# **REQUEST FOR PROPOSAL 07-2025**

# **Supply of Snowplow Truck and Equipment**

Issued: November 21, 2025

Deadline for Submissions: December 12, 2025



# The Corporation of the Town of Shelburne

203 Main Street East | Shelburne, ON L9V 3K7

Phone: 519-925-2600 | Fax:519-925-6134 | Email: treasurer@shelburne.ca



## PROPOSAL REQUIREMENTS

Request for Proposal submissions must include Schedule A, B, C and Request for Proposal Form.

Request for Proposal submissions are to be addressed by email only to Carey Holmes, Treasurer at <a href="mailto:treasurer@shelburne.ca">treasurer@shelburne.ca</a> with the subject line clearly stating RFP 07-2025 Submission.

Emails must be sent no later than **3:00 p.m.** (**15:00 hours**) **local time**, on the specified closing date; Friday December **12**, 2025.

Late bids will not be accepted.

| November 21, 2025   | Request for Proposal Issued   |
|---|---|
| December 05, 2025 by 4:30 pm (questions & addendums (if any)) | Deadline for electronic questions to Municipality ( <a href="wthomson@shelburne.ca">wthomson@shelburne.ca</a> ) from Interested Suppliers; Replies will be circulated to all Suppliers: Addendums (if necessary) will be the responsibility of the bidder to download from the town website at <a href="mailto:shelburne.ca">shelburne.ca</a> or <a href="mailto:merx.com">merx.com</a> |
| December 12, 2025 (3:00 pm)                                   | Closing date for Proposal Submissions   |
| December 19, 2025   | The Municipality will award the Request for<br>Proposal and notify the successful Proponent   |

All questions, technical or otherwise, pertaining to this Request for Proposal should be directed by email only to:

Will Thomson

Manager of Operations, Parks, and Facilities

wthomson@shelburne.ca

Deadline for emailed questions will be Friday December 05, 2025 at 4:30pm.

Responses and clarifications requests will be provided to all Proponents in writing. No clarification requests will be accepted by telephone.



# **PROPOSAL FORMAT**

Proposals will not be considered unless:

- Received by date and time specified Friday December 12, 2025 3:00 pm EST.
- Received Tender Pricing Form signed by Proponent with authority to bind the Company.
- Specifications of new Single Axle Cab & Chassis Truck complete with Snowplow Equipment.
- Company Profile including Certifications and Accreditations along with relevant experience.
- References of similar projects from previous/existing Vendors.
- Copy of Contractor's current insurance certificates and WSIB clearance certificate.

## PROPOSAL EVALUATION CRITERIA

Proposals will be assessed on the information provided in the proposal. Evaluation will be based upon the following items:

- Price 40%
- Conformity to Specification 20%
- Customer Service and Part Support 20%
- Conformity to Town Fleet 10%
- Value added features or Options 10%

Note: Lowest or Any Proposal not necessarily accepted.

#### Please Be Advised

Proposals that are incomplete, conditional, illegible, or obscure or that contain additions not called for, reservations, erasures, alterations, or irregularities of any kind, may be rejected as informal. Bidders are required to fill in all the blanks.

A Proponent may, without prejudice to himself, withdraw his tender at any time up to twenty-four (24) hours before the time set for the closing of the tender. Such withdrawal shall be made in writing and be received by the Town within the specified time. The



Proponent who has withdrawn their Proposal may submit a new Proposal but must be received by the Town on or before the closing date and time. After closing, the Proposals are final and binding on the Proponent.

## **TERMS AND CONDITIONS**

#### **ADDENDUM**

If an addendum is found to be necessary, it will be released to all companies that have requested a copy of the RFP, or already submitted a Proposal for the RFP. If the Town revises this RFP, any revisions will be included in this Addendum. The Addendum shall advise any changes to the Proposal submission date if more time is allowed for all Proponents to revise their Proposals. It will be the responsibility of all Proponents to download from the Town website or Merx.com.

#### CONFIDENTIALITY

In accordance with the Municipal Freedom of Information and Protection of Privacy Act. R.S.O. 1990, as amended, Proponents are advised that all correspondence provided by a Proponent responding to this RFP as hereby collected under the authority of the Municipal Act, 2001 and will be used exclusively in the RFP process. The Town will treat all Proposals as confidential within the boundaries of the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA) but may be released pursuant to the Act.

All public reports approved by the Town of Shelburne will become public information. Notwithstanding the foregoing, Proponents recognize and agree that the Town will not be liable in any way for any losses that the Proponent may suffer from the disclosure of information to third parties.

#### **CONFLICT OF INTEREST**

The Proponent must disclose to the Town any potential conflict of interest that might compromise the project. In the case where there might be a conflict of interest, the Town may refuse to consider the Proponent. The Proponent must fully disclose any potential conflict of interest with a Town employer, board member or commission that may have a financial gain with the awarding of the contract and state the nature of that interest.



#### **FAILURE OR DEFAULT OF PROPONENT**

If the Proponent, for any reason, fails or defaults in respect of any matter or thing which is an obligation of the Proponent under the terms of the RFP, the Town may disqualify the Proponent from the RFP and/or from competing for future bid opportunities (RFTs/RFQs/RFPs/etc.) issued by the Town. In addition, the Town may at its option either: 1. Consider that the Proponent has withdrawn any offer made, or abandoned the Agreement if the offer has been accepted, whereupon the acceptance, if any, of the Town shall be null and void; or 2. Require the Proponent to pay the Town the difference between its Proposal and any other Proposal which the Town accepts, if the latter is for a greater amount and, in addition, pay the Town any cost which the Town may have incurred, by reason of the Proponent's failure or default, and further, the Proponent will indemnify and save harmless the Town its officers, employees and agents from all loss, damage, liability, cost, charge and expense whatever, which it, they or any of them may suffer, incur due to the failure of the Proponent.

#### <u>INDEMNIFICATION</u>

The Proponent shall indemnify and save harmless the Corporation of the Town of Shelburne, it's elected officials, officers, employees, and agents from and against all losses and all claims, demands, payments, suits, actions, recoveries and judgements of every nature and description made, brought or recovered against the Town by reason of any act or omission of the Proponent, his agents or employees, in the execution of his work. This indemnity shall be in addition to and not in lieu of any insurance to be provided by the successful Proponent in accordance with the RFP.

#### **INSURANCE**

The party to whom this Contract is awarded shall supply the Town with proof of insurance and a copy of the policy, prior to signing of the Proponent by Town officials, and provide coverage throughout the term of the Proposal in the amounts outlined below.

Comprehensive General Liability Insurance with a minimum limit of liability of \$5,000,000.00 inclusive of any one occurrence. Comprehensive General Liability Insurance shall cover all operations and liability assumed under the Contract with the Town. The Comprehensive General Liability Insurance shall include premises and operations liability, Proponent's contingency liability with respect to the operations of Sub-contractors completed operations liability and automobile liability (owned, non-owned or hired units).



All premiums and expenses incurred with this insurance shall be paid for by the Contractor. Failure to maintain adequate insurance, the Proponent shall be totally responsible for all claims for damage.

#### LIMITS AND LAWS/CONFORMITY TO LEGISLATION

The Proponent shall obtain, and pay for all required permits from Federal, Provincial and Municipal Authorities having jurisdiction over the work. The Proponent shall comply with all applicable laws, ordinances, rules, and regulations including but not limited to, the Occupational Health and Safety Act, the Labour Act, Environmental Protection Act and Highway Traffic Act.

#### **NON-COLLUSION**

A Proponent is prohibited from any communication, directly or indirectly, with any other Proponent/Agent or representative of the Proposal. If a breach is discovered, the Town reserves the right to disqualify the Proposal.

#### **PAYMENT**

Payment shall be based on thirty (30) days following the delivery of the complete unit and based upon invoiced amounts. If there are any shortages or deficiencies, a suitable amount will be withheld. Partial payments may be negotiated based upon successful inspection of one (1) complete unit (truck and plow equipment / combo sander body).

#### PROCUREMENT POLICY

Contract Award and Execution shall be in accordance with the Town's Municipal Procurement Policy 2019-05. A copy of the Procurement Policy is available on the Town website: https://www.shelburne.ca/media/vg5ntimp/amended-municipal-procurement-policy-2019-05.pdf

#### **TOWN'S RIGHT TO ACCEPT OR REJECT**

The Town of Shelburne reserves the right to accept any Proposal or Proposals or any portion of any Proposal that the Town determines is in the Town's best interests, even if that Proposal is not the lowest in dollar amounts. Such decisions of the Town are final and binding.

The Town of Shelburne reserves the right to reject any Proposal, even if that Proposal is the lowest in dollar amounts and may award the contract to the Proponent that the



evaluation team finds the most appropriate. The Town will not be liable for any incurred costs that may arise from submitting the Proposal.

It is not the intention of the Town to award this RFP to any Supplier who does not furnish satisfactory evidence that he/she has the ability and experience in this class of work, and that he has sufficient capital and plant to enable him to prosecute and complete the same successfully, and to complete it in the time stated in this Proposal. It will be the Supplier's responsibility to clarify any details in questions before submitting a Proposal.

The Town of Shelburne will not bear any fault for any oral communications. The Town reserves the right to re-tender the Project or potentially negotiate a contract with a suitable Proponent.

Proponents are required to disclose their legal status as to whether they are a Federal, Provincial or Foreign Corporation, a partnership or an individual and to state the names and addresses of the responsible officers or partners as the case may be.

