

Public Facilities Committee Beaufort County, SC

This meeting will be held both in person in Council Chambers at 100 Ribaut Road, Beaufort, and virtually through Zoom. Please be aware that there is limited seating available for the inperson meeting and attendees must practice social distancing

Monday, September 20, 2021 3:30 PM

(or at the conclusion of the Finance Committee Meeting, no sooner than 3:00PM)

AGENDA

- 1. CALL TO ORDER
- PLEDGE OF ALLEGIANCE
- 3. PUBLIC NOTIFICATION OF THIS MEETING HAS BEEN PUBLISHED, POSTED, AND DISTRIBUTED IN COMPLIANCE WITH THE SOUTH CAROLINA FREEDOM OF INFORMATION ACT
- 4. APPROVAL OF AGENDA
- 5. APPROVAL OF MINUTES JULY 19, 2021 AND AUGUST 16, 2021
- 6. CITIZENS COMMENTS (ANYONE who wishes to speak during the Citizen Comment portion of the meeting will limit their comments to no longer than three (3) minutes (a total of 15 minutes) and will address Council in a respectful manner appropriate to the decorum of the meeting, refraining from the use of profane, abusive, or obscene language)
- 7. ASSISTANT COUNTY ADMINISTRATOR'S REPORT

AGENDA ITEMS

- 8. RECOMMENDATION OF AWARD FOR RFQ 060821 CONSULTING SERVICES TO PROVIDE AN EVALUATION AND STUDY OF ISSUES RELATED TO BEAUFORT COUNTY PUBLIC BOAT LANDINGS (\$312,965.00)
- REQUEST TO PURCHASE CATERPILLAR MODEL 323 EXCAVATOR W/LONG REACH (\$221,823.85)
- 10. REQUEST TO PURCHASE OF A TIGER TRUCKAT MOWER (\$218,622.40)
- 11. REQUEST TO PURCHASE PUBLIC WORKS PURCHASE OF FORD F550 (\$149,826.00)
- 12. RECOMMENDATION TO AWARD RFQ #042721E, INDOOR POOL RENOVATIONS ARCHITECTURE AND ENGINEERING SERVICES (> \$1,000)
- 13. DISCUSSION ON FINANCING FOR THE HILTON HEAD ISLAND AIRPORT EXPANSION
- 14. WIMBEE CREEK FISHING PIER CONDITION ASSESSMENT

- 15. UPDATE 170 IMPROVEMENTS (BETWEEN 278 AND 462)
- 16. SC 170 ACCESS MANAGEMENT PLAN NORTH
- 17. AN ORDINANCE AUTHORIZING THE COUNTY ADMINISTRATOR TO EXECUTE A MODIFICATION OF DRAINAGE EASEMENT ASSOCIATED WITH PARCEL #R112-031-000-0628-0000
- 18. CHAIRMAN'S WRAP UP
- 19. ADJOURNMENT



Public Facilities Committee Meeting

2021 Committee Objectives

- 1. TRANSPORTATION
- 2. SOLID WASTE & RECYCLING
- 3. COUNTY FACILITIES
- 4. AIRPORTS
- 5. DAUFUSKIE FERRY
- 6. CAPITAL INVESTMENT

Chairman

STU RODMAN

Vice Chairman

YORK GLOVER

Committee Members

CHRIS HERVOCHON BRIAN FLEWELLING MARK LAWSON

County Administrator

ERIC GREENWAY

Clerk to Council

SARAH W. BROCK

Staff Support

CHUCK ATKINSON JARED FRALIX

Administration Building

Beaufort County Government Robert Smalls Complex 100 Ribaut Road

Contact

Post Office Drawer 1228 Beaufort, South Carolina 29901-1228 (843) 255-2180

Public Facilities Committee Minutes

Monday, July 19, 2021 at 2:00 PM

PRESENT

Committee Chairman Stu Rodman Committee Vice-Chair York Glover Council Member Brian Flewelling Council Member Joseph F. Passiment Council Member Gerald Dawson Council Member Lawrence McElynn

ABSENT

Council Member D. Paul Sommerville Council Member Chris Hervochon Council Member Alice Howard Council Member Mark Lawson Council Member Logan Cunningham

CALL TO ORDER

Chairman Rodman called the meeting to order at 2:00 PM

PLEDGE OF ALLEGIANCE

Chairman Rodman led the Pledge of Allegiance.

FOIA

Chairman Rodman noted that Public notification of this meeting had been published, posted, and distributed in compliance with the South Carolina Freedom of Information Act.

APPROVAL OF AGENDA

Motion to Amend: It was moved by Council Member Flewelling, seconded by Committee Vice-Chair Glove to amend the Agenda to add an item to Executive Session: Pursuant to S.C. Code Sec. 30-4-70(a)(2) receipt of legal advice where the advice relates to pending claims and move Executive session to item #8. The motion was approved without objection.

Motion: <u>It was moved by Council Member Flewelling, seconded by Committee Vice-Chair Glover to approve the amended agenda. The motion was approved without objection.</u>

APPROVAL OF MINUTES

Motion: It was moved by Committee Vice-Chair Glover, seconded by Council

Member Flewelling to approve minutes from May 17, 2021. The motion was approved without objection.

AGENDA ITEMS

Transportation Sales Tax Referendum Discussion

* See Presentation *

Status: For Informational Purposes Only

Introduction of the County Facilities 10-year Plan

* See Presentation *

Status: For Informational Purposes Only.

EXECUTIVE SESSION

Pursuant to S.C. Code Sec. 30-4-70(a)(2) receipt of legal advice where the legal advice relates to matters covered by the attorney-client privilege.

Pursuant to S.C. Code Sec. 30-4-70(a)(2) receipt of legal advice where the advice relates to pending claims.

Motion: It was moved that Committee Vice-Chair Glover, seconded by Council Member Passiment to go into executive session. The motion was approved without objection.

MATTERS ARISING OUT OF EXECUTIVE SESSION

No matters arising out of executive session

Assistant County Administrators Report - Jared Fralix

Eric Greenway presented an update about the growth plan with future needs of staff and SIG recommendations.

Jared Fralix presented updates on:

- 1. Airports
- 2. Boat Landing Master Plan Study
- 3. Electric Vehicles Consultant

Cindy Carter presented a presentation of the Convenience Center Decal System Update

Jared Fralix presented updates on:

- B. 2018 Sales Tax Update
- D. 278 -Corridor Funding Update
- C. Discussion of additional Littering crew

Status: For Informational Purposes Only

Hilton Head Island Airport (HXD) – TBE Work Authorization 2119-2101 (Fiscal impact:) \$531,242 (Funded 100% (reimbursable) by FAA Grant 47

Jon Rembold stated the existing runway and taxiway at HXD need additional strengthening and rehabilitation due to the increased commercial jet aircraft using the airport. Professional services to be provided by Talbert, Bright & Ellington, Inc. (TBE) will include full engineering design services, bidding, and construction administration.

Motion: It was moved by Council Member McElynn, seconded by Committee Vice-Chair Glover to move forward to the County Council for a recommendation of approval. The motion was approved without objection.

Beaufort Executive Airport (ARW) – New Fuel provider – Campbell Oil Company Fiscal impact: 51000011-58000 (Purchases-Fuel/Lubricants) \$375,000 (Resale for profit)

Jon Rembold stated the Beaufort Executive Airport purchases aviation fuels for resale at a profit. The term of the contract for the current provider expires soon and Campbell Oil has been selected as the next provider following an RFP and interview process. Campbell Oil is a family-owned business that has grown into a major provider in the Southeast. Their reviews are strong, especially in the areas of reliability and customer service. Campbell Oil is a Phillips 66-branded provider and offers other benefits to the airport such as marketing assistance, customer loyalty programs, inexpensive fuel trucks with service plans, staff safety training, and point of sale software assistance. The airport purchases the aviation fuels and then sells the fuel at a profit. This is a top revenue line item for the airport.

Motion: It was moved by Council Member McElynn, seconded by Committee Vice-Chair Glover to move forward to the County Council for a recommendation of approval. The motion was approved without objection.

Airport's FY22 contract renewals.

- A. Volarie Aviation Consulting \$53,400
- B. Security \$127,764

Dave Thomas stated to improve our process for renewing annual contract renewals a summary sheet (see the attached excel sheet) is provided for Committee's review and approval. The summary sheet provides the vendor name, purpose, requesting department, account name and number, prior and current contract cost, term, and notes. The Department Head responsible for the contract or their representative will be available for questions during the Committee meeting.

Motion: <u>It was moved by Council Member McElynn, seconded by Committee Vice-Chair Glover to move forward to the County Council for a recommendation of approval. The motion was approved without objection.</u>

Beaufort County and City of Beaufort Intergovernmental Agreement Amendment for Airport Frontage Road

Jared Fralix stated in March 2020, Beaufort County and the City of Beaufort entered into an intergovernmental agreement for the construction and improvements at US 21 Airport Area and Airport Frontage Road (Lost Island Connectivity Project). Through the development of the project, Beaufort County and the City of Beaufort has a desire to clarify right of way language in the agreement.

Motion: It was moved by Committee Vice-Chair Glover, seconded by Council Member Passiment to approve the execution of the Beaufort County and City of Beaufort Intergovernmental Agreement Amendment for Airport Frontage Road to move forward to County Council for approval. The motion was approved without objection.

Recommendation of Award for RFP #032421- Project Management, Landscape Maintenance Services for Linear Medians for Various County Roads (\$236,892.00)

Jared Fralix stated due to the maintenance responsibility of several linear project areas (Sections of Highway 278 medians, Spanish Moss Trail & Bluffton Parkway), staff recognized that these specific areas would be better suited to be contracted out. Initial discussions were conducted with several landscape contractors to gauge interest in potential bidders for this project. This project was put out for bid, four bids were received with County staff choosing The Greenery, the lowest, most responsive, and responsible bidder.

Motion: It was moved by Council Member Passiment, Seconded by Council Member McElynn to approve the recommendation of award for RFP #032421– Project Management, Landscape Maintenance Services for Linear Medians for Various County Roads to The Greenery to move forward to County Council for approval. The motion was approved without objection.

CITIZEN COMMENTS

Robert Fitzgerald emailed regarding US 278 Corridor improvements, this was forwarded to County Council, County Administrator, and appropriate staff.

Ananta Gopalan submitted a County Council Feedback form regarding 5B Bluffton Parkway Realignment, this was forward to County Council, County Administrator, and appropriate staff.

Thomas Senigla submitted a County Council Feedback form regarding 5B Extension, this was forwarded to County Council, County Administrator, and appropriate staff.

Linda Benninger emailed regarding proposed changes to Bluffton/Hilton Head Island Bridge and 278 Corridor. This was forwarded to County Council, County Administrator, and appropriate staff.

Betty Black submitted a County Council Feedback form regarding bridges and fixing dirt roads. This was forwarded to County Council, County Administrator, and appropriate staff.

Mary Delle Robinson submitted a County Council Feedback form regarding 5B Bluffton Parkway. This was forwarded to County Council, County Administrator, and appropriate staff.

Joshua Hirsch submitted a County Council Feedback form regarding extension of 5B. This was forwarded to County Council, County Administrator, and appropriate staff.

Carmen (no last name) submitted a County Council Feedback form regarding extension of 5B. This was forwarded to County Council, County Administrator, and appropriate staff.

Chairman wrap up

Beaufort County Transportation Committee - 1 vacancy – District 7

Construction Adjustment and Appeals Board - 2 Vacancies - Design Professional/Contractor/Building Industry Stormwater Management Utility Board - 1 vacancy – District 8

ADJOURNMENT

The meeting was adjourned 3:54 PM



Public Facilities Committee Beaufort County, SC

AT THE CONCLUSION OF THE FINANCE COMMITTEE BUT NO SOONER THAN 3:00 PMThis meeting will be held both in person and at County Council, 100 Ribaut Road, Beaufort, and virtually through Zoom. Please be aware that there is limited seating available for the in-person meeting and attendees must practice social distancing

Monday, August 16, 2021 3:30 PM

MINUTES

1. CALL TO ORDER

Chairman Rodman called the meeting to order at 3:28 PM

PRESENT

Committee Chairman Stu Rodman

Committee Vice-Chair York Glover

Council Member Brian Flewelling

Council Member Joseph F. Passiment

Council Member D. Paul Sommerville

Council Member Gerald Dawson

Council Member Chris Hervochon

Council Member Alice Howard

Council Member Mark Lawson

Council Member Lawrence McElynn

ABSENT

Council Member Logan Cunningham

2. PLEDGE OF ALLEGIANCE

Chairman Rodman led the Pledge of Allegiance.

3. **FOIA**

PUBLIC NOTIFICATION OF THIS MEETING HAS BEEN PUBLISHED, POSTED, AND DISTRIBUTED IN COMPLIANCE WITH THE SOUTH CAROLINA FREEDOM OF INFORMATION ACT

4. APPROVAL OF AGENDA

Motion to Amend: It was moved by Council Member Flewelling, seconded by Council Member Sommerville to amend the agenda to do the items in this order: Airport items, citizens comment, add

assistant administrators report, the remainder of agenda items. The motion to approve the amended agenda was approved without objection.

5. **APPROVAL OF MINUTES**

Motion: It was moved by Council Member Howard, seconded by Committee Vice-Chair Glover to approve minutes from June 21, 2021. The motion was approved without objection.

AGENDA ITEMS

6. HILTON HEAD ISLAND AIRPORT PRESENTATION & TERMINAL PROJECT FUNDING DISCUSSION

Jon Rembold stated the terminal project and its funding at previous Finance and Public Facilities Committees. The terminal project has been in design for about 18 months with significant input from a stakeholder group made up of a cross-section of community members. It is now nearly ready to bid, but the funding solution must be complete before offering the bid opportunity.

Status: For Informational Purposes Only

Presentation: To see the full presentation click the link below.

https://beaufortcountysc.new.swagit.com/videos/130484

7. RESOLUTION AUTHORIZING COUNTY ADMINISTRATOR TO ACCEPT FAA GRANT 47 (FISCAL IMPACT: INCOMING GRANT FUNDS - \$1,233,622)

Jon Rembold stated the projects that will be 100% funded by this grant include the design and bidding of the runway and taxiway strengthening project and the procurement of a new Aircraft Rescue and Firefighting Vehicle (previously approved by Council in June 2021)

Motion: It was moved by Council Member Flewelling, Seconded by Committee Vice-Chair Glover to move forward to County Council for approval on August 23, 2021. The motion was approved without objection

Discussion: To see the full discussion click the link below.

https://beaufortcountysc.new.swagit.com/videos/130484

The Vote: Committee Chairman Rodman, Committee Vice-Chair Glover, Council Member Flewelling, Council Member Passiment, Council Member Sommerville, Council Member Dawson, Council Member Hervochon, Council Member Howard, Council Member Lawson, Council Member McElynn. The vote 10:0

8. Citizen Comment

Carol Crutchfield commented about King George Road into the county road system.

9. Request for Private Road Acceptance of King George Road into County Road System

Jared Fralix stated King George Road is a private road (~872 LF) located in the Verdier View subdivision off SC 46 in Bluffton. The Verdier View Association was incorporated on 03/14/1985 and dissolved on 8/11/1992. Associated covenants state that owners will automatically become a member of Verdier View Association, Inc and shall be entitled to all the rights of membership as well as the obligations imposed upon them. Since this HOA was dissolved, roads have deteriorated with no means to repair. A particular concern is a commercial property at the entrance of the neighborhood utilizing 18-wheeler

Public Facilities Committee Minutes – Beaufort County, SC

delivery trucks causing potholes and road erosion. Neil Desai, P.E., the Public Works Director, has estimated road and drainage repair costs to be around \$70,000 and he has concerns associated with road acceptance.

Status: To move forward to the next Committee meeting.

Discussion: To see the full discussion click the link below.

https://beaufortcountysc.new.swagit.com/videos/130484

10. Assistant County Administrators Report - Jared Fralix

Status: For Informational Purposes Only

Discussion: To see the full discussion click the link below.

https://beaufortcountysc.new.swagit.com/videos/130484

11. Discussion of SC 170 Improvement Project (Near-term Improvements)

Jared Fralix stated LATS commissioned an Access Management Study for SC 170 in 2019. The study area included a 4.4-mile segment from US 278 to SC 462. Coming from the report, recommendations were developed for near-term, intermediate-term and long-term improvements. In April, County Council commissioned the design on the short-term improvements (approx. \$200k). It is anticipated the near-term improvements have a construction cost of \$3,000,000.

Motion: It was moved by Council Member Flewelling, seconded by Council Member Lawson to move forward to County Council for approval of 1.5 million from impact fees for the construction of the intersection by Highway 462. The motion was approved without objection.

Discussion: To see the full discussion click the link below.

https://beaufortcountysc.new.swagit.com/videos/130484

The Vote: Committee Chairman Rodman, Committee Vice-Chair Glover, Council Member Flewelling, Council Member Passiment, Council Member Sommerville, Council Member Dawson, Council Member Hervochon, Council Member Howard, Council Member Lawson, Council Member McElynn. The vote 10:0

12. PUBLIC FACILITIES VACANCIES

Status: For Informational Purposes Only

Discussion: To see the full discussion click the link below.

https://beaufortcountysc.new.swagit.com/videos/130484

13. **ADJOURNMENT**

The meeting adjourned at 4:44 PM

ITEM TITLE:

Recommendation of award for RFQ 060821 Consulting Services to provide an evaluation and study of issues related to Beaufort County Public Boat Landings (\$312,965.00)

MEETING NAME AND DATE:

Public Facilities Committee – September 20, 2021

PRESENTER INFORMATION:

Jared Fralix, Assistant County Administrator, Engineering

Mark Roseneau, Director, Facility Management (Alternate)

15 minutes

ITEM BACKGROUND:

Beaufort County published a solicitation for the Consulting Services to provide a study of issues related to Beaufort County Public Boat Landings on May 7, 2021 to which 4 firms submitted qualifications. A committee of 4 evaluated the submissions and determined that Creech and Associates, PLLC was the most qualified.

PROJECT / ITEM NARRATIVE:

Publicly owned boat landings contribute greatly to the economic impact of the tourism and recreation industries, and the quality of life of the Beaufort County's residents by affording boating access to the creeks, rivers, bays, and sounds of our coastal county. The responsibility of providing maintenance, facility upgrades, new facilities, and security increasingly falls on the Beaufort County, with traditional funding sources requested annually. Beaufort County desires to make an effort to establish reliable funding sources, create uniform standards, and enhance safety, accessibility, security, and environmental compatibility.

FISCAL IMPACT:

The proposal received from Creech and Associates for consulting services is \$284,515.00. With a 10% contingency of \$28,450, the final contract amount is **\$312,965**. The County has \$150,000 from an A/H Tax Grant already in place for this project. A second A/H Tax Grant will be applied for in December for the shortfall of \$162,965. Should the grant prove unsuccessful, the remainder contract value will be paid from Facilities Management account number 10001310-51130.

STAFF RECOMMENDATIONS TO COUNCIL:

Staff recommends award of RFQ 060821 Consulting Services for Public Boat Landings to Creech and Associates. (\$312,965)

OPTIONS FOR COUNCIL MOTION:

Motion to approve/deny recommendation of award RFQ 060821 Consulting Services for Beaufort County Public Boat Landings to Creech and Associates.

(Next step: Move forward to County Council for approval.)



Charlotte, NC 28208

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August 24, 2021

David L. Thomas, CPPB, CPPO **Purchasing Director Beaufort County** 106 Industrial Village Road, Bldg. #2 Beaufort, S.C. 29901

Re: Public Boat Landing Facilities Assessment (RFQ 060821)

David:

Creech & Associates, PLLC is pleased to present you with a proposal for design services to complete a comprehensive study of issues related to the design, construction, operation, maintenance, and use of public boat landing access within Beaufort County. The following is a general understanding of the project goals and scope of work:

- The assessment is needed to establish the condition of current facilities, create procedures for their maintenance and upgrades, and plan for new facilities.
- The results will provide a plan with both short-term and long-term solutions for improving the quality of life of Beaufort County residents by offering better boating access to the various waterways of the coastal county.
- The process is estimated to encompass 12 months and is scheduled to commence in October 2021. The starting date is pending the completed contract approval by the County. Due to the potential for state and local authorities to modify state-wide orders related to COVID-19, the schedule may be extended accordingly.

The consultant team serving the project is as follows:

| • | Jon Guerry Taylor & Associates, Inc. (JGT) | Marine Engineering |
|---|--|---------------------------------|
| • | ADC Engineering, Inc. (ADC) | Civil Engineering |
| • | Chmura Economics & Analytics (CHM) | Economic Impact Analysis |
| • | Davenport Public Finance (DAV) | Capital Planning |

The fee is structured around the eight (8) tasks identified in our request for qualifications. The final deliverable will be an 8.5 x 11 formatted electronic document that provides a comprehensive summary of each task and the relative findings and conclusions. A breakdown of the deliverables is as follows:

Task 1: Initial Scoping Meeting with Advisory Committee

A. Coordination meeting with the Advisory Committee to confirm scope and schedule

Task 2: Preliminary Information Gathering and Kickoff Meeting

- A. Prepare and coordinate a fee proposal and project schedule for approval
- B. Initiate project ShareFile site for data transfer
- C. Receive from the County various data required and requested to initiate the study: all survey plats, CAD files, drawings of existing facilities, and copies of previous studies
- D. Develop base files for each site with available information including surveys, aerials, historic data, and previous study information
- E. Kickoff meeting with the Advisory Committee

Task 3: Individual Landing Site Assessments

- A. Conduct a physical site assessment for upland elements of each location identified in Attachment A that includes the following components:
 - Vehicular and pedestrian circulation
 - Parking capacity
 - Stormwater drainage
 - Lighting
 - ADA compliance
- B. Conduct a physical structural non-invasive assessment of the boat ramps and piers
- C. Conduct a hydrographic survey and dredging evaluation at the Broad River Boat Landing only. Scope of work does not include any additional hydrographic surveys or below surface evaluations.
- D. Develop recommendations for subsequent repairs including preliminary cost estimates
- E. Compile each site into a standard document format with a single-page snapshot summary of significant findings

Task 4: Standard Operations Manual

- A. Compile recommendations to serve as standard methods and procedures for county-wide facility and maintenance standards for existing and new boat landing sites
- B. Incorporate the following design criteria:
 - Ordinance for use and security
 - ADA compliance
 - Lighting
 - Parking
 - Wayfinding/signage
 - Accommodation of non-motorized watercraft
 - -Environmental best management practices
 - Pollution prevention best management practices
- C. Create an inspection checklist for future use in maintaining sites
- D. Present a draft to the Advisory Committee
- E. Revise per owner review comments and provide as a stand-alone document

Task 5: Regional Master Plan of Boating Access

- A. Review and evaluate boat landing site access on a county-wide scale
- B. Incorporate an analysis of the following components:
 - New landing site considerations
 - Strategies to address direct and secondary impacts
 - Environmental constraints
- C. Conduct three (3) public outreach sessions in strategic locations to facilitate input
- D. Present master plan and observations to the Advisory Committee
- E. Develop a list of priorities for implementation based on direction
- F. Provide as a stand-alone document for separate funding source identification

Task 6: Economic Impact Analysis

- A. Conduct a household survey to understand the potential use of boat landings in Beaufort and the surrounding counties.
 - This survey will be a telephone survey with a target population of current and potential boat users from Beaufort and surrounding counties.
 - Frequency and duration of recreation trips
 - Associated use of motels and restaurant facilities
- B. Utilize the Jobs EQ economic impact model to estimate the direct, indirect, and induced impact in terms of spending and jobs created, as well as the business diversity impacts
- C. Identify quantitatively the economic diversity benefit of the boat landing and how expansion of facilities can satisfy public recreation and economic needs

Task 7: Capital Planning

- A. Utilize the cost estimates from the site assessments, data from the economic impact analysis, recommendations of the regional boating access master plan, and other additional county financial information to create a capital funding model.
- B. Identify the desired capital plan that addresses the funding required to implement the study scope over a 5–10 year duration.

Task 8: Development of Final Report

- A. Compile an 8.5 x 11 format final report to document the study
- B. Document the entire process from the kick-off meeting to the final recommendations
- C. Organize all raw data into a clear format accompanied by charts, photographs, diagrams, executive summaries, and other supporting information
- D. Share an electronic draft with the Advisory Committee for review and comment prior to finalizing the report.
- E. Modify report based on owner feedback and suggestions on final draft
- F. Quality Control review of entire document
- G. Final report presented to the Advisory Committee
- H. Ongoing support from the team at Creech & Associates after conclusion of the project

A breakdown of lump sum fees by each major category is as follows:

| • | Total | \$284,515.00 |
|---|---|--------------|
| • | Task 8: Development of Final Report | \$24,421.00 |
| • | Task 7: Capital Planning | \$23,070.00 |
| • | Task 6: Economic Impact Analysis | \$14,388.00 |
| • | Task 5: Regional Master Plan of Boating Access | \$20,195.00 |
| • | Task 4: Standard Operations Manual | \$15,020.00 |
| • | Task 3: Individual Landing Site Assessments | \$132,404.00 |
| • | Task 2: Preliminary Information Gathering | \$44,253.00 |
| • | Task 1: Initial Scoping and Kickoff Meeting with Advisory Committee | \$10,765.00 |

The Advisory Committee will be established by County leadership and will include key personnel to provide oversight and guide the study. There will be a total of six (6) meetings with the Advisory Committee included in this scope, in addition to the final presentation. There will be a total of one (1) presentation to County Council for the final report, and three (3) public outreach sessions. A recurring bimonthly conference call or net meeting will be established to maintain open communications throughout the study.

All reimbursable expenses are included in the base fee with the condition that all deliverables will be submitted in electronic format and no hard copies will be required. Any additions to the scope of work outlined in this proposal, including but not limited to site visits, presentations, deliverables, etc. will be considered an additional service and will be billed hourly per the 2021 rates listed in Attachment B. All additional services must be authorized in writing prior to commencing work.

Creech & Associates appreciates the opportunity to serve Beaufort County. If you have any questions, please feel free to contact us.

Yours truly:

Creech and Associates, PLLC

Brent J. Green, LEED AP

Principal

cc: Michael Supino, AIA

file

Accepted: David L. Thomas, CPPB, CPPO

Date

Beaufort County Public Boat Landing Facilities Assessment DRAFT 1

ATTACHMENT A

List of 20 boat landings to be included in the site assessment scope of work:

| 1. | Alljoy Boat Landing | 265 Alljoy Road |
|-----|-------------------------------|----------------------------------|
| 2. | Bluffton Oyster Factory Park | 75 Wharf Street |
| 3. | Brickyard Creek Boat Landing* | 275 Brickyard Point Road |
| 4. | Broad River Boat Landing | 1050 Robert Smalls Parkway |
| 5. | Buddy and Zoo Boat Landing | 40 Station Creek Drive |
| 6. | Butcher's Island Boat Landing | 10 Butcher's Road |
| 7. | C.C. Haigh, Jr. Boat Landing | 1640 Fording Island Rd Extension |
| 8. | Cross Island Boat Landing | 68 Helmsman Way |
| 9. | Daufuskie Island Boat Landing | 13 Haig Point Road |
| 10. | Eddings Point Boat Landing* | 511 Eddings Point Road |
| 11. | Edgar Glenn Boat Landing | 305 Okatie Highway |
| 12. | Grays Hill Boat Landing | 395 Clarendon Road |
| 13. | H.E. Trask, Sr. Boat Landing* | 325 Sawmill Creek Road |
| 14. | Marshland Boat Landing | 97 Marshland Road |
| 15. | Paige Point Boat Landing | 99 Paige Point Landing Road |
| 16. | Parris Island Boat Landing | 50 Marina Boulevard |
| 17. | Sams Point Boat Landing | 1009 Sams Point Road |
| 18. | Steel Bridge Boat Landing | 993 Charleston Highway |
| 19. | Sugar Hill Boat Landing | 40 Sugar Hill Landing Road |
| 20. | White Hall Boat Landing | 33 Sea Island Parkway |
| | | |

List of 6 piers to be included in the site assessment scope of work:

| 1. | Camp St. Mary's Fishing Pier | 119 Camp St. Mary's Road |
|----|-------------------------------|----------------------------------|
| 2. | C.C. Haigh Landing Fixed Pier | 1640 Fording Island Rd Extension |
| 3. | Daufuskie Landing Fixed Pier | 13 Haig Point Road |
| 4. | Factory Creek Fishing Pier | 33 Sea Island Parkway |
| 5. | Old House Creek Pier | 50 Sterling Point Drive |
| 6. | Whale Branch Fishing Pier | 216 Seabrook Road |

^{*} Indicates boat landings currently scheduled for improvements

ATTACHMENT B

2021 Hourly Rates

Administrative

CREECH & ASSOCIATES

| Principal | \$200.00 |
|---------------------------------------|----------|
| Senior Designer/Associate/Team Leader | \$175.00 |
| Project Architect | \$160.00 |
| BIM/Technical | \$130.00 |
| Administrative | \$90.00 |
| | |
| JON GUERRY TAYLOR | |
| Senior Civil Engineer | \$175.00 |
| Civil Engineer | \$175.00 |
| Civil Engineering Graduate | \$125.00 |
| Engineering Designer | \$100.00 |
| Senior Land Planner | \$175.00 |
| Permitting/Environmental Specialist | \$175.00 |
| Land Planner | \$105.00 |

\$50.00

ITEM TITLE:

Request to purchase Caterpillar Model 323 Excavator w/ Long Reach (\$221,823.85)

MEETING NAME AND DATE:

Public Facilities Committee Meeting - September 20, 2021

PRESENTER INFORMATION:

Jared Fralix, P.E., Assistant County Administrator, Engineering

Neil J. Desai, P.E., Public Works Director

(5 Minutes)

ITEM BACKGROUND:

The Public Works 2002 Volvo 290 caught fire while on a jobsite and it was determined by the County's insurance company to be a total lost.

PROJECT / ITEM NARRATIVE:

Purchase of CAT 323 Excavator with the long reach boom. Since there is a current inventory of CAT products, maintenance costs will be streamlined. The excavator is a piece of equipment that is used in numerous different facets, it is essential to the operations of the Public Works Department.

FISCAL IMPACT:

A quote has been provided from Blanchard CAT in the amount of \$221,823.85. The funding source for this item was approved in the FY2022 budget meeting for Public Works account number 10001301-54000, additionally the insurance claim proceeds will also go towards this purchase as well.

STAFF RECOMMENDATIONS TO COUNCIL:

Public Works Director and the Fleet Manager recommend approving the purchase of the CAT 323 to replace the Volvo 290.

OPTIONS FOR COUNCIL MOTION:

Motion to either accept/deny the recommendation to approve the purchase of the Cat 323 Excavator w/ Long Reach.

Next Steps - A Majority Vote for Acceptance by Committee would move item forward to final acceptance by full County Council vote.



BEAUFORT COUNTY GOVERNMENT-PUBLIC WORKS & MAINTENANC 84 SHANKLIN RD BEAUFORT, SC 29901 August 2, 2021

Attention: Katie Gottschalk

Dear Kate.

We would like to thank you for your interest in our company and our products and are pleased to quote the following for your consideration.

One (1) New Cat Model: 323 Excavators with all standard equipment in addition to the additional specifications listed below:

We wish to thank you for the opportunity of quoting on your equipment needs. This quotation is valid for 30 days, after which time we reserve the right to re-quote. If there are any questions, please do not hesitate to contact me.

