

**CITY OF SAN ANTONIO**  
**PURCHASING AND GENERAL SERVICES DEPARTMENT**

FORMAL INVITATION FOR BID ("IFB") NO.: 6100006830

**PURCHASE OF HEAVY EQUIPMENT**

Date Issued: NOVEMBER 9, 2015

**BIDS MUST BE RECEIVED NO LATER THAN:**  
**2:00 PM CENTRAL TIME DECEMBER 4, 2015**

ORIGINAL

Bids may be submitted by any of the following means:

- Electronic submission through the Portal
- Hard copy in person or by mail

Address for hard copy responses:

Physical Address:

City Clerk's Office  
100 Military Plaza  
2<sup>nd</sup> Floor, City Hall  
San Antonio, Texas 78205

Mailing Address:

City Clerk's Office  
P.O. Box 839966  
San Antonio, Texas 78283-3966

For Hard Copy Submissions, Mark Envelope

"PURCHASE OF HEAVY EQUIPMENT"

Bid Due Date: 2:00 p.m. CENTRAL TIME, DECEMBER 4, 2015

Bid No.: 6100006830

Bidder's Name and Address

Bid Bond: None      Performance Bond: None      Payment Bond: None      Other: None

See Supplemental Terms & Conditions for information on these requirements.

Affirmative Procurement Initiative:

DBE / ACDBE Requirements:

See Instructions for Bidders and Attachments sections for more information on these requirements.

Pre-Submittal Conference \* YES

\* If YES, the Pre-Submittal conference will be held on NOVEMBER 17, 2015 at 10.00 AM at FLEET TRAINING ROOM, 329 S. FRIO ST., SAN ANTONIO, TX 78207

Staff Contact Person: LD MCGARITY, PROCUREMENT SPECIALIST II, P.O. Box 839966, San Antonio, TX 78283-3966.

Email: [ld.mcgarity@sanantonio.gov](mailto:ld.mcgarity@sanantonio.gov)

Phone: 210-207-2078

Fax: 210-207-4360

**002 - TABLE OF CONTENTS**

002 - TABLE OF CONTENTS .....2  
003 - INSTRUCTIONS FOR BIDDERS.....3  
004 - SPECIFICATIONS / SCOPE OF SERVICES .....9  
005 - SUPPLEMENTAL TERMS & CONDITIONS .....17  
006 - GENERAL TERMS & CONDITIONS .....19  
007 - SIGNATURE PAGE.....24  
008 - STANDARD DEFINITIONS.....24  
009 - ATTACHMENTS.....26

## 003 - INSTRUCTIONS FOR BIDDERS

### Submission of Bids.

Submission of Hard Copy Bids. Submit one original bid, signed in ink, and two copies of the bid enclosed in a sealed envelope addressed to the City Clerk at the address and by the due date provided on the Cover Page. The name and address of Bidder, the date and hour of the bid opening, bid number and title of the bid solicitation shall be marked on the outside of the envelope(s). All times stated herein are Central Time. Any bid or modification received after the time and date stated on the Cover Page shall be rejected.

Submission of Electronic Bids. Submit one bid electronically by the due date provided on the Cover Page. All times stated herein are Central Time. Any bid or modification received after the time and date stated on the Cover Page shall be rejected. All forms in this solicitation which require a signature must have a signature affixed thereto, either by manually signing the document, prior to scanning it and uploading it with your submission, or affixing it electronically.

Bids sent to City by facsimile or email shall be rejected.

Modified Bids. Bids may be modified provided such modifications are received prior to the time and date set for submission of bids, and submitted in the same manner as original bids. For hard copy bids, provide a cover letter with the bid, indicating it is a modified bid and that the Original bid is being withdrawn. For electronic bids, a modified bid will automatically replace a prior bid submission. See below for information on submitting Alternate Bids.

City shall not be responsible for lost or misdirected bids or modifications.

Bidders must sign the Signature Page on hard copy bids and return the IFB document to City. For electronic bids, Bidder's electronic submission, with accompanying affirmations, constitutes a binding signature for all purposes.

Bidders are cautioned that they are responsible for the security of their log on ID and password, since unauthorized use could result in Bidder's being held liable for the submission.

Certified Vendor Registration Form. If Bidder has not completed City's Certified Vendor Registration (CVR) Form, Bidder is required to do so prior to the due date for submission of bids. The CVR form may be accessed at: <http://www.sanantonio.gov/purchasing/>. Bidders must identify the correct name of the entity that will be providing the goods and/or services under the contract. No nicknames, abbreviations (unless part of the legal title), shortened or short-hand names will be accepted in place of the full, true and correct legal name of the entity.

Alternate Bids. Alternate bids may be allowed at the sole discretion of City.

Hard Copy Alternate Bids. Alternate bids must be submitted in separate sealed envelopes in the same manner as submission of other bids. Alternate bids must be marked consecutively on the envelope as Alternate Bid No. 1, 2, etc. Failure to submit alternate bids in separate envelopes may result in rejection of a bid.

Electronic Alternate Bids Submitted Through the Portal. All alternate bids are recorded with original bids when submitted electronically.

Catalog Pricing. (This section applies to bids using catalog pricing.)

The bid will be based on manufacturer's latest dated price list(s). Said price list(s) must denote the manufacturer, latest effective date and price schedule.

Bidders shall be responsible for providing one copy of the manufacturer's catalog for each manufacturer for which a bid is submitted. Bidder shall provide said catalog at the time of submission of its bid. Manufacturers' catalogs may be submitted in any of the following formats: paper copy or CD ROM for bids submitted on paper, or PDF file for bids submitted electronically.

Bidders may submit price lists other than the manufacturer's price list. Said price list(s) must denote the company name, effective date and price schedule. These price lists are subject to approval of City Purchasing & General Services Department.

Specified items identified herein, if any, are for overall bid evaluation and represent the commonly and most used items. Net prices entered for those specified items must reflect the actual price derived from quoted price list less all discounts offered.

#### Restrictions on Communication.

Bidders are prohibited from communicating with: 1) elected City officials and their staff regarding the IFB or bids from the time the IFB has been released until the contract is posted as a City Council agenda item; and 2) City employees from the time the IFB has been released until the contract is awarded. These restrictions extend to "thank you" letters, phone calls, emails and any contact that results in the direct or indirect discussion of the IFB and/or bid submitted by Bidder. Violation of this provision by Bidder and/or its agent may lead to disqualification of Bidder's bid from consideration.

Exceptions to the restrictions on communication with City employees include:

Bidders may ask verbal questions concerning this IFB at the Pre-Submittal Conference.

Bidders may submit written questions, or objections to specifications, concerning this IFB to the Staff Contact Person listed on the Cover Page on or before 7 calendar days prior to the date bids are due. Questions received after the stated deadline will not be answered. Questions submitted and City's responses will be posted with this solicitation. All questions shall be sent by e-mail or through the portal.

Bidders may provide responses to questions asked of them by the Staff Contact Person after bids are received and opened. The Staff Contact Person may request clarification to assist in evaluating Bidder's response. The information provided is not intended to change the bid response in any fashion. Such additional information must be provided within two business days from City's request.

Bidders and/or their agents are encouraged to contact the Small Business Office of the International and Economic Development Department for assistance or clarification with issues specifically related to the City's Small Business Economic Development Advocacy (SBEDA) Program policy and/or completion of the SBEDA form(s), if any. The point of contact is identified on the Cover Page. Contacting the Small Business Office regarding this IFB after the bid due date is not permitted. If this solicitation contains Affirmative Procurement Initiatives, it will be noted on the Cover Page.

If this solicitation contains DBE/ACDBE requirements, bidders and/or their agents may contact the Aviation Department's DBE/ACDBE Liaison Officer for assistance or clarification with issues specifically related to the DBE/ACDBE policy and/or completion of the required form(s). Point of contact is Ms. Lisa Brice, who may be reached via telephone at (210) 207-3505 or through e-mail at [lisa.brice@sanantonio.gov](mailto:lisa.brice@sanantonio.gov). Bidders and/or their agents may contact Ms. Brice at any time prior to the due date for submission of bids. Contacting her or her office regarding this IFB after the bid due date is not permitted. If this solicitation contains DBE/ACDBE requirements, it will be noted on the Cover Page.

#### Pre-Submittal Conference.

If a Pre-Submittal Conference is scheduled, it will be held at the time and place noted on the Cover Page. Bidders are encouraged to prepare and submit their questions in writing in advance of the Pre-Submittal Conference in order to expedite the proceedings. City's responses to questions received prior to the conference may be distributed at the Pre-Submittal Conference and posted with this solicitation. Attendance at the Pre-Submittal Conference is optional, but highly encouraged.

This meeting place is accessible to disabled persons. Call the Staff Contact Person for information on the location of the wheelchair accessible entrance, or to request an interpreter for the deaf. Interpreters for the deaf must be requested at least 48 hours prior to the meeting. For other assistance, call (210) 207-7245 Voice/TTY.

Any oral response given at the Pre-Submittal Conference that is not confirmed in writing and posted with this solicitation shall not be official or binding on the City.

#### Changes to IFB.

Changes to this IFB made prior to bid opening shall be made directly to the original IFB. Changes are captured by creating a replacement version each time the IFB is changed. It is Bidder's responsibility to check for new versions until the bid due date. City will assume that all bids received are based on the final version of the IFB as it exists on the day bids are due.

No oral statement of any person shall modify or otherwise change or affect the terms, conditions or specifications stated in the IFB.

#### Preparation of Bids.

All information required by the IFB must be furnished or the bid may be deemed non-responsive and rejected. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be construed in the favor of City.

Correct Legal Name. If Bidder is found to have incorrectly or incompletely stated the name of the entity that will provide goods and/or services, the bid may be rejected.

Line Item Bids. Any bid that is considered for award by each unit or line item, must include a price for each unit or line item for which Bidder wishes to be considered. All bids are awarded on the basis of low line item, low total line items, or in any other combination that serves the best interest of City, unless City designates this solicitation as an "all or none" bid in the Supplemental Terms & Conditions.

All or None Bids. Any bid that is considered for award on an "all or none" basis must include a price for all units or line items. In an "All or None" bid, a unit price left blank shall result in the bid being deemed nonresponsive and disqualified from consideration. An "All or None" bid is one in which City will award the entire contract to one bidder only.

Delivery Dates. Proposed delivery dates must be shown in the bid form where required and shall include weekends and holidays, unless specified otherwise in this IFB. Proposed delivery times must be specific. Phrases such as "as required", "as soon as possible" or "prompt" may result in disqualification of the bid. Special delivery instructions, if any, may be found in the Specifications / Scope of Services section of this document, or in the Purchase Order.

Tax Exemption. The City of San Antonio is exempt from payment of federal taxes, and State of Texas limited sales excise and use taxes. Bidders must not include such taxes in bid prices. An exemption certificate will be signed by City where applicable upon request by Bidder after contract award.

#### Description of Supplies.

Any brand names, catalog or manufacturer's reference used in describing an item is merely descriptive, and not restrictive, unless otherwise noted, and is used only to indicate quality and capability desired.

Bids submitted for comparable items must clearly identify the proposed product, model, and type, as applicable, and shall include manufacturer specification sheet(s) for each proposed item with bid response. Product specifications shall be the most current available and be sufficiently detailed and descriptive so as to permit City to determine the item's suitability and compliance with bid specifications. City shall be the sole judge of equality and suitability of comparable items.

Pro-rata adjustments to packaging and pricing may be allowed at the sole discretion of City.

Samples, Demonstrations and Pre-award Testing. If requested by City, Bidder shall provide product samples, demonstrations, and/or testing of items bid to ensure compliance with specifications prior to award of the contract. Samples, demonstrations and/or testing must be provided within 7 calendar days of City's request. Failure to comply with City's request may result in rejection of a bid. All samples (including return thereof), demonstrations, and/or testing shall be at Bidder's expense. Samples will be returned upon written request. Requests for return of samples must be made in writing at the time the samples are provided. Otherwise, samples will become property of City at no cost to City. Samples that are consumed or destroyed during demonstrations or testing will not be returned.

Estimated Quantities for Annual Contracts.

Designation as an "annual" contract is found in the contract's title on the Cover Page of this document. The quantities stated are estimates only and are in no way binding upon City. Estimated quantities are used for the purpose of evaluation. City may increase or decrease quantities as needed. Where a contract is awarded on a unit price basis, payment shall be based on the actual quantities supplied.

Bidders shall thoroughly examine the drawings, specifications, schedule(s), instructions and all other contract documents.

Bidders shall make all investigations necessary to thoroughly inform themselves regarding plant and facilities for delivery of material and equipment, or conditions and sites/locations for providing goods and services as required by this IFB. No plea of ignorance by Bidder will be accepted as a basis for varying the requirements of City or the compensation to Bidder.

Confidential or Proprietary Information. All bids become the property of the City upon receipt and will not be returned. Any information deemed to be confidential by Bidder should be clearly noted; however, City cannot guarantee that it will not be compelled to disclose all or part of any public record under the Texas Public Information Act, since information deemed to be confidential by Bidder may not be considered confidential under Texas law, or pursuant to a Court order. Note that pursuant to state law, bids are opened publicly and read aloud. In addition, bids are tabulated and posted to the City's website, so shall not be considered proprietary or confidential.

Interlocal Participation.

City may engage in cooperative purchasing with other governmental entities or governmental cooperatives ("Entity" or "Entities") to enhance City's purchasing power. At City's sole discretion and option, City may inform other Entities that they may acquire items listed in this IFB. If this contract will be subject to cooperative purchasing, such fact will be indicated in the Supplemental Terms and Conditions portion of this IFB. Such acquisition(s) shall be at the prices stated in the bid, and shall be subject to Bidder's acceptance. Entities desiring to acquire items listed in this IFB shall be listed on a rider attached hereto, if known at the time of issuance of the IFB. City may issue subsequent riders after contract award setting forth additional Entities desiring to utilize this bid.

Bidder must sign and submit the rider, if attached to this IFB, with its bid, indicating whether Bidder wishes to allow other Entities to use its bid. Bidder shall sign and return any subsequently issued riders within ten calendar days of receipt. Bidder's decision on whether to allow other Entities to use the bid shall not be a factor in awarding this IFB.

Costs of Bidding. Bidder shall bear any and all costs that are associated with the preparation of the Bid, attendance at the Pre-Submittal Conference, if any, or during any phase of the selection process.

Rejection of Bids.

City may reject any and all bids, in whole or in part, cancel the IFB and reissue the solicitation. City may reject a bid if:

Bidder misstates or conceals any material fact in the bid; or

The bid does not strictly conform to law or the requirements of the solicitation;

The bid is conditional; or

Any other reason that would lead City to believe that the bid is non-responsive or Bidder is not responsible.

City, in its sole discretion, may also waive any minor informalities or irregularities in any bid, such as failure to submit sufficient bid copies, failure to submit literature or similar attachments, or business affiliation information.

Variances and Exceptions to Bid Terms. In order to comply with State law, bidders must submit bids on the same material terms and conditions. Bids that contain material variances or exceptions to the terms and conditions, including additional terms and conditions, will be rejected.

Changes to Bid Form. Bids must be submitted on the forms furnished. Bids that change the format or content of City's IFB will be rejected.

Withdrawal of Bids. Bids may be withdrawn prior to the time set for the bid opening. Written notice of withdrawal shall be provided to the City Clerk for bids submitted in hard copy. Bids submitted electronically may be withdrawn electronically.

Bid Opening. Bids will be opened publicly and read aloud at 2:30 central time on the day the bids are due. Bid openings are held at Purchasing & General Services, Riverview Tower, 11<sup>th</sup> Floor, 111 Soledad, Suite 1100, San Antonio, Texas 78205.

Evaluation and Award of Contract.

Per Section §252.043 of the Texas Local Government Code, the contract will be awarded to the lowest responsible bidder. The Purchasing Division evaluates bids for responsiveness and the responsibility of the bidder, and makes a recommendation to the City Council. The City Council makes the final determination regarding award.

City reserves the right to make an award on the basis of low line item, low total line items, or in any other combination that serves the best interest of City, unless City designates this solicitation as an "all or none" bid in the Supplemental Terms & Conditions.

A written award of acceptance (manifested by a City Ordinance) and Purchase Order furnished to Bidder results in a binding contract without further action by either party. Vendor must have the Purchase Order before making any delivery.

City reserves the right to utilize historical usage data as a basis for evaluation of bids when future usages are unable to be determined.

Breaking of tie bids shall be in accordance with the Texas Local Government Code §271.901.

City reserves the right to delete items prior to the awarding of the contract, and purchase said items by other means.

Inspection of Facilities/Equipment.

Depending on the nature of the IFB, Bidders' facilities and equipment may be a determining factor in making the bid award. All bidders may be subject to inspection of their facilities and equipment.

Prospective bidders must prove beyond any doubt to City Purchasing Administrator that they are qualified and capable of performing the contract's requirements.

Prompt Payment Discount.

Provided Bidder meets the requirements stated herein, City shall take Bidder's offered prompt payment discount into consideration. The evaluation will not be based on the discount percentage alone, but rather the net price as determined by applying the discount to the bid price, either per line item or total bid amount. However, City reserves the right to reject a discount if the percentage is too low to be of value to City, all things considered. City may also reject a discount if the percentage is so high as to create an overly large disparity between the price City would pay if it is able to take advantage of the discount and the price City would pay if it were unable to pay within the discount period. City may always reject the discount and pay within the 30 day period, at City's sole option.

City will not consider discounts that provide fewer than 10 days to pay in order to receive the discount.

For example, payment terms of 2% 5, Net 30 will NOT be considered in bid evaluations or in the payment of invoices. However, payment terms of 2% 10, Net 30 will result in a two percent reduction in the bid price during bid evaluation, and City will take the 2% discount if the invoice is paid within the 10 day time period.

Tabulations. The Purchasing Division will post preliminary tabulations within 7 days of the advertised bid opening. The information on these tabulations will be posted for informational purposes only, and will be posted as read during the bid opening. This tabulation is not a notice of award of the contract. All bids are subject to review for completeness, accuracy and compliance with the terms set forth in the bid documents.

## Bid Protest Procedures.

Any bidder who is adversely affected in connection with the solicitation, evaluation, or proposed award of a contract may file a protest with the Director and appeal any adverse decision to the City Manager of the City of San Antonio.

Bidder must deliver a written notice of protest to the Director within 7 calendar days of the posting of the intent to award. If Bidder does not file a written notice within this time, Bidder will have waived all rights to formally protest the intent to award. It is Bidder's responsibility to check the City's website posting.

Debriefing. Debriefing of contract award is available upon request and after award of the Contract.

Prohibited Financial Interest. The Charter of the City of San Antonio and its Ethics Code prohibit a City officer or employee, as those terms are defined in the Ethics Code, from having a financial interest in any contract with City or any City agency such as City-owned utilities. An officer or employee has a "prohibited financial interest" in a contract with City or in the sale to City of land materials, supplies or service, if any of the following individual(s) or entities is a party to the contract or sale: the City officer or employee; his parent, child or spouse; a business entity in which he or his parent, child or spouse owns ten (10) percent or more of the voting stock or shares of the business entity, or ten (10) percent or more of the fair market value of the business entity; or a business entity in which any individual or entity above listed is a subcontractor on a City contract, a partner or a parent or subsidiary business entity.

Conflict of Interest. Effective January 1, 2006, Chapter 176 of the Texas Local Government Code requires that persons, or their agents, who seek to contract for the sale or purchase of property, goods, or services with the City, shall file a completed conflict of interest questionnaire with the City Clerk not later than the 7th business day after the date that the person: (1) begins contract discussions or negotiations with the City; or (2) submits to the City an application, response to a request for proposals or bids, correspondence, or another writing related to a potential agreement with the City. The conflict of interest questionnaire form is available from the Texas Ethics Commission at [www.ethics.state.tx.us](http://www.ethics.state.tx.us). Completed conflict of interest questionnaires may be mailed or delivered by hand to the Office of the City Clerk. If mailing a completed conflict of interest questionnaire, mail to: Office of the City Clerk, P.O. Box 839966, San Antonio, TX 782833966. If delivering a completed conflict of interest questionnaire, deliver to: Office of the City Clerk, City Hall, 2nd floor, 100 Military Plaza, San Antonio, TX 78205." Bidder should consult its own legal advisor with questions regarding the statute or form. Do not include this form with your sealed bid. The Purchasing Division will not deliver the form to the City Clerk for you.

State of Texas Conflict of Interest Questionnaire (Form CIQ). Chapter 176 of the Texas Local Government Code requires that persons, or their agents, who seek to contract for the sale or purchase of property, goods, or services with the City, shall file a completed Form CIQ with the City Clerk if those persons meet the requirements under 176.006(a) of the statute.

By law this questionnaire must be filed with the City Clerk not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Texas Local Government Code.

Form CIQ is available from the Texas Ethics Commission by accessing the following web address:

[https://www.ethics.state.tx.us/filinginfo/conflict\\_forms.htm](https://www.ethics.state.tx.us/filinginfo/conflict_forms.htm)

In addition, please complete the **City's Addendum to Form CIQ (Form CIQ-A)** and submit it with Form CIQ to the Office of the City Clerk. The Form CIQ-A can be found at:

<http://www.sanantonio.gov/atty/ethics/pdf/OCC-CIQ-Addendum.pdf>

When completed, the CIQ Form and the CIQ-A Form should be submitted together, either by mail or hand delivery, to the Office of the City Clerk. If mailing, mail to:

Office of the City Clerk, P.O. Box 839966, San Antonio, TX 78283-3966.

If delivering by hand, deliver to:

Office of the City Clerk, City Hall, 2nd floor, 100 Military Plaza, San Antonio, TX 78205.

Do not include these forms with your sealed bid. The Purchasing Division will not deliver the forms to the City Clerk for you.



## 004 - SPECIFICATIONS / SCOPE OF SERVICES

- 4.1 SCOPE: The City of San Antonio is soliciting bids to provide 15 heavy equipment units in accordance with the Building and Equipment Specifications listed herein. This equipment will be utilized by the Transportation & Capital Improvements, Parks & Recreation, and Solid Waste Management Departments.
- 4.2 GENERAL CONDITIONS: The following general conditions will apply to all items within this bid unless specifically excluded within any item.
- 4.2.1 Equipment shall be manufacturer's latest design, standard production model and shall have been manufactured within the last 12 months from the date of delivery to City. All components shall be installed new, unused, and shall be manufacturer's standard equipment unless otherwise specified or replaced herein. Equipment is to be inspected, serviced, and adjusted in accordance with manufacturer's recommended pre-delivery checklist, and ready for operation upon delivery. Manufacturer's Statement of Origin (MSO) showing manufacture within the last 12 calendar months, and completed pre-delivery checklists will be required at delivery. Equipment offered under the below listed specifications will be considered unacceptable if, for any reason, the equipment's, or major component's, long term availability on the U.S. market, or in the local area, is in doubt
- 4.2.2 Equipment must include the maximum standard manufacturer's warranty on all components, with parts and service included. All components, parts and service shall include, as a minimum, a one year unlimited mileage/hours warranty. All warranty times shall start the date the vehicle is placed in service as determined by the City, not on the delivery date. The dealer will be notified by letter of the in-service date of each vehicle by serial number. Bidder shall fully explain the warranty by attaching separate, authenticated correspondence or entering such information in the remarks section of this bid. Warranty, reliability, and replacement captive parts costs and availability shall be a consideration in award of this bid. Warranty parts and service must be available within 50 mile radius of San Antonio City Hall from and by a factory-authorized dealer (NO EXCEPTIONS). In the event that a unit purchased from a vendor requires transportation outside of Bexar County for a repair covered under warranty, that vendor shall be responsible for paying for all cost associated with the transportation to and from the warranty repair facility. If the vendor chooses to travel to inspect the unit to determine if the repair needed is covered under warranty, all expenses shall be paid for by the vendor. All warranty repairs must be completed within three (3) business days from the date equipment is delivered to the vendor unless otherwise approved by the appropriate City of San Antonio BESD Fleet Operations Manager or designate. Bidders must certify that all repairs needed after the warranty period will be available within 50 mile radius of San Antonio City Hall.
- 4.2.3 Delivery - All deliveries are to be made inside the City limits of San Antonio. Vendor must deliver equipment to the following address:
- Vendor must deliver equipment to:
- City of San Antonio,  
Northeast Service Center,  
10303 Tool Yard, Bldg #2,  
San Antonio, TX 78233  
Attn: Acquisitions
- Delivery to a non-specified location will result in non-acceptance of the equipment by the City. All deliveries must be pre-arranged with a minimum 24-hour notification, NO EXCEPTIONS. Vehicles will be accepted 8:00 A.M. to 3:00 P.M. central time. Vehicles with more than 500 miles accumulated on the odometer will not be accepted. All vehicles are required to have a full tank(s) when delivered to City specified location.
- 4.2.4 Equipment Manuals – Successful bidder shall furnish one` set of operator manuals covering all major components of the vehicle for each unit delivered. Successful bidder shall also provide two (2) complete sets of repair and parts manuals or CDs for each item bid, to include all major components, or prepaid 8-year subscription to manufacturer's maintenance/parts web site at no cost to the City. If, applicable, successful bidder shall provide a minimum (2) diagnostic software licenses and or software updates if diagnostic software is already currently being used by the City for a minimum (5) years after date of delivery. Online real time access is also accepted.
- 4.2.5 Training – The City may require operational and maintenance training for equipment. If so, training shall be provided by a qualified instructor and conducted at a designated City facility. The City will not pay any cost incurred by the

successful bidder in providing training. Training shall be provided no later than 30 days after the City takes delivery and accepts the new equipment at the specified City facility. Unless otherwise specified, training shall consist of a minimum (1) eight hour day. Payment for new equipment will not be made to successful bidder until training is completed. Operator training shall be coordinated with Fleet Operations staff. For equipment requiring more complex operation the City may require job site operational training that could last multiple days to assure proper machine operation.