#### **TOWN'S AUTHORITY**

The Director of Development & Operations shall be the Contract Administrator as identified in Ontario Provincial Standards (O.P.S.) Section GC 3.01 of the General Conditions. It is mutually agreed between the parties of this Contract that the Town's Director of Development & Operations or designated representative, shall supervise, direct, and approve all work included herein, and in all cases shall decide every question which may arise relative to the execution of the work to be performed under this Contract as per Section GC 7.0 – Contractor's Responsibilities and Control of the work.

#### **WORKPLACE SAFETY AND INSURANCE BOARD**

A Certificate of Clearance from the Workplace Safety and Insurance Board (WSIB) must be provided prior to the commencement of the project, providing adequate proof that all payments by the Proponent have been made.

The Proponent clearly understands and agrees that they are not, nor is anyone hired by the Proponent, covered by the Corporation of the Town of Shelburne under the Workplace Safety & Insurance Board Act, The Unemployment Act, or any other Act, whether Provincial or Dominion, in respect of the Proponent, their employees and operations, and shall upon request furnish the Town with such satisfactory evidence that the Proponent has complied with the provisions of any such Acts.



The Town of Shelburne is not to be deemed the employer of the supplier or their personnel under any circumstances whatsoever.



# **SCHEDULE A - SPECIFICATION**

| SPECIFICATIONS FOR TRUCK   |            |       |
|--|------------|-------|
| SPECIFY: YEAR/MAKE:  |            |       |
| SPECIFY: MODEL – SET BACK AXLE:  |            |       |
| VEHICLE WEIGHT   |            |       |
| G.V.W. – 19,500 kg. <b>SPECIFY:</b> kg   |            |       |
| The allowable G.V.W. as supplied shall be shown on a metal/mylar tag.  | YES        | NO    |
| Chassis Weight - 5,000 kg. min. <b>SPECIFY:</b> kg   |            |       |
| ENGINE   |            |       |
| Diesel High Torque 330 H.P. minimum  |            |       |
| SPECIFY: MAKE:   |            |       |
| SPECIFY: MODEL:  |            |       |
| Number of cylinders: 6 IN LINE six   | YES        | NO    |
| Peak H.P. – 330. SPECIFY: HP @ RPM   |            |       |
| Net H.P. – 330. SPECIFY: HP @ RPM  |            |       |
| Gross Torque - 1,150 lb. ft. min. SPECIFY: lb.ft.@ RPM   |            |       |
| Net Torque. SPECIFY: lb.ft. @ RPM  |            |       |
| Engine Weight. SPECIFY: Ib   |            |       |
| Displacement SPECIFY: litres   |            |       |
| Air Cleaner - Heavy Duty - Dual element. SPECIFY:  |            |       |
| Driver in-dash control for engine air intake for summer / winter operations.   | YES        | NO    |
| Oil Filter - full flow type mounted on the engine (remote location not acceptable) - 2  SPECIFY: CAPACITY litres   | 2L capaci  | ity.  |
| Alternator - shall be a brushless 145 amp. min. capacity(3SI) high current output a speed. <b>SPECIFY:</b>   | t low idle |       |
| Governor - engine governor, electronic.  | YES        | NO    |
| Battery - Three maintenance free 12-volt batteries to be supplied and shall have a capacity of 1900 CCA @ 0° F. <b>SPECIFY:</b> CCA  | total crar | nking |
| If batteries are mounted behind the cab, they shall be clear of sanding  |            |       |
| equipment and wing tower.  | YES        | NO    |
| For the hydraulic pump; P.T.O. must be front mounted. Crankshaft shall be provided with an adapter for P.T.O drive. Pumps to have cab-mounted, driver-operated disconnect. | YES        | NO    |
| NOTE:  |            |       |



Where a crankshaft is located low enough to allow the front mounted pumps to operate with sufficient clearance below the radiator, crankshaft access permitted through radiator. SPECIFY: whether crank adaptor locate below O.E.M. rad or has cut-out through bottom of rad for access. **SPECIFY**: Extend life Anti-freeze - 40°C. YES NO Fan clutch – temperature-controlled Type: YES NO High temperature and low-pressure engine protection alarm bell or buzzer YES NO device. Radiator stone screen & guard in behind grille. YES NO YES Air compressor 16.5 CFM Type: NO YES NO Fuel water separator. TRANSMISSION Transmission – Allison 6 speed 3000 RDS P Automatic. YES NO Transmission minimum torque. **SPECIFY:** Auxiliary transmission cooler. YES NO Locking main differential operator-controlled dash mounted switch. YES NO YES Synthetic transmission fluid. NO YES Transmission temperature gauge – dash mounted. NO **CHASSIS** Wheelbase approx. 180", Cab to axle approx. 102". To be confirmed with box YES NO supplier. NOTE: Clear effective / usable C.A. required. Front axle capacity at ground - 20,000 lb. YES NO YES Rear suspension - 31,000 lbs. NO Heavy duty front shock absorbers & front springs shall be supplied. YES NO Front Springs shall be Heavy Duty multi leaf 10,000lbs each @ ground. YES NO YES Rear Axle – heavy duty helper springs 4,500 lbs auxiliary. NO **CAB** Conventional cab with a full front tilt hood, stationary CHROME grill separate from hood fixed in front of rad, rock guard and bug screen, hood service hatches YES NO that will not interfere with a front mounted P.T.O. / tandem front mount pumps. Air ride Cab. Colour keyed cab valance panels (fill in panels below cab). Colour keyed exterior sun visor w/LED clearance lights. Right passenger door comes with lower Fresnel window. YES NO R.H cab mounted look down convex mirror. All windows to be O.E.M tinted. In-cab O.E.M mounted fire extinguisher, first aid kit and triangle reflector kit. 18" tilt/telescopic steering wheel. Suspended accelerator, brake pedals.



| 2" in-dash cup holders. Medium grey interior.   |  |
|---|--|
| For sound (Max 80 D.B.A.) interior cab noise and heat protection, premium interior pkg. w/insulated / padded door panels, cloth headliner and complete back wall panel. Heavy duty insulated rubber floor mats. |  |

Heavy duty, high back, 100% CLOTH Seats with foam rubber cushions.

#### **SPECIFY:**

Both seats shall be a BOSTRUM, Talladega 914 Model (or equivalent) with arm rests, and must have a fully adjustable air ride suspension, with fore/aft leg reach setting, front seat cushion height adjustment for leg support and manually adjustable lumbar supports.

### **SPECIFY:**

| Power windows with driver and passenger controls on doors.  | YES | NO  |
|---|-----|-----|
| HEAVY DUTY floor mats – rubber.   | YES | NO  |
| Interior sun visors - dual adjustable.  | YES | NO  |
| Windshield wipers - shall be <b>Heavy Duty</b> with intermittent feature and have winter wiper blades.  | YES | NO  |
| Mirrors: Two outside power and heated mirrors 6"x16" chrome or stainless-steel west coast style with L.E.D. lights and two 8" convex mirrors west coast type, Cab mount, both heated. <b>SPECIFY:</b>   | YES | NO  |
| The mirrors shall be electrically heated to prevent fogging and ice build-up.   | YES | NO  |
| Fresh air heater and defroster with 3 speed fan and side window defrosters plus   | YES | NO  |
| 2 directional fans one for passenger window and one for driver windshield.  | 163 | INO |
| Factory installed, cab pressurizing air conditioning shall be supplied.   | YES | NO  |
| Electronic engine throttle / cruise control shall be supplied.  | YES | NO  |
| Fuel gauge shall be supplied.   | YES | NO  |
| Voltmeter shall be supplied.  | YES | NO  |
| Water temperature gauge shall be supplied.  | YES | NO  |
| Oil pressure gauge shall be supplied complete with an automatic low oil pressure engine light & alarm.  | YES | NO  |
| Tachometer shall be supplied.   | YES | NO  |
| Air filter restriction gauge shall be mounted in the dash.  | YES | NO  |
| Engine hour meter shall be supplied.  | YES | NO  |
| Grab bars on each side to assist easy entry and exit.   | YES | NO  |
| Air Horns - shall be supplied complete with snow shields.   | YES | NO  |
| Muffler to be mounted on the truck frame and not interfere with snowplow equipment. Vertical exhaust stack – chromed – not to protrude past rear corner of cab on passenger side. Stack to have elbow at top. SPECIFY: where O.E.M. DPF is located: | YES | NO  |
| The exhaust stack shall have a heat guard for burn protection.  | YES | NO  |



| O.E.M. in-dash AM – FM weather radio shall be supplied.  | YES | NO |
|--|-----|----|
| Rubber fender extensions on each front wheel opening to help check road spray shall be supplied. O.E.M. full width lower front ¼ fender mud flaps /guards required to keep road debris off of fuel tank / cab entry steps. | YES | NO |
| Inner fender splash guards / sound abatement designed to keep engine area free of road dirt.   | YES | NO |
| The electrical system should be supplied with circuit breakers instead of fuses.   | YES | NO |

#### **FRAME**

Rear axle to rear of frame distance approx. 60 in. after frame and verified with body manufacture. **SPECIFY:** 

| Frame shall I | be supplied as follow | vs: - <u>Or Equivalen</u> t | <u>t.</u>                     |                    | YES                   | NO   |
|---------------|-----------------------|-----------------------------|-------------------------------|--------------------|-----------------------|------|
| MAKE          | FRAME                 | REINFORCING                 | MATERIAL<br>YEILD<br>STRENGTH | SECTION<br>MODULUS | RESIST<br>BENE<br>MOM | DING |
|               | 14.12x3.06x.312       | Double Channel              | 120,000                       | 30.0               | 3,300                 | ,000 |
|               | 10 1/2x3<br>1/2x5/16  | 10 13/16x3<br>13/16x5/16    | 120,000                       | 31.10              | 3,421                 | ,000 |

Resisting bending moment (Section Modulus x yield strength) shall be 3,100,000 lb. in. min. Section Modulus shall be 28.0 minimum.

