"Sailing Ahead" With the City of CLEAR LAKE "Where People Make the Difference"

CITY OF CLEAR LAKE

15 North 6th Street • P.O. Box 185 • Clear Lake, IA 50428
Phone: 641-357-5267 • Fax: 641-357-8711
www.cityofclearlake.com

January 15, 2016

HONORABLE MAYOR & CITY COUNCIL MEMBERS

The next regular meeting of the Clear Lake City Council is scheduled for Monday, January 18, 2016, at 6:30 p.m., in the Council Chambers, at City Hall. Please refer to the attached agenda for the items discussed below.

ITEM #6A. **2016 G.O. Refunding Loan Agreement**. The Council will consider setting the date for a public hearing on a proposal to enter into a future loan agreement in a principal amount not to exceed $1,700,000 to refund three (3) outstanding City General Obligation bond issues. The primary purpose of the transaction is to achieve approximately $50-60,000 (+/-) in total interest savings over the life of the bonds. The authorization of the refunding bonds does NOT result in the City incurring new debt, but simply provides for the re-financing of outstanding debt.

The current interest rates on the City's outstanding bonds proposed to be refunded range from 2.5% to 3.8%. This is proposed to be a "non-rated" and "bank qualified" issuance. The City will solicit competitive sealed quotes, including from the local banks, for the placement of the issue. It should be noted that the majority of the refinanced debt is currently held by Clear Lake Bank & Trust.

The proceeds from the refunding will be utilized to refinance existing debt from three (3) prior bond issues that are "callable". Those were as follows: 2008 General Obligation Water Improvement Bond ($1,200,000) issued for the east water tower project; 2010 General Obligation Water Improvement Note ($600,000) issued for the west-end and south-end water distribution system looping project (total project was $1,200,000); and 2011 General Obligation Fire Station Bonds ($2,300,000).

The remaining schedule is as follows:

Council Meeting, January 18th: Council reviews potential refinancing and considers resolution taking action to set Monday, February 1st as date for public hearing

January 20th: City Clerk publishes notice of public hearing in CL Mirror Reporter.

Council Meeting, February 1st: Council holds public hearing.

Week of February 1st: Review of Terms with Bank(s)

★ CLEAR LAKE

Week of February 8th: Finalize Terms with Bank(s)

Council Meeting, February 15th: Council considers Bond Purchase Agreement (locks in interest rates on refunding) and Council authorizes redemption of prior debt

Council Meeting, March 7th: Council authorizes issuance of G.O. Refunding Bonds, Series 2016

Wednesday, March 23rd: Closing / delivery of funds

ITEM #6B. **RFP 2016 Regenerative Air Street Sweeper Replacement**. The City currently uses two street sweepers for street cleaning operations: a 2005 Johnston Regenerative Air Vacuum Sweeper and a 2011 Pelican 3-wheel Mechanical Broom Sweeper. At certain times of the year, in particular the fall, the City utilizes both sweepers to lessen localized street flooding and storm sewer collection system congestion. Generally speaking, the useful life of a municipal street sweeper is between 7-8 years. Obviously, the primary factors in determining whether to replace such a piece of equipment are: age, overall physical condition, availability of parts, and repairs. The 2005 Johnston has more than surpassed its useful life expectancy and its reliability necessary for use as a day-to-day sweeper is now circumspect. It has experience higher maintenance costs and undesirable down time the last few years as a result of mechanical failures of a significant nature and is showing wear and fatigue on the drive and chassis components.

The FY 16 City budgeted included $260,000 for the purchase of a new regenerative air vacuum street sweeper. The Public Works Department has prepared the necessary Request for Proposals to solicit competitive sealed bids for the equipment.

Bid proposals are due to the Public Works Director by Tuesday, January 26th, at 1:00 p.m. It is anticipated the Council will consider an award of contract at its regular meeting on February 1st. Delivery is due within 75 days of the award.

Smart Quote: "*Never contend with a man who has nothing to lose.*" -- Baltasar Gracian, writer and philosopher

Scott Flory
City Administrator

PUBLIC NOTICE IS HEREBY GIVEN that the following governmental body will meet at the date, time, and place herein set out. The tentative agenda for said meeting is as follows:

TENTATIVE AGENDA
CLEAR LAKE CITY COUNCIL
CITY HALL – 15 N. 6TH STREET
MONDAY, JANUARY 18, 2016
6:30 P.M.

1. Call to Order and Pledge of Allegiance led by Mayor Nelson P. Crabb.

2. Approval of Agenda.

3. Consent Agenda:

   A. Minutes – January 4, 2016.
   B. Approval of the bills & claims.
   C. Licenses & Permits:
      - **Liquor License**: Class B Wine Permit, Class C Beer Permit, Class E Liquor License, *Fareway Stores*, (renewal).

4. Citizens opportunity to address the Council on items not on the agenda:

   - In conformance with the City Council's Rules of Procedure, no action can occur on items presented during the Citizens forum.
   - Please walk to the lectern, state your name (spell last name), address, and subject of your discussion.
   - Speakers are limited to a maximum of five (5) minutes per person.

5. Unfinished Business:

6. New Business:

   A. 2016 General Obligation Bond Refunding Loan Agreement:

      - Review of proposal, Scott Flory, City Administrator.
      - **Motion** to approve **Resolution #16-01**, "A Resolution to fix a date for a public hearing on a general obligation refunding loan agreement in a principal amount not to exceed $1,700,000" by City Council.
      - Discussion and consideration of **Motion** by City Council.

B. Request for Proposals for purchase of a new (replacement) 2016 regenerative air street sweeper:

- Introduction by Scott Flory, City Administrator.
- Review of proposed RFP, Joe Weigel, Public Works Director.
- **Motion** to authorize the issuance of an RFP by City Council.
- Discussion and consideration of **Motion** by City Council.

C. W. 7th Avenue N. Watermain Improvement Project:

- Review of Pay Estimate #4, Jason Petersburg, P.E. Veenstra & Kimm.
- **Motion** to approve Pay Estimate #4 by City Council.
- Discussion and consideration of **Motion** by City Council.

7. Chief of Police's Report:

8. Mayor's Report:

- Request to move February 1st Council meeting to 5:30 p.m.

9. Public Works Director's Report:

10. City Administrator's Report:

- Disposal of former NW Water Tower property.
- Main Avenue Brick Paver Sidewalk Project update.

11. Other Business:

12. Adjournment.

NEXT REGULAR MEETING – FEBRUARY 1, 2016

This notice is given pursuant to Chapter 21.4(1) of the Code of Iowa and the local rules of said governmental body.

RESOLUTION NO. _____

Resolution to fix a date for a public hearing on a general obligation refunding loan agreement in a principal amount not to exceed $1,700,000

WHEREAS, the City of Clear Lake (the "City"), in Cerro Gordo County, State of Iowa, has previously issued its General Obligation Water Improvement Bond, dated June 2, 2008, in the principal amount of $1,200,000 (the "Series 2008 Bond"); and

WHEREAS, in the resolution authorizing the issuance of the Series 2008 Bond, the City reserved the right to prepay the outstanding balance of the Series 2008 Bond on June 1, 2015 or any date thereafter; and

WHEREAS, the City has also previously issued its General Obligation Water Improvement Note, dated June 1, 2010, in the principal amount of $600,000 (the "Series 2010 Note"); and

WHEREAS, in the resolution authorizing the issuance of the Series 2010 Note, the City reserved the right to prepay the outstanding balance of the Series 2010 Note on June 1, 2014 or any date thereafter; and

WHEREAS, the City has also previously issued its General Obligation Fire Station Bonds, dated January 11, 2011, in the principal amount of $2,300,000 (the "Series 2011 Bonds"); and

WHEREAS, in the resolution authorizing the issuance of the Series 2011 Bonds, the City reserved the right to prepay the outstanding balance of the Series 2011 Bonds on June 1, 2016 or any date thereafter; and

WHEREAS, the City now proposes to enter into a General Obligation Refunding Loan Agreement (the "Loan Agreement") in a principal amount not to exceed $1,700,000 pursuant to the provisions of Section 384.24A of the Code of Iowa for the purpose of paying the cost, to that extent, of refunding the outstanding balances of the Series 2008 Bond, the Series 2010 Note and the Series 2011 Bonds, and it is necessary to fix a date of meeting of the City Council at which it is proposed to hold a hearing on entering into the Loan Agreement and to give notice thereof as required by such law;

NOW, THEREFORE, Be It Resolved by the City Council of the City of Clear Lake, Iowa, as follows:

Section 1. The City Council shall meet on the 1st day of February, 2016 at the City Hall, Clear Lake, Iowa, at 5:30 o'clock p.m., at which time and place a hearing will be held and proceedings will be instituted and action taken to enter into the Loan Agreement.

Section 2. The City Clerk is hereby directed to give notice of the proposed hearing and action on the Loan Agreement setting forth the amount and purpose thereof, the time when and place where the said meeting will be held by publication at least once and not less than 4 nor more than 20 days before the meeting, in a legal newspaper which has a general circulation in the City. The notice shall be in substantially the following form:

NOTICE OF PROPOSED ACTION TO INSTITUTE PROCEEDINGS TO ENTER INTO A GENERAL OBLIGATION REFUNDING LOAN AGREEMENT IN A PRINCIPAL AMOUNT NOT TO EXCEED $1,700,000

(GENERAL OBLIGATION REFUNDING)

The City Council of the City of Clear Lake, Iowa, will meet on the 1st day of February, 2016, at the City Hall, Clear Lake, Iowa, at 5:30 o'clock p.m., for the purpose of holding a public hearing on a loan agreement (the "Loan Agreement") in a principal amount not to exceed $1,700,000 for the purpose of paying the cost, to that extent, of refunding the outstanding balances of the City's General Obligation Water Improvement Bond, dated June 2, 2008; General Obligation Water Improvement Note, dated June 1, 2010 and General Obligation Fire Station Bonds, dated January 11, 2011.

The Loan Agreement is proposed to be entered into pursuant to authority contained in Section 384.24A of the Code of Iowa and will constitute a general obligation of the City.

At that time and place, oral or written objections may be filed or made to the proposal to enter into the Loan Agreement. After receiving objections, the City may determine to enter into the Loan Agreement, in which case, the decision will be final unless appealed to the District Court within fifteen (15) days thereafter.

By order of the City Council of the City of Clear Lake, Iowa.

Jennifer Larsen
City Clerk

Section 3. All resolutions or parts of resolutions in conflict herewith are hereby repealed to the extent of such conflict.

Passed and approved January 18, 2016.

_____
Mayor

Attest:

_____
City Clerk

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Date: January 19, 2016

To: Potential Bidders

From: Scott Flory, City Administrator

CC: Joe Weigel, Public Works Director

Re: Request for sealed bid proposal for Regenerative Air Street Sweeper

To Whom It May Concern:

This is to advise you that the City of Clear Lake will be accepting sealed bid proposals for the purchase of a **Regenerative Air Street Sweeper**. Only new 2016 models or newer shall be quoted. Sealed bids will be received at the Public Works Department, 1419 2nd Avenue South, Clear Lake, IA 50428, until 1:00 p.m., Tuesday, January 26, 2016. It is expected that the Council will consider the bids and make an award at its February 1, 2016 meeting.