Sincerely,

Wiley Murph Machine Sales Representative

STANDARD EQUIPMENT

POWERTRAIN -C7.1e single turbo Tier 4 Final diesel -engine -Electric fuel priming pump -Reversible electric cooling fans -Two-stage fuel filtration system with -water separator and indicator -Sealed double element air filter with -integrated pre-cleaner -Biodiesel capable (up to B20) -

UNDERCARRIAGE -Grease lubricated track link -Tie down points on base frame -(ISO 15818 compliant) -

HYDRAULICS -Electronic main control valve -Auto warm up -Tandem type electronic main pump -Boom and stick regeneration circuits -Automatic two speed travel -Boom and stick drift reduction valve -Element type main hydraulic filter -

ELECTRICAL -Maintenance free battery -Centralized electrical disconnect switch -CAT product link -After engine shut down programmable -time delay LED working -lights: -One chassis mounted, one LH boom mounted -

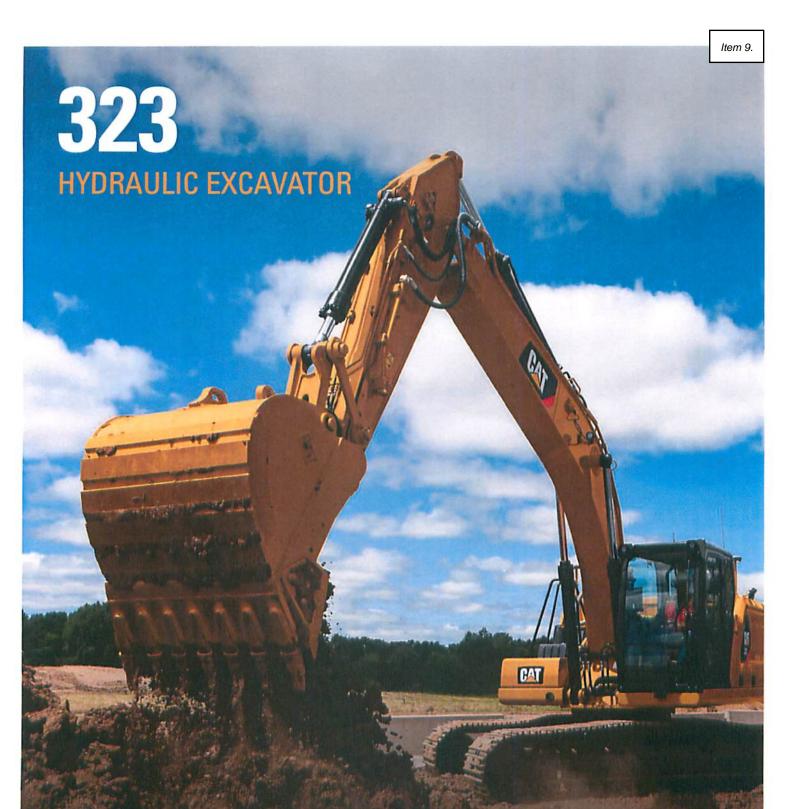
OPERATOR ENVIRONMENT -Sound-suppressed ROPS cab -(ISO 12117-2 compliant) w/viscous mount -Increased rear window size -as emergency exit -2 inch (51mm) orange seat belt -Tilt up left side console -Automatic bi-level air conditioner -with pressurized function -Washable floor mat -Roller front sunscreen -Beacon ready -2 x 12V DC outlet and USB port -Dome and lower LED interior lights, -coat hook, cup holder, console storage -rear storage with net, and overhead -storage with net -(Deluxe cab) --Openable tempered front upper -windshield w/ assist device and -removable tempered lower windshield -with in cab storage bracket --Air suspension deluxe seat w/ headrest -w/ 2 step seat heater, console height -adjustment w/o tools, arm rest height -and angle adjustment --Upper radial wiper for 70/30 --Openable polycarbonate hatch for 2P -windshield

SAFETY AND SECURITY -RH hand rail and hand hold -(ISO 2867 compliant) -Service platform with anti-skid plate -and countersunk bolts -Hydraulic lock out lever neutralizes -all controls -Ground level accessible secondary engine -shutoff switch in cab -Signaling / warning horn -

OTHER STANDARD EQUIPMENT -Side entry to service platform -Grouped location for engine oil -and fuel filters -Ground level 2nd dipstick for engine oil -Sampling ports for scheduled oil -Sampling (S.O.S) -Remote flash -

MACHINE SPECIFICATIONS Description Reference No 323 07D HEX AM-N CFG2C 597-0901 INCLUDES: 547-3691 323 07 EXCAVATOR ARRANGEMENT 578-6724 COMMON ARRANGEMENT 507-4824 FRAME, SWING, HD 575-2661 COUNTERWEIGHT, 5.4MT(11,900lb) 577-2734 BEARING, SWING, HD 561-1743 SWING DRIVE NG. 573-5699 UNDERCARRIAGE HD, W/SD ROLLER 494-4986 CYLINDER, BOOM, HL 513-3210 BOOM TUBE W/EOU 489-2950 LINES, FRONT, STD 513-3214 SENSOR, PRESSURE, EOU 546-0101 CAB, DELUXE 577-7866 LINES, AIR CONDITIONER 490-7715 PEDAL, STRAIGHT TRAVEL 490-7715 511-9428 MONITOR, 10" 511-9428 592-8316 TRAVEL, ALARM 592-8316 577-3907 LIGHT, CHASSIS **525-7678 MACHINE ECM** 502-7150 COOLING, HIGH AMBIENT 488-9288 GUARD, TRAVEL MOTOR, HD 488-9288 134-8875 GUARD, SWIVEL, STD 134-8875 493-9765 FINE SWING 520-9418 FILM, OPERATING PATTERN, 2WAY 520-9418 BOOM, REACH 18'8" HD 577-5865 STICK, R12'10" 490-7672 LINKAGE, BKT, B1 W/EYE GRADE 492-8537 CYLINDER, STICK 586-3636 CYLINDER, BKT, B1 490-4179 TRACK, 31" TG HD 526-6475 **GUARD, TRACK GUIDE, SEGMENTED** 526-8766 HYDRAULIC PKG, NO TOOL W/ HL 597-0798 JOYSTICKS, VERTICAL SLIDER 528-6835 LINES, DRAIN, PG QUICK COUPLER 549-8149 SUCTION LINE, PUMP, STD 489-2952 **BATTERIES. 2** 506-5013 LIGHTS, CAB, W/RAIN PROTECTOR 577-8973 LIGHTS PKG, BOOM LH & RH 579-5428 WIPER, RADIAL W/O LOWER 484-8021 INTEGRATED RADIO, W/O DAB 502-7166 GRADE W/2D, ASSIST&PAYLOAD 516-0550 GRADE SENSOR, REACH BOOM 516-9880 GRADE SENSOR, R12'10" STICK 516-9882 PROD LINK, PLE643/PLE743 RADIO 594-9052 **NETWORK MANAGER, STD** 555-7286

| Description | Reference No |
|--------------------------------|--|
| MIRROR, CAB, W/O GUARD | 580-8628 |
| DECALS, EXTERIOR, ANSI | 578-2907 |
| DECALS, STICK WARNING, ANSI | 567-3815 |
| FILM, EMC | 528-4738 |
| DECAL, ROPS | 567-3816 |
| INSTRUCTIONS, ENGLISH | 0P-3380 |
| STORAGE TRAY | 576-9463 |
| SCREEN, RADIATOR | 491-8272 |
| QUICK DRAINS READY | 511-7398 |
| CONTROL, QC | 517-4758 |
| LINES, QC, REACH BOOM | 570-4691 |
| LINES, QC, R12'10" STICK | 242-6486 |
| STORAGE PROTECTION (EXPORT) | 0G-4126 |
| ROLL ON-ROLL OFF | 0G-4202 |
| FIXTURE, BUCKET LINKAGE B1 | 575-8647 |
| DECALS, CAB, ANSI | 573-4351 |
| BKT HD 48" 1.56YD3 B | 552-8240 |
| BUCKET-DC, 60" 1.32 YD3 (B) | 441-6074 |
| TIP, PENETRATION PLUS ADVANSYS | 505-4097 |
| SIDECUTTERS, HEAVY DUTY | 357-2698 |
| PIN GROUP, SPARE | 172-8444 |
| COUPLER, PG W/O PINS B | 388-0067 |
| LINES, CONNECTOR, PIN GRABBER | 449-1136 |
| KIT, MESH/NET GUARD, FULL | 528-3292 |
| CAMERA, 360 VISIBILITY | 578-1166 |
| ROCKLAND TRAPEZOID BUCKET | |
| CAT STIFF THUMB 603-2227 | |
| SELL PRICE | \$221,323.85 |
| EXT WARRANTY | Included |
| NET BALANCE DUE | \$221,323.85 |
| SC SALES TAX | \$500.00 |
| AFTER TAX BALANCE | \$221,823.85 |
| WARRANTY | |
| Standard Warranty: | 12 Months - Unlimited |
| Extended Warranty: | 323-36 MO/5000 HR POWERTRAIN + HYDRAULICS + TECH |
| | |
| Accepted by | on |
| | Signature |



Engine Power Operating Weight – 790 mm (31") Shoes Operating Weight – 600 mm (24") Shoes 121 kW (162 hp) 25 500 kg (56,200 lb) 23 900 kg (52,700 lb)

Cat" C7.1 Engine meets U.S. EPA Tier 4 Final and EU Stage IV emission standards with an aftertreatment system that requires no operator input or downtime.

NEXT GENERATION EXCAVATORS

The new line of Cat® Excavators was designed with a new approach to equipment families that gives you:

- MORE MODEL OPTIONS
- MORE STANDARD TECHNOLOGIES
- + MORE PRICE POINTS

Ready to help you make your business stronger, Cat Excavators give you new ways to get the most work done at the lowest cost—so you put more money in your pocket.



THE NEW CAT® 323

HIGH PRODUCTION PERFORMANCE

THE CAT 323 delivers power, speed and high production performance. With more standard technology than previous models, the highest lift capacity in the line-up, plus reduced fuel and maintenance costs, the Cat 323 has all you need to take your business to the next level.



INCREASE EFFICIENCY **UP TO 45%**

The Cat 323 offers the industry's highest level of standard factory-equipped technology, including Cat Grade with 2D, Grade with Assist and Payload.

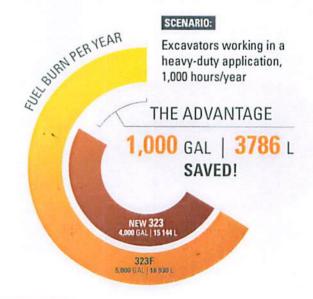
REDUCE FUEL CONSUMPTION UP TO 20% 2

A precise combination of lower engine speed and a large hydraulic pump delivers top performance while burning less fuel.

LOWER MAINTENANCE COSTS UP TO 20% 3

Extended and more synchronized maintenance intervals increase uptime and reduce costs compared to the 323F.

FUEL EFFICIENCY SAVINGS ADD UP



CALCULATION:

NEW 323:

 $5.0 \text{ GAL/HR} \times 1,000 \text{ HR/YR} = 5,000 \text{ GAL/YR}$ ($5.0 \text{ GAL/HR} \times 80\%$) $\times 1,000 \text{ HR/YR} = 4,000 \text{ GAL/YR}$ 18.93 L/HR X 1000 HR/YR = 18 930 L/YR (18.93 L/HR X 80%) X 1000 HR/YR = 15 144 L/YR

¹ Operator efficiency gains compared to traditional grading methods.

² Compared to the 323F.

³ Cost reduction based on 12,000 hours of operation.



STANDARD CAT CONNECT TECHNOLOGY

GETS JOBS DONE FASTER WITH LESS REWORK

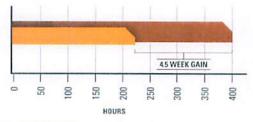
Onboard Cat Connect Technology gives you the edge.

Operators of all experience levels will dig, load and grade with more confidence, speed and accuracy. The result?

Better productivity and lower costs.

WHAT WOULD YOU DO WITH 4.5 MORE WEEKS?





PREVIOUS YEAR:

USING TRADITIONAL GRADING METHODS
 400 hours/year, grading with stakes and checkers

CURRENT YEAR:

USING NEW CAT 323 WITH CAT CONNECT TECHNOLOGY

220 hours/year, with standard Cat Grade



STANDARD, SIMPLE-TO-USE TECHNOLOGIES INCLUDE:



STANDARD CAT GRADE WITH 2D

Cat GRADE with 2D helps operators reach grade faster. Operators cut and fill to exact specifications without overcutting. You can program up to four of your most commonly used target depth and slope off sets so you can get to grade with ease—a real time saver on the job site. Best of all, no grade checkers are needed so the work area is safer.



STANDARD CAT PAYLOAD

Cat PAYLOAD technology delivers precise load targets with on-the-go weighing, which helps prevent over/under-loading and maximizes efficiency. Automated tracking helps manage production and lower cost.



STANDARD CAT GRADE WITH ASSIST

Automated boom, stick and bucket movements deliver more accurate cuts with less effort. The operator simply sets the depth and slope into the monitor and activates single-lever digging.

AVAILABLE OPTIONAL UPGRADES

Cat GRADE with Advanced 2D and Cat GRADE with 3D increase productivity and expand grading capabilities. GRADE with Advanced 2D adds in-field design capabilities through an additional 10-inch (254 mm) high-resolution touchscreen monitor. GRADE with 3D adds GPS and GLONASS positioning for pinpoint accuracy. Use the excavator's onboard cell technology to quickly connect to 3D services like Trimble Connected Community or Virtual Reference Station.

REAL-TIME INFORMATION FROM CAT LINK

TAKE THE GUESSWORK OUT OF MANAGING YOUR EQUIPMENT

Cat Link hardware (Product Link™) and software (VisionLink®) work together to put equipment information at your fingertips. Get real-time access to information on every machine in your fleet on any jobsite—no matter the size of the operation or the brands of equipment you run.



PRODUCT LINK™

Track asset location, hours, fuel usage, diagnostic codes, idle time and more to improve your productivity and lower your operating costs. Cellular connectivity comes standard. Satellite connectivity is available.



VISIONLINK®

Using the online VisionLink interface, you can see a common, collective view of your information, making it easier to manage a mixed fleet and make informed decisions about your equipment.



MY.CAT.COM

You can also access Caterpillar and Cat dealer information at my.cat.com. My.cat.com gives you access to PM schedules, parts and service records, warranty coverage and more—with a single login. Plus, you can link directly to your VisionLink account.

NEW CAB TAKES THE HARD OUT OF WORK

Sites where excavators typically work are rugged and challenging. That's why it's important that the 323 cab protects the operator as much as possible from the fatigue, stresses, sounds and temperatures of the job.



NEW SEAT AND JOYSTICK CONSOLE REDUCE FATIGUE

Comfort and efficiency of movement keep operators productive and alert all shift long. The new standard seat is wide and adjustable for operators of virtually any size. The Deluxe cab package includes a heated air suspension seat; the Premium seat is both heated and cooled.





TOUCHSCREEN MONITOR

Most machine settings can be controlled through the high-resolution 10-inch/254 mm touchscreen monitor. It offers 42 languages and is easy to reach from the seat-no twisting or turning.



NEW SMART MODE

The new Smart Mode (one of three power mode settings) automatically adjusts engine and hydraulic power for the highest fuel efficiency-less power for tasks such as swinging and more power for digging.



CUSTOMIZABLE JOYSTICKS

Joystick function can be customized through the monitor. Joystick pattern as well as response can be set to match operator preference. All preferences are saved with the Operator ID and restored at log-in.



KEYLESS PUSH START

The 323 uses a keyless push-button engine start. This adds security for the machine by using Operator ID codes to limit and track machine access. Codes can be entered manually, via an optional Bluetooth® key fob or smartphone app.



ISO-CERTIFIED ROPS CAB

The ISO-certified ROPS cab is soundsuppressed and sealed. The windows and lower front profile of the machine give outstanding visibility to the work area without the strain of constantly leaning forward.

ALL-AROUND VISIBILITY

Standard rearview and right-side-view cameras keep operators aware of their surroundings at all times. An optional 360° Visibility feature is also available.

EASY ACCESS, CONNECTIVITY AND STORAGE

Convenience features include Bluetooth integrated radio, USB ports for charging and phone connectivity, 12V DC outlets and AUX port, storage in rear, overhead and console compartments, and cup and bottle holders.



SAFETY FEATURES

LOOK OUT FOR YOUR PEOPLE AND YOUR EQUIPMENT

Daily maintenance checks can be performed with 100% of the points accessible from ground level, making maintenance faster, easier and safer. Checkpoints include the engine oil dipstick, fuel water separator, fuel tank water and sediment drains, and cooling system coolant level check.

LIFT ASSIST

Lift Assist helps you avoid tipping. With visual and auditory alerts, you'll know if your load is within the excavator's safe working range limits.





*https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4962179/













E-WALL SWING

E-WALL FORWARD

E-WALL CAB PROTECTION

E-WALL CEILING

E-WALL FLOOR

STANDARD 2D E-FENCE TECHNOLOGY

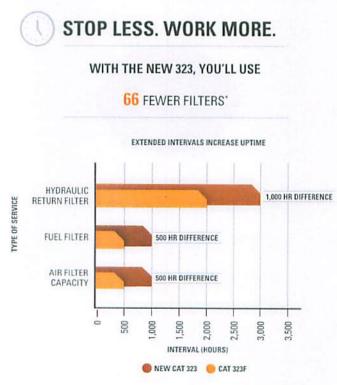
The standard 2D E-fence feature automatically stops excavator motion using boundaries you set in the monitor for the entire working envelope—above, below, sides and front. E-fence features protect equipment from damage and reduce fines related to zoning or underground utility damage. Automatic boundaries even help prevent operator fatigue by reducing over-swinging and over-digging.



With extended and more synchronized maintenance intervals, you get more done at a lower cost compared to the 323F. Consolidated filter locations make service faster. Hydraulic, air and fuel tank filters have increased capacity and longer life.

KEY MAINTENANCE COST REDUCTIONS INCLUDE:

- Consolidated filter locations to reduce service time.
- Multiple oil filters with extended maintenance intervals, plus a new higher dirt capacity hydraulic filter.
- The new Cat air filter design results in a 100% increase in service life compared to our previous filter.
- Fuel filters are synchronized to be changed at 1,000 hoursdouble the interval from the previous filters.



*Based on 12,000 operating hours.

INCREASE YOUR PRODUCTIVITY AND PROFIT

WITH CAT ATTACHMENTS

You can easily expand the performance of your machine by utilizing any of the variety of Cat Attachments. Each Cat Attachment is designed to fit the weight and horsepower of Cat Excavators for improved performance, safety and stability.

BUCKETS



HYDRAULIC HAMMERS

MULTI-PROCESSORS











QUICK COUPLERS

RAKES

RIPPERS

SECONDARY PULVERIZERS









SHEARS

THUMBS

VIBRATORY PLATE COMPACTORS







Did you know you can find your attachments quickly and easily? The excavator's onboard Bluetooth reader can search for any work tool equipped with Cat asset tracking devices up to a range of 60 meters (200 feet).

TECHNICAL SPECIFICATIONS

See cat.com for complete specifications.

| ENGINE | | |
|---|--------------------|--------------------|
| Engine Model | | Cat C7.1 |
| Engine Power – ISO 9249 | 121 kW | 162 hp |
| Engine Power – ISO 14396 | 122 kW | 164 hp |
| Bore | 105 1 | mm 4 ir |
| Stroke | 135 (| mm 5 ir |
| Displacement | 71 | . 428 in |
| HYDRAULIC SYSTEM | VI | 12.38 |
| Main System – Maximum Flow (Implement) | 429 L/min 11 | 3 gal/mir |
| Maximum Pressure - Equipment - Normal | 35 000 kPa | 5,075 ps |
| Maximum Pressure – Equipment – Heavy Lift Mode | 38 000 kPa | 5,510 ps |
| Maximum Pressure – Travel | 34 300 kPa | 4,974 ps |
| Maximum Pressure – Swing | 26 800 kPa | 3,886 ps |
| MACHINE WEIGHT | | |
| Operating Weight – 790 mm (31") Shoes | 25 500 kg | 56,200 It |
| HD reach boom, R2.9 m (9'6") HD stick, 1.38 m ³ (790 mm (31") triple grouser HD shoes, 5.4 mt (11 | | |
| Operating Weight - 600 mm (24") Shoes | 23 900 kg | 52,700 It |
| Reach boom, R2.9 m (9'6") stick, 1.30 m ³ (1.70 yd 600 mm (24") triple grouser HD shoes, 5.4 mt (11 | ,900 lb) counterwe | eight. |
| SERVICE REFILL CAPACI | 345 L | 00.0 == |
| , aut turn | 25 L | 86.6 ga |
| Cooling System Engine Oil | 25 L | 6.6 ga |
| | | - J |
| Swing Drive (each) | 5 L | 1.3 ga |
| Final Drive (each) | 5 L | 1.3 ga |
| Hydraulic System (including tank) | 234 L | 61.8 ga |
| FT 1 P T 1 | | |
| Hydraulic Tank DEF Tank | 115 L 41 L | 30.4 ga 10.8 ga |

| DIMENSIONS | | |
|--------------------------------------|--------------|---------|
| Boom | Reach 5.7 m | (18'8") |
| Stick | Reach 2.9 m | (9'6") |
| Bucket | 1.19 m³ (1.5 | 56 yd³) |
| Shipping Height (top of cab) | 2960 mm | 9'9" |
| Handrail Height | 2950 mm | 9'9" |
| Shipping Length | 9530 mm | 31'3" |
| Tail Swing Radius | 2830 mm | 9'3" |
| Track Length | 4450 mm | 14'7" |
| Length to Center of Rollers | 3650 mm | 12'0" |
| Ground Clearance | 470 mm | 1'7" |
| Track Gauge | 2380 mm | 7'9" |
| Transport Width - 600 mm (24") Shoes | 2980 mm | 9'9" |
| Transport Width - 790 mm (31") Shoes | 3170 mm | 10'5" |
| Counterweight Clearance | 1050 mm | 3'5" |
| WORKING RANGES AND FORCES | | |

| WORKING RANGES AND FO | RCES |
|--|---------------------|
| Boom | Reach 5.7 m (18'8") |
| Stick | Reach 2.9 m (9'6") |
| Bucket | 1.19 m³ (1.56 yd³) |
| Maximum Digging Depth | 6720 mm 22'1" |
| Maximum Reach at Ground Level | 9860 mm 32'4" |
| Maximum Cutting Height | 9370 mm 30'9" |
| Maximum Loading Height | 6490 mm 21'4" |
| Minimum Loading Height | 2170 mm 7'1" |
| Maximum Depth Cut for 2440 mm (8'0") Level Bottom | 6550 mm 21'6" |
| Maximum Vertical Wall Digging Depth | 5190 mm 17'0" |
| Bucket Digging Force (ISO) | 150 kN 38,811 lbf |
| Stick Digging Force (ISO) | 106 kN 23,911 lbf |

AIR CONDITIONING SYSTEM

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.9 kg of refrigerant which has a $\rm CO_2$ equivalent of 1.287 metric tonnes.

CAB FEATURES

| FEATURE | DESCRIPTION | DELUXE | PREMIUM |
|--------------------------------|------------------------------|--------|---------|
| ROPS | Standard Sound Suppression | • | x |
| | Advanced Sound Suppression | X | |
| High-Resolution Monitor | 254 mm (10 inch) Touchscreen | • | • |
| Keyless Push-to-Start | Engine Control | • | • |
| Jog Dial, Shortcut Keys | Monitor Control | • | • |
| Air Conditioning | Automatic Bi-level | | • |
| Suspension Seat with Seat Belt | Air Adjustable | • | • |
| | Automatic | X | • |
| | Heated | • | × |
| | Heated & Cooled | X | |
| Console | Infinitely Adjustable | • | • |
| | Tilt-Up Left Side | • | • |
| Bluetooth Integrated Radio | With USB Ports | • | • |

- standard x - not available

STANDARD & OPTIONAL EQUIPMENT

Standard and optional equipment may vary. Consult your Cat dealer for details.

| CAB | STANDARD | OPTIONAL |
|--|----------|----------|
| ROPS, standard sound suppression (Deluxe only) | • | |
| ROPS, advanced sound suppression (Premium only) | | |
| Air-adjustable seat with heat (Deluxe only) | • | |
| Auto-adjustable seat with heat and air ventilation (Premium only) | | |
| High-resolution 254 mm (10 in) LCD touchscreen monitor | • | |
| CAT CONNECT TECHNOLOGY | STANDARD | OPTIONA |
| Cat Product Link | • | |
| Cat GRADE with 2D | • | |
| Cat GRADE with Advanced 2D | | • |
| Cat GRADE with 3D | | |
| Cat GRADE with Assist | • | |
| Cat PAYLOAD | | |
| 2D E-fence | | |
| Remote Flash capability | | |
| Remote Troubleshoot capability | • | |
| ENGINE | STANDARD | OPTIONA |
| Three selectable power modes | • | |
| Auto engine idle shutdown | | |
| 52° C (125° F) high-ambient cooling capacity | • | |
| -32° C (-25° F) cold start capability | | |
| Double element air filter with integrated precleaner | • | |
| Reversing electric cooling fans | • | |
| Biodiesel capability up to B20 | • | |
| HYDRAULIC SYSTEM | STANDARD | OPTIONA |
| Boom and stick regeneration circuits | • | |
| Boom and stick lowering check valves | | |
| Auto hydraulic warm up | • | |
| Auto two-speed travel | • | |
| Boom and stick drift reduction valve | • | |
| Hammer return filter circuit | | |
| | | |
| Advanced Tool Control (two pump, | •1 | • |
| Advanced Tool Control (two pump, one/two way high-pressure flow) Medium-pressure circuit | •1 | |

| BOOM AND STICKS | STANDARD | OPTIONAL |
|--|----------|----------|
| 5.7 m (18'8") reach boom, 2.9 m (9'6") stick | • | |
| 5.7 m (18'8") HD reach boom, 2.9 m (9'6") HD stick | | • |
| 8.85 m (29'0") super long reach boom, 6.28 m (20'7") stick | | • |
| UNDERCARRIAGE AND STRUCTURES | STANDARD | OPTIONAL |
| 600 mm (24") triple grouser shoes | | • |
| 700 mm (28") triple grouser shoes | | |
| 790 mm (31") triple grouser shoes | | • |
| 900 mm (35") triple grouser shoes | | |
| Tie-down points on base frame | • | |
| 4200 kg (9,300 lb) counterweight | | |
| 5400 kg (11,900 lb) counterweight | • | |
| ELECTRICAL SYSTEM | STANDARD | OPTIONAL |
| Two 1,000 CCA maintenance-free batteries | • | |
| Programmable time-delay LED working lights | | |
| LED chassis light, left-hand/right-hand boom lights, cab lights | • | |
| SERVICE AND MAINTENANCE | STANDARD | OPTIONAL |
| Sampling ports for Scheduled Oil Sampling (S·O·S) | • | |
| Ground-level and platform-level engine oil dipsticks | | |
| SAFETY AND SECURITY | STANDARD | OPTIONAL |
| Rearview camera | • | |
| Right-side-view camera | | |
| 360° visibility | | • |
| Lift Assist | | |
| Cat asset tracker | • | |
| Ground-level engine shutoff switch | | |
| Right-hand handrail and hand hold | • | |
| Signaling/warning horn | | |

Not all features are available in all regions. Please check with your local Cat dealer for specific offering availability in your area.

For additional information, refer to the Technical Specifications brochures for the 320 GC, 320 and 323 models available at www.cat.com or your Cat dealer.

¹ ANZ and Europe only.

² Europe only.

For more complete information on Cat products, dealer services and industry solutions, visit us on the web at www.cat.com

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VisionLink is a trademark of Trimble Navigation Limited, registered in the United States and in other countries.

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Yellow", the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

www.cat.com www.caterpillar.com

AEXQ2331-02 Replaces AEXQ2331-01 Build Number: 07B





Table of Contents

323
Hydraulic Excavator

Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

| pecifications | |
|--|---|
| Engine | Major Component Weights |
| Swing Mechanism2 | Dimensions |
| Weights2 | Working Ranges |
| Track | HD Reach Boom Lift Capacities |
| Drive | Reach Boom Lift Capacities8 |
| Hydraulic System | SLR Boom Lift Capacities |
| Service Refill Capacities | Bucket Specifications and Compatibility |
| Sound Performance | Attachments Offering Guide |
| Standards2 | Thumb Specifications |
| Operating Weights and Ground Pressures | |

| Engine | | | |
|--------------------------|-----------|---------------------|--|
| Engine Model | Cat® C7.1 | | |
| Net Power (ISO 9249) | 128 kW | 172 hp | |
| Engine Power (ISO 14396) | 129 kW | 174 hp | |
| Bore | 105 mm | 4 in | |
| Stroke | 135 mm | 5 in | |
| Displacement | 7.01 L | 428 in ³ | |

- The 323 meets U.S. EPA Tier 4 Final emission standards.
- Recommended for use up to 4500 m (14,764 ft) altitude with engine power derate above 3000 m (9,842.5 ft).
- Net power is tested per ISO 9249. Standards in effect at the time of manufacture.
- Net Power advertised is the power available at the flywheel when the engine is equipped with fan, air intake system, exhaust system and alternator.
- · Rated speed at 2,200 rpm.

| Swing Mechanism | | |
|--|-------------------|----------------|
| Swing Speed | 11.25 rpm | |
| Maximum Swing Torque | 82 kN·m | 60,300 lbf-ft |
| Weights | | |
| Operating Weight | 25 500 kg | 56,200 lb |
| 5400 kg (11.900 lb) counterwei | ght, HD Reach boo | m. R2.9 (9'6") |

 5400 kg (11,900 lb) counterweight, HD Reach boom, R2.9 (9'6") HD Thumb Ready Reach stick, HD 1.38 m³ (1.81 yd³) bucket and 790 mm (31 in) HD shoes.

| Track | | |
|---------------------------------------|--------|-------|
| Standard Track Shoe Width | 790 mm | 31 in |
| Optional Track Shoe Width | 600 mm | 24 in |
| Number of Shoes (each side) | 49 | |
| Number of Track Rollers (each side) | 8 | |
| Number of Carrier Rollers (each side) | 2 | |

| Drive | | |
|--|----------|------------|
| Gradeability | 35°/70% | |
| Maximum Travel Speed | 5.7 km/h | 3.5 mph |
| Maximum Drawbar Pull – Long Undercarriage | 203 kN | 45,614 lbf |

| Hydraulic System | | |
|---|-----------------------------------|------------------------------------|
| Main System – Maximum Flow – Implement | 429 L/min (214.5 × 2 pumps) | 113 gal/min (56.5 × 2 pumps) |
| Maximum Pressure – Equipment – Normal | 35 000 kPa | 5,075 psi |
| Maximum Pressure – Equipment – Lift Mode | 38 000 kPa | 5,510 psi |
| Maximum Pressure – Travel | 34 300 kPa | 4,974 psi |
| Maximum Pressure – Swing | 27 500 kPa | 3,998 psi |
| Boom Cylinder – Bore | 120 mm | 4.7 in |
| Boom Cylinder – Stroke | 1260 mm | 49.6 in |
| Stick Cylinder – Bore | 140 mm | 5.5 in |
| Stick Cylinder – Stroke | 1504 mm | 59.2 in |
| Bucket Cylinder – Bore | 120 mm | 4.7 in |
| Bucket Cylinder - Stroke | 1104 mm | 43.5 in |
| | | |

| Service Refill Capacities | HIELD IN | |
|-----------------------------------|----------|----------|
| Fuel Tank Capacity | 345 L | 86.6 gal |
| Cooling System | 25 L | 6.6 gal |
| Engine Oil | 25 L | 6.6 gal |
| Swing Drive (each) | 12 L | 3.2 gal |
| Final Drive (each) | 5 L | 1.3 gal |
| Hydraulic System (including tank) | 234 L | 61.8 gal |
| Hydraulic Tank | 115 L | 30.4 gal |
| DEF Tank | 41 L | 10.8 gal |

| Sound Performance | |
|----------------------------|-----------|
| ISO 6395:2008 (external) | 100 dB(A) |
| ISO 6396:2008 (inside cab) | 70 dB(A) |

 Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/ windows open) for extended periods or in a noisy environment.

| Standards | |
|-----------------|------------------|
| Brakes | ISO 10265:2008 |
| Cab/ROPS | ISO 12117-2:2008 |
| FOGS (optional) | ISO 10262-2:1998 |

Operating Weights and Ground Pressures

| | 790 mm (31 in) HD Triple Grouser Shoes | | | |
|--|---|--------|-----------------|-----|
| | Weight | | Ground Pressure | |
| | kg | lb | kPa | psi |
| i.4 mt (11,900 lb) Counterweight + Base Machine | | | | |
| HD Reach Boom, R2.9 (9'6") HD Thumb Ready Reach Stick, 1.38 m³ (1.81 yd³) HD Bucket | 25 600 | 56,400 | 35.5 | 5.1 |
| Super Long Reach Boom + 6.28A (20'7") Super Long Reach Stick + 0.53 m³ (0.69 yd³) GD Bucket | 25 100 | 55,300 | 39.7 | 5.7 |
| 1.2 mt (9,300 lb) Counterweight + Base Machine | | | | |
| Reach Boom + R2.9 (9'6") Reach Stick + 1.19 m³ (1.56 yd³) HD Bucket | 22 900 | 50,500 | 36.2 | 5.2 |

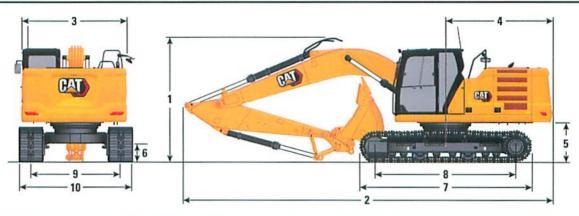
All operating weights include a 90% fuel tank with 75 kg (165 lb) operator.