4.2.6 Demonstrations – The City may request, from selected vendors, a demonstration of proposed equipment. The City is under no obligation to demo all products proposed by vendors. If a demonstration is required, the City’s Fleet Operations Manager will contact the vendor to schedule the product demonstration. This request will be considered an integral part of the bid process. Failure to comply may result in the bid being deemed nonresponsive, and therefore, not considered for award. Upon request, the vendor shall have a minimum of five (5) working days to provide and deliver the equipment to a location specified by City for the demonstration. The vendor shall make the equipment available for a minimum of five (5) working days at City’s location, but not to exceed ten (10) working days.

4.2.7 Evaluation – In the event that a demonstration is required, the equipment will be evaluated to determine if the unit meets the minimum bid specifications at the City’s discretion.

4.2.8 All prices will be quoted F.O.B., designated City of San Antonio facility. All bids will be submitted in triplicate and will include complete manufacturer’s specifications for each model being bid.

4.2.9 Any equipment furnished must meet all Federal and State safety requirements and must be certified as minimum Tier IV Interim emissions compliant. Tier IV shall be offered. The engine offered by bidder must meet the Environmental Protection Agency (EPA) emission standards in effect at the time the bid is submitted. Bidder shall submit a copy of the applicable EPA certificate with its bid.

4.2.10 Units shall be equipped with OEM, or equal, warning and shut down systems for low oil pressure and or high coolant temperature at a minimum. This requirement **applies to all** bid line items.

4.2.11 Unless otherwise specified all equipment is to be standard OEM colors.

4.2.12 VEHICLE INSPECTION: The vendor shall have each vehicle properly inspected in compliance with Texas motor vehicle laws. Texas Inspection Certificate shall accompany the vehicle when delivered to the receiving entity of the City of San Antonio.

4.2.13 BRAND NAMES: Manufacturer names, trade names, brand names, and product numbers used herein are for the purpose of describing and establishing tested, compatible, approved and acceptable products that are of the type and quality required by the City. The use of pre-approved brand names are not intended to limit competition; therefore the phrase "or equal" is added. For purposes of this contract, the proposed "or equal" products shall require close adherence to the established standards of performance and quality inherently derived and reasonably expected from the brand named products specified herein. The City shall be the sole judge of equality and suitability.

4.3	ITEM	QUANTITY	DESCRIPTION
	1	3	<b>Wheeled Articulated Loader w/ Minimum 4 Cubic Yard Bucket</b>

4.3.1 ENGINE: Diesel, minimum SAE 191 net HP. Water cooled and protected to -20° F, dry type two-stage air cleaner with service indicator, full flow oil filter and two-stage fuel filter with water separator. Shall include engine precleaner with extension. Programmable hydraulic-driven engine cooling fan with reverse rotation. Engine protection system for low oil pressure, high engine or hydraulic temperature.

4.3.2 TRANSMISSION: Automatic torque converter & minimum four speed forward transmission – Hydrostatic Drive acceptable. Unit to be capable of minimum 15 mph forward and minimum 12 mph in reverse.

4.3.3 AXLES, DIFFERENTIALS, & FINAL DRIVES: Heavy duty semi floating axles, except for units with outboard planetary systems. Torque proportioning differential, positive traction or selective hydraulic differential lock

- 4.3.4 BRAKES: Hydraulically actuated, wet disc brakes actuate on all four wheels.
- 4.3.5 STEERING: Center pivot articulated design with power steering and double acting steering cylinders.
- 4.3.6 TIRES: 23.5 R 25 -16PR, 12 ply. Rims shall be equipped with valve stem protectors. Unit shall have rear full fenders and power train guard.
- 4.3.7 WEIGHT: Minimum 38,000 lbs.
- 4.3.8 LIGHTING: Minimum of four (4) headlight/working lights and two (2) rear working/flood lights, tail and stop lights, turn signal with 4-way flash.
- 4.3.9 ATTACHMENTS: General purpose bucket minimum SAE rated capacity 4.00 cubic yard heaped. Minimum dump clearance at 45 degree angle will be 110" inches. Bucket will be equipped with a heavy duty bolt-on type cutting edge. One (1) 72" fork attachment to be included.
- 4.3.10 SAFETY: Back-up alarm and lamp with horn. Rear view mirror, SMV emblem attached to left rear.
- 4.3.11 CAB: ROPS/FOPS: cab with tinted safety glass windows, air conditioning, heater with defroster, AM/FM radio, windshield washer, front and rear wipers, reclining suspension seat with seat belt and sun visor. One (1) 12- volt power port. Steering wheel shall be tilt.
- 4.3.12 INSTRUMENTS: Standard instrument gauges to include; speedometer, tachometer, hour meter, engine water temperature, fuel level, hydraulic temperature. Standard instrument warning indicators and lights to include; engine oil pressure, engine oil level, air cleaner restriction, parking brake, water level, battery charge, directional indicator, engine water temperature, turn signals, high beam, fuel level, hydraulic temperature.
- 4.3.13 VANDALISM PROTECTION: Full OEM vandalism protection package to include locking engine panels, light covers/guard for brush and debris, fluid cap locking devices, battery box cover with locking device, tool box with locking device. All locks shall be keyed alike. A heavy duty padlock is acceptable. Master on/off switch.

4.4	ITEM	QUANTITY	DESCRIPTION
	2	1	Tracked Milling Machine

- 4.4.1 ENGINE: Diesel, water cooled, minimum 550 SAE net flywheel HP direct injection, dry type air cleaner with service indicator, full-flow replaceable oil filter, primary and secondary fuel filters required. Coolant protected to 20° F. Raised Turbo II type pre-cleaner or equal is required. Engine to be protected by OEM shutdown system or proven equal for low oil pressure and high engine temperature.
- 4.4.2 ELECTRICAL SYSTEM: 12 or 24 volt starting/charging system with manufacturers suggested ampere per hour recharging capability. All wiring shall be fused in a convenient centralized panel. No wiring shall be exposed or unprotected; wiring shall be in conduit or concealed.
- 4.4.3 TRACK SYSTEM: Four, hydrostatic drive track system. Manufacturer's standard rubber track pads on all track assemblies. Minimum of four (4) rollers per track.
- 4.4.4 ROTARY CUTTER ASSEMBLY: Minimum 78" inch cut width with quick change cutting teeth. Assembly to have a minimum 162 cutting teeth. Milling depth, 0 to 12 inches. Machine shall be capable of cutting next to a twelve (12) inch high curb. Averaging ski type assemblies, two (2) each, for left and right sides. Moldboard with window opening and side plates. Pressurized water-spray system to have a minimum capacity of 800 gallons water tank size large enough to accommodate an ten (10) hour work day under normal working conditions, spray bars to be located on top, front and rear for full drum coverage, minimum of 10 nozzles per bar. Automatic grade and slope control with manual override and minimum two (2) grade sensor's located on each side of the machine.
- 4.4.5 TWO STAGE COVERED CONVEYOR ASSEMBLY: Front or rear discharge, adjustable discharge height up to fifteen (15) feet, swing minimum of 45 degrees left and right with remote control to allow ground personnel to adjust discharge conveyor position, conveyor speed control required. Endless cleated belt, approximately 30" inches wide,



4.5.15 SAFETY: Backup alarm, grab handles/steps, pulls loops on undercarriage designed to accommodate chains with 5/8 hooks.

4.6	ITEM	QUANTITY	DESCRIPTION
	4	3	6 Ton Double Drum Vibratory Roller

4.6.1 ENGINE: Diesel, minimum SAE 72 net HP rated at no more than 2500 rpm. Full-flow, two-stage fuel filter with water separator, full flow oil-filtering system with disposable spin-on element, double element dry type air cleaner with turbo type pre-cleaner and service indicator. Fuel capacity to be a of minimum 29 U.S. gallons.

4.6.2 PROPULSION: Dual drum hydrostatic drive with dual or single lever forward, reverse and travel speed control. Infinitely variable travel speed with three-speed drive and minimum top speed of 6.2 mph.

4.6.3 BRAKES: Parking brake shall be spring applied, hydraulic release disc type brake. Parking brake shall apply either with manual switch or upon engine shutdown.

4.6.4 DRUMS: Drum rolling width minimum 56-inches and 43-inches diameter. Drums to be steel, with minimum 0.65inch shell thickness and a curb clearance of minimum 13-inches. Drums to be equipped with spring loaded, flexible, double acting, replaceable double blade scrapers. Operating weight, minimum 13,300 lbs.

4.6.5 VIBRATING SYSTEM: Dual drum vibration system with independent on/off control for each drum. Switch for automatic vibration shutoff as travel control passes through the neutral position. Dual frequency shall be a minimum 2520 vpm in low amplitude and 1980 vpm in high amplitude. Maximum centrifugal force shall be a minimum of 14,500 lbs per drum.

4.6.6 SPRAY SYSTEM: Fan-jet type spray nozzles with filters, minimum 245 196 gallon corrosion resistant water tank with strainer and lockable fill cap. Must be pressurized and cover full width of each drum. Water flow to be adjustable from operator's position, and have variable intermittent spray control switch. Sprinkler to have variable flow adjustment for each drum.

4.6.7 INSTRUMENTS: Hour meter, engine oil, coolant temperature, hydraulic system restriction, alternator charge, neutral start position, fuel gauges and "brake on" indicator.

4.6.8 ELECTRICAL SYSTEM: Minimum 12 or 24 volts, 55 amp alternator and minimum 120 amp hour battery.

4.6.9 CAB: Cab shall have integral ROPS/FOPS, noise and vibration isolation, tinted glass, opening side glass 3-speed fan, air filtration system, front and rear wiper/washer, OEM air conditioner/heater/defogger, seat belt and rear view mirrors.

4.6.10 ACCESSORIES: Horn, SMV symbol attached to left rear of vehicle, 20 lb. fire extinguisher, back-up alarm, two (2) front and two (2) rear adjustable flood lights. Unit to have rotating beacon/strobe light installed. Operator's seat shall be bucket type with adjustments for fore/aft and suspension. Seat shall slide laterally to provide left, right and center seating positions.

4.6.11 FRAME: Articulated with 25-degree articulation in each direction. Joint shall be permanently sealed and require no greasing. Center joint shall provide oscillation of 6 degrees in each direction.

4.6.12 VANDALISM PROTECTION: Full OEM vandalism protection package to include locking engine panels, lighting covers, fluid cap locking devices, battery box cover with locking device, tool box with locking device, instrument cover with locking device(s). All locks shall be keyed alike.

4.6.3 MISCELLANEOUS ITEMS:

4.6.3.1 Electric horn

- 4.6.3.2 ROPS operator area
- 4.6.3.3 Key type ignition
- 4.6.3.4 Deleted:

4.7	ITEM	QUANTITY	DESCRIPTION
	5	1	<b>Pneumatic, Articulated Tired Roller</b>

4.7.1 ENGINE: Diesel, minimum 4 cylinder, minimum 74 horsepower, water cooled, 12 or 24 volt cranking/charging system. Two-stage air cleaner system with service indicator and vacuator valve. Full flow oil filter with spin on replacement. Engine neutral safety interlock. Engine & hydraulic cooling to allow work in high ambient temps. Fill points to allow ease of filling and daily fluid checks. Unit offered shall meet current EPA minimum Tier IV Interim exhaust emission standard.

4.7.2 TRANSMISSION: Hydrostatic drive with wheel motors mounted directly to the drive wheels, a single electric displacement control lever to control direction, speed and braking. NO CHAIN DRIVES. Ground speed to be a minimum 7.5 mph.

4.7.3 BRAKES: Service braking to be dynamic through the hydrostatic transmission. Parking brake to be spring applied, hydraulically released or foot applied brake. Parking brake interlock to be wired into the hydrostatic control so no propel torque is applied when the brake switch is on.

4.7.4 WHEELS: Rollers to have minimum seven (7) wheels, minimum three (3) on the front and minimum four (4) on the rear. The four (4) on the rear are to be drive wheels. All wheels to oscillate, individually or in pairs. Rollers to be equipped with 14/70-20 12 ply or proven equal smooth radial compactor type tires.

4.7.5 CONTROLS: Full hydraulic powered articulated frame steering through orbital control. The operator's compartment will have a single or dual operating station swivel seat with minimum 180 degree rotation or nonrotating sliding seat to allow driver to have more visibility.

4.7.6 INSTRUMENTATION: To be equipped with an instrument panel with the following gauges or warning lights; fuel level, hours of operation, engine speed, oil pressure, water temperature and volt meter. A dual or single hydraulic sight level and temperature gauge. Vandal cover for the instrument panel and all accessible fluid tanks.

4.7.7 SPRINKLER SYSTEM: To be equipped with a minimum 100 gallon water tank with spray nozzles and mats for each individual tire. Tank will be equipped with a 70 mesh filler screen and 100 mesh in line filter. The water system to turn on automatically when the roller is placed in motion and turn off when stopped.

4.7.8 BALLAST COMPARTMENTS: Unit to have minimum of two (2) ballast compartments or a removable steel weight system. Weights or ballast compartment must be sufficient to provide a minimum of 24,000 lb. roller operating weight.

4.7.9 ACCESSORIES: Unit to be equipped with ROPS and FOPS with a sun shade. Seat belt, back up alarm, LED where available strobe light, tail lights (2), work lights (2 front, 2 rear), directional lights (2 front, 2 rear).

4.7.10 SAFETY: Designed to accommodate chains for safe loading and hauling.

4.8	ITEM	QUANTITY	DESCRIPTION
	6	2	<b>Loader Backhoe with 12" Bucket and Telescopic Boom</b>

4.8.1 ENGINE: Minimum SAE 85 net HP, maximum torque (lbs - foot) rated at manufacturers suggested RPM. Heavyduty turbo, direct injection diesel with fuel tank capacity at minimum 31 gallons, full flow spin-on oil filter, dry-type

replaceable air filter. Twelve (12) volt starting system at manufacturer's suggested ampere per hour recharging capability.

4.8.2 DRIVE TRAIN: Minimum of four (4) forward and two (2) reverse gears with speeds ranging from 3.0 mph to 25 mph. Steering will be power hydrostatic or equal. Four-wheel drive (4WD) and ride control required.

4.8.3 HYRDAULIC SYSTEM: Variable flow pump with pump output minimum 29 gallons per minute (gpm). Minimum micron rating for hydraulic filters rated at seven (7) microns or greater.

4.8.4 TIRES: Front tires will be 12 x 16.5, 8 ply. Rear tires to be minimum 19.5 x 24, 8 ply.

4.8.5 INSTRUMENT PANEL: Gauges and warning lights to measure engine water temperature, tachometer/hour meter, fuel level gauge, converter oil temperature, voltmeter, air cleaner restriction, alternator, A/C low/high pressure, cold start, engine oil pressure, hydraulic oil filter bypass, parking brake, and low fuel. Audible alarms for coolant temperature, engine oil pressure, parking brake engagement, shuttle engagement, and backup alarm.

4.8.6 BACKHOE: Twelve (12) inch bucket with heaped capacity at 2.8 cu ft. or greater. Maximum SAE dig depth at 14' or greater with reach from center pivot at 18' or greater. Maximum operating height at 18' or greater with stabilizers operating at 9' or greater. Unit to be equipped with a telescoping boom.

4.8.7 LOADER: Bucket breakout force 8,900 lbs ft or greater with heaped capacity at 1.25 cu yds or greater. Lift capacity to full height at 6,150 lbs or greater, dump height at 8' 4" or greater, and maximum operating height at 11' or greater. Minimum 700 lbs of counter weight to be equipped at front

4.8.8 OPERATORS AREA: Cab meets SAE ROPS/FOPS requirements, dual entry, serrated steps, and easy-to-reach handrails. Unit shall have pilot/excavator controls panel selectable from operator station. Seat is made from heavy-duty cloth and heavy-duty suspension with armrests and 2 inch retractable seat belt. Steering column is tiltable. Cab also contains sun visor, hand and foot throttle, padded floor mat, interior rearview mirror, and domelight. Four (4) front and rear work lights, horn, warning buzzer, hazard flashers, and turn signals. One (1) 12-volt mobile power socket, cup holders, coat hook, and storage trays. Heater/defroster system, cab pressurization, front/rear windshield wiper/washer, and four (4) tinted side windows that open fully or partially. Air conditioned. Slow moving vehicle emblem attached to left rear.

4.9	ITEM	QUANTITY	DESCRIPTION
	7	1	<b>Loader Backhoe with 24" Bucket and 1K Hydraulic Breaker</b>

4.9.1 ENGINE: Minimum SAE 85 net HP, maximum torque (lbs - foot) rated at manufacturers suggested RPM. Heavyduty turbo, direct injection diesel with fuel tank capacity at minimum 31 gallons, full flow spin-on oil filter, dry-type replaceable air filter. Twelve (12) volt starting system at manufacturer's suggested ampere per hour recharging capability.

4.9.2 DRIVE TRAIN: Minimum of four (4) forward and two (2) reverse gears with speeds ranging from 3.0 mph to 25 mph. Steering will be power hydrostatic or equal. Four-wheel drive (4WD) and ride control required.

4.9.3 HYRDAULIC SYSTEM: Variable flow pump with pump output minimum 37 gallons per minute (gpm). Minimum micron rating for hydraulic filters rated at seven (7) microns or greater.

4.9.4 TIRES: Front tires will be 12 x 16.5, 8 ply. Rear tires to be minimum 19.5 x 24, 8 ply.

4.9.5 INSTRUMENT PANEL: Gauges and warning lights to measure engine water temperature, tachometer/hour meter, fuel level gauge, converter oil temperature, voltmeter, air cleaner restriction, alternator, A/C low/high pressure, cold start, engine oil pressure, hydraulic oil filter bypass, parking brake, and low fuel. Audible alarms for coolant temperature, engine oil pressure, parking brake engagement, shuttle engagement and backup alarm.

4.9.6 BACKHOE: 24" Bucket with quick change disconnect hoses for 1,000 lbs hydraulic breaker. Dig depth should be a minimum of 18'.5". Minimum 700 lbs of counter weight to be equipped at front of unit.

4.9.7 **LOADER:** Bucket with heaped capacity at .75 cubic yard or greater.

4.9.8 **OPERATOR'S AREA:** Enclosed pressurized cab with air conditioning and heater/defroster system. Unit shall have pilot/excavator controls panel selectable from operator station. Cab meets SAE ROPS/FOPS requirements, dual entry. Seat is heavy-duty suspension with armrests and 2 inch retractable seat belt. Steering column is tilt able. Cab also contains sun visor, hand and foot throttle, interior rearview mirror, and dome light. Four (4) front and rear work lights, horn, warning buzzer, hazard flashers, and turn signals. One (1) 12-volt mobile power socket. Front/rear windshield wiper/washer, and four (4) OEM tinted side windows that open fully or partially. Slow moving vehicle emblem attached to left rear.

4.10	ITEM	QUANTITY	DESCRIPTION
	8	1	Dozer Crawler

4.10.1 **ENGINE:** EPA compliant diesel, 4 cycle, minimum 4 cylinder, minimum 104 SAE net flywheel horsepower. Full flow, two stage fuel filtering with water separator, double element dry type air cleaner with turbo type pre-cleaner and service indicator

4.10.2 **TRANSMISSION:** Hydrostatic or Countershaft or planetary type transmission, single stage and torque converter driven. Minimum of three (3) speeds forward and three (3) reverse or infinitely variable. Must have replaceable full flow filters and a suction line screen.

4.10.3 **STEERING:** Foot or hand operated (combination of hand or foot acceptable) with multiple disc or contracting band type brake system controlling each track separately.

4.10.4 **FINAL DRIVE:** Double reduction with pinion/ bull gear arrangement or planetary. A sprocket inner bearing seal trash guard will be provided on each side. High drive acceptable.

4.10.5 **UNDERCARRIAGE:** Box section track frame construction with a minimum six (6) lower rollers and one (1) idler (carrier) rollers on each side, tracks and rollers all sealed and permanently lubricated. Sprocket and idler will be protected by (inner and outer) rock guards. Track frame covers and sprocket guards will be provided. Hydraulic track adjusters. Full length, heavy duty, bottom/drive train protection with pull/tow hook. Track guides required front and rear. Track shoes minimum 26 inches wide and full heavy duty grousers. Track gauge, minimum 70 inches. Maximum ground pressure 5.0 PSI. Track rails to be abrasion resistant, sealed and lubricated (SALT).

4.10.6 **POWER TILT / ANGLE BLADE:** Straight blade, width 120 to 135 inches, height minimum 42 inches 3.1 cu yard with an additional brush guard on top. Hydraulically actuated and equipped with hydraulic tilt and angle controls.

4.10.7 **DRAWBAR:** Ridged, heaviest duty available, with pin.

4.10.8 **COOLING SYSTEM:** Heavy duty grill and brush screen, anti-sand blast or armored core radiator. Reversible fan. System to be protected to -20o F.

4.10.9 **OPERATING WEIGHT:** Minimum basic operating weight 25,000 lbs.

4.10.10 **CAB:** All weather pressurized OSHA Standard ROPS/FOPS cab with air conditioning and filters (roof mounted air conditioning is not acceptable). Adjustable high back, fabric suspension seat, windows and windshield to be tinted safety glass, neutral start mechanism, seat belts. Two (2) front and two (2) rear floodlights, front and rear LED strobe lights mounted in protected areas, AM /FM radio, dash lighting, parking brake, hot water heater with defroster.

4.10.11 **ELECTRICAL & INSTRUMENTATION:** 24-volts, minimum 100 amp alternator, engine oil temperature and pressure gauge, hydraulic oil temperature gauge, hour meter, tachometer, ammeter, torque converter temperature and pressure gauge.

4.10.12 **ACCESSORIES:** Full vandalism protection to include keyed alike locks for doors, engine side panels, filler caps and covers. Three sets of keys will be provided with unit.



## 005 - SUPPLEMENTAL TERMS & CONDITIONS

### Original Contract Term.

This contract shall begin upon the effective date of the ordinance awarding the contract, or date specified in the award letter if this contract does not exceed \$50,000. This contract shall terminate upon completion of all work described herein or delivery of all goods ordered, as applicable.