Bid specifications are enclosed for your consideration. Bid proposals should be clearly marked as "**Regenerative Air Street Sweeper**", along with the "Dealer Name", and addressed to Joe Weigel, Public Works Director. All bids must be valid for a period of not less than forty-five (45) days from the date submitted.

The City of Clear Lake may choose to trade-in a 2005/2006 Johnston VT 650 Sweeper, which can be viewed at the City's Public Works Department, at the aforementioned address. The trade-in shall be valued as-is. The City reserves the right to sell or dispose of the trade-in up to and until the date of delivery of the new 4-Wheel Regenerative Air Street Sweeper.

Please quote an outright purchase price, as well as a trade allowance for the 2005/2006 Johnston Sweeper. A price schedule sheet is enclosed. The City may elect to delete trade-in and/or extended warranties if available. Bidder quotation shall include the description of the items to be provided to meet or exceed the minimum requirements. Any deviations or exceptions must be clearly detailed on the attached sheet labeled "Exceptions to Bid Specifications Sheet B" or bid may be disqualified. Should you have any questions or need additional information, you may contact Mr. Dave Whitehurst at 641-357-6135.

The dealer shall have the 2016 Regenerative Air Street Sweeper equipment installed on either a International or Freightliner Chassis. Delivery shall be F.O.B. to the City of Clear Lake Public Works Department (1419 2nd Avenue South) within seventy five (75) days of acceptance of the bid by the City of Clear Lake. The City of Clear Lake reserves the right to reject any and all bids and to waive any irregularities of informalities in any bid received and to accept the bid it deems in the best interest of the City of Clear Lake. **AWARD** – Award in part or in whole will be made to the bidder whose proposal provides the greatest value to the City from the standpoint of suitability to purpose, quality, service, previous experience, price, and ability to deliver, or for any other reason deemed by the City Council to be in the best interests of the City of Clear Lake. Thus the result will not be determined by price alone. The City will be seeking the least costly outcome that meets the City's needs, as determined by the City Council.

The intent of the attached specifications is to describe the minimum requirements governing the construction and installation of Regenerative Air Street Sweeper unit on a single axle chassis.

On behalf of the City of Clear Lake, I appreciate your time and effort in responding to our request for a bid proposal.

Price Schedule

Regenerative Air Street Sweeper

Regenerative Street Sweeper

Purchase Price $_____

Less Trade Allowance: 2005/2006 Johnston VT 650 Sweeper $_____

Extended Warranty – Chassis (If available) $_____

Extended Warranty – Regenerative Air Street Sweeper Unit (If available) $_____

Total Price: $_____

Company: _____

Address: _____

_____

Phone: _____

Signature: _____

Date: _____

Delivery Date: _____

Please provide detailed literature for the Regenerative Air Street Sweeper and Chassis.

Please list and provide detailed literature of any standard and extended warranties.

Intent

It is the intent of these specifications to describe a new 2016 or newer Freightliner or International conventional chassis which is sufficiently rated to transport a full load of sweeping debris at speeds up to 67 MPH. For safety and comfort of the operator and for quick, local service along with local availability of repair parts, the chassis will NOT be a purpose built chassis built by the sweeper manufacturer. The chassis shall be equipped with dual steering and operator controls and an automatic transmission. All tires shall be the same size and have dual tires on each side of the rear axle (six-wheel configuration).

No deviations to these specifications will be allowed

Bidders must indicate compliance for each item throughout the bid by writing "YES" or "NO". Failure to do so may be cause to reject the bid. All "NO" answers must be fully explained on a separate sheet of paper and be attached to and submitted with bid. Failure to explain "NO" answers may be cause to reject bid.

CHASSIS ENGINE

Compliance

_____ Engine shall be a Cummins ISB 6.7 liter turbo-charged electronic diesel engine.

_____ Horsepower rating shall be a minimum of 200 HP @ 2300 RPM. Torque rating shall be 520 LB/FT @ 1600 RPM.

_____ Engine shall be equipped with an after treatment device, automatic over the road regeneration and dash mounted regeneration request switch.

_____ Engine exhaust and after treatment device shall be under cab mounted on the right hand side with a vertical tailpipe also routed on the right hand side of the cab and extends behind back of cab no more than 1.5 inches.

_____ After treatment device / muffler and tailpipe shield shall be constructed of stainless steel.

_____ A 6 gallon diesel exhaust fluid (DEF) tank shall be provided and mounted under left hand side of cab.

_____ Engine shall have an electronic integral automatic shutdown system. The system is to provide protection from damage from low engine oil pressure, high coolant temperature and low coolant level.

_____ Donaldson two-stage heavy duty air cleaner with a pop up restriction indicator shall be mounted on the firewall with a side of hood intake.

_____ Intake shall be equipped with an electric grid air intake warmer.

_____ Alternator shall be 160 Amp.

_____ Two maintenance free batteries shall be provided with 1850 total CCA. Batteries shall be mounted in a frame mounted left hand side location under the cab.

_____ Engine cooling fan shall be a Horton HT650 electric electro-magnetic on/off fan clutch.

_____ Engine radiator shall be 950 square inches and constructed of aluminum.

_____ Antifreeze shall be -34F, ethylene glycol pre-charged SCA heavy duty coolant.

_____ Engine radiator shall be equipped with Gates Blue Stripe radiator hoses with constant pressure tension hose clamps and a lower radiator rock guard.

_____ Chassis engine to share 50-gallon fuel tank and batteries with auxiliary engine. No exceptions. Fuel tank and batteries shall be mounted under left hand side of cab and not extend past back of cab.

_____ Engine shall be equipped with a full flow oil filter and spin on fuel filter. Engine shall also be equipped with a magnetic oil drain plug.

_____ Chassis to include fuel/water separator mounted on engine and fuel filter in a single assembly.

_____ Chassis engine to include turbocharger brake with selector switch

TRANSMISSION

_____ Transmission shall be an electronic 6-speed automatic Allison 2500 RDS with T-handle shifter. 6-speed transmission allows broader gear range and eliminates the need for 2-speed rear axle.

_____ Transmission to have oil filter mounted on transmission.

_____ Transmission shall be equipped with a magnetic transmission drain plug.

_____ Transmission to have transmission oil temperature gauge mounted in dash.

_____ Transmission shall be equipped with water to oil transmission cooler in radiator end tank.

DUAL SIT-DOWN STEERING

_____ Chassis shall have dual steering with 4 spoke, 18" diameter steering wheels.

_____ No dual steering installed by the sweeper manufacturer. No exceptions.

_____ Dual steering package shall include a complete dual gauge package for both driving stations.

_____ Dual steering shall have accelerator and brake controls, self-canceling turn signal, horn, headlight dimmer switch with flash-to-pass feature, and four way flasher controls at each driving position.

_____ Both driving positions shall have tilt steering wheel.

_____ Ignition switch and air brake control shall be located to the center of dash.

_____ Single or center mounted steering will not be accepted. Dual steering must not be installed by sweeper manufacturer.

_____ Turning radius to be a maximum of 23.3 feet.

FRONT AXLE & SUSPENSION

_____ Front axle shall be Minimum 12,000 lb capacity with automatic aligning slack adjusters and cam front brakes

_____ Front suspension to be a minimum 12,000 lb. capacity taper leaf spring and maintenance free rubber bushings.

_____ Front axle shall be equipped with Chicago Rawhide Scotseal Plus XL front oil seals with vented front hub caps and standard spindle nuts.

_____ Front suspension to have shock absorbers.

REAR AXLE & SUSPENSION

_____ Rear axle shall be a minimum capacity of 21,000 lbs. No exceptions.

_____ Rear suspension shall be flat leaf rear spring suspension with helper and radius rod.

_____ Sweepers that require the operator to make adjustments in the cab to the suspension to allow the sweeper to sweep or travel at highway speeds will not be accepted. Air-bag suspension will not be acceptable.

_____ Rear axle to be single speed having ratio of 6.14

BRAKE SYSTEM EQUIPMENT

_____ Brakes to be air brake system. No hydraulic brake system will be accepted.

_____ Anti-lock braking system shall be provided.

_____ Front brakes to be 15" X 4". Rear brakes to be 16.5" X 8.62".

_____ Spring actuated parking brake chambers shall be provided with a center dash control accessible from either driving station

_____ Air compressor to be Cummins with 18.7 CFM with internal safety valve.

_____ Front & rear brakes to have automatic slack adjusters.

_____ Front & rear brakes to have brake dust shields.

_____ All air reservoirs to have air tank twist-type drain valves with pull cables.

FRAME & WHEELBASE

_____ Wheelbase shall be 184" and usable cab to axle shall be 115.5".

_____ Frame rails to be 10 15/16" x 3 ½" x 11/32" high strength steel alloy steel (80,000 PSI yield). Any chassis not meeting or exceeding these minimum standards will not be accepted.

_____ GVW shall be minimum of 33,000 lb.

_____ Front tow hooks to be frame mounted.

TIRES & WHEELS

_____ Tires shall be a size of 11R 22.5 and be 14 ply.

_____ Rear axle shall have dual tires and wheels on each side of axle.

_____ Wheels shall be 10-stud steel disc hub piloted 22.5 X 8.25.

_____ Wheels shall be interchangeable to allow emergency change at the job site.

CAB EXTERIOR

_____ Cab shall be conventional type with aluminum cab and fiberglass tilting front end.

_____ Door/ignition locks shall be keyed alike.

_____ Headlights shall be halogen. Five (5) amber marker lamps shall be provided on the top of the cab.

_____ Chassis to have dual bright finish remote control heated west coast mirrors mounted on doors.

_____ 8" square bright finish parabolic mirrors to be mounted under west coast mirrors.

_____ 12" diameter chrome parabolic mirrors to be mounted on front fenders for viewing gutter brooms.

_____ Chassis must have power locks.

_____ Chassis shall be equipped with dual electric horns.

_____ Door windows shall be tinted and power roll down with non-operating wing windows. No sliding windows.

_____ Rear window to be 63" x 14" tinted glass. Front windshield to be tinted.

_____ Chrome towel bar-type exterior grab handles to be provided on each side of cab. No exceptions.

CAB INTERIOR

_____ Interior shall be gray charcoal finish

_____ Air conditioner shall be provided with integral heater and defroster with a Denso heavy duty air compressor.

_____ Both seats shall be high-back, air suspension seats with fore and aft adjustment. Seat cover material shall be vinyl.

_____ Three point, lap and shoulder seat belts shall be provided.

_____ Left and right side arm rests to be provided on each door.

_____ Ashtray, cigar lighter and two (2) cup holders shall be provided.

_____ Dome light to be door activated.

_____ Cab shall be provided with cab insulation and gray vinyl mats with insulation

_____ Cab shall include a forward roof mounted console with upper storage compartments without netting. An in dash storage bin shall also be provided.