#### **SPECIFY:**

|     | М   | <b>C</b> I | 7 | ᆮ. |
|-----|-----|------------|---|----|
| FRA | IVI | SI         | L | ⊏. |

**REINFORCING SIZE:** 

#### **MATERIAL YIELD STRENGTH:**

**SECTION MODULUS:** 

#### **RESISTANCE BENDING MOMENT:**

### 18" FRONT FRAME EXTENSION w/1/4" channel reinforcement.

| the sander spinner assembly.  | 1 L S | INO |
|---|-------|-----|
| Left side of frame shall be kept clear 90 in. forward of centre of rear axles for | YES   | NO  |
| drawing.  |       |     |
| snowplow wing push to each frame rail. NOTE: MTO x-member to be to MTO            | YES   | NO  |
| A MTO cross member shall be installed within 10 in. of rear of cab to transfer    |       |     |

#### **STEERING**

| Power steering shall be supplied with heavy duty dual steering boxes.  | YES | NO |
|--|-----|----|
| There shall be a filter for the steering fluid, and it shall be serviceable without dismantling any power steering components. | YES | NO |
| AVIES  |     |    |

#### **AXLES**



| Front axle shall be 20,000 lb. capacity min. SPECIFY: CAPACITY lb   |         |     |
|---|---------|-----|
| Rear axle shall be 23,000 lb. capacity min. with 31,000 lb. suspension. SPECIFY   | : CAPAC | ITY |
| lb  |         |     |
| Rear axle shall use synthetic oil & magnetic oil plug supplied.   | YES     | NO  |
| Rear axle shall be single speed with limited slip differential.   | YES     | NO  |
| Front axle: SET BACK – SPECIFY: Distance from front bumper > centre of fron   | t axle: |     |
| SPECIFY: ".   |         |     |
| Road speed at rated RPM in top gear shall be l00 Km/hr approximately.   |         |     |
| SPECIFY: SPEED km/hr  |         |     |
| Rear axle ratio. SPECIFY:   |         |     |
| BRAKES  |         |     |
| Service Brakes - full air brakes shall be supplied with ABS.  | YES     | NO  |
| Front brakes, size 16 1/2 x 6 in. min. shall be supplied. S Cam type.  SPECIFY: TYPE SIZE mm  |         |     |
| Rear brakes, size 16.5 x 7 in., min. shall be supplied. S. Cam type with two 3030 chambers. With long stroke life maxi pots.  SPECIFY: TYPE  SIZE  mm   | ) brake |     |
| Brakes shall be in accordance with MVS 121 U.S. Standards.  | YES     | NO  |
| Bendix Westinghouse AD-9 air dryer to be supplied.  |         |     |
| SPECIFY: Location:  | YES     | NO  |
| Brake chambers on rear drive axle shall not extend beyond rear tires i.e., inverted.  | YES     | NO  |
| Low Pressure Indicator to be supplied.  | YES     | NO  |
| Automatic drain valves with heater shall be supplied to drain moisture from the   |         |     |
| air tank.   | YES     | NO  |
| Alcohol injector to be supplied on the brake system in an accessible location.  | YES     | NO  |
| WHEELS AND TIRES  | l l     |     |
| 10 bolt Hub Pilot Wheels c/w Teflon Spacer Plate.   | YES     | NO  |
|   |         |     |
| Rims and tires shall be of the tubeless type.   | YES     | NO  |
| Rims and tires shall be of the tubeless type. Front Wheel rim size shall be 22.5 x 12.25 in. SPECIFY:   | YES     | NO  |
| Front Wheel rim size shall be 22.5 x 12.25 in. <b>SPECIFY:</b> Powder coated – Grey. <b>SPECIFY:</b>  | YES     | NO  |
| Front Wheel rim size shall be 22.5 x 12.25 in. SPECIFY: Powder coated – Grey. SPECIFY: Front tire size shall be 425/65R x 22.5. SPECIFY:  | YES     | NO  |
| Front Wheel rim size shall be 22.5 x 12.25 in. SPECIFY: Powder coated – Grey. SPECIFY: Front tire size shall be 425/65R x 22.5. SPECIFY: Front tires shall be 20 ply Michelin. SPECIFY:   |         |     |
| Front Wheel rim size shall be 22.5 x 12.25 in. SPECIFY:  Powder coated – Grey. SPECIFY:  Front tire size shall be 425/65R x 22.5. SPECIFY:  Front tires shall be 20 ply Michelin. SPECIFY:  Dual rear wheels shall be supplied.   | YES     | NO  |
| Front Wheel rim size shall be 22.5 x 12.25 in. SPECIFY:  Powder coated – Grey. SPECIFY:  Front tire size shall be 425/65R x 22.5. SPECIFY:  Front tires shall be 20 ply Michelin. SPECIFY:  Dual rear wheels shall be supplied.  Rear wheel rim size shall be 22.5 x 8.25 in. SPECIFY:  |         |     |
| Front Wheel rim size shall be 22.5 x 12.25 in. SPECIFY: Powder coated – Grey. SPECIFY: Front tire size shall be 425/65R x 22.5. SPECIFY: Front tires shall be 20 ply Michelin. SPECIFY: Dual rear wheels shall be supplied. Rear wheel rim size shall be 22.5 x 8.25 in. SPECIFY: Powder coated – Grey. SPECIFY:  |         |     |
| Front Wheel rim size shall be 22.5 x 12.25 in. SPECIFY:  Powder coated – Grey. SPECIFY:  Front tire size shall be 425/65R x 22.5. SPECIFY:  Front tires shall be 20 ply Michelin. SPECIFY:  Dual rear wheels shall be supplied.  Rear wheel rim size shall be 22.5 x 8.25 in. SPECIFY:  Powder coated – Grey. SPECIFY:  Rear tires shall be 16 ply – Michelin M&S. SPECIFY: |         |     |
| Front Wheel rim size shall be 22.5 x 12.25 in. SPECIFY: Powder coated – Grey. SPECIFY: Front tire size shall be 425/65R x 22.5. SPECIFY: Front tires shall be 20 ply Michelin. SPECIFY: Dual rear wheels shall be supplied. Rear wheel rim size shall be 22.5 x 8.25 in. SPECIFY: Powder coated – Grey. SPECIFY:  |         |     |



service.

only.

**OPTIONS** 

| or approved equal.   |           |            |
|--|-----------|------------|
| FUEL TANK  |           |            |
| 80 U.S. gallon (minimum) 'non polished' aluminium tank shall be supplied.  |           |            |
| <b>Tank shall not extend beyond rear of cab.</b> This area may be needed for spinner modifications. <b>SPECIFY:</b> gallons. | YES       | NO         |
| Tank shall be mounted on left hand side and shall include a helper step fastened to bottom of tank.                          | YES       | NO         |
| LIGHTS & WARNING DEVICES   |           |            |
| Two, fender mounted, 4 in. diameter amber directional lights, facing front.  | YES       | NO         |
| Rear red directional lights shall be supplied.   | YES       | NO         |
| Five identification streamlined cab lights shall be supplied (LED).  | YES       | NO         |
| Four-way flashers shall be supplied.   | YES       | NO         |
| Back-up lights shall be supplied.  | YES       | NO         |
| 102 DBA back-up alarm.   | YES       | NO         |
| Unit to have completely sealed lighting system with corrosion proof and waterproof junction box and lamps.                   | YES       | NO         |
| Individual wires to each lamp, no splicing.  | YES       | NO         |
| All wires protected with polyethylene tubing.  | YES       | NO         |
| Sealed 7 wire trailer plug wiring to rear of chassis frame with electric brake controller in cab.                            | YES       | NO         |
| O.E.M. auxiliary plow wiring harness under hood for plow lights c/w O.E.M. in dash headlight switch.                         | YES       | NO         |
| O.E.M. 2-way radio mounting bracket w/power supply and ground.   | YES       | NO         |
| 1250 watt plug in block heater – plug in to be located under cab on drivers' side.   | YES       | NO         |
| WARRANTY AND SERVICE LITERATURE  |           |            |
| Signed Manufacturers factory warranty shall be supplied.   | YES       | NO         |
| Shop Manual and Parts Book shall be supplied including Shop Manual for Engine.   | YES       | NO         |
| NOTE: This specification lists only the major details of a unit, therefore it is the supplier'                               | s respons | ibility to |

deliver a fully-equipped vehicle with compatible components to provide dependable efficient

CPL automatic lubrication system for chassis and plow equipment. Note: Town wants to approve the location of canister / pump before installation. Groeneveld

NO

YES



### **DELIVERY DATE**

Delivery date of completed unit to the Town of Shelburne's Operations Yard at 124 Luxton Way, Shelburne. **DATE**:

### NOTE:

- Complete manufacturer's literature and specifications shall accompany each quotation.
- These specification sheets shall be completed and returned with the quotation form.
- The unit shall be delivered complete with snowplow equipment as specified in RFP 07-2025.
- Licensing shall be done by the truck dealer and invoiced separately to Town at time of delivery. Annual Inspection Sticker supplied by truck dealer.
- All warranty to start when put into service or licensed by the Town.
- When this truck is being built, all components and accessories must be placed so they will not interfere with each other and situated with the operators' safety and comfort in mind.
- Turning radius profile to be submitted w/bid submission.
- Please include prices for any available options that may be beneficial.