Major Component Weights

| HD track rollers and standard carrier rollers for long undercarriage, without boom cylinder – does not include 90% fuel and 75 kg [165 lb] operator) Base Machine (with 5.4 mt [11,900 lb] counterweight, HD swing frame, HD base frame with SD track rollers and standard carrier rollers for long undercarriage, without boom cylinder – does not include 90% fuel and 75 kg [165 lb] operator) Track Shoes: 600 mm (24 in) Width, 14 mm (0.55 in) Thick Single Grouser Track Shoes for Long Undercarriage 3090 6,800 790 mm (31 in) Width, 12.5 mm (0.49 in) Thick Triple Grouser HD Track Shoes for Long Undercarriage 3800 8,400 with Step Extension for ISO 2867 Boom Cylinders 340 750 | | kg | lb |
|--|---|--------|--------|
| and standard carrier rollers for long undercarriage, without boom cylinder – does not include 90% fuel and 75 kg [165 b] operator) Track Shoes: 600 mm (24 in) Width, 14 mm (0.55 in) Thick Single Grouser Track Shoes for Long Undercarriage with Step Extension for ISO 2867 790 mm (31 in) Width, 12.5 mm (0.49 in) Thick Triple Grouser HD Track Shoes for Long Undercarriage with Step Extension for ISO 2867 Boom Cylinders 8340 750 Weight of 90% Fuel Tank and 75 kg (165 lb) Operator Counterweights: 4201 4200 9,300 5.4 mt Counterweight for Thumb Ready Reach and Super Long Reach Sticks 5400 11,900 Swing Frame: Semi-HD Swing Frame HD Swing Frame, for Thumb Ready Reach and Super Long Reach Sticks 2090 4,600 Undercarriage: Standard Base Frame with HD Track Rollers and Standard Carrier Rollers for Long Undercarriage HD Base Frame with HD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4420 9,700 HD Base Frame with SD Track Rollers and Standard Carrier Rollers for Long Undercarriage Windercarriage: Reach Boom (5.7 m/18°8") 1710 3,800 Sticks (including lines, pins, stick cylinder): Reach Boom (5.7 m/18°8") 1710 3,800 Sticks (including lines, pins, bucket cylinder, bucket linkage): Reach Stick (R3.9B1/1210") 1300 2,900 Reach Stick (R3.9B1/1210") 1300 2,900 Reach Stick (R3.9B1/1210") 1300 2,900 Buckets (without linkage) 119 m² (1.56 yd²) HD 1300 2,900 330 900 138 m² (1.69 yd²) GD 1390 900 131 m² (1.69 yd²) GD 900 901 901 901 901 902 902 903 904 904 905 905 906 907 907 907 907 908 909 907 900 900 | HD track rollers and standard carrier rollers for long undercarriage, without boom cylinder - does not include | 14 800 | 32,600 |
| 600 mm (24 in) Width, 14 mm (0.55 in) Thick Single Grouser Track Shoes for Long Undercarriage with Step Extension for ISO 2867 3800 | and standard carrier rollers for long undercarriage, without boom cylinder - does not include 90% fuel and | 16 700 | 36,800 |
| 790 mm (31 in) Width, 12.5 mm (0.49 in) Thick Triple Grouser HD Track Shoes for Long Undercarriage with Step Extension for ISO 2867 340 750 | Track Shoes: | | |
| ### Step Extension for ISO 2867 Boom Cylinders | | 3090 | 6,800 |
| Weight of 90% Fuel Tank and 75 kg (165 lb) Operator 310 680 Counterweights: 4.2 mt Counterweight 4200 9,300 5.4 mt Counterweight for Thumb Ready Reach and Super Long Reach Sticks 5400 11,900 Swing Frame: 1910 4,210 HD Swing Frame 1910 4,210 HD Swing Frame, for Thumb Ready Reach and Super Long Reach Sticks 2090 4,600 Undercarriage: Standard Base Frame with HD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4420 9,700 HD Base Frame with SD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4470 9,900 Booms (including lines, pins, stick cylinder): 1710 3,800 HD Reach Boom (5.7 m/18'8") 1710 3,800 HD Reach Boom (5.7 m/18'8") 2010 4,400 Super Long Reach Boom (8.85 m/290") 2170 4,800 Sticks (including lines, pins, bucket cylinder, bucket linkage): 800 2,900 Reach Stick (R2.9B1/9'6") 1300 2,900 Reach Stick (R2.9B1/9'6") 1300 2,900 Suckets (without linkage): 119 m*(1.56 yd*) HD 960 2,100 1.38 m*(1.81 yd*) HD | | 3800 | 8,400 |
| A2 mt Counterweights A2 mt Counterweight A2 mt Counterweight S4 mt Counterweight | Boom Cylinders | 340 | 750 |
| 4.2 mt Counterweight 4200 9,300 5.4 mt Counterweight for Thumb Ready Reach and Super Long Reach Sticks 5400 11,900 Swing Frame: Semi-HD Swing Frame 1910 4,210 HD Swing Frame, for Thumb Ready Reach and Super Long Reach Sticks 2090 4,600 Undercarriage: Standard Base Frame with HD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4420 9,700 HD Base Frame with SD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4470 9,900 Booms (including lines, pins, stick cylinder): Reach Boom (5.7 m/18'8") 1710 3,800 HD Reach Boom (5.7 m/18'8") 2010 4,400 Sticks (including lines, pins, bucket cylinder, bucket linkage): Reach Stick (R2.9B1/96") 1300 2,900 Reach Stick (R2.9B1/96") 1300 2,900 Reach Stick (R2.9B1/96") 1300 2,900 Bouckets (without linkage): In Jm m' (1.56 yd²) HD 960 2,100 1.19 m' (1.56 yd²) HD 960 2,100 <td>Weight of 90% Fuel Tank and 75 kg (165 lb) Operator</td> <td>310</td> <td>680</td> | Weight of 90% Fuel Tank and 75 kg (165 lb) Operator | 310 | 680 |
| 5.4 mt Counterweight for Thumb Ready Reach and Super Long Reach Sticks 5400 11,900 Swing Frame: Semi-HD Swing Frame 1910 4,210 HD Swing Frame, for Thumb Ready Reach and Super Long Reach Sticks 2090 4,600 Undercarriage: Standard Base Frame with HD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4420 9,700 HD Base Frame with SD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4470 9,900 Booms (including lines, pins, stick cylinder): Reach Boom (5.7 m/18'8") 1710 3,800 HD Reach Boom (5.7 m/18'8") 2010 4,400 Super Long Reach Boom (8.85 m/29'0") 2170 4,800 Sticks (including lines, pins, bucket cylinder, bucket linkage): Reach Stick (R.3.9B1/12'10") 1300 2,900 Reach Stick (R.2.9B1/9'6") 1300 2,900 HD Thumb Ready Reach Stick (R.2.9B1/9'6") 1300 2,900 Buckets (without linkage): 1.19 m² (1.56 yd²) HD 960 2,100 1.38 m² (1.81 yd²) HD <td>Counterweights:</td> <td></td> <td></td> | Counterweights: | | |
| Swing Frame: 1910 4,210 HD Swing Frame, for Thumb Ready Reach and Super Long Reach Sticks 2090 4,600 Undercarriage: Standard Base Frame with HD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4420 9,700 HD Base Frame with SD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4470 9,900 Booms (including lines, pins, stick cylinder): 1710 3,800 Reach Boom (5.7 m/18'8") 1710 3,800 HD Reach Boom (8.5 m/18'8") 2010 4,400 Super Long Reach Boom (8.85 m/29'0") 2170 4,800 Sticks (including lines, pins, bucket cylinder, bucket linkage): 1300 2,900 Reach Stick (R3.9B1/12'10") 1300 2,900 Reach Stick (R2.9B1/9'6") 1300 2,900 MD Thumb Ready Reach Stick (R2.9B1/9'6") 1300 2,900 Super Long Reach Stick (6.28A/20'7") 1340 3,000 Buckets (without linkage): 1 1 1 2,900 Super Long Reach Stick (6.29A') HD 960 2,100 1 2,300 2,900 0.57 m³ (0.75 yd³) DC 390 900 2,300 390 <td< td=""><td></td><td>4200</td><td>9,300</td></td<> | | 4200 | 9,300 |
| Semi-HD Swing Frame | 5.4 mt Counterweight for Thumb Ready Reach and Super Long Reach Sticks | 5400 | 11,900 |
| HD Swing Frame, for Thumb Ready Reach and Super Long Reach Sticks 2090 4,600 | Swing Frame: | | |
| Undercarriage: Standard Base Frame with HD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4420 9,700 HD Base Frame with SD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4470 9,900 Booms (including lines, pins, stick cylinder): Reach Boom (5.7 m/18'8") 1710 3,800 HD Reach Boom (5.7 m/18'8") 2010 4,400 Super Long Reach Boom (8.85 m/29'0") 2170 4,800 Sticks (including lines, pins, bucket cylinder, bucket linkage): Reach Stick (R3.9B1/12'10") 1300 2,900 Reach Stick (R2.9B1/9'6") 990 2,200 HD Thumb Ready Reach Stick (R2.9B1/9'6") 1340 3,000 Super Long Reach Stick (6.28A/20'7") 1340 3,000 Buckets (without linkage): 1.19 m³ (1.56 yd³) HD 960 2,100 1.38 m³ (1.81 yd³) HD 1040 2,300 0.57 m³ (0.75 yd³) DC 390 900 0.53 m³ (0.69 yd³) GD 410 900 Quick Coupler: | Semi-HD Swing Frame | 1910 | 4,210 |
| Standard Base Frame with HD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4420 9,700 HD Base Frame with SD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4470 9,900 Booms (including lines, pins, stick cylinder): 1710 3,800 Reach Boom (5.7 m/18'8") 2010 4,400 Super Long Reach Boom (8.85 m/29'0") 2170 4,800 Sticks (including lines, pins, bucket cylinder, bucket linkage): 1300 2,900 Reach Stick (R3.9B1/12'10") 1300 2,900 Reach Stick (R2.9B1/9'6") 990 2,200 HD Thumb Ready Reach Stick (R2.9B1/9'6") 1300 2,900 Buckets (without linkage): 1340 3,000 Buckets (without linkage): 1.19 m³ (1.56 yd³) HD 960 2,100 1.38 m³ (1.81 yd³) HD 1040 2,300 0.57 m³ (0.75 yd³) DC 390 900 0.53 m³ (0.69 yd³) GD 410 900 Quick Coupler: | HD Swing Frame, for Thumb Ready Reach and Super Long Reach Sticks | 2090 | 4,600 |
| HD Base Frame with SD Track Rollers and Standard Carrier Rollers for Long Undercarriage 4470 9,900 | | | |
| Booms (including lines, pins, stick cylinder): Reach Boom (5.7 m/18'8") | Standard Base Frame with HD Track Rollers and Standard Carrier Rollers for Long Undercarriage | 4420 | 9,700 |
| Reach Boom (5.7 m/18'8") 1710 3,800 HD Reach Boom (5.7 m/18'8") 2010 4,400 Super Long Reach Boom (8.85 m/29'0") 2170 4,800 Sticks (including lines, pins, bucket cylinder, bucket linkage): Reach Stick (R3.9B1/12'10") 1300 2,900 Reach Stick (R2.9B1/9'6") 990 2,200 HD Thumb Ready Reach Stick (R2.9B1/9'6") 1300 2,900 Super Long Reach Stick (6.28A/20'7") 1340 3,000 Buckets (without linkage): 1.19 m³ (1.56 yd³) HD 960 2,100 1.38 m³ (1.81 yd³) HD 1040 2,300 0.57 m³ (0.75 yd³) DC 390 900 0.53 m³ (0.69 yd³) GD 410 900 Quick Coupler: | HD Base Frame with SD Track Rollers and Standard Carrier Rollers for Long Undercarriage | 4470 | 9,900 |
| HD Reach Boom (5.7 m/18'8") Super Long Reach Boom (8.85 m/29'0") Sticks (including lines, pins, bucket cylinder, bucket linkage): Reach Stick (R3.9B1/12'10") Reach Stick (R2.9B1/9'6") HD Thumb Ready Reach Stick (R2.9B1/9'6") Super Long Reach Stick (R2.9B1/9'6") Buckets (without linkage): 1.19 m³ (1.56 yd³) HD 1.38 m³ (1.81 yd³) HD 1.38 m³ (1.81 yd³) HD 0.57 m³ (0.75 yd³) DC 0.53 m³ (0.69 yd³) GD Quick Coupler: | | | |
| Super Long Reach Boom (8.85 m/29'0") 2170 4,800 Sticks (including lines, pins, bucket cylinder, bucket linkage): Reach Stick (R3.9B1/12'10") 1300 2,900 Reach Stick (R2.9B1/9'6") 990 2,200 HD Thumb Ready Reach Stick (R2.9B1/9'6") 1300 2,900 Super Long Reach Stick (6.28A/20'7") 1340 3,000 Buckets (without linkage): 960 2,100 1.38 m³ (1.81 yd³) HD 1040 2,300 0.57 m³ (0.75 yd³) DC 390 900 0.53 m³ (0.69 yd³) GD 410 900 Quick Coupler: | Reach Boom (5.7 m/18'8") | 1710 | 3,800 |
| Sticks (including lines, pins, bucket cylinder, bucket linkage): Reach Stick (R3.9B1/12'10") 1300 2,900 Reach Stick (R2.9B1/9'6") 990 2,200 HD Thumb Ready Reach Stick (R2.9B1/9'6") 1300 2,900 Super Long Reach Stick (6.28A/20'7") 1340 3,000 Buckets (without linkage): 1.19 m³ (1.56 yd³) HD 960 2,100 1.38 m³ (1.81 yd³) HD 1040 2,300 0.57 m³ (0.75 yd³) DC 390 900 0.53 m³ (0.69 yd³) GD 410 900 Quick Coupler: Discounting the superior of the couple of | HD Reach Boom (5.7 m/18'8") | 2010 | 4,400 |
| Reach Stick (R3.9B1/12'10") 1300 2,900 Reach Stick (R2.9B1/9'6") 990 2,200 HD Thumb Ready Reach Stick (R2.9B1/9'6") 1300 2,900 Super Long Reach Stick (6.28A/20'7") 1340 3,000 Buckets (without linkage): 1.19 m³ (1.56 yd³) HD 960 2,100 1.38 m³ (1.81 yd³) HD 960 2,300 0.57 m³ (0.75 yd³) DC 390 900 0.53 m³ (0.69 yd³) GD 410 900 Quick Coupler: 2000 2000 2000 | CONTRACTOR OF THE COURT OF THE | 2170 | 4,800 |
| Reach Stick (R2.9B1/9'6") 990 2,200 HD Thumb Ready Reach Stick (R2.9B1/9'6") 1300 2,900 Super Long Reach Stick (6.28A/20'7") 1340 3,000 Buckets (without linkage): 960 2,100 1.38 m³ (1.81 yd³) HD 1040 2,300 0.57 m³ (0.75 yd³) DC 390 900 0.53 m³ (0.69 yd³) GD 410 900 Quick Coupler: 200 200 200 | Sticks (including lines, pins, bucket cylinder, bucket linkage): | | - |
| HD Thumb Ready Reach Stick (R2.9B1/9'6") Super Long Reach Stick (6.28A/20'7") Buckets (without linkage): 1.19 m³ (1.56 yd³) HD 1.38 m³ (1.81 yd³) HD 0.57 m³ (0.75 yd³) DC 0.53 m³ (0.69 yd³) GD Quick Coupler: | Reach Stick (R3.9B1/12'10") | 1300 | 2,900 |
| Super Long Reach Stick (6.28A/20'7") Buckets (without linkage): 1.19 m³ (1.56 yd³) HD 1.38 m³ (1.81 yd³) HD 0.57 m³ (0.75 yd³) DC 0.53 m³ (0.69 yd³) GD Quick Coupler: | Reach Stick (R2.9B1/9'6") | 990 | 2,200 |
| Buckets (without linkage): 1.19 m³ (1.56 yd³) HD 1.38 m³ (1.81 yd³) HD 0.57 m³ (0.75 yd³) DC 0.53 m³ (0.69 yd³) GD Quick Coupler: | HD Thumb Ready Reach Stick (R2.9B1/9'6") | 1300 | 2,900 |
| 1.19 m³ (1.56 yd³) HD 960 2,100 1.38 m³ (1.81 yd³) HD 1040 2,300 0.57 m³ (0.75 yd³) DC 390 900 0.53 m³ (0.69 yd³) GD 410 900 Quick Coupler: 2000 pd² 2,100 2000 pd² 2,300 2,300 390 900 900 410 900 900 410 900 900 410 900 900 | Super Long Reach Stick (6.28A/20'7") | 1340 | 3,000 |
| 1.38 m³ (1.81 yd³) HD 0.57 m³ (0.75 yd³) DC 0.53 m³ (0.69 yd³) GD Quick Coupler: | Buckets (without linkage): | | |
| 0.57 m³ (0.75 yd³) DC 0.53 m³ (0.69 yd³) GD Quick Coupler: | 1.19 m³ (1.56 yd³) HD | 960 | 2,100 |
| 0.53 m³ (0.69 yd³) GD 410 900 Quick Coupler: | 1.38 m³ (1.81 yd³) HD | 1040 | 2,300 |
| Quick Coupler: | 0.57 m³ (0.75 yd³) DC | 390 | 900 |
| N. C. 11 . C. | | 410 | 900 |
| Pin Grabber QC 390 850 | Quick Coupler: | | |
| | Pin Grabber QC | 390 | 850 |

Dimensions

All dimensions are approximate and may vary depending on bucket selection.

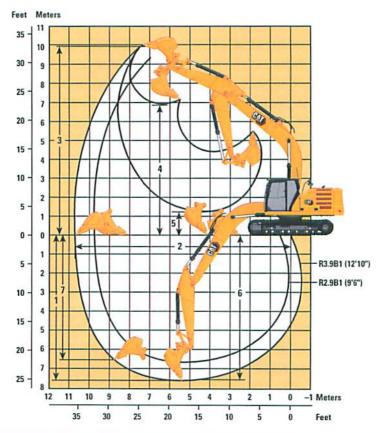


| Boom Options | Reach* Boom 5.7 m (18'8") | | Reach Boom 5.7 m (18'8") | | Super Long Reach Boom 8.85 m (29'0") | | |
|-------------------------------------|------------------------------|-------------------------------|-----------------------------|--------------------------------|---|---|--|
| Stick Options | | Reach* Stick R2.9B1 (9'6") | | Reach Stick R3.9B1 (12'10") | | Super Long Reach Stick 6.28A (20'7") | |
| 1 Machine Height: | | | | | | | |
| Top of Cab Height | 2960 mm | 9'9" | 2960 mm | 9'9" | 2960 mm | 9'9" | |
| Top of FOGS Height | 3100 mm | 10'2" | 3100 mm | 10'2" | 3100 mm | 10'2" | |
| Handrails Height | 2950 mm | 9'8" | 2950 mm | 9'8" | 2950 mm | 9'8" | |
| With Boom/Stick/Bucket Installed | 3160 mm | 10'4" | 3470 mm | 11'5" | 3190 mm | 10'5" | |
| With Boom/Stick Installed | 2910 mm | 9'7" | 3190 mm | 10'6" | 3070 mm | 10'1" | |
| With Boom Installed | 2480 mm | 8'2" | 2480 mm | 8'2" | 2650 mm | 8'9" | |
| 2 Machine Length: | | | | | | | |
| With Boom/Stick/Bucket Installed | 9530 mm | 31'3" | 9500 mm | 31'2" | 12 750 mm | 41'10" | |
| With Boom/Stick Installed | 9500 mm | 31'2" | 9530 mm | 31'3" | 12 760 mm | 41'10" | |
| With Boom Installed | 8450 mm | 27'9" | 8450 mm | 27'9" | 8920 mm | 29'3" | |
| 3 Upperframe Width without Walkways | 2780 mm | 9'1" | 2780 mm | 9'1" | 2780 mm | 9'1" | |
| 4 Tail Swing Radius | 2830 mm | 9'3" | 2830 mm | 9'3" | 2830 mm | 9'3" | |
| 5 Counterweight Clearance | 1050 mm | 3'5" | 1050 mm | 3'5" | 1050 mm | 3'5" | |
| 6 Ground Clearance | 470 mm | 1'7" | 470 mm | 1'7" | 470 mm | 1'7" | |
| 7 Track Length | 4450 mm | 14'7" | 4450 mm | 14'7" | 4450 mm | 14'7" | |
| 8 Length to Center of Rollers | 3650 mm | 12'0" | 3650 mm | 12'0" | 3650 mm | 12'0" | |
| 9 Track Gauge | 2380 mm | 7'9" | 2380 mm | 7'9" | 2380 mm | 7'9" | |
| 10 Undercarriage Width: | | | | | | | |
| 600 mm (24 in) Shoes | 2980 mm | 9'9" | 2980 mm | 9'9" | 2980 mm | 9'9" | |
| 790 mm (31 in) Shoes | 3170 mm | 10'5" | 3170 mm | 10'5" | 3170 mm | 10'5" | |
| Bucket Type | H | HD | | HD GD | |) | |
| Bucket Capacity | 1.14 m³ | 1.50 yd3 | 1.19 m³ | 1.56 yd3 | 0.53 m ³ | 0.69 yd ³ | |
| Bucket Tip Radius | 1470 mm | 4'10" | 1570 mm | 5'2" | 1230 mm | 4'0" | |

^{*}Reach has same data as HD Reach.

Working Ranges

All dimensions are approximate and may vary depending on bucket selection.

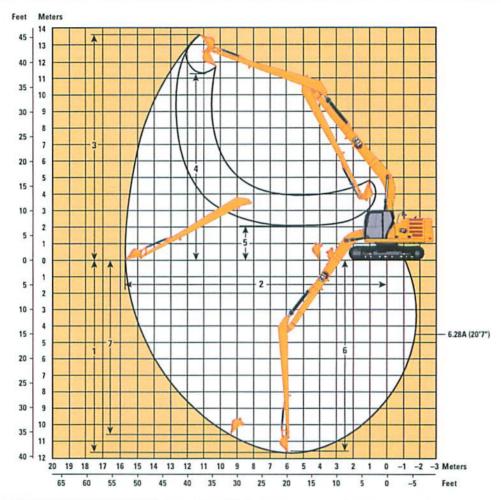


| Boom Options | | * Boom (18'8") | Reach 5.7 m | Boom (18'8") |
|---|---------|----------------------|-----------------|-------------------|
| Stick Options | | ı* Stick 1 (9'6") | Reach R3.9B1 | Stick (12'10") |
| 1 Maximum Digging Depth | 6620 mm | 21'9" | 7670 mm | 25'2" |
| 2 Maximum Reach at Ground Line | 9760 mm | 32'0" | 10 770 mm | 35'4" |
| 3 Maximum Cutting Height | 9330 mm | 30'7" | 9910 mm | 32'6" |
| 4 Maximum Loading Height | 6590 mm | 21'7" | 6930 mm | 22'9" |
| 5 Minimum Loading Height | 2270 mm | 7'5" | 1220 mm | 4'0" |
| 6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom | 6440 mm | 21'2" | 7530 mm | 24'8" |
| 7 Maximum Vertical Wall Digging Depth | 5360 mm | 17'7" | 6640 mm | 21'9" |
| Bucket Digging Force (ISO) | 163 kN | 36,711 lbf | 140 kN | 31,505 lbf |
| Stick Digging Force (ISO) | 109 kN | 24,486 lbf | 87 kN | 19,666 lbf |
| Bucket Type | Н | ID | Н | D |
| Bucket Capacity | 1.14 m³ | 1.50 yd3 | 1.19 m³ | 1.56 yd3 |
| Bucket Tip Radius | 1470 mm | 4'10" | 1570 mm | 5'2" |

^{*}Reach has same data as HD Reach.

Working Ranges

All dimensions are approximate and may vary depending on bucket selection.



| Boom Option | SLR I 8.85 m | 3oom (29'0") |
|---|-----------------|-----------------|
| Stick Options | SLR : 6.28A | |
| 1 Maximum Digging Depth | 11 540 mm | 37'10" |
| 2 Maximum Reach at Ground Line | 15 570 mm | 51'1" |
| 3 Maximum Cutting Height | 13 540 mm | 44'5" |
| 4 Maximum Loading Height | 11 440 mm | 37'6" |
| 5 Minimum Loading Height | 2240 mm | 7'4" |
| 6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom | 11 440 mm | 37'6" |
| 7 Maximum Vertical Wall Digging Depth | 11 020 mm | 36'2" |
| Bucket Digging Force (ISO) | 62 kN | 13,841 lbf |
| Stick Digging Force (ISO) | 49 kN | 10,966 lbf |
| Bucket Type | D | C |
| Bucket Capacity | 0.57 m³ | 0.75 yd³ |
| Bucket Tip Radius | 1070 mm | 3'6" |

HD Reach Boom Lift Capacities - Counterweight: 5.4 mt (11,900 lb) - without Bucket - Heavy Lift: On

| R2 | 2.9 m | D TRS | | HD 5.7 m (18'8 | 7) | | | 790 mm (31") | HD Triple Gro | ouser Shoes | | 3650 mm | | |
|--------------------|----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|------------------|-----------------------|------------------|---------------|------------------|----------------------|----------------------|
| 5 | 1.5 m/5.0 ft 3.0 m/10.0 ft | | | | | 4.5 m/ | 15.0 ft | 6.0 m | /20.0 ft | 7.5 m/ | 25.0 ft | | | |
| | 1 | | | | | P | æ | P | 臣 | P | 中 | P | æ | m ft |
| 7.5 m 25.0 ft | kg Ib | | | | | | | *4900 | *4900 | | | *4250 *9,400 | *4250 *9,400 | 6.15 20.00 |
| 6.0 m 20.0 ft | kg Ib | | | | | | | *5350 *11,750 | *5350 *11,750 | | | *3900 *8,650 | *3900 *8,650 | 7.29 24.17 |
| 4.5 m 15.0 ft | kg Ib | | | | | | | *5900 *12,800 | *5900 *12,800 | *5500 *12,100 | 4500 9,700 | *3850 *8,450 | *3850 *8,450 | 7.99 26.67 |
| 3.0 m 10.0 ft | kg Ib | | | | | *8600 *18,500 | *8600 *18,500 | *6750 *14,650 | 6100 13,150 | *5900 *12,850 | 4400 9,500 | *3950 *8,600 | 3750 8,250 | 8.36 27.50 |
| 1.5 m 5.0 ft | kg Ib | | | | | *10 400 *22,450 | 8700 18,800 | *7650 *16,600 | 5850 12,600 | *6350 *13,750 | 4300 9,250 | *4150 *9,150 | 3650 7,950 | 8.45 28.33 |
| 0 m 0 ft | kg Ib | | | *6550 *15,050 | *6550 *15,050 | *11 400 *24,700 | 8400 18,100 | *8300 *18,000 | 5650 12,200 | 6450 13,850 | 4200 9,050 | *4600 *10,150 | 3700 8,100 | 8.26 27.50 |
| −1.5 m −5.0 ft | kg Ib | *7000 *15,650 | *7000 *15,650 | *11 350 *25,750 | *11 350 *25,750 | *11 500 *24,950 | 8350 17,900 | *8500 *18,400 | 5600 12,050 | 6400 13,800 | 4150 9,000 | *5400 *11,950 | 4000 8,750 | 7.78 25.83 |
| −3.0 m −10.0 ft | kg Ib | *12 050 *27,000 | *12 050 *27,000 | *15 300 *33,100 | *15 300 *33,100 | *10 800 *23,300 | 8400 18,050 | *8000 *17,200 | 5600 12,100 | | | *6550 *14,400 | 4650 10,300 | 6.95 23.33 |
| -4.5 m -15.0 ft | kg Ib | | | *12 150 *26,050 | *12 150 *26,050 | *8750 *18,600 | 8600 18,550 | | | | | *6600 *14,500 | 6400 14,350 | 5.60 18.33 |

Reach Boom Lift Capacities - Counterweight: 5.4 mt (11,900 lb) - without Bucket - Heavy Lift: On

| | | 2.981 | | 5.7 m (18'8") | | | | 790 mm (31") | HD Triple Gro | ouser Shoes | | 3650 mr | | |
|--------------------|----------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|------------------|-----------------------|-----------------------|---------------|------------------|-----------------------|---------------|
| 5 | Ŧ | 1.5 m | /5.0 ft | 3.0 m/ | 10.0 ft | 4.5 m/ | /15.0 ft | 6.0 m/ | /20.0 ft | 7.5 m/ | 25.0 ft | | | |
| | 1 | P. | 中 | P | 中 | P | Œ | P | æ | P | 中 | P | (F) | m ft |
| 7.5 m 25.0 ft | kg Ib | | | | | | | *4950 | *4950 | | | *4300 *9,500 | *4300 *9,500 | 6.15 20.00 |
| 6.0 m 20.0 ft | kg Ib | | | | | | | *5450 *12,000 | *5450 *12,000 | | | *3950 *8,750 | *3950 *8,750 | 7.29 24.17 |
| 4.5 m 15.0 ft | kg Ib | | | | | | | *6000 *13,050 | *6000 *13,050 | *5650 *12,400 | 4600 9,900 | *3900 *8,550 | *3900 *8,550 | 7.99 26.67 |
| 3.0 m 10.0 ft | kg 1b | | | | | *8750 *18,850 | *8750 *18,850 | *6900 *14,950 | 6200 13,350 | *6050 *13,150 | 4500 9,700 | *4000 *8,750 | 3850 8,500 | 8.36 27.50 |
| 1.5 m 5.0 ft | kg Ib | | | | | *10 650 *22,950 | 8850 19,100 | *7850 *17,000 | 5950 12,850 | *6500 *14,100 | 4400 9,500 | *4250 *9,300 | 3750 8,200 | 8.45 28.33 |
| 0 m 0 ft | kg Ib | | | *6600 *15,150 | *6600 *15,150 | *11 650 *25,200 | 8600 18,500 | *8500 *18,450 | 5800 12,500 | 6550 14,100 | 4300 9,300 | *4700 *10,300 | 3800 8,350 | 8.26 27.50 |
| -1.5 m -5.0 ft | kg Ib | *7050 *15,750 | *7050 *15,750 | *11 400 *25,850 | *11 400 *25,850 | *11 750 *25,500 | 8550 18,350 | *8700 *18,850 | 5750 12,350 | 6550 14,050 | 4300 9,250 | *5500 *12,100 | 4100 9,050 | 7.78 25.83 |
| −3.0 m −10.0 ft | kg Ib | *12 100 *27,100 | *12 100 *27,100 | *15 600 *33,800 | *15 600 *33,800 | *11 000 *23,800 | 8600 18,450 | *8200 *17,650 | 5750 12,450 | | | *6700 *14,800 | 4800 10,600 | 6.95 23.33 |
| -4.5 m -15.0 ft | kg Ib | | | *12 500 *26,700 | *12 500 *26,700 | *9000 *19,100 | 8800 18,900 | | | | | *6800 *14,950 | 6500 14,650 | 5.60 18.33 |
| | | * | | | | | ISO 105 | 67 | | | | 1 | | |

^{*} Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007.

They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Lift capacity stays with ±5% for all available track shoes.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

TRS = Thumb Ready Stick

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323 Hydraulic Excavator Specifications

Reach Boom Lift Capacities - Counterweight: 5.4 mt (11,900 lb) - without Bucket - Heavy Lift: On

| | | 3650 mm | | | | (_6.2) ww 009 | | | | ("8'8f) m T. | - | 186.9 | m e.s sa | |
|----------------|-----------------|------------------|----------------|------------------|------------------|-----------------|------------------|--------------------|--------------------|--------------------|----------|---------|-------------|--------------------|
| | 3 | ī | 4 0.25 | ī∖m č. T | 11 0.09 | Z/m 0.8 | ¥ 0'S | \m 2.Þ | # 0.01 | \rm 0.£ | 190.5 | /m 2.f | , | 5 |
| m 14 | 中 | P | 图 | M | 中 | P | 中 | P | 中 | P | 中 | H |] 7 | |
| 6.15 20.00 | 009'6. 0087. | 009'6. 0027. | | | 0967. | 0967. | | | | | | | IP ķā | m 2.7 # 0.25 |
| 71.29 71.12 | 094'8. 43950 | 8.3950 | | | *12,000 *5450 | *5450 *5450 | | | | | | | IP KB | m 0.8 # 0.0S |
| 79.95 79.92 | .3900 .3900 | 099'8. 0062. | 09'6 009'7 | *5650 | 090'EL. 0009. | 090'81. | | | | | | | IP KG | m 2.4 11 0.21 |
| 8.36 27.50 | 3750 8,300 | .4000 .4000 | 00th 00th | 091'EL. 0909. | 0 90'E1 | 096'\$1. | 0278* | 058,81* | | | | | IP KB | т 0.6 # 0.01 |
| 8.45 28.33 | 3650 3650 | •4250 | 09 2 ′6 | 13'920 9200 | 1 5,550 | 000,TI* | 0 998 1 | *10 650 | | | | | IP KB | m 2.1 11 0.2 |
| 8.26 27.50 | 3700 | *4700 *10,300 | 9,050 4200 | 13,750 | 12,200 12,200 | 028. | 000,81 050,81 | *11 650 | 091'91. 0099. | 0999* | | | IP KG | m 0 # 0 |
| 87.7 25.83 | 0004 | •15,100 •5500 | 9,000 4200 | 6350 13,700 | 12,050 | 0078* 027,81 | 006,71 | .11 750 | .52'820 .11 t00 | .52'820 .11 400 | 090/- | 054,21* | IP KG | m 2.1- # 0.2- |
| 26.8 28.23 | 10,350 | 0070* | | | 5600 12,100 | 059'LL- | 0358 000,81 | *11 000 *23,800 | •12 600 | *33,800 | *12 100 | *12 100 | IP kg | m 0.6- # 0.01- |
| 08.8 EE.81 | 6350 | 0089* | | | | | 0 558 | 001'61. 0006. | *26,700 *12,500 | *26,700 *12 500 | | | IP KB | m 2.4- 11 0.21- |

Reach Boom Lift Capacities - Counterweight: 5.4 mt (11,900 lb) - without Bucket - Heavy Lift: On

| | I[| | | | | | L | 9901 081 | | | | | | * | | |
|----------------|--|-------------------------|----------------|----------------|-----------------|------------------|----------------|------------------|-------------------|--------------------|--------------------|--------------------|--------------------|------------------|----------|-------------------|
| 16'7 | 0019. | 0019. | | | | | | | .7200 | •7200 | | | | | IP KB | m 0.8- # 0.05- |
| 6.87 | 10,500 | 0019. | | | | | 15,050 | 096'91+ | 18,000 | .10 500 | 41,700 | 009'15. | •30'120 •13 020 | .13 650 | IP Kd | m c.t- n o.er- |
| 8.00 76.67 | 3800 | 098'6. 0977. | | | 0014 | 13'650 | 058,11 | .8320 .8320 | 007,71 | *24,450 *11 300 | 435,750 *14,450 | *32,750 *14 450 | 001,12* | 001,15° | IP Kd | m 0.6- # 0.01- |
| 87.8 71.es | 7,400 3350 | .3650 *3650 | | | 0014 | 13,650 | 006'11 | 001,81* | 057,71 0250 | *24,800 | *23,550 *10,400 | .10 ¢00 | .13'200 .0909 | *13,500 *6050 | IP KG | m 2.f- 11 0.2- |
| 91.6 30.06 | 9120 3120 | *3200 *3200 | 7,000 7,000 | 092'L. | 9,000 9,000 | .13'800 .0320 | 12,200 | 0987* | 18,200 | *10 800 | 084,81* | 024,81* | | | IP Kd | m 0 # 0 |
| 9.33 30.83 | .67450 | .5950 | 3300 | 005,8* | 9,250 | *5850 *5850 | 09L'Z1 | 001'91. 0969. | 005,er | 096'61. 0976. | 05E'EZ. | 05E'EZ. | | | IP KG | m č. f 11 0.2 |
| 9.25 30.83 | *6,150 *2800 | • 6,150 •2800 | 3400 | .3850 .3850 | 009'6 0977 | *11,500 *5300 | *5900 *2900 | *5900 *5900 | 09E'91* 091/4* | 09E'91. | | | | | qı kd | m 0.6 # 0.01 |
| 29.8 71.es | •6,050 •2750 | 090'9. 091Z. | | | 006'6 009† | 009'01* | | | | | | | | | IP Kd | m 2.4 # 0.2f |
| 8.30 | •6,150 •2800 | .5800 .5800 | | | 009'6. 0997. | 009'6. 0997. | | | | | | | | | IP Kd | m 0.0 # 0.0S |
| 71.32 24.17 | 009'9* 0000* | 009'9• -3000 | | | | | | | | | | | | | IP kg | m č.7 11 0.2S |
| т 11 | 中 | P | 中 | P | 由 | P | 中 | | 中 | P | 由 | P | 由 | P | 1 | |
| | # 0.05\m 0.9 # 0.25\m 2.7 # 0.05\m 0.9 | | | | | | | 40.21 | \m 2.P | 11 0.01 | \m 0.E | H 0.27 | √m č.ľ |] | 4 | |
| | ("0'St) mm 0288 seodS secused Short OH ("ft) mm 0867 ("0'St) m 6.5 ("0'S | | | | | | | | | | | | | | | |

* Indicates that the load is limited by hydraulic lifting capacity rather than upping load. The above loads are in compliance with hydraulic excevator lift capacities. Lifting capacities are based from the above lifting capacities. Lifting capacities are based on or exceed 87% of hydraulic lifting capacities. Lifting capacities are based on the machine diffing capacities. Lifting capacities are based on the machine at lirm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Lift capacity stays with ±5% for all available track shoes.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Reach Boom Lift Capacities - Counterweight: 4.2 mt (9,300 lb) - without Bucket - Heavy Lift: On

| | | (9'6") 12.9B1 | | 5.7 m (18'8") | | | | 790 mm (31") | HD Triple Gro | ouser Shoes | | 3650 mr | | |
|--------------------|----------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|------------------|-----------------------|----------------------|
| 5 | f | 1.5 m | /5.0 ft | 3.0 m/ | 10.0 ft | 4.5 m/ | 15.0 ft | 6.0 m | /20.0 ft | 7.5 m/ | 25.0 ft | | | |
| | m kg | | | | 中 | P | æ | P | Œ. | P | 中 | P | Œ. | m ft |
| 7.5 m 25.0 ft | | | | | | | | *4950 | *4950 | | | *4300 *9,500 | *4300 *9,500 | 6.15 20.00 |
| 6.0 m 20.0 ft | kg Ib | | | | | | | *5450 *12,000 | *5450 *12,000 | | | *3950 *8,750 | *3950 *8,750 | 7.29 24.17 |
| 4.5 m 15.0 ft | kg Ib | | | | | | | *6000 *13,050 | 5650 12,150 | *5650 *12,400 | 4050 8,650 | *3900 *8,550 | 3650 8,050 | 7.99 26.67 |
| 3.0 m 10.0 ft | kg Ib | | | | | *8750 *18,850 | 8250 17,750 | *6900 *14,950 | 5450 11,700 | 6000 12,950 | 3950 8,450 | *4000 *8,750 | 3350 7,350 | 8.36 27.50 |
| 1.5 m 5.0 ft | kg Ib | | | | | *10 650 *22,950 | 7750 16,700 | *7850 *17,000 | 5200 11,200 | 5900 12,700 | 3800 8,200 | *4250 *9,300 | 3250 7,100 | 8.45 28.33 |
| 0 m 0 ft | kg Ib | | | *6600 *15,150 | *6600 *15,150 | *11 650 *25,200 | 7500 16,100 | 8050 17,250 | 5050 10,850 | 5800 12,500 | 3750 8,050 | *4700 *10,300 | 3300 7,200 | 8.26 27.50 |
| −1.5 m −5.0 ft | kg Ib | *7050 *15,750 | *7050 *15,750 | *11 400 *25,850 | *11 400 *25,850 | *11 750 *25,500 | 7400 15,900 | 7950 17,100 | 4950 10,700 | 5800 12,450 | 3700 8,000 | *5500 *12,100 | 3550 7,800 | 7.78 25.83 |
| −3.0 m −10.0 ft | kg Ib | *12 100 *27,100 | *12 100 *27,100 | *15 600 *33,800 | 14 350 30,700 | *11 000 *23,800 | 7450 16,050 | 8000 17,150 | 5000 10,750 | | | 6500 14,400 | 4150 9,200 | 6.95 23.33 |
| -4.5 m -15.0 ft | kg Ib | | | *12 500 *26,700 | *12 500 *26,700 | *9000 *19,100 | 7650 16,500 | | | | | *6800 *14,950 | 5650 12,750 | 5.60 18.33 |

Reach Boom Lift Capacities - Counterweight: 4.2 mt (9,300 lb) - without Bucket - Heavy Lift: On

| 3 | | 33.981 | | — 5.7 m (18 | 3'8") | | | | 790 mm (31" |) HD Triple | Grouser Sho | oes | f | 3650 mm (1 4450 mm (1 | | |
|-------------------------|-----------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|------------------|-----------------------|-----------------------|----------------------|-----------------|----------------------|--------------------------|----------------------|---------------|
| 5 | f | 1.5 m | /5.0 ft | 3.0 m/ | 10.0 ft | 4.5 m/ | 15.0 ft | 6.0 m/ | 20.0 ft | 7.5 m/ | 25.0 ft | 9.0 m/ | 30.0 ft | 2 | | |
| _ | L | | (F) | P | 图 | P | 中 | P | æ | P | 中 | P | 田 | P | 田 | m ft |
| 7.5 m 25.0 ft | kg Ib | | | | | | | | | | | | | *3000 *6,600 | *3000 *6,600 | 7.32 24.17 |
| 6.0 m 20.0 ft | kg Ib | | | | | | | | | *4550 *9,600 | 4100 8,750 | | | *2800 *6,150 | *2800 *6,150 | 8.30 27.50 |
| 4.5 m 15.0 ft | kg Ib | | | | | | | | | *4800 *10,500 | 4000 8,600 | | | *2750 *6,050 | *2750 *6,050 | 8.92 29.17 |
| 3.0 m 10.0 ft | kg Ib | | | | | *7150 *15,350 | *7150 *15,350 | *5900 *12,800 | 5450 11,700 | *5300 *11,500 | 3900 8,350 | *3850 *7,150 | 2900 6,200 | *2800 *6,150 | 2800 6,100 | 9.25 30.83 |
| 1.5 m 5.0 ft | kg Ib | | | *9800 *23,350 | *9800 *23,350 | *9250 *19,950 | 7800 16,750 | *6950 *15,100 | 5150 11,050 | 5800 12,500 | 3750 8,000 | 4450 *8,500 | 2850 6,100 | *2950 *6,450 | 2700 5,900 | 9.33 30.83 |
| 0 m 0 ft | kg Ib | | | *8100 *18,450 | *8100 *18,450 | *10 800 *23,300 | 7350 15,800 | *7850 17,000 | 4900 10,550 | 5700 12,200 | 3600 7,700 | *4150 *7,250 | 2800 5,950 | *3200 *7,050 | 2700 5,950 | 9.16 30.00 |
| −1.5 m −5.0 ft | kg Ib | *6050 *13,500 | *6050 *13,500 | *10 400 *23,550 | *10 400 *23,550 | *11 450 *24,800 | 7150 15,350 | 7750 16,650 | 4750 10,250 | 5600 12,000 | 3500 7,550 | | | *3650 *8,000 | 2850 6,300 | 8.73 29.17 |
| -3.0 m -10.0 ft | kg Ib | *9400 *21,100 | *9400 *21,100 | *14 450 *32,750 | 13 700 29,350 | *11 300 *24,450 | 7100 15,300 | 7700 16,550 | 4750 10,150 | 5600 12,050 | 3500 7,550 | | | *4450 *9,850 | 3250 7,150 | 8.00 26.67 |
| -4.5 m -15.0 ft | kg Ib | *13 650 *30,750 | *13 650 *30,750 | *14 700 *31,600 | 13 950 29,950 | *10 200 *21,900 | 7200 15,550 | *7450 *15,950 | 4800 10,400 | | ., | | | *6100 *13,400 | 4050 9.050 | 6.87 22.50 |
| −6.0 m −20.0 ft | kg Ib | | | | | *7200 | *7200 | 13,000 | 15/100 | | | | | *6400 | *6400 | 4.91 |
| | | * | | | | | | ISO 1056 | 7 | | | | | | | |

^{*} Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007.