### Liquidated Damages for Delay:

The parties agree that the actual damages that might be sustained by the City by reason of the breach by Vendor of its covenant to make delivery within the time specified herein, is uncertain and would be difficult of ascertainment, and that the sum of \$100.00 per day per unit for each day that delivery is late would be a reasonable compensation for such breach. Vendor hereby promises to pay, and City hereby agrees to accept, such sum as liquidated damages, and not as a penalty, in the event of such breach. Furthermore, the parties agree that City may withhold said liquidated damages from any payments due to Vendor hereunder. If Vendor's delay exceeds 30 days, City may, at its option, elect to terminate this contract in whole or in part. In such event, City may pursue actual damages, rather than applying this liquidated damages provision.

### Change Orders.

Notwithstanding anything stated to the contrary in Section 006 – General Terms & Conditions, in order to comply with Texas law governing purchases made by municipalities, the following rules shall govern all change orders made under this contract.

Any change orders that become necessary during the term of this contract as a result of changes in plans, specifications, quantity of work to be performed, materials, equipment or supplies to be furnished must be in writing and conform to the requirements of City Ordinance 2011-12-08-1014, as hereafter amended.

Any other change will require approval of the City Council, City of San Antonio.

Changes that do not involve an increase in contract price may be made by the Director.

No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated herein.

### Insurance.

Prior to the commencement of any work under this Agreement, Vendor shall furnish copies of all required endorsements and completed Certificate(s) of Insurance to the City's Finance Department-Purchasing Division, which shall be clearly labeled "Purchase of Heavy Equipment" in the Description of Operations block of the Certificate. The Certificate(s) shall be completed by an agent and signed by a person authorized by that insurer to bind coverage on its behalf. City will not accept a Memorandum of Insurance or Binder as proof of insurance. The certificate(s) must have the agent's signature and phone number, and be mailed, with copies of all applicable endorsements, directly from the insurer's authorized representative to City. City shall have no duty to pay or perform under this Agreement until such certificate and endorsements have been received and approved by City's Finance Department-Purchasing Division. No officer or employee, other than City's Risk Manager, shall have authority to waive this requirement.

City reserves the right to review the insurance requirements of this Article during the effective period of this Agreement and any extension or renewal hereof and to modify insurance coverages and their limits when deemed necessary and prudent by City's Risk Manager based upon changes in statutory law, court decisions, or circumstances surrounding this Agreement. In no instance will City allow modification whereby City may incur increased risk.

A Vendor's financial integrity is of interest to City; therefore, subject to Vendor's right to maintain reasonable deductibles in such amounts as are approved by City, Vendor shall obtain and maintain in full force and effect for the duration of this Agreement, and any extension here of, at Vendor's sole expense, insurance coverage written on an occurrence basis, unless otherwise indicated, by companies authorized to do business in the State of Texas and with an A.M Best's rating of no less than A- (VII), in the following types and for an amount not less than the amount listed below:

TYPE	AMOUNTS
1. Workers' Compensation 2. Employers' Liability	Statutory \$500,000/\$500,000/\$500,000
3. Broad form Commercial General Liability Insurance to include coverage for the following: a. Premises operations b. Independent Contractors c. Products/completed operations d. Personal Injury e. Contractual Liability f. Damage to property rented by you	For Bodily Injury and Property Damage of \$1,000,000 per occurrence; \$2,000,000 General Aggregate, or its equivalent in Umbrella or Excess Liability Coverage  \$100,000
4. Business Automobile Liability a. Owned/leased vehicles b. Non-owned vehicles c. Hired Vehicles	Combined Single Limit for Bodily Injury and Property Damage of \$1,000,000 per occurrence

Vendor agrees to require, by written contract, that all subcontractors providing goods or services hereunder obtain the same insurance coverages required of Vendor herein, and provide a certificate of insurance and endorsement that names Vendor and City as additional insureds. Vendor shall provide City with said certificate and endorsement prior to the commencement of any work by the subcontractor. This provision may be modified by City's Risk Manager, without subsequent City Council approval, when deemed necessary and prudent, based upon changes in statutory law, court decisions, or circumstances surrounding this agreement. Such modification may be enacted by letter signed by City's Risk Manager, which shall become a part of the contract for all purposes.

As they apply to the limits required by City, City shall be entitled, upon request and without expense, to receive copies of the policies, declaration page, and all endorsements thereto and may require the deletion, revision, or modification of particular policy terms, conditions, limitations, or exclusions (except where policy provisions are established by law or regulation binding upon either of the parties hereto or the underwriter of any such policies). Vendor shall be required to comply with any such requests and shall submit a copy of the replacement certificate of insurance to City at the address provided below within 10 days of the requested change. Vendor shall pay any costs incurred resulting from said changes.

City of San Antonio  
Attn: Finance Department-Purchasing Division  
P.O. Box 839966  
San Antonio, Texas 78283-3966

Vendor agrees that with respect to the above required insurance, all insurance policies are to contain or be endorsed to contain the following provisions:

Name City, its officers, officials, employees, volunteers, and elected representatives as additional insureds by endorsement, as respects operations and activities of, or on behalf of, the named insured performed under contract with City, with the exception of the workers' compensation and professional liability policies;

Provide for an endorsement that the "other insurance" clause shall not apply to the City of San Antonio where City is an additional insured shown on the policy;

Workers' compensation, employers' liability, general liability and automobile liability policies will provide a waiver of subrogation in favor of City; and

Provide advance written notice directly to City of any suspension, cancellation, non-renewal or material change in coverage, and not less than ten (10) calendar days advance notice for nonpayment of premium.

Within five (5) calendar days of a suspension, cancellation or non-renewal of coverage, Vendor shall provide a replacement Certificate of Insurance and applicable endorsements to City. City shall have the option to suspend Vendor's

performance should there be a lapse in coverage at any time during this contract. Failure to provide and to maintain the required insurance shall constitute a material breach of this Agreement.

In addition to any other remedies City may have upon Vendor's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, City shall have the right to order Vendor to stop work hereunder, and/ or withhold any payment(s) which become due to Vendor hereunder until Vendor demonstrates compliance with the requirements hereof.

Nothing herein contained shall be construed as limiting in any way the extent to which Vendor may be held responsible for payment of damages to persons or property resulting from Vendor's or its subcontractors' performance of the work covered under this Agreement.

It is agreed that Vendor's insurance shall be deemed primary and non-contributory with respect to any insurance or self insurance carried by City for liability arising out of operations under this Agreement.

It is understood and agreed that the insurance required is in addition to and separate from any other obligation contained in this Agreement and that no claim or action by or on behalf of City shall be limited to insurance coverage provided.

Vendor and any subcontractors are responsible for all damage to their own equipment and/or property.

#### Incorporation of Attachments.

Each of the attachments listed below is an essential part of this contract, which governs the rights and duties of the parties, incorporated herein by reference, and shall be interpreted in the order of priority as appears below, with this document taking priority over all attachments:

Attachment A – Price Schedule

Attachment B – City of San Antonio Local Preference Program Forms

Attachment C – Veteran-Owned Small Business Preference Program Tracking Form

### **006 - GENERAL TERMS & CONDITIONS**

Electronic Bid Equals Original. If Vendor is submitting an electronic bid, City and Vendor each agree that this transaction may be conducted by electronic means, as authorized by Chapter 322, Texas Business & Commerce Code, known as the Electronic Transactions Act.

#### Delivery of Goods/Services.

Destination Contract. Vendor shall deliver all goods and materials F.O.B., City of San Antonio's designated facility, inside delivery, freight prepaid, to the address provided in this IFB or, if different, in the Purchase Order. Vendor shall bear the risk of loss until delivery. Freight charges will be paid only when expedited delivery is requested and approved in writing by the City. Vendor shall be responsible for furnishing necessary personnel or equipment and/or making necessary arrangements to off load at City of San Antonio facility, unless otherwise noted herein.

Failure to Deliver. When delivery is not met as provided for in the contract, City may make the purchase on the open market, with any cost in excess of the contract price paid by Vendor, in addition to any other direct, indirect, consequential or incidental damages incurred by City as a result thereof. In addition, Vendor may be removed from the City's list of eligible bidders.

Purchase Orders. Each time a City department wishes to place an order against this contract, it will issue Vendor a purchase order. Vendor must have the purchase order before making any delivery.

Acceptance by City. City shall have a reasonable time (but not less than 30 days) after receipt to inspect the goods and services tendered by Vendor. City at its option may reject all or any portion of such goods or services which do not, in City's sole discretion, comply in every respect with all terms and conditions of the contract. City may elect to reject the entire

goods and services tendered even if only a portion thereof is nonconforming. If City elects to accept nonconforming goods and services, City, in addition to its other remedies, shall be entitled to deduct a reasonable amount from the price thereof to compensate City for the nonconformity. Any acceptance by City, even if non-conditional, shall not be deemed a waiver or settlement of any defect in such goods and services.

Testing. After award of contract, City may, at its sole option, test the product delivered to ensure it meets specifications. Initial testing shall be at City's expense. However, if the product does not to meet specifications, Vendor shall reimburse City for the costs of testing. City may withhold the cost of testing from any amounts owed to Vendor under this or any other contract, or invoice Vendor for same. If invoiced, Vendor shall pay City within 30 calendar days' of the invoice.

Warranty. A minimum of 90-days product guarantee or the manufacturer's standard commercial warranty, whichever is greater, shall apply to all products and/or services purchased under this IFB, unless otherwise specified in the Specifications/Scope of Services section of this IFB. This warranty shall provide for replacement of defective merchandise, parts, and labor, and shall include pick-up of the defective merchandise from City and delivery of the replacement(s) to the same location. The warranty shall be effective from the date of acceptance of the merchandise, or completion of the service, as applicable.

**REJECTION OF DISCLAIMERS OF WARRANTIES & LIMITATIONS OF LIABILITY. ANY TERM OR CONDITION IN ANY DOCUMENT FURNISHED BY VENDOR, DISCLAIMING THE IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR ATTEMPTING TO LIMIT VENDOR'S LIABILITY SHALL BE OF NO FORCE OR EFFECT, AND SHALL BE STRICKEN FROM THE CONTRACT DOCUMENTS AS IF NEVER CONTAINED THEREIN.**

Invoicing and Payment.

Address for Invoices. All original invoices must be sent to: City of San Antonio, Attn: Accounts Payable, P.O. Box 839976, San Antonio, Texas 78283-3976.

Information Required On Invoice.

All invoices must be in a form and content approved by the City. City may require modification of invoices if necessary in order to satisfy City that all billing is proper and pursuant to the terms of the contract. Invoices are required to show each City Purchase Order Number. Invoices must be legible. Items billed on invoices must be specific as to applicable stock, manufacturer, catalog or part number (if any). All invoices must show unit prices for each item being billed, the quantity of items being billed and the total for each item, as well as the total for all items on the invoice. If prices are based on list prices basis, then the list prices, the percentage discount or percentage surcharge, net unit prices, extensions and net total prices must be shown. Prompt payment discounts offered shall be shown separately on the invoice.

Payment by City.

In accordance with the Texas Prompt Payment Act, City shall have not less than 30 days to pay for goods or services. Time for payment, including payment under discount terms, will be computed from the later of: (1) the date City receives conforming goods under the contract; (2) the date performance of the service under the contract is completed; or (3) the date City receives a correct and valid invoice for the goods or services. Payment is deemed to be made on the date of mailing of the check. Payment is made in US dollars only.

This provision shall not apply where there is a bona fide dispute between City and Vendor about the goods delivered or the service performed that causes the payment to be late, or where the invoice is not mailed to the address provided herein.

The payment amount due on invoices may not be manually altered by City personnel. Once disputed items are reconciled, Vendor must submit a corrected invoice or a credit memorandum for the disputed amount. City will not make partial payments on an invoice where there is a dispute.

**NECESSITY OF TIMELY INVOICE / WAIVER OF PAYMENT. NOTWITHSTANDING THE FORGOING, THE CITY CANNOT PAY FOR ANY GOODS OR SERVICES WITHOUT AN INVOICE. VENDOR MUST INVOICE CITY NO LATER THAN 90 CALENDAR DAYS FROM THE DATE GOODS ARE DELIVERED OR SERVICES RENDERED. FAILURE TO SUBMIT AN INVOICE WITHIN SAID 90 DAYS SHALL NEGATE ANY LIABILITY ON THE PART OF CITY**

AND CONSTITUTE A **WAIVER** BY VENDOR OF ANY AND ALL RIGHT OR CLAIMS TO COLLECT MONEYS THAT VENDOR MAY RIGHTFULLY BE OTHERWISE ENTITLED TO FOR GOODS OR SERVICES PERFORMED.

The total price for all goods and/or services is shown on the Price Schedule. No additional fees or expenses of Vendor shall be charged by Vendor nor be payable by City. The parties hereby agree that all compensable expenses of Vendor are shown on the Price Schedule. If there is a discrepancy on the Price Schedule between the unit price for an item, and the extended price, the unit price shall govern.

Change Orders. In order to comply with Texas law governing purchases made by municipalities, the following rules shall govern all change orders made under this contract.

Any change orders that become necessary during the term of this contract as a result of changes in plans, specifications, quantity of work to be performed, materials, equipment or supplies to be furnished may be approved by the Director, provided that such change orders:

- are made in writing, signed by the Director;
- do not involve an increase or decrease in contract price of more than \$25,000; and
- sufficient funds have already been allocated by City or are available to the Director to cover any increase in contract price.

Any other change will require approval of the City Council, City of San Antonio.

Changes that do not involve an increase in contract price may, however, be made by the Director.

No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated herein.

#### Termination.

Termination-Breach. Should Vendor fail to fulfill in a timely and proper manner, as determined solely by the Director, its material obligations under this contract, or violate any of the material terms of this contract, City shall have the right to immediately terminate the contract in whole or in part. Notice of termination shall be provided in writing to Vendor, effective upon the date set forth in the notice. City may, in City's sole discretion, provide an opportunity for Vendor to cure the default. If City elects to offer an opportunity to cure, City shall provide notice to Vendor specifying the matters in default and the cure period. If Vendor fails to cure the default within the cure period, City shall have the right, without further notice, to terminate the contract in whole or in part. Such termination shall not relieve Vendor of any liability to the City for damages sustained by virtue of any breach by Vendor.

Termination-Notice. City may terminate this contract, in whole or in part, without cause. City shall be required to give Vendor notice ten days prior to the date of termination of the contract without cause.

Termination-Funding. City retains the right to terminate this contract at the expiration of each of City's budget periods. This contract is conditioned on a best efforts attempt by City to obtain and appropriate funds for payment of any debt due by City herein.

Termination by City may be effected by Director, without further action by the San Antonio City Council.

Independent Contractor. Vendor covenants and agrees that it is an independent contractor and not an officer, agent, servant or employee of City. City shall not be liable for any claims which may be asserted by any third party occurring in connection with the services to be performed by Vendor under this contract and that Vendor has no authority to bind City. The doctrine of respondeat superior shall not apply as between City and Vendor.

#### INDEMNIFICATION.

**VENDOR covenants and agrees to FULLY INDEMNIFY, DEFEND and HOLD HARMLESS, CITY and the elected officials, employees, officers, directors, volunteers and representatives of CITY, individually and collectively, from and against any and all costs, claims, liens, damages, losses, expenses, fees, fines, penalties, proceedings, actions, demands, causes of action, liability and suits of any kind and nature, including but not limited to, personal or bodily injury, death and property damage, made upon CITY directly or indirectly arising out of, resulting from or related to VENDOR'S activities under this Agreement, including any acts or omissions**

of VENDOR, any agent, officer, director, representative, employee, consultant or subcontractor of VENDOR, and their respective officers, agents employees, directors and representatives while in the exercise of the rights or performance of the duties under this Agreement. The indemnity provided for in this paragraph shall not apply to any liability resulting from the negligence of CITY, its officers or employees, in instances where such negligence causes personal injury, death, or property damage. IN THE EVENT VENDOR AND CITY ARE FOUND JOINTLY LIABLE BY A COURT OF COMPETENT JURISDICTION, LIABILITY SHALL BE APPORTIONED COMPARATIVELY IN ACCORDANCE WITH THE LAWS FOR THE STATE OF TEXAS, WITHOUT, HOWEVER, WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO THE CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW. In addition, Vendor agrees to indemnify, defend, and hold the City harmless from any claim involving patent infringement, trademarks, trade secrets, and copyrights on goods supplied.

The provisions of this INDEMNITY are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity. VENDOR shall advise CITY in writing within 24 hours of any claim or demand against CITY or VENDOR known to VENDOR related to or arising out of VENDOR's activities under this AGREEMENT and shall see to the investigation and defense of such claim or demand at VENDOR's cost. CITY shall have the right, at its option and at its own expense, to participate in such defense without relieving VENDOR of any of its obligations under this paragraph.

Assignment. Except as otherwise stated herein, Vendor may not sell, assign, pledge, transfer or convey any interest in this contract, nor delegate the performance of any duties hereunder, by transfer, by subcontracting or any other means, without the consent of Director. As a condition of such consent, if such consent is granted, Vendor shall remain liable for completion of the services and provision of goods outlined in this contract in the event of default by the successor Vendor, assignee, transferee or subcontractor. Any attempt to transfer, pledge or otherwise assign this Contract without said written approval, shall be void ab initio and shall confer no rights upon any third person.

Ownership of Documents. Pursuant to Texas Local Government Code Chapter 201, any and all Records produced by Vendor pursuant to the provisions of this contract are the exclusive property of City; and no such Record shall be the subject of any copyright or proprietary claim by Vendor. The term "Record" as used herein shall mean any document, paper, letter, book, map, photograph, sound or video recording, microfilm, magnetic tape, electronic medium, or other information recording medium, regardless of physical form or characteristic. Vendor understands and acknowledges that as the exclusive owner of any and all such Records, City has the right to use all such Records as City desires, without restriction.

#### Records Retention.

Vendor and its subcontractors, if any, shall properly, accurately and completely maintain all documents, papers, and records, and other evidence pertaining to the services rendered hereunder ("Documents"), and shall make such Documents available to the City at their respective offices, at all reasonable times and as often as City may deem necessary during the contract period, including any extension or renewal hereof, and the record retention period established herein, for purposes of audit, inspection, examination, and making excerpts or copies of same by City and any of its authorized representatives.

Vendor shall retain any and all Documents produced as a result of services provided hereunder for a period of four years ("Retention Period") from the date of termination of the contract. If, at the end of the Retention Period, there is litigation or other questions arising from, involving or concerning these Documents or the services provided hereunder, Vendor shall retain the records until the resolution of such litigation or other such questions. Vendor acknowledges and agrees that City shall have access to any and all such Documents at any and all times, as deemed necessary by City, during said Retention Period. City may, at its election, require Vendor to return the documents to City at Vendor's expense prior to or at the conclusion of the Retention Period. In such event, Vendor may retain a copy of the documents.

Vendor shall notify City, immediately, in the event Vendor receives any requests for information from a third party, which pertain to the Documents referenced herein. Vendor understands and agrees that City will process and handle all such requests.

Severability. If any clause or provision of this contract is held invalid, illegal or unenforceable under present or future federal, state or local laws, including but not limited to the City Charter, City Code, or ordinances of the City of San Antonio, Texas, then and in that event it is the intention of the parties hereto that such invalidity, illegality or unenforceability shall not affect any other clause or provision hereof and that the remainder of this contract shall be construed as if such invalid, illegal or unenforceable clause or provision was never contained herein. It is also the intention of the parties hereto that in lieu of

each clause or provision of this contract that is invalid, illegal, or unenforceable, there be added as a part of the contract a clause or provision as similar in terms to such invalid, illegal or unenforceable clause or provision as may be possible, legal, valid and enforceable.

Compliance with Law. Vendor shall provide and perform all services required under this Agreement in compliance with all applicable federal, state and local laws, rules and regulations.

Certifications. Vendor warrants and certifies that Vendor and any other person designated to provide services hereunder has the requisite training, license and/or certification to provide said services, and meets all competence standards promulgated by all other authoritative bodies, as applicable to the services provided herein.

Non-waiver of Performance. Unless otherwise specifically provided for in this Agreement, a waiver by either Party of a breach of any of the terms, conditions, covenants or guarantees of this Agreement shall not be construed or held to be a waiver of any succeeding or preceding breach of the same or any other term, condition, covenant or guarantee herein contained. Further, any failure of either Party to insist in any one or more cases upon the strict performance of any of the covenants of this Agreement, or to exercise any option herein contained, shall in no event be construed as a waiver or relinquishment for the future of such covenant or option. In fact, no waiver, change, modification or discharge by either party hereto of any provision of this Agreement shall be deemed to have been made or shall be effective unless expressed in writing and signed by the party to be charged. No act or omission by a Party shall in any manner impair or prejudice any right, power, privilege, or remedy available to that Party hereunder or by law or in equity, such rights, powers, privileges, or remedies to be always specifically preserved hereby.

**Venue. Venue of any court action brought directly or indirectly by reason of this contract shall be in Bexar County, Texas. This contract is made and is to be performed in Bexar County, Texas, and is governed by the laws of the State of Texas.**

Non-discrimination. As a condition of entering into this agreement, Vendor represents and warrants that it will comply with City's Commercial Nondiscrimination Policy, as described under Section IILC.1 of the SBEDA Ordinance. As part of such compliance, Vendor shall not discriminate on the basis of race, color, religion, ancestry or national origin, sex, age, marital status, sexual orientation, or on the basis of disability or other unlawful forms of discrimination in the solicitation, selection, hiring or commercial treatment of subcontractors, vendors, suppliers, or commercial customers, nor shall Vendor retaliate against any person for reporting instances of such discrimination. Vendor shall provide equal opportunity for subcontractors, vendors and suppliers to participate in all of its public sector and private sector subcontracting and supply opportunities, provided that nothing contained in this clause shall prohibit or limit otherwise lawful efforts to remedy the effects of marketplace discrimination that have occurred or are occurring in the City's Relevant Marketplace. Vendor understands and agrees that a material violation of this clause shall be considered a material breach of this agreement and may result in termination of this agreement, disqualification of Vendor from participating in City contracts, or other sanctions. This clause is not enforceable by or for the benefit of, and creates no obligation to, any third party. Vendor shall include this nondiscrimination clause in all subcontracts for the performance of this contract. **As a party to this contract, Vendor understands and agrees to comply with the *Non-Discrimination Policy* of the City of San Antonio contained in Chapter 2, Article X of the City Code and further, shall not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, veteran status, age or disability, unless exempted by state or federal law, or as otherwise established herein.**

Delinquent Taxes. In the event that Vendor is or subsequently becomes delinquent in the payment of taxes owed to the City of San Antonio, the City reserves the right to deduct any delinquent taxes from payments that the City may owe to the delinquent Vendor as a result of this contract.

Binding Contract. This contract shall be binding on and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, legal representatives, and successors and assigns, except as otherwise expressly provided for herein.

Entire Agreement. This contract, including City's final electronically posted online version, together with its authorizing ordinance and its price schedule(s), attachments, purchase orders, and exhibits, if any, constitutes the final and entire agreement between the parties hereto and contains all of the terms and conditions agreed upon. No other agreements, oral or otherwise, regarding the subject matter of this contract shall be deemed to exist or to bind the parties hereto, unless same be in writing, dated subsequent to the date hereof, and be duly executed by the parties, in accordance with the Change Order provision herein. **Parties agree that City's final electronically posted online version of this solicitation contains the agreed upon specifications, scope of services, and terms and conditions of this contract, and shall control in the event of a conflict with any printed version signed and submitted by Vendor.**

007 - SIGNATURE PAGE

By submitting a bid, whether electronically or by paper, Bidder represents that:

(s)he is authorized to bind Bidder to fully comply with the terms and conditions of City's Invitation for Bid for the prices stated therein;

(s)he has read the entire document, including the final version issued by City, and agreed to the terms therein;

Bidder is in good standing with the Texas State Comptroller's Office; and

to the best of his/her knowledge, all information is true and correct.

If submitting your bid by paper, complete the following and sign on the signature line below. Failure to sign and submit this Signature Page will result in rejection of your bid.