INSTRUMENTS & CONTROLS

_____ Chassis gauges to include speedometer, tachometer, oil pressure, water temperature, air pressure for air brakes, voltmeter, fuel, and transmission temperature at both driving positions. Right side gauges to match factory gauge cluster on the left side.

_____ Odometer shall have trip, hour, diagnostic, voltage display

_____ Chassis shall have electronic cruise control.

_____ AM/FM/CD/MP3/WB radio with forward left hand side roof mounted antenna and two (2) speakers in cab shall be provided.

_____ Two-speed windshield wiper control with wash and intermittent feature at both driving positions shall be provided. Reservoir shall be 8 liter.

PAINT COLOR

_____ The chassis and wheels shall be painted white in color.

_____ Chassis frame to be painted black.

CHASSIS WARRANTY

_____ Basic vehicle warranty to be 24 months/unlimited distance.

_____ Drive train components warranty to be 24 months/unlimited distance.

_____ Cab structure and sheet metal, cab corrosion, and frame rails & cross members warranty to be 60 months/unlimited distance.

DELIVERY

_____ The unit shall be delivered completely assembled, serviced, and ready to operate.

_____ Bidder to state delivery date.

_____ The bidder shall supply chassis operators manual. Service manual on CD ROM, and parts manual shall be provided.

Intent

It is the intent of these specifications to describe a new 2016 regenerative air street sweeper with hydraulic drives, 8.4 cubic yard hopper, 90" wide pickup head. The head must be capable of sweeping in reverse with the head down without causing damage to the pickup head or its components. Blower shall be belt driven via auxiliary engine. The unit must be equipped with vertical digger-type gutter brooms, pressurized dust control spray system and an independent engine to power the sweeping functions. The chassis for this sweeper is to be sufficiently rated to transport a full load of sweeping debris at speeds up to 67 MPH. For safety and comfort of the operator and for quick, local service along with local availability of repair parts, the chassis will NOT be a purpose built chassis built by the sweeper manufacturer. The chassis shall be equipped with spring suspension on both axles, dual steering, dual operator controls, and an automatic transmission. All tires shall be the same size and have dual tires on each side of the rear axle (six-wheel configuration).

The unit shall be new of current manufacture. No prototype, demo, used, vacuum type, or mechanical type sweepers will be accepted.

All parts not specifically mentioned which are necessary to provide a complete street sweeper shall be included in the bid and shall conform in strength, quality of materials, and workmanship to what is normally provided to the trade in general.

No deviations to these specifications will be allowed.

Bidders must indicate compliance for each item throughout the bid by writing "YES" or "NO". Failure to do so may be cause to reject the bid. All "NO" answers must be fully explained on a separate sheet of paper and be attached to and submitted with bid. Failure to explain "NO" answers may be cause to reject bid.

Warranties are to be listed for the single axle truck chassis and the regenerative air street sweeper on the "price scheduled" sheet. Also list any available extended warranty with the corresponding cost. THE DEALER SHALL BE RESPONSIBLE FOR THE COST OF PICKUP AND DELIVERY OF THE TRUCK AND REGENERATIVE AIR STREET SWEEPER FOR SERVICE AND MAINTENANCE DURING THE EXTENT OF THE WARRANTY PERIOD ACCEPTED BY THE CITY.

SWEEPER ENGINE

Compliance

_____ A. An auxiliary diesel engine shall be provided to power the sweeper. The engine shall be a turbo charged four-cylinder Tier III John Deere with a horsepower rating of not less than 115 hp @ 2400 RPM and shall provide a peak torque rating of not less than 317 ft/lb at 1,500 RPM. Minimum displacement shall be not less than 276 cubic inches. Engine shall be made in North America.

_____ B. Engine shall be equipped with a full-flow spin-on oil filter, fuel filter and fuel water separator.

_____ C. Unit shall have a heavy-duty two-stage dry type air cleaner and an air filter restriction indicator located at the air filter housing.

_____ D. In order to have the cleanest air possible, the air intake shall be at least 8 feet above the ground level.

_____ E. Engine to be equipped with a 3-point safety engine shutdown device that shuts down the engine for low oil pressure, high coolant temperature, and low coolant level.

_____ F. Injector pump shall have high pressure common rail with electronic control unit for speed control of auxiliary engine.

_____ G. Twelve (12) volt electrical system, electrical starter and 75 amp alternator shall be provided. Sweeper shall have re-settable circuit breakers.

_____ H. Sweeper auxiliary engine shall share a minimum 50-gallon fuel tank and batteries with chassis engine. No exceptions.

_____ I. Auxiliary engine, muffler, fuel tank, battery box, and hydraulic tank and cooler to be protected by a shroud integral to the sweeper hopper.

Hydraulic System

_____ A. Hydraulic power shall be used to operate all broom rotation and lifting functions. Systems incorporating pneumatic-type controls will not be accepted.

_____ B. Hydraulic pressure shall be set at 2500 PSI for all hydraulic functions.

_____ C. Sweeper shall utilize a multi-stage gear driven hydraulic pump, minimum 25 gallon vented hydraulic reservoir, a spin-on 10 micron return filter, and high pressure hoses and fittings. Hydraulic reservoir to have tank mounted level and temperature indicator. Hydraulic reservoir shall be mounted above the hydraulic pump.

_____ D. Hydraulic system to have a 9,000 BTU oil to air radiator type hydraulic oil cooler.

_____ E. Hydraulic tank shall have shut-off valves for hydraulic oil filter change.

_____ F. Hydraulic system shall have quick disconnect relief pressure check ports mounted in the hydraulic manifold(s).

_____ G. For safety of the operator, no sweeper hydraulic lines to run into or through the cab.

_____ H. Hydraulic valves shall have built-in diagnostic system lighting for troubleshooting hydraulic flow and electrical power.

_____ I. A 12-volt DC hydraulic backup system shall be provided which may be used to operate all hydraulic functions without starting the auxiliary engine.

DUST SEPARATOR

_____ A. A centrifugal dust separator with a minimum 29,000 cubic inch volumetric area shall be supplied inside hopper to remove airborne dust from the air stream. The dust separator shall be designed so that it will not plug with normally encountered debris.

_____ B. The dust separator shall have a clean-out door that opens automatically and discharges debris from the separator when the hopper is raised.

_____ C. Cable or other manual/mechanical means required for discharging debris in the separator shall not be allowed.

HOPPER

_____ A. The volumetric capacity of the hopper shall not be less than 8.4 cubic yards. The usable capacity shall not be less than 7.0 cubic yards.

_____ B. Hopper screen to be a two piece saw-tooth design such that airflow will not be interrupted even in difficult sweeping conditions. Flat screens

are unacceptable due to premature clogging of the screen. Hopper screen to be a minimum of 6228 square inches.

_____ C. Hopper screens must have 2 hinges on each screen with a remote drop down feature, allowing the screen to drop down from one side, providing extra safety for the operator during cleanup. The remote drop down shall include an integral winch and stainless steel cable and pulley system to raise and lower the screens.

_____ D. Dumping shall be accomplished hydraulically by tilting the hopper a minimum of 53 degrees. Contents shall be dumped to the rear of the vehicle at a height of 36 inches. Twin dumping cylinders shall be 4" X 16". Hopper floor shall be sloped 3 degrees towards the rear door making the total dump angle 56 degrees. Hopper door shall include an in-cab indicator light notifying the operator when the hopper is raised.

_____ E. Hopper to be constructed with 3/16 inch steel floor. The roof, door, and sides to be made of minimum 10 gauge steel.

_____ F. Dump door to be hydraulically opened, closed, and locked with an indicator light in cab. Operation of the hopper dump door to be accomplished from inside or outside the cab.

_____ G. Large 15" X 32" inspection doors shall be provided on left and right sides of hopper. These doors shall provide an easy way to manually load debris and provide a convenient access for hopper inspection and cleaning.

_____ H. Hopper shall be airtight through the use of rubber seals on all doors and openings.

_____ I. Weatherproof dump switches to be located outside directly behind cab for visibility and safety during the dumping process. There shall be one switch for each function: raising and lowering the hopper to the dump position, opening and closing the dump door, and turning the 2 rear bumper mounted flood lights on for night dumping.

_____ J. Hopper interior shall be coated with an anti-wear/anti-seize coating.

_____ K. Sweepers that use a no tilt method of dumping hopper or use an inside of hopper mechanical means of pushing debris out of the hopper (raker bar) will not be accepted.

_____ L. Hopper to have a shroud enclosing the auxiliary engine, muffler, blower housing, fuel tank, battery box, and hydraulic tank and cooler.

A Shroud shall be designed to help protect components from the elements and vandals.

_____ N. Shroud shall also be designed to reduce auxiliary engine noise by having a minimum of 1" thick sound dampening material attached to the inside of shroud in the engine compartment area. Sound deadening material must consist of at least 48 Square feet of material. Shroud must be part of the hopper and lift when the hopper is raised and be designed to give the sweeper a neat well thought out streamlined appearance. In the interest of sweeper protection, public safety, and sweeper noise reduction, sweepers that do not meet all of these requirements will not be accepted.

_____ O. The hopper roof shall be higher at the center to allow water to run off and to reduce corrosion. Hoppers with flat roofs will not be accepted.

_____ P. The suction tube entering hopper shall be bolt on for easy replacement and shall be constructed of abrasion resistant steel.

_____ Q. A hopper door open/close switch to be mounted on console to allow rear door to be operated from inside cab.

_____ R. The hopper shall be equipped with an in-cab controlled hopper floor vibrator/shaker system. This system shall include a sweeper console mounted activation switch.

BLOWER

_____ A. Heavy-duty steel blower shall be used to create air pressure and suction (regenerative air) for removing debris from road surface. Sweepers that clean road surfaces by using suction only (pure vacuum) will not be accepted.

_____ B. Blower to be powered by the sweeper auxiliary engine via a heavy-duty 5-groove v-belt. A belt safety guard shall be supplied.

_____ C. The blower shall be a closed face turbine type with 10 curved blades, and shall by 32.75 inch diameter by 5 inches wide. The blower shall be constructed of 500 brinell hardness abrasion resistant steel. Fan to be fully balanced within 1.5 grams on both sides for long fan and bearing life. A die-cast aluminum alloy open face blower, either covered with rubber or not, or a die cast steel open face blower will not be acceptable.

_____ D. Blower shall have a minimum rated performance of negative 65 inches of water column and 17,000 CFM. Documentation must be included with the bid packet that states that the Air Movement and Control Association has tested the fan and certifies the fan is equal to or greater than the performance data listed above. Since the rated fan performance is directly related to the performance of the sweeper, no sweeper will be considered without the fan being certified by the Air Movement and Control Association.

_____ E. Must be Whisper Wheel equipped to provide a 360 degree average dB(a) rating of 72.0 or less at an unobstructed distance of 50 feet at 2000 engine RPM. Sound dampening material is required in the area of the auxiliary engine and blower to aid in soundproofing.