They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Lift capacity stays with ±5% for all available track shoes.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

SLR Boom Lift Capacities - Counterweight: 5.4 mt (11,900 lb) - without Bucket

| | | 6.28A | | 3.85 m (29'0") | | | | 790 mm (31*) | HD Triple Gr | ouser Shoes | | 3650 mm | | |
|--------------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------------|-----------------|-----------------|----------------|
| 5 | Ŧ | 1.5 m | /5.0 ft | 3.0 m/ | 10.0 ft | 4.5 m/ | 15.0 ft | 6.0 m | /20.0 ft | 7.5 m/ | 25.0 ft | | | |
| | ft lb | | | | | P | æ | P | æ | P | 中 | P | æ | m ft |
| 12.0 m 40.0 ft | kg Ib | | | | | | | | | | | *1300 *2,850 | *1300 *2,850 | 10.35 33.33 |
| 10.5 m 35.0 ft | kg Ib | | | | | | | | | | | *1200 *2,600 | *1200 *2,600 | 11.66 38.33 |
| 9.0 m 30.0 ft | kg Ib | | | | | | | | | | | *1150 *2,500 | *1150 *2,500 | 12.66 41.67 |
| 7.5 m 25.0 ft | kg Ib | | | | | | | | | | | *1100 *2,450 | *1100 *2,450 | 13.41 44.17 |
| 6.0 m 20.0 ft | kg Ib | | | | | | | | | | | *1100 *2,400 | *1100 *2,400 | 13.97 45.83 |
| 4.5 m 15.0 ft | kg Ib | | | | | | | | | | | *1100 *2,450 | *1100 *2,450 | 14.34 47.50 |
| 3.0 m 10.0 ft | kg Ib | | | *4700 *11,900 | *4700 *11,900 | *6050 *12,900 | *6050 *12,900 | *4450 *9,600 | *4450 *9,600 | *3600 *7,800 | *3600 * 7.800 | *1150 *2,500 | *1150 *2,500 | 14.55 48.33 |
| 1.5 m 5.0 ft | kg Ib | | | | .,,,,,,,, | *6750 *16,000 | *6750 *16,000 | *5250 *11,300 | *5250 *11,300 | *4100 *8,900 | 3900 8,400 | *1200 *2,600 | *1200 *2,600 | 14.60 48.33 |
| 0 m 0 ft | kg Ib | | | *2050 *4,550 | *2050 *4,550 | *4700 *10,750 | *4700 *10,750 | *5900 *12,700 | 4800 10,350 | *4550 *9,800 | 3600 7,800 | *1300 *2,800 | *1300 *2,800 | 14.49 47.50 |
| −1.5 m −5.0 ft | kg Ib | *2100 *4,600 | *2100 *4,600 | *2750 *6,100 | *2750 *6,100 | *4650 *10,550 | *4650 *10.550 | *6250 *13,550 | 4550 9,750 | *4850 *10,450 | 3400 7,350 | *1400 *3,000 | *1400 *3,000 | 14.23 46.67 |
| -3.0 m -10.0 ft | kg Ib | *2850 *6,350 | *2850 *6,350 | *3550 *7,900 | *3550 *7,900 | *5200 *11,750 | *5200 *11,750 | *6450 *13,900 | 4400 9,450 | *5000 *10,850 | 3300 7,050 | *1500 *3,300 | 1450 3,200 | 13.79 45.83 |
| -4.5 m -15.0 ft | kg Ib | *3700 *8,200 | *3700 *8,200 | *4450 *9,900 | *4450 *9,900 | *6100 *13,750 | *6100 *13,750 | *6400 *13,800 | 4350 9,400 | *5050 *10,900 | 3250 6,950 | *1700 *3,800 | 1550 3,400 | 13.17 43.33 |
| -6.0 m -20.0 ft | kg Ib | *4550 *10,150 | *4550 *10,150 | *5450 *12,200 | *5450 *12,200 | *7250 *16,350 | 6700 14,400 | *6150 *13,250 | 4400 9,500 | *4900 *10,550 | 3250 7,000 | *2000 *4,500 | 1700 3,800 | 12.34 40.83 |
| -7.5 m -25.0 ft | kg Ib | *5500 *12,300 | *5500 *12.300 | *6600 *14,850 | *6600 *14,850 | *7300 *15,650 | 6900 14,800 | *5650 *12,150 | 4500 9,750 | *4550 *9,800 | 3300 7,150 | *2550 *5,700 | 2000 4,450 | 11.24 36.67 |
| -9.0 m -30.0 ft | kg Ib | 12,000 | 12,300 | *8000 *17,500 | *8000 *17,500 | *6150 *13,100 | *6150 *13,100 | *4850 *10,350 | 4700 10,150 | *3950 *8,300 | 3450 7,500 | *2700 *5,900 | 2500 5,600 | 9.80 31.67 |

^{*} Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007.

They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

ISO 10567

Lift capacity stays with ±5% for all available track shoes.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

SLR Boom Lift Capacities - Counterweight: 5.4 mt (11,900 lb) - without Bucket (continued)

| 6 | 5.28 m (2 SLR 6 | | 8.85 n | 1 (29'0") | | | - 790 mm (31") H | ID Triple Grouse | r Shoes | | 60 mm (12'0") 60 mm (14'7") | |
|--------------------|--------------------|-----------------|----------------------|-----------------|-----------------|----------------------|------------------|----------------------|----------------|-----------------|--------------------------------|--------------|
| 5 | - | 9.0 m/ | 730.0 ft | 10.5 m | /35.0 ft | 12.0 m | /40.0 ft | 13.5 m | /45.0 ft | | | |
| | | Po | (F) | P | (F) | P | æ | P | æ | P | æ | m ft |
| 12.0 m 40.0 ft | kg Ib | | | | | | | | | *1300 *2,850 | *1300 *2,850 | 10.3 33.3 |
| 10.5 m 35.0 ft | kg Ib | | | *2200 *4.750 | *2200 *4.750 | | | | | *1200 *2,600 | *1200 *2,600 | 11.6 38.3 |
| 9.0 m 30.0 ft | kg Ib | | | *2200 *4,800 | *2200 *4,800 | *2000 *3,700 | *2000 *3,700 | | | *1150 *2,500 | *1150 *2,500 | 12.6 41.6 |
| 7.5 m 25.0 ft | kg Ib | | | *2250 *4,950 | *2250 *4,950 | *2250 *4,900 | *2250 4,850 | | | *1100 *2,450 | *1100 *2,450 | 13.4 44.1 |
| 6.0 m 20.0 ft | kg Ib | | | *2400 *5,200 | *2400 *5,200 | *2300 *5,000 | 2250 4,750 | *1850 *3,250 | 1750 *3,250 | *1100 *2,400 | *1100 *2,400 | 13.9 45.8 |
| 4.5 m 15.0 ft | kg Ib | *2800 *6,050 | *2800 *6,050 | *2600 *5,600 | *2600 *5,600 | *2400 *5,250 | 2150 4,600 | *2300 *4,650 | 1750 3,650 | *1100 *2,450 | *1100 *2,450 | 14.3 47.5 |
| 3.0 m 10.0 ft | kg Ib | *3100 *6,750 | *3100 *6,750 | *2800 *6,050 | 2550 5,500 | *2550 *5,550 | 2050 4,400 | *2400 *5,200 | 1650 3,550 | *1150 *2,500 | *1150 *2,500 | 14.5 48.3 |
| 1.5 m 5.0 ft | kg Ib | *3450 *7,450 | 3050 6,550 | *3000 *6,500 | 2400 5.200 | *2700 *5,850 | 1950 4,200 | *2500 *5,400 | 1600 3,450 | *1200 *2,600 | *1200 *2,600 | 14.6 48.3 |
| 0 m Oft | kg Ib | *3750 *8,050 | 2850 6,100 | *3200 *6,900 | 2300 4,900 | *2850 *6,150 | 1900 4,000 | 2550 5,450 | 1550 3,300 | *1300 *2,800 | *1300 *2.800 | 14.4 47.5 |
| −1.5 m −5.0 ft | kg Ib | *3950 *8,550 | 2700 5,800 | *3350 *7,250 | 2200 4,700 | *2950 6,350 | 1800 3,850 | 2500 5,350 | 1500 3,250 | *1400 *3,000 | *1400 *3,000 | 14.2 46.6 |
| −3.0 m -10.0 ft | kg Ib | *4100 *8,850 | 2600 5,550 | *3450 *7,450 | 2100 4,550 | 2900 6,250 | 1750 3,750 | *2300 *3,700 | 1500 3,200 | *1500 *3,300 | 1450 3,200 | 13.7 45.8 |
| -4.5 m -15.0 ft | kg Ib | *4100 *8,900 | 2550 5,450 | 3450 7,400 | 2100 4,450 | 2900 6,200 | 1750 3,750 | | Sizes | *1700 *3,800 | 1550 3,400 | 13.1 |
| -6.0 m -20.0 ft | kg Ib | *4000 *8,650 | 2550 5,500 | *3350 *7,200 | 2100 4,500 | *2800 *5,150 | 1800 3,850 | | | *2000 *4,500 | 1700 3,800 | 12.3 40.8 |
| -7.5 m -25.0 ft | kg Ib | *3750 *8,000 | 2600 5.650 | *3050 *6,450 | 2150 4,650 | | | | , | *2550 *5,700 | 2000 4,450 | 11.2 36.6 |
| -9.0 m -30.0 ft | kg Ib | *3150 *6,550 | 2750 5.950 | 2,100 | ., | | | | | *2700 *5,900 | 2500 5,600 | 9.8 31.6 |

^{*} Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007.

They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Lift capacity stays with ±5% for all available track shoes.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Bucket Specifications and Compatibility

| | | | | | | | | | (9,30 | mt 00 lb) rweight | (11,9 | 4 mt 900 lb) erweight | 5.4 n (11,900 Countery | (dl |
|---|---------|------|---------|----------------|-----------|-----------|---------|------|----------------|-------------------------|----------------|-----------------------------|------------------------------|-------|
| | | | | | | | | | | Canada Cara Cara Cara | | | HD Reach | SLR |
| | | Wi | dth | Сар | acity | We | ight | Fill | | Boom | | h Boom | Boom | Boom |
| | Linkage | mm | in | m ³ | yd³ | kg | lb | % | R2.9 (9'6") | R3.9 (12'10") | R2.9 (9'6") | R3.9 (12'10°) | R2.9 (9'6") HD TRS | SLR |
| Pin-On (No Quick Coupler) | Linkage | 1000 | 111 | 11111 | yu | kg | ID | 70 | 1901 | 112 10 / | (30) | 112 10 / | no mo | SLI |
| General Duty - Capacity | В | 600 | 24 | 0.55 | 0.72 | 619 | 1,363 | 100 | | | | | 0 | |
| denotal buly duputity | В | 750 | 30 | 0.75 | 0.98 | 710 | 1,566 | 100 | | | | | • | |
| | В | 900 | 36 | 0.95 | 1.24 | 787 | 1,735 | 100 | | 0 | | 0 | • | |
| | В | 1050 | 42 | 1.16 | 1.52 | 848 | 1,870 | 100 | • | Ö | | 0 | 0 | 171 |
| | В | 1200 | 48 | 1.38 | 1.80 | 926 | 2,041 | 100 | 0 | 0 | | 0 | 0 | |
| | В | 1350 | 54 | 1.59 | 2.08 | 1004 | 2,213 | 100 | X | X | X | X | 0 | |
| General Duty - Capacity - Wide Tip | В | 600 | 24 | 0.55 | 0.72 | 633 | 1,394 | 100 | | • | • | | • | |
| , | В | 750 | 30 | 0.75 | 0.98 | 731 | 1,612 | 100 | • | • | • | | • | |
| | В | 900 | 36 | 0.95 | 1.24 | 813 | 1,793 | 100 | | 0 | | | 0 | 544 |
| | В | 1050 | 42 | 1.16 | 1.52 | 895 | 1,973 | 100 | 0 | Ö | 0 | 0 | 0 | |
| | В | 1200 | 48 | 1.38 | 1.80 | 979 | 2,158 | 100 | 0 | 0 | | 0 | 0 | |
| | В | 1350 | 54 | 1.59 | 2.08 | 1063 | 2,343 | 100 | X | X | X | X | Ð | |
| Heavy Duty | В | 600 | 24 | 0.46 | 0.61 | 649 | 1,431 | 100 | | • | • | | • | |
| 500-400 * 100000 * | В | 750 | 30 | 0.64 | 0.84 | 748 | 1,649 | 100 | | | | | • | |
| | В | 900 | 36 | 0.81 | 1.06 | 826 | 1,821 | 100 | | 0 | | | 0 | |
| | В | 1050 | 42 | 1.00 | 1.31 | 880 | 1,940 | 100 | | 0 | | | • | 100 |
| | В | 1200 | 48 | 1.19 | 1.56 | 972 | 2,141 | 100 | 0 | 0 | | • | • | |
| | В | 1350 | 54 | 1.38 | 1.81 | 1054 | 2,322 | 100 | Х | X | Х | X | Х | |
| Heavy Duty - Power | В | 900 | 36 | 0.79 | 1.03 | 842 | 1,856 | 100 | • | • | • | | • | EL : |
| | В | 1050 | 42 | 0.96 | 1.26 | 907 | 1,999 | 100 | • | 0 | • | | 0 | |
| | В | 1200 | 48 | 1.14 | 1.49 | 993 | 2,188 | 100 | 0 | X | • | X | • | 14116 |
| Severe Duty | В | 600 | 24 | 0.46 | 0.61 | 694 | 1,530 | 90 | • | • | • | • | 0 | |
| | В | 750 | 30 | 0.64 | 0.84 | 802 | 1,768 | 90 | • | • | • | • | • | |
| | В | 900 | 36 | 0.81 | 1.06 | 889 | 1,959 | 90 | • | • | • | • | • | |
| | В | 1050 | 42 | 1.00 | 1.31 | 964 | 2,125 | 90 | • | • | • | • | • | |
| | В | 1200 | 48 | 1.19 | 1.56 | 1053 | 2,320 | 90 | | 0 | • | • | | |
| Severe Duty – Power | В | 900 | 36 | 0.79 | 1.03 | 908 | 2,001 | 90 | • | • | • | | • | |
| Extreme Duty | В | 1100 | 43 | 1.00 | 1.31 | 1078 | 2,376 | 90 | • | θ | | • | | The |
| | В | 1250 | 49 | 1.19 | 1.56 | 1134 | 2,499 | 90 | • | 0 | • | • | | |
| Mud/Cleanup | В | 1700 | 72 | 1.60 | 2.09 | 979 | 2,158 | 100 | 0 | \Q | • | 0 | θ | |
| Ditch Cleaning | В | 1500 | 60 | 1.01 | 1.32 | 652 | 1,437 | 100 | • | • | • | • | | |
| | В | 1800 | 72 | 1.24 | 1.62 | 740 | 1,631 | 100 | • | θ | • | 0 | | |
| D: 101 1 T | В | 2000 | 78 | 1.22 | 1.60 | 869 | 1,916 | 100 | • | 0 | • | • | • | |
| Ditch Cleaning – Tilt | В | 1500 | 60 | 0.90 | 1.18 | 948 | 2,090 | 100 | • | 0 | • | • | | |
| | В | 1800 | 72 | 1.11 | 1.45 | 1063 | 2,344 | 100 | • | 0 | • | 0 | • | 503 |
| | В | 1800 | 72 | 1.40 | 1.83 | 1148 | 2,531 | 100 | θ | ♦ | • | 0 | • | 1 |
| | В | 2000 | 79 | 1.23 | 1.61 | 1096 | 2,416 | 100 | 0 | 0 | • | 0 | • | |
| C1D | В | 2000 | 79 | 1.23 | 1.61 | 1132 | 2,496 | 100 | θ | \Diamond | • | Θ | • | |
| General Duty | 312 | 900 | 36 | 0.53 | 0.69 | 403 | 888 | 100 | | | | | | 0 |
| Ditch Cleaning Long Reach | 312 | 1200 | 48 | 0.57 | 0.74 | 386 | 851 | 100 | DEALE | United the second | | | | 0 |
| | | N | laximum | load with | pin-on (p | payload + | bucket) | kg | 3100 | 2445 | 3710 | 2985 | 2840 | 1140 |
| | | | | | | | | Ib | 6,834 | 5,390 | 8,179 | 6,581 | 6,261 | 2,513 |

The above loads are in compliance with hydraulic excavator standard EN474-5:2006+A3:2013, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity with front linkage fully extended at ground line with bucket curled.

Capacity based on ISO 7451.

Bucket weight with General Duty tips.

TRS = Thumb Ready Stick

Maximum Material Density:

- 2100 kg/m³ (3,500 lb/yd³)
- 1800 kg/m³ (3,000 lb/yd³)
- → 1500 kg/m³ (2,500 lb/yd³)
- O 1200 kg/m³ (2,000 lb/yd³)
 ♦ 900 kg/m³ (1,500 lb/yd³)
- X Not Recommended

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

Bucket Specifications and Compatibility (continued)

| | | | | | | | | | (9,3 | 2 mt 00 lb) rweight | (11,9 | 1 mt 100 lb) rweight | 5.4 mt (11,900 lb) Counterweigh HD Reach |
|------------------------------------|---------|------|----------|-----------|-----------|-----------|---------|------|----------|---------------------------|----------|----------------------------|---|
| | | Wi | dth | Cap | acity | We | eight | Fill | Reacl | Boom | Reac | Boom | Boom |
| | | | | T | T . | | Ī | | R2.9 | R3.9 | R2.9 | R3.9 | R2.9 (9'6") HD |
| | Linkage | mm | in | m³ | yd³ | kg | lb | % | (9'6") | (12'10") | (9.6,) | (12'10") | TRS |
| With Cat Pin Grabber Coupler | | | | | | | | | | | | | |
| General Duty - Capacity | В | 600 | 24 | 0.55 | 0.72 | 619 | 1,363 | 100 | • | | • | • | • |
| | В | 750 | 30 | 0.75 | 0.98 | 710 | 1,566 | 100 | | • | | • | |
| | В | 900 | 36 | 0.95 | 1.24 | 787 | 1,735 | 100 | • | 0 | • | • | • |
| | В | 1050 | 42 | 1.16 | 1.52 | 848 | 1,870 | 100 | 0 | \Q | • | Θ | • |
| | В | 1200 | 48 | 1.38 | 1.80 | 926 | 2,041 | 100 | 0 | \Q | • | 0 | Θ |
| | В | 1350 | 54 | 1.59 | 2.08 | 1004 | 2,213 | 100 | 0 | X | Θ | 0 | 0 |
| General Duty - Capacity - Wide Tip | В | 600 | 24 | 0.55 | 0.72 | 633 | 1,394 | 100 | • | • | • | • | • |
| | В | 750 | 30 | 0.75 | 0.98 | 731 | 1,612 | 100 | • | • | • | • | • |
| | В | 900 | 36 | 0.95 | 1.24 | 813 | 1,793 | 100 | • | 0 | • | • | • |
| | В | 1050 | 42 | 1.16 | 1.52 | 895 | 1,973 | 100 | θ | \Q | • | θ | • |
| | В | 1200 | 48 | 1.38 | 1.80 | 979 | 2,158 | 100 | 0 | X | • | 0 | θ |
| | В | 1350 | 54 | 1.59 | 2.08 | 1063 | 2,343 | 100 | 0 | X | θ | \Q | 0 |
| Heavy Duty | В | 600 | 24 | 0.46 | 0.61 | 649 | 1,431 | 100 | • | | • | • | • |
| | В | 750 | 30 | 0.64 | 0.84 | 748 | 1,649 | 100 | • | • | • | • | • |
| | В | 900 | 36 | 0.81 | 1.06 | 826 | 1,821 | 100 | • | θ | • | • | • |
| | В | 1050 | 42 | 1.00 | 1.31 | 880 | 1,940 | 100 | 0 | 0 | • | • | • |
| | В | 1200 | 48 | 1.19 | 1.56 | 972 | 2,141 | 100 | θ | 0 | • | 0 | • |
| | В | 1350 | 54 | 1.38 | 1.81 | 1054 | 2,322 | 100 | 0 | X | θ | 0 | Θ |
| Heavy Duty – Power | В | 900 | 36 | 0.79 | 1.03 | 842 | 1,856 | 100 | • | 0 | • | • | • |
| | В | 1050 | 42 | 0.96 | 1.26 | 907 | 1,999 | 100 | • | 0 | • | • | • |
| | В | 1200 | 48 | 1.14 | 1.49 | 993 | 2,188 | 100 | 0 | \Q | • | Θ | • |
| Heavy Duty - Pin Grabber | В | 600 | 24 | 0.44 | 0.57 | 676 | 1,491 | 100 | | • | • | • | • |
| Performance | В | 750 | 30 | 0.60 | 0.79 | 778 | 1,715 | 100 | • | | • | | • |
| | В | 900 | 36 | 0.76 | 1.00 | 864 | 1,904 | 100 | • | Θ | • | • | • |
| | В | 1050 | 42 | 0.93 | 1.22 | 928 | 2,045 | 100 | • | 0 | • | • | • |
| | В | 1200 | 48 | 1.11 | 1.45 | 1016 | 2,239 | 100 | θ | ♦ | • | 0 | • |
| 0 | В | 1350 | 54 | 1.28 | 1.67 | 1104 | 2,432 | 100 | 0 | X | • | 0 | Θ |
| Severe Duty | В | 600 | 24 | 0.46 | 0.61 | 694 | 1,530 | 90 | • | • | • | • | • |
| | В | 750 | 30 | 0.64 | 0.84 | 802 | 1,768 | 90 | • | • | • | • | • |
| | В | 900 | 36 | 0.81 | 1.06 | 889 | 1,959 | 90 | • | θ | • | • | • |
| | В | 1050 | 42 | 1.00 | 1.31 | 964 | 2,125 | 90 | • | 0 | • | • | • |
| Course Data Donne | В | 1200 | 48 | 1.19 | 1.56 | 1053 | 2,320 | 90 | θ | \Q | • | 0 | • |
| Severe Duty – Power | В | 900 | 36 | 0.79 | 1.03 | 908 | 2,001 | 90 | • | θ | • | • | • |
| Mud/Cleanup | В | 1700 | 72 | 1.60 | 2.09 | 979 | 2,158 | 100 | ♦ | X | θ | \Q | 0 |
| Ditch Cleaning | В | 1500 | 60 | 1.01 | 1.32 | 652 | 1,437 | 100 | 0 | θ | • | 0 | • |
| | В | 1800 | 72 | 1.24 | 1.62 | 740 | 1,631 | 100 | θ | \Q | • | θ | • |
| Ditab Classica Til- | В | 2000 | 78 | 1.22 | 1.60 | 869 | 1,916 | 100 | 0 | \Q | • | Θ | • |
| Ditch Cleaning – Tilt | В | 1500 | 60 | 0.90 | 1.18 | 948 | 2,090 | 100 | 0 | 0 | • | 0 | • |
| | В | 1800 | 72 | 1.11 | 1.45 | 1063 | 2,344 | 100 | 0 | ♦ | • | Θ | • |
| | В | 1800 | 72 | 1.40 | 1.83 | 1148 | 2,531 | 100 | 0 | X | θ | 0 | 0 |
| | В | 2000 | 79 | 1.23 | 1.61 | 1096 | 2,416 | 100 | 0 | X | 0 | 0 | θ |
| | В | 2000 | 79 | 1.23 | 1.61 | 1132 | 2,496 | 100 | 0 | X | <u> </u> | 0 | Θ |
| | | , | viaximum | load with | coupler (| payload + | bucket) | kg | 2779 | 2112 | 3401 | 2660 | 3140 |
| | | | | | | | | lb | 6,127 | 4,656 | 7,498 | 5,865 | 6,924 |

The above loads are in compliance with hydraulic excavator standard EN474-5:2006+A3:2013, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity with front linkage fully extended at ground line with bucket curled.

Capacity based on ISO 7451.

Bucket weight with General Duty tips.

TRS = Thumb Ready Stick

Maximum Material Density:

- 2100 kg/m³ (3,500 lb/yd³)
- 1800 kg/m³ (3,000 lb/yd³)
- → 1500 kg/m³ (2,500 lb/yd³)
- O 1200 kg/m3 (2,000 lb/yd3)
- 900 kg/m³ (1,500 lb/yd³)
- X Not Recommended

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

Attachments Offering Guide

Not all Attachments are available in all regions. Consult your Cat dealer for configurations available in your region.

 ✓ Match
 ★ Working range front only
 † Allowed usage on machine less than 50%
 No Match
 ● 1800 kg/m³ (3,000 lb/yd³)
 ○ 1200 kg/m³ (2,000 lb/yd³)

| Undercarriage | | | L | L |
|------------------------------------|---------------------------|--------------|------------------|--------------|
| Counterweight | | 4.2 mt (| 4.2 mt (9,300 lb | |
| Boom Type | | Re | HD Reach | |
| Stick Length | | 2.9 m (9'6") | 3.9 m (12'10") | 2.9 m (9'6") |
| Hydraulic Hammers | H120 GC | ✓ | ✓ | ✓ |
| | H120 GC S | ✓ | 1 | ✓ |
| | H120 S | ✓ | ✓ | ✓ |
| | H130 GC | | | 1 |
| | H130 GC S | | | ✓ |
| | H130 S | √ † | ✓ | ✓ |
| Multi-Processors | MP318 Concrete Cutter Jaw | ✓ | ✓ | 1 |
| | MP318 Demolition Jaw | 1 | ✓ | ✓ |
| | MP318 Pulverizer Jaw | ✓ | ✓ | ✓ |
| | MP318 Shear Jaw | ✓ | ✓ | / |
| | MP318 Universal Jaw | ✓ | ✓ | ✓ |
| Demolition and Sorting Grapples | G318 | ✓ | ✓ | / |
| | G318 WH-800 | ✓ | ✓ | ✓ |
| | G318 WH-1100 | ✓ | | ✓ |
| | G318 WH | ✓ | ✓ | ✓ |
| | G324 | √ * | | √ * |
| | G324 WH-1500 | √ * | | |
| | G324 WH | √* | | |
| Mobile Scrap and Demolition Shears | S3025 | ✓ | | ✓ |
| | S3025 Flat Top | ✓ | | ✓ |
| Pulverizers | P215 | ✓ | ✓ | ✓ |
| Compactors (Vibratory Plate) | CVP110 | ✓ | ✓ | ✓ |
| Mulchers | HM4015 | ✓ | ✓ | ✓ |
| Orange Peel Grapples | GSH420-500 | • | • | • |
| | GSH420-600 | • | • | • |
| | GSH420-750 | • | 0 | • |
| | GSH425-750 | • | | 0 |
| | GSH425-950 | 0 | | 0 |
| | GSH520-500 | • | • | • |
| | GSH520-600 | • | 0 | • |
| | GSH520-750 | • | 0 | • |
| | GSH525-750 | 0 | | 0 |

Demolition and Sorting Grapple: WH - Waste Handling shells

TRS = Thumb Ready

| Attachments Offering Guide (co | ontinued) | | | | | |
|--|---|---------------------------------------|------------------|---------------|-----------------|--|
| Not all Attachments are available in a | all regions. Consult your Cat dealer fo | or configurations a | vailable in your | region. | | |
| ✓ Match ↑ Allowed usage on mach | nine less than 50% No Match | 1800 kg/m³ (3, | 000 lb/yd³) | 1200 kg/m³ (2 | 2,000 lb/yd³) | |
| | | | | | | |
| PIN-ON ATTACHMENTS | | | | | | |
| Undercarriage | | | L | | L | |
| Counterweight | | 5.4 mt (| 11,900 lb) | 5.4 mt (| 11,900 lb) | |
| Boom Type | | | each | | Reach | |
| Stick Length | | 2.9 m (9'6") | 3.9 m (12'10") | 2.9 m (9'6") | 2.9 m TR (9'6") | |
| Hydraulic Hammers | H120 GC | / | 1 | V | / | |
| , | H120 GC S | / | / | _ | _ | |
| | H120 S | ✓ | V | / | ✓ | |
| | H130 GC | · · · · · · · · · · · · · · · · · · · | | ✓ | | |
| | H130 GC S | | | V | | |
| | H130 S | √ † | ✓ | ✓ | / | |
| Multi-Processors | MP318 Concrete Cutter Jaw | 1 | ✓ | 1 | / | |
| | MP318 Demolition Jaw | 1 | √ | ✓ | ✓ | |
| | MP318 Pulverizer Jaw | ✓ | ✓ | ✓ | ✓ | |
| | MP318 Shear Jaw | 1 | / | ~ | ✓ | |
| | MP318 Universal Jaw | 1 | V | 1 | / | |
| Demolition and Sorting Grapples | G318 | 1 | V | ✓ | ✓ | |
| CONTROL STORY OF THE STORY OF T | G318 WH-800 | 1 | ✓ | ✓ | ✓ | |
| | G318 WH-1100 | ✓ | | 1 | ✓ | |
| | G318 WH | 1 | 1 | V | | |
| | G324 | 1 | | 1 | ✓ | |
| | G324 WH-1500 | ✓ | | 1 | 1 | |
| | G324 WH | 1 | | 1 | ✓ | |
| Mobile Scrap and Demolition Shears | S3025 | ✓ | | / | ✓ | |
| | S3025 Flat Top | ✓ | | 1 | ✓ | |
| Pulverizers | P215 | ✓ | · | / | ✓ | |
| Compactors (Vibratory Plate) | CVP110 | ✓ | V | | ✓ | |
| Mulchers | HM4015 | ✓ | 1 | V | V | |
| Orange Peel Grapples | GSH420-500 | • | • | • | • | |
| | GSH420-600 | • | • | • | • | |
| | GSH420-750 | • | • | • | • | |
| | GSH425-750 | • | 0 | • | • | |
| | GSH425-950 | • | | • | • | |
| | GSH425-1150 | 0 | | 0 | 0 | |
| | GSH520-500 | • | • | • | • | |
| | GSH520-600 | • | • | • | • | |
| | GSH520-750 | • | 0 | • | • | |
| | GSH525-750 | • | | • | • | |
| | GSH525-950 | 0 | | 0 | 0 | |
| | GSH525-1150 | 0 | • | 0 | | |

 $\label{eq:def:Demolition} \textbf{Demolition and Sorting Grapple: WH-Waste Handling shells}$