Bidder Information:

Bidder Information:

Please Print or Type:

Vendor ID No.: v1007975

Signer's Name: W.B. (BRAX) WRIGHT

Name of Business: ASSOCIATED SUPPLY COMPANY

Street Address: 4146 I-10 EAST

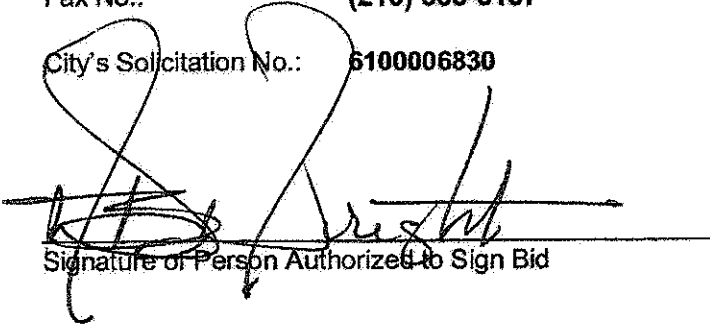
City, State, Zip Code: SAN ANTONIO, TEXAS 78219

Email Address: CMEYER@ASCOEQ.COM

Telephone No.: 210-305-3196 / 210-333-8000

Fax No.: (210) 333-6137

City's Solicitation No.: 6100006830

  
Signature of Person Authorized to Sign Bid

008 - STANDARD DEFINITIONS

Whenever a term defined by the Uniform Commercial Code ("UCC"), as enacted by the State of Texas, is used in the Contract, the UCC definition shall control, unless otherwise defined in the Contract.

All-or-None Bid - an invitation to bid in which the City will award the entire contract to one bidder only.



Alternate Bid - two or more bids with substantive variations in the item or service offered from the same bidder in response to a solicitation.

Assignment - a transfer of claims, rights or interests in goods, services or property.

Bid - a complete, signed response to a solicitation. The term "bid" is synonymous with the term "offer".

Bid Opening - a public meeting during which bid responses are disclosed.

Bidder - a person, firm or entity that submits a bid in response to a solicitation. The bidder whose bid is accepted by City may also be referred to herein as Contractor, Vendor or Supplier.

Bid Bond or Bid Guarantee - security to ensure that Bidder (a) will not withdraw the bid within the period specified for acceptance, and (b) will furnish any required bonds or performance guarantees, and any necessary insurance within the time specified in the solicitation.

Change Order - a change to the plans or specifications of the contract, or an increase or decrease in the quantity of work to be performed or of materials, equipment, or supplies to be furnished, issued by the Director after the bid has been accepted by the City.

City - the City of San Antonio, a Texas home-rule municipal corporation.

Contract - the binding legal agreement between the City and Vendor.

Contractor - the bidder whose bid is accepted by the City and is, therefore, the person, firm or entity providing goods or services to the City under a contract.

Director - the Director of City's Purchasing & General Services Department, or Director's designee.

Equal or Equivalent - terms to indicate that similar products or other brands may be acceptable for purchase if specifications and functional requirements are met.

Invitation for Bid (IFB) - a solicitation requesting pricing for a specified good or a service.

Line Item - a listing of items in a bid for which a bidder is expected to provide separate pricing.

Low Bid - a bid which is lowest in price, but may not meet all requirements or specifications.

Lowest Responsible Bidder - the bidder whose bid meets all requirements of the specifications, terms and conditions of the IFB and results in the lowest cost to the City in an award based solely on price, taking into consideration the bidder's competence and qualifications to perform the contract.

Non-Responsive Bid - a bid or offer that does not comply with the terms and conditions, or specifications and/or requirements of the IFB.

Offer - a complete, signed response to an IFB that, if accepted, would bind the bidder to perform the resultant contract. The term "offer" is synonymous with the term "bid".

Payment Bond - a particular form of security provided by the contractor to protect the City against loss due to the contractor's failure to pay suppliers and subcontractors.

Performance Bond - a particular form of security provided by the contractor to protect the City against loss due to the contractor's inability or unwillingness to complete the contract as agreed.

Performance Deposit - security provided by the contractor to protect the City against loss due to the contractor's inability or unwillingness to complete the contract as agreed.

Pre-Submittal Conference - a meeting conducted by the City, held in order to allow bidders to ask questions about the proposed contract and particularly, the contract specifications.

Purchase Order - a validly issued order placed by an authorized City department for the purchase of goods or services, written on the City's standard purchase order form, and which is Vendor's authority to deliver to and invoice the City for the goods or services specified in an IFB for the price stated in Vendor's bid.

Responsible Bidder - a bidder who is known to have the necessary competence and qualifications to perform and provide all requirements of an intended contract.

Responsive Bidder - a bidder who tenders a bid which meets all requirements of the invitation to bid and is a responsible bidder.

Sealed Bid - a bid submitted as a sealed document, whether hard copy or electronic, by a prescribed time to the location indicated in the IFB. The contents of the bid will not be made public prior to the bid opening.

Specifications - a description of what the City requires and what the bidder must offer; a description of the physical or functional characteristics of a product or material, or the nature of a service or construction item.

Subcontractor - a person, firm or entity providing goods or services to a vendor to be used in the performance of the Vendor's obligations under the contract with the City.

Supplier - the bidder whose bid is accepted by the City and is, therefore, the person, firm or entity providing goods or services to the City under a contract.

Vendor - the bidder whose bid is accepted by the City and is, therefore, the person, firm or entity providing goods or services to the City under a contract.

Waiver of Irregularity - noting, but disregarding an immaterial variance within a bid.

## **009 - ATTACHMENTS**

### **Attachment A 11/9/2015:**

#### **PRICE SCHEDULE**

##### Local Preference Program (LPP) Ordinance

The 82nd Texas Legislature adopted a revision to the law that allowed the City of San Antonio (City) to adopt a policy that would grant contracting preferences to local businesses for certain types of contracts. The City adopted such a policy, known as the Local Preference Program, described in the San Antonio City Code Chapter 2, Article XII, effective for solicitations issued after May 1, 2013.

This solicitation is subject to the Local Preference Program. For more information on the program, refer to the Local Preference Program Identification Form attached to this solicitation.

In order to receive consideration the Local Bidder must complete and return the attached Local Preference Identification Form.

ITEMS PRICING

ITEM	QUANTITY	DESCRIPTION
1	3	Wheeled Articulated Loader w/ Minimum 4 Cubic Yard Bucket

PRICE EACH: \$ 194,000

TOTAL: \$ 582,00

YEAR, MAKE & MODEL OFFERED:

**2016 CASE 821F WHEEL LOADER**

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

**FTP F4HFE613 205HP Net**

WARRANTY:

**3 YEAR / 3000 HOUR FULL MACHINE**

WARRANTY SERVICE PROVIDER NAME:

**ASSOCIATED SUPPLY COMPANY**

WARRANTY FACILITY ADDRESS:

**4146 I-10 EAST  
SAN ANTONIO, TX 78219**

DELIVERY WILL BE MADE WITHIN **60** CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: **10/1/16**

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: **8/15/15**

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? **NO**

ITEM	QUANTITY	DESCRIPTION
2	1	Tracked Milling Machine

PRICE EACH: \$ NO BID

TOTAL: \$ NO BID

YEAR, MAKE & MODEL OFFERED:

NO BID

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

NO BID

WARRANTY:

NO BID

WARRANTY SERVICE PROVIDER NAME:

NO BID

WARRANTY FACILITY ADDRESS:

NO BID

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: \_\_\_\_\_

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: \_\_\_\_\_.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? \_\_\_\_\_.

ITEM	QUANTITY	DESCRIPTION
3	3	Wheeled Motor Graders

PRICE EACH: \$ NO BID

TOTAL: \$ NO BID

YEAR, MAKE & MODEL OFFERED:

NO BID

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

NO BID

WARRANTY:

NO BID

WARRANTY SERVICE PROVIDER NAME:

NO BID

WARRANTY FACILITY ADDRESS:

NO BID

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: \_\_\_\_\_

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: \_\_\_\_\_.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? \_\_\_\_\_.

ITEM	QUANTITY	DESCRIPTION
4	3	6 Ton Double Drum Vibratory Roller

PRICE EACH: \$ NO BID

TOTAL: \$ NO BID

YEAR, MAKE & MODEL OFFERED:

NO BID

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

NO BID

WARRANTY:

NO BID

WARRANTY SERVICE PROVIDER NAME:

NO BID

WARRANTY FACILITY ADDRESS:

NO BID

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: \_\_\_\_\_

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: \_\_\_\_\_.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? \_\_\_\_\_.

ITEM	QUANTITY	DESCRIPTION
5	1	Pneumatic, Articulated Tired Roller

PRICE EACH: \$ NO BID

TOTAL: \$ NO BID

YEAR, MAKE & MODEL OFFERED:  
NO BID

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):  
NO BID

WARRANTY:  
NO BID

WARRANTY SERVICE PROVIDER NAME:  
NO BID

WARRANTY FACILITY ADDRESS:  
NO BID

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: \_\_\_\_\_

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: \_\_\_\_\_.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? \_\_\_\_\_.

ITEM	QUANTITY	DESCRIPTION
6	2	Loader Backhoe with 12" Bucket and Telescopic Boom

PRICE EACH: \$68,100

TOTAL: \$136,200

YEAR, MAKE & MODEL OFFERED:

**2015 CASE 580N Backhoe**

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

FPT            F5BFL413C            89 hp (66 kW)

WARRANTY:

**1 YEAR / 1000 HOUR FULL MACHINE**

WARRANTY SERVICE PROVIDER NAME:

**ASSOCIATED SUPPLY COMPANY**

WARRANTY FACILITY ADDRESS:

**4146 I-10 EAST  
SAN ANTONIO, TX 78219**

DELIVERY WILL BE MADE WITHIN **60** CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: **10/1/16**

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: **8/15/15**

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? **NO**

ITEM	QUANTITY	DESCRIPTION
7	1	Loader Backhoe with 24" Bucket and 1K Hydraulic Breaker

PRICE EACH: **\$84,500**

TOTAL: **\$84,500**

YEAR, MAKE & MODEL OFFERED:

**2015 CASE 580N Backhoe**

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

FPT            F5BFL413C            89 hp (66 kW)

WARRANTY:

**1 YEAR / 1000 HOUR FULL MACHINE**

WARRANTY SERVICE PROVIDER NAME:

**ASSOCIATED SUPPLY COMPANY**

WARRANTY FACILITY ADDRESS:

**4146 I-10 EAST  
SAN ANTONIO, TX 78219**

DELIVERY WILL BE MADE WITHIN **60** CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: **10/1/16**

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: **8/15/15**

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? **NO**

ITEM	QUANTITY	DESCRIPTION
<b>8</b>	<b>1</b>	<b>Dozer Crawler</b>

PRICE EACH: **\$119,350**

TOTAL: **\$119,350**

YEAR, MAKE & MODEL OFFERED:

**2015 CASE 850M Dozer**

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

**FPT F4HFE413P 112 hp (84 kW)**

WARRANTY:

**3 YEAR / 3000 HOUR FULL MACHINE**

WARRANTY SERVICE PROVIDER NAME:

**ASSOCIATED SUPPLY COMPANY**

WARRANTY FACILITY ADDRESS:

**4146 I-10 EAST  
SAN ANTONIO, TX 78219**

DELIVERY WILL BE MADE WITHIN **60** CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: **10/1/16**



INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: **8/15/15**

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? **NO**

(Prompt Payment Discount: \_\_\_\_\_% \_\_\_\_\_ days. (if no discount is offered, Net 30 will apply.)

## ENGINE

Make	FPT
Model	F4HFE613
Emissions Certification	Tier 4 Final
Type	4-stroke, turbocharged and air-to-air cooled
Cylinders	6-cylinder in-line
Bore/Stroke	4.09 x 5.20 in (104 X 132 mm)
Displacement	411 in <sup>3</sup> (6.7 L)
Fuel	#2 Diesel, #1 and #2 mixture permitted for cold temperatures
Fuel injection	Direct injection – electronic
Fuel filter	Replaceable, full flow spin-on cartridge
Fuel pump	Bosch CP 3.3
Gradeability:	
Side-to-side	35°
Fore and aft	35°
Air filter	2-element dry-type w/ warning restriction indicator
Mid-mount cooling module:	Mid-mount air/water
Fan – hydraulic driven:	
Style	8 blade puller
Diameter	32 in (813 mm)
Water pump	Integral
Engine oil pump operating angles ratings:	
Side-to-side	35°
Fore and aft	35°
Oil filtration	Replaceable, full flow spin-on cartridge
Engine speeds	RPM
Rated – full load	2000
Horsepower:	
Maximum Power Mode:	
Peak gross @ 1800 RPM	231 hp (172 kW)
Net rated @ 2000 RPM	205 hp (153 kW)
Peak net @ 1800 RPM	212 hp (158 kW)
Standard Power Mode:	
Peak gross @ 1700 RPM	208 hp (155 kW)
Net rated @ 2000 RPM	178 hp (133 kW)
Peak net @ 1700 RPM	193 hp (144 kW)
Economy Power Mode:	
Peak gross @ 1400 RPM	169 hp (126 kW)
Net rated @ 2000 RPM	123 hp (92 kW)
Peak net @ 1400 RPM	161 hp (120 kW)

NOTE: Gross horsepower and torque per SAE J1995.  
Net horsepower and torque per SAE J1349.

## ENGINE (cont.)

Torque – peak:	
Maximum Power Mode:	
Gross @ 1300 RPM	873 lb-ft (1 184 N-m)
Net @ 1300 RPM	844 lb-ft (1 145 N-m)
Standard Power Mode:	
Gross @ 1300 RPM	745 lb-ft (1 010 N-m)
Net @ 1300 RPM	716 lb-ft (971 N-m)
Economy Power Mode:	
Gross @ 1300 RPM	664 lb-ft (900 N-m)
Net @ 1300 RPM	635 lb-ft (861 N-m)

Torque rise:	
Maximum power range	47%

NOTE: Gross horsepower and torque per SAE J1995.  
Net horsepower and torque per SAE J1349.

## DRIVETRAIN

Transmission:	4F/3R Proportional w/ Electronic Control Module torque sensing autoshift/manual shift and modulation
Gears	Helical cut
Torque converter:	
Stall ratio – 4-speed	2.28:1
Stall ratio – 5-speed	2.42:1
Differential:	
Limited slip differential, front – up to 72.5% of available axle torque to wheel w/ traction	
Limited slip differential, rear – up to 72.5% of available axle torque to wheel w/ traction	
Rear axle oscillation	24° total
Front and rear axles:	
Differential ratio	4.11
Planetary ratio	6.00
Final axle ratio	24.67

Heavy-duty axles – optional:  
Front axle equipped w/ locking differential  
Rear axle equipped w/ open differential

Planetaries	Outboard
Service brakes:	Hydraulically actuated, maintenance-free, multiple wet disc w/ accumulator to all four wheels
Brake surface area:	
Rear hub	600 in <sup>2</sup> (0.387 m <sup>2</sup> )
Front and opt. rear hub	721 in <sup>2</sup> (0.465 m <sup>2</sup> )

Parking brakes:  
Spring-applied hydraulic release disc on transmission output shaft neutralizes power flow to wheels when engaged

Travel speeds – 4-speed transmission:		
	Forward	Reverse
	mph (kph)	mph (kph)
1st	4.4 (7.1)	4.7 (7.5)
2nd	7.5 (12.0)	7.8 (12.6)
3rd	14.5 (23.3)	15.2 (24.4)
4th	22.7 (36.6)	–

NOTE: Travel speeds at full engine throttle w/ 23.5 x 25 L3 tires.

## DRIVETRAIN (cont.)

Travel speeds – 5-speed transmission:		
	Forward	Reverse
	mph (kph)	mph (kph)
1st	4.1 (6.6)	4.3 (7.0)
2nd	7.1 (11.4)	7.5 (12.0)
3rd	10.6 (17.1)	17.2 (27.7)
4th	16.4 (26.4)	–
5th	24.8 (40.0)	–

NOTE: Travel speeds at full engine throttle w/ 23.5 x 25 L3 tires.

## ELECTRICAL

Voltage	24 Volts, negative ground
Alternator	120 amp
Batteries (2)	12-volt

## OPERATOR ENVIRONMENT

ROPS/FOPS Cab w/ heat and AC; Key start; Articulated power steering w/ tilt column; Fully adjustable suspension seat; Foot throttle; 1-Lever loader control w/ wrist rest; Cup holder; Coat hook; 1 Interior rearview mirror; 2 in (51 mm) retractable seat belt; Storage tray behind seat; Lunch box compartment; Single brake pedal; F-N-R shuttle switch; Glove box; Pressurized air filtering; Anti-glare window strip; Defroster; Side window partial/fully open; Dome light; Wipers, rear and intermittent front; Windshield washers, front and rear; Rubber floor mat; Horn.

### Displays/Gauges:

Analog:  
Transmission oil temperature; Hydraulic oil temperature; Fuel level; Engine coolant temperature.

### LCD screen:

Hour meter; Engine speed; Travel speed; Time; Automatic transmission indication; Current gear selection; FNR indication; DeClutch indication; Engine mode indication; Trip computer; Fuel consumption; Multiple languages, Metric/English; Engine diagnostics; Transmission diagnostics; Warning prompts; Error reporting; DEF gauge; Diff. Lock\*.

### Audible/Visual alarms:

Warning lights:  
Four-way flashers and turn signals; Brake pressure; Lamp/high beam indication; Grid heater\*.

NOTE: \*If equipped w/ option.

## OPERATOR ENVIRONMENT (cont.)

### Audible/Visual alarms:

#### Caution alarm:

Parking brake; Coolant temperature; Hydraulic oil temperature; Transmission oil temperature; Air filter; Transmission filter; Hydraulic filter; Alternator; Low fuel.

#### Critical alarm:

Engine oil pressure; Brake pressure; Steering pressure – w/ aux steering; Coolant temperature; Hydraulic oil temperature; Transmission oil temperature.

#### Backup alarm

NOTE: \*If equipped w/ option.

## OPERATING WEIGHT

### Z-Bar

Unit equipped w/ 23.5R25 Michelin XHA2; ROPS cab w/ heater and AC; Heavy-duty counterweight – 4,940 lb (2 241 kg); Heavy-duty batteries; Front and rear fenders; Lights; Full fuel; 175 lb (79 kg) operator; 4.25 yd<sup>3</sup> (3.2 m<sup>3</sup>) MD pin on w/ bolt on edge:

38,874 lb (17 633 kg)

### XR

Unit equipped w/ 23.5R25 Michelin XHA2; ROPS cab w/ heater and AC; Heavy-duty counterweight – 4,940 lb (2 240 kg); Heavy-duty batteries; Front and rear fenders; Lights; Full fuel; 175 lb (79 kg) operator; 4.25 yd<sup>3</sup> (3.2 m<sup>3</sup>) MD pin on w/ bolt on edge:

39,716 lb (18 015 kg)

## HYDRAULICS

### Pump – steering/implement:

Closed center pressure/flow compensated

### Variable displacement – load sensing:

31.7 gpm @ 2000 RPM  
(120 L/min @ 2000 RPM)

### Loader control valve:

Closed-center, sectional 2, 3 or 4-function w/ pilot control for lift, tilt and auxiliary hydraulics, electromagnetic detents in float, raise and rollback

### Loader auxiliary steering:

Hydraulic orbital center-pivot articulating w/ on-demand oil flow

### High pressure standby:

Implement 3,625 psi (25 000 kPa)  
Steering 3,499 psi (24 132 kPa)

### Filtration:

Filtered vent w/ relief on hydraulic reservoir, maintains 3-5 psi on reservoir. 10-micron, returns filter furnishes only clean oil to all components of the system

## SERVICE CAPACITIES

Fuel tank 76.1 gal (288.0 L)

### DEF tank – Diesel Exhaust Fluid:

Usable 9.8 gal (37.1 L)  
Total 15.6 gal (58.9 L)

### Hydraulic system:

Reservoir 24.0 gal (90.8 L)  
Total 47.0 gal (178.0 L)

### Transmission:

Service w/ filter 9.0 gal (34.1 L)

### Front and rear axle:

Front axle 10.6 gal (40.0 L)  
Rear axle 10.6 gal (40.0 L)

Engine oil w/ filter 4.0 gal (15.1 L)

Cooling system 7.9 gal (30.0 L)

## OTHER SPECIFICATIONS

### Lift cylinder:

Bore diameter 5.5 in (140 mm)  
Rod diameter 3.0 in (76 mm)  
Stroke 33.3 in (846 mm)

### Dump cylinder:

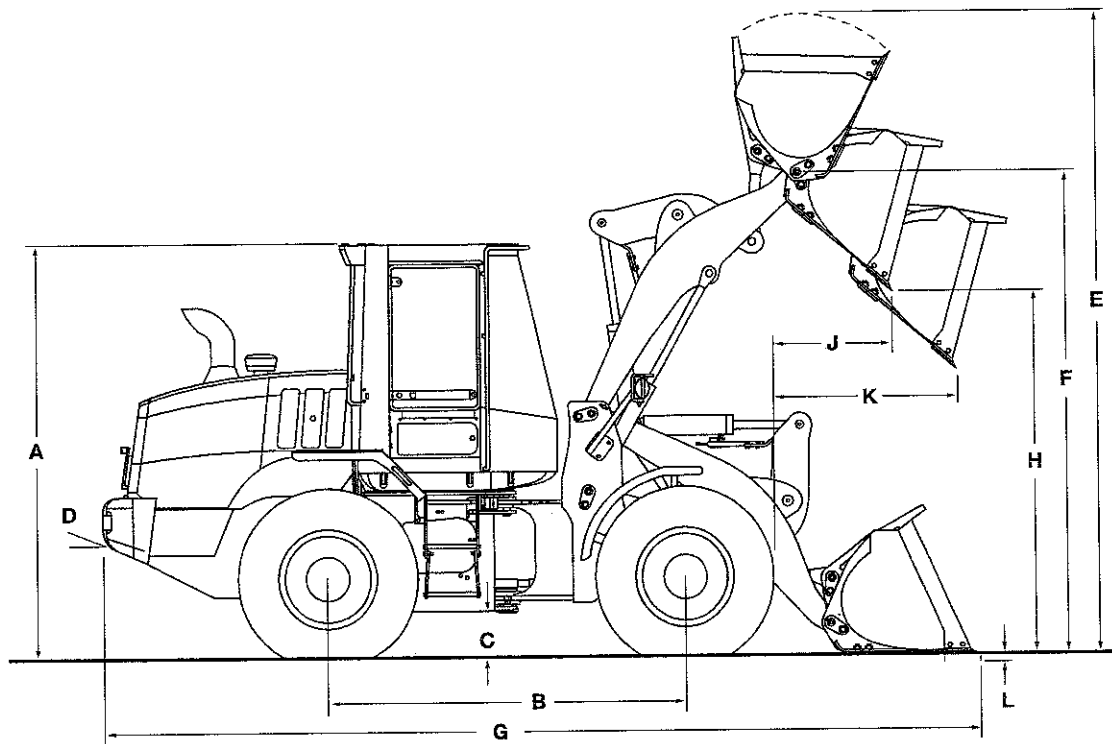
Bore diameter 6.5 in (165 mm)  
Rod diameter 3.5 in (89 mm)  
Stroke 23.6 in (600 mm)

### Loader:

Z-Bar loader linkage; Single control for lift and tilt; Positive hold float; Automatic return-to-dig; Automatic height control; Automatic return-to-travel; Brake pedal transmission disconnect; Bucket position indicator on bucket.

### Cycle time:

Raise w/ rated bucket load 6.2 sec  
Dump w/ rated bucket load 1.2 sec  
Power down 2.9 sec  
Float down 2.5 sec



Line drawings are for illustrative purpose only and may not be exact representation of unit.

## DIMENSIONS

A. Height to top of ROPS cab	135.8 in (3 450 mm)
Height to drawbar	42.2 in (1 071 mm)
B. Wheelbase	131.5 in (3 340 mm)
C. Ground clearance	16.4 in (416 mm)
D. Angle of departure	32°
Width:	
Overall* without bucket	113.6 in (2 885 mm)
Centerline tread	87.8 in (2 230 mm)
Turning radius* – outside	237.5 in (6 032 mm)
Turning angle:	
From center	40°
Total angle	80°
Rear axle oscillation, total	24°

NOTE: \*Dimensions taken with 23.5R25 Michelin XHA2 tires. Additional dimensions on pages 4 through 8.