_____ F. The blower housing shall be constructed of 3/16" abrasion resistant steel with the inside of the housing covered by a replaceable rubber wear liner.

_____ G. Blower housing shall have a vacuum enhancer for discharging a portion of the blast air for sweeping light materials such as leaves and paper. The vacuum enhancer shall be electrically powered by a DC actuator and controlled from a switch located on the control panel inside the cab. The vacuum enhancer to be capable of 0 - 80% air diversion for maximum control.

_____ H. Blower housing shall not be an integral part of the hopper and shall be mounted parallel with the front of the hopper.

_____ I. Blower shall be mounted on sealed self-aligning anti-friction bearings. Blower shaft to have greaseable bearings requiring 1/4 ounce of grease every 250 hours to ensure maximum life expectancy. Non-regreaseable bearings are unacceptable due to sweeper environment. Blower shaft shall be a minimum of 36 inches long and 2 1/4" diameter to reduce stress or premature bearing wear.

PICKUP HEAD

_____ A. Pickup head to be spring balanced all steel fabricated with separate upper and lower chambers where pressurized air is blasted from the upper chamber through an elongated blast orifice to the lower chamber.

_____ B. Rubber blast orifice to be angled a minimum of 3 degrees towards the suction side of the pickup head. This will ensure a smooth transfer of

debris by increasing pressure as the debris moves toward the suction tube.

_____ C. The pickup head shall not be less than 90 inches wide and 36 inches long giving a total head area of 3240 square inches.

_____ D. Pressure and suction hoses shall be fourteen inches in diameter and be constructed from 3/8 inch thick heavy duty molded wire reinforced molded rubber.

_____ E. Sweeping paths shall be:
Pickup head only = 90 inches
Pickup head and one gutter broom = 117 inches
Pickup head and two gutter brooms = 144 inches

_____ F. Sweeper shall have Sweeps-in-Reverse which allows it to sweep in both forward and reverse with the head down without causing damage to the head or other components. NO EXCEPTIONS. Sweeping heads that are not designed to sweep-in-reverse and that require add-on devises such as chains attached to the head and chassis axle to meet this requirement, will not be considered. Sweeper must be able to sweep in reverse while making turns. For safety and liability proposes, no sweeper will be accepted that automatically raises the sweeping head when the sweeper is placed in reverse.

_____ G. Pickup head shall be equipped with doublewide full length carbide drag shoes for maximum life. Front and rear of drag shoe to be snowshoe design to follow road contour without damage. Shoes shall be interchangeable from either the left or right side.

_____ H. Drag shoes shall be warranted against wear-out for a minimum of two years/2000 hours, prorated.

_____ I. Sweeping head shall be raised and lowered hydraulically by a single switch located in the cab.

_____ J. Head to have a quick disconnect at the head suction transition.

_____ K. Suction transition shall include two high volume water nozzles to lubricate the suction tube to reduce clogging during sweeping operations.

GUTTER BROOMS

_____ A. Dual gutter brooms shall be 44" minimum diameter, flattened wire filled vertical digger type for removing debris from gutter area.

_____ B. Gutter brooms to be hydraulic motor driven and shall be positioned laterally and vertically by a hydraulic cylinder and springs.

_____ C. Each gutter broom shall have an adjustment to allow downward compensation for bristle contact, pattern and wear and shall be full floating to follow street contour.

_____ D. Each gutter broom shall have lateral flexibility to swing inward 15" under the chassis when encountering the impact of an immovable object thus avoiding damage to the broom assembly.

_____ E. Each gutter broom shall be held in the up and transit position by use of a hydraulic cylinder and an electric lock valve attachment.

_____ F. Upward motion for gutter broom storage shall be regulated by an adjustable flow control valve.

_____ G. Gutter broom disk to be recessed to prevent such items as cassette tape, string, and small rope like material from being rapped around and damaging the gutter broom motor shaft seal. Disk shall be designed as to allow water to drain off, therefore eliminating water damage to the gutter broom motor seals.

_____ H. A center deflector shall be provided to direct debris thrown by the gutter brooms into the path of the pickup head. Deflector shall be positioned under the belly of the sweeper and in between the gutter brooms. Deflector shall raise and lower with the pick-up head.

_____ I. Each gutter broom shall additionally incorporate a hydraulically actuated tilt capability of 27 degrees, remotely controlled from the console in the cab to allow instant adjustment for debris removal from deep gutters (such as those resulting from multiple overlays of blacktop).

_____ J. Each gutter broom shall have Gutter Broom Extension Override (GEO) with in-cab controls to be able to extend and retract while in sweeping mode. This will allow the gutter brooms to scrub the pavement surface in front of the pickup head. All controls shall be in-cab. At no time shall the operator have to leave the cab to activate this function. The system shall be activated by an electric linear actuator.

_____ K. Each gutter broom motor shall have a heavy duty seal, seal slinger/protector and heavy duty bearing to extend life while operating in a debris filled environment.

DUST CONTROL SYSTEM

_____ A. Water spray to be supplied by an electric diaphragm water pump. The water pump to produce a minimum of 60 PSI, with a minimum 5.88 gpm. The water pump to automatically disengage when the water supply is depleted. Pump shall be mounted below water tank bottom level.

_____ B. Water tank capacity not to be less than 250 gallons (with options up to 600 gallons) and shall be constructed of polyethylene for strength and corrosion resistance.

_____ C. A minimum 25-foot long fire hydrant fill hose shall be provided with 2.5" NST coupling to fill water tank. A minimum 2" air gap shall be provided between water fill tube and water tank. Hydrant hose shall include a hydrant wrench and hose storage rack.

_____ D. Water system to be filtered by a 100 mesh cleanable filter located between tank and water pump. For ease of cleaning, water filter to be at ground level. Water shut-off valve shall be provided to allow cleaning filter without loosing water supply.

_____ E. 2 each adjustable spray nozzles shall be located at each gutter broom.

_____ F. Dust suppression system to include two spray nozzles at the front axle. Left nozzle to come on when left gutter broom water is in use and right nozzle to come on when right gutter broom water is in use.

_____ G. Each water spray function to have its own independent on/off cab controlled solenoid valve.

_____ H. An in-cab water level gauge must give operator constant visibility of water system levels.

_____ I. Water spray nozzles shall be provided as follows: five nozzles at pickup head, two nozzles inside hopper, two nozzles at right gutter broom, two nozzles at left gutter broom, two nozzles in the suction tube, and two at the front axle.

_____ J. No part of the water system shall be made with ferrous metal.

_____ K. The water system shall incorporate an air purge system for flushing water lines during freezing conditions.

_____ L. Sweeper to be equipped with a front spray bar with 7 nozzles. Spray bar to be mounted on front bumper.

OPERATING CONTROLS

_____ A. Sweeper shall be equipped with dual steering and controls for left or right hand operations. Center mounted steering or single steering is not acceptable. Dual steering shall NOT be installed by the sweeper manufacturer.

_____ B. Auxiliary engine control and gauges shall be mounted on the control console inside the cab. They shall consist of: keyed ignition, electronic throttle control, leaf bleeder control, oil pressure gauge, water temperature gauge, voltmeter, tachometer, and hour meter. All gauges to be lighted. Shall include a diagnostic gauge with the ability to read and record engine error codes.

_____ C. Console to have independent switches for operating left gutter broom, tilt and GEO, right gutter broom, tilt and GEO, and pickup head. All switches to be lighted and have international symbols for easy identification.

_____ D. Console to have water pump on/off switch and low water level warning light. Independent water control switches for left gutter broom, right gutter broom, pickup head, hopper, front bumper, and nozzles at front axles. All switches to be lighted and have international symbols for easy identification.

_____ E. Console to have independent switches for each gutter broom light, rear dump light, and safety strobe.

_____ F. All sweeper main electrical systems to be separately fused at the control console.

SAFETY EQUIPMENT

_____ A. Sweeper to meet all federal motor vehicle safety standards. All lighting must be LED.

_____ B. Sweeper shall include two hopper safety struts that lock hopper in the raised position during maintenance. Safety struts to be permanently mounted to sweeper. Operator to manually engage and disengage struts.

_____ C. Sweeper shall to be equipped with an LED amber strobe lights with limb guards. LED Strobe to be mounted at the highest point of the front and rear of the sweeper.

_____ D. The sweeper shall have two lower LED stoplights mounted into the rear bumper at a height of 35 inches. The sweeper shall also have two integral high mounted LED stoplights mounted at a height of approximately 94 inches. For protection of the lights and to make cleanup easier, the lights shall be integrally mounted in the sweeper body.

_____ E. Two rear high mounted integral yellow alternating LED flashing lights to be provided. Light shall be mounted at a height of approximately 94 inches above the ground.

_____ F. Sweeper shall be equipped with rear mounted slow moving vehicle emblem, backup alarm, cab mounted 5-lb fire extinguisher, and a warning triangle kit.

_____ G. Permanent warning labels shall be provided at all hazard areas.

_____ H. Sweeper shall be equipped with rear view camera and 7" cab-mounted color flat screen monitor with sound. System capable of night vision with auto dimming monitor. Capable of continuous viewing or activated when chassis is shifted into reverse.

ACCESSORIES

_____ A. Sweeper must have a full width steel rear bumper mounted to frame.

_____ B. 12" chrome cab mounted parabolic mirrors shall be provided to aid operator in observing gutter brooms. They shall be mounted on the fenders of the chassis.

_____ C. A 18 7/8" wide X 10 1/2" tall X 24 5/8" deep lockable toolbox shall be provided. Access shall be from the curb side of sweeper.

PAINT COLOR

_____ A. The sweeper shall be painted with 1 coat of sealer/primer and 2 coats of DuPont Imron Elite polyurethane paint in the manufacturer's standard white color. Paint shall be lead free.

_____ B. Gutter brooms, pickup head, sweeper and truck frame to be painted a semi-gloss polyurethane textured black for long life.

SWEEPER WARRANTY

_____ A. Per manufacturers published warranty, sweeper shall be warranted to be free of defective materials and workmanship for a period of 12 months or 1,200 hours from date of delivery. No exceptions.

_____ B. Sweeper auxiliary engine shall be warranted for not less than 24 months or 2000 hours, whichever occurs first from date of delivery.

_____ C. Sweeper hydraulic system shall be warranted for not less than 60 months or 6000 hours, whichever occurs first from date of delivery.

_____ D. **ALL TRANSPORTATION COSTS OF THE SWEEPER AND EQUIPMENT DURING THE WARRANTY PERIOD SHALL BE THE RESPONSIBILITY OF THE DEALER AWARDED THE BID.**

DELIVERY

A. The sweeper shall be delivered F.O.B. to the City of Clear Lake Public Works Department

_____ B. The unit shall be delivered completely assembled, serviced, and ready to operate. The bidder shall have a qualified service representative in attendance with the sweeper during start up operations to make any adjustments needed and to give operator instruction on the proper operation of the sweeper.