TRS = Thumb Ready

| Attachments Unering Guit | | 100000000000000000000000000000000000000 | | | | | 100 | |
|---------------------------------|------------------------------|---|-------------------|--------------------|-----------------|------------------|-----------------|--------------------|
| Not all Attachments are availab | le in all regions. Consult y | our Cat deal | er for confi | gurations ava | ilable in y | your region | ո. | |
| ✓ Match | ng range front only | † Allowed | usage on mad | chine less than 50 | 0% | | lo Match | |
| | | | | | | | | |
| CAT PIN GRABBER COUPLER ATTA | CHMENTS | | | | | | الوراديان | |
| Undercarriage | | | | | L | | | |
| Counterweight | | | 4.2 mt (9,300 |) lb) | | 5.4 mt | (11,900 lb) | |
| Boom Type | | Re | each | HD Reach | Re | ach | HD | Reach |
| Stick Length | | 2.9 m (9'6") | 3.9 m (12'10") | 2.9 m (9'6") | 2.9 m (9'6") | 3.9 m (12'10) | 2.9 m (9°6") | 2.9 m TR (9'6") |
| Hydraulic Hammers | H120 GC | √ † | √ † | ✓ | à | ✓ † | ~ | ✓ |
| | H120 GC S | √ † | à | ✓ | √ † | √ † | ✓ | ✓ |
| | H120 S | √ † | √ † | ✓ | à | √ † | ~ | ✓ |
| | H130 GC | ✓ † | | <* . | √ † | | ✓ | ✓ |
| | H130 GC S | √ † | | ✓ | √ † | | ~ | ✓ |
| | H130 S | ✓ † | | ✓ | √ † | | ✓ | ✓ |
| Multi-Processors | MP318 Concrete Cutter Jaw | ✓ | | ✓ | ✓ | | ✓ | ✓ |
| | MP318 Demolition Jaw | ~ | | 1 | √ | | ~ | ✓ |
| | MP318 Pulverizer Jaw | ✓ | | V* | ✓ | | ✓ | ✓ |
| | MP318 Shear Jaw | ✓ | | 1 | ✓ | | ✓ | ✓ |
| | MP318 Universal Jaw | ~ | | 1 | V | | ✓ | ✓ |
| Demolition and Sorting Grapples | G318 | ✓ | | ~ | ✓ | | ✓ | ✓ |
| | G318 WH-800 | ✓ | | | ✓ | | ✓ | ✓ |
| | G318 WH-1100 | ✓ | | ✓• | ✓ | | ✓ | ✓ |
| | G318 WH | ✓ | | ✓* | ✓ | | ✓ | ✓ |
| Mobile Scrap and Demolition | S3025 | ✓ | | V* | ✓ | | ✓ | ✓ |
| Shears | S3025 Flat Top | √* | | | ✓ | | | |
| Pulverizers | P215 | ✓ | | ✓ | ✓ | | ✓ | ✓ |
| Compactors (Vibratory Plate) | CVP110 | ✓ | ✓ | ✓ | ~ | ✓ | ~ | ✓ |
| Mulchers | HM4015 | 1 | 1 | ✓ | · | ~ | / | ✓ |

Demolition and Sorting Grapple: WH - Waste Handling shells

TRS = Thumb Ready

| Attachments Offering Gui | de (continu | ied) | | | | | |
|---------------------------------|----------------|---------------|----------------------|-------------------|-----------------|-------------------|-----------------|
| Not all Attachments are availab | ole in all reg | ions. Consul | t your Cat dealer | for configuration | ns available in | your region. | |
| ✓ Match | t | Allowed usage | on machine less than | 50% | No Matc | h | |
| TRS18-S70 COUPLER ATTACHMEN | TS | | | | | | W. Could be |
| Undercarriage | | | | | L | | _ |
| Counterweight | | | 4.2 mt (9 | ,300 lb) | | 5.4 mt (11,900 lb |) |
| Boom Type | | | Reach | HD Reach | Reach HD Reach | | |
| Stick Length | | | 2.9 m (9'6") | 2.9 m (9'6") | 2.9 m (9'6") | 2.9 m (9'6") | 2.9 m TR (9'6") |
| Hydraulic Hammers | H11 | 5 S | ✓ | 1 | ✓ | ✓ | ✓ |
| | H12 | 0 GC S | √ † | ✓ | √ † | ✓ | ✓ |
| | H12 | 0 S | √ † | 1 | √ † | ✓ | ✓ |
| Compactors (Vibratory Plate) | CVF | 75 | ✓ | ✓ | ✓ | ✓ | ✓ |
| | CVP | 110 | ✓ | V | ✓ | ✓ | ✓ |
| BOOM-MOUNT ATTACHMENTS | | 12 1 1 1 | | | | | |
| Undercarriage | | | | | L | | |
| Counterweight | | | 4.2 mt (9,300 lb) | | | 5.4 mt (11,900 lb | 1) |
| Boom Type | | Reach | HD Reach | ES Reach | Reach | HD Reach | ES Reach |
| Mobile Scrap and | S2050 | ✓ | ✓ | | ✓ | 1 | |
| Demolition Shears | S3035 | 1 | ✓ | ✓ | ✓ | ✓ | ✓ |

Demolition and Sorting Grapple: WH - Waste Handling shells

TRS = Thumb Ready

| Thumb Specif | ICa | HOHS |
|--------------|-----|------|
|--------------|-----|------|

Not all Attachments are available in all regions. Consult your Cat dealer for configurations available in your region.

| ٢ | | | |
|----|---|--|----------|
| 1 | 1 | Match | No Match |
| -1 | | Contract Con | |

| | | | | Pro | Plus | P | Pro | Still | Link | Ut | ility |
|---|-------------------|------|-----------|----------|--------------------|----------|----------|----------|----------|----------|----------|
| Bucket Type | Tooth Quantity | Wi | dth in | Pin-On | Cat Pin Grabber | Pin-On | Cat Pin | D:- 0- | Cat Pin | D:- 0- | Cat Pin |
| | | | | | | | Grabber | Pin-On | Grabber | Pin-On | Grabber |
| General Duty | 5 | 902 | 36 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | 5 | 1056 | 42 | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | ✓ | ✓ |
| | 6 | 1208 | 48 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | 7 | 1350 | 54 | ✓ | ✓ | ✓ | ✓ | 1 | 1 | 1 | ✓ |
| Heavy Duty | 5 | 902 | 36 | ✓ | 1 | ✓ | 1 | ✓ | ✓ | ✓ | ✓ |
| | 5 | 1056 | 42 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | 1 |
| | 6 | 1208 | 48 | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | √ | V |
| | 7 | 1350 | 54 | ✓ | √ | ✓ | ✓. | 1 | ✓ | 1 | 1 |
| Heavy Duty Power | 5 | 1056 | 42 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | √ | / |
| 479-100-100-100-100-100-100-100-100-100-10 | 6 | 1208 | 48 | | | | 1 | 1 | 1 | 1 | 1 |
| Severe Duty | 5 | 902 | 36 | ✓ | ✓ | ✓ | ✓ | 1 | ✓ | 1 | ✓ |
| 5-10-20-00-00-00-00-00-00-00-00-00-00-00-00 | 5 | 1056 | 42 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | / | ✓ |
| | 6 | 1208 | 48 | ✓ | V | ✓ | ✓ | 1 | ✓ | ✓ | 1 |
| Pin Grabber Performance | 5 | 902 | 36 | | ✓ | | | | | V | V |
| Buckets | 5 | 1056 | 42 | | ✓ | | ✓ | | | V | ✓ |
| | 6 | 1208 | 48 | | ✓ | | | | | V | 1 |
| | 7 | 1350 | 54 | | | | | | | / | ✓ |

323 Standard and Optional Equipm

Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat dealer for details.

| | Standard | Optiona |
|--|----------|---------|
| CAB | | |
| ROPS, standard sound suppression | 1 | |
| High-resolution 254 mm (10 in) LCD touchscreen monitor | ✓ | |
| High-resolution 254 mm (10 in) LCD touchscreen monitor + additional monitor (for Cat GRADE with Advanced 2D or Cat GRADE with 3D) | | ~ |
| Auto bi-level air conditioner | ✓ | |
| Jog dial and shortcut keys for monitor control | √ | |
| Keyless push-to-start engine control | ✓ | |
| Height-adjustable console, infinite with no tool | 1 | |
| Heated seat with air-adjustable suspension | 1 | |
| 51 mm (2 in) seat belt | ✓ | |
| Tilt-up left-side console | 1 | |
| Bluetooth integrated radio with USB ports | ✓ | |
| 12V DC outlets | ✓ | |
| Document storage | ✓ | |
| Rear head storage net and lunchbox storage net | ✓ | |
| Cup and bottle holders | ✓ | |
| Openable two-piece front window | ✓ | |
| Upper radial wiper with washer | 1 | |
| Openable polycarbonate skylight hatch | 1 | |
| LED dome light | √ | |
| Floor welcome light | ✓ | |
| Roller front sunscreen | V | |
| Roller rear sunscreen | | 1 |
| Washable floor mat | ✓ | |
| Beacon ready | ✓ | |

| | Standard | Optiona |
|---|----------|----------|
| NGINE | | |
| Three selectable power modes | ✓ | |
| Auto engine speed control | ✓ | |
| Auto engine idle shutdown | ✓ | |
| Work up to 3000 m (9,842.5 ft) above sea level without engine power de-rating | ✓ | |
| 52° C (125° F) high-ambient cooling capacity | ✓ | |
| Cold starting capability for -18° C (0° F) | ✓ | |
| Cold starting capability for -32° C (-25° F) | | ✓ |
| Double element air filter with integrated pre-cleaner | ✓ | |
| Electric fuel priming pump | ✓ | |
| Electric cooling fans with auto-reverse function | ✓ | |
| Biodiesel capability up to B20 | ✓ | |
| IYDRAULIC SYSTEM | | |
| Boom and stick regeneration circuits | ✓ | |
| Boom and stick lowering check valves | | V |
| Heavy lift configuration | | V |
| Electronic main control valve | ✓ | |
| Auto warm up | ✓ | |
| Auto two-speed travel | ✓ | |
| Boom and stick drift reduction valve | ✓ | |
| Element type main hydraulic filter | ✓. | |
| Slider joysticks | ✓ | |
| Tandem type electronic main pump | ✓ | |
| Fine swing control | ✓ | |
| Hammer return filter circuit | | 1 |
| Advanced Tool Control (two pump, one/two way high-pressure flow) | | √ |
| Medium pressure auxiliary circuit | | 1 |

323 Standard and Optional Equipment

Standard and Optional Equipment (continued)

Standard and optional equipment may vary. Consult your Cat dealer for details.

| | Standard | Optional |
|--|----------|----------|
| NDERCARRIAGE AND STRUCTURES | | |
| 600 mm (24 in) single grouser track shoes | | ✓ |
| 790 mm (31 in) HD triple grouser track shoes | √ | |
| Tie-down points on base frame | ✓ | |
| Segmented track guiding guards | ✓ | |
| Full-length track guiding guards | | 1 |
| HD bottom guard | ✓ | |
| Swivel guard | | 1 |
| HD travel motor guards | ✓ | |
| Grease lubricated track links | 1 | |
| 4200 kg (9,260 lb) counterweight | | 1 |
| 5400 kg (11,900 lb) counterweight | 1 | |
| Semi-HD swing frame | | 1 |
| HD swing frame | ✓ | |
| HD swing bearing | ✓ | |
| HD base frame with SD track rollers and standard carrier rollers | 1 | |
| SD base frame with SD track rollers and SD carrier rollers | | ✓ |
| Base frame with HD track rollers and standard carrier rollers | | ✓ |
| Final drive with standard travel motor | ~ | |

| | Standard | Optional |
|--|----------|----------|
| BOOMS, STICKS AND LINKAGES | | |
| 5.7 m (18'8") Reach boom | | ✓ |
| 5.7 m (18'8") HD Reach boom | | ✓ |
| 8.85 m (29'0") Super Long Reach boom | | 1 |
| 2.9 m (9'6") Reach stick | | ✓ |
| 2.9 m (9'6") HD thumb ready Reach stick | | 1 |
| 3.9 m (12'10") Reach stick | | ✓ |
| 6.28 m (20'7") Super Long Reach stick | | ✓ |
| Bucket linkage, B1-family with lifting eye, Cat GRADE | ✓ | |
| Bucket linkage, A-family, with lifting eye | | 1 |
| ELECTRICAL SYSTEM | | 1 |
| 1,000 CCA maintenance-free batteries (×2) | ✓ | |
| Centralized electrical disconnect switch | ✓ | |
| Programmable time-delay LED working lights | ✓ | |
| LED chassis light, LH and RH boom lights, cab lights | 1 | |
| Premium surround lighting package | | ✓ |

323 Standard and Optional Equipm

Standard and Optional Equipment (continued)

Standard and optional equipment may vary. Consult your Cat dealer for details.

| | Standard | Optional |
|--|----------|----------|
| CAT TECHNOLOGY | 200 | |
| Cat Product Link™ | ✓ | |
| Work tool recognition | ✓ | |
| Work tool tracking* | ✓ | |
| Laser catcher | | 1 |
| Cat GRADE with 2D and offset memory | ✓ | |
| Cat GRADE with Advanced 2D | | ✓ |
| Cat GRADE with 3D connectivity: - Virtual Reference Station** - Internet Base Service Station** - Trimble Connected Community** | | ✓ |
| Cat Assist: - Grade Assist - Boom Assist - Bucket Assist - Swing Assist - Lift Assist | V | |
| Cat PAYLOAD: - Static weigh - Semiautomatic calibration - Payload/cycle information - USB reporting capability | √ | |
| 2D E-Fence: - E-ceiling - E-floor - E-swing - E-wall - E-cab avoidance | √ | |
| Auto hammer stop | ✓ | |
| Remote Services capability | √ | |
| Auto Dig Boost | ✓ | |

| *Paired wi | ith PL161 | attachment | locator. |
|------------|-----------|-------------|----------|
| | | attaominont | ioouton. |

^{**}Subscription required.

| | Standard | Optional |
|--|----------|----------|
| SERVICE AND MAINTENANCE | | |
| Scheduled Oil Sampling (S·O·S SM) ports | ✓ | |
| QuickEvac™ maintenance ready | | ✓ |
| Grouped location for engine oil and fuel filters | ✓ | |
| Ground-level second dipstick for engine oil | ✓ | |
| Radiator screen | | ✓ |
| SAFETY AND SECURITY | | - |
| Cat Command remote control | | ✓ |
| Rearview and right-hand-sideview cameras | ✓ | |
| 360° visibility | | 1 |
| Neutral lever (lock out) for all controls | ✓ | |
| Anti-skid plate and countersunk bolts on service platform | ✓ | |
| Ground-level accessible secondary engine shutoff switch in cab | ✓ | |
| RH handrail and handhold (ISO 2867 compliant) | ✓ | |
| Travel alarm | ✓ | |

323 Attachments

Dealer Installed Kit and Attachments

Attachments may vary. Consult your Cat dealer for details.

CAB

- · Radial lower wiper
- · LH/RH electrical pedal for tool control
- · Dual exit rear window kit
- · Rain protector plus cab light cover
- 75 mm (3") retractable seat belt

SAFETY AND SECURITY

· Bluetooth® key fob

SERVICE AND MAINTENANCE

· Grease gun holder

ELECTRICAL

· Jump start wiring

GUARDS

- · Side rubber bumper
- Falling object guard system (not compatible with cab light cover, rain protector)
- Mesh guard full front (not compatible with cab light cover, rain protector)
- · Mesh guard lower half front
- · Full protecting vandalism guard

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

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AEXQ2162-04 (09-2020) Replaces AEXQ2162-03 Build Number: 07D (North America)



SUPER LONG REACH & LONG REACH EXCAVATION



GO THE DISTANCE

CAT® SUPER LONG REACH AND LONG REACH EXCAVATION EXCAVATORS

Whether cleaning ditches, canals, and waterways, or doing heavier-duty work like dredging and long-distance excavation, count on Cat® Next Generation Super Long Reach and Long Reach Excavation Excavators to expand how you work.



Work at greater distances with better fuel economy, more comfort, and improved efficiency with Cat Next Generation Super Long Reach (SLR) and Long Reach Excavation (LRE) Excavators.

SUPER LONG REACH EXCAVATORS

320

+ 323

- + 326
- + 330

LONG REACH EXCAVATION EXCAVATORS

- + 340
- + 352

MADE TO MATCH YOUR WORK

When your work is a little farther away, reach for Cat Super Long Reach and Long Reach Excavators. They are specialized machines designed to perform despite the unique challenges of working at distance.

Super long reach excavators excel in applications with ditch cleaning buckets.

Long reach excavation excavators excel at heavier-duty work that requires more digging force and lift capacity.







| TYPE | SUPER LONG REACH | LONG REACH EXCAVATION |
|---|--|--|
| Models | 320, 323, 326, 330 | 340, 352 |
| Application | Ditch cleaning Slope finishing Settling pond clean out Waterway and canal maintenance Vegetation control | General excavation Dredging Ditch cleaning Settling pond clean out Waterway and canal maintenance Vegetation control with mulcher attachment Loose material transfer |
| Work tools | Ditch cleaning buckets Skeleton buckets | Excavation buckets Ditch cleaning buckets Ditch cleaning tilt buckets Quick couplers Mulcher heads Skeleton buckets |
| Front linkage family | Cat A linkage | Cat B linkage |
| Undercarriage | Long | Heavy duty, high wide |
| Additional counterweight | Yes | Yes |
| Digging force compared to reach configuration | Approximately 40% | Approximately 66% |



SUPER LONG REACH

NEXT GENERATION EXCAVATORS

Cat Super Long Reach Excavators are a great fit for lighter-duty, long-distance applications, including:

- Ditch cleaning
- Slope finishing
- Settling pond clean out
- Waterway and canal maintenance
- Vegetation control

NEARLY 40% MORE REACH

Cat Medium Excavators with super long reach front linkage extend nearly 40% farther than those with the standard reach configuration with approximately 40% of the digging force.¹

NEXT GENERATION FEATURES

Take advantage of Cat Next Generation Excavator features, including improved operator comfort, reduced maintenance costs, and better fuel economy. Super long reach excavators are compatible with Next Generation Excavator technologies.

EQUIPPED FOR PERFORMANCE

The 323 and 330 provide similar reach and dig depth as the 320 and 326, respectively. However, you will get greater stability and performance with the 323 or 330. All super long reach excavators use a heavier counterweight than equivalent standard reach excavators.

SUPER LONG REACH EXCAVATORS

For detailed specifications, consult Technical Specifications document available on www.cat.com or your from your Cat dealer.

| | Max Digging | Max Reach at | Bucket Digging | Stick Digging | Bucket Size Range |
|-----------|---------------------|--------------------|---------------------|---------------------|---|
| | Depth | Ground Level | Force (ISO)* | Force (ISO)* | "A" Family Linkage** |
| 320 (SLR) | 11 540 mm | 15 570 mm | 62 kN | 49 kN | DC: .57 m³ (.75 yd³) |
| | 37'10" | 51'1" | 13,841 lbf | 10,966 lbf | GD: .53 m³ (.69 yd³) |
| 323 (SLR) | 11 540 mm | 15 570 mm | 62 kN | 49 kN | DC: .57 m ³ (.75 yd ³) |
| | 37'10" | 51'1" | 13,841 lbf | 10,966 lbf | GD: .53 m ³ (.69 yd ³) |
| 326 (SLR) | 14 580 mm 47'10" | 18 280 mm 60'0" | 61 kN 13,710 lbf | 45 kN 10,120 lbf | DC: .5774 m³ (.7497 yd³) |
| 330 (SLR) | 14 610 mm | 18 290 mm | 60 kN | 45 kN | DC: .5774 m³ (.7497 yd³) |
| | 47'11" | 60'0" | 13,490 lbf | 10,120 lbf | GD: .53 m³ (.69 yd³) |

^{*}With ditch cleaning bucket

^{**}Not all buckets available in all regions. Consult your Cat dealer.

DC = Ditch Cleaning Bucket; GD = General Duty Bucket

¹ Reach comparison made at ground level. Regional configurations vary. Consult the Technical Specifications document available on www.cat.com for details specific for your region.

LONG REACH EXCAVATION

NEXT GENERATION EXCAVATORS

When your job calls for heavier work at a distance, call on Cat Long Reach Excavation Excavators. They excel in long-distance applications, including:

- General excavation
- Dredging
- Ditch cleaning
- Settling pond clean out
- Waterway and canal maintenance
- Vegetation control with mulcher attachment
- Loose material transfer



NEARLY 35% MORE REACH

Cat Long Reach Excavation Excavators reach nearly 35% farther than those with the standard reach configuration with approximately 66% of the digging force.¹

A STABLE FOUNDATION

The heavy-duty, high wide undercarriage provides a stable, rugged platform for long reach digging and loading applications with high ground clearance. The variable gauge undercarriage on the 352 LRE can be retracted, making transportation easier.

DESIGNED TO DIG

Reinforcements in the front linkage and frame allow digging power at a distance without sacrificing durability. A heavier counterweight than equivalent standard reach excavators provides greater stability. Get added versatility with optional tool control for select hydro-mechanical tools.

NEXT GENERATION FEATURES

Take advantage of Cat Next Generation Excavator features including improved operator comfort, reduced maintenance costs, and better fuel economy. Long reach excavation excavators are compatible with Next Generation Excavator technologies.²

LONG REACH EXCAVATION EXCAVATORS

For detailed specifications, consult Technical Specifications document available on www.cat.com or from your Cat dealer.

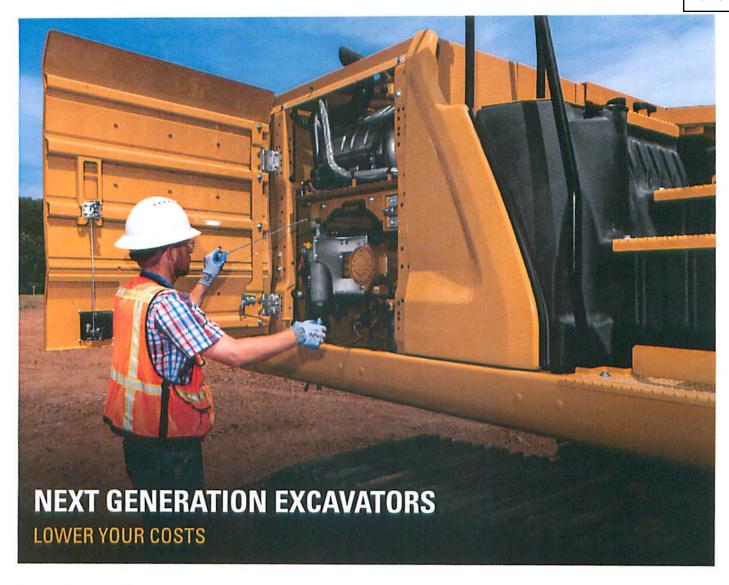
| | Max Digging Depth | Max Reach at Ground Level | Bucket Digging Force (ISO) | Stick Digging Force (ISO) | Bucket Size Range "B" Family Linkage* |
|-----------|----------------------|------------------------------|-------------------------------|------------------------------|---|
| 340 (LRE) | 13 050 mm 42'10" | 18 080 mm 59'4" | 141 kN 31,590 lbf | 92 kN 20,750 lbf | DC: .86-1.50 m³ (1.12-1.96 yd³) DCT: .90-1.23 m³ (1.18-1.61 yd³) GD: .46-1.00 m³ (.61-1.31 yd³) HD: 1.00 m³ (1.31 yd³) |
| 352 (LRE) | 13 040 mm 42'9" | 19 640 mm 64'5" | 141 kN 31,700 lbf | 104 kN 23,380 lbf | DC: .86-1.50 m ³ (1.12-1.96 yd ³) DCT: .90-1.23 m ³ (1.18-1.61 yd ³) GD: .46-1.00 m ³ (.61-1.31 yd ³) HD: 1.00-1.38 m ³ (1.31-1.80 yd ³) |

^{*}Not all buckets available in all regions. Consult your Cat dealer.

DC = Ditch Cleaning Bucket; DCT = Ditch Cleaning Tilt Bucket, GD = General Duty Bucket, HD = Heavy Duty Bucket

¹ Reach comparison made at ground level. Regional configurations vary. Consult the Technical Specifications document available on www.cat.com for details specific for your region.

² Cat Assist technologies available on the 340 only.



Cat Next Generation Excavators are ready to help you make your business stronger by giving you new ways to get the most work done at the lowest cost – so you can put more money in your pocket.

FUEL SAVINGS FEATURES

Next Generation Excavators help you lower fuel costs. Key fuel-savings features include:

- The electrohydraulic system's main control valve and large hydraulic pump allow the engine to run at a lower engine speed without impacting production.
- Smart mode (one of three power mode settings) automatically adjusts engine and hydraulic power for the highest fuel efficiency – providing more when it is required and less when it isn't.
- Cat Grade technologies can improve operator efficiency by up to 45%, reducing the time it takes you to complete a job.

LOWER MAINTENANCE COSTS

Don't let maintenance costs eat into your business. Key maintenance cost-lowering features include:

- Extended and synchronized maintenance intervals reduce downtime for routine maintenance.
- The new air intake filter with precleaner has double the dirt holding capacity of the previous air intake filter.
- Hydraulic and fuel tank filters have increased capacity and longer life.
- Many maintenance points are accessible from the ground, making service not only easy, but safe.

NEXT GENERATION OPERATOR STATION

WORK IN COMFORT

Next Generation Excavator cabs keep you comfortable and productive.

SAFE AND CONVENIENT

Cabs on super long reach excavators and the 340 LRE have ISO-certified ROPS. All cabs are sound suppressed and sealed. Convenience features include automatic climate control, Bluetooth integrated radio, USB ports for charging and phone connectivity, 12V DC outlets and AUX port, storage in rear, overhead, and console compartments, and cup and bottle holders.



ALL-AROUND VISIBILITY

When working at distance, visibility is everything. The cab windows and lower front profile of the machine give outstanding visibility to the work area without the strain of constantly leaning forward.

Standard rear- and side-view cameras keep you aware of your surroundings at all times. An optional 360° visibility feature is also available.



TOUCHSCREEN MONITOR

Most machine settings can be controlled through the highresolution touchscreen monitor. It offers 42 languages and is easy to reach from the seat – no twisting or turning.

Joystick functions can be customized through the monitor.

Joystick pattern as well as response can be set to match operator preference. All preferences are saved with the Operator ID and restored at login.



TECHNOLOGY THAT GETS WORK DONE

INCREASE EFFICIENCY UP TO 45%

Boost productivity up to 45% versus traditional grading with standard Cat Grade and Assist technologies. Cat Grade and Assist technologies keep you on grade when visibility is impaired.

WORK UNDER WATER

Standard waterproof technology provides precision excavation down to 4.5 m (14'9") on long reach excavation excavators and 2.5m (8'2") on super long reach excavators. An optional submarine solution allows you to work down to 20 m (65'8") on either configuration.

| CAT TECHNOLOGY | SLR MODELS | LRE MODELS |
|---|------------|------------|
| Cat Product Link™ | • | • |
| Cat Grade with 2D | 0 | • |
| Cat Grade with Advanced 2D | 0 | 0 |
| Cat Grade with 3D | 0 | 0 |
| Cat Assist - Boom Assist - Bucket Assist - Swing Assist - Grade Assist - Lift Assist | 0 | •1 |
| 2D E-Fence - E-ceiling - E-floor - E-swing - E-wall - E-cab avoidance | 0 | |
| Cat Payload — Static weigh — Semiautomatic calibration — Payload information | o | • |
| Remote Service capability | • | • |

Standard O Optional

| | SLR MODELS | LRE MODELS |
|------------------------------|------------|------------|
| Waterproof depth of factory | 2.5 m | 4.5 m |
| installed technology sensors | 8'2" | 14'9" |
| Waterproof depth of dealer | 20 m | 20 m |
| installed dredging kit | 65'8" | 65'8" |
| | | |
| | | |
| | | |
| | | |
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| | R | |
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Cat Assist only available on 340 LRE.

CAT COMMAND

Cat Command is a remote control system featuring onboard electronics, vision systems, and offboard controls that help users achieve consistent quality in their work. Jobs become safer, more comfortable, and more precise — without sacrificing control, feel, or accuracy.

Easy-to-install Command kits include indicator lights and vision systems. A ground level switch toggles between manual and remote operation.







INCREASE YOUR PRODUCTIVITY AND PROFIT WITH CAT ATTACHMENTS'

SUPER LONG REACH EXCAVATORS

DITCH CLEANING BUCKETS

SKELETON BUCKETS





LONG REACH EXCAVATION EXCAVATORS

COUPLERS

DITCH CLEANING BUCKETS

DITCH CLEANING TILT BUCKETS²

EXCAVATION BUCKETS









MULCHERS

SKELETON BUCKETS





¹Not all attachments available in all regions. Contact your Cat dealer for more information.

²Some Cat technology solutions are not supported with ditch cleaning tilt buckets. Contact your Cat dealer for more information.

SPECIFICATIONS & FEATURES SUMMARY

Specifications may vary due to regional configuration differences. Consult the Technical Specifications document available on www.cat.com or from your Cat dealer for detailed specifications for machines in your region.

| | | SUPER LONG | | LONG REACH EXCAVATION (LRE) | | |
|-------------------------------|------------|------------|------------|-----------------------------|------------|------------------------|
| SPECIFICATIONS | 320 (SLR) | 323 (SLR) | 326 (SLR) | 330 (SLR) | 340 (LRE) | 352 (LRE) |
| Operating Weight* | 23 900 kg | 25 100 kg | 29 200 kg | 30 900 kg | 43 900 kg | 58 400 kg |
| | 52,700 lb | 55,345 lb | 64,300 lb | 68,200 lb | 96,700 lb | 128,800 lb |
| Engine Model | Cat C7.1 | Cat C7.1 | Cat C7.1 | Cat C7.1 | Cat C9.3B | Cat C13 |
| Engine Power – ISO 14396:2002 | 122 kW | 129 kW | 151 kW | 205 kW | 234 kW | 317 kW |
| | 164 hp | 174 hp | 202 hp | 275 hp | 314 hp | 425 hp |
| Undercarriage Type | Long | Long | Long | Long - | HDHW | Variable Gauge HDHW |
| Counterweight | 4.7 mt | 5.4 mt | 6.7 mt | 6.7 mt | 10.35 mt | 12.0 mt |
| | 10,400 lb | 11,900 lb | 14,770 lb | 14,770 lb | 22,800 lb | 26,455 lb |
| Boom | 8.85 m | 8.85 m | 10.2 m | 10.2 m | 10.6 m | 11.5 m |
| | 29'0" | 29'0" | 33'6" | 33'6" | 34'9" | 37'9" |
| Stick | 6.28 m | 6.28 m | 7.85 m | 7.85 m | 7.1 m | 8.5 m |
| | 20'7" | 20'7" | 25'9" | 25'9" | 23'4" | 27'11" |
| Maximum Digging Depth | 11 540 mm | 11 540 mm | 14 580 mm | 14 610 mm | 13 050 mm | 13 040 mm |
| | 37'10" | 37'10" | 47'10" | 47'11" | 42'10" | 42'9" |
| Maximum Reach at Ground Level | 15 570 mm | 15 570 mm | 18 280 mm | 18 280 mm | 18 080 mm | 19 640 mm |
| | 51'1" | 51'1" | 60'0" | 60'0" | 59'4" | 64'5" |
| Bucket Digging Force (ISO) | 62 kN | 62 kN | 61 kN | 45 kN | 141 kN | 141 kN |
| | 13,841 lbf | 13,841 lbf | 13,710 lbf | 10,120 lbf | 31,590 lbf | 31,700 lbf |
| Stick Digging Force (ISO) | 49 kN | 49 kN | 60 kN | 45 kN | 92 kN | 104 kN |
| | 10,966 lbf | 10,966 lbf | 13,490 lbf | 10,120 lbf | 20,750 lbf | 23,380 lbf |

^{*}Weight is typical configuration, 90% fuel, operator, and bucket.

| | | SUPER LONG | LONG REACH EX | CAVATION (LRE | | |
|---|-----------|------------|---------------|---------------|-----------|-----------|
| FEATURES | 320 (SLR) | 323 (SLR) | 326 (SLR) | 330 (SLR) | 340 (LRE) | 352 (LRE) |
| ROPS | • | • | • | • | • | × |
| Power modes, including Smart mode | • | • | • | • | • | • |
| Rear- and side-view cameras | • | • | • | • | • | • |
| 360° visibility | 0 | 0 | 0 | 0 | 0 | 0 |
| Extended and synchronized maintenance intervals | • | • | • | • | • | • |
| Tool control for hydromechanical attachments | x | × | x | x | 0 | 0 |
| Medium pressure circuit | x | x | × | × | 0 | 0 |
| Quick coupler hydraulic circuit | x | x | x | x | 0 | 0 |
| Cat Product Link | • | • | • | • | • | • |
| Work tool recognition | • | • | • | • | • | • |
| Cat Grade with 2D | 0 | 0 | 0 | 0 | • | • |
| Cat Grade with 3D | 0 | 0 | 0 | 0 | 0 | 0 |
| Cat Assist | 0 | 0 | 0 | 0 | • | x |
| 2D E-Fence | 0 | 0 | 0 | 0 | | • |
| Cat Payload | 0 | 0 | 0 | 0 | • | • |
| Remote Flash | • | • | • | • | • | • |
| Remote Troubleshoot | • | • | • | • | • | • |
| Submarine kit | 0 | 0 | 0 | 0 | 0 | 0 |

Standard O Optional X not available

For more complete information on Cat products, dealer services and industry solutions, visit us on the web at www.cat.com.

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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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www.cat.com www.caterpillar.com

AEXQ3108-00 (N Am, Eur)





ROTARY AND FLAIL



INNOVATION ON THE MOVE

The Tiger TrucKat Boom Mower starts with the highest quality materials and is built with freedom in mind. The freedom to travel to and from a work site at posted road speeds and once at the work site, use the newest technology in enhanced boom mowing equipment to tackle the toughest jobs with ease. Now featuring 22' and 24' booms for more reach and power.

DURABILITY INNOVATION







mount designed for 36,000 GVW trucks with dual steering similar to the Freightliner M2 series. The Tiger Truckat Boom Mower can be purchased as a turnkey unit with the Ford F550 FWD chassis, or as a truck bed



Truck Width - 8'6"

Stow Dimensions

Giving the operator the ability to travel road limit restrictions. attached to a truck that meet the legal a fully operational boom mower that is Tiger has met the challenges of building

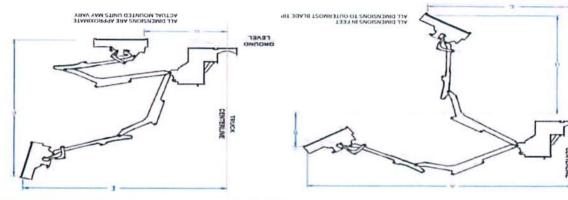
special permits. on any road or highway without any

the travel stowed position. under 8' 6" wide with the tallest point of our boom measuring 13' 5" when in The Truckat has a total width of just



240w Height - 11' 8" for 22' Boom 240W Height - 13' 5" for 24' Boom

Boom Dimensions



| A CONTRACTOR OF THE PARTY OF TH | | | | | | | |
|--|-------------|------------|--|---------------|-------------|---|----------------|
| "4'8 | 21,11" | .9.71 | 13,21 | 15,6,, | ,,6,5 | 73,0,, | 74 |
| ,,6,5 | 21.6" | 13,3" | 15,8,, | "S.II | "6,S | 21,6" | 22 |
| | | | STATE OF STA | 1 12 12 17 17 | | AND DESCRIPTION OF THE PERSON | FL63 |
| 9,5 | 20,8" | 13,10 | 13,0,, | 15,4" | | 22,7" | 24 |
| ,OI,S | "e'e1 | 15,8" | 15,0,, | 11,3" | ,,,,, | 20,11,, | 22 |
| THE RESERVE AND ADDRESS. | | | | | | | FL50 |
| ,,9,5 | 21,7" | "L.PI | 13,6" | 12'8" | "8'2 | 73,8" | 74 |
| "II,S | 16,07 | "S'EI | 13,0,, | 11,6" | "8'2 | 22,1,, | 22 |
| | | | | | | S A SECTION OF | 09TR |
| "OT'S | 21,2" | 14,3" | 13,0,, | 15,21 | ,,9,5 | 23,2" | 24 |
| ,,,,9 | "01'e1 | 13,1" | 15,21 | "4'11 | 9,5 | 21,6" | 22 |
| | | | | | | The second second | OSTA |
| 9 | 4 | 3 | a |) | 8 | A | Bengal |
| 9IT 3QAJ8 | 9IT 3QAJ8 | 9IT 3QAJ8 | TO BLADE TIP | 9IT 3QAJ8 | 9IT 3QAJ8 | 91T 3QAJ8 | |
| OT TUO | LEVEL UP TO | OT TUO | LEVEL DOWN | OT TUO | LEVEL UP TO | OTTUO | Bengal Reaches |
| CENTERLINE | GROUND | CENTERLINE | GROUND | CENTERLINE | евопир | CENTERLINE | |
| NI | 1 | 0 | NA | 00 | 11 | 10 | |



Truckat



- Dual Control System Sit on right or left side of truck with complete control of steering, brake and driving of vehicle.
 Do not attempt to transport truck at road speeds from the right side seat.
- Joystick Control located on right side of truck for precise mowing operation.
- Control Box located in center console for easy access to all mower functions.