# **SCHEDULE B: SNOWPLOW UNIT**

| SPECIFICATIONS FOR POWER REVERSIBLE PLOW  |     |    |
|---|-----|----|
| MAKE: VIKING  |     |    |
| MODEL - SET BACK AXLE: VCL36R1245C  |     |    |
| These specifications describe a hydraulic ram reversible snow plow with ultra high molecular polymer moldboard and safety trip edge with torsion style trip springs.  | YES | NO |
| SPECIFY: MAKE:  |     |    |
| SPECIFY: MODEL:  In the straight ahead bulldozing position it shall be possible to clear an 12' wide path.  | YES | NO |
| The plow will be hydraulic ram reversible from 42 degrees right to 42 degrees left allowing the plow to perform at all angles in between.   | YES | NO |
| Set at a 35 degree angle the plow will clear a path of 8'-9" wide. A 10-gauge steel backup plate will provide reinforcement for the 3/8" polymer moldboard material.  | YES | NO |
| The moldboard height shall be a constant <u>38</u> over the entire length of the plow.  | YES | NO |
| Moldboard braces shall be of telescopic design.   | YES | NO |
| Connection points of the telescope brace to the moldboard, the drive frame to the moldboard, and the hydraulic power angling cylinders to the moldboard and the "A" frame will be fitted with spherical bushings. | YES | NO |
| The spherical bushings will provide free oscillation of the moldboard plus or minus a minimum of 30 degrees on each side of its drive points.   | YES | NO |
| All spherical bushings will be grooved for lubrication and fitted with grease fittings.   | YES | NO |
| Drive frame will be "A" style, manufactured of 3 1/2" x 3 1/2" x 1/4" minimum square structural tube.   | YES | NO |
| Drive frame stiffeners will be ½" minimum.  | YES | NO |
| Integral heavy duty self-leveling device capable of keeping the cutting edge parallel to the road surface while in the carrying position regardless of the degree of angle.                                       | YES | NO |
| Push point spacing will be 30 ½" center to center to suit standard push frame.  | YES | NO |
| A safety trip edge will provide protection from road hazards. This mechanism will provide a pivoting movement of the blade when hitting an obstacle.  | YES | NO |
| The trip edge will be designed and manufactured as a one section trip   | YES | NO |



| assembly. Multiple sectional trip edges with lock out bolts or pins required          |             |    |
|---|-------------|----|
| for conversion to a one-section trip is not acceptable.                               |             |    |
| Hydraulic power angling cylinders (2), 3" base diameter by 20" Stroke to              | YES         | NO |
| provide reversing action.   |             |    |
| Cylinders to be nitrated and must be 'HARDENED CHROMED'.                              | YES         | NO |
| A crossover relief valve will provide cushion impact protection.                      | YES         | NO |
| Hydraulic hoses will be complete with hydraulic quick disconnects.                    | YES         | NO |
| All steel to be shot blasted, epoxy primed and finish paint to be Medium Gloss BLACK. | YES         | NO |
| Drive frame to be complete with QUICK-ATTACH swivel.                                  | YES         | NO |
| ½" x 12" rubber deflector bolted across top of moldboard.                             | YES         | NO |
| Flag staff on each end of plow.   | YES         | NO |
| Standard ½" cutting edge.   | YES         | NO |
| One curb runner right side VCL.   | YES         | NO |
| One curb runner left side VCL.  | YES         | NO |
| The plow shall be fitted with two cast steel mushroom push frame shoes.               | YES         | NO |
| Salt Saver underbody plow VCLUB11FL32 plus Trip Section9'30                           |             |    |
| degrees743 lbs.2000 lbs. @ 1000 PSI hydraulic pressure.                               | YES         | NO |
| CONTROLS AND VALVES   | .1          |    |
| Proportional featherable air controls shall be supplied one for each of the           | VEC         | NO |
| eight valve sections.   | YES         | NO |
| An air dryer lubricator and air protection valve shall be installed in the air        | VEC         | NO |
| control system.   | YES         | NO |
| The air control mounting stand will be fully adjustable and located between           |             |    |
| the driver and passenger seat within easy view and reach of either                    | YES         | NO |
| occupant.   |             |    |
| Adjustable control stand to be mounted at rear of cab wall on floor between           |             |    |
| drivers and passengers seats for ease of removing engine cover and to                 | YES         | NO |
| allow more room in cab.   |             |    |
| Hydraulic valves will be sectional stackable.   | YES         | NO |
| The valve stack will include the following six, plus the main hydraulic valve         | VEC         | NO |
| bank for a total of SEVEN.  | YES         | NO |
| SPECIFY: No of Bosch-Rexroth M4 valve sections  |             |    |
|   |             |    |
| 1 D.A. Plow Lift 1 D.A. Wing Slide  |             |    |
| 1 D.A. Tilt Front Harness 1 D.A. Reversible Plow                                      |             |    |
| 1 D.A. Front of Wing 1 S.A. Body Hoist  |             |    |
| 1 D.A. Rear of Wing   | <del></del> | T  |
| The valve stack will be mounted back of cab.  | YES         | NO |
| TANDEM DRY MODE FRONT MOUNT HYDRAULIC PUMPS   |             |    |
| The hydraulic pump supplied shall be Bosch-Rexroth 71cc variable                      | \/F0        | NO |
| displacement front mount pump.  | YES         | NO |
|   | 1           |    |



| SPECIFY: MAKE:   |      |    |
|--|------|----|
| SPECIFY: MODEL:  |      |    |
| Pump mounting plate and splined drive shaft shall be supplied.   | YES  | NO |
| The pump shall be driven from the crankshaft.  | YES  | NO |
| The pump shall have a manufacturer's R.P.M. rating equivalent or higher                                  | YES  | NO |
| than that of the truck engine at governed speed.   | TES  | NO |
| Hydraulic hoses to connect pump shall be supplied. Their size shall be                                   |      |    |
| adequate for quick operation of all hydraulic operations and shall be <u>2 ply</u>                       | YES  | NO |
| <u>braided steel</u> SAE100RS, with swivels on both ends.  |      |    |
| The drive shaft shall be supplied with spline long enough to allow telescopic                            |      |    |
| retraction of the shaft in order to change fan belt without removing the                                 | YES  | NO |
| pump.  | \/F0 | NO |
| Driveshaft to be machined 'balanced' tube driveshaft.  | YES  | NO |
| The hydraulic system must be set up so all other hydraulic functions do not                              | YES  | NO |
| "rob" the sander equipment.  | YES  | NO |
| Single stage one section hydraulic GEAR pumps will not be acceptable.                                    | YES  | NO |
| There will be no flow divider valves used to split oil flows between spreader and plow / wing functions. | YES  | NO |
| HYDRAULIC DETACHABLE PLOW HARNESS  |      |    |
|  | 1    |    |
| Full Hydraulic Detachable Front Plow harness Viking VCL500 HD  | YES  | NO |
| or equivalent demonstrated to and approved by the Town of Shelburne.                                     |      |    |
| SPECIFY: MAKE: SPECIFY: MODEL:   |      |    |
| The harness shall be mounted at the frontend of the frame and shall be                                   |      |    |
|  | YES  | NO |
| bolted to the cheekplates.   |      |    |
| The lifting frame shall be bolted to the push plate and shall be braced to                               | YES  | NO |
| conform with M.T.O. standards.   |      |    |
| The front plate will be one solid piece of 3/8" steel plate with cut out of                              | YES  | NO |
| sufficient size to allow cooling of the chassis radiator.  | ILS  | NO |
| Overall height of the front plate will be 49" with a 5 1/4" 900 bend at the top                          | VE0  | NO |
| and a 2" $90^{\circ}$ bend at the bottom.  | YES  | NO |
| Overall width of the front plate will be 57 1/2" at the top and 40" at the                               |      |    |
| bottom.  | YES  | NO |
| Lifting Ram Diameter - 4" minimum. SPECIFY:  |      |    |
| Lifting Ram Stroke - shall be 10" minimum. SPECIFY:  |      |    |
|  | \/F0 | NO |
| Lift ram shall be double acting.   | YES  | NO |
| The cylinder rod shall be fully chrome plated.   | YES  | NO |
| Lift or grab link for nose chain shall be 18" minimum.   | YES  | NO |
| Drive ears shall be 30 1/2" center to center.  | YES  | NO |
| Plow lift yoke 3/4" steel plate, braced with two 1/4"x2" flat bar diagonal                               | YES  | NO |