_____ C. Bidder to state delivery date.

_____ D. The bidder shall supply a complete sweeper manual. Manual shall include system/component descriptions, sweeper operation,

maintenance, troubleshooting, illustrated parts listing with part numbers, and schematics for the sweeper. Manual shall also include reproducible periodic maintenance schedules.

_____ E. Auxiliary engine manuals to be provided. They are to consist of operations & maintenance, maintenance schedules, component technical manual, and an illustrated parts catalog.

SCHWARZE INDUSTRIES

The People You Know. The Products You Trust.

A7 Tornado™

- 8.4 Cubic Yard Hopper
- Rule 1186 AQMD Certified
- Regenerative Air Sweeping
- Whisper Wheel™ Fan System
- Schwarze Sweeps-in-Reverse™
- DC Auxiliary Hydraulic Pump

*Sweeper shown with optional equipment

WARRANTY 5yr Standard Hydraulic Component SCHWARZE

QUALITY ▪ PERFORMANCE ▪ PUBLIC SAFETY
VALUE ▪ CUSTOMER SUPPORT

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A7 Tornado™

8.4 Cubic Yard Regenerative Air Street Sweeper

AMERICAN BUILT–
AMERICAN MADE

QUALITY

Bolt in Pressure & Transition Tubes: Ease of maintenance (reduced cost of ownership)

Whisper Wheel℠ Fan System: 70% quieter, uses 20% less fuel and 7% more powerful than an open face fan design

Abrasion Resistant Steel in Critical Wear Areas: Longer life expectancy equates to reduced cost of ownership

Four Point Protection℠: Optional stainless steel hopper package for long lasting performance

PERFORMANCE

Optional Equipment: Gutter Broom Extension Override℠: Increased usability of gutter brooms and expands the versatility in various applications, while eliminating the need for a center broom

Saw tooth Screens: Increased screen surface area creates more productivity, eliminates the need for a screen vibrator, lower cost of operation

Optional Equipment: Mechani-Pneumatic Powerhood (broom assist head), in-cab tilt controls for gutter brooms

Financing Available

The Schwarze A7 Tornado™ is a chassis mounted, regenerative air street sweeper with an 8.4 cubic yard hopper. With over 20 years of successful operation throughout the world, the A7 Tornado™ is a heavy duty workhorse that will provide a high quality option with a low cost of ownership. Come to the people you know for the products you trust.

Also Available from Schwarze Industries, Inc:

Whisper Wheel™ Fan System

In Cab Hydraulic T

PUBLIC SAFETY

Available in CNG

Noise Level: Reduced operator stress and increased ability to operate in noise sensitive areas

PM 10 Certified: Meets AQMD 1186 requirements to pick up and contain harmful particulates

Optional Equipment: One to three remote cameras with in-cab video monitor and sound suppression system

VALUE

8.4 Cubic Yard Hopper Capacity: Increased hopper capacity equates to increased production and less dumps

90"x36" Sweeping Head: Increased productivity with a larger area of influence (quicker transfer, no bulldozing)

Sweeps in Reverse℠: Eliminates the need for the operator to raise the sweeping head to reverse

Optional Equipment: 8" auxiliary hand hose, extra 350 gallon polyethylene water tank

Standard 12V DC Hydraulic Pump: Able to raise and lower the sweeping head without use of aux. engine

Parts Availability: Schwarze original equipment parts are available when you need them.

Trusted Dealers: Trusted dealers will support your before and after-purchase needs.

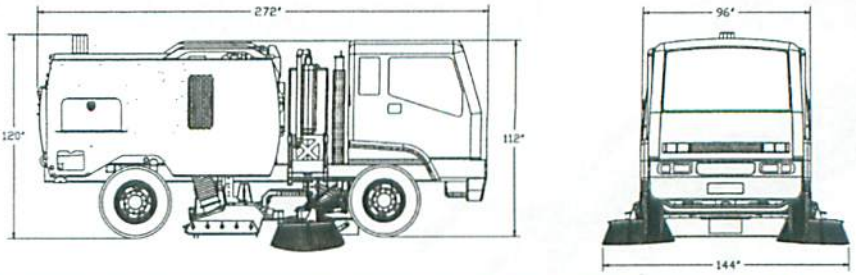
Empowered and Responsive: Schwarze People are valued for their commitment to our future.

Schwarze Products: Engineered for enhanced sweeping performance and low ownership cost.

CUSTOMER SUPPORT

Warranty Support: Schwarze people are on duty to support you and your equipment.

Schwarze regenerative air sweepers are guaranteed to be free from defects due to faulty materials and/or workmanship for a period of 12 months, or 1200 hours. Liability is limited to replacement of defective parts at factory or authorized dealer. The standard warranties of the chassis and sweeper engine manufacturer shall apply.



Model shown with optional equipment. Design and specifications subject to change without notice. Specifications may vary depending on chassis type.

Sweeping Path

Pickup Head Only	90" (2,286mm) 7.5'
Pickup Head and one gutter broom	117" (2,972mm) 9.75'
Pickup Head and two gutter brooms	144" (3,658mm) 12'

Chassis

Mounts on various chassis to meet requirements

Sweeper Body

Construction	Welded 10-gauge steel plate with 3/16 steel hopper floor
Safety Prop	Dual steel bars located under body

Instrumentation

Sweeper Engine	Tachometer, hourmeter, voltmeter, temperature gauge, oil pressure gauge

Standard Engine

Model / Type	4045T In-line 4 cylinder
Aspiration	Turbo-charged diesel
Manufacturer	John Deere
Displacement	275 cu. in. (4.5L)
Brake Horsepower	115HP (86KW) @ 2400 RPM (opt. 140 HP)
Torque	317 ft-lb (430Nm) @1500RPM
Air Cleaner	Precleaner: Centrifugal type; Air Cleaner: Dry type with safety element
Oil Filter	Full-flow / Spin on
Stroke	5.00" (127mm)
Bore	4.20" (106mm)
Compression Ratio	19.0 to 1
Safety Shutdown	Three-point automatic
Throttle Control	Electronic

Electrical System

Voltage	12 Volt
Sweeper Engine Alternator	65 Amperes

Dust Control System

Type	High Pressure / Low volume
Capacity	250 Gallon (946 L) (600 gallon on cab-over chassis)
Tank Construction	Polyethylene
Filter	200 mesh, cleanable
Fill Diameter	2.5" (63.5mm)
Fill Hose	25 foot (7620mm)

Dust Control System cont'd

Controls	Electric; in-cab
Nozzles	2 on each broom 5 around suction head 2 inside suction nozzle 2 on front axle 2 inside hopper
Water Level Gauge	In-cab

Blower System

Type	Closed-face radial
Drive	Direct via 5 groove, banded power belt
Construction	Hardox Steel
Balanced	to 1.5 grams or less on 2 sides
Diameter	32.75" (832mm)
Housing Lining	Bolt-in corded rubber
Mounting	2 regreaseable sealed bearings
Vacuum Enhancer	For heavy / light material In-cab indicator

Pickup Head

Type	Dual chambered full-width blast orifice
Operating Direction	Forward and reverse
Suspension	Adjustable spring balanced
Length	90" (2,286mm)
Pressure Hose Diameter	14" (355.6mm)
Suction Hose Diameter	14" (355.6mm)
Hose Construction	3/8" (9.5mm) wire-reinforced molded rubber
Head Area	3,240 sq. in. (20,904cm²)
Controls	Hydraulic raise and lower
Skids	Double wide tungsten carbide
Construction	Abrasion-resistant steel inlet and outlet transitions

Paint

One coat of sealer / primer and two coats of Dupont Imron Elite polyurethane in standard white color

Side Brooms

Type	Vertical steel digger
Location	Right, Left, forward of pickup head
Diameter	44" (1117.60 mm)
Drive	Hydraulic
Suspension	Torque-sensing spring
Wear Adjustment	Automatic
Pressure	Manual
Speed	Variable, non-reversing
Segments	5 each side, disposable
Tilt Angle Adjustment	Manual with optional in-cab controls

Debris Hopper

Volumetric Capacity	8.4 cubic yards (6.4 cu. meters)
Useable Capacity	7.0 cubic yards (5.4 cu. meters)
Dump Angle	53 degrees
Floor Angle	3 degrees
Lifting	Twin hydraulic cylinders
Hopper Dump Door	Open/close/ lock hydraulically
Inspection Doors	1 on each side of hopper
Screens	Sawtooth Drop Down
Design	

Hydraulic System

Type	Dual output 2 section
Pump Capacity	6.5 gpm @1800RPM (24.6L / min.) per section for 13.0gpm total
Drive	Direct gear
Maximum Pressure	2500psi (173 bar)
Reservoir	25 gallons (94 liters)
Filter	10 micron, spin on
Protection	Pressure relief valve
Controls	Electro-hydraulic

Auxiliary Hydraulic System

Type	Gear type, driven by electric motor
Function	Raise/lower hopper, open/close hopper door, raise/lower brooms and pickup head

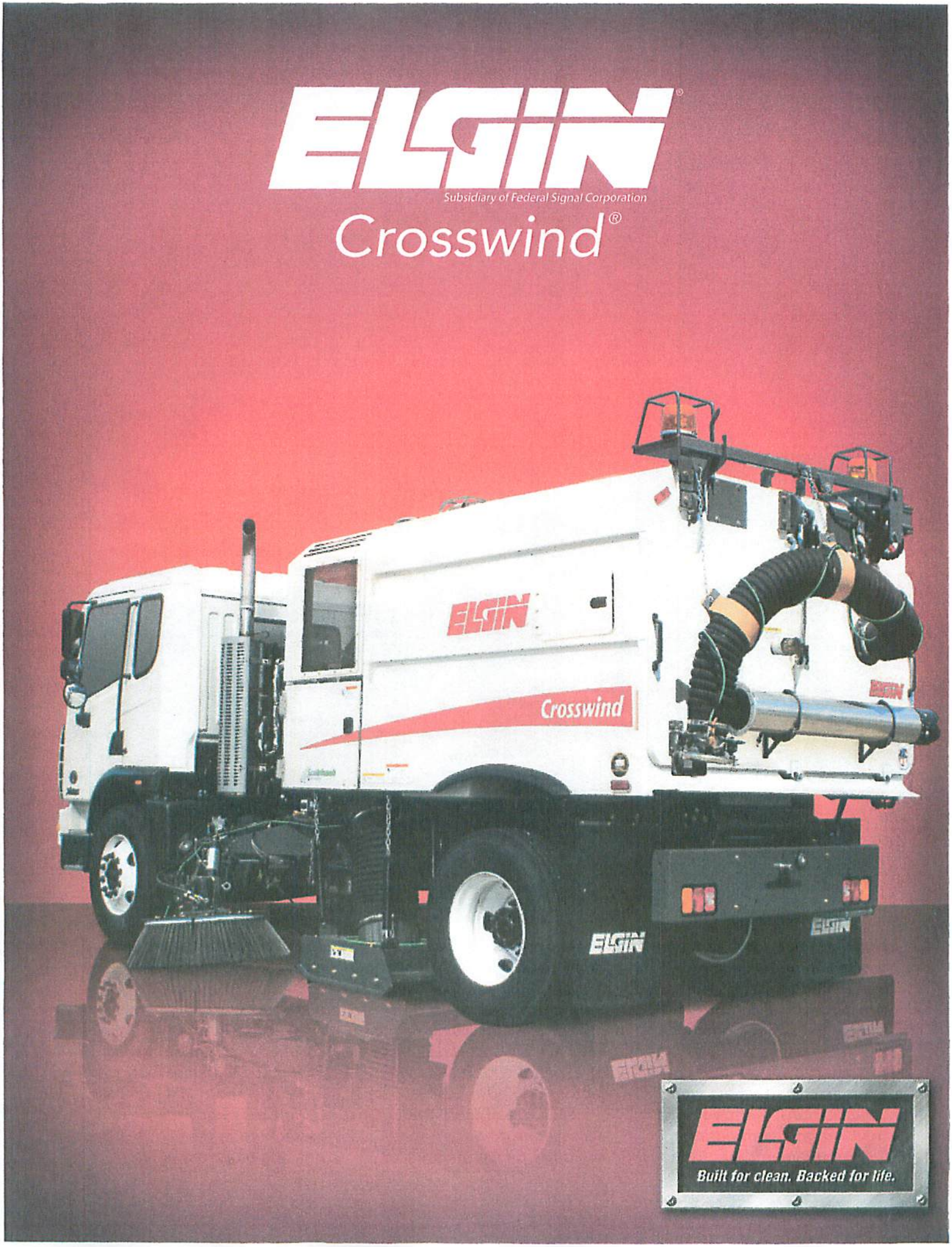
NOTE: Specifications are subject to change without notice