Joystick Control



Control Box

Camera Option





Optional camera located on the right side of the TrucKat allows the operator to view the cutting head in operation while facing forward and steering vehicle.

Camera is fully adjustable to view any angle, built with quick disconnects and mounted magnetically so it can be locked away when not in use.

The monitor shown below is attached using a suction cup device and can be connected to a smooth surface anywhere in the truck. Also features quick disconnects.





- Features

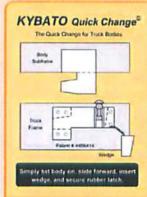
Productivity. Performance. Power.

With the power of the Tiger TrucKat you can get to the job site and back in record time. The versatility of this innovative machine allows you to mow roadside areas, trim low hanging branches, remove silt from ditches and move snow with ease.

When finished for the day you can drive the TrucKat at road speeds with the traffic flow increasing safety, cutting down on drive time and improving overall productivity. Experience the power of the all-seasonTiger TrucKat.









Remove the Tiger TrucKat in minutes with the use of the patented Kybato Quick Change system. The quick disconnect system allows the truck to be used for other applications throughout the year.

SAFETY FEATURES

Engine Make Cummins QSF2.8 **Engine Model** QSF 2.8 (Tier 4 Final) **Power Rating** 74 HP @ 1,800 RPM 4 Cyl., Turbo Diesel **Engine Type Throttle Control** Electronic Adjustable 45 GPM @ 3,250 PSI · Operator Protective Screen Covers Hydraulic System 7 Second Shut Down Safety Stop Truck Bed Quick Removable

Transport Width Controls

Cutter Head

8'6" Electronic Joystick

50" or 60" Rotary 50" or 63" Flail

- · Master ON/OFF Switch
- · Operator Presence Switches on Right Side Door
- Mower Safety Start Switch
- · Brush Guard Extending Over Cab
- Right Hand Door
- Manual Emergency Over-ride



OPTIONAL TRAILER HITCH



BOOM SWEEPER



FIRE SUPPRESSION



TURBINE BLOWER



SAW BLADE



SNOW BLOWER



TREE SHEAR

Tiger Corporation 3301 N Louise Ave. Sioux Falls, SD 57107 800-843-6849 www.tigermowers.com An Alamo Group Company



Dealer Info:



Purchase Order for John Deere Equipment (U.S. Only)

| PO# | 08210 | 267 | |
|------------|--------|------|------|
| PO Revisio | n# Ori | gina | Item |

10.

| PURCHASER'S NAME - First Signe | r (First, N | Middle Initial, Last) | DATE OF ORDER | | COMPAN | | ER ACCOUNT NO. | |
|--|--|--|--|--|--|--|---|----------------------------|
| BEAUFORT COUNTY, SC | | | Aug 11, 2021 DEALER ORDER NO | | 01 | 01311 | 8 | _ |
| (SECOND LINE OF OWNER NAME | :) | | DEALER ORDER INC |).·· | | | | |
| STREET OR RR | | | SOC.SEC. | | IRS NO. | EIN.N | 0. | |
| 120 SHANKLIN RD TOWN | STATE | ZIP CODE | TRANSACTION TYP | - | | PURCHASER SALES | TAVEVENDT | |
| | SC | 29906 | Cash Sale | E | | PURCHASER SALES | TAX EXEMPT | |
| COUNTY PURCHASER ACC | Γ. | PHONE NO. | SELLER'S NAME & | ADDRESS | | | | |
| Beaufort | | 843-255-6415 | Deere & Company | | | 13 | | |
| REWARDS # | | | 2000 John Deere Ru Cary, NC 27513 | ın | | | | |
| E-MAIL ADDRESS | | | 843-761-3822 | | | | | |
| Use County Us BEAUFORT SC | State/P | rovince | delivered as shown from the manufacture delayed or prevente beyond Dealer's con prior to any change | below. Thing and De d due to la trol. The propertion of the in price by | s order is ealer shall abor distur- rice shown y the man | rom Dealer the Equipmen subject to Dealer's ability it be under no liability if dell bances, transportation diffi below is subject to Dealer's ufacturer. It is also subject ment after the date of this o | o obtain such Equip very of the Equipme culties, or for any re receipt of the Equip to any new or incre | mer ent i aso mer |
| R E U U S E M A L D | | quipment & Value (Give Model, Size | e & Description) | | Hours of Use | PRODUCT IDENTIFICATION NUMBER | DELIVERED CASH PRICI (Or Total Lea: Payments) | E se |
| 1 X TIGER TrucK | | | CONTRACT PRIC | | 0 | | \$ 218,122 | 40 |
| I (We) offer to sell, transfer, and co above Equipment, as a "trade-in" to clear of all security agreements, lier is a description and the price to be a | be applied s, and er | ed against the cash neumbrances at the | price. Such item(s) sha time of transfer to you. | all be free a The follow | and ring | L CASH PRICE | \$ 218,122 | 40 |
| QTY | | SCRIPTION OF T | RADE-IN | Hours of Use | | PRODUCT NTIFICATION NUMBER | AMOUNT | |
| | 31 | | | | | TRADE-IN ALLOWANCE | \$0 | 00 |
| PURCHASER TYPE | MAF | RKET USE | | | 1. TOT | AL CASH-PRICE | \$ 218,122 | 40 |
| | | | | | 2. TOT | AL TRADE-IN ALLOWANCE | \$0 | 00 |
| COMMENTS: | | | | | 3. TOT | AL TRADE-IN PAY-OFF | \$0 | 00 |
| | | | | | 4. BAL | ANCE | \$ 218,122 | - |
| | | | | | 5. Vehi | cle Tax - (0.23%) | \$ 500 | 00 |
| | | | | | 8 FST | SERVICE AGREEMENT | \$0 | 00 |
| | | | | | TAXES | | \$0 | 00 |
| | | | | | 6. SUB | -TOTAL | \$ 218,622 | 40 |
| | | | | | 7. CAS | H WITH ORDER | \$0 | - |
| | | | | | 8. REN | TAL APPLIED | \$0 | |
| | | | | | | H DISCOUNT | \$0 | |
| | 1938 N-C | | | | | LANCE DUE | \$ 218,622 | 40 |
| IMPORTANT WARRANTY NOTICE warranty on used equipment. The r THIS PURCHASE ARE LIMITED FITNESS ARE NOT MADE AND A Telematics: Orders of telematic de enabled from your local John Deere | AS SET RE EXCL vices incl Operation | pment warranty is p FORTH IN THE W UDED UNLESS SF lude only the hardwards ons Center or JDLink | part of this contract. Ple VARRANTY AND THIS PECIFICALLY PROVID are. Where available, to k website. Please see | ease read S CONTRA ED IN THE elematics s your author | it carefully ACT. IMPL E JOHN DI software, in rized John | YOUR RIGHTS AND REM LIED WARRANTIES OF M EERE WARRANTY. Including JDLink™ connective Deere dealer for assistance | IEDIES PERTAINING ERCHANTABILITY vity service, may be 3. | C T |
| DISCLOSURE OF REGULATION A Board. In-Use Off-Road Diesel Vehi pollutants. ACKNOWLEDGEMENTS- I (We) pr | cle Regu | lation. It therefore co | ould be subject to retro | fit or accele | erated turn | over requirements to reduce | e emissions of air | racti |
| or a Loan Agreement, for the purcha Equipment ordered herein. Despite p | ase price hysical de | of the Equipment, p elivery of the Equipm | lus additional charges ent,title shall remain in | shown ther the seller u | eon or exe | cute a Lease Agreement, o the foregoing is accomplishe | n or before delivery od. | of the |
| USE OF INFORMATION/PRIVACY personal information and machine bealer, John Deere and their equip (https://www.deere.com/en/privacDeere collects, how it is collected, u | ment, pro | provide warranty, conducts and services | and to support other b | uct and cu | stomer su | pport, marketing and prom | otional information a | abou |
| Purchaser's Signature | | | Accepte By | d | | | | |
| Purchaser's Signature | | | Date Accepte | d | | Salesperson | CHASTAIN,TODD | |
| | | | Delivery Acknow | ledgeme | nt | | | _ |
| Delivered On: | | | Denvely Acknow | Jugerner | | | | |
| Warranty Begins: | | | - | | | Signature | Date | _ |







This form shall be completed for any non-competitive purchase that is not exempt.

(a)A County contract may be awarded without competition when the Purchasing Director determines in writing, after conducting a good faith review of available sources, that there is only one source for the required supply, service, or construction item. The Purchasing Director shall conduct negotiations, as appropriate, as to price, delivery, and terms. A record of sole source procurements shall be maintained as public record and shall list each contractor's name, the amount and type of each contract, a listing of the items procured under each contract, and the identification of each contract file.

(b)Sole source procurement of a used item from the open market may only be considered, provided that:

(1) The using agency recommends purchase; (2) condition of the item is verified by appropriate County official; and (3) price analysis justifies purchase when the following factors are considered: (a) new acquisition price; (b) current book value; and (c) maintenance costs.

Code 1982 SS 12-19 Sec. 2-518 Sole source procurement

The County Council may by resolution, exempt specific supplies or services from the purchasing procedures required in the Code. The following supplies and services shall be exempt from the purchasing procedures required in this division; however, the Purchasing Director for just cause may limit or withdraw any exemption provided for in this section. (1) Works of art for museum and public display (2) Published books, library books, maps, periodicals, technical pamphlets (3) Copyrighted educational films, filmstrips, slides and transparencies (4) Postage stamps and postal fees (5) Professional dues, membership fees and seminar registration fees (6) Medicine and drugs (7) Utilities including gas, electric, water and sewer (8) Advertisements in professional publications or newspapers (9) Fresh fruit, vegetables, meats, fish, milk, bread and eggs (10) Oil company credit cards (11) Articles for commercial sale by all governmental bodies Code 1982 SS 12-14 Ord. No. 2000-1 S 1, 1-10-2000 Sec. 2-514 Exemption from procedures

Notwithstanding any other section of this division, the Purchasing Director may make or authorize others to make emergency procurements of supplies, services, or construction items when there exists a threat to the functioning of county government; for the preservation or protection of property; or for the health, welfare or safety of any person, provided that such emergency procurements shall be made with such competition as is practicable under the circumstances. A written determination of the basis for the emergency and for the selection of the particular contractor shall be included in the contract file. As soon as practicable, a record of each emergency procurement shall be made and shall set forth the contractor's name, the amount and type of the contract, a listing of the items procured under the contract, and the identification number of the contract file.

Code 1982 SS 12-20 Sec. 2-519 Emergency procurements

| Requesting Department: Public Works | Requested Account | Code: 10001301 |
|--|--------------------------------------|--|
| Department Head Email: nilesh | n.desai@bcgov.net | |
| Description of Requested Services: | | |
| Truckat is a vehicle with a mower attached that | at can accomplish multiple areas ar | nd move to next. |
| Please provide a listing of the items purchased | l, if additional pages are necessary | please attach to this form: |
| Truckat and all attachments | | |
| Cost of Requested Services: \$218,622.40 | | |
| Requested Vendor Name: Sparrow and Kenne | dy Tractor | |
| Requested Vendor Address: 2060 South Live C | Oak Drive Moncks Corner, SC 29461 | |
| Requested Vendor Phone Number: 843-761-3 | 822 Requested Vendor Em | ail Address: sparrowsales@homesc |
| Type of Service Requested (Please check one) Cons Please attach any documentation provided by | | Supply/Good Southern Supply/Good Southern Supply/Good Southern Supply Su |
| Attachments: | | |
| Truckst Letter for Beaufort County SC 8- 11-2021.docx 115.17 KB | No file attached | ■ No file attached |

Please select a reason below as to why this is a non-competitive purchase and provide a brief explanation.

| It is not possible to obtain competition. | There is only one source available for the supply, service, or construction |
|---|---|
| item. | |

| | agency recommends purchase, | item from the open market. I he item may on: , (2) condition of the item is verified by appro n the following factors are considered: (a) ne sts. | priate County official, (3) Price |
|-------------|---------------------------------------|--|--|
| 8 | | chase. Other sources may be available but pu eaufort County. Please select an option below | |
| | Standardization | | |
| | Warranty | | |
| | ☑ Other, if selected please | specify below. | |
| | Tigerkat is the only manufactu | rer of an asset of this type. They hold the pat | tent for a vehicle mower of this sort. |
| | An emergency exists that three | atens the functioning of County government. | |
| 1.1 | An emergency exists that three | atens the preservation or protection of County | y property. |
| | What steps have been t | taken to verify that these features are not av | /ailable elsewhere? |
| i J | · · · · · · · · · · · · · · · · · · · | vere examined (please list names and contact County-attach additional pages as necessary | · · · · · · · · · · · · · · · · · · · |
| | Communicated with Lee Trans | port, Dick Smith Ford, Santee Automotive an | d none could assist in this asset. |
| | | d (please list names and contact information inty-attach additional pages as necessary): | and explain why those contacted did |
| Form Com | npleted By: 😢 | kgottschalk | Date: 8/12/2021 |
| | | | |
| | | *** Department Head Section *** | |
| Departme | ent Head Signature: 🔞 | nilesh.desai | Date: 8/12/2021 |
| | | *** Purchasing Review Section *** | |
| Date Rece | eived in Purchasing Department: | 8/15/2021 | |
| ₽ Rev | iewed by Purchasing Departmer | nt for completeness | |
| Date: | 8/15/2021 | . | |
| Reviewed | by: dthomas | | |
| Verified to | hat this is the only source: | Yes c No | |
| Comment | ts: | | |

| Purchasing Director Signature: | Approve 🔾 Disapprove 🖂 _ | dthomas | 8/15/2021 | 7:40:54 PM |
|--------------------------------|--------------------------|------------------|-----------|---------------------------------------|
| | | | | Date / Time |
| Associated Purchase Orders Nu | mber: | | | · · · · · · · · · · · · · · · · · · · |
| Associated Contract Number: | | | | |
| | *** Purchasing Compl | etion Section ** | • | |
| Process Complete: 🖾 | victoria.moyer | Date: | 8/16/2021 | |
| 8:24:49 AM | | | | |
| Submitted: 8/10/2021 | | | | |

ITEM TITLE:

Request to purchase of a Tiger Truckat Mower

MEETING NAME AND DATE:

Public Facilities Committee Meeting - September 20, 2021

PRESENTER INFORMATION:

Jared Fralix, P.E., Assistant County Administrator, Engineering

Neil J. Desai, P.E., Public Works Director

(5 Minutes)

ITEM BACKGROUND:

Replacing Asset# 21300 – 2002 John Deere Utility Tractor 6320 that caught fire and it was determine by the County's insurance company to be a total lost.

PROJECT / ITEM NARRATIVE:

Purchase of Truckat Mower is an essential piece of equipment that will utilized by the Public Works Department to maintain the County's roadside Right of Ways.

FISCAL IMPACT:

Tiger Corporation, a Sourcewell/State Contract vendor has proposed a cost of \$218,622.40. The funding source for this purchase was approved in FY2022 budget meeting for Public Works account number 10001301-54000. In addition, the insurance reimbursement will be applied to the purchase as well.

STAFF RECOMMENDATIONS TO COUNCIL:

Public Works Director and Fleet Manager recommends approving the purchase of the Truckat Mower to replace the John Deer Tractor.

OPTIONS FOR COUNCIL MOTION:

Motion to either accept/deny the recommendation to approve the purchase of the Truckat Mower

Next Steps - A Majority Vote for Acceptance by Committee would move item forward to final acceptance by full County Council vote.

ITEM TITLE:

Request the purchase of a Ford F550 4 x4 Crew Cab w/ Crane Service Body (\$149,826)

MEETING NAME AND DATE:

Public Facilities Committee Meeting - September 20, 2021

PRESENTER INFORMATION:

Jared Fralix, P.E., Assistant County Administrator, Engineering

Neil J. Desai, P.E., Public Works Director

(5 Minutes)

ITEM BACKGROUND:

Per contract, Beaufort County is to provide a Field Service Vehicle to First Vehicle Services to provide mobile support for vehicle maintenance to the County fleet.

PROJECT / ITEM NARRATIVE:

2006 Ford F-450 is currently being used by First Vehicle Services as a Field Service Vehicle, which has 156k miles and has numerous mechanical issues. The Fleet Division understands the importance to standardize the County's Fleet and recommends continuing to purchase Ford vehicles. Also, the maintenance service on this vehicle is rated at a higher non-contract price and by obtaining a new vehicle Beaufort County will not have to pay the higher maintenance cost.

FISCAL IMPACT:

Vic Bailey, a vendor on the State contract, has offered to honor the cost of this vehicle at \$149,826.00. The funding source for this purchase has been approved in the FY2022 budget within the Public Works Department account number 10001301-54000.

STAFF RECOMMENDATIONS TO COUNCIL:

Public Works Director and the Fleet Manager recommend approval of the purchase of the F550 to Vic Bailey Ford to support all of Beaufort County Fleet assets.

OPTIONS FOR COUNCIL MOTION:

Motion to either accept/deny the recommendation to approve the purchase of the F550 to support all of Beaufort County Fleet assets.

Next Steps - A Majority Vote for Acceptance by Committee would move item forward to final acceptance by full County Council vote.

| | VIC BAILEY FORD | | | | | T | | - | | |
|---|--|---------------|---------------------------------------|-----------|-------------|-------------------|------|----------------|--------------------|----------------------|
| | David Vetter 864.585.3600 or 800.922. | 1365 | | | • | · -• | | | | tem 11 |
| | David Vetter 604.565.5000 Or 600.522. | 1303 | | - | · — | -• | | · | | |
| | • | | | | | ļ | | | | |
| | 2021 FORD F250 | | | | | | | | | |
| - | | | | | • | • | | - | | |
| | PU -7: Truck, Pick Up, 4x2, 3/4 Ton, C | rew C: | ah 675 | ' Bo | dv | | | - | | |
| | • | | 10, 0 | | <u> </u> | •— | - | | | |
| | Contract #: 4400022492 | | | | • | | | <u> </u> | | |
| | <u> </u> | | | | | | | | | _ |
| | Standard Equipment Included: | | - | | · | | | | - | |
| | 6.2L V-8 Engine | | | | Power Ste | | | | | |
| | Automatic Transmission | | | | Power Bra | | | | | |
| | A/C | | | | Power Win | | | | | |
| | AM/ FM Radio | | | | Vinyl 40/20 | | | <u> </u> | | |
| | 160" Wheel Base 6.75' Bed | | | | Heavy Dut | <u>y Vin</u> yl F | loor | | | |
| | Cruise Control | | | | XL Trim | | | | | |
| | SC STATE CONTRACT PRICE: | | | | | 1 | | | \$26,92 | 7.00 |
| | Body Installation/Coordination Fee | | | | Ī | | | i . | \$60 | 00.00 |
| 5H | F550 Crew Cab 4x4 Chassis w/ 179" Wheelbase | e/60" CA | | | • | <u> </u> | | | \$18,2 | 58.00 |
| | 19,500lb Payload Upgrade | | | | | | | | \$1,1 | 57.00 |
| 3B | Factory Installed Cab Steps (Super Cab and Cre | w Cab) | | | | | | | \$44 | 46.00 |
| | Body Installed per Lee Quote# GS-01272021-K | - | | | • | | | | \$99,67 | 70.00 |
| 372 | Rear View Camera Prep Kit for Chassis Models | | | | 1 | i | | | \$4 | 15.00 |
| | Limited Slip Rear Axle | | | | | | | 1 | \$39 | 91.00 |
| | Vinyl 40/Mini-Console/ 40 Seats | | | | | | | | \$3 | 58.0 |
| 42 | Daytime Running Lights | | | | | i | | | \$4 | 47.00 |
| | Trailer Tow Wiring and Hitch - Aftermarket Instal | lled | | | 1 | | |] | \$4 | 75.00 |
| R | Transmission Power Take-Off | | | | : | | | į | \$28 | 82.0 |
| | Delivery | | | | • | <u> </u> | | | \$30 | 00.00 |
| | IMF - Sales Tax | | | | · | | | 1 | \$50 | 00.00 |
| | TOTAL SC STATE CONTRACT PRICE | • | | | | Ī | | Ī | \$149,82 | 6.00 |
| | <u> </u> | | | | • | - - | | | | |
| | • | | | | 1 | 1 | | 1 | | |
| | | | | | | | | | | |
| | ADDITIONAL AVAILABLE FACTORY I | NSTAL | LED O | PTIC | NS: | | | • | | |
| 9T | 6.7L Diesel Engine | | | | Ĭ | ļ | | + | \$9,33 | 35.00 |
| | 225/70R19.5 Traction Tires - Rear Only | | | | • —- | | | • | | 91.00 |
| | 225/70R19.5 Traction Tires - Front and Rear | | | | | · - · | - | | | 15.00 |
| | Groups and Packages - See Tab Belo | w for (| Ontion | Conf | ent | • • | | - | <u>*</u> = | : = |
| :\/ | XL Value Package | | - P (1011 | | | | - | | 630 | 96.00 |
| | Sync 3 - Enhanced Voice Recognition Communi | cations : | and Enter | tainm | ent System | <u>.</u> . | | | | 52.00 |
| ,,, | Trailering Options: | Cations | ailo Cinei | tall lill | ient System | ' i | | | | JZ.UL |
| _ | | | | | | | | | | _ : |
| R | Trailer Brake Controller | | | | • | | | | \$2 | 74.00 |
| | Electrical - Battery and Alternator Opt | tions: | | _ | ļ | | | | | |
| Β | 397 Amp Alternator | - | | _ | · | - | | ! | \$11 | 15.00 |
| | Functional Options: | | | | | | | | | |
| H | Engine Block Heater | | | | • | Ť | | | \$10 | 01.00 |
| S | Upfitter Switches | | | | • | | | + | | 65.00 |
| Ρ | Skid Plate Package (4x4 Only) | | | | • | i | | • | \$10 | 02.00 |
| _ | Snow Plow Prep Package (4x4 Models Only) | | | | | . [| | | | 52.00 |
| | Engine Idle Shutdown (Diesel Engine Only - Sp | | | 20 N | linutes) | | | | \$25 | 52.00 |
| # | Operator Commanded Regeneration (Diesel En | gine On | ly) | | | | | · <u>i</u> | \$25 | 52.00 |
| # R | | | | | İ | | | Ī | | 52.00 |
| # IR iS | Remote Start | | | | | Ī — | | • | \$17 | 76.00 |
| 3# 3R 3S 3C | Remote Start 110V/400W Outlet | | | | • | | | | | |
| 5# BR BS BC 24/4 | Remote Start 110V/400W Outlet Privacy Glass w/ Black Glass Defroster | | | | • | | | | \$9 | 92.00 |
| 5# 3R 5S 3C 24/4 5C | Remote Start 110V/400W Outlet Privacy Glass w/ Black Glass Defroster Exterior Back Up Alarm/Chime | - <u>-</u> | · · · · · · · · · · · · · · · · · · · | | • | <u>;</u> | | | | |
| 6# BR 6S 3C 24/4 6C 942 | Remote Start 110V/400W Outlet Privacy Glass w/ Black Glass Defroster Exterior Back Up Alarm/Chime Daytime Running Lights | | | | | <u> </u> | | | \$14 \$4 | 92.00 42.00 47 |
| 5# 5R 5S 5C 24/4 5C 942 | Remote Start 110V/400W Outlet Privacy Glass w/ Black Glass Defroster Exterior Back Up Alarm/Chime | | | | | | | | \$14 \$4 \$8 | 42.00 |

| 18A | Upfitter Interface Module | \$296.00 |
|-----|--|------------|
| | Safety Options: | |
| 94P | Pre-Collision Assist w/ Automatic Emergency Braking | <u> </u> |
| | Seating Options - XL Package - Crew Cab Models: | · |
| 4 | 4 Cloth 40/Mini-Console/ 40 Seats | \$616.00 |
| 1 | 1 Cloth 40/20/40 Bench Seat | \$316.00 |
| | After Market Installed Options: | |
| | Warn 12000lb Zeon Winch & Black Grill Guard | \$2,162.00 |
| | Warn 12000lb M12 Winch & Black Grill Guard | \$2,795.00 |
| | Warn Brush Guard for Winch | \$400.00 |
| | 2" Ball, Receiver Tube and Pin for Frame Mounted Hitch | \$45.00 |
| | 3 - Ball Hitch | \$125.00 |
| | Combo Ball and Pintle Hook | \$165.00 |
| | FMVSS Safety Kit (Fire Ext., Triangle and First Aid Kit) | \$95.00 |

LEE TRANSPORT EQUIPMENT INC.

Custom Quotation For:

Accepted By

P.O. BOX 26, 1300 BLUFF R.D.

COLUMBIA, SOUTH CAROLINA 29202 PHONE# 803-799-7860 FAX 803-765-053

| Quote # | GS-01 | Item 11. |
|---------|-------|----------|
| Date: | 1/2 | 7/2021 |
| Phone # | 843- | 812-7572 |
| Fax# | | |
| | | |

PHONE# 803-799-7860 FAX 803-765-0535 **Beaufort County** *TRUCK BODIES AND TRUCK EQUIPMENT* PRICING: **Personal Contact: Katie Gottschalk** (South Carolina State Contract for Service Bodies Number #4400024845) Furnish and install Stellar Model TMAX-1, 11' Crane service body to include. \$ 21,985.00 INC LED body lights standard shelving package. 6.955.00 20" work bench bumper with thru compartment and full hydraulic outriggers. \$ 28.895.00 Stellar 7630 full hydraulic field service crane with FM remote and boom support. \$ Add suspension springs to level truck under crane side. 950.00 Ś Class 5 receiver hitch with 7-way plug and back up alarm. 490.00 Ś 2-LED work lights installed on rear of body. 360.00 \$ 850.00 Kevlar spray in liner installed in cargo area, compartment tops and on rear bumper. Ś 685.00 4-corner strobe light system (B12-AW) in front grill and on rear of body. LED compartment lights installed in service body. 685.00 American Eagle 7-drawer tool box installed in street side front compartment. 1.685.00 Full height body with oxy-acetylene bottle holders in curb side front compartment. \$ 4,250,00 Master locking system installed. 695.00 Vmac H-60, 60cfm rotary screw air compressor installed on street side front with FLR. 11.950.00 Cab guard installed with Stryker LED GoLight. 995.00 50' Air hose reel installed on street side rear compartment exiting out of the rear of the body. Ś 750.00 One row E-Track installed each side in cargo area 2" from top. 355.00 Install dealer furnished rear back up camera when body is complete. INC Miller Bobcat 250 welder installed on top of street side rear compartment (no welding leads). \$ 5,150.00 TP&L 4-Product Lube skid to customers specifications. \$ 11,985.00 Crane, body and all accessories completely installed, painted and ready to go. Note: Chassis must have factory PTO provision and 19.5" tires. Price good for 30 days. Tax not Inc. Insurance: Customers chassis covered with primary coverage insurance while 99,670.00 Price: in the care and the custody of L.T.E. Product Liability insurance carried. Special Discount: 19.500 GVWR 84" White Chassis: Paint: 99,670.00 Net Price: Other Data: Local Option Tax: State Sales Tax **Total Price:** Lee Transport Equipment, Inc. Tax Exempt No Delivery Date:

Greg L Stowers

Item 11.

Stellar® Service Cranes and TMAX™ Service Bodies

7621/7630



TECHNICAL SPECIFICATION GUIDE





STELLAR® 7621/7630 TECHNICAL SPECIFICATION GUIDE

SPECIFICATION INFORMATION

Crane Rating (with Boost): 44,840 ft-lb (6.2 tm)*

7621 Boom Length: 11' (3.35 m) from CL of Crane 7630 Boom Length: 13' 4" (4.06 m) from CL of Crane

7621 Boom Extension:

• 1st Stage: Hydraulic 60" (152.4 cm)
• 2nd Stage: Hydraulic 60" (152.4 cm)

7630 Boom Extension:

1st Stage: Hydraulic 100" (254 cm)2nd Stage: Hydraulic 100" (254 cm)

7621 Max. Reach: 21' (6.40 m) from CL of Crane 7630 Max. Reach: 30' (9.68 m) from CL of Crane

7621 Max. Vertical Lift: 23' (7.01 m) 7630 Max. Vertical Lift: 31'9" (9.68 m)

Boom Elevation: -10° to +80°

Stowed Height: 37.75" (82.6 cm)

(crane only)

Mounting Space Required: 20" x 21" (50.8 x 53.3 cm)

Approximate Crane Weight: 7621 - 1,885 lbs (855 kg) 7630 - 2,100 lbs (953 kg)

Controls: Stellar® CDTplus™ radio control standard

for all functions

Winch

Rope Diameter: 3/8" (0.95 cm)

6X31 IWRC-DGXIP X 100" (30.48 m)

Line Pull Speed: 60 ft/min (18.29 m)
 Max. Single Part Line: 3750 lbs (1700 kg)
 Max. Double Part Line: 7500 lbs (3402 kg)

Rotation: 400° power

(worm gear)

7621 Lifting Capacities: 7500 lbs @ 5'10" (3400 kg @ 1.78 m)**

2135 lbs @ 21' (965 kg @ 6.40 m)**

7630 Lifting Capacities: 7500 lbs @ 5'10" (3400 kg @ 1.78 m)**

1490 lbs @ 30' (675 kg @ 9.14 m)**

Power Supply Required: PTO & Pump 8 gpm @ 3000 psi (30.31 lpm @ 207 bars)

Min. Rec. Chassis (GVRW) 19,000***

NOTE: All Stellar cranes meet ANSI B30.5 and OSHA 1910.180 specifications. Specifications subject to change without notification.

*Crane rating in Boost Mode. Normal crane rating is 38,000 ft-lbs (5.25 ton-m)

"Maximum capacities in Boost Mode

***Guideline for Stellar® TMAX™ package with curbside rear crane.

Consult with Stellar for other installations.

DEFINING CHARACTERISTICS

Stellar® CDTplus™ (Crane Dynamics Technology Plus™)

The Stellar CDTplus control system is EXCLUSIVE TO STELLAR and features a NEW handheld transmitter with an over-molded rubber bumper system to maximize durability while keeping it lightweight. The new LCD display features operator feedback including real time load capacity, maximum distance with the current load, boom angle, and percentage of load. The boost feature allows a momentary increase in the capacity of the crane, and a Safe Mode to keep the crane and operator safe should a load indicating device fail to operate correctly. The new Stellar CDTplus remote handle features a rechargeable battery and an in-cab docking and recharging station.

Full Hydraulic Extension

The Stellar CDTplus series offers cranes in either 21' or 30' of all hydraulic reach. No manual extensions.

Market Leading Boom Articulation

The Stellar CDTplus cranes offer -10 degrees to +80 degree. This gives the operator both easy reach to snatch block stowing and the best ability to load items into the load bed.

Quick Release Snatch Block Stow

The Stellar quick release snatch block stow is installed on the underside of the boom to easily stow your snatch block after use. Plus, its unique design gently releases the snatch block for use when the boom is raised at close to 60 degrees to ensure a safe and orderly deployment.

On-Demand Speed Control

The Stellar exclusive on-demand speed control ramps engine RPM up only when the crane is being used. When the crane is not used for 5 seconds engine RPM returns to idle. This lowers fuel consumption and reduces noise pollution in the work area.

Maximum Foot-Pound Rating

The Stellar CDTplus series cranes offers robust ft. lb. ratings during standard mode and increases that by 18% during "Boost" mode to help you get maximum lift when you need it most.

Planetary Winch

The planetary winch on every crane manufactured by Stellar was designed to match the capacity and hydraulic control system. It lifts the maximum crane load and offers the smoothest and fastest speeds in the market today to help keep your productivity at maximum levels.

400 Degree Enclosed Rotation

Stellar uses a durable enclosed rotation system with a cast iron base and an internal mechanical stop to provide the most durable rotation system found in the industry.

Greaseable Pivot Bushings

Each pivot pin location on the CDTplus series crane includes bushings and grease zerks to provide for years of use.

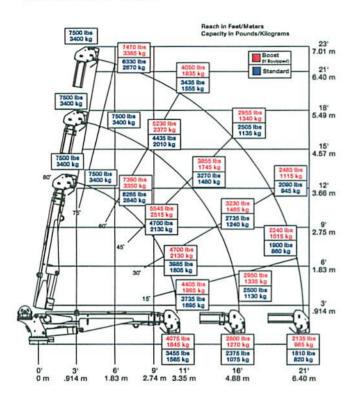
Hexagonal Booms

Stellar Industries made the hexagonal boom design famous in the telescopic service crane market. The hexagonal boom design is optimized to deliver dramatically less boom flex and side to side movement than other boom designs on the market.

Flip Sheave with Bar Style Anti-Two Block

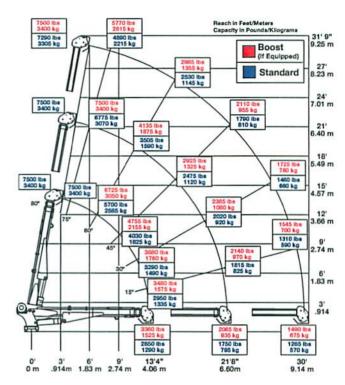
The Stellar CDTplus series is available standard with our patent pending flip sheave with a bar style ATB. The flip sheave allows for a shorter horse head profile which allows for boom placement in tight quarters, such as an equipment cab.

7621 CAPACITY CHART



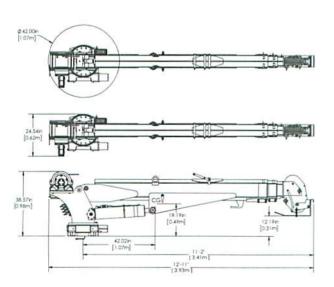
Weight of load handling devices are part of the load lifted and must be deducted from the capacity. Maximum 1-part line capacity is 3750 lbs. (1700 kg). For greater loads, use 2-part line.

7630 CAPACITY CHART

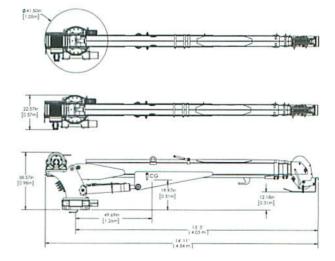


Weight of load handling devices are part of the load lifted and must be deducted from the capacity. Maximum 1 - part line capacity is 3750 lbs. (1700 kg). For greater loads, use 2 - part line.