| braces.  |             | •   |
|--|-------------|-----|
| Two mounting locations in lift yoke to provide location for mounting of plow   |             |     |
| hydraulic lift cylinder in winter operation position and stored summer position.   | YES         | NO  |
| Mounting plate for plow lift cylinder, lift yoke and lift yoke braces and 1/2" steel plate 100% welded to front plate.   | YES         | NO  |
| Lift yoke brace mounting plates positioned to provide minimum 23.5" span.  | YES         | NO  |
| Height to lower drive connection shall be 19" when mounted, truck empty.   | YES         | NO  |
| Cheekplates to match truck frame shall be supplied and shall be compatible for plow.   | YES         | NO  |
| Fasteners attaching cheekplates to chassis frame rails will be minimum grade 8N.C. hex head bolts.   | YES         | NO  |
| Three grab links shall be supplied.  | YES         | NO  |
| Two sealed beam Halogen type headlamps, with high and low beam shall be supplied.  | YES         | NO  |
| Spacing and height of headlamps shall be in compliance with ES-401.  | YES         | NO  |
| Two new turn signals shall be installed in the location shown in ES-401 and the chassis shall be equipped with factory plug in wiring harness.   | YES         | NO  |
| The wired shall be protected by looms.   | YES         | NO  |
| The plow lights and signals shall be equipped with "Quick-Tack" ends.  | YES         | NO  |
| The plow and wing front harness to be easily and quickly attachable or detachable as one unit.   | YES         | NO  |
| When detached it shall reduce the weight of the vehicle and improve operating safety and driving convenience.  | YES         | NO  |
| Male coupler: the male hinged swing arm and its enclosed rigid mounting bracket shall form an integral assembly and is to be fitted to the side plate (cheekplate). The assembly remains permanently with the vehicle even after the female coupler has been detached. | YES         | NO  |
| Side (cheek) plates: The side plates are to 1/2" standard and attached to the chassis side rails.  | YES         | NO  |
| Swing arm: the male swing arm to be rotated on the shaft and the hub ends are to be guided by four anti-friction polymer discs in the mounting bracket.  | YES         | NO  |
| The swing arm to be operated by two double acting hydraulic cylinders with t specifications:   | he followir | ng  |
| Piston diameter - 2 1/2"   | YES         | NO  |
| Piston rod diameter - 1 1/18"  | YES         | NO  |
|  | 1 L O       | 110 |
| Stroke - 6"  | YES         | NO  |



| permit the front harness to tilt forward by disengaging the top and engaging    |      |    |
|---|------|----|
| the bottom hydraulic operated lock pins. The truck hood (cab) can be tilted     |      |    |
| forward for easy access to the engine without detaching the front harness       |      |    |
| from the truck.   |      |    |
| All cylinders to be hardened chromed.   | YES  | NO |
| Hydraulic locking shall be achieved by two double acting, double ended          |      |    |
| hydraulic cylinders.  | YES  | NO |
| One cylinder shall provide upper locking and the other cylinder shall           |      |    |
| perform the lower locking function.   | YES  | NO |
| The lock cylinder control valve shall be a double acting two spool mono         | \/=0 | NO |
| block valve.  | YES  | NO |
| For safety, the lock cylinder valve shall be mounted in a position to allow     |      |    |
| the operator visibility of the hydraulic lock pins while performing the lock or | YES  | NO |
| unlock function (front L.H. corner of cab and chassis).                         |      |    |
| Two independent in cab feather joystick controls will be pedestal mounted       |      |    |
| inside the chassis cab, one control will operate exclusively the plow lift      | \/F0 | NO |
| function and the second control will operate exclusively the hydraulic power    | YES  | NO |
| tilt function.  |      |    |
| Hydraulic hose quick disconnects shall be flush face, no spill, quick           | \/F0 | NO |
| couplings.  | YES  | NO |
| Hydraulic quick couplers to be supplied and installed complete with             |      |    |
| protective dust caps and plugs, installed on all hydraulic hoses that will      | YES  | NO |
| require disconnecting to detach the front harness plow and wing.                |      |    |
| All structural steel plate used in the plow harness will be 44W complying       | VEC  | NO |
| with CSA G400.21.   | YES  | NO |
| Tensile strength will be 65-90 KSI and the minimum yield strength will be 44    | VEC  | NO |
| KSI.  | YES  | NO |
| SPECIFY: Tensile Strength:  |      |    |
| SPECIFY: Yield Strength:  |      |    |
| All steel prepped and painted Industrial black.                                 | YES  | NO |
| 6" sealed beam work light at front of harness off to the side, below halogen    | VEC  | NO |
| headlight, roadside only! Separate marked switch in cab on floor pedestal.      | YES  | NO |
| Harness to have two (2) pairs of drive ears 100% welded, spaced at 30 1/2"      | VEC  | NO |
| standard centers.   | YES  | NO |
| Three sets of plow drive bar connection holes located in drive ears height to   | VEC  | NO |
| lower drive connection 19" mounted with truck empty.                            | YES  | NO |
| Plow push frame to be attached by means of Quick Attach pockets at drive        | VEC  | NO |
| ears with drop in pins.   | YES  | NO |



| Licence plate provision at top of harness on driver's side plus on main harness cheek when detach removed from chassis in off season.  | YES | NO |
|--|-----|----|
| Cut bumper ends and re-install to chassis.   | YES | NO |
| Upper and lower lock pins valves at front of chassis on drivers' side to be  |     |    |
| housed in weatherproof Poly Nema 13 box.   | YES | NO |
| VIKING 8" FRONT WING POST  |     |    |
| SPECIFY: MAKE:   |     |    |
| SPECIFY: MODEL:  |     |    |
| The rear wing slide and 3" dia x 36" stroke D.A. ram shall be on the outside   |     |    |
| of the rear mast beam, to operate the wing braces.   | YES | NO |
| The design and construction of the wing post shall be in compliance with MTO ES403, or be equivalent design approved by the MTO. Brace "A" ES403 shall be replaced by a second sturdy cross member. This crossmember shall be bolted to both cheekplates. Alternate braces must be approved. | YES | NO |
| The wing post shall be made of 8" I-Beam, 18.4 lb./ft., minimum. Cross member shall be of heavy construction to sustain snow-plowing operation in severe conditions.   | YES | NO |
| The wing post, when mounted, shall not be higher than the wing tower.  | YES | NO |
| The sheave pin shall be provided with a grease fitting and an Oilite bushing.  | YES | NO |
| A safety stop, limited slide travel shall be supplied.   | YES | NO |
| Lifting cable shall not be mounted to the hinge pin an 8" grab link shall be located halfway between upper and lower position of bolt "D" as shown on ES403.   | YES | NO |
| Front slide shall be provided with a tip-over, arrangement. A spring shall be included to return the blade to normal position after it has tripped.  | YES | NO |
| Bottom of wing post shall be approx. 11" from the ground, truck empty, and shall be protected by a shoe.   | YES | NO |
| A 3" x 30" stroke D.A. cylinder shall be mounted on the inside of the front post and shall operate the front wing slide through 2 (6" dia) sheaves and a cable.  | YES | NO |
| Cross member must be bolted to wing post.  | YES | NO |
| 6" overhang shall be left on cross-members to allow lateral movement for mounting the wing post on future trucks.  | YES | NO |
| Guide bars for the slide shall be welded 100% up 2' from bottom.   | YES | NO |
| Design and quality must be approved by the MTO.  | YES | NO |
| The wing post and cross member shall be painted BLACK.   | YES | NO |
| A parts manual shall be supplied with each unit.   | YES | NO |
| 12" Grote #12020 convex mirror shall be mounted on extended 10" bracket to back side of post to enable driver to view down the curbside of the truck.  | YES | NO |
| Two (2) 6" front post lights on 18" adjustable bracket c/w separate in-cab switches.   | YES | NO |



| Aeon rubber helper spring kit installed to factory chassis springs on           | YES | NO   |
|---|-----|------|
| curbside to aid in winging operation.   |     |      |
| FULL HYDRAULIC SNOWPLOW REAR WING TOWER   |     |      |
| VIKING Model VCL 350SCL   |     |      |
| SPECIFY: MAKE:  |     |      |
| SPECIFY: MODEL:   |     |      |
| ADDITIONAL MTO X-MEMBER approx. 10" B.C. to be supplied & installed             | YES | NO   |
| by body builder to compensate for rear wing tower / wing and hydraulics.        | 0   |      |
| The harness assembly shall be of heavy construction to sustain snow             | YES | NO   |
| plowing operations under severe conditions.                                     | 0   |      |
| A reservoir of adequate capacity shall be supplied but must not interfere       |     |      |
| with the operation of the box. Valves shall be installed on outlet lines at the | YES | NO   |
| reservoir.  |     |      |
| Bottom of wing tower shall be protected by shoe and shall have a ground         | YES | NO   |
| clearance of 14" minimum, truck empty.  |     |      |
| The spacing of the holes in the slides for connecting the wing braces shall     | YES | NO   |
| be approximately 17".   | 120 |      |
| Approved size of ram controlling the front end of wing shall be 3" dia. x 30"   | YES | NO   |
| stroke approx. with a cable and sheave assembly.                                | 120 |      |
| Approved size of ram controlling the rear end of wing shall be 3" dia. x 30"    | YES | NO   |
| stroke approx. cylinder, with a cable and sheave assembly.                      | 120 |      |
| Approved size of ram controlling wing brace slide shall be 3" dia. x 36"        | YES | NO   |
| stroke approx. and shall be double acting.                                      |     |      |
| Sealed beam 6" wing light with separate in-cab switch shall be provided.        | YES | NO   |
| The wing tower shall be of a heavy construction and bolted to the right side    | YES | NO   |
| of the truck chassis.   |     |      |
| Wing tower shall be of 10" channel construction with a 25 degree offset and     | _   | _    |
| its mountings shall be sufficient to sustain snow plowing operations under      | YES | NO   |
| severe conditions.  |     |      |
| One pipe brace 2 3/4" diameter shall connect the bottom of the wing tower       |     |      |
| and the truck chassis near the forward mount of the right rear springs to       | YES | NO   |
| reduce the shock of the truck frame.  |     |      |
| The rear wing tower shall be heavily braced and gusseted to the frame           | YES | NO   |
| cheekplate.   | 120 | -110 |
| For maximum strength two channels shall be used to form a triangular            | YES | NO   |
| support integral with the rear post.  |     |      |
| The first channel shall be 4" x 66 ½" 13.8 lb/ft slopping diagonal brace.       | YES | NO   |
| The second channel shall be 4" x 40" 13.8 lb/ft horizontal brace bolted to      | YES | NO   |
| the chassis rails and welded to the brace box.                                  |     |      |
| Two triangular stiffeners shall be incorporated into the assembly.              | YES | NO   |
| To provide additional support the oil reservoir shall act as an auxiliary       | YES | NO   |
| support post.   | VEC | NO   |
| The 35 U.S. gallon oil reservoir shall be integral with the rear post assy.     | YES | NO   |