Affiliates

GSA NJPA APWA NAPSA

Schwarze Industries, Inc.
1055 Jordan Road
Huntsville, AL 35811
Central phone: 256-851-1200

SCHWARZE INDUSTRIES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Subsidiary of Federal Signal Corporation
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Built for clean. Backed for life.

CROSSWIND® – RELIABLE, VERSATILE REGENERATIVE AIR SWEEPER

Searching for a reliable, versatile, regenerative air sweeper? Elgin Sweeper Company has the answer. The Elgin Crosswind combines superior performance with a low-maintenance, simplified design. The wide sweeping path is suited for municipalities, contractors, airport applications and general maintenance sweeping. From the high performance sweep system to the user-friendly controls, the Crosswind has been designed and manufactured to the exacting quality standards that have made Elgin a leading sweeper manufacturer. Thanks to a worldwide factory-trained dealer network, you can be sure of complete satisfaction on delivery and far down the road.

APPLICATION SOLUTIONS

Elgin Sweeper doesn't offer just one sweeping technology — we take an application-based approach to solving our customers' sweeping needs. Our team works with each customer to ensure that you get a machine that fits your specifications, with the right truck, engine configuration, fuel requirements, and options.

POWERFUL SUPPORT

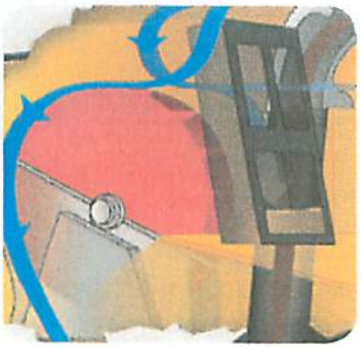
Elgin Sweepers are built for clean, backed for life. Throughout the life of the sweeper, we offer training to your team on proper use and maintenance. We have a world-wide network of experienced dealers with factory trained technicians and a local stock of OEM parts and accessories, to ensure total customer peace of mind.

UNMATCHED QUALITY

The Crosswind was introduced nearly 30 years ago and has been continuously improved in design and production. Elgin sweepers are manufactured in an ISO:9001 certified manufacturing plant. Products are painted prior to assembly and quality tested. Elgin Crosswinds are proudly assembled in the U.S.A. using only the finest materials.

POWERFUL CLEANING SYSTEM

How well a street sweeper picks up material is determined by its overall design. The air conveyance, sweeping, dust suppression, and maintenance systems must work together as an integrated cleaning system to achieve maximum sweeping performance.



HIGHLY EFFICIENT AIR CONVEYANCE SYSTEM

Efficient air flow, including a superior vacuum source and air routing path, is at the heart of the Crosswind.

- High volume air flow at high velocity results in exceptional one-pass pickup while eliminating plugging that can occur in similar type sweepers.
- A nine-vane closed face turbine fan is powered by a turbo-charged diesel auxiliary engine for maximum airflow.
- A centrifugal dust separator minimizes pressure loss and maximizes sweep performance and fan life.

HIGH PRODUCTIVITY SWEEP SYSTEM

The sweep path picks up debris close to the curb and across a wide area.

- A 90 in. (2286 mm) wide pick-up head and dual hydraulically driven, 42 in. (1067 mm) side brooms provide a 12 ft. (3658 mm) wide sweep path.
- Work with brooms fully extended or add the optional full broom retract feature for powerful scrubbing action in front of the pick-up head.
- An optional center broom provides added digging power for compacted debris.
- A 12 ¾ in. (324 mm) diameter suction hose accepts large debris. Quick disconnect allows operator to inspect and clean hose and intake tube without raising hopper.
- The vacuum enhancer/leaf bleeder facilitates sweeping under light and bulky debris conditions.

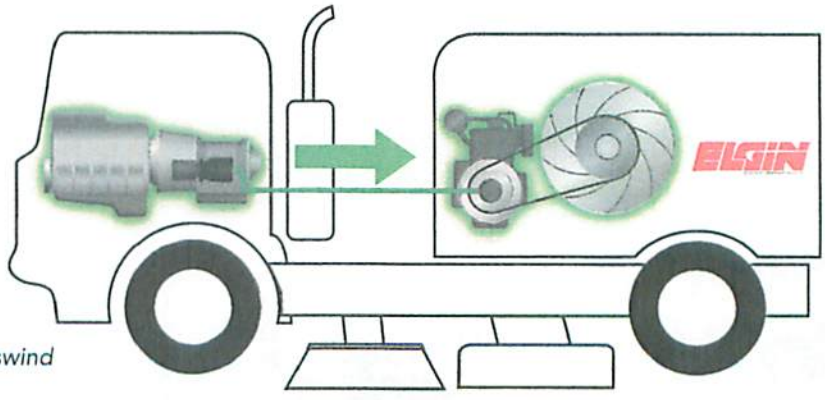
ECOINFUSED® SHAREDPOWER TECHNOLOGY

The Crosswind's patented shared power system is a Tier 4F compliant solution that delivers proven performance, increased fuel efficiency, reduced emissions and lower noise levels at engine-rated speeds.

- The system was developed to share chassis power when using a 74 hp auxiliary engine to ensure maintenance of outstanding sweep performance while providing a simple emission compliant solution that doesn't involve complex, higher maintenance, and expensive exhaust after treatment devices.
- Typically the chassis engine is underutilized while sweeping. EcoInfused SharedPower technology taps into that unused potential and allows power to be hydraulically transferred to and shared with the auxiliary engine.
- Power can also come from regenerative braking. Using a transmission mounted PTO, energy normally lost to vehicle momentum while sweeping on downhill grades or coasting can be reclaimed and immediately applied back into the sweeper system.

EcoInfused Technology SharedPower

To see an animation on how the SharedPower system works, scan the QR code or visit: elginsweeper.com/Products/AirSweepers/Crosswind



THE ELGIN CROSSWIND

COMPACT DESIGN

The sweeper mounts on conventional or cab-over chassis with short wheelbases, enabling a tight turning radius for better reach in cul-de-sac sweeping, and greater maneuverability around tight corners. The standard auto pickup in reverse allows for quick change of sweeping locations.

HIGH-PERFORMANCE SWEEPER ENGINE

The heavy-duty John Deere 4045T diesel engine provides exceptional power and extended service life. Auto shut-down of engine functions comes standard. The latest EPA Tier 4F and CARB emission compliant packages are now standard.

HIGH CAPACITY/EFFICIENT LOADING

The 8 cu. yard (6 m³) capacity hopper provides extended sweeping time. Abrasion-resistant steel inlet deflector directs debris flow to the center of the hopper, ensuring even, efficient material loading for maximum capacity utilization. A traditional tilting hopper 50 degree dump angle and drop down hopper screens make the Crosswind easy to clean.

SUPERIOR DUST SUPPRESSION

Proper use of water is essential for dust suppression, sweeping performance and longevity of sweeper components providing protection from abrasive materials. Two heavy-duty water pumps, one for the pick-up head and suction hose and one for the side brooms are easy to access and capable of run-dry operation. The durable 240 gallon (908 l) polyethylene water tank is removable for service. Ample water is provided by 16 high-quality , agricultural-grade water nozzles (standard) all in easy to access locations. High/low selectable pump speeds allow for application dependent dust suppression.

UNIQUE TRAILING ARM SIDE BROOMS

Trailing arms provide special 4-way action to closely follow road contours, provide inward motion safety for obstacles, and maintain a consistent broom angle even as the broom starts to wear. Digging pressure is adjustable in-cab. Brooms can be extended outward for maximum sweep path. The optional full broom retract feature allows for scrubbing action directly in front of the pick-up head.

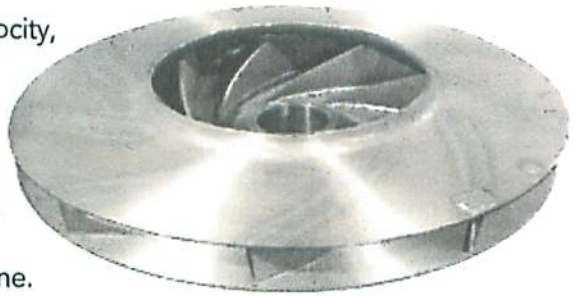
SIMPLE, EASY – ACCESS MAINTENANCE

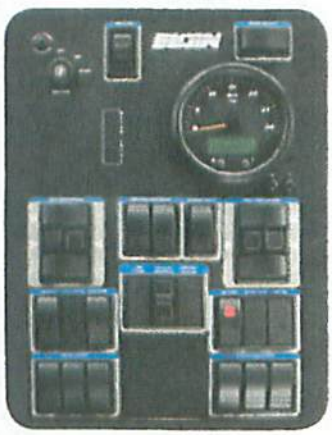
The Crosswind is designed so that systems are accessible and easy to service. Large access doors allow for quick and easy inspection of the auxiliary engine, electrical, water and hydraulic systems without tilting the hopper. The engine oil and pneumatic pressure can be checked, hydraulic filter changes and the fan bearings greased. The hydraulic system with o-ring seal fittings is designed for long life and leak-free operation. Heavy-duty, waterproof electrical connectors and color-coded wires have stamped identification for quick location during trouble shooting.