7621 DIMENSIONS



7630 DIMENSIONS



NEW TMAX Service Bodies

TMAX1™ Service Body

16,000 - 19,500 GVWR Applicable Chassis

(19.5 tire size)

Compatible Crane Models: 3315

Cab to Axle:

Body Length Nominal:

133" (337.82 cm) Body Height: 44" (111.76 cm) Body Width: 94" (238.76 cm) Compartment Depth: 22" (55.88 cm)

Floor Width: Net Weight:

84" (213.36 cm)

50" (127 cm) 3220 lbs (1460.37 kg)

TMAX2™ Service Body

Above 19,500 GVWR Applicable Chassis:

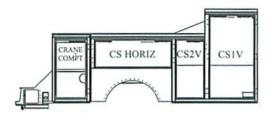
(22.5 tire size)

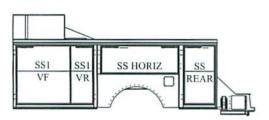
Compatible Crane Models: 7621

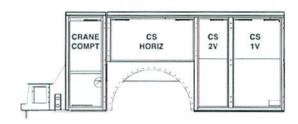
Cab to Axle: 84" (213.36 cm) Body Length Nominal: 133" (337.82 cm) 52" (132.08 cm) Body Height: 94" (238.76 cm) Body Width: Compartment Depth: 22" (55.88 cm) Floor Width: 50" (127 cm)

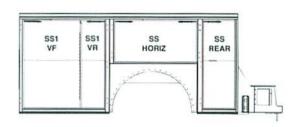
Net Weight:

3600 lbs (1632.93 kg)









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190 State Street P.O. Box 169

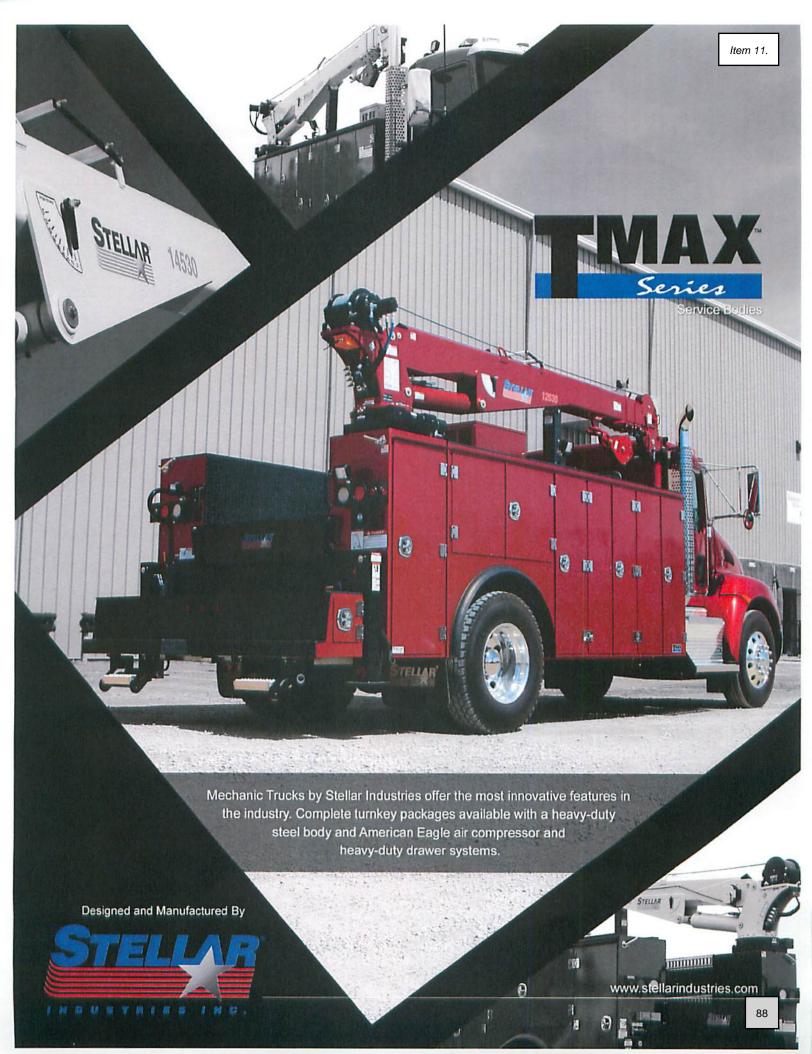
Garner, IA 50438

Telephone: (641) 923-3741 • (800) 321-3741

Fax: (641) 923-2812

Internet: www.stellarindustries.com Email: sales@stellarindustries.com

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STELLAR® TMAX™ SERIES BODIES

Mechanic Trucks by Stellar Industries offer the most innovative features in the industry. Built to the highest standards demanded of all Stellar products, the Mechanic Truck by Stellar Industries offers the most complete turnkey packages available with a heavy-duty steel body, air compressor, drawer system and available options.













- Complete turnkey packages available with a heavy-duty steel body and American Eagle air compressor and drawer systems
- Stellar service cranes feature hexagonal booms which makes them stronger, reduces boom flex and excessive side-to-side boom movement
- · Stellar offers a wide range of lifting capacities up to 14,000 pounds
- Planetary winches provide line speed up to 60-feet per minute
- · Up to 30-feet of hydraulic reach
- · Quick release snatch block stow
- · 400-degree power rotation on most models
- . Standard Stellar® CDT™ and Stellar® CDTplus™ radio remote with optional E-Link control system
- · On demand speed control
- · Dual acting counter balance valves integrated into hydraulic cylinders
- · Flip sheave with bar style ATB
- Stellar® CDTplus™ cranes offer -10 degrees to +80 degrees. This gives the operator both easy reach to snatch block stowing and the best ability to load items onto the load bed

Stellar TMAX™ Series Service Bodies

TMAX™ 1 Service Body

Designed to meet the needs of public utilities, municipalities and construction companies requiring medium lifting range.

TMAX™ 2 Service Body

Perfect for mining companies, heavy equipment dealers and construction companies requiring heavy lifting at a longer range.

TMAX™ 3 Service Body

Serving the increasing demands of heavy equipment dealers, the mining industry and large construction companies who operate sizable fleets with even larger equipment needing service.

9



The Best Features in the Industry are Standard on Every Stellar® Model TMAX[™] 1, TMAX[™] 2 & TMAX[™] 3 Service Body.

 The crane pedestal / compartment is constructed of steel material capable of handling the robust lifting capacity of Stellar cranes, including Stellar® CDTplus™ equipped cranes. This provides the same storage space as other non-reinforced compartments.

- The rotating masterlock system soundly secures each door, and accepts your pad lock of choice to protect your valuable tool supply.
- Exterior mounted light box provides maximum protection for the lights yet minimizes intrusion into the compartments.
 - · Slide out step.
 - Smooth steel workbench surface bumper, with recess for pintle hitch. Step bumper and grab handles are standard.



Stainless steel billet style hinge has hidden fasteners and a rugged 5/16" stainless steel rod. All combined to stand up to years of heavy use.



3-Point compression latches positively compress compartment weather strip for weather tightness, while allowing easy access.



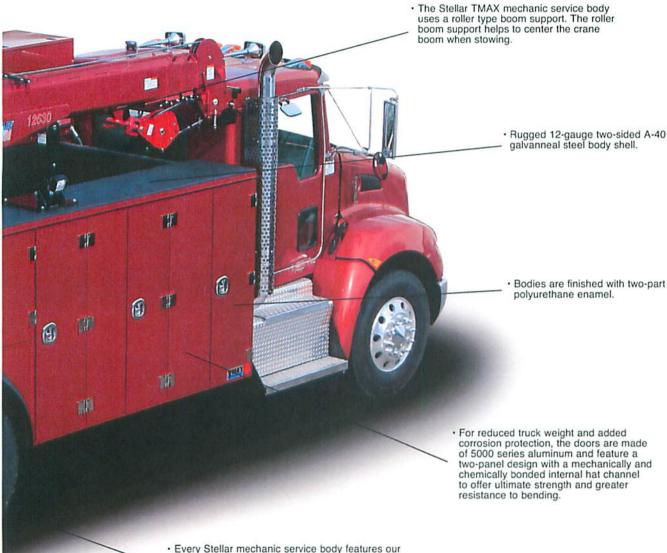
Double spring over center door closures on all vertical doors, keeps door in positive open or closed position.



扣

250-lb capacity adjustable divider shelves made of spangled galvanized steel.

Stellar Industries | Our People, Our Products,



 For reduced truck weight and added corrosion protection, the doors are made of 5000 series aluminum and feature a two-panel design with a mechanically and chemically bonded internal hat channel to offer ultimate strength and greater registations to bending. resistance to bending.

 Every Stellar mechanic service body features our torq-isolator crane support design and isolates the crane compartment from the rest of the side pack. Lifting stresses are transferred to the stabilizers and box-type subframe, not the compartment doors.



Complete undercoating, with minimum of 3 mils of petroleum base material, provides extra protection from corrosion and road debris.



Full width longbar storage compartment integrated into the rear workbench bumper. Removable vise pedestal is standard.

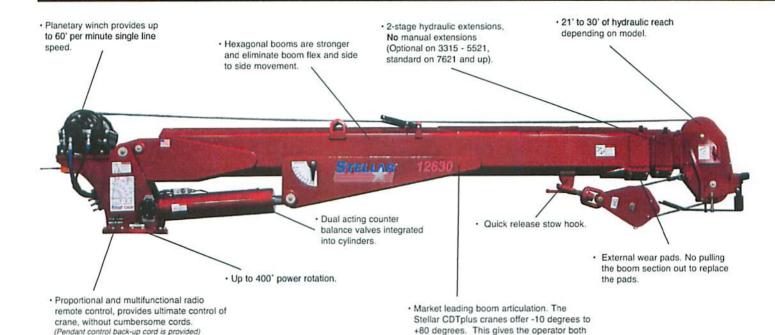


12-gauge double panel tailgate with hinged arm brackets to provide a stout working surface.



Encased in a durable nylon braided loom, the standard electrical wiring harness used by Stellar covers all functions, and features the use of weather-tight connectors.

STELLAR® TELESCOPIC SERVICE CRANES





(Pendant control back-up cord is provided)

Stellar® CDTplusTM (Crane Dynamics Technology PlusTM)

A proprietary collection of revolutionary features that includes a two-way communication and feedback feature, a crane boosting feature, and an enhanced safety-monitoring feature.



- . The CDTplus™ system is the first radio transmitter in the industry to offer real time capacity feedback to the operator. Using a unique 2-color LCD screen, the Stellar® CDTplus™ handheld remote will show actual load, reach, angle and also additional reach possible with the current load.
- Through the use of proprietary technology, the Stellar[®] CDTplus[™] system can also allow operators who exceed standard capacity to productively operate through that situation by increasing crane capacity to 118% of its normal operating capacity for a short period of time.
- . Stellar® CDTplus™ equipped cranes feature an enhanced safety system. If a device intended to monitor the capacity of the crane operates incorrectly, the crane will put itself into safe mode. Safe mode will allow the operator to work with the crane at a reduced speed until the safety device is in proper working order

Flip Sheave with Bar Style Activation

The standard two-part line position allows for better cable location when making lifts at a high boom angle, such as loading into the truck bed. It keeps the wire rope further from the boom and prevents rubbing.

The new Flip Sheave low profile position, designed for the single-part line configuration, is beneficial when lifting something in a tight location, such as inside a cab or under a hood. The low profile configuration creates more room to lift the load and position loads in limited height areas.

Available on telescopic crane models 7621 and up.



easy reach to snatch block stowing and the best ability to load items onto the load bed.





Low Profile Position



Stellar® E-Link Control System

The Stellare E-Link Control system is a robust design meant to handle the rigors our industry demands. It also offers a multi-color backlit design for easy viewing in low light conditions, and is IP67 rated to resist dust and moisture interference.

(Available with Stellar® CDTplus™ only on cranes 7621 and larger)





Available Cranes

| | Model | Crane Rating | Boom Length* | Max Reach* | Lifting Capacities | Power Supply |
|-------------------|-------|------------------------------|---------------------|--------------|---|--|
| L ped | 4421 | 16,000 ft-lbs (2.23 ton-m) | 11' (3.35m) | 21' (6.40 m) | 4,000 lbs @ 4' (1,814 kg @ 1.22 m) 760 lbs @ 21' (345 kg @ 6.40 m) | PTO 3.0 gpm @ 2600 psi 12 volt power E/H (Optional) |
| Fquipped | 5521 | 29,500 ft-lbs (4.1 ton-m) | 11' (3.35 m) | 21' (6.40 m) | 5,000 lbs @ 5' 10" (2,268 kg @ 1.78 m) 1,400 lbs @ 21' (635 kg @ 6.40 m) | PTO 8 gpm @ 2500 psi |
| CDT | 6521 | 35,000 ft-lbs (5.3 ton-m) | 11' (3.35 m) | 21' (6.40 m) | 6,000 lbs @ 5' 10" (2,722 kg @ 1.78 m) 1,680 lbs @ 21' (762 kg @ 6.40 m) | PTO 8 gpm @ 3000 psi |
| | 7621 | 44,840 ft-lbs* (6.20 ton-m) | 11' (3.35 m) | 21' (6.40 m) | 7,500 lbs @ 5'10" (3,402 kg @ 1.78 m)* 2,135 lbs @ 2 1' (965 kg @ 6.40 m)* | PTO 8 gpm @ 3000 psi |
| | 7630 | 44,840 ft-lbs* (6.20 ton-m) | 13' 4" (4.06 m) | 30' (9.14 m) | 7,500 lbs @ 5' 10" (3,402 kg @ 1.78 m)* 1,490 lbs @ 30' (675 kg @ 9.14 m)* | PTO 8 gpm @ 3000 psi |
| | 9621 | 70,800 ft-lbs* (9.79 ton-m) | 11' (3.35 m) | 21' (6.40 m) | 9,000 lbs @ 7' 10" (4,082 kg @ 2.39 m)* 3,365 lbs @ 21' (1,525 kg @ 6.40 m)* | PTO 8 gpm @ 2500 psi |
| - peddi | 9630 | 70,800 ft-lbs* (9.79 ton-m) | 13' 4" (4.06 m) | 30' (9.14 m) | 9,000 lbs @ 7' 10" (4,082 kg @ 2.39 m)* 2,360 lbs @ 30' (1,070 kg @ 9.14 m)* | PTO 8 gpm @ 2500 psi |
| CDTplus" Equipped | 10621 | 70,800 ft-lbs* (9.79 ton-m) | 11' (3.35 m) | 21' (6.40 m) | 10,000 lbs @ 7' (4,536 kg @ 2.13 m)* 3,365 lbs @ 21' (1,525 kg @ 6.40 m)* | PTO 8 gpm @ 3000 psi |
| CDTplu | 10630 | 70,800 ft-lbs* (9.79 ton-m) | 13' 4" (4.06 m) | 30' (9.14 m) | 10,000 lbs @ 7' (4,536 kg @ 2.13 m)* 2,360 lbs @ 30' (1,070 kg @ 9.14 m)* | PTO 8 gpm @ 3000 psi |
| | 12621 | 77,800 ft-lbs* (10.76 ton-m) | 11' (3.35 m) | 21' (6.40 m) | 12,000 lbs @ 6.5' (5,443 kg @ 1.96 m)* 3,705 lbs @ 21' (1,680 kg @ 6.40 m)* | PTO 8 gpm @ 3000 psi |
| | 12630 | 77,800 ft-lbs* (10.76 ton-m) | 13' 4" (4.06 m) | 30' (9.14 m) | 12,000 lbs @ 6.5' (5,443 kg @ 1.96 m)* 2,590 lbs @ 30' (1,175 kg @ 9.14 m)* | PTO 8 gpm @ 3000 psi |
| | 14530 | 82,600 ft-lbs* (11.42 ton-m) | 13' (9.96 m) | 30' (9.14 m) | 14,000 lbs @ 5' (6,350 kg @ 1.52 m)* 2,750 lbs @ 30' (1,247 kg @ 9.14 m) | PTO 12 gpm @ 2600 psi |

^{*} With Stellar® CDTplus™ boost mode. See technical specification brochure or manual for each specific model.

Stellar Exclusive Service Bodies



| Model | GVWR | Crane Models | Cab to Axle | Length | Height | Comp. Depth | Floor Width |
|--------------------|-------------------------------------|--|--------------------------------------|-----------------------------|-----------------------------|----------------|---------------------------|
| TMAX™ 1 Bodies | 16,000 - 19,500 (19.5 tire size) | 4421, 5521, 6521, 7621, 7630 | 60" - 84" (152-213 cm) | 109" - 133" (276-338 cm) | 44" & 60" (112 & 152 cm) | 22" (56 cm) | 50" (127 cm) |
| TMAX™ 2 Bodies | 19,500 and up (22.5 tire size) | 7621, 7630, 9621, 9630, 10621, 10630, 12621, 12630 | 84" - 120" (213-305 cm) | 133" - 169" (338-429 cm) | 60" (152 cm) | 22" (56 cm) | 50" (127 cm) |
| TMAX™ 3 Bodies | 33,000 and up | 14530 | 120" (304.8 cm) | 169" (429 cm) | 60" (152 cm) | 22" (56 cm) | 50" - 52" (127-132 cm) |
| TMAX™ 3T Bodies | 46,000 and up | 14530 | 138" (Cab to Trunnion) (350.5 cm) | 210" (533 cm) | 60" (152 cm) | 22" (56 cm) | 50" - 52" (127-132 cm) |

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Fax: (641) 923-2812

Internet: www.stellarindustries.com Email: sales@stellarindustries.com

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STL000065 9/18



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- Built with genuine, trusted brand name components and parts
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Effective

- · Avoid costly downtime by servicing your machinery on-site
- · Complete service system without the need for additional lubrication tools

LOOKING FOR A MOBILE LUBRICATION SOLUTION THAT DOESN'T BREAK THE BANK AND FITS ALMOST ANY SIZE SERVICE VEHICLE?

Taylor Pump and Lift has you covered! With seven standard lube skids, and the option to **customize one of your own**, we're confident we can provide you with a product that will suit your business needs and budget.

Contact us today or visit us at www.taylorpumpandlift.com!

STANDARD & ENCLOSED SKID OPTIONS

TPL 236-983

- Two (2) 50-gallon new oil tanks
- One (1) 60-gallon used oil tank
- · 42"W x 36"D x 60"H

TPL 236-983-G

- · Two (2) 50-gallon new oil tanks
- · One (1) 60-gallon used oil tank
- · 42"W x 55"D x 60"H
- 120 lb grease system

TPL 236-984

· Includes the above + 48"D

TPL 236-993

- · Three (3) 30-gallon new oil tanks
- One (1) 60-gallon used oil tank
- · 42"W x 36"D x 60"H

TPL 236-994

- Three (3) 30-gallon new oil tanks
- · One (1) 60-gallon used oil tank
- 120 lb grease system
- · 42"W x 48"D x 60"H

TPL 236ERC

- · Three (3) 50-gallon new oil tanks
- · One (1) 50-gallon antifreeze tank
- · 120 lb grease tank
- · One (1) 100-gallon waste oil tank

TPL 236ERC-AC

 Includes the above + 14 hp gasoline compressor and reels











ITEM TITLE:

Recommendation to Award RFQ #042721E, Indoor Pool Renovations Architecture and Engineering Services

MEETING NAME AND DATE:

Public Facilities Committee – September 20, 2021

PRESENTER INFORMATION:

Jared Fralix, Assistant County Administrator – Engineering

(5 minutes)

ITEM BACKGROUND:

2000: MOA with BCSD whereby County maintains/operates pools for 25 years (2025).

2018: Council approved \$540K to improve air quality in all three pools (then assessed to be HVAC failures).

2020: BDB Study indicated actual problem is structural failure/leakage of building. Estimate: \$3.4M

PROJECT / ITEM NARRATIVE:

A request for qualifications was published to assess enclosures that would last longer than the apparent 20-year-life cycle. 3 areas of evaluation include existing conditions, renovations/modifications to same, and evaluate other designs.

Two firms responded to the solicitation and the evaluation committee selected RMF Engineering (Charleston, SC) for recommendation.

FISCAL IMPACT:

RMF Contract: Cost estimated at \$75,420 over a 112-calendar day period to study/report on the 3 areas of evaluation. With \$1,000 for reimbursable expenses and 10% contingency, the total project cost is \$82,500 to be funded from 2019A GO Bond – Other Improvements PAR Pools – 40110011-54436 with a balance of \$422,850.

STAFF RECOMMENDATIONS TO COUNCIL:

Approve the Committee's recommendation to award Contract to RMF for RFQ#042721E, Indoor Pool Renovations Architecture and Engineering Services.

OPTIONS FOR COUNCIL MOTION:

Motion to approve/deny award of contract for Indoor Pool Renovations Architecture and Engineering Services to RMF Engineering.

Next Step: Contract is less than \$100,000, therefore; does not require County Council approval. Staff to proceed with executing contract.

| RFQ 042721E | | | | |
|--------------------------|-----------------|-----------------|--|--|
| Summary Score Sheet | | | | |
| | | | | |
| Evaluators | Name of Company | Name of Company | | |
| | Beaufort Design | | | |
| | <u>Build</u> | RMF Engineering | | |
| C. Atkinson | 92 | 83 | | |
| S. Loper | 91 | 95 | | |
| M. Watts | 86 | 89 | | |
| M. Roseneau | 89 | 93 | | |
| W. Campbell | 90 | 80 | | |
| TOTALS: | 358 | 360 | | |
| | | | | |
| 1. RMF Engineering | 360 | | | |
| 2. Beaufort Design Build | 358 | | | |



August 17, 2021

Beaufort County 2266 Boundary Street Beaufort, SC 29902

Attention: Mr. J. Wes Campbell

Beaufort County Construction Manager

Reference: Beaufort County Indoor Pools Study

RFQ NO.042721E

Engineering Services Proposal

Dear Wes,

RMF Engineering, Inc. (RMF) is pleased to submit this proposal to perform the mechanical, electrical and plumbing (MEP) engineering services for the above referenced project. Subcontractors to RMF will be ADC Engineering for structural engineering and FWA Group for architectural services. Find the subcontractors proposals attached.

PROJECT DESCRIPTION

The design team has been hired to evaluate the options to repair, modify or replace three existing indoor pool facilities.

1 Blue Dolphin Drive, Beaufort 35 State Rd S-7-266, Beaufort 55 Pritchard Street, Bluffton

The project is a two-phase project. The first phase is the study to evaluate and select the options for each facility; the second phase is to provide the design documents for the selected options.

The deliverable for this phase of the project (Phase 1) will be a written report including any photo documentation, plans, renderings and associated opinion of costs for each of the scope items described below.

Scope Item 1 – Existing Building Evaluations

The design team will perform Building Condition Assessments for the three indoor pool buildings and support spaces. The assessments will cover the structural, architectural, envelope, mechanical and electrical equipment, and systems. The assessments will include a review of the existing program spaces, functions and code compliance as they relate to the current occupancy and usage per the documents received at the July 8, 2021 Owner Review meeting. We will generally follow ASTM E 2018-08 guidelines for assessments as they apply to the scope of work above. RMF will perform HVAC load calculations on the existing natatoriums to determine if the existing HVAC is sized appropriately for its current service.







The assessment team will not perform any destructive investigation of any type. Our assessment does not include hazardous materials investigation, survey or sampling. The design team will not start or operate any equipment in the facility. The design team will not evaluate the pool heating, cooling or filtration equipment.

Scope Item 2a - Existing Building Renovations

The design team will provide an itemized list of suggested upgrades to the buildings and associated costs. These upgrades will be the upgrades required to repair or replace failing equipment or systems or to bring the building up to code compliance. Due to the difference of deterioration at each building it is understood that each building will have its own list of upgrades and all upgrades may not be suggested for each building.

Scope Item 2b – Existing Building Modifications

The design team will provide a description and opinion of costs for up to three (3) options for providing removal/retractable enclosures for the pool buildings which may include decoupling the support spaces from the pools.

Scope Item 3 – New Pools

The design team will provide a description and opinion of costs for two (2) new pools incorporating owner programming and occupancy usage based on the documents received at the July 8, 2021 Owner Review meeting.

No work for Phase 2 will be completed under this contract. Once Phase 1 is complete a fee can be negotiated for developing the bidding/construction documents for Phase 2 at the owner's request.

It is understood that Beaufort County has the facility as-builts in PDF format. For this project the design team will use the as-builts to develop Revit files for our use. The design team will modify the Revit file with any conditions in the field that do not match the as-builts.

COST ESTIMATING

Schematic level opinion of construction cost will be provided for Scope Items 2a, 2b and 3.

PROJECT MEETINGS

RMF will participate in three (3) owner review meetings in Beaufort, South Carolina with the owner and the design team during the evaluation period. The project will not progress until the review meeting has occurred.

RMF will generate and distribute formal meeting minute documentation from each meeting.

DELIVERABLES

The final deliverable for this project will be a PDF report describing the existing conditions, proposed modifications, opinion of constructions costs and renderings

There will be no specifications or construction design documents generated for this project.



PROPOSED SCHEDULE

| Project Phase | Days After NTP |
|--|----------------|
| Existing Building Field Surveys | 14 |
| 25% Phase 1 Report (No costs, No renderings) | 35 |
| Owner Review Meeting | 42 |
| 75% Phase 1 Report | 63 |
| Owner Review Meeting | 70 |
| 95% Phase 1 Report (Renderings as Requested) | 91 |
| Owner Review Meeting | 98 |
| Final Phase 1 Report | 112 |

This schedule is preliminary and will be finalized with the owner once the project is approved to move forward. The proposed schedule does not include delays for extended review periods, etc.

ENGINEERING SERVICES FEE

Fixed engineering costs shall be as follows and are good for 60 calendar days from the date of this proposal.

Note: Invoices will be sent each month based on percent of work completed. Payment is due within forty-five (45) days of invoices. All amounts not paid within this time frame are subject to interest payment of 1-1/2 percent each month on the unpaid balance. RMF cannot work without a signed agreement on the fee and an executed contract.

| Project Phase | Fee |
|---|---|
| Field Surveys | \$ 2,597.00 |
| Phase 1 Report – 25% | 6,491.00 |
| Phase 1 Report – 75% | 6,491.00 |
| Phase 1 Report – 95% | 6,491.00 |
| Phase 1 Report Final | 3,895.00 |
| Sub-Total | \$ 25,965.00 |
| Supplemental Services ADC Structural FWA Group Convert As-Builts to Revit Rendering Each — \$1,700.00 Sub-Total — Supplemental Services | 21,600.00 21,895.00 3,960.00 TBD \$ 47,455.00 |
| Expenses Reimbursable | 1,000.00 |
| Sub-Total – Expenses | \$ 1,000.00 |
| Project Total | \$ 74,420.00 |



REIMBURSABLE EXPENSES

Reimbursable expenses are in addition to compensation for Basic, Supplemental and Additional Services and include expenses incurred directly related to the project, including travel, reproduction, meals, and parking. Reimbursable expenses will be billed at one hundred ten (110%/1.1) percent of direct cost. We anticipate that our reimbursable cost for expenses will be approximately \$1,000.00. If reimbursables are exceeded, RMF will notify the client prior to any additional expenses being incurred.

HOURLY RATES

Other requested Supplemental Services can be provided on a time and material basis if requested based on the following schedule of hourly rates:

| Principal | \$220.00 | Design Engineer | \$105.00 | |
|------------------|----------|-------------------|----------|--|
| Associate | \$190.00 | Designer | \$100.00 | |
| Project Manager | \$165.00 | CAD Technician | \$75.00 | |
| Project Engineer | \$125.00 | Technical Support | \$75.00 | |

OPTIONAL SUPPLEMENTAL SERVICES (NOT INCLUDED IN BASIC SERVICES FEE ABOVE)

Scope Increase: All fees are based upon the total project construction cost, proposed gross square feet (GSF) of building area and the percentage of MEP/FP building cost listed. If the scope of the building increases by more than 10% of the proposed building costs, GSF or MEP/FP construction cost listed, then additional fees will be required to account for the increased MEP scope.

LCCA Analysis: Provide life cycle cost analysis for mechanical or architectural systems to determine the energy savings associated with mechanical or architectural alternatives.

Advanced Planning: Perform Advanced planning/Pre-Design services to evaluate MEP strategies for multiple building options or future buildings/additions. This may include economic feasibility.

Site Utility Systems: Design for site underground thermal utility distribution for chilled water, hot water, steam and condensate, as well as medium voltage electrical, security, and telecommunications.

Commissioning: Perform Cx services including design review, preparation of pre-functional and functional equipment test procedures, witnessing of functional testing, and Cx reports.

Design Changes: Design changes made after substantial completion of the final submission may require additional engineering services regardless of whether the change was initiated by the owner, architect, or architect's sub-consultant.

Advanced Energy Modeling: Provide detailed comparative analysis by applying sophisticated building energy use simulation techniques to review various designs and how those changes affect the overall energy usage of the facility. This effort is for modeling beyond that included in the Sustainable Certification Design Services indicated above.

Electrical Engineering Studies: Perform a fault current, coordination, and arc flash hazard analysis of the facility.

In the absence of any other executed contract this letter shall incorporate the general conditions of the AIA B105-2017, Standard Form of Agreement Between Owner and Architect, except as noted otherwise by this proposal.

We appreciate the opportunity to work with you on this project. Please contact me to discuss any questions, concerns, or scoping issues.

Sincerely,

RMF ENGINEERING, INC.

Don Zimmerman III, PE, CEM Associate

APPROVED:

DATE:

August 4, 2021

Via Email Page 1 of 3

Don Zimmerman RMF Engineering 194 Seven Farms Road, Suite G Charleston, South Carolina 29492

Subject: Proposal for Structural Engineering Services

Beaufort County Pool Renovations

Beaufort County, SC ADC Project No. 21274

Dear Don:

ADC Engineering, Inc. appreciates the opportunity to submit the following proposal for your consideration. Our understanding of the scope of services and proposed fee are as follows:

SCOPE:

Our proposed scope of services includes the basic services detailed below for (3) three indoor pool buildings and support spaces located at public schools in Beaufort County, South Carolina (Battery Creek, Beaufort, and Bluffton). The basic services include the following:

Phase 1

Phase 1 of the project will be to perform visual structural assessments of the three referenced existing pools and provide written reports with findings and recommendations to the Client. ADC will perform an Existing Building Condition Assessment (EBCA) for each of the three indoor pool buildings and support spaces referenced above. The assessments will cover a visual assessment of the existing structural systems, a review of the existing program spaces, functions and code compliance as they relate to the current occupancy and usage per the documents received at the July 8, 2021 Owner Review meeting. ADC will generally follow ASTM E 2018-08 guidelines for assessments as they apply. ADC will generate a written report for each building outlining our findings and recommendations. This Phase will include up to 3 report submissions and Owner review meetings.

Phase 2

Phase 2 of the project will be to provide structural narratives, opinions of costs and schematic level designs for options to renovate or modify the existing buildings based on the EBCA reporting from Phase 1.

Scope Item 2a - Existing Building Renovations

The design team will provide an itemized list of suggested upgrades to the buildings and associated costs. These upgrades will be the upgrades required to repair or replace failing equipment or systems or to bring the building up to code compliance. Due to the difference of deterioration at each



building it is understood that each building will have its own list of upgrades and all upgrades may not be suggested for each building. Deliverables will include a narrative and opinion of costs for each building.

Scope Item 2b – Existing Building Modifications

The design team will provide a description and opinion of costs for up to three (3) options for providing removal/retractable enclosures for the pool buildings which may include decoupling the support spaces from the pools. The deliverable will include a narrative, opinion of costs, schematic level plans and renderings to be coordinated with the Design Team.

Phase 3

Phase 3 of the project will be to provide a structural systems description and opinion of costs for the design of two (2) new pools incorporating owner programming and occupancy usage based on the documents received at the July 8, 2021, Owner Review meeting. The deliverable will include a narrative, opinion of costs, schematic level plans and renderings to be coordinated with the Design Team.

LIMITATIONS:

The basic scope of services is limited to that outlined above for Phases 1-3 and specifically does **not** include the following:

- Destructive techniques will not be utilized. All assessments will be limited to visually accessible elements only. No disassembly or removal of components or component elements will be performed.
- Design Development Level Documents and Specifications
- Construction Level Documents and Specifications
- Construction Administration Services
- Value engineering services associated with scope or budget reduction
- Testing Services

FEES:

The proposed fee for this scope of work is outlined below plus expenses. Expenses may include mileage, reproduction, photography, and/or delivery with a ten percent overhead fee affixed. Below is a detailed fee summary of our services and deliverables:

STRUCTURAL ENGINEERING SERVICES

| STRUCTURAL ENGINEERING TOTAL | \$ | 21,600.00 |
|--|-----------|-----------------|
| Phase 3 – New Pool Designs | <u>\$</u> | <u>3,600.00</u> |
| Phase 2b – Existing Building Modifications | \$ | 3,600.00 |
| Phase 2a – Existing Building Renovations | \$ | 5,400.00 |
| Phase 1 – EBCAs and Reporting | \$ | 9,000.00 |

Each individual milestone stage fee will be billed immediately upon completion of the stage. ADC will not proceed to the next phase without Owner, review, comments, and direction to do so.

Services other than those outlined in the Basic Services Scope will be provided as requested as an additional service. Unless agreed upon otherwise, additional services will be billed as hourly services in accordance with ADC Engineering's hourly rate schedule plus 1.1 times actual expenses.

In the absence of any other executed contract this letter shall incorporate the general conditions of the architect – engineer AIA standard contract C401, except as noted otherwise by this proposal.

If acceptable, please sign where indicated below, keep one copy and return one copy to our office. Your signature will serve as our *Notice to Proceed*. For all purchase orders, billing/invoices and payments, please make sure to always reference the ADC project number.

Thank you for considering ADC Engineering, Inc. If you have any questions or comments, please do not hesitate to call.

Sincerely,

ADC Engineering, Inc.

Jeremy Williams, P.E.

ACCEPTED BY:

RMF Engineering

Date

This Proposal may be accepted by executing where indicated herein and returning the executed Proposal within ninety (90) days of the date of this Proposal. After ninety (90) days, this Proposal and its contents become invalid and will be voided.



August 9, 2021

Mr. Don Zimmerman III, PE, CEM Project Manager RMF Engineering, Inc. 194 Seven Farms Dr., Suite G Charleston, SC 29492

RE: Proposal to Provide Architectural Design Support for the Beaufort County Indoor Pools Study – RFQ NO. 042721E

Dear Don,

Based on our initial discussions with Beaufort County representatives, the FWA Group is delighted to forward this proposal to you regarding services to review and evaluate Beaufort County's pool needs based on the referenced project.

General Scope of Work

As discussed, FWA in coordination with RMF Engineering and ADC Engineering (your selected structural/civil engineering consultants) will review the existing conditions of the three noted pool facilities in consideration of the County's request to "evaluate the options to either repair, modify or replace the three existing indoor pool facilities".

