water Ridge Pa	Dr Jose Rizal Wy	Driftwater Tl	N/A	P3	0.19
Water Ridge Pa	Driftwater Tl	Driftwater Tl	N/A	P3	0.23
Water Ridge Pa	Water Ridge Pa	Water Ridge Pa	N/A	P3	0.11
Water Ridge Pa	Luzon By	Dr Jose Rizal Wy	N/A	P3	0.20

Water Ridge Pa	Driftwater Tl	Driftwater Tl	N/A	P3	0.03
Water Ridge Pa	Driftwater Tl	Driftwater Tl	N/A	P3	0.36
Wellsprings Cv	Old Commonwealth Pa	Old Commonwealth Pa	N/A	P3	0.17
Wentwood Cr	Skrypnyk Cr	Jefferson Av	N/A	P3	0.53
White Pine Pl	Inkster Garden Dr	Inkster Garden Dr	N/A	P3	0.17
Wildbrook By	Old Commonwealth Pa	Old Commonwealth Pa	N/A	P3	0.51
Wildes Ln	Linden Park By	Rose Hill Wy	N/A	P3	0.19
Willowood Rd	Monty Hall Dr	Jack Kolt Pl	N/A	P3	0.28
Willowood Rd	Jack Kolt Pl	Simkin Dr	N/A	P3	0.27
Wyatt Rd	Filkow By	Mandalay Dr	N/A	P3	0.50
Wyatt Rd	Inkster Bv	Filkow By	N/A	P3	0.73
<b>Total</b>					<b>164.54</b>

## APPENDIX D – HISTORICAL WEATHER DATA

YEAR	TOTAL ANNUAL SNOWFALL [CENTIMETER]
1974-1975	125.2
1975-1976	136.2
1976-1977	64.4
1977-1978	73.1
1978-1979	148.6
1979-1980	108
1980-1981	72.5
1981-1982	77.2
1982-1983	77.4
1983-1984	56.3
1984-1985	93.2
1985-1986	124.2
1986-1987	120.2
1987-1988	65.4
1988-1989	153.6
1989-1990	96.4
1990-1991	120.5
1991-1992	133
1992-1993	111.6
1993-1994	82
1994-1995	88.6
1995-1996	202.5
1996-1997	211.4
1997-1998	104.1
1998-1999	144.7
1999-2000	71.4
2000-2001	109.7
2001-2002	105.4
2002-2003	90.9
2003-2004	149.8
2004-2005	136.6
2005-2006	151.2
2006-2007	135.6
2007-2008	111.9
2008-2009	129.2
2009-2010	81.6
2010-2011	149.1
2011-2012	72.6
2012-2013	151
2013-2014	177
2014-2015	82.0
2015-2016	124.0
2016-2017	81.2.
2017-2018	48.8