SUPERIOR REGENERATIVE AIR SWEEPER DESIGN

POWERFUL BLOWER

The Crosswind features a high velocity, 9-vane closed face turbine fan with a rubber-lined housing for extended life. The vanes are constructed from Hardox® brand steel for durability. A secure, multiple V-groove power belt adjusts without repositioning engine.



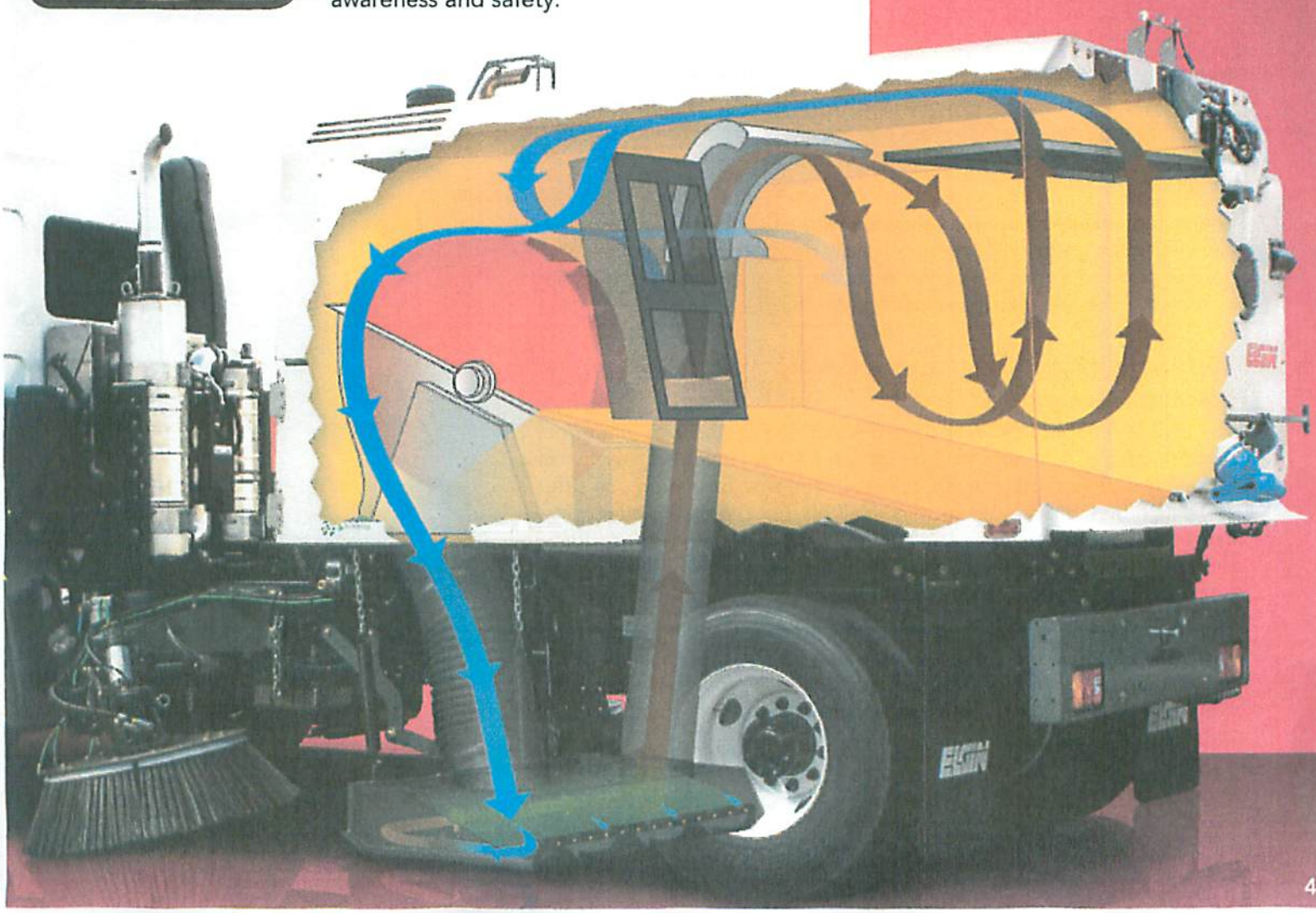


ERGONOMIC CONTROLS

The Crosswind's centrally-mounted console features rocker switches for all sweep functions and complete gauges (auxiliary engine coolant temperature, oil pressure, charging voltage, fuel level, engine hour meter, engine RPM) for quick review of system conditions. Side broom down pressure controls and automotive-style fuses further enhance ease of operation and maintenance. A back up camera and alarm are standard for increased operational awareness and safety.

MEMORY SWEEP®

Elgin's optional Memory Sweep® system allows the operator to resume all previous sweep settings, even broom tilt (if so equipped), with one touch control. This feature enhances productivity and reduces fatigue. Memory Sweep incorporates a multi-screen display that indicates system diagnostics as well as optional features such as broom tilt angle, vacuum enhancer position, and broom hours.



APPLICATION-SPECIFIC CONFIGURATIONS

CROSSWIND CNG POWERED

Environmentally Sound, Clean Burning Alternative Fuel Option

The Crosswind is available powered by compressed natural gas (CNG). The alternative fueled dual engine Crosswind is mounted on a commercial conventional or cab-over chassis powered by a Cummins Westport ISL-G engine. The sweeper is powered by a General Motors 5.7 L V8 engine which allows for excellent fuel economy with an impressive power to weight ratio. The engines share four 3600 psi composite reinforced cylinder fuel tanks with a 60 DGE capacity.

EcoInfused Technology

CROSSWIND FSX™

Top Performance On and Off the Runway

If you need top performance for airport applications, the Crosswind FSX is for you. With a unique pickup head, at 15 mph (24 km/h) the FSX can sweep 950,000 sq. ft. (88,255 sq. m) of runway per hour, and sweeps tarmac, gate areas and access roadways at slower speeds. Results are tested and proven.

Special options are available including: poly side brooms, a high-performance cast aluminum side air blast nozzle, pick-up head casters, and a heavy duty magnet mounted to front bumper.

CROSSWIND GRS

Glycol Recovery Sweeper

The Crosswind GRS is ideal for sweeping debris and removing environmentally damaging glycol and other deicing fluid runoff on runways and gate locations. The GRS does not require any modifications when switching from sweeping debris to glycol removal in snow and ice conditions.

The system features a blower enhanced with a flow blocker system to allow for quick glycol unloading. Specially designed baffles in the hopper help reduce liquid slosh without impeding sweeping or dumping operations. The hopper capacity is 750 gal (2839 L).

CROSSWIND SPECIALTY TRACK SWEEPER

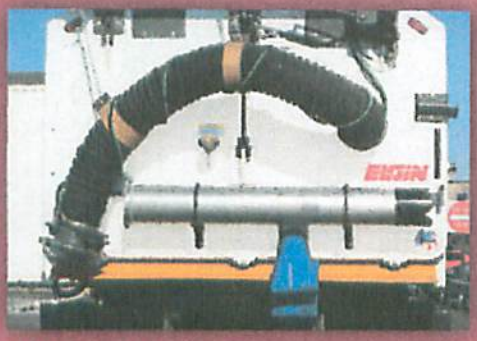
Racetrack Cleaning and Drying

The Crosswind Specialty Track Sweeper was engineered with input from racetack officials. It includes features for racetrack sweeping and maintenance, including a hydraulically-driven, plastic bristle side broom on one side and a high-performance cast aluminum air blast nozzle on the other. The Track Sweeper can clean a wide, 117 in (2972 mm) path with its side broom and pickup head. Its side air blast nozzle can blow debris off the track for distances up to 50 ft (15.24 m).

The Track Sweeper quickly and efficiently removes standing water, rubber, and debris from in and around the pit area for the overall safety of the racers, their crews, and spectators. It features an internal dust-suppression system to reduce airborne dust and prevent water from being applied directly to the racing surface.

NASCAR GREEN OFFICIAL SWEEPER

OPTIONAL ENHANCEMENTS

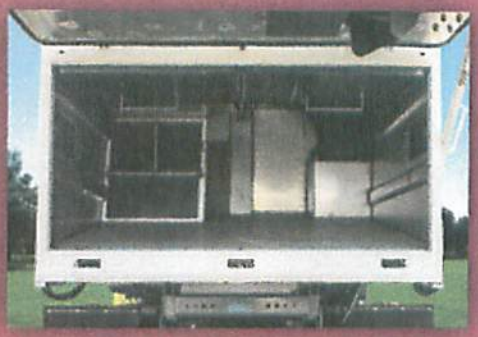


WANDERING HOSE

The versatile, hydraulic-assist hose gets into hard to reach places and is effective in catch basin cleaning. It handles multiple tubes for especially deep catch basin cleaning.

LIFELINER® HOPPER SYSTEM

The LifeLiner® hopper liner and finish system greatly improves the life, durability, and dumping functionality of a sweeper hopper. It is backed by a lifetime warranty*.



STAINLESS STEEL HOPPER SYSTEM

This complete hopper body is constructed entirely of 304 grade stainless steel to provide maximum service life, even in the most corrosive applications.

ADDITIONAL OPTIONS:

- Center broom
- Memory Sweep®
- Side broom tilt
- High pressure washdown/ high pressure pump
- Front spray bar
- Hopper deluge
- Auxiliary hydraulic pump
- PM-10 compliant
- Full side broom retract
- In-cab hopper dump
- Variable speed side brooms
- Full-width magnet
- Rotating beacon
- Auxiliary lighting packages
- In-cab control for vacuum enhancer
- Broom hour meter
- Additional water: 140 gal. (530L), 280 gal (1060L), 360 gal. (1363L)
- R or L inspection door
- Cast aluminum side air blast
- Enhanced water control

SPECIFICATIONS:

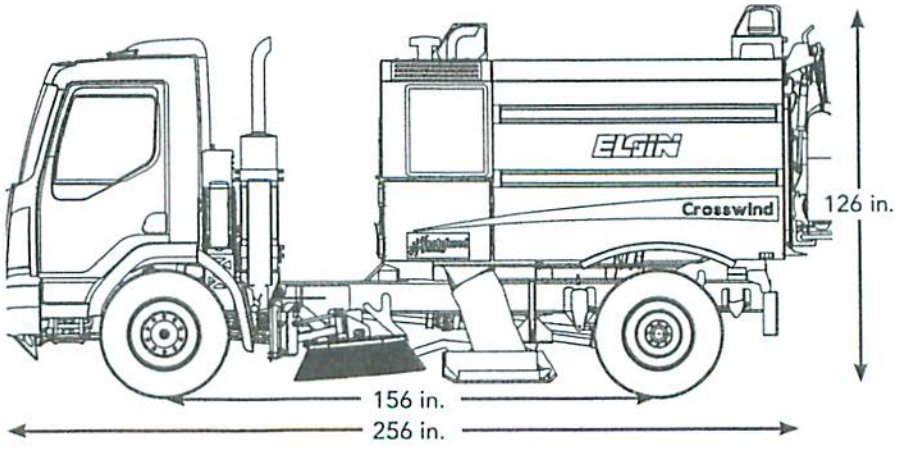
SWEEP SYSTEM
High performance regenerative air
Sweeping path: 12 ft. (3658 mm)
Side brooms: 42 in. (1067 mm)

PICK-UP HEAD
High flow with pressure and vacuum chamber
2700 sq. in. (17,450 sq. cm.)
Pressure hose diameter:
14 in. (356 mm)
Suction hose diameter:
12 3/4 in. (324 mm)

AUXILIARY ENGINE
John Deere 4045T
Tier 4F low emission diesel
*Tier 2 & 3 for export only

CHASSIS
Choice of conventional or cab-over chassis

TRAVEL SPEED
Highway speeds



*Consult factory for warranty details

ELGIN SWEEPER IS YOUR PARTNER...