Work to be Done

- FWA will use the County provided as-built drawings to create new base Revit models for each of the three pool facility buildings. This base model will only include architectural and exposed structural elements. It will not include mechanical, electrical, or plumbing elements.
- As outlined and defined in RMF's letter to Beaufort County, FWA will provide architectural support to address our portion of Scope Item #1 as typically considered per ASTM E 2018-08 guidelines. With that information FWA will them address Scope Items #2a, #2b and #3.
 - a. For Scope Item #1 FWA will visit each of the three facilities as required with the Revit model created from the existing drawings, site survey documents and other available material provided by the County to RMF to review the existing conditions of the facilities as they relate to the program spaces, function, and code compliance.
 - FWA will review the general architectural condition of the building interior to include ADA/ANSI accessibility.
 - ii. Review the condition of the building exterior roof, walls, doors, and windows.
 - iii. FWA will document our findings with comments to the existing drawings and photographs and coordinate the findings with RMF.
 - b. For Scope Item #2a FWA will review our findings per Scope Item #1 and develop suggestions to correct, repair or replace any noted deficient elements or components.
 - i. FWA will document our suggestions and coordinate them with RMF.
 - Based on the finalized list of suggestions FWA will assist RMF with assigning associated costs to address the suggestions.
 - c. For Scope Item #2b FWA will review our findings per Scope Item #1 and develop up to three (3) descriptive options to modify the pool structure.
 - i. The options will be developed in coordination with RMF.
 - ii. Based on the accepted described modification options FWA will assist RMF with the development of opinions of cost for each option.

Mr. Don Zimmerman III, PE, CEM - Project Manager RMF Engineering, Inc. August 9, 2021 Page 2 of 3

- d. For Scope Item #3 FWA will work with RMF and the County Representative(s) to develop an initial building program leading to the creation of basic concepts for two (2) new pool facilities.
 - i. Based on the program concepts FWA will assist RMF with the development of opinions of cost for the two (2) new pool facilities.
- 3. FWA will attend a total of three (3) meetings to review the progress of the work with RMF and the County Representative(s).
- 4. FWA will attend one (1) meeting to review the program needs for the two (2) new pool facilities with RMF and the County Representative(s).
- 5. FWA will create a limited number of building renderings based on a not to exceed sum per rendering requested by RMF / County Representative.

Work not Included

The work not included in this proposal, but which could be added if so desired as an Additional Service under our review as the Project progresses, includes:

- 1. The development of schematic documents, design development documents, construction documents, bidding or construction contract administration phase services.
- 2. Submission to or appearance before any associated design review boards or related committees.
- 3. All efforts associated with cultural or archaeological studies, remediation or design.
- 4. All efforts associated with environmental studies, remediation or design.

Information to be Furnished by RMF Engineering / Beaufort County

To complete the review and documentation efforts for this project it would be helpful if the following can be provided:

- 1. Current as-built building and site survey information of each pool facility total property area and utility services.
- 2. Provide access to County staff as needed to discuss desired upgrades/improvements.

Deliverables

FWA will furnish the Client with the scope items as noted under "Work to Be Done" above.

Compensation

Based on the scope noted we propose to provide the work as described under "Work to be Done" as follows:

- Fee to convert the County provided as-built existing floor plan drawings for the three pool facilities to Revit files \$3,960.00.
- Fee to provide the four basic scope items noted in "Work to be Done" above plus associated reimbursable expenses for an amount not to exceed \$21,895.00.
- Fee to create a scope item building rendering will be based on a not to exceed sum per each rendering provided of \$1,700.00.

If any services not noted in "Work To Be Done" above are required they will be addressed as additional services. Additional services will be agreed to in writing prior to the performance of services based on the following hourly rates.

FWA hourly rates will be invoiced as below:

Principal \$180.00/Hour
 Project Manager \$135.00/Hour
 Project Architect \$120.00/Hour

Hilton Head Island Office

10 Palmetto Business Park Road PO Box 5910 (29938) Hilton Head Island, SC 29928 (843) 785-2199 (843) 785-6801 fax Mr. Don Zimmerman III, PE, CEM - Project Manager RMF Engineering, Inc. August 9, 2021 Page 3 of 3

Project Designer \$100.00/HourClerical \$65.00/Hour

Invoices will be monthly, payable within 30 days. Interest will be applied as is allowed at 12 percent per annum to past due account 45 days out. Failure to make payment within 60 days will result in suspension of services under this agreement until full payment is received. Additional services required beyond the scope defined will also be invoiced at the hourly rates above upon your approval or otherwise agreed.

Fees such as filing, application, license, impact, connection, etc., if required, are the responsibility of the Client/Owner.

Schedule

The FWA Group is positioned to start the work immediately. We have the manpower and resources to complete the job in a timely and efficient manner to meet your schedule.

Please review this proposal and indicate your acceptance by signing in the space indicated below and returning one copy for our records. If so desired, we can convert and attach this proposal to a standard AIA document.

Please call me if you have any questions or concerns.

| Barry H. Taylor, AlA, LEED®AP | | Authorization by RMF Engineering Inc. to provide the above services: |
|-------------------------------|-------|--|
| Principal BHT/jc | | |
| | Date: | |
| | | |

cc: File

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ITEM TITLE:

Discussion on financing for the Hilton Head Island Airport Expansion

MEETING NAME AND DATE:

Public Facilities Meeting 09/20/2021

PRESENTER INFORMATION:

Hayes Williams, Interim Chief Financial Officer

15 Minutes

ITEM BACKGROUND:

There is funding needed for the Hilton Head Island Airport Expansion.

PROJECT / ITEM NARRATIVE:

The total expansion project is expected to cost approximately \$52M. The project has established funding sources of \$22M leaving a need of approximately \$30M. The proposal would be to fund \$20M to \$30M with a revenue bond from the Local Hospitality Tax fund.

FISCAL IMPACT:

The Hilton Head Island Airport brings approximately \$405M in revenues to Beaufort SC. Funding this expansion with Local Hospitality Tax Funds would allow for progress of the expansion. It would be a millage neutral source of funding.

STAFF RECOMMENDATIONS TO COUNCIL:

Staff recommends that Council allow them to proceed to finance the Hilton Head Island Airport in an amount not to exceed \$30m with Local Hospitality Tax Funds.

OPTIONS FOR COUNCIL MOTION:

Motion to approve staff to proceed to Council with the revenue bond.





Established Funding

The Hilton Head Island Terminal Expansion project includes 4 gates, 3 jet bridges and 1 walkout. The estimated cost of the project is \$52 *million*. Below are established funding sources:

\$20 million FAA Grants

\$1 million SC Aeronautics Commission

\$1 million Airport Funded

With *\$22 million* established, how will Beaufort County fund the remaining cost?

Funding Solution

To keep this project moving in a timely manner, Administration is pursuing local funding options.

Potential Sources



Potential Local Funding Options

Revenue Bond issuance by pledging local accommodations and hospitality taxes. In order to obtain the best interest rates and the highest credit rating, both accommodations and hospitality must be pledged. The debt service will come from *hospitality tax only.*

Annual Revenue Collected

| | FY 2018 | FY 2019 | FY 2020 | FY 2021 |
|-------------------|---------|---------|---------|---------|
| Accommodation Tax | \$1.25M | \$1.24M | \$1.23M | \$1.7M |
| Hospitality Tax | \$2.30M | \$2.34M | \$2.30M | \$2.53M |
| Total Revenue | \$3.55M | \$3.58M | \$3.53M | \$4.23M |

Scenarios for Revenue Bond

| | SCENARIO 1 | SCENARIO 2 | SCENARIO 3 |
|---|------------|------------|------------|
| Bond Amount | \$20M | \$30M | \$34M |
| Average Debt Service | \$1.35M | \$2.0M | \$2.3M |
| Average Local Hospitality Tax over the past 4 years | \$2.36M | \$2.36M | \$2.36M |
| Amount left in Local Hospitality Tax to award | \$1.01M | \$360K | \$60K |

Estimated yearly debt services of \$2.3M in order to issue \$34M in Revenue Bonds

PROS

The revenues from hospitality tax meet one of the exclusive purposes designated by ordinance

Zero millage increase for the taxpayers of Beaufort County

General Obligation Bond capacity will be maintained for other County projects

Airport acts as a tourist conduit of Beaufort County and will assist in increases of tax revenue for future expenditures

CONS

\$46M payback over 20 years unless paid in less term

Local agencies will only be able to apply for local accommodations tax and the remaining unspent hospitality tax



Tourist Destinations

- Tanger Outlets
- Victoria Bluff Heritage Preserve
- Heyward House Museum
- Old Town Bluffton
- The Church of the Cross
- May River Theatre
- New River Linear Trail
- Pinckney Island National Wildlife Refuge
- Garvey House
- Hilton Head National Golf Club



Recommendation

To pursue revenue bond funding of \$20M, not to exceed, \$30M

ITEM TITLE:

Wimbee Creek Fishing Pier - Condition Assessment

MEETING NAME AND DATE:

Public Facilities Committee - September 20, 2021

PRESENTER INFORMATION:

Andrea Atherton, Director - Transportation Engineering

(5 minutes)

ITEM BACKGROUND:

McSweeney Engineering performed routine inspections of the pier deck and structure in 2018 and 2019. As requested by the County in 2020 they provided an analysis of six (6) repair and demolition alternatives along with probable costs.

PROJECT / ITEM NARRATIVE:

Alternatives A through F and the cost for a new timber pier are presented for consideration. Alternates range from "do nothing" to various rehabilitation scenarios and a complete demolition alternative with an option for constructing a new timber pier.

FISCAL IMPACT:

Range of construction costs \$650,000 to \$1,800,000. Engineering/permitting 10% +/- construction costs.

STAFF RECOMMENDATIONS TO COUNCIL:

Committee to select preferred alternative and make recommendation for staff to proceed with A/H tax grant application to fund Engineering/Permitting costs.

OPTIONS FOR COUNCIL MOTION:

Motion to either accept/deny proceeding with A/H tax grant application for preferred alternative.



Wimbee Creek Fishing Pier

Public Facilities Committee Meeting

September 20, 2021

Background

- Located at the end of Wimbee Landing Road.
- Approximately 314 ft. long and 11 ft. wide.
- Former railroad trestle.
- Routine inspection conducted in 2018 & 2019 by McSweeney.
- Severe deterioration and fire damage to key load bearing elements
 - ▶ For safety, last 25' has been fenced to restrict public access.
- McSweeney Engineers contracted to evaluate repair and demolition alternatives and opinion of probable costs for each scenario.

Inspection November 2019

- Overall Rating Fair to Serious
 - Deck
 - ► *Fair* cracking in concrete surfaces
 - Superstructure
 - ► *Poor* displacement of bearing pads
 - Substructure
 - ▶ Poor to Serious fire damage and significant deterioration of timber structural elements.
- Structure is near the end of its service life due to advanced deterioration of key load bearing elements

Alternatives - February 2020 Report Prepared by: McSweeney Engineers

A - Do Nothing. Significant safety Liability

▶ B - Full rehabilitation. \$1.5M to 1.8M. SL 25 years

C - Partial rehabilitation.
\$1.1M to 1.3M SL 25 years

▶ D - Partial rehab/Alum deck \$1.1M to 1.3M SL 25 years

► E - Partial rehab/timber deck \$1.0M to 1.2M SL 25 years

F- Complete demo/removal \$650K to 800K

New Timber Pier \$350k to \$400K SL 50 years



Wimbee Creek Fishing Pier

Alternatives and Cost Analysis
February 2020





McSweeney Engineers

495C Meeting St Charleston, SC 29403

(843) 974-5621

www.mcsweeneyengineers.com

Beaufort County, South Carolina Wimbee Creek Fishing Pier Alternatives and Cost Analysis



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1.0 INTRODUCTION

1.1 Project Site

The Wimbee Creek Fishing Pier is located at the end of Wimbee Landing Road near Dale in Beaufort County, South Carolina. The pier measures approximately 314 ft long by 11 ft wide. The structure is a former railroad trestle of unknown age that has been repurposed for use as a public fishing pier. As such, a new concrete deck and handrail assemblies were placed on the original structure. The figure below provides an aerial view of the Wimbee Creek Fishing Pier.



Figure 1. Aerial View of the Wimbee Creek Fishing Pier

McSweeney Engineers conducted routine comprehensive inspection of the structure in 2018 and 2019. The results of that inspection indicated severe deterioration and fire damage to key load bearing elements.

1.2 Project Scope

Following submittal of the routine structural inspection reports, McSweeney Engineers, LLC was contacted by Beaufort County Engineering in order to evaluate possible demolition and repair alternatives for the site and provide opinion of probable costs associated with each scenario . The scope of this study includes:

- Review of the previous inspection reports
- Evaluate potential repair scenarios
- · Evaluate full and partial demolition scenarios



Provide an opinion of probable cost

The purpose of this study is to provide guidance to Beaufort County in determining the most suitable solution for the structure.

2.0 Structure Conditions and Evaluation

2.1 2019 Structural Conditions and Evaluation

The last routine inspection of the Wimbee Creek Fishing Pier was conducted on November, 7 2019. Readers are encouraged to read and review the previous inspection report in conjunction with this study; however, the most significant findings are summarized below.

At the time of the previous inspection, the structural condition of the Wimbee Creek Fishing Pier was rated from *Fair* to *Serious*. A brief recap of these ratings is presented below:

Deck

Rated as Fair due to cracks located in concrete surfaces

Superstructure

Rated as Poor due to the displacement of the bearing pads

Substructure

 Rated as Poor to Serious due to fire damage and significant deterioration of timber structural elements

2.2 2019 Recommendations

The 2019 inspection report noted that the condition of the structure had not changed appreciably since the 2018 inspection; however, the report also indicated that the structure was near the end of its service life due to advanced deterioration of key load bearing elements. With this understanding, the 2019 report provided a generalized list of potential repair strategies and also noted that the cost of any repairs should be weighed against the cost of wholesale replacement of the structure.

3.0 Alternatives Analysis

The alternatives discussed in the following sections do not cover <u>every</u> potential option for the structure. The alternatives listed herein present generalized approaches and costs to repair, replacement, and demolition of the structure. Budgetary cost information was obtained



from our in-house expertise in marine construction and through discussion with a local marine contractor. The intent is for this document to be used as a decision making tool for planning and budgeting purposes.

3.1 Alternative A – Do Nothing

The "Do Nothing" was considered during this study. In the short term this option would cost the County nothing; however, the current condition of the fishing pier is a significant safety liability. Therefore, this option is not warranted.

3.2 Alternative B - Full Rehabilitation

This alternative considers a full rehabilitation of the existing fishing pier and includes the following items:

- Installing 14 structural pile jackets at Bent 1
- Repair bearing pad at the Abutment (requires superstructure jacking or removal)
- Installing 84, 20 ft long protective wraps at Bents 2 through 7
- Rebuilding the pile caps at Bents 6 and 7 (requires superstructure jacking or removal)
- Install 3x6 marine treated cross bracing at each Bents 1 through 7
- Install 12, 25 ft long non-structural pile jackets at Bent 8.
- Install new galvanized hardware
- Install miscellaneous repairs:
 - o vandal-proof luminaries
 - fence repairs
 - shoreline erosion repairs

In order to accomplish this scenario it likely that jacking, shoring, or temporary removal of the structure have to occur in order to in order to gain access to the pile caps. Although exact methods and costs are difficult to pinpoint they are likely to be complex and expensive. In addition, the work necessary to rehabilitate the substructure would involve the use of commercial divers. These two factors require the use of specialized personnel and equipment which will significantly increase project costs. It is likely that this alternative will cost between \$1.5M and \$1.8M.

The main disadvantage of this project, other than cost, is we estimate that these repairs will only add an additional 25 years of service life to the structure.



3.3 Alternative C – Save 5/Demo 3

Alternative C considers salvaging and rehabilitating Bents 1 through 5 and complete removal of Bents 6 through 8 (fire damaged portion). This alternative would include the following:

- Installing 14 structural pile jackets at Bent 1
- Repair bearing pad at the Abutment (requires superstructure jacking or removal)
- Installing 56, 20 ft long protective wraps at Bents 2 through 5
- Install 3x6 marine treated cross bracing at each Bents 1 through 5
- Install new galvanized hardware
- Install miscellaneous repairs (previously indicated)
- Demolition of Bents (and Spans) 6 through 8

Similar to Alternative B, Alternative C would also require jacking or shoring of the superstructure and divers. The shoring and/or jacking efforts necessary to repair the Abutment can likely be done by heavy equipment staged from land which will reduce cost. We estimate that the cost for this alternative will be between \$1.1M and \$1.3M. Similar to Alternative B, the lifespan if this option is limited by the current age of the substructure. At most, an additional 25 years of service life can be expected with this option.

3.4 Alternative D – Rehab Substructure Install New Aluminum Superstructure

This alternatives considers removing the existing heavy steel superstructure and installing a lighter aluminum framed superstructure. In addition, Bents 6 through 8 would be removed. This alternative would include the following:

- Installing 14 structural pile jackets at Bent 1
- Modify Abutment to accept new superstructure
- Installing 56, 20 ft long protective wraps at Bents 2 through 5
- Install 3x6 marine treated cross bracing at each Bents 1 through 5
- Install new galvanized hardware
- Demolition of Bents (and Spans) 6 through 8
- Install new 10 ft wide aluminum superstructure

This alternative would remove the existing superstructure in its entirety and remove Bents 6 through 8. A new aluminum framed superstructure would be lowered into the rehabilitated pile caps. This option would remove the requirement for jacking or temporarily supporting the superstructure. Divers would be required to complete the underwater repairs.



One disadvantage of this option is that the existing span lengths are approximately 45 ft long. Most commercially available aluminum fixed piers are comprised of aluminum channel sections. As such, maximum span lengths are generally a maximum of 20 feet. Given the current span arrangement of approximately 45 ft it is likely that the aluminum superstructure would likely have to be in an truss or arch configuration. This will significantly drive up cost. Similar to the previous two alternatives, this repair will be limited by the age of the existing substructure. We expect to cost between \$1.1M and \$1.3M.

3.5 Alternative E – Rehab Substructure Install New Timber Superstructure

This alternatives is similar to Alternative D in that it considers removing the existing heavy steel superstructure; however the new superstructure would be timber construction. Bents 6 and 7 would be removed, Bent 8 would remain in the water way. This alternative would include the following:

- Installing 14 structural pile jackets at Bent 1
- Modify Abutment to accept new superstructure
- Installing 56, 20 ft long protective wraps at Bents 2 through 5
- Install 3x6 marine treated cross bracing at each Bents 1 through 5
- Install new galvanized hardware
- Demolition of Bents 6 and 7 (Bent 8 to remain)
- Install new 10 ft wide timber superstructure
- Install new bents to support new timber superstructure.

This alternative would remove the existing superstructure in its entirety and remove Bents 6 and 7. Bent 8 would remain in the water. The abutment would be modified and a new timber superstructure would be placed on the existing pile bents.

One disadvantage of this option is that the existing span lengths are approximately 45 ft long. As such, additional bents would need to be installed in order to support the new timber spans. We expect to cost between \$1M and \$1.2M.

3.6 Alternative F – Demolish Existing

Alternative E consists of complete removal and disposal of the existing fishing pier. At an estimated cost of \$650K to \$800K this is likely to be the least expensive alternative. The primary drawback associated with this option is the lack of a recreational fishing pier at Wimbee Creek Landing.



3.7 New Fishing Pier

As a point of reference for this study, we estimate that a 314 ft long by 11 ft wide timber fishing pier with timber piles and marine grade lumber will cost approximately \$350,000 with a service life of approximately 50 years with the proper maintenance.

4.0 CONCLUSION AND RECOMMENDATIONS

This study presented an engineering opinion regarding potential rehabilitation and demolition options at the Wimbee Creek Fishing Pier. Although there are many potential options, the intent of this document was to generalize several thought out approaches and present them to Beaufort County personnel for consideration in the budgeting and long-range planning processes.

Based on our analysis, we recommend that the Beaufort County consider Alternate F - Complete Demolition. We believe that this alternative will remove a significant liability from Beaufort County infrastructure while at the same time creating a "blank slate" from which to work. As shown in the last paragraph of the preceding section, the cost of a comparable fishing pier constructed of timber will cost approximately \$350,000 and last approximately 50 years. With this understanding, demolishing the existing structure and installing a new one will likely cost Beaufortonians the same or less than the other options listed for consideration.

At the end of this report we have provided an Alternatives Analysis Matrix. This matrix addresses the pros and cons of each alternative and their approximate costs. It is our hope that this report and analysis aids Beaufort County in determining a suitable solution.

McSweeney Engineers greatly appreciates the opportunity to provide this report and looks forward to assisting further in this project. If you need further clarification or have any questions please do not hesitate to contact me.

Respectfully submitted, McSweeney Engineers, LLC

William Barna, P.E. Project Manager





Beaufort County, South Carolina Wimbee Creek Fishing Pier Alternatives and Cost Analysis

5.0 Alternatives Analysis Matrix

| Alternative | Pros | Cons | Approximate Cost | Anticipated Service Life |
|--|--|--|---------------------------|--------------------------------|
| A Do Nothing | - No Additional Cost | - Significant Liability (Do Not Recommend) | \$0 | 0 |
| B Full Rehab | - Reestablish existing structure | Limited by Age of Existing Substructure Cost | \$1.5M to \$1.8M | 25 Yrs |
| C Save 5/Demo 3 | - Lower Cost of Alternative B | Limited by Age of Existing Substructure Cost | \$1.1M to \$1.3M | 25 Yrs |
| D Rehab Substructure New Aluminum Superstructure | - Partial Use of Existing Structure | Limited by Age of Existing Substructure Cost | \$1.1M to \$1.3M | 25 Yrs |
| E Rehab Substructure New Timber Superstructure | Partial Use of Existing Structure Lowest Cost of Repair Options | Limited by Age of Existing Substructure New Bents Must Be Driven Cost | \$1M to \$1.2M | 25 Yrs |
| F Complete Demo | Least CostReduced Liability | - No Fishing Pier Structure | \$650,000 to \$800,000 | 0 |

^{*}Approximate cost of new timber fishing pier \$350,000 - Service Life 50 years



| ITEM TITLE: | | | |
|-------------|--|--|--|

SC 170 Access Management Plan North

MEETING NAME AND DATE:

Public Facilities Committee - September 20, 2021

PRESENTER INFORMATION:

Juliana Smith, Long Range Planner – Zoning and Planning (5 mins)

ITEM BACKGROUND:

Per Resolution 2002-1, Beaufort County adopted the Robert Smalls Parkway Joint Corridor Plan, a planning effort conducted between the City of Beaufort, Town of Port Royal, and Beaufort County to address access management on SC 170 from Parris Island Gateway to the Broad River Bridge. The plan is nearly 20 years old.

PROJECT / ITEM NARRATIVE:

Beaufort County and the City of Beaufort are conducting an update from Parris Island Gateway to Castle Rock Road. Engineering services from Andrews Engineering have been procured under small A&E.

FISCAL IMPACT:

\$49,900 has been funded from TAG fees for the access management plan update.

STAFF RECOMMENDATIONS TO COUNCIL:

For information only

OPTIONS FOR COUNCIL MOTION:

For information only

ITEM TITLE:

AN ORDINANCE AUTHORIZING THE COUNTY ADMINISTRATOR TO EXECUTE A MODIFICATION OF DRAINAGE EASEMENT ASSOCIATED WITH PARCEL R112-031-000-0628-0000

MEETING NAME AND DATE:

Public Facilities Committee Meeting 9-20-21

PRESENTER INFORMATION:

Jared Fralix, P.E., Assistant County Administrator, Engineering

Neil J. Desai, P.E., Public Works Director

(5 Minutes)

ITEM BACKGROUND:

Beaufort County was granted a 40' drainage easement by William D. Trask and Harold E. Trask, Jr, recorded in Deed Book 567 on Pages 1768-1769 on 12- 28-1990. The existing drainage ditch does not lie in the area depicted on the Original Easement Plat, and a portion of the Original Drainage Easement associated with parcel R112-031-000-0628-0000 was abandoned. Ditch is located off Hwy 170 near Ashton Overlook Dr.

PROJECT / ITEM NARRATIVE:

A Modification to the original easement will correct the drainage easement location to the existing ditch location.

FISCAL IMPACT:

N/A

STAFF RECOMMENDATIONS TO COUNCIL:

Staff recommends approving County Administrator to execute Modification of Drainage Easement associated with Parcel R112-031-000-0628-0000

OPTIONS FOR COUNCIL MOTION:

Motion to approve/Deny County Administrator to execute Modification of Drainage Easement associated with Parcel R112-031-000-0628-0000.

(Next Step) Move action to County Council vote on 9-27-2021

ORDINANCE NO. 2021/_____

AN ORDINANCE AUTHORIZING THE COUNTY ADMINISTRATOR TO EXECUTE A MODIFICATION OF DRAINAGE EASEMENT ASSOCIATED WITH PARCEL R112-031-000-0628-0000

WHEREAS, Beaufort County was granted a 40' drainage easement by William D. Trask and Harold E. Trask, Jr, recorded in Deed Book 567 on Pages 1768-1769 on December 28, 1990 (the "Original Drainage Easement"); and

WHEREAS, the Original Drainage Easement referenced a Sketch Map titled "Drainage Canal Easement Across the Lands Between S.C. Hwy. 20 and S.C. Hwy. 802", which such Sketch Map was later recorded in the Beaufort County Register of Deeds' Office in Plat Book 40 at Page 52 (said Sketch Map, the "Original Easement Plat"); and

WHEREAS, the existing drainage ditch does not lie in the area depicted on the Original Easement Plat, and a portion of the Original Drainage Easement associated with parcel R112-031-000-0628-0000 located in the Town of Port Royal, Beaufort County, South Carolina was abandoned; and

WHEREAS, a modification of the Original Drainage Easement is necessary to amend the terms of the Original Drainage Easement to correctly depict and describe the location of the Revised Drainage Easement as defined in the attached Modification of Drainage Easement (ORB 567 Page 1768) (PB 40 Page 52); and

WHEREAS, it is in the best interest of Beaufort County to authorize the County Administrator to execute the attached Modification of Drainage Easement (ORB 567 Page 1768) (PB 40 Page 52) to correctly depict the current location of the drainage easement; and

NOW, THEREFORE, BE IT RESOLVED that Beaufort County Council hereby authorizes the County Administrator to execute documents associated with the revised drainage easement located on parcel R112-031-000-0628-0000 as described in the attached Modification of Drainage Easement (ORB 567 Page 1768) (PB 40 Page 52).

| ADOPTED this day of | , 2021. |
|----------------------------------|-----------------------------------|
| | COUNTY COUNCIL OF BEAUFORT COUNTY |
| | By: Joseph Passiment, Chairman |
| ATTEST: | |
| Sarah W. Brock, Clerk to Council | |

| STATE OF SOUTH CAROLINA |) | MODIFICATION OF |
|-------------------------|---|---------------------|
| |) | DRAINAGE EASEMENT |
| |) | (ORB 567 PAGE 1768) |
| COUNTY OF BEAUFORT |) | (PB 40 PAGE 52) |

THIS MODIFICATION OF DRAINAGE EASEMENT ("Modification") is made effective August 1, 2021, by and between ASHTON POINTE PROPERTY LIMITED PARTNERSHIP, a Virginia limited partnership ("Owner"), and BEAUFORT COUNTY, a body politic and political subdivision of the State of South Carolina ("County").

WHEREAS, the Owner owns real property located in the Town of Port Royal, Beaufort County, South Carolina more particularly described on <u>Exhibit A</u> attached hereto and incorporated herein ("Burdened Property"); and

WHEREAS, the Owner's predecessor in interest granted to the County a drainage easement over certain portions of the Burdened Property by that certain Drainage Easement dated September 7, 1990 and recorded in the Office of the Beaufort County Register of Deeds in Book 567 at Page 1768 (the "Original Drainage Easement"); and

WHEREAS, the Original Drainage Easement referenced a Sketch Map titled "Drainage Canal Easement Across the Lands Between S.C. Hwy. 20 and S.C. Hwy. 802", which such Sketch Map was later recorded in the Beaufort County Register of Deeds' Office in Plat Book 40 at Page 52 (said Sketch Map, the "Original Easement Plat") and

WHEREAS, because (i) the existing drainage ditch on the Burdened Property, as constructed, does not lie in the area depicted on the Original Easement Plat, and (ii) a portion of the Original Drainage Easement was abandoned by the County, the parties hereof have agreed to this Modification to amend the terms of the Original Drainage Easement to correctly depict and describe the location of the Revised Drainage Easement, as defined and as set forth below.

NOW, THEREFORE, for Ten Dollars and no other consideration, the legal sufficiency of which the parties expressly acknowledge, the parties agree as follows:

- 1. Grant of Drainage Easement. Owner hereby grants, conveys and releases, and by these presents does grant, convey, and release unto the County, its successors and assigns, a drainage easement in, over, and through those areas within the Burdened Property labeled as "Proposed 40' Ditch Esmt. ("Revised Drainage Easement") on that certain plat entitled "Subdivision Plat Also Showing New Wetland Buffers & Ditch Easement" prepared by Beaufort Surveying, Inc. dated February 14, 2006, last revised January 30, 2008, and attached hereto as Exhibit B ("Revised Drainage Easement Plat"). The County shall not materially disrupt nor unreasonably interfere with Owner, or its tenants, invitees, agents, lessees or principals' use of the Burdened Property while exercising its rights hereunder, nor shall Owner materially or unreasonably interfere or impede the County's easement rights hereunder.
- 2. Modification of Original Easement and Original Easement Plat. The Original Drainage Easement is hereby modified by removing all references to the Original Easement Plat and replacing the same with the Revised Drainage Easement Plat. The Original Easement Plat is replaced by the Revised Drainage Easement Plat. The depiction and location of the Original Drainage Easement on the Burdened Property, as shown on the Original Easement Plat, is hereby replaced with the Revised Drainage Easement as depicted on the Revised Drainage Easement Plat. To the extent the Original Drainage Easement granted to the County easement rights over the Burdened Property not located

within Revised Drainage Easement as shown on the Revised Drainage Easement Plat, such easement rights are hereby terminated and abandoned, including without limitation, any easement rights located within the hatched area on the Revised Drainage Easement Plat labeled as "To Be Filled 0.639 acres".

- **3.** <u>Modification of Original Easement Terms</u>. The provisions and terms set forth in the Original Drainage Easement are hereby modified as follows:
 - a. All County inspection and maintenance work to the Revised Drainage Easement shall be conducted between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday. Notwithstanding the preceding, the County may access the Revised Drainage Easement at any time and any day in the event of emergency to conduct emergency repairs or maintenance. The County shall maintain the Revised Drainage Easement to accommodate the flow of drainage and prevent the growth of weeds and underbrush within the Revised Drainage Easement.
 - b. The County's access to the Revised Drainage Easement is limited to the roadways within the Burdened Property.
 - c. Section 4 "Special Provisions" of the Original Drainage Easement is no longer applicable and is hereby deleted in its entirety.
 - d. The Owner shall have the right to maintain, repair and reconstruct the existing Ashton Overlook Drive that crosses the Revised Drainage Easement.
 - e. The Owner shall have the right to use the Burdened Properly, so long as said use does not impede drainage through the Revised Drainage Easement or damage or compromise any drainage infrastructure installed by the County. Such rights shall include the right to run conduits for electrical, cable, internet, telephone and other utility wiring across the Revised Drainage Easement.
- **4.** <u>Severability</u>. In the event any provision hereof is held to be invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of any other provision hereof and this Modification shall be construed in all respects as if such invalid or unenforceable provision were omitted.
- **5.** Remedies. In the event of any breach of the terms and conditions of this Modification, the non-breaching party shall be entitled to bring an action in law or in equity against the breaching party. All remedies shall be available to the non-breaching party including, but not limited to, specific performance and actual damages.
- **6.** Attorney's Fees and Costs. In the event it is necessary for any party to this Modification to initiate any legal proceeding whatsoever for the purpose of enforcing its rights under this Modification, the prevailing party is entitled to recover any and all expenses, including but not limited to court costs and reasonable attorney's fees incurred in connection therewith, from the non-prevailing party.
- 7. <u>Governing Law</u>. This Agreement shall be construed, governed and interpreted in accordance with the laws of State of South Carolina.
- **8.** <u>Successors and Assigns</u>. This Modification shall run with the Burdened Property and shall be binding upon the Owner and the County, and their respective successors and assigns.
- 9. <u>Miscellaneous</u>. This Modification shall be recorded in the Beaufort County Register of Deeds Office.

10. <u>Amendments to be Written</u>. There are no oral understandings, terms or conditions, or no party hereto has relied any representations, express or implied, not contained in this Modification. This Modification may not be amended or further modified except by written modification executed by the parties hereto.

WITNESS our hands and seals effective as of the date first written above

| WITNESSES: | Ashton Pointe Property Limited Partnership, a Virginia limited partnership |
|-------------------------------------|---|
| | By: HHHunt Corporation Its: General Partner |
| | By: Brian C. Myers Its: Vice President |
| | |
| STATE OF NORTH CAROLINA |) NOTARY ACKNOWLEDGMENT |
| COUNTY OF WAKE I, the undersigned |) |
| | otary Public for the State of North Carolina, do hereby certify |
| that Brian C. Myers, Vice President | of HHHunt Corporation, the general partner of Ashton Pointe conally appeared before me this day and acknowledged the due |
| Witness my hand and official 2021. | al seal this the day of, |
| | (SEAL) |
| | Notary Public |
| | My commission expires: |

| WITNESSES: | Beaufort County, a body politic and a political subdivision of the State of South Carolina | | |
|---|--|-------------|--|
| | By: Eric L. Greenway Its: County Administrator | | |
| STATE OF SOUTH CAROLINA COUNTY OF BEAUFORT |)) NOTARY ACKNOWL) | LEDGMENT | |
| | otary Public for the State of North Ca | | |
| that | | of Beaufort | |
| County, personally appeared beforegoing instrument. | re me this day and acknowledged th | | |
| Witness my hand and official 2021. | al seal this the | day of, | |
| | | (SEAL) | |
| | Notary Public | | |
| | My commission expires: | | |

EXHIBIT A

Legal Description of Burdened Property

ALL that certain piece, parcel or tract of land, situate, lying and being in the Town of Port Royal, Beaufort County, South Carolina, measuring and containing 16.590 acres, more or less, as more particularly shown and designated as "PARCEL 'B', 16.590 ACRES" on that certain plat entitled, "SUBDIVISION PLAT ALSO SHOWING NEW WETLAND BUFFERS & DITCH EASEMENT PREPARED FOR ASHTON POINTE PROPERTY LIMITED PARTNERSHIP MU1 PORTION OF TRASK PROPERTY (P.O. 112-31-595) BEAUFORT COUNTY, SOUTH CAROLINA 31.619

ACRES TOTAL" prepared by David C. Youmans dated February 14, 2006 and recorded in the ROD Office for Beaufort County in Plat Cabinet 111 at page 189 (the "Plat"). Said tract of land having such size, shape, buttings and boundings as will by reference to said plat more fully appear.

BEING THE SAME property conveyed by Grantors here in to Ashton Pointe Property Limited Partnership, a Virginia limited partnership by deed dated February 22, 2006 and recorded February 24, 2006 in Deed Book 2325, Page 2557-2566 in the ROD Office for Beaufort County as previously conveyed to the Grantors herein by deed recorded on February 24, 2005, in the ROD Office for Beaufort County in Book 1418, at page 2203 in the ROD Office for Beaufort County.

TMS# R112-031-00-0628-0000-00