## WEIGHT ADJUSTMENTS

Select Options	Weight Adjustment	Tipping Load Adjustment Straight	Tipping Load Adjustment 40° Turn
Base counterweight	-1,678 lb (-761 kg)	-3,885 lb (-1 762 kg)	-3,278 lb (-1 487 kg)
L2BIAS tires	-948 lb (-430 kg)	-732 lb (-332 kg)	-646 lb (-293 kg)
L3BIAS tires	-313 lb (-142 kg)	-240 lb (-109 kg)	-212 lb (-96 kg)
ROPS Canopy	-295 lb (-134 kg)	-258 lb (-117 kg)	-249 lb (-113 kg)

NOTE: Unit equipped with Z-Bar loader arms, 4.25 yd<sup>3</sup> (3.2 m<sup>3</sup>) general purpose pin on bucket with bolt-on edge, 23.5-25 Michelin XHA2 tires, ROPS cab with heater and air conditioner, full counterweight, heavy-duty batteries, front and rear fenders, full fuel and 175 lb (79 kg) operator. Adjust select options from rated weight.

**PERFORMANCE DATA**

<b>821F Z-Bar*</b>	<b>3.50 yd<sup>3</sup> HD Pin On (2.6 m<sup>3</sup>) Bucket with Bolt-on Edge</b>	<b>3.50 yd<sup>3</sup> HD Pin On (2.6 m<sup>3</sup>) Bucket with Teeth Only</b>	<b>4.25 yd<sup>3</sup> MD Pin On (3.2 m<sup>3</sup>) Bucket with Bolt-on Edge</b>
E. Operating height – fully raised with spillguard	210.1 in (5 336 mm)	209.6 in (5 325 mm)	216.4 in (5 496 mm)
F. Hinge pin height – fully raised	162.3 in (4 123 mm)	162.3 in (4 123 mm)	162.3 in (4 123 mm)
G. Overall length – bucket level on ground	303.1 in (7 700 mm)	308.8 in (7 844 mm)	309.4 in (7 859 mm)
Dump angle – fully raised	55°	55°	55°
H. Dump height – fully raised, 45° dump	121.5 in (3 086 mm)	118.0 in (2 996 mm)	117.4 in (2 983 mm)
J. Bucket reach – fully raised, 45° dump	38.8 in (985 mm)	43.6 in (1 107 mm)	43.6 in (1 107 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	64.0 in (1 625 mm)	67.2 in (1 708 mm)	67.0 in (1 703 mm)
L. Dig depth – edge below ground	3.0 in (75 mm)	2.6 in (66 mm)	3.0 in (75 mm)
Operating load – ISO	13,871 lb (6 292 kg)	14,116 lb (6 403 kg)	13,614 lb (6 175 kg)
Operating load – SAE	12,893 lb (5 848 kg)	13,111 lb (5 947 kg)	12,630 lb (5 729 kg)
Maximum material density – ISO	4,033 lb/yd <sup>3</sup> (2 393 kg/m <sup>3</sup> )	4,406 lb/yd <sup>3</sup> (2 614 kg/m <sup>3</sup> )	3,283 lb/yd <sup>3</sup> (1 948 kg/m <sup>3</sup> )
Maximum material density – SAE	3,749 lb/yd <sup>3</sup> (2 224 kg/m <sup>3</sup> )	4,092 lb/yd <sup>3</sup> (2 428 kg/m <sup>3</sup> )	3,047 lb/yd <sup>3</sup> (1 808 kg/m <sup>3</sup> )
Tipping load – ISO:			
Straight	32,009 lb (14 519 kg)	32,571 lb (14 774 kg)	31,471 lb (14 275 kg)
40° turn	27,741 lb (12 583 kg)	28,232 lb (12 806 kg)	27,225 lb (12 349 kg)
Tipping load – SAE:			
Straight	30,466 lb (13 819 kg)	30,982 lb (14 053 kg)	29,921 lb (13 572 kg)
40° turn	25,785 lb (11 696 kg)	26,222 lb (11 894 kg)	25,261 lb (11 458 kg)
Lift capacity:			
Full height	22,544 lb (10 226 kg)	22,551 lb (10 229 kg)	22,203 lb (10 071 kg)
Maximum reach	30,430 lb (13 803 kg)	30,468 lb (13 820 kg)	30,073 lb (13 641 kg)
Ground	40,468 lb (18 356 kg)	40,737 lb (18 478 kg)	39,930 lb (18 112 kg)
Breakout force with tilt cylinder	40,658 lb (18 442 kg)	44,042 lb (19 977 kg)	35,338 lb (16 029 kg)
Loader clearance circle with bucket	519.3 in (13 190 mm)	523.0 in (13 284 mm)	522.8 in (13 279 mm)

<b>821F XR</b>	<b>3.50 yd<sup>3</sup> HD Pin On (2.6 m<sup>3</sup>) Bucket with Bolt-on Edge</b>	<b>3.50 yd<sup>3</sup> HD Pin On (2.6 m<sup>3</sup>) Bucket with Teeth Only</b>	<b>4.25 yd<sup>3</sup> MD Pin On (3.2 m<sup>3</sup>) Bucket with Bolt-on Edge</b>
E. Operating height – fully raised with spillguard	227.4 in (5 777 mm)	227.0 in (5 766 mm)	233.7 in (5 937 mm)
F. Hinge pin height – fully raised	179.7 in (4 564 mm)	179.7 in (4 564 mm)	179.7 in (4 564 mm)
G. Overall length – bucket level on ground	322.3 in (8 186 mm)	328.0 in (8 332 mm)	328.5 in (8 345 mm)
Dump angle – fully raised	49°	49°	49°
H. Dump height – fully raised, 45° dump	138.9 in (3 527 mm)	135.3 in (3 437 mm)	134.8 in (3 424 mm)
J. Bucket reach – fully raised, 45° dump	43.2 in (1 097 mm)	48.0 in (1 219 mm)	48.0 in (1 219 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	80.9 in (2 055 mm)	84.4 in (2 143 mm)	84.2 in (2 139 mm)
L. Dig depth – edge below ground	5.6 in (142 mm)	5.2 in (133 mm)	5.6 in (142 mm)
Operating load – ISO	10,950 lb (4 967 kg)	11,116 lb (5 042 kg)	10,714 lb (4 860 kg)
Operating load – SAE	10,274 lb (4 660 kg)	10,421 lb (4 727 kg)	10,033 lb (4 551 kg)
Maximum material density – ISO	3,184 lb/yd <sup>3</sup> (1 889 kg/m <sup>3</sup> )	3,469 lb/yd <sup>3</sup> (2 058 kg/m <sup>3</sup> )	2,584 lb/yd <sup>3</sup> (1 533 kg/m <sup>3</sup> )
Maximum material density – SAE	2,987 lb/yd <sup>3</sup> (1 772 kg/m <sup>3</sup> )	3,253 lb/yd <sup>3</sup> (1 930 kg/m <sup>3</sup> )	2,420 lb/yd <sup>3</sup> (1 436 kg/m <sup>3</sup> )
Tipping load – ISO:			
Straight	25,481 lb (11 558 kg)	25,860 lb (11 730 kg)	24,992 lb (11 336 kg)
40° turn	21,901 lb (9 934 kg)	22,231 lb (10 084 kg)	21,429 lb (9 720 kg)
Tipping load – SAE:			
Straight	24,436 lb (11 084 kg)	24,791 lb (11 245 kg)	23,942 lb (10 860 kg)
40° turn	20,545 lb (9 319 kg)	20,842 lb (9 454 kg)	20,066 lb (9 102 kg)
Lift capacity:			
Full height	20,693 lb (9 386 kg)	20,695 lb (9 387 kg)	20,353 lb (9 232 kg)
Maximum reach	26,089 lb (11 834 kg)	26,138 lb (11 856 kg)	25,726 lb (11 669 kg)
Ground	30,918 lb (14 024 kg)	31,178 lb (14 142 kg)	30,369 lb (13 775 kg)
Breakout force with tilt cylinder	41,295 lb (18 731 kg)	44,743 lb (20 295 kg)	35,898 lb (16 283 kg)
Loader clearance circle with bucket	538.1 in (13 669 mm)	542.5 in (13 779 mm)	542.4 in (13 776 mm)

<b>821F</b>	<b>Z-Bar/XR</b>	<b>Z-Bar/XR</b>	<b>Z-Bar/XR</b>
Maximum rollback:			
Ground	41°/37°	41°/37°	41°/37°
Carry position	44°/43°	44°/43°	44°/43°
@ Maximum reach	54°/53°	54°/53°	54°/53°
@ Full height	59°/60°	59°/60°	59°/60°
Maximum grading angle with bucket – back dragging	59°/62°	60°/63°	60°/63°
SAE bucket capacity – struck	2.9 yd <sup>3</sup> (2.22 m <sup>3</sup> )	2.7 yd <sup>3</sup> (2.09 m <sup>3</sup> )	3.5 yd <sup>3</sup> (2.71 m <sup>3</sup> )
Heaped	3.4 yd <sup>3</sup> (2.63 m <sup>3</sup> )	3.2 yd <sup>3</sup> (2.45 m <sup>3</sup> )	4.1 yd <sup>3</sup> (3.17 m <sup>3</sup> )
Bucket width – outside	119.3 in (3 030 mm)	119.9 in (3 046 mm)	119.3 in (3 030 mm)
Bucket weight	3,109 lb (1 410 kg)	3,126 lb (1 418 kg)	3,441 lb (1 561 kg)

**PERFORMANCE DATA**

<b>821F Z-Bar*</b>	<b>4.25 yd<sup>3</sup> MD Pin On (3.2 m<sup>3</sup>) Bucket with Teeth Only</b>	<b>4.50 yd<sup>3</sup> LD Pin On (3.4 m<sup>3</sup>) Bucket with Bolt-on Edge</b>	<b>3.5 yd<sup>3</sup> GP (2.7 m<sup>3</sup>) on Case Z-Bar Coupler Bucket with Bolt-on Edge</b>
E. Operating height – fully raised with spillguard	215.5 in (5 474 mm)	217.7 in (5 530 mm)	216.3 in (5 494 mm)
F. Hinge pin height – fully raised	162.3 in (4 123 mm)	162.3 in (4 123 mm)	162.2 in (4 121 mm)
G. Overall length – bucket level on ground	308.6 in (7 838 mm)	310.8 in (7 894 mm)	313.5 in (7 962 mm)
Dump angle – fully raised	55°	55°	55°
H. Dump height – fully raised, 45° dump	117.9 in (2 995 mm)	116.6 in (2 961 mm)	114.8 in (2 916 mm)
J. Bucket reach – fully raised, 45° dump	42.7 in (1 085 mm)	44.6 in (1 133 mm)	46.7 in (1 186 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	66.4 in (1 686 mm)	67.6 in (1 718 mm)	68.9 in (1 749 mm)
L. Dig depth – edge below ground	3.1 in (80 mm)	3.0 in (75 mm)	3.0 in (75 mm)
Operating load – ISO	13,704 lb (6 216 kg)	13,494 lb (6 121 kg)	12,209 lb (5 538 kg)
Operating load – SAE	12,705 lb (5 763 kg)	12,507 lb (5 673 kg)	11,296 lb (5 124 kg)
Maximum material density – ISO	3,435 lb/yd <sup>3</sup> (2 038 kg/m <sup>3</sup> )	3,044 lb/yd <sup>3</sup> (1 806 kg/m <sup>3</sup> )	3,550 lb/yd <sup>3</sup> (2 106 kg/m <sup>3</sup> )
Maximum material density – SAE	3,186 lb/yd <sup>3</sup> (1 890 kg/m <sup>3</sup> )	2,822 lb/yd <sup>3</sup> (1 674 kg/m <sup>3</sup> )	3,283 lb/yd <sup>3</sup> (1 948 kg/m <sup>3</sup> )
Tipping load – ISO:			
Straight	31,683 lb (14 371 kg)	31,206 lb (14 155 kg)	28,420 lb (12 891 kg)
40° turn	27,408 lb (12 432 kg)	26,987 lb (12 241 kg)	24,418 lb (11 076 kg)
Tipping load – SAE:			
Straight	30,102 lb (13 654 kg)	29,650 lb (13 449 kg)	26,982 lb (12 239 kg)
40° turn	25,408 lb (11 525 kg)	25,014 lb (11 346 kg)	22,591 lb (10 247 kg)
Lift capacity:			
Full height	22,174 lb (10 058 kg)	22,132 lb (10 039 kg)	20,768 lb (9 420 kg)
Maximum reach	30,053 lb (13 632 kg)	29,983 lb (13 600 kg)	28,526 lb (12 939 kg)
Ground	39,985 lb (18 137 kg)	39,654 lb (17 987 kg)	32,053 lb (14 539 kg)
Breakout force with tilt cylinder	44,311 lb (20 099 kg)	34,348 lb (15 580 kg)	32,227 lb (14 618 kg)
Loader clearance circle with bucket	522.9 in (13 282 mm)	523.6 in (13 299 mm)	525.1 in (13 338 mm)

<b>821F XR</b>	<b>4.25 yd<sup>3</sup> MD Pin On (3.2 m<sup>3</sup>) Bucket with Teeth Only</b>	<b>4.50 yd<sup>3</sup> LD Pin On (3.4 m<sup>3</sup>) Bucket with Bolt-on Edge</b>	<b>3.5 yd<sup>3</sup> GP (2.7 m<sup>3</sup>) on Case Z-Bar Coupler Bucket with Bolt-on Edge</b>
E. Operating height – fully raised with spillguard	232.9 in (5 915 mm)	235.1 in (5 971 mm)	233.7 in (5 935 mm)
F. Hinge pin height – fully raised	179.7 in (4 564 mm)	179.7 in (4 564 mm)	179.6 in (4 562 mm)
G. Overall length – bucket level on ground	327.7 in (8 324 mm)	329.9 in (8 380 mm)	332.6 in (8 449 mm)
Dump angle – fully raised	49°	49°	49°
H. Dump height – fully raised, 45° dump	135.3 in (3 437 mm)	133.9 in (3 402 mm)	132.2 in (3 357 mm)
J. Bucket reach – fully raised, 45° dump	47.2 in (1 198 mm)	49.1 in (1 246 mm)	51.1 in (1 298 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	83.5 in (2 122 mm)	84.9 in (2 156 mm)	86.2 in (2 190 mm)
L. Dig depth – edge below ground	5.8 in (147 mm)	5.6 in (142 mm)	5.6 in (143 mm)
Operating load – ISO	10,770 lb (4 885 kg)	10,617 lb (4 816 kg)	9,550 lb (4 332 kg)
Operating load – SAE	10,080 lb (4 572 kg)	9,936 lb (4 507 kg)	8,911 lb (4 042 kg)
Maximum material density – ISO	2,700 lb/yd <sup>3</sup> (1 602 kg/m <sup>3</sup> )	2,395 lb/yd <sup>3</sup> (1 421 kg/m <sup>3</sup> )	2,776 lb/yd <sup>3</sup> (1 647 kg/m <sup>3</sup> )
Maximum material density – SAE	2,527 lb/yd <sup>3</sup> (1 499 kg/m <sup>3</sup> )	2,242 lb/yd <sup>3</sup> (1 330 kg/m <sup>3</sup> )	2,591 lb/yd <sup>3</sup> (1 537 kg/m <sup>3</sup> )
Tipping load – ISO:			
Straight	25,122 lb (11 395 kg)	24,778 lb (11 239 kg)	22,485 lb (10 199 kg)
40° turn	21,539 lb (9 770 kg)	21,235 lb (9 632 kg)	19,101 lb (8 664 kg)
Tipping load – SAE:			
Straight	24,057 lb (10 912 kg)	23,726 lb (10 762 kg)	21,504 lb (9 754 kg)
40° turn	20,159 lb (9 144 kg)	19,870 lb (9 013 kg)	17,822 lb (8 084 kg)
Lift capacity:			
Full height	20,322 lb (9 218 kg)	20,283 lb (9 200 kg)	18,927 lb (8 585 kg)
Maximum reach	25,712 lb (11 663 kg)	25,633 lb (11 627 kg)	24,149 lb (10 954 kg)
Ground	30,402 lb (13 790 kg)	30,091 lb (13 649 kg)	27,992 lb (12 697 kg)
Breakout force with tilt cylinder	45,003 lb (20 413 kg)	34,893 lb (15 827 kg)	32,745 lb (14 853 kg)
Loader clearance circle with bucket	542.4 in (13 776 mm)	543.3 in (13 799 mm)	545.1 in (13 846 mm)

<b>821F</b>	<b>Z-Bar/XR</b>	<b>Z-Bar/XR</b>	<b>Z-Bar/XR</b>
Maximum rollback:			
Ground	42°/38°	41°/37°	41°/37°
Carry position	44°/43°	44°/43°	44°/43°
@ Maximum reach	54°/53°	54°/53°	54°/53°
@ Full height	59°/60°	59°/60°	59°/60°
Maximum grading angle with bucket – back dragging	60°/63°	60°/63°	61°/63°
SAE bucket capacity – struck	3.4 yd <sup>3</sup> (2.63 m <sup>3</sup> )	3.8 yd <sup>3</sup> (2.89 m <sup>3</sup> )	2.9 yd <sup>3</sup> (2.20 m <sup>3</sup> )
Heaped	4.0 yd <sup>3</sup> (3.05 m <sup>3</sup> )	4.4 yd <sup>3</sup> (3.39 m <sup>3</sup> )	3.4 yd <sup>3</sup> (2.63 m <sup>3</sup> )
Bucket width – outside	119.9 in (3 046 mm)	119.3 in (3 030 mm)	119.3 in (3 030 mm)
Bucket weight	3,486 lb (1 581 kg)	3,508 lb (1 591 kg)	4,808 lb (2 181 kg)

**PERFORMANCE DATA**

<b>821F Z-Bar*</b>	<b>3.5 yd<sup>3</sup> GP (2.7 m<sup>3</sup>) on Case Z-Bar Coupler Bucket with Teeth Only</b>	<b>3.5 yd<sup>3</sup> CB on CNH Z-bar Coupler (ACS Compatible) Bucket with Bolt-on Edge</b>	<b>3.5 yd<sup>3</sup> CB on CNH Z-bar Coupler (ACS Compatible) Bucket with Teeth Only</b>
E. Operating height – fully raised with spillguard	216.3 in (5 494 mm)	214.2 in (5 441 kg)	214.2 in (5 441 mm)
F. Hinge pin height – fully raised	162.2 in (4 121 mm)	162.2 in (4 121 mm)	162.2 in (4 121 mm)
G. Overall length – bucket level on ground	319.6 in (8 118 mm)	310.9 in (7 896 mm)	316.8 in (8 047 mm)
Dump angle – fully raised	55°	55°	55°
H. Dump height – fully raised, 45° dump	110.8 in (2 815 mm)	116.5 in (2 958 mm)	112.6 in (2 859 mm)
J. Bucket reach – fully raised, 45° dump	51.1 in (1 299 mm)	44.5 in (1 130 mm)	48.9 in (1 241 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	71.3 in (1 810 mm)	67.5 in (1 714 mm)	69.9 in (1 776 mm)
L. Dig depth – edge below ground	3.2 in (81 mm)	3.1 in (80 mm)	3.3 in (84 mm)
Operating load – ISO	12,394 lb (5 622 kg)	12,375 lb (5 613 kg)	12,580 lb (5 706 kg)
Operating load – SAE	11,477 lb (5 206 kg)	11,455 lb (5 196 kg)	11,647 lb (5 283 kg)
Maximum material density – ISO	3,868 lb/yd <sup>3</sup> (2 295 kg/m <sup>3</sup> )	3,639 lb/yd <sup>3</sup> (2 159 kg/m <sup>3</sup> )	3,926 lb/yd <sup>3</sup> (2 329 kg/m <sup>3</sup> )
Maximum material density – SAE	3,582 lb/yd <sup>3</sup> (2 125 kg/m <sup>3</sup> )	3,369 lb/yd <sup>3</sup> (1 999 kg/m <sup>3</sup> )	3,636 lb/yd <sup>3</sup> (2 157 kg/m <sup>3</sup> )
Tipping load – ISO:			
Straight	28,812 lb (13 069 kg)	28,801 lb (13 064 kg)	29,249 lb (13 267 kg)
40° turn	24,789 lb (11 244 kg)	24,749 lb (11 226 kg)	25,161 lb (11 413 kg)
Tipping load – SAE:			
Straight	27,368 lb (12 414 kg)	27,357 lb (12 409 kg)	27,780 lb (12 601 kg)
40° turn	22,955 lb (10 412 kg)	22,910 lb (10 392 kg)	23,296 lb (10 567 kg)
Lift capacity:			
Full height	20,973 lb (9 513 kg)	20,774 lb (9 423 kg)	20,939 lb (9 498 kg)
Maximum reach	28,746 lb (13 039 kg)	28,565 lb (12 957 kg)	28,746 lb (13 039 kg)
Ground	33,477 lb (15 185 kg)	34,749 lb (15 762 kg)	36,502 lb (16 557 kg)
Breakout force with tilt cylinder	34,480 lb (15 640 kg)	33,982 lb (15 414 kg)	36,453 lb (16 535 kg)
Loader clearance circle with bucket	529.4 in (13 446 mm)	523.7 in (13 301 mm)	527.7 in (13 404 mm)

<b>821F XR</b>	<b>3.5 yd<sup>3</sup> GP (2.7 m<sup>3</sup>) on Case Z-Bar Coupler Bucket with Teeth Only</b>	<b>3.5 yd<sup>3</sup> CB on CNH Z-bar Coupler (ACS Compatible) Bucket with Bolt-on Edge</b>	<b>3.5 yd<sup>3</sup> CB on CNH Z-bar Coupler (ACS Compatible) Bucket with Teeth Only</b>
E. Operating height – fully raised with spillguard	233.7 in (5 936 mm)	231.6 in (5 882 mm)	231.6 in (5 882 mm)
F. Hinge pin height – fully raised	179.6 in (4 563 mm)	179.6 in (4 562 mm)	179.6 in (4 562 mm)
G. Overall length – bucket level on ground	338.7 in (8 604 mm)	330.0 in (8 382 mm)	335.9 in (8 532 mm)
Dump angle – fully raised	49°	49°	49°
H. Dump height – fully raised, 45° dump	128.2 in (3 256 mm)	133.8 in (3 399 mm)	130.0 in (3 301 mm)
J. Bucket reach – fully raised, 45° dump	55.6 in (1 412 mm)	48.9 in (1 243 mm)	53.3 in (1 354 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	88.9 in (2 259 mm)	84.7 in (2 152 mm)	87.4 in (2 221 mm)
L. Dig depth – edge below ground	5.8 in (148 mm)	5.8 in (147 mm)	6.0 in (151 mm)
Operating load – ISO	9,714 lb (4 406 kg)	9,667 lb (4 385 kg)	9,833 lb (4 460 kg)
Operating load – SAE	9,070 lb (4 114 kg)	9,024 lb (4 093 kg)	9,182 lb (4 165 kg)
Maximum material density – ISO	3,032 lb/yd <sup>3</sup> (1 799 kg/m <sup>3</sup> )	2,843 lb/yd <sup>3</sup> (1 687 kg/m <sup>3</sup> )	3,069 lb/yd <sup>3</sup> (1 821 kg/m <sup>3</sup> )
Maximum material density – SAE	2,832 lb/yd <sup>3</sup> (1 680 kg/m <sup>3</sup> )	2,655 lb/yd <sup>3</sup> (1 575 kg/m <sup>3</sup> )	2,865 lb/yd <sup>3</sup> (1 700 kg/m <sup>3</sup> )
Tipping load – ISO:			
Straight	22,827 lb (10 354 kg)	22,758 lb (10 323 kg)	23,115 lb (10 485 kg)
40° turn	19,425 lb (8 811 kg)	19,335 lb (8 770 kg)	19,667 lb (8 921 kg)
Tipping load – SAE:			
Straight	21,839 lb (9 906 kg)	21,768 lb (9 874 kg)	22,115 lb (10 031 kg)
40° turn	18,140 lb (8 228 kg)	18,047 lb (8 186 kg)	18,364 lb (8 330 kg)
Lift capacity:			
Full height	19,132 lb (8 678 kg)	18,931 lb (8 587 kg)	19,094 lb (8 661 kg)
Maximum reach	24,374 lb (11 056 kg)	24,198 lb (10 976 kg)	24,385 lb (11 061 kg)
Ground	28,338 lb (12 854 kg)	28,305 lb (12 839 kg)	28,614 lb (12 979 kg)
Breakout force with tilt cylinder	35,027 lb (15 888 kg)	34,524 lb (15 660 kg)	37,027 lb (16 795 kg)
Loader clearance circle with bucket	550.0 in (13 970 mm)	543.3 in (13 801 mm)	548.0 in (13 920 mm)