| Hydraulic hoses shall connect the rams of the tower with the valves in the control box. Hoses shall be two ply braided steel, SAE100R2 with swivels on both ends. | YES          | NO      |
|---|--------------|---------|
| All sheave pins shall be provided with oil impregnated bronze bearings and grease fitting.  | YES          | NO      |
| A safety chain shall be provided for securing wing when not in use.   | YES          | NO      |
| Guide bars to contain the rear wing slide shall be welded 100% from the   | YES          | NO      |
| bottom up 2 feet.   | YES          | NO      |
| 6" wing light w/in-cab switch.  Two (2) adjustable needle valves B.C. to allow operator to be able to   | 163          | NO      |
| change speed of wing function modes.  | YES          | NO      |
| Tower assembly to be prepped and painted BLACK.   | YES          | NO      |
| Parts manual.   | YES          | NO      |
| All cylinders to be HARDENED CHROMED.   | YES          | NO      |
| 12' STANDARD WING   |              |         |
| Viking VCL 144WHD 12' standard wing cylinder in compliance with the follow  | ing specif   | ication |
| and approved by the Municipality.   | 0 .          |         |
| SPECIFY: MAKE:  |              |         |
| SPECIFY: MODEL:   |              |         |
| The inside height of the wing shall be 29" minimum.   | YES          | NO      |
| The outside height of the wing shall be 39" minimum.  | YES          | NO      |
| Overall length of the wing shall be 12 feet.  | YES          | NO      |
| The thickness of the moldboard shall be 10 U.S.S. Ga. (.1345), minimum.   | YES          | NO      |
| Two drive ribs for connecting the wing brace shall be provided.   | YES          | NO      |
| The drive ribs shall be located approximately 7'2" and 8'8" from the nose   | YES          | NO      |
| end of the wing.  |              |         |
| The plate for mounting the wing to the wing post shall be 1" thick.   | YES          | NO      |
| The mounting hole shall be far enough from the edge of the plate to avoid failure in this area.   | YES          | NO      |
| Lower wing angle shall be 6" X 4" X 3/4".   | YES          | NO      |
| The mounting of the nose end of the wing to the wing post shall be by means of a hinge and rectangle spring, to allow tipping over the wing.                      | YES          | NO      |
| Two adjustable wing braces shall be supplied.   | YES          | NO      |
| The upper brace shall be of a stock release type, including a spring  |              |         |
| retraction. The spring shall provide adequate stability of the wing in normal   | YES          | NO      |
| operating conditions and shall retract the wing from tip-over position.   |              |         |
| The distance between the center of the mounting holes of the wing braces sh   | nall be as t | ollows: |
| Upper brace – Extended 90" C.C.   | YES          | NO      |
| Collapsed 60" C.C.  | YES          | NO      |
| Extended distances shall be measured with spring fully retracted.   | YES          | NO      |
| Lower brace – Extended 88" C.C.   | YES          | NO      |
| Collapsed 58" C.C   | YES          | NO      |
| •   |              |         |



| One spare pin for adjusting the wing braces shall be supplied with each brace.  | YES | NO |
|---|-----|----|
| The wing shall be fitted with the following:  |     |    |
| One wing HIGH WEAR blade in lieu of standard ½" cutting edge. One wing shoe M.T.O. ES-509   | YES | NO |
| The top edge of the wing shall be boxed in and welded 100% to the ribs and the moldboards so as to avoid all pockets.   | YES | NO |
| Wing prepped and painted Medium Gloss BLACK.  | YES | NO |
| One 36" ORANGE plow marker mounted @ rear of wing.  | YES | NO |
| Conspicuity safety tape on wing trip arms and on rear edge of wing.   | YES | NO |
| HYDRAULIC CONTROLS  |     |    |
| Bosch-Rexroth M4 closed loop hydraulic control valves.  | YES | NO |
| · ·   |     |    |
| To prevent corrosion the air shifters will have a bronze sleeve.  | YES | NO |
| The control valve will include the following:  7 Bosch-Rexroth M4 sections:  1 D.A. Plow Lift  1 D.A. Rear of wing  1 D.A. Tilt Harness  1 D.A. Wing brace  1 D.A. Reversible Plow  1 S.A. Body Hoist  1 D.A. Front of Wing | YES | NO |
| The hydraulic control valves will be operated by proportional featherable in cab air controls.  | YES | NO |
| The control panel assembly shall be of a remote design pedestal mounted and adjustable.   | YES | NO |
| An oil reservoir of adequate capacity shall be supplied complete with oil filter oil level sight gauge, breather type filler cap, drain plug and oil ball valve shut off.   | YES | NO |
| The complete valve stack assembly will be mounted vertically on a ¼" mounting plate, integral with the rear wing tower assembly in a powder coated Bosch-Rexroth all weather control box.                                   | YES | NO |
| The valve mounting plate will be welded to the horizontal channel and sloping diagonal brace.   | YES | NO |
| The valve assembly will be completely open and easily accessible from the drivers side of the chassis for washing and maintenance.  | YES | NO |
| In-cab proportional featherable joystick air controls function labeled.   | YES | NO |
| An air dryer / lubricator and protection valve will be installed in the control system.   | YES | NO |
| The air control mounting stand will be pedestal type, fully adjustable, located between the driver and passenger seat within easy view and reach of either occupant.  | YES | NO |
| Weatherproof screw down filler /breather cap with fine mesh screen and hand clean out.  | YES | NO |



| A removable magnetic trap shall be supplied.  | YES | NO |
|---|-----|----|
| The oil return port will be fitted with a diffuser to prevent turbulence and foaming of oil on the inside of the reservoir.   | YES | NO |
| Oil filter with 25-micron spin on element rated at 50 G.P.M. nominal capacity installed in the return line ahead of the reservoir, complete with oil condition indicator gauge. | YES | NO |
| Oil level and temperature gauge.  | YES | ОИ |
| Low hydraulic oil level indicator w/ in cab warning light and buzzer.   | YES | NO |
| Oil shut off ball valves.   | YES | NO |
| Hydraulic hoses 2 ply braided steel SAE 100RS, swivels both ends, tied supported to eliminate sag, properly routed and protected to eliminate abrasion.                         | YES | NO |
| Aeon 5,000 lb. capacity rubber helper spring kit installed to R.H. factory front chassis springs.   | YES | NO |
| Grote 6" wing light with in-cab switch.   | YES | NO |
| All steel will be shot blasted, epoxy primed and top-quality BLACK finish, paint electrostatically applied.   | YES | NO |

| ALL SEASON COMBINATION DUMP BODY / SPREADE   | R - |    |
|--|-----|----|
| PROLINE2 1112 LW   |     |    |
| GENERAL  |     |    |
| These specifications describe an All-Season Combination Dump Body and Sand/Salt Spreader. The dump box shall remain stationary on the chassis frame while spreading. Rear discharge shall be front hoist tilt action as per conventional dump bodies. The unit will be oval shaped to permit gravity flow unloading. The main conveyor will be chassis frame mounted with spreader discharge on the front, left side (driver's) of dump box. | YES | NO |
| The spreader body offered by the bidder under this specification shall be the manufacturer latest model standard commercial product and shall have demonstrated and proven industry acceptance by having been manufactured and sold in significant numbers to Municipalities and Contractors and shall be proven in service for at least one year prior to issuing of this RFP document.   | YES | NO |
| The bidder if requested must be able to provide name and contact information of a least five Municipalities who currently own and operate the same make and model of spreader body that the bidder is offering in the RFP submission.  | YES | NO |
| Viking Model PL1112LW approved by the Municipality.  |     |    |
| SPECIFY: MAKE:   |     |    |
| SPECIFY: MODEL:  |     |    |
| DEMONSTRATION  |     |    |