IN THE PLANNING

Instead of one-size-fits-all solutions, we'll work with you to select the sweeping technology that fits your specific needs.

IN THE STREETS

We're here to help you maintain your Elgin and train your operators to ensure the job is done right.

INTO THE FUTURE

Our dealers don't just sell you an Elgin; they're available to answer your questions and provide service for the life of the machine.

WARRANTY

Elgin Sweeper Company backs the Crosswind sweeper with a one-year limited warranty. The Crosswind is warranted against defects in material or workmanship for a period of 12 months from the date of delivery to the original purchaser. Optional extended warranty packages are available. Consult your Elgin dealer for complete warranty information.

Your Local Elgin Dealer Is:

ELGIN
Built for clean. Backed for life.

elginsweeper.com

1300 W. Bartlett Road • Elgin, IL 60120 U.S.A.
(847) 741-5370 Phone • (847) 742-3035 Fax

VEENSTRA & KIMM, INC.
2800 Fourth Street SW, Suite 9 • Mason City, Iowa 50401-1596
641-421-8008 •641-380-0313(FAX) • 877-241-8008(WATS)

PAY ESTIMATE NO. 4

Date: January 12, 2016

Project Title	West 7th Avenue North Watermain Improvement Project Clear Lake, Iowa			Contractor	Charlson Excavating Co., Inc. 4111 7th Avenue North Clear Lake, IA 50428
Original Contract Amount & Date	$424,000.00	July 20, 2015		Pay Period	November 1 - December 31, 2015

BID ITEMS

Item No.	Specification Section / Description	Unit	Estimated Quantity	Unit Price	Extended Price	Quantity Complete	Value Completed
Division 1 - General							
1.01	Mobilization	LS	1	$15,000.00	$15,000.00	100%	$15,000.00
1.02	Traffic Control	LS	1	$7,500.00	$7,500.00	100%	$7,500.00
1.03	Roadway Pavement Removals	SY	403	$7.00	$2,821.00	420	$2,940.00
1.04	Driveway Pavement Removals	SY	500	$6.25	$3,125.00	500	$3,125.00
1.05	Clearing and Grubbing *assumed quantity	UNIT	161	$50.00	$8,050.00	82	$4,100.00
1.06	Granular Backfill Material *assumed quantity	TONS	250	$15.00	$3,750.00	250.00	$3,750.00
1.07	Stabilizing Material *assumed quantity	TONS	60	$18.00	$1,080.00	60.00	$1,080.00
1.08	Jack and Bore 24" Steel Casing	LF	115	$240.00	$27,600.00	115	$27,600.00
1.09	Railroad Insurance	LS	1	$4,000.00	$4,000.00	100%	$4,000.00
Division 2 – Erosion Control							
2.01	Silt Fence	LF	45	$5.00	$225.00	45	$225.00
2.02	Perimeter and Sediment Control Device, 9"	LF	400	$5.00	$2,000.00	125	$625.00
2.03	Intake Filter	EACH	4	$200.00	$800.00	5	$1,000.00
Division 3 – Sanitary Sewer							
3.01	Connect to Existing Sanitary Sewer Main	EACH	2	$250.00	$500.00	0	$0.00
3.02	Sanitary Sewer Main, Watermain Quality Pipe, 8"	LF	20	$50.00	$1,000.00	0	$0.00
3.03	Sanitary Sewer Service, 4" *assumed quantity	LF	50	$30.00	$1,500.00	26	$780.00
3.04	Sanitary Sewer Service, 6" *assumed quantity	LF	175	$40.00	$7,000.00	63	$2,520.00
Division 4 – Storm Sewer							
4.01	Connect to Existing Storm Sewer *assumed quantity	EACH	2	$500.00	$1,000.00	0	$0.00
4.02	Drain Tile Point Repair, 4-8" Diameter *assumed quantity	EACH	5	$400.00	$2,000.00	3	$1,200.00
4.03	Storm Sewer Pipe, RCP with Gaskets, 15" Dia. *assumed quantity	LF	12	$50.00	$600.00	0	$0.00

Item No.	Specification Section / Description	Unit	Estimated Quantity	Unit Price	Extended Price	Quantity Complete	Value Completed
Division 5 – Water Main							
5.01	Connect to Existing Water Main	EACH	5	$600.00	$3,000.00	6	$3,600.00
5.02	Fire Hydrant Removal and Salvage	EACH	2	$250.00	$500.00	3	$750.00
5.03	Water Main, Open Cut, PVC, 4" Dia.	LF	20	$40.00	$800.00	15	$600.00
5.04	Water Main, Open Cut, PVC, 6" Dia.	LF	27	$40.00	$1,080.00	44	$1,760.00
5.05	Water Main, Open Cut, PVC, 8" Dia.	LF	20	$50.00	$1,000.00	18	$900.00
5.06	Water Main, Open Cut, PVC, 12" Dia.	LF	2455	$48.00	$117,840.00	2455	$117,840.00
5.07	Water Main, Directional Bore, PVC, 12" Dia.	LF	200	$125.00	$25,000.00	200	$25,000.00
5.08	Water Main, Thru Steel Casing, PVC, 12" Dia.	LF	115	$60.00	$6,900.00	115	$6,900.00
5.09	6" Gate Valve	EACH	6	$900.00	$5,400.00	6	$5,400.00
5.10	8" Gate Valve	EACH	3	$1,500.00	$4,500.00	4	$6,000.00
5.11	12" Gate Valve	EACH	5	$2,300.00	$11,500.00	5	$11,500.00
5.12	Water Main, Fittings	LBS	2790	$6.50	$18,135.00	2382	$15,483.00
5.13	Water Services, Open Cut, ¾" Copper	LF	196	$22.00	$4,312.00	196	$4,312.00
5.14	Water Services, Directional Bore, ¾" Copper	LF	430	$29.50	$12,685.00	430	$12,685.00
5.15	¾" Corporation	EACH	33	$350.00	$11,550.00	34	$11,900.00
5.16	¾" Curb Stop and Box	EACH	31	$375.00	$11,625.00	31	$11,625.00
5.17	Water Services, Open Cut, 1" Copper	LF	20	$30.00	$600.00	6	$180.00
5.18	1" Corporation	EACH	2	$400.00	$800.00	1	$400.00
5.19	1" Curb Stop and Box (Assumed Quantity)	EACH	2	$400.00	$800.00	0	$0.00
5.20	Fire Hydrant	EACH	6	$2,700.00	$16,200.00	6	$16,200.00
5.21	Watermain Insulation	LF	115	$18.50	$2,127.50	45	$832.50
5.22	Water Main System & Compaction Testing	LS	1	$3,500.00	$3,500.00	100%	$3,500.00
Division 6 – Pavement							
6.01	Temporary Aggregate Surface Course, 6"	TONS	245	$17.50	$4,287.50	240.21	$4,203.68
6.02	Modified Subbase, 6"	SY	403	$6.00	$2,418.00	403	$2,418.00
6.03	PCC Roadway Pavement with Integral Curb & Gutter, 6" Thick	SY	403	$53.00	$21,359.00	403	$21,359.00
6.04	PCC Curb & Gutter, 2.5' (Assumed Quantity)	LF	50	$30.00	$1,500.00	50	$1,500.00
6.05	PCC Driveway Pavement, 6" Thick	SY	494	$50.00	$24,700.00	494	$24,700.00
Division 7 - Landscape							
7.01	Topsoil Import and Spread *Assumed Quantity	CY	500	$25.00	$12,500.00	292	$7,300.00
7.02	Seed, Fertilizer, and Mulch	SQ	315	$20.00	$6,300.00	144	$2,880.00
7.03	Sod	SQ	17	$90.00	$1,530.00	29	$2,610.00
	TOTAL CONTRACT				**$424,000.00**		**$399,783.18**

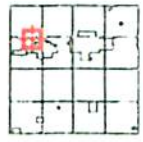
SUMMARY			
		Contract Price	Value Completed
	Original Contract Price	$424,000.00	$399,783.18
Approved Change Orders (list each)			
	TOTAL ALL CHANGE ORDERS	$0.00	$0.00
	Revised Contract Price	$424,000.00	$399,783.18
		Materials Stored	$0.00
		Value of Completed Work and Materials Stored	$399,783.18
		Less Liquidated Damages	$0.00
		Final Contract Amount (Revised Contract Price Less Damages & Assessments)	$399,783.18
		Less Retained Percentage (5%)	$19,989.16
		Net Amount Due This Estimate	$379,794.02
Less Estimate(s) Previously Approved	No.1	$102,379.60	
	No.2	$117,642.62	
	No.3	$139,097.10	
	No.4	$0.00	
	No.5	$0.00	
	No.6	$0.00	
		Less Total Pay Estimates Previously Approved	$359,119.32
Percent Complete	94.3%	Amount Due This Estimate	$20,674.70

The amount $20,674.70 is recommended for approval for payment in accordance with the terms of the contract.

Quantities Complete Submitted By:	Recommended By:	Approved By:
Charlson Excavating Co., Inc.	Veenstra & Kimm, Inc.	City of Clear Lake
Signature	Signature	Signature
Erick Molstad	Jason Petersburg, P.E.	Scott Flory / Nelson Crabb
Vice President	Project Engineer	City Administrator / Mayor
Title	Title	
Date	Date 1/13/16	Date

Beacon™ Cerro Gordo County, IA

Overview



Legend

- Parcel Point
- Parcels
- Corporate Limits
- Political Township

Parcel ID	051137700200	**Alternate ID**	n/a	**Owner Address**	CITY OF CLEAR LAKE
Sec/Twp/Rng	n/a	**Class**	C		15 N 6TH ST
Property Address		**Acreage**	0.23		CLEAR LAKE IA 50428
District	02029				

Brief Tax Description COM SW COR SE SW 11-96-22 TH N 09ï¿½19' E 174.3' TO POB ON N R/W LINE HWY 18 TH N 73ï¿½36' E ON R/W LINE HWY 18 100' TH N 05ï¿½24" E 100' TH S 73ï¿½36" W 100' TH S 05ï¿½ 24" W 100' TO POB 11-96-22

(Note: Not to be used on legal documents)

Date created: 1/12/2016
Last Data Upload: 1/12/2016 12:19:59 AM

Developed by
The Schneider Corporation