<b>821F</b>	<b>Z-Bar/XR</b>	<b>Z-Bar/XR</b>	<b>Z-Bar/XR</b>
Maximum rollback:			
Ground	42°/38°	42°/38°	42°/38°
Carry position	44°/43°	44°/43°	44°/43°
@ Maximum reach	54°/53°	54°/53°	54°/53°
@ Full height	59°/60°	59°/60°	59°/60°
Maximum grading angle with bucket – back dragging	62°/65°	60°/63°	61°/64°
SAE bucket capacity – struck	2.7 yd <sup>3</sup> (2.09 m <sup>3</sup> )	2.9 yd <sup>3</sup> (2.20 m <sup>3</sup> )	2.7 yd <sup>3</sup> (2.10 m <sup>3</sup> )
Heaped	3.2 yd <sup>3</sup> (2.45 m <sup>3</sup> )	3.4 yd <sup>3</sup> (2.60 m <sup>3</sup> )	3.2 yd <sup>3</sup> (2.45 m <sup>3</sup> )
Bucket width – outside	119.9 in (3 046 mm)	119.3 in (3 030 mm)	119.9 in (3 046 mm)
Bucket weight	4,610 lb (2 091 kg)	4,815 lb (2 184 kg)	4,665 lb (2 116 kg)

## PERFORMANCE DATA

821F	Z-Bar*		XR
	3.0 yd <sup>3</sup> 4-IN-1® (2.3 m <sup>3</sup> ) on Case Z-Bar Coupler Bucket Only	3.0 yd <sup>3</sup> 4-IN-1® (2.3 m <sup>3</sup> ) on Case Z-Bar Coupler Bucket Only	
E. Operating height – fully raised with spillguard	217.2 in (5 516 mm)	234.5 in (5 957 mm)	
F. Hinge pin height – fully raised	162.2 in (4 120 mm)	179.6 in (4 561 mm)	
G. Overall length – bucket level on ground	309.5 in (7 861 mm)	328.4 in (8 342 mm)	
Dump angle – fully raised	55°	49°	
H. Dump height – fully raised, 45° dump	116.9 in (2 969 mm)	134.3 in (3 410 mm)	
J. Bucket reach – fully raised, 45° dump	41.8 in (1 061 mm)	46.2 in (1 174 mm)	
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	65.0 in (1 650 mm)	82.2 in (2 087 mm)	
L. Dig depth – edge below ground	4.6 in (116 mm)	7.2 in (183 mm)	
Operating load – ISO	11,449 lb (5 193 kg)	8,779 lb (3 982 kg)	
Operating load – SAE	10,545 lb (4 783 kg)	8,146 lb (3 695 kg)	
Maximum material density – ISO	3,774 lb/yd <sup>3</sup> (2 239 kg/m <sup>3</sup> )	2,894 lb/yd <sup>3</sup> (1 717 kg/m <sup>3</sup> )	
Maximum material density – SAE	3,476 lb/yd <sup>3</sup> (2 062 kg/m <sup>3</sup> )	2,685 lb/yd <sup>3</sup> (1 593 kg/m <sup>3</sup> )	
Tipping load – ISO:			
Straight	26,903 lb (12 203 kg)	20,946 lb (9 501 kg)	
40° turn	22,897 lb (10 386 kg)	17,558 lb (7 964 kg)	
Tipping load – SAE:			
Straight	25,483 lb (11 559 kg)	19,974 lb (9 060 kg)	
40° turn	21,092 lb (9 567 kg)	16,290 lb (7 389 kg)	
Lift capacity:			
Full height	19,048 lb (8 640 kg)	17,207 lb (7 805 kg)	
Maximum reach	26,826 lb (12 168 kg)	22,461 lb (10 188 kg)	
Ground	32,708 lb (14 836 kg)	26,546 lb (12 041 kg)	
Breakout force with tilt cylinder	34,893 lb (15 827 kg)	35,424 lb (16 068 kg)	
Maximum rollback:			
Ground	42°	38°	
Carry position	44°	43°	
@ Maximum reach	54°	53°	
@ Full height	59°	60°	
Maximum grading angle with bucket – back dragging	60°	63°	
SAE bucket capacity – struck	2.6 yd <sup>3</sup> (1.98 m <sup>3</sup> )	2.6 yd <sup>3</sup> (1.98 m <sup>3</sup> )	
Heaped	3.0 yd <sup>3</sup> (2.32 m <sup>3</sup> )	3.0 yd <sup>3</sup> (2.32 m <sup>3</sup> )	
Bucket width – outside	119.3 in (3 030 mm)	119.3 in (3 030 mm)	
Bucket weight	6,534 lb (2 964 kg)	6,534 lb (2 964 kg)	
Loader clearance circle with bucket	523.0 in (13 285 mm)	542.6 in (13 781 mm)	

NOTE: \*Z-Bar performance data shown with full counterweight.

\*\*XT lift arm with buckets for ACS Pro Series 2000® size 30 HD coupler.

\*\*\*XT lift arm with bucket for Case coupler.

Performance data unit equipped with 20.5R25 Michelin XHA TL tires, ROPS cab with heater and air conditioner, full counterweight, standard batteries, front and rear fenders, full fuel and 175 lb (75 kg) operator. Specifications per SAE J732, J1234, J695, J742, and J818.

## 72 INCH FORKS ON CASE Z-BAR COUPLER

821F	Z-Bar	XR
<b>Dimensional</b>		
Fork length – Vertical front surface of tine to fork tip	72.0 in (1 829 mm)	72.0 in (1 829 mm)
Fork width – max. – Outside to outside of tine	96.0 in (2 438 mm)	96.0 in (2 438 mm)
Fork clearance @ full height – Ground to top of tine	152.0 in (3 861 mm)	169.4 in (4 302 mm)
Fork reach @ full height – Vertical front surface of tine to front of tire	33.9 in (862 mm)	38.3 in (974 mm)
Fork clearance @ max. reach – Ground to top of tine	70.6 in (1 794 mm)	70.6 in (1 792 mm)
Fork reach – max. – Vertical front surface of tine to front of tire	67.9 in (1 724 mm)	83.7 in (2 126 mm)
Fork reach @ ground – Vertical front surface of tine to front of tire	43.5 in (1 105 mm)	62.9 in (1 598 mm)
Fork load center – Vertical front surface of tine to load CG	36.0 in (914 mm)	36.0 in (914 mm)
<b>Operational</b>		
Fork attachment weight – includes coupler	4,162 lb (1 888 kg)	4,162 lb (1 888 kg)
Operating load – per EN 474-3:		
Rough terrain	9,374 lb (4 252 kg)	7,826 lb (3 550 kg)
Firm and level ground	12,498 lb (5 669 kg)	10,435 lb (4 733 kg)
Tipping load straight ISO	18,510 lb (8 396 kg)	15,622 lb (7 086 kg)
Tipping load @ 40° turn ISO	15,624 lb (7 087 kg)	13,043 lb (5 916 kg)
Operating weight	39,595 lb (17 960 kg)	40,437 lb (18 342 kg)



## STANDARD EQUIPMENT

### OPERATOR ENVIRONMENT

See page 1

### ENGINE

Case/FPT F4HFE613

Tier 4 Final Certified

Selectable work modes:

Maximum Power

Standard Power

Economy Power

Auto Power

Turbocharger

Charge air cooling

Automatic belt tensioner

Integral engine oil cooling

Fuel filter with water trap

Dual-element dry-type air cleaner

Hydraulic-driven cooling fan

Air-cooled radiator

Mid-mounted cooling module

Common rail electronic fuel injection

### DRIVETRAIN

4-wheel drive

4F/3R Selectable autoshift/manual shift transmission

Electronic Control Module – programmable, computer controlled proportional shifting with programmable gear selection

Onboard diagnostics

Single lever electronic shift control

F/N/R switch in loader control handle

Downshift button

### DRIVETRAIN (CONTINUED)

Torque converter

Limited-slip differentials – Z-Bar

Heavy-duty axles – XR:

Larger size rear axle with automatic hydraulically-actuated differential lock on front axle, open differential on rear axle.

Recommended for applications on hard surfaces or with solid tires.

Outboard planetary axles

Transmission oil cooler

Brake pedal transmission disconnect – declutch

Hydraulic wet disc brakes

Spring-applied hydraulic release parking brake

Limp-Home Mode

Greasable rear axle trunnion

3-piece rims

### HYDRAULICS

2-function loader valve with joystick control

Low-effort steering

Hydraulic driven cooling fan

Diagnostic quick couplers

Split flange hydraulic connections – 1 in or greater

### LOADER

See page 2 – Operating weight, Other specifications

### ELECTRICAL

Alternator and voltage regulator

Electrical disconnect

120 amp alternator

### ELECTRICAL (CONTINUED)

(2) 700 CCA 12-volt batteries

Electric starter

Lights:

- 2 Front and 2 rear halogen flood lights
- 2 Front driving headlights – high/low beam with integrated turn signals
- 2 LED stop/tail lights with integrated turn signals

Key start/stop switch

Backup alarm

Centrally located fuse box with all electrical circuits protected

Remote jump start receptacle

### TELEMATICS

CASE SiteWatch™ Telematics – includes hardware and a 3-yr Advanced data subscription

### OTHER

Electric hood lift

Front and rear fenders, partial coverage

Heavy counterweight

Drawbar hitch

Articulation locking bar

Lift arm locking bar

Lift and tie-down points – front/rear

Remote drain points

Grouped remote-mounted ecology drains:

- Engine oil
- Engine coolant
- Hydraulic oil

## OPTIONAL EQUIPMENT

### OPERATOR ENVIRONMENT

Heated cloth-covered air suspension seat

Cloth mechanical suspension seat

Headrest

3 in (76 mm) retractable seat belt

Sound Shield noise suppression package

Cab with heater only – no AC

Radio-ready – 12 or 24-volt with auxiliary power – 12-volt

AM/FM stereo radio

Cab convenience package: ashtray, 24V cigar lighter and cell phone holder

Rotating beacon

Right hand brake pedal

External rearview mirrors

External rearview mirrors, heated

In-cab accessory mount – no rear view camera

Rear view camera with accessory mount

Extra front-facing work lights

### HYDRAULICS

Auxiliary hydraulics

Ride Control

Secondary steering

Joystick steering with and without secondary steering

2-function loader valve with single access control

### HYDRAULICS (CONTINUED)

3-function loader valve with 3 lever control or with joystick plus lever

4-function loader valve with joystick and 2 lever control

### DRIVETRAIN

5F/3R Autoshift/manual shift transmission, lockup torque converter, PowerInch de-clutch

Heavy-duty axles – Z-Bar:

Larger size rear axle with automatic hydraulically-actuated differential lock on front axle, open differential on rear axle. Recommended for applications on hard surfaces or with solid tires.

Cold weather package:

Heavy-duty (2) 950 CCA 12V batteries

Grid heater

Fuel heater

Hydraulic oil cooler bypass

Low temperature hydraulic oil

Fast-warm hydraulic valve

### TIRES

23.5 x 25 L2 bias – dirt/traction

23.5 x 25 L3 bias – rock

23.5 R25 L2 radial – dirt/traction

23.5 R25 L3 radial – rock

23.5 R25 radial Michelin SnoPlus

Spare wheels and tires

Axle oscillation stops

### LOADER

XR extended reach version

Attachment auxiliary hydraulics

Coupler systems – JRB or ACS compatible

Buckets – see pages 4 through 7

4 – 1 clamp buckets

Forks

### ADVANCED ENGINE AIR FILTRATION

Variable speed hydraulic reversing fan

Full view air pre-cleaner

Sy-Klone® ejective air pre-cleaner

### OTHER

Additional RH steps and platform with standard or wide fenders

Side guards for rear frame

Tool box – ground level access

Light counterweight – Z-Bar

Fire extinguisher

License plate bracket

12.4 mph (20 kph) maximum speed control

Special paint

Skid plate and transmission

**CASE** Customer Assistance  
1866-54-CASE6

NOTE: All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

NOTE: All engines meet current EPA emissions requirements.

IMPORTANT: Case Construction Inc. reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Case Construction Inc. does not warrant the safety or reliability of attachments from other manufacturers.

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821F • Page 9 of 9



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**CASE**  
CONSTRUCTION

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## ENGINE

Model	FPT F4HFE413P Tier 4 Interim Certified
Cylinders	4
Displacement	275 in <sup>3</sup> (4.5 L)
Fuel injection	Common rail
Fuel	#2 Diesel
Fuel filter	Spin-on w/ in line strainer
Air intake	Cross-flow
Cooling	Liquid
Engine speeds	RPM
High idle – no load	2220 +/- 50
Rated – full load	2000
Low idle	1100 +/- 25
Horsepower @ 2220 RPM – SAE J1349:	
Net	112 hp (84 kW)
Gross	120 hp (90 kW)

## Engine lubrication:

Pump	Deep sump plate cooler w/ pressurized under-piston nozzles
Pump operating angle ratings:	
Side-to-side	35°
Fore and aft	45°
Oil filtration	Replaceable, spin-on full flow cartridge
Radiator:	
Fins per inch	8.5
Fan:	
Diameter	21.6 in (550 mm)
Ratio	1.1:1

## DRIVETRAIN

Dual path hydrostatic:	
Pump	Variable axial piston
Motor	Variable bent axis piston
Max. drawbar pull*	42,813 lb (190.4 kN)
Transmission	Single lever control electronic straight tracking
Oil filter	4-micron, spin-on, replaceable
Travel speeds*:	
Forward	5.2 mph (8.4 kph)
Reverse	5.2 mph (8.4 kph)
Parking brakes	Heavy-duty, spring-applied, hydraulic release disc
Steering brakes	Hydrostatic
Final drive	2 helical gear reduction to planetary output
Ratio	62.4:1
Transmission cooling:	
Type	Oil to water
Core size	417 in <sup>2</sup> (0.27 m <sup>2</sup> )

NOTE: \*Measured using standard track chain. Increase travel speeds by 4% and reduce drawbar pull by 4% w/ the optional CELT track chain.

## ELECTRICAL

Alternator	120 amp
Batteries	(2) 12-volt, low-maintenance 925 cold-cranking amps @ -4° F (-20° C)
Electrical system	24 Volts

## OPERATOR ENVIRONMENT

Optional ROPS cab; Single lever control for speed, steering and direction; Cloth air suspension seat w/ back adjustment; Retractable 2 in (51 mm) seat belt; Adjustable armrest; Two foot rest; Rearview mirror; Two door windshield wipers; Dome light; 12-volt accessory outlet; Headliner; Floor mat.

## Warning lights:

Air filter; Alternator; Diagnostic fault indicator; Engine coolant temperature; Engine oil pressure; Hydraulic filter; Low fuel level; Park brake engaged; Service soon indicator; Transmission filter; Transmission charge pressure; Transmission temperature.

## Gauges:

Battery voltage; Fuel level; Digital hour meter/tachometer/diagnostic/service reminder; Transmission oil temperature; Transmission speed indicator; Water temperature; Diesel Exhaust Fluid (DEF) level.

## Audible warnings:

Engine coolant temperature; Engine oil pressure; Low fuel level; Transmission charge pressure; Temperature/hydraulic temperature.

## OPERATING WEIGHT

Long track	21,560 lb (9 779 kg)
Wide track	22,330 lb (10 129 kg)
Low ground pressure	22,830 lb (10 355 kg)

## Add-on weights:

Drawbar	84 lb (38 kg)
Ripper	1,400 lb (635 kg)
Winch	1,001 lb (454 kg)
Front counterweight	827 lb (375 kg)
Cab	560 lb (254 kg)

## CELT chain:

18 in (457 mm)	141 lb (64 kg)
20 in (508 mm)	128 lb (58 kg)
24 in (610 mm)	141 lb (64 kg)
28 in (711 mm)	141 lb (64 kg)

Center rock guard	340 lb (154 kg)
-------------------	-----------------

Sweeps	139 lb (63 kg)
--------	----------------

NOTE: Unit equipped w/ ROPS, full fuel tank, 170 lb (77 kg) operator, drawbar, side shield, track guides, backup alarm, horn and lights.

## HYDRAULICS

Pump flow @ 2000 RPM @ 3,000 psi (207 bar):	20.3 gpm (78.8 L/min)
Lift cylinder	Two (2)
Bore diameter	3.50 in (88.9 mm)
Rod diameter	1.75 in (44.4 mm)
Stroke	14.26 in (362.1 mm)
Angle cylinder	Two (2)
Bore diameter	3.50 in (88.9 mm)
Rod diameter	1.75 in (44.4 mm)
Stroke	14.56 in (369.9 mm)
Tilt cylinder	One (1)
Bore diameter	3.50 in (88.9 mm)
Rod diameter	1.75 in (44.4 mm)
Stroke	5.39 in (137.0 mm)

## SERVICE CAPACITIES

Fuel tank	50.0 gal (189.0 L)
Engine oil w/ filter	13.0 qt (12.3 L)
Engine oil w/o filter	12.2 qt (11.5 L)
Engine cooling system	5.75 gal (21.8 L)
Hydraulic reservoir	23.75 gal (90.0 L)
Final drive – per side	15.0 qt (14.2 L)
Track rollers – each	0.26 qt (0.25 L)
Front idlers – each	0.52 qt (0.49 L)
Carrier rollers – each	0.25 qt (0.24 L)
DEF tank	12.0 gal (45.4 L)

## OTHER SPECIFICATIONS

### Undercarriage:

Track adjustment	Hydraulic
Frame	Rigid suspension
Length of track on ground	93 in (2 352 mm)
Track link pitch	6.73 in (171 mm)
Track shoe height	2.06 in (52 mm)
Pin diameter	1.32 in (33 mm)
Bushing diameter:	
CLT track	2.24 in (57 mm)
CELT track	3.0 in (76 mm)
Track shoes per side	40
Track rollers per side	7
Carrier rollers per side	1
Track roller rail diameter	7.48 in (190 mm)

### Track on ground:

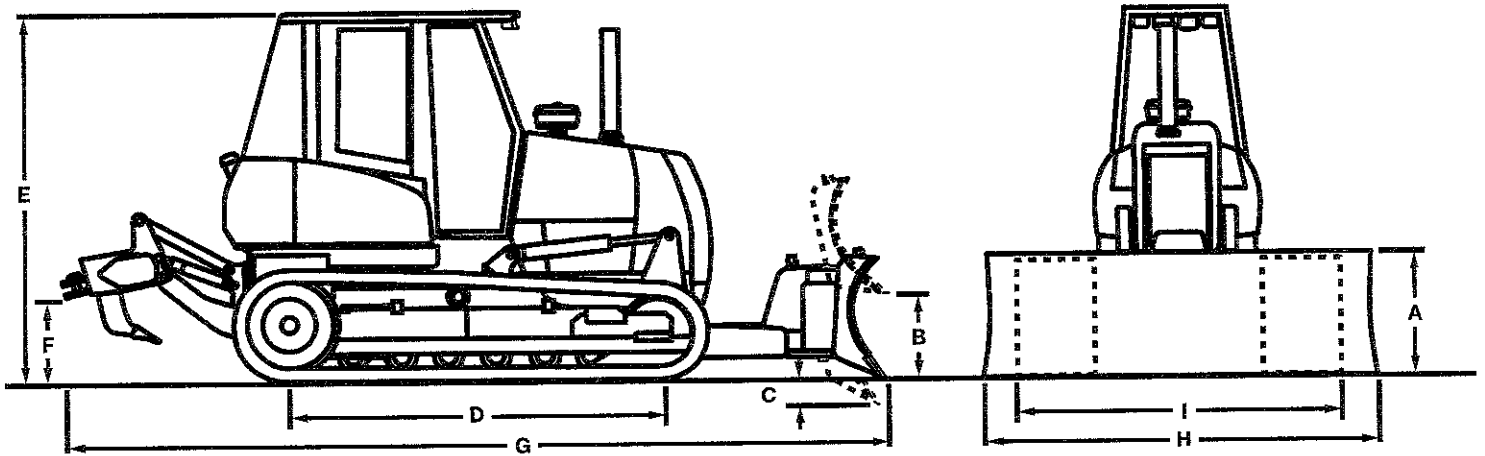
Shoe area:	
18 in (457 mm)	3,334 in <sup>2</sup> (21 507 cm <sup>2</sup> )
20 in (508 mm)	3,704 in <sup>2</sup> (23 896 cm <sup>2</sup> )
24 in (610 mm)	4,448 in <sup>2</sup> (28 694 cm <sup>2</sup> )
28 in (711 mm)	5,184 in <sup>2</sup> (33 445 cm <sup>2</sup> )

## OTHER SPECIFICATIONS (CONTINUED)

Track:	
Long track:	
18 in (457 mm) closed grousers and CLT	
18 in (457 mm) open grousers and CELT	
20 in (508 mm) closed grousers and CLT	
20 in (508 mm) open grousers and CELT	
Wide track:	
20 in (508 mm) closed grousers and CLT	
20 in (508 mm) open grousers and CELT	
24 in (610 mm) closed grousers and CLT	
24 in (610 mm) open grousers and CELT	

Track (continued):	
Low ground pressure:	
28 in (711 mm) closed grousers and CLT	
28 in (711 mm) open grousers and CELT	
Blade:	
Variable blade pitch	56°+/- 4°
Lift speed – per second	19.7 in (500 mm)
Cutting edge	
Width	Reversible, replaceable 8.0 in (203 mm)
Thickness	0.75 in (19 mm)

Ripper:	
Max. penetration	14.2 in (361 mm)
Width	71.1 in (1 806 mm)
Cut width	69.5 in (1 765 mm)
Max. ground clearance	17.7 in (450 mm)
Max. number of shanks	3
Tooth spacing:	
with 3 teeth	30.9 in (785 mm)
Hydraulic cylinder	
Diameter	Double-acting 3.9 in (99.1 mm)
Stroke	8.4 in (213 mm)
Rod	1.75 in (44.5 mm)



Line drawings are for illustrative purpose only and may not be exact representation of unit.