| The bidder will arrange a working demonstration of any unit offered as an approved equivalent at the municipality's location prior to the RFP closing date.                                | YES | NO |
|--|-----|----|
| DIMENSIONS   | 1   |    |
| To provide optimum combination of legal payload and capacity all dimensions below are maximum / minimum and will be exactly as specified.  | YES | NO |
| Body shall be oval shaped, permitting materials to unload by gravity flow into spreading chain.  | YES | NO |
| Total weight of the complete body assembly in ready to work condition includin tailgate, cross conveyor, main conveyor, and all other required components no 5450lbs. <b>SPECIFY: Ibs.</b> |     |    |
| CAPACITY   |     |    |
| Water level capacity will be 6.6 cu. yd. SPECIFY:  |     |    |
| Water level capacity with 10" sideboards will be 9.0. cu., yd.   | YES | NO |
| Outside length 12'.  | YES | NO |
| Inside length 11'.   | YES | NO |
| Overall width outside 96".   | YES | NO |
| Overall width inside 86".  | YES | NO |
| Height of sides 38" from conveyor floor.   | YES | NO |
| Height of tailgate 46" from conveyor floor.  | YES | NO |
| Height of front panel 53 inches.   | YES | NO |
| CONSTRUCTION   |     |    |
| Body shall be one piece construction for both the headboard and side panels.   | YES | NO |
| The front head of the body will be completely clean and clear of any type of recesses or protrusions into the body including hoist doghouse, bulkheads, etc.                               | YES | NO |
| Body front panel will be designed to slope from the cab shield rearward down to the conveyor floor at 22 degrees from vertical.  | YES | NO |
| The front panel slop will be continuous and uninterrupted for the full length from top to bottom.  | YES | NO |
| Top rail of body will be 4" x 4" x 1/4" rectangular tubing.  | YES | NO |
| All body welds will be 100% continuous inside and outside.   | YES | NO |
| Body front head 3/16" Cor-ten "A".   | YES | NO |
| Body sides 3/16" Cor-ten "A".  | YES | NO |
| Rear vertical corner posts will be 10 ga. sheet steel, fabricated in such a way as to include provision for rear facing lighting requirements.   | YES | NO |
| Rear vertical corner-posts to be tied to radius side panels and horizontal 3" x 8" x 3/8" wall HSS tube spanning the full body width.  | YES | NO |
| Body construction shall include integral side fenders fabricated from a minimum 10 GA Cor-ten A corrosion resistant material.  | YES | NO |
| Fenders shall be full length from front to rear of body.   | YES | NO |
| One fender right side and one fender left side shall be integral with body. Integral fenders will fully enclose and protect optional chassis frame mounted                                 | YES | NO |



| on-board liquid storage tanks minimum capacity of 95 U.S. gallons each tank for total 190 U.S. gallons.                             |     |     |
|---|-----|-----|
| Integral fenders to be sloped away from unit to prevent any excess material   | YES | NO  |
| spilled during loading from building / piling up.  Dump box access ladder shall be 15" wide, two-piece fold-up ladder located       |     |     |
| at the rear curb side of body.  | YES | NO  |
| Access ladder will be manufactured from safety grip strut material.   | YES | NO  |
| HOIST   |     |     |
| Mailhot Nitride top lift 3 stage telescopic hoist "C" series Model CS-94-5-3.   | YES | NO  |
| Hoist lift cylinder to be forward mounted three (3) stage top lift telescopic.  | YES | NO  |
| Hoist capacity shall be 20 ton @ 2,000 P.S.I.   | YES | NO  |
| Hoist cylinder will be rod sealed.  | YES | NO  |
| Special Mailhot coating to provide protection to hoist seals in spreader position.  | YES | NO  |
| Cylinder stroke shall be 94".   | YES | NO  |
| Dump box dump angle shall be variable to 50 degrees from horizontal.  | YES | NO  |
| There will be no hoist doghouse protruding into front head of body, hoist will be external mounted to provide flat body front head. | YES | NO  |
| Rear hinge diameter shall be 2 ½".  | YES | NO  |
| Hoist control valve shall be air operated from inside cab.  | YES | NO  |
| The body to be equipped with a positive locking support brace integral with rear dump hinge.  | YES | NO  |
| TAILGATE  |     |     |
| Tailgate shall be double acting.  | YES | NO  |
| Tailgate height shall be 46" from conveyor floor.   | YES | NO  |
| Upper hinge plates to be offset design flame cut from 1" steel plate.   | YES | NO  |
| Tailgate shall be rectangle shaped to allow use of asphalt or stone chip spreader.  | YES | NO  |
| Construction shall be of 3/16" Cor-Ten "A" steel with 3/16" formed cross bracing.   | YES | NO  |
| Ext. vertical side support tubes to be 3 ½" x 3 ½" x ¼" wall HSS tubing.  | YES | NO  |
| Latch mechanism for the tailgate shall be air trip using two air pot chambers actuated from inside cab.                             | YES | NO  |
| Brake chambers directly coupled to ½" thick flame cut latches.  | YES | NO  |
| Brake chambers one right side one left side enclosed and protected by integral body fenders.  | YES | NO  |
| Spreader chains and brackets shall be supplied on tailgate and rear apron. Chain shall be grade 70 coil proof 3/8" minimum.         | YES | NO  |
| MAIN CONVEYOR   |     |     |
| The main conveyor shall be centered and recessed along the length of dump box floor.  | YES | NO  |
| Three-piece formed construction minimum 25" wide.   | YES | NO  |
| Three preservations defined construction from the mace.   |     | 110 |



| Constructed of ¼" Cor-ten "A".  | YES | NO |
|---|-----|----|
| Conveyor floor 1/4" Hardox 450.   | YES | NO |
| The protective covers will run from the front to the rear of the body right and left side of the main conveyor.   | YES | NO |
| The protective non-removable main conveyor link covers will cover and protect the main conveyor chain links from damage by impact at all times in all operation modes.  | YES | NO |
| In addition to the permanent non-removable main conveyor chain link covers a removable conveyor chain cover will be supplied.   | YES | NO |
| The removable cover will protect the main conveyor floor and conveyor chain cross flights from damage by impact when installed.   | YES | NO |
| The removable main conveyor cover will be manufactured from 3/8" 2 ply high temperature rubber.   | YES | NO |
| The removable main conveyor will self-feed into place to allow fast and simple installation.  | YES | NO |
| Self-feeding will be achieved by simply attaching the conveyor cover to a main conveyor chain cross flight at the tailgate (idler end), starting the main conveyor will pull the cover into place under the permanent non removable protective steel chain link covers. | YES | NO |
| The removable rubber cover will be complete with attachment brackets to couple easily and directly to main conveyor chain cross flights.  | YES | NO |
| Removal of the rubber conveyor cover from the body will be accomplished by starting the main conveyor, which will then feed the cover out through the front material discharge gate.  | YES | NO |
| Installation and removable of the rubber main conveyor cover into or out of the spreader body will be a one-man operation.  | YES | NO |
| Conveyor chain to be self-cleaning D667 pintle type with an average tensile strength of 21,700 PSI, spaced apart 21" on center.   | YES | NO |
| 3/8" x 1 ½" cross flights welded to every 2 <sup>nd</sup> link (approx. 4.5" spacing).  | YES | NO |
| All conveyor flights shall be 100% fully welded to the chain links.   | YES | NO |
| Drive and idler shafts to be two (2) inches diameter.   | YES | NO |
| Drive and idler shafts manufactured from high-resistance stress proofed SAMSON 100.   | YES | NO |
| Drive and idler sprockets to be minimum eight-tooth cast steel.   | YES | NO |
| All drive and idler sprockets to be minimum C1030 cast steel.   | YES | NO |
| Main conveyor drive shall be a single 25:1 high efficiency planetary drive with high torque low speed motor.  | YES | NO |
| The planetary drive shall deliver 34,518 IN/LB peak torque with 24,750 IN/LB continuous.  | YES | NO |
| Planetary drive close coupled to main conveyor shaft.   | YES | NO |
| SPECIFY: Make and Model of planetary:   |     |    |
| SPECIFY:MAKE:   |     |    |
| SPECIFY:MODEL:  |     |    |



| Connection of the planetary drive shaft to the main conveyor shaft shall be accomplished via s split two-piece rectangular shaped coupler assembly.  | YES | NO |
|--|-----|----|
| The upper and lower half of the coupler assembly will be bolted together by (4) 5/8" x 4 ½" N.C. Grade 8 Hex Head bolts.   | YES | NO |
| Removal of the (4) coupling bolts will allow simple disassembly of the planetary drive shaft from the main conveyor shaft, for ease of maintenance.  | YES | NO |
| The two main conveyor drive shaft flange bearings will be bolted directly to the body long sill weldments.   | YES | NO |
| Each of the two body long sill weldment will be vertical slotted. Simply removing the drive shaft flange bearings and uncoupling the planetary and main conveyor drive shafts. The entire conveyor drive shaft assembly will drop out through the vertical long sill slots providing easy access and simple maintenance. | YES | NO |
| Idler end of main conveyor will also be vertical slotted drop out design as described above.   | YES | NO |
| Conveyor chain tension to be regulated via an automatic chain tensioning system. This tensioning system will provide appropriate chain tension for the main conveyor chain at all times and under all normal operating conditions.   | YES | NO |
| The fully automated chain tensioner will eliminate the requirement for any manual chain tension adjusting mechanisms such as conventional threaded rod and nut tensioners or hydraulic grease ram tensioners.  | YES | NO |
| Automated chain tensioning system to be centrally located between main conveyor drive and idle shafts.   | YES | NO |
| Access to automated conveyor chain tensioning system shall be from the side(s) of the body.  | YES | NO |
| The flow control gate between main and cross conveyor shall be screw adjustable by hand crank from driver's side of dump body.   | YES | NO |
| The main conveyor flow control gate, will be flush and even with the front of the body, without any type of recess.  | YES | NO |
| Underside of main conveyor to be complete with full length poly guard to prevent material spillage on to chassis components and frame rails.   | YES | NO |
| CROSS CONVEYOR   |     |    |
| The cross conveyor shall be hydraulic direct drive via a single reversible 11.9 cu. in. hydraulic motor controlled by a 12V solenoid valve with in cab toggle switch.  | YES | NO |
| A cross conveyor assembly shall be used to discharge material from main conveyor to the either left hand or right hand of chassis sides.   | YES | NO |
| Cross conveyor assembly to mount on chassis frame independent from and in front of main combination spreader unit.   | YES | NO |
| Cross conveyor unit shall be removable design to reduce added weight in non-spreading applications.  | YES | NO |
| Cross conveyor weldment shall be fabricated from a minimum 3/16" Cor-Ten A corrosion resistant material.   | YES | NO |