## DIMENSIONS

	Long Track (LT)		Wide Track (WT)		Low Ground Pressure (LGP)
Blade width	104 in (2 640 mm)	112 in (2 845 mm)	112 in (2 845 mm)	120 in (3 048 mm)	124 in (3 150 mm)
SAE blade capacity	2.16 yd <sup>3</sup> (1.65 m <sup>3</sup> )	2.35 yd <sup>3</sup> (1.80 m <sup>3</sup> )	2.35 yd <sup>3</sup> (1.80 m <sup>3</sup> )	2.53 yd <sup>3</sup> (1.93 m <sup>3</sup> )	2.62 yd <sup>3</sup> (2.00 m <sup>3</sup> )
A. Blade height	36.0 in (910 mm)	36.0 in (910 mm)	36.0 in (910 mm)	36.0 in (910 mm)	36.0 in (910 mm)
B. Blade lift above ground	34.4 in (874 mm)	34.4 in (874 mm)	34.4 in (874 mm)	34.4 in (874 mm)	34.4 in (874 mm)
C. Blade depth below ground	19.0 in (483 mm)	19.0 in (483 mm)	19.0 in (483 mm)	19.0 in (483 mm)	19.0 in (483 mm)
Blade angle both directions	25°	25°	25°	25°	25°
Blade tilt, each end – up to 8.3°	8.9 in (226 mm)	8.9 in (226 mm)	8.9 in (226 mm)	9.49 in (241 mm)	9.49 in (241 mm)
Track gauge	62.0 in (1.57 m)	62.0 in (1.57 m)	70.0 in (1.78 m)	70.0 in (1.78 m)	70.0 in (1.78 m)
Maximum shoe width	20.0 in (508 mm)	20.0 in (508 mm)	24.0 in (610 mm)	24.0 in (610 mm)	28.0 in (711 mm)
D. Length of track on ground:					
CLT	93.0 in (2.35 m)	93.0 in (2.35 m)	93.0 in (2.35 m)	93.0 in (2.35 m)	93.0 in (2.35 m)
Area of track on ground	3,704 in <sup>2</sup> (2.38 m <sup>2</sup> )	3,704 in <sup>2</sup> (2.38 m <sup>2</sup> )	4,448 in <sup>2</sup> (2.87 m <sup>2</sup> )	4,448 in <sup>2</sup> (2.87 m <sup>2</sup> )	5,186 in <sup>2</sup> (3.34 m <sup>2</sup> )
Ground pressure	5.3 psi (0.37 bar)	5.3 psi (0.37 bar)	4.5 psi (0.31 bar)	4.5 psi (0.31 bar)	4.0 psi (0.28 bar)
E. Height to top of cab	9 ft 1 in (2 769 mm)	9 ft 1 in (2 769 mm)	9 ft 1 in (2 769 mm)	9 ft 1 in (2 769 mm)	9 ft 1 in (2 769 mm)
with air conditioning	9 ft 2 in (2 794 mm)	9 ft 2 in (2 794 mm)	9 ft 2 in (2 794 mm)	9 ft 2 in (2 794 mm)	9 ft 2 in (2 794 mm)
F. Ground clearance	14.2 in (361 mm)	14.2 in (361 mm)	14.2 in (361 mm)	14.2 in (361 mm)	14.2 in (361 mm)
Length:					
Blade straight with drawbar	14 ft 5 in (4 394 mm)	14 ft 5 in (4 394 mm)	14 ft 5 in (4 394 mm)	14 ft 5 in (4 394 mm)	14 ft 5 in (4 394 mm)
G. Blade straight with ripper	17 ft 2 in (5 232 mm)	17 ft 2 in (5 232 mm)	17 ft 2 in (5 232 mm)	17 ft 2 in (5 232 mm)	17 ft 2 in (5 232 mm)
Width:					
H. Blade straight	8 ft 8 in (2 642 mm)	9 ft 4 in (2 845 mm)	9 ft 4 in (2 845 mm)	10 ft 0 in (3 048 mm)	10 ft 4 in (3 150 mm)
Blade angled	7 ft 8 in (2 337 mm)	8 ft 6 in (2 590 mm)	8 ft 6 in (2 590 mm)	9 ft 3 in (2 820 mm)	9 ft 4 in (2 845 mm)
I. Over track	6 ft 8 in (2 030 mm)	6 ft 8 in (2 030 mm)	7 ft 10 in (2 390 mm)	7 ft 10 in (2 390 mm)	8 ft 2 in (2 490 mm)

NOTE: Ground clearance and overall height dimensions are with the grousers fully penetrated. Add 2.07 in (52.5 mm) if unit is on solid surface.

## STANDARD EQUIPMENT

### OPERATOR ENVIRONMENT

See page 1

### ENGINE

F4HFE413P

Tier 4 Interim Certified

Automatic fan belt tensioner

Integral engine oil cooling

Fuel filter

Dual element air cleaner

120 amp alternator

925 CCA 24-volt battery

Engine side panels

Anti-freeze to -34° F

Pusher fan

### DRIVETRAIN

Dual path infinitely variable, single-lever controlled hydrostatic drive, with electronic straight tracking, power turns and counter-rotation

Final drive:

Triple reduction; helical gear/planetary decelerator with hydrostatic drive retardation

Spring-applied hydraulic release parking brake

### BLADE

52° – 60° variable pitch, with integral adjustment tool

Single lever control for blade lift, angle and tilt

### UNDERCARRIAGE

Hydraulic track adjusters

Easy clean track covers

Case Lubricated Track Chain

Permanently lubricated track and carrier rollers

Track adjuster guard

Track guides – front and rear

Shock resistance idler mounting

### OTHER

Anti-vandalism package

Backup alarm

Horn

Work lights:

2 front

1 rear

Master disconnect switch

Mirror

Pre-cleaner

Front pull hook

Rear transmission guard

### TELEMATICS

CASE SiteWatch™ Telematics – includes hardware and a 3-yr Advanced data subscription

## OPTIONAL EQUIPMENT

### OPERATOR ENVIRONMENT

Cab:

with heat, A/C, defroster, lights

Seat belt – 3 in (76 mm)

Rear wiper for cab

Radio

### HYDRAULICS

4-spool hydraulic valve for field-installed ripper

### REAR MOUNTED EQUIPMENT

Ripper – 5 position with 3 shanks

Hydraulic pump with PTO

Rear tow hook

Drawbar

### BLADES

96 in (2 438 mm)

104 in (2 630 mm)

112 in (2 855 mm)

120 in (3 050 mm)

124 in (3 150 mm)

### GUARDS

Sweeps

Center rock guard

### SCREENS

Radiator brush screen

Sandblast screen

### OTHER

Environmental drains

Case Extended Life Track

Additional work lights

Front counterweight

Blade guidance ready – Trimble

Blade guidance ready – Leica

Blade guidance ready – Topcon

Rearview mirror

Cold start aid – grid heater:  
with dual 12-volt battery



NOTE: All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

NOTE: All engines meet current EPA emissions requirements.

IMPORTANT: Case Construction Equipment Inc. reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Case Construction Equipment Inc. does not warrant the safety or reliability of attachments from other manufacturers.

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850M • Page 3 of 3



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All Case construction equipment is biodiesel ready.

## ENGINE

Model	FPT F5BFL413C
Emissions Certification	Tier 4 Final
Type	Diesel 4-stroke, turbocharged
Cylinders	4
Bore/Stroke	3.90 x 4.33 in (99 x 110 mm)
Displacement	207 in <sup>3</sup> (3.4 L)
Fuel injection	Direct, high pressure common rail – HPCR
Fuel	Diesel
Engine speeds*	RPM
Rated speed – full load	2200
Low idle	900 – 1000
High idle – no load	2330 – 2430
Horsepower @ 2200 RPM:	
Gross	90 hp (67 kW)
Net w/ viscous fan**	89 hp (66 kW)
Net	83 hp (62 kW)
Maximum torque @ 1400 RPM:	
Gross	306 lb-ft (415 N-m)
Net w/ viscous fan	305 lb-ft (413 N-m)
Net	299 lb-ft (405 N-m)
Torque rise at rated speed	43% +/- 5%
Radiator:	
Core type	Square wave
Core size area	486 in <sup>2</sup> (3 145 cm <sup>2</sup> )
Rows of tubes	5
39° fan:	
Style	7 blade suction
Diameter	19.65 in (499 mm)
Ratio	1.1:1
Pump operating angle ratings:	
Side to side	Rated 35°
Fore and aft	Rated 35°
Oil filtration	Replaceable, full flow spin on

NOTE: \*Meets federal emission regulations.

\*\*Viscous fan included w/ Cab  
Convenience package.

## DRIVETRAIN

Transmission – standard:		
4F-4R Power Shuttle Synchromesh		
Transmission manual gear shift, fully synchronized		
Transmission – optional:		
Powershift S-Type, 4F-3R fully synchronized		
Specifications below apply to both Power Shuttle and Powershift S-Type transmission unless otherwise indicated.		
Gear ratios	Forward/Reverse	
1st	5.603/4.643	
2nd	3.481/2.884	
3rd	1.584/1.313	
4th	0.793/0.657*	
Travel speeds	Forward	Reverse
	mph (kph)	mph (kph)
1st	3.8 (6.1)	4.5 (7.3)
2nd	6.1 (9.8)	7.3 (11.7)
3rd	13.1 (21.1)	15.7 (25.3)
4th	24.6 (39.6)	29.4 (47.3)*

NOTE: Travel speeds at 2293 engine RPM specified:  
w/ 19.5 L x 24.0 tires.  
Speeds decrease w/ 17.5 L x 24.0 rear tires.  
\*4R not available on Powershift S-Type.

Torque converter ratio	3.2
Differential lock	On-the-go push-button activation
Front 4WD/Rear axle:	
Differential ratio	2.0/2.5
Planetary hub ratio	6.0/6.4
Total reduction ratio	12.0/16.0
Service brakes:	
Individually applied, power assisted, hydraulically actuated, maintenance-free, self-adjusting, outboard mounted, wet disc, 2 per side.	
Total disc area	384 in <sup>2</sup> (0.25 m <sup>2</sup> )
Parking brakes	Trans Mounted spring-applied hydraulic release – SAHR

## ELECTRICAL

Voltage	12 Volts, negative ground
Alternator	160 amp
Battery	850 cold-cranking amps
Opt. batteries (2)	850 cold-cranking amps
Power plugs (2)	30 amps total

## OPERATOR ENVIRONMENT

ROPS/FOPS certified protective canopy;  
Anti-vandalism cover for dash – w/ canopy only;  
Rear fenders extensions; Coat hook w/ garment  
strap; Interior rearview mirror, convex  
3.54 in (90 mm) wide x 10.83 in (275 mm) high;  
Non-suspension seat – 180° swivel – Vinyl; 2  
in (50 mm) retractable seat belt; Cup holder/  
storage tray mounted on left-hand fender;  
Right-hand storage compartment w/ lid.

### Gauges:

Engine water temperature; Converter oil  
temperature; Fuel level; Tachometer/  
hourmeter; DEF level.

### Warning lights:

Air cleaner restriction; Alternator; A/C high  
pressure; Cold start; Engine oil pressure  
low; Hydraulic oil filter bypass; Parking brake  
engagement; Low fuel; Water in fuel;  
Low DEF.

### Audible alarms:

Coolant temperature; Engine oil pressure;  
Parking brake engagement; Shuttle  
engagement/seat position; Backup,  
Converter temperature; Low DEF fluid.

Hom Dual switched front and rear

## OPERATING WEIGHT

### Configuration 1 – SAE Transport:

Standard dipper, 82 in (2.08 m) LL bucket;  
2WD; 19.5 L – 24 rear tires, 24 in HD backhoe  
bucket; flip over stabilizer pads; 1 door cab w/  
heat and A/C; cloth mechanical suspension  
seat; small front counter weight; S-type  
powershift transmission; no operator; fully  
fueled. 16,589 lb (7 525 kg)

### Configuration 2 – SAE Transport:

No Operator; One door cab; 4WD; AC; Ehoe;  
SPS Shift; Wobble Stick Mechanical BH  
Controls; Front Counterweight 4 Speed Manual  
Transmission; Boom Guard; Extendahoe®; 82”  
GP Loader Bucket Galaxy 12-16.5 @ 49 psi  
Front Tires; Solideal 19.5 L – 24 @ 29 psi Rear  
Tires. 17,751 lb (8 052 kg)

### Add-on weights:

Cab-over canopy	309 lb (140 kg)
Fabricated Stabilizer pads	141 lb (64 kg)
Counterweights	700 lb (318 kg)
Extendahoe®	285 lb (129 kg)
4WD w/ driveshaft guard	283 lb (128 kg)

## HYDRAULICS

Pump:	Parker P330 Single Section Gear Pump
Main relief pressure:	Standard 3,350 +/- 50 psi (231 +/- 3.5 bar)

Filtration:  
7-micron, return line, full flow, spin on element, condition indicator light for filter.

Oil cooler Heavy-duty

Loader flow @ rated engine RPM:  
28.5 gpm @ 3,350 psi  
(108 L/min @ 231 bar)

Loader control valve:  
Two or three-spool open center monoblock valve. Two and three-spool valves have a single lever manual control for lift and tilt functions. Three-spool valve uses a proportional Electro-Hydraulic control for the auxiliary function. The lift lever has a positive hold "Float" position and a "return-to-dig" feature. System Main Relief valve is single stage w/ Manual Backhoe Controls, dual stage relief valve w/ Pilot Backhoe Controls.

Loader auxiliary hydraulics proportional thumb switch w/ detent on loader control handle.

Loader auxiliary hydraulics w/ full available flow:  
0 – 28.5 gpm (0 – 108 L/min)

Backhoe flow @ rated engine RPM:  
28.5 gpm @ 3,350 psi  
(108 L/min @ 231 bar)

Manual backhoe control valve:  
Six or seven-spool monoblock open center control valve. Features "Pro-Control" which includes custom designed spools for each individual function along w/ "swing cushioning" valve for zero-wag swing control. Basic control valve has an open center parallel circuit for all functions.

Pilot backhoe control valve:  
Six, seven or eight-spool sectional closed center control valve. Features "Pro-Control" which includes custom designed spools for each individual function along w/ "swing cushioning" valve for zero-wag swing control. Basic control valve is closed center, w/ circuits in parallel w/ a post-compensated, flow sharing feature for simultaneous operation of all circuits.

### Unidirectional auxiliary hydraulics:

Unidirectional hydraulic valve is equipped w/ an adjustable LS relief valve to control attachment pressure and a 6 position flow control selector for 6 detented, distinct flow settings.

Actuation:  
Manual backhoe controls – cab floor pedal  
Pilot controls – left-hand joystick

### Bidirectional auxiliary hydraulics\*:

Actuation:  
Activate the bidirectional Switch located on the rear console  
Manual shift – bidirectional linkage on far right of backhoe tower  
Pilot controls – left-hand joystick.

NOTE: \*Available w/ Combo Aux. Hyd. option.

## SERVICE CAPACITIES

Fuel tank	35.0 gal (132.0 L)
DEF tank	3.6 gal (13.5 L)
Hydraulic system:	
Total	111 qt (105.0 L)
w/ Extendahoe®	117 qt (110.7 L)
Reservoir w/ filter	55 qt (52.4 L)
Reservoir w/o filter	53 qt (50.5 L)
Transmission – total system:	
2WD Standard	18 qt (17.0 L)
2WD Powershift	23 qt (21.7 L)
4WD Standard	21 qt (19.4 L)
4WD Powershift	22 qt (20.7 L)
Front axle:	
4WD Differential	8.1 qt (7.7 L)
4WD Planetaries – each	0.5 qt (0.5 L)
Rear axle:	
Differential and planetaries	14.4 qt (13.6 L)
Engine oil w/ filter	8.5 qt (8.0 L)
Cooling system:	
w/ heater	19.0 qt (18.0 L)
w/o heater	18.3 qt (17.3 L)
Window washer reservoir	3.0 qt (2.8 L)

## OTHER SPECIFICATIONS

Front tires:  
2WD 11.0 L x 16.0, 10-ply rating  
4WD 12.0 L x 16.5, 8-ply rating

Rear tires:  
2/4WD 19.5 L x 24.0, 10-ply rating  
2/4WD 17.5 L x 24.0, 10-ply rating

Loader:  
Bucket position indicator; Lifting lugs on standard bucket; Single lever control w/ self-leveling and return-to-dig; Hand operated clutch disconnects on loader and shift levers, single lever 4-function loader control: lift, dump, clutch cut-out, differential lock.

### Loader bucket sizes:

Width	Weight	Struck	Heaped
<b>Long Lip Bucket w/o bolt-on edge</b>			
82 in (2.08 m)	683 lb (310 kg)	0.88 yd <sup>3</sup> (0.67 m <sup>3</sup> )	1.03 yd <sup>3</sup> (0.79 m <sup>3</sup> )
93 in (2.36 m)	1,188 lb* (539 kg)	1.10 yd <sup>3</sup> (0.84 m <sup>3</sup> )	1.29 yd <sup>3</sup> (0.99 m <sup>3</sup> )
<b>4 IN 1* Bucket w/ bolt-on edge</b>			
82 in (2.08 m)	1,572 lb* (713 kg)	0.85 yd <sup>3</sup> (0.65 m <sup>3</sup> )	1.05 yd <sup>3</sup> (0.80 m <sup>3</sup> )

NOTE: \*Weight of 4 IN 1\* bucket includes edges, cylinders and tube lines.

## OTHER SPECIFICATIONS (cont.)

### Turning radius\*: Curb to Curb

2WD:  
Brakes on 10 ft 8 in (3.24 m)  
Brakes off 12 ft 4 in (3.76 m)

4WD – engaged:  
Brakes on 11 ft 4 in (3.45 m)  
Brakes off 13 ft 10 in (4.21 m)

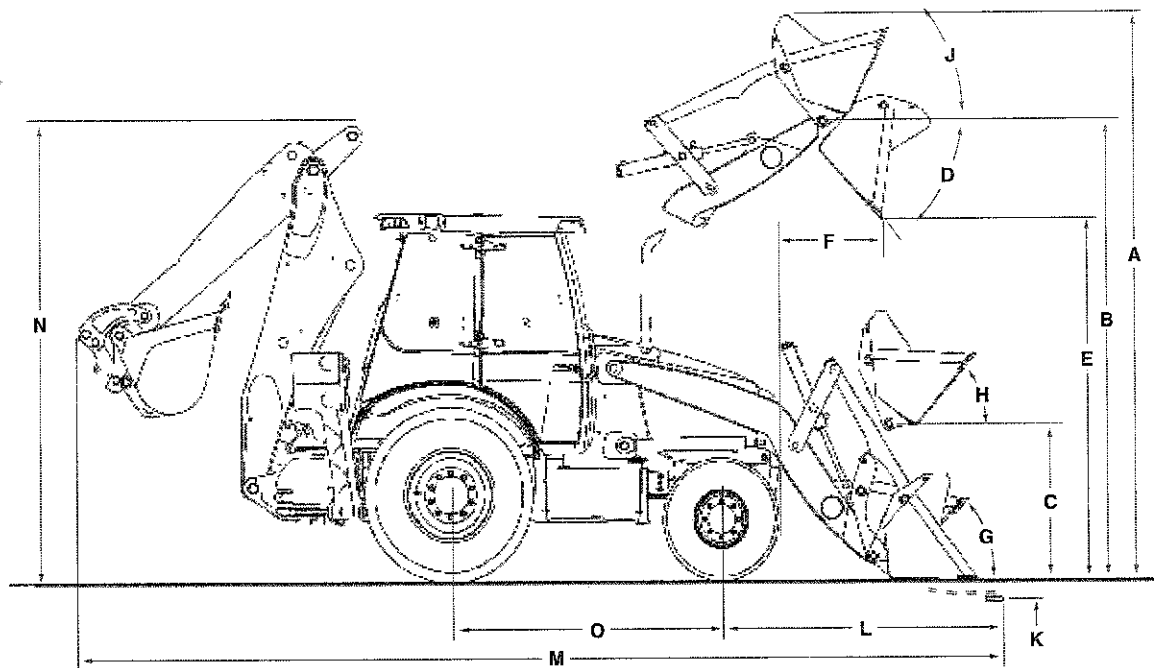
4WD – disengaged:  
Brakes on 11 ft 0 in (3.36 m)  
Brakes off 12 ft 3 in (3.72 m)

Backhoe:  
Over center design, fabricated "S" boom;  
Open-center hydraulics – Pro Control System.

### Backhoe bucket sizes:

Width	Weight	Heaped
<b>General Purpose Trenching Buckets</b>		
18 in (457 mm)	232 lb (105 kg)	4.70 ft <sup>3</sup> (0.13 m <sup>3</sup> )
24 in (610 mm)	272 lb (123 kg)	6.26 ft <sup>3</sup> (0.18 m <sup>3</sup> )
<b>Universal Buckets</b>		
12 in (305 mm)	295 lb (137 kg)	3.40 ft <sup>3</sup> (0.10 m <sup>3</sup> )
18 in (457 mm)	356 lb (162 kg)	5.30 ft <sup>3</sup> (0.15 m <sup>3</sup> )
24 in (610 mm)	427 lb (194 kg)	7.70 ft <sup>3</sup> (0.22 m <sup>3</sup> )
30 in (762 mm)	489 lb (222 kg)	10.20 ft <sup>3</sup> (0.29 m <sup>3</sup> )
36 in (914 mm)	552 lb (251 kg)	12.70 ft <sup>3</sup> (0.36 m <sup>3</sup> )
<b>High Capacity Buckets</b>		
24 in (610 mm)	447 lb (203 kg)	8.50 ft <sup>3</sup> (0.24 m <sup>3</sup> )

NOTE: \*Turning radius dimensions curb to curb w/ 17.5 L x 24.0 rear tires.



Line drawings are for illustrative purpose only and may not be exact representation of unit.

### LOADER DIMENSIONS\*

	Long Lip Bucket	4 IN 1° Bucket
A. Overall operating height – fully raised	13 ft 9 in (4.18 m)	13 ft 8 in (4.16 m)
Height to:		
B. Bucket hinge pin fully raised	11 ft 3 in (3.42 m)	11 ft 3 in (3.42 m)
C. Bucket hinge pin at SAE carry	13.6 in (345 mm)	13.6 in (345 mm)
D. Dump angle at full height	47°	47°
E. Dump clearance at full height, 45° dump:		
Bucket	8 ft 10 in (2.69 m)	8 ft 11 in (2.71 m)
Clam open	—	9 ft 8 in (2.96 m)
F. Dump reach at full height, 45° dump:		
Bucket	31.5 in (801 mm)	29.1 in (738 mm)
Clam open	—	15.3 in (388 mm)
Bucket rollback:		
G. @ Groundline	42°	42°
H. @ SAE carry	42°	42°
J. @ Full height	Adjustable	Adjustable
K. Digging depth below grade:		
Bucket flat	6.1 in (155 mm)	4.8 in (122 mm)
Clam open – dozing	—	4.1 in (103 mm)
L. Reach from front axle centerline – bucket on ground	6 ft 10 in (2.08 m)	6 ft 10 in (2.03 m)
Lift capacity to full height	6,803 lb (3 086 kg)	6,459 lb (2 930 kg)
Breakout force:		
Lift cylinders	9,506 lb (4 228 daN)	9,276 lb (4 126 daN)
Dump cylinders	10,622 lb (4 724 daN)	11,312 lb (5 032 daN)
Bucket cutting edge width	82.5 in (2.09 m)	82.0 in (2.08 m)
Maximum grading angle	114°	114°
Maximum clam opening	—	38.3 in (972 mm)
Moldboard height	—	36.8 in (934 mm)
Raising time to full height	4.6 sec	4.6 sec
Bucket dumping time	1.1 sec	1.1 sec
Lowering time:		
Power down	2.6 sec	2.6 sec
Return-to-dig	3.6 sec	3.6 sec
Clam:		
Open time	—	1.0 sec
Close time	—	1.0 sec

NOTE: \*Loader dimensions taken with 4WD, 19.5 L x 24.0 rear tires.