| Cross conveyor belt to be fabricated from 3/8" thick, 2 ply, 12" wide by 121" long molded, seamless conveyor belting.   | YES | NO |
|---|-----|----|
| Belt shall be positive drive to eliminate slippage.   | YES | NO |
| The cross conveyor belt shall have a high temperature, asphalt application option available.  | YES | NO |
| Cross conveyor assembly to include replaceable steel guards to prevent material from entering under belt or spilling off conveyor.  | YES | NO |
| Cross conveyor assembly to include 4 poly runners to maintain an even belt surface, preventing material from getting under belt.  | YES | NO |
| Cross conveyor assembly shall have snub rollers constructed with high temperature, low stick, 2.5" diameter by 2.0" poly rollers, to reduce material build up under conveyor.   | YES | NO |
| Cross conveyor assembly shall come with external, quick coupler washout connection.   | YES | NO |
| Cross conveyor assembly shall include 5 external, greaseable flange bearings and 2 external, greaseable take up bearings.   | YES | NO |
| Cross conveyor assembly shall include 8 external grease fittings for application of grease to all bearings.   | YES | NO |
| Cross conveyor assembly to provide provisions for mounting of material sand/salt chutes and spinner units.  | YES | NO |
| SPINNER   |     |    |
| A polyurethane spinner with anti-coning device and spinner guard and poly chute plus fold down windrow salt chute shall be installed on left hand side (driver side) to spread ahead of rear wheels.                  | YES | NO |
| A 3.0 cu. in. hydraulic motor shall drive the spinner assembly.   |     | 1  |
| SPECIFY:  |     |    |
| The spinner height shall be adjustable from 20 to 28 inches below the mounting surface of the body.   | YES | NO |
| The spinner height shall be capable of spreading evenly up to a 20 FT radius within main operating range of 0 to 15 FT radius.  | YES | NO |
| Spinner assembly discharge rate from 100 lbs/lane mile - 2,500 lbs/mile.  | YES | NO |
| Spinner position adjustable fore and aft horizontal along chassis frame rail.   | YES | NO |
| Spinner assembly will be flip up style allowing the spinner to be carried in an on board stored raised position.  | YES | NO |
| Hydraulic hoses to the spinner motor are to be complete with quick disconnect automated sealing breakaway couplers and are to be assembled so that the male end plug into the female end on the spinner motor and the | YES | NO |
| hoist frame when the spinner assembly is disconnected.  |     |    |
| hoist frame when the spinner assembly is disconnected. <b>LIGHTING</b>  |     |    |
|   | YES | NO |



| 1 1   |         |        |
|---|---------|--------|
| dump hinge.   | \/F0    | NO     |
| 2" round red side clearance lights provided in lower rear side corner posts.  | YES     | NO     |
| MUD FLAPS  Mud flaps shall be provided fore and off of rear whools, from a mounted via  |         |        |
| Mud flaps shall be provided fore and aft of rear wheels, frame mounted via full width steel flat bar.   | YES     | NO     |
| PAINT   |         |        |
| The dump body shall be shot blasted, and epoxy primed.  | VEC     | NO     |
| Finish paint Dupont Imron Elite polyurethane.   | YES     | NO     |
| · · · · · · · · · · · · · · · · · · ·   | YES     | NO     |
| SPECIFY: Paint Manufacturer:  |         |        |
| SPECIFY: Paint Type:  | T       |        |
| Finish paint to be baked on.  | YES     | NO     |
| ASPHALT DOOR  |         |        |
| Asphalt door in tailgate with 14" x 25" dimensions. Cantilever handle offset to   | YES     | NO     |
| curb side to operate the sliding door.  | 120     |        |
| LOAD COVER  |         |        |
| An air tarp shall be supplied with fabricated tarp arms dimensions of 1 $\frac{1}{2}$ " x 2 $\frac{1}{2}$   |         | ıbing, |
| 1/8" mesh tarp, powered by twin air cylinders operated from in the cab. SPECI   | FY: Arm |        |
| Dimensions:   |         |        |
| LIGHTING AND WIRING   | T       |        |
| Box lighting kit to include stop, tails, turn signals and back up lights.   | YES     | NO     |
| Removable upper rear mount taillights.  | YES     | NO     |
| All box lights will all be light emitting diode (LED)   | YES     | NO     |
| Lights and wiring shall be completely sealed with corrosion and vapor proof lamps and junction box.   | YES     | NO     |
| Strobes to be provided, one blue and one amber in upper rear body corner posts, right side and left side.   | YES     | NO     |
| Body cab shield mounted blue beacon light with amber lens or two beacon lights for blue and amber separately switched in cab.                               | YES     | NO     |
| 6" spinner light to be included.  | YES     | NO     |
| Auxiliary lighting will plug directly into chassis O.E.M. connection cutting splicing soldering or shrink tubing of connection is not acceptable.  SPECIFY: | YES     | NO     |
| The body operation shall be powered by the existing hydraulics of the snowplow truck harness.   | YES     | NO     |
| All fittings, valves, hoses, and drive shaft shall be supplied and installed. All hoses shall be equipped with swivels on both ends.                        | YES     | NO     |
| The hydraulic reservoir shall be of sufficient capacity to supply necessary oil supply. Reservoir must NOT interfere with the box installation.             | YES     | NO     |
| All hydraulic hose 100R16 with half bend radius of standard 100RS hose.   | YES     | NO     |
| SPECIFY: Make:  |         |        |



| SPECIFY: Model:  |     |    |
|--|-----|----|
| A combination sight/temperature gauge to allow easy checking of the hydraulic oil level in the reservoir shall be supplied.  | YES | NO |
| A combination sight / temperature gauge to allow easy checking of the hydraulic oil in the reservoir shall be supplied.  | YES | NO |
| Pintle hook plate and frame reinforcing rated at <30,000 MGTW c/w 2 safety chain loops. Holland PHT100A spring mounted pintle hook rated @ 20,000 MGTW installed at <b>SPECIFY:</b> " lunette height (level ground to center of hook). | YES | NO |
| Relocate O.E.M. 6 wire electrical plug @ rear of chassis into face of pintle hook plate.   | YES | NO |
| OPTIONAL EQUIPMENT   |     |    |
| 1). Chassis mounted ALUMINUM fenders.  | \$  |    |
| 2). Chassis – dump body to be CROWN rust proofed by O.E.M. Ontario plow equipment builder prior to completed unit being picked up by truck dealer.   | \$  |    |
| 3) 12" Wing Viking Model VCL144WHD - Metro general complete with dismount stand or floor support.  | \$  |    |
| 4) DiCan model DCW-12AB back-up camera system w/7" colour screen, heater, and washer spray.  | \$  |    |
| 5) Stainless Steal Cross Conveyor.   | \$  |    |



# **SCHEDULE C: TENDER PRICING FORM**

| This quotation for the supply of one (1) new <b>Single Axle C Unit</b> is submitted by:  | ab & Chassis Snow Plow   |
|--|--------------------------|
| in accordance with the accompanying specifications.  |                          |
| I/We hereby propose and agree to supply the unit(s) for the fo   | llowing quotation price: |
|  | Pricing<br>Summary       |
| Schedule A – TRUCK   | \$                       |
| Schedule B – SNOWPLOW UNIT   | \$                       |
| Air Conditioning Tax   | \$                       |
| 13 % H.S.T   | \$                       |
| <b>TOTAL QUOTATION:</b> one (1) complete unit (truck and plow equipment / combo sander body) delivered to the Town of Shelburne Operations Yard. | \$                       |
|  |                          |
|  |                          |
| Signature of Authorized Person   |                          |
| Print Name   |                          |
| Title  |                          |
| Signature of Witness   |                          |

Please note: Person signing must be authorized to conduct business on behalf of the company represented and to bind the company/individual to statements on this RFP/Contract. Failure to sign submission will result in a rejection of the proposal.



# **REFERENCES**

List five (5) Municipalities who have been using the combination U-body/spreader offered in this RFP for a minimum period of one year.

| # | Name of Municipality | Contact Name | Length of time Comb.<br>U body in service for | SPECIFY:<br>model # of<br>Comb. U Body<br>Owned | Phone # |
|---|----------------------|--------------|---|---|---------|
| 1 |                      |              |   |   |         |
| 2 |                      |              |   |   |         |
| 3 |                      |              |   |   |         |
| 4 |                      |              |   |   |         |
| 5 |                      |              |   |   |         |



# REQUEST FOR PROPOSAL FORM

| Company Name:  |
|--|
| Contact Representative:  |
| City, Province, Postal Code:   |
| Address:   |
| Phone:   |
| Email:   |
| HST Registration Number:   |
| Insurance Company:   |
| Insurance Policy Number:   |
| Insurance Coverage:  |
| WSIB Clearance Certificate Number:   |
| I/We have read and understand the Provisions, Specifications and Conditions which forms part of this RFP and hereby propose and      |
| agree to supply and deliver to the Town of Shelburne, 124 Luxton Way, Shelburne, Ontario, including all taxes, freight, duty         |
| exchange, transportation or other charges, fully paid, the following described one (1) complete truck with plow equipment as         |
| specified herein in full conformity with the Town's specifications attached hereto, for the following sum or sums in lawful money of |
| the Dominion of Canada.  |
| Signature of Authorized Person   |
| Print Name   |
| Title  |
| Signature of Witness   |
|  |