## DIMENSIONS

	2WD with 19.5 L x 24.0 tires	4WD with 19.5 L x 24.0 tires
<b>M. Overall transport length:</b>		
Long Lip bucket with Quick Coupler	23 ft 5 in (7.14 m)	23 ft 4 in (7.10 m)
4 IN 1° bucket with Quick Coupler	23 ft 3 in (7.07 m)	23 ft 1 in (7.04 m)
Long Lip bucket with Straight Links	23 ft 6 in (7.15 m)	23 ft 4 in (7.12 m)
4 IN 1° bucket with Straight Links	23 ft 3 in (7.09 m)	23 ft 2 in (7.06 m)
Overall transport width – rear tires	6 ft 10 in (2.07 m)	6 ft 10 in (2.07 m)
<b>Height:</b>		
To top of canopy	8 ft 9 in (2.66 m)	8 ft 9 in (2.66 m)
To top of cab	8 ft 11 in (2.72 m)	8 ft 11 in (2.72 m)
To top of exhaust stack	8 ft 7 in (2.62 m)	8 ft 7 in (2.61 m)
<b>N. Transport</b>	10 ft 10 in (3.30 m)	11 ft 1 in (3.37 m)
Ground clearance at backhoe frame	15.0 in (380 mm)	15.0 in (380 mm)
Angle of departure	15.3°	19.0°
<b>Front wheel tread:</b>		
11.0 L x 16.0	67.5 in (1.71 m)	67.5 in (1.71 m)
12.0 L x 16.5	67.7 in (1.72 m)	67.7 in (1.72 m)
<b>Rear wheel tread:</b>		
17.5 L x 24.0	63.1 in (1.60 m)	63.1 in (1.60 m)
19.5 L x 24.0	61.2 in (1.55 m)	61.2 in (1.55 m)
<b>Width over tires:</b>		
11.0 L x 16.0	79.3 in (2.01 m)	79.3 in (2.01 m)
12.0 L x 16.5	81.1 in (2.06 m)	81.1 in (2.06 m)
17.5 L x 24.0	81.7 in (2.07 m)	81.7 in (2.07 m)
19.5 L x 24.0	81.4 in (2.07 m)	81.4 in (2.07 m)
<b>O. Wheelbase</b>	84.0 in (2.13 m)	84.5 in (2.15 m)

## CYLINDERS

	Bore Diameter	Rod Diameter	Stroke	Closed Length
<b>Loader:</b>				
Lift (2)	3.25 in (82.6 mm)	1.75 in (44.5 mm)	28.86 in (733.0 mm)	41.81 in (1 062.0 mm)
Dump (2)	3.00 in (76.2 mm)	1.50 in (38.1 mm)	20.33 in (516.5 mm)	30.31 in (769.9 mm)
4 IN 1° clam (2)	3.00 in (76.2 mm)	1.75 in (44.5 mm)	9.08 in (230.6 mm)	19.62 in (498.3 mm)
<b>Backhoe:</b>				
Boom	4.50 in (114.3 mm)	2.25 in (57.2 mm)	38.22 in (971.5 mm)	52.82 in (1 341.6 mm)
Dipperstick	4.25 in (108.0 mm)	2.25 in (57.2 mm)	25.14 in (628.5 mm)	39.65 in (1 007.0 mm)
Bucket	3.25 in (82.6 mm)	2.25 in (57.2 mm)	35.35 in (897.9 mm)	48.17 in (1 223.6 mm)
Extendahoe®	3.00 in (76.2 mm)	1.75 in (44.5 mm)	42.05 in (1 068.0 mm)	56.22 in (1 428.0 mm)
Swing (2)	3.75 in (95.3 mm)	2.00 in (50.8 mm)	11.50 in (292.0 mm)	24.44 in (620.8 mm)
Stabilizer (2)	4.25 in (108.0 mm)	2.25 in (57.2 mm)	21.37 in (542.9 mm)	33.87 in (860.2 mm)

## AXLE RATINGS

	Front – 2WD	Rear	Front – 4WD
Maximum static	70,821 lb (32 124 kg)	90,145 lb (40 889 kg)	64,613 lb (29 308 kg)
Dynamic operating	44,261 lb (20 076 kg)	56,200 lb (25 492 kg)	39,328 lb (17 839 kg)
Static operating	17,704 lb (8 030 kg)	22,480 lb (10 197 kg)	15,732 lb (7 136 kg)
Oscillation – front axle	22° total – 11° side to side	–	22° total – 11° side to side

## BACKHOE LIFT CAPACITIES

Boom Lift	Standard Backhoe	Extendahoe®	
	Lift Capacity lb (kg)	Retracted Lift Capacity lb (kg)	Extended Lift Capacity lb (kg)
+16 ft (4.87 m)	—	—	1,693 (768)
+14 ft (4.27 m)	2,472 (1 121)	2,271 (1 030)	1,979 (897)
+12 ft (3.66 m)	2,857 (1 296)	2,644 (1 199)	2,124 (964)
+10 ft (3.05 m)	2,966 (1 345)	2,748 (1 246)	2,172 (985)
+8 ft (2.44 m)	2,983 (1 353)	2,761 (1 252)	2,169 (984)
+6 ft (1.83 m)	2,963 (1 344)	2,739 (1 242)	2,173 (985)
+4 ft (1.22 m)	2,929 (1 329)	2,701 (1 225)	2,165 (982)
+2 ft (0.61 m)	2,892 (1 312)	2,662 (1 207)	2,153 (977)
<b>Ground Level</b>	2,858 (1 297)	2,625 (1 191)	2,153 (977)
-2 ft (0.61 m)	2,834 (1 285)	2,598 (1 178)	2,145 (973)
-4 ft (1.22 m)	2,827 (1 282)	2,588 (1 174)	2,143 (972)
-6 ft (1.83 m)	2,853 (1 294)	2,609 (1 183)	2,154 (977)
-8 ft (2.44 m)	2,949 (1 338)	2,698 (1 224)	2,189 (993)
-10 ft (3.05 m)	3,319 (1 506)	3,053 (1 385)	2,270 (1 030)
-12 ft (3.66 m)	—	—	2,429 (1 102)
-14 ft (4.27 m)	—	—	3,115 (1 413)
<b>Dipper Lift:</b>			
+14 ft (4.27 m)	—	—	3,154 (1 431)
+12 ft (3.66 m)	4,343 (1 970)	4,139 (1 877)	2,981 (1 352)
+10 ft (3.05 m)	4,027 (1 827)	3,826 (1 735)	2,823 (1 281)
+8 ft (2.44 m)	4,112 (1 865)	3,910 (1 774)	2,855 (1 295)
+6 ft (1.83 m)	4,563 (2 070)	4,357 (1 976)	3,010 (1 365)
+4 ft (1.22 m)	5,398 (2 449)	5,177 (2 348)	2,948 (1 337)
+2 ft (0.61 m)	—	—	3,486 (1 581)

## BACKHOE OPERATIONAL DATA

	Standard Backhoe	Extendahoe®	
		Retracted	Extended
<b>Digging depth:</b>			
Maximum	14 ft 9 in (4.50 m)	14 ft 9 in (4.50 m)	18 ft 3 in (5.55 m)
2 ft (610 mm) flat bottom	14 ft 8 in (4.46 m)	14 ft 8 in (4.46 m)	18 ft 1 in (5.52 m)
8 ft (2.44 m) flat bottom	13 ft 8 in (4.16 m)	13 ft 8 in (4.16 m)	17 ft 4 in (5.29 m)
<b>Overall reach from:</b>			
Rear axle centerline	21 ft 11 in (6.68 m)	21 ft 11 in (6.68 m)	25 ft 4 in (7.72 m)
Swing pivot	18 ft 4 in (5.57 m)	18 ft 4 in (5.57 m)	21 ft 8 in (6.60 m)
<b>Loading height</b>	11 ft 9 in (3.59 m)	11 ft 9 in (3.59 m)	14 ft 1 in (4.30 m)
<b>Loading reach – dipper retracted</b>	6 ft 9 in (2.04 m)	6 ft 9 in (2.04 m)	9 ft 4 in (2.84 m)
<b>Swing arc</b>	180°	180°	180°
<b>Bucket rotation:</b>			
Straight links	175.6°	175.6°	175.6°
Mechanical coupler	198.0°	198.0°	198.0°
<b>Stabilizer spread – centers:</b>			
Flip pad	9 ft 5 in (2.87 m)	9 ft 5 in (2.87 m)	9 ft 3 in (2.81 m)
Cast Pad	9 ft 9 in (2.97 m)	9 ft 9 in (2.97 m)	9 ft 7 in (2.92 m)
<b>Digging force:</b>			
Bucket cylinder	11,517 lb (51 228 N)	11,517 lb (51 228 N)	11,517 lb (51 228 N)
Dipper cylinder	6,710 lb (29 484 N)	6,710 lb (29 484 N)	4,887 lb (21 738 N)
<b>Leveling angle:</b>			
Flip pad	12.8°	12.8°	12.8°
Cast pad	13.8°	13.8°	13.8°

## STANDARD EQUIPMENT

### OPERATOR ENVIRONMENT

See page 1

### ENGINE

FPT F58FL4I3C diesel

Cooled EGR

Diesel Oxidation Catalyst with SCR

Full flow engine oil filter

Air cleaner – replaceable dry type  
with radial seal

Aspirated air cleaner

Radiator with de-aeration bottle

Antifreeze to -34° F (-37° C)

Throttles, both rotary hand and foot

Self adjusting belt

### DRIVETRAIN

Front axle, as selected:

2WD heavy-duty front axle with  
11.0 L x 16.0 tires

4WD heavy-duty mechanically driven front  
axle with 12.0 L x 16.5 tires

Rear axle:

2/4WD heavy-duty outboard planetary drive  
with 17.5 L x 24.0 tires

4F-4R Power Shuttle Synchronesh  
transmission

Torque converter – 11.8 in (300 mm)

On-the-go electric 4WD control

Electric F/R shuttle control

Electric differential lock control, push-button  
activation on the loader control lever

Park brake, spring-applied, hydraulic  
release – SAHR

### HYDRAULICS

Pump 28.5 gal/min @ 3,350 psi  
(107.9 L/min @ 231 bar)

Heavy-duty hydraulic oil cooler

7-micron, spin on oil filter

### LOADER

See page 2

### BACKHOE

See page 2

### OTHER

Forward tilt engine hood

Replaceable, molded front bumpers

Front/Rear tie downs

Reflective logos

Lights – cab and canopy:

2 front driving

2 rear tail/stop

2 front flashers/turn

2 rear flashers/turn

Lights – cab only:

Adjustable halogen work lights – 55 W:

2 front

2 side – left and right

4 rear

Lights – canopy only:

Adjustable halogen work lights – 55 W:

2 side – left and right

2 rear

### TELEMATICS

CASE SiteWatch™ Telematics – includes  
hardware and a 3-yr Advanced  
data subscription

## OPTIONAL EQUIPMENT

### OPERATOR ENVIRONMENT

Speed Selectable Auto Ride Control –  
4WD models

Standard Ride Control – 2WD models

Comfort Steering with momentary latching  
switch, two-speed steering pump and  
3rd/4th gear cutout

ROPS/FOPS certified protective cab with rear  
wipers and floor mat

Cab Convenience Package containing  
pull-down sun visor, window washer – front  
and rear, left-hand storage tray, deluxe  
interior package, tilt steering column, Sound  
Reduction Package for cab models – levels  
reduced to 72 dB (A), right-hand threshold  
storage box, viscous fan

Air-conditioning for cab models

Mechanical suspension seat with flip-up  
armrests, 180° swivel, heated cloth or vinyl,  
adjustable seat and weight, backrest angle,  
lumbar and cushion angle

Air Ride suspension seat with flip-up armrests,  
180° swivel, heated, electric height  
adjustment, adjustable backrest and lumbar  
support – cab units cloth, canopy units vinyl

Pull-down sun visor for canopy models

Radio, AM/FM Stereo/WB, MP3 auxiliary  
input – cab models

3 in (75 mm) seat belt for mechanical and  
air-suspension seat

### ENGINE

Cold Weather Starting Aid  
with dual 12 Volt batteries and glow plugs

Block heater

### DRIVETRAIN

Powershift S-Type transmission, 4F-3R fully  
synchronized, electronic transmission  
controller and kick down in loader control  
lever – 2WD or 4WD

Heavy-duty outboard planetary drive  
without 19.5 L x 24.0 tires

### LOADER

Auxiliary hydraulics for loader-mounted  
equipment with thumb-operated  
proportional control

Hydraulic front quick coupler

Loader linkage without loader bucket

Tool portfolio of additional attachments

Buckets – see page 2

### BACKHOE

Auxiliary backhoe unidirectional hydraulics

Auxiliary backhoe combo hydraulics:  
Hand lever operated for bidirectional  
manual controls

Button operated for pilot controls, includes  
unidirectional and bidirectional

Auxiliary hydraulics with flow from  
0 to 28 gal/min (0 to 106 L/min)

Extendahoe®

Two-lever controls – backhoe or Extendahoe®

### BACKHOE (continued)

Pilot operated control system:

Fingertip proportional Electro-Hydraulic  
stabilizer controls

Thumb-operated proportional Electro-  
Hydraulic Extendahoe® control

Thumb-operated horn button

Thumb-operated auxiliary hydraulic control

Infinitely adjustable towers

In-cab switchable “excavator to backhoe”  
control pattern change

Flip over stabilizer pads

Cemetery/Street pads

Case mechanical quick coupler

Universal coupler – CAT/Deere compatible

Buckets – see page 2

### OTHER

Front:

11.0 L x 16.0 10-ply or 12.0 L x 16.5 8-ply

Rear:

17.5 L x 24.0 10-ply or 19.5 L x 24.0 10-ply

Special paint

Canopy lights – Additional 2 front and 2 rear  
halogen lights – 55 W

Tool box – bolt-on, step-mounted

Front counterweights:

700 lb and 1,100 lb (318 kg and 500 kg)

Rotating beacon

Master disconnect switch and  
remote jump-start terminals

Eco-Mode – Detent on backhoe hand throttle,  
push button switch on desk



NOTE: All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

NOTE: All engines meet current EPA emissions requirements.

IMPORTANT: Case Construction Inc. reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Case Construction Inc. does not warrant the safety or reliability of attachments from other manufacturers.

CASE is a trademark registered in the United States and many other countries, owned by or licensed to CNH Industrial N.V., its subsidiaries or affiliates. CNH Industrial Capital is a trademark in the United States and many other countries, owned by or licensed to CNH Industrial N.V., its subsidiaries or affiliates.

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Replaces Form No. CCE201502580N

Printed in U.S.A.  
580N • Page 7 of 7



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All Case construction equipment is biodiesel ready.

**City of San Antonio**  
**Finance Department - Purchasing Division**  
**Local Preference Program Identification Form**

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The City of San Antonio Local Preference Program, described in the San Antonio City Code Chapter 2, Article XII, establishes a local preference for specific contracting categories. Each time a bidder or respondent submits a bid for a solicitation, this Local Preference Program Identification Form must be completed and turned in with the solicitation response in order to be identified as a City Business and receive the preference described below. The City will not rely on Local Preference Program Identification Forms submitted with prior or contemporaneous bids or proposals.

The Local Preference Program allows the City to grant a preference to a business meeting the definition of *City Business* in the award of the following types of contracts, when selection is made based on price alone:

- Personal Property (Goods / Supplies): The local bidder's price must be within 3% of the price of the lowest non-local bidder for contracts of \$50,000 or more;
- Non-professional Services: The local bidder's price must be within 3% of the price of the lowest nonlocal bidder for contracts of \$50,000 to under \$500,000;
- Construction Services: The local bidder's price must be within 3% of the price of the lowest non-local bidder for contracts of \$50,000 to under \$100,000, excluding contracts awarded using alternative delivery methods.

The Local Preference Program also allows the award of additional points, when multiple evaluation criteria are used in the award of professional service contracts, where the selection process is not governed by statute and in revenue generating and concession contracts. A business meeting the definition of *City Business* stated below may be awarded 10 points for being headquartered within the city, or 5 points for having a local office within the city.

Moreover, the program recognizes joint venture agreements and allows for apportioning of points based upon the percentage of ownership of joint ventures by *City Businesses* responding to solicitations for which discretionary points are applied. For solicitations where selection is made based on price alone, all members of a joint venture must be *City Businesses* for the preference to be applied.

**City Business** is defined as a business headquartered within the incorporated San Antonio city limits for one year or more OR one that meets the following conditions:

- Has an established place of business for one year or more in the incorporated limits of the City:
  - (a) from which at least 100 of its employees OR at least 20% of its total full-time, part-time and contract employees are regularly based; and
  - (b) from which a substantial role in the business' performance of a commercially useful function or a substantial part of its operations is conducted by those employees.

A location utilized solely as a post office box, mail drop or telephone message center or any similar combination, with no other substantial work function, is not a *City Business*.

For the purposes of this program, Headquartered is defined as the place where a business entity's officers direct, control, and coordinate the entity's activities.

NOTE: Bidders / Respondents are required to submit documentation to substantiate that the requirements of a City Business have been met. Examples of documentation may include, but are not limited to the following: 1. Existence of local headquarters or office: For corporations, Texas Comptroller's listing of names/addresses of officers and directors. For partnerships, partnership agreement and any documents identifying the current managing partners and their current work addresses

**City of San Antonio**  
**Finance Department - Purchasing Division**  
**Local Preference Program Identification Form**

2. Evidence of local headquarters or office in existence for one year or more: Utility bills, real property lease agreements, equipment leases, personal property taxes, real property taxes
3. Evidence of number of employees: Organizational charts, payroll records by location

CITY RESERVES THE RIGHT TO REQUEST ADDITIONAL INFORMATION TO VALIDATE BIDDERS'/RESPONDENTS' DESIGNATION AS A CITY BUSINESS.

COMPLETE THE FOLLOWING FORM AND SUBMIT WITH YOUR RESPONSE EVEN IF YOU ARE NOT SEEKING A LOCAL PREFERENCE. THE BIDDER / RESPONDENT MUST COMPLETE THE FOLLOWING FORM TO BE IDENTIFIED AS A CITY BUSINESS. IF BIDDER / RESPONDENT IS SUBMITTING AS A JOINT VENTURE, EACH CITY BUSINESS THAT IS A MEMBER OF THE JOINT VENTURE MUST COMPLETE AND SIGN THIS FORM.

**PROVIDE THE FOLLOWING INFORMATION IF BIDDER/ RESPONDENT IS SUBMITTING AS PART OF A JOINT VENTURE.** Joint Venture means a collaboration of for-profit business entities, in response to a solicitation, which is manifested by a written agreement, between two or more independently owned and controlled business firms to form a third business entity solely for purposes of undertaking distinct roles and responsibilities in the completion of a given contract. Under this business arrangement, each joint venture partner shares in the management of the joint venture and also shares in the profits or losses of the joint venture enterprise commensurately with its contribution to the venture.

STATE BIDDER'S / RESPONDENT'S PERCENTAGE OF OWNERSHIP IN THE JOINT VENTURE: \_\_\_\_\_%

SUBMIT A COPY OF THE JOINT VENTURE AGREEMENT. SUBMIT ANY OTHER DOCUMENTATION REQUESTED BY CITY TO SUBSTANTIATE THE EXISTANCE OF AND/OR PARTICIPATION IN THE JOINT VENTURE. NO PREFERENCE POINTS WILL BE ALLOCATED TO A JOINT VENTURE THAT FAILS TO SUBMIT REQUIRED DOCUMENTATION.

SOLICITATION NAME/NUMBER:           V 100 7975          

**PROVIDE THE FOLLOWING INFORMATION REGARDING BIDDER'S / RESPONDENT'S HEADQUARTERS:**

Name of Business:	ASCO –Associated Supply Company	
Physical Address:	4146 I-10 East	
City, State, Zip Code:	San Antonio, TX 78219	
Phone Number:	210-333-8000	
Email Address:	ksmith@ascoeq.com	
Provide the total number of full-time, part-time, and contract personnel employed by Bidder / Respondent: <u>52</u>		
Is Business headquartered within the incorporated San Antonio city limits? (circle one)	Yes	<input checked="" type="radio"/> No
Has the business been headquartered in the incorporated San Antonio city limits for one year or more? (circle one)	Yes	<input checked="" type="radio"/> No

**City of San Antonio**  
**Finance Department - Purchasing Division**  
**Local Preference Program Identification Form**

If the answers to the questions above are "Yes", stop here. If the answer to either of the above questions is "No", provide responses to the following questions:

**PROVIDE THE FOLLOWING INFORMATION REGARDING BIDDER'S / RESPONDENT'S LOCAL OFFICE (IF APPLICABLE):**

Name of Business:	ASCO –Associated Supply Company	
Physical Address:	4146 I-10 East	
City, State, Zip Code:	San Antonio, TX 78219	
Phone Number:	210-333-8000	
Email Address:	ksmith@ascoeq.com	
Provide the total number of full-time, part-time, and contract personnel employed by Bidder / Respondent in the local office: _____		
Is the business located in the incorporated San Antonio city limits? (circle one)	<u>Yes</u>	No
Has the business been located in the incorporated San Antonio city limits for one year or more? (circle one)	<u>Yes</u>	No
Are at least 100 full-time, part-time or contract employees regularly based in the San Antonio office? (circle one)	Yes	<u>No</u>
Are at least 20% of the business' total full-time, part-time or contract employees regularly based in the San Antonio office? (circle one)	Yes	<u>No</u>
Do the employees in the San Antonio office perform a substantial role in the business' performance of a commercially useful function or are a substantial part of the business' operations conducted in the San Antonio office? (circle one)	<u>Yes</u>	No

ACKNOWLEDGEMENT

THE STATE OF TEXAS

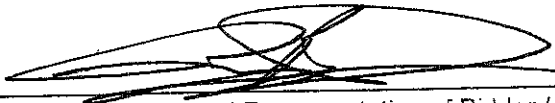
I certify that my responses and the information provided on this Local Preference Program Identification Form are true and correct to the best of my personal knowledge and belief and that I have made no willful misrepresentations on this form, nor have I withheld any relevant information in my statements and answers to questions. I am aware that any information given by me on this Local Preference Program Identification Form may be investigated and I hereby give my full permission for any such investigation, including the inspection of business records and site visits by City or its authorized representative. I fully acknowledge that any misrepresentations or omissions in my responses and information may cause my offer to be rejected or contract to be terminated. I further acknowledge that providing false information is grounds for debarment.

City of San Antonio  
Finance Department - Purchasing Division  
Local Preference Program Identification Form

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BIDDER'S / RESPONDENT'S FULL NAME:

Ridny B. Johnson  
(Print Name) Authorized Representative of Bidder / Respondent

  
(Signature) Authorized Representative of Bidder / Respondent

VP  
Title

12-4-15  
Date

**This Local Preference Identification Form must be submitted with the bidder's /  
respondent's bid/proposal response.**





**City of San Antonio**  
**Veteran-Owned Small Business Program Tracking Form**

Name of Respondent:	Associated Supply ASCO	
Physical Address:	4146 I-10 Ease	
City, State, Zip Code:	San Antonio TX	78231
Phone Number:	210-333-8000	
Email Address:	<a href="mailto:ksmith@ascoeq.com">ksmith@ascoeq.com</a>	
Is Respondent certified as a VOSB with the U.S. Small Business Administration? (circle one)	Yes	<input checked="" type="radio"/> No
If yes, provide the SBA Certification #		
If not certified by the SBA, is Respondent certified as a VOSB by another public or private entity that uses similar certification procedures? (circle one)	Yes	<input checked="" type="radio"/> No
If yes, provide the name of the entity who has certified Respondent as a VOSB. Include any identifying certification numbers.		
Participation Percentage:		
Participation Dollar Amount:		

Is Respondent subcontracting with a business that is certified as a VOSB? (circle one)	Yes	<input checked="" type="radio"/> No
Name of <b>SUBCONTRACTOR</b> Veteran-Owned Small Business:		
Physical Address:		
City, State, Zip Code:		
Phone Number:		
Email Address:		
Is <b>SUBCONTRACTOR</b> certified as a VOSB with the U.S. Small Business Administration? (circle one)	Yes	<input checked="" type="radio"/> No
If yes, provide the SBA Certification #		

**City of San Antonio  
Veteran-Owned Small Business Program Tracking Form**

If not certified by the SBA, is <b>SUBCONTRACTOR</b> certified as a VOSB by another public or private entity that uses similar certification procedures? (circle one)	Yes	No
If yes, provide the name of the entity who has certified <b>SUBCONTRACTOR</b> as a VOSB. Include any identifying certification numbers.		
Participation Percentage:		
Participation Dollar Amount		

ACKNOWLEDGEMENT

THE STATE OF TEXAS

I certify that my responses and the information provided on this Veteran-Owned Small Business Preference Program Identification Form are true and correct to the best of my personal knowledge and belief and that I have made no willful misrepresentations on this form, nor have I withheld any relevant information in my statements and answers to questions. I am aware that any information given by me on this Veteran-Owned Small Business Preference Program Identification Form may be investigated and I hereby give my full permission for any such investigation, including the inspection of business records and site visits by City or its authorized representative. I fully acknowledge that any misrepresentations or omissions in my responses and information may cause my offer to be rejected or contract to be terminated. I further acknowledge that providing false information is grounds for debarment.

BIDDER/RESPONDENT'S FULL NAME:

Richard B. Johnson  
(Print Name) Authorized Representative of Bidder/Respondent

[Signature]  
(Signature) Authorized Representative of Bidder/Respondent

VP  
Title

12-4-15  
Date

**This Veteran-Owned Small Business Program Tracking Form must be submitted with the Bidder/Respondent's bid/proposal.**