INDIANA DEPARTMENT OF TRANSPORTATION

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Eric Holcomb, Governor
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November 26, 2018

CONSTRUCTION MEMORANDUM
18-06

TO: District Deputy Commissioners
District Construction Directors
District Technical Services Directors
District Testing Engineers
District Area Engineers
District Project Management Director
Project Management Director
District LPA Coordinators
Project Engineers/Supervisors
Field Engineers

FROM: John Leckie, Director
Division of Construction Management and District Support

SUBJECT: Determining Construction Equipment Costs

This memorandum is intended to assist field personnel analyze construction equipment costs submitted by contractors. These equipment costs are crucial when reviewing extra work performed by the contractor. The costs are described in Standard Specification 109.05(b)4. This memorandum will focus on interpreting and calculating information, including idle equipment rates, based on EquipmentWatch Rental Rate Blue Book reports.

EquipmentWatch Rental Rate Blue Book Report

A typical EquipmentWatch Rental Rate Blue Book report for a Link-Belt RTC-8050 Series II Crane is included as an attachment to this memorandum for reference and example purposes.

At the top of the attached report, under the *Rental Rate Blue Book* heading, key information such as size class, gross weight, and equipment configuration can be found. This information should accurately represent the equipment performing the extra work. It should be noted that the contractor submitted equipment reports do not need to exactly match the equipment on the project, but they should be reasonably close. Since the construction equipment industry is so large, not every make and model has been categorized and assigned a value within EquipmentWatch.

The middle section of the equipment report, under the *Blue Book Rates* heading, shows associated contractor costs for owning a piece of equipment. Adjustments are applied by the contractor to prorate

these costs over the time the equipment is normally expected to work. Adjustments for region, model year, hourly ownership costs, and hourly operating costs should be included.

EquipmentWatch Rental Rate Blue Book Calculations
The Department only recognizes the adjusted FHWA hourly rate, (**D**). The FHWA hourly rate is equal to the adjusted monthly rate, (**A**), divided by 176 hours plus the adjusted value indicated at the bottom of the **Estimated Operating Costs Hourly** column, (**C**). The columns for *Weekly*, *Daily*, and *Hourly* are **not** recognized by the Department or FHWA.

Calculation 1 - Adjusted Hourly Ownership:
To calculate the adjusted hourly ownership cost, the adjusted monthly ownership cost rate (**A**), listed at the bottom of the *Monthly* column, is divided by 176 hours. The value obtained is the **Adjusted Hourly Ownership** cost for the specific piece of equipment. This value is not listed on the rental rate report.

A / 176 = **Adjusted Hourly Ownership**
$9,962.48 / 176 = **$56.61**

The value listed at the bottom of the **Estimated Operating Costs Hourly** column (**C**) represents the estimated costs, with adjustments, the contactor incurs while the equipment is performing work. These costs include such items as fuel and lubrication.

Calculation 2 – FHWA Rate, Hourly:
The value listed at the bottom of the column **FHWA Rate, Hourly** (**D**) is obtained by adding the **Adjusted Hourly Ownership** (Calculation 1) to the cost listed at the bottom of the column **Estimated Operation Costs Hourly** (**C**).

(Adjusted Hourly Ownership) + C = D
$56.61 + $59.70 = D = $116.31

Idle Equipment Determination and Calculations
The Department allows an idle rate for equipment used for extra work if the equipment is:

- operational, and
- on-site, and
- necessary to perform work on the controlling operation, and
- remains idle due to conditions beyond the control of the contractor.

The idle rate is determined by dividing the **Adjusted Hourly Ownership** cost (Calculation 1) by 2 (reduced by 50%). The Department and FHWA do **not** recognize the *Standby Rate* or *Idling Rate* shown under the *Non-Active Use Rates* section of the EquipmentWatch Rental Rate report.

Calculation 3 – Idle Hourly Rate:
The idle hourly rate is determined by dividing the **Adjusted Hourly Ownership** cost (Calculation 1), by 2 (reducing by 50%) for a result of $28.30 per hour ($56.61 / 2 = $28.30).

(Adjusted Hourly Ownership) / 2 = **Idle Hourly Rate**
$56.61 / 2 = **Idle Hourly Rate = $28.30**

The idle rate will also apply during periods of transportation and on-site assembly and disassembly of the equipment.

Idle time will **not** be paid for:

- more than 8 hours per day, minus any hours paid for at the FHWA rate, or
- 40 hours per week, minus any hours paid for at the FHWA rate.

Rented Equipment

If equipment is rented rather than owned, the Department uses the contractor's actual paid invoice rates from the supplier for the duration of work or idle period to determine the rate costs. During the period of equipment rental, the actual rental costs continue whether the equipment is in use or idle. Supplier price quotes and estimates are **not** acceptable for determining idle rates.

For rented equipment, either the actual fuel, lubricant and transportation costs incurred by the contractor **or** the fuel percentage, indicated under the *Rate Element Allocation* heading of the EquipmentWatch Rental Rate report, may be added to the rental cost.

Questions or comments should be directed to the Division of Construction Management through the channels of your respective district Field Engineer.

Attachment: EquipmentWatch Rental Rate Report

JHL/KAP/ddh

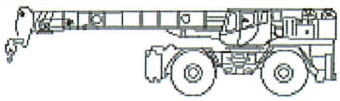
EquipmentWatch™

www.equipmentwatch.com

All prices shown in US$

Rental Rate Blue Book®

Link-Belt RTC-8050 SERIES II
Rough Terrain Hydraulic Cranes



Size Class:
40.0 - 49.9 MTons
Weight:
72,495 lbs.

Configuration for RTC-8050 SERIES II

Axle Configuration	**4 X 4 X 4**	Power Mode	**Diesel**
Net Horsepower	**185 hp**	Maximum Boom Length	**110 ft**
Maximum Lift Capacity	**45.36 mt**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	$10,395.00	$2,910.00	$730.00	$110.00	$59.70	$118.76
Adjustments						
Region (Indiana DOT: 98.6%)	($145.53)	($40.74)	($10.22)	($1.54)		
Model Year (2009: 97.2%)	($286.99)	($80.34)	($20.15)	($3.04)		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)	A				C -	D
Total:	**$9,962.48**	**$2,788.92**	**$699.63**	**$105.42**	**$59.70**	**$116.31**

Non-Active Use Rates	**Hourly**
Standby Rate	$28.30
Idling Rate	$77.21

Rate Element Allocation

Element	**Percentage**	**Value**
Depreciation (ownership)	36%	$3,742.20/mo
Overhaul (ownership)	50%	$5,197.50/mo
CFC (ownership)	7%	$727.65/mo
Indirect (ownership)	7%	$727.65/mo
Fuel (operating) @ 3.01	35%	$20.60/hr

Revised Date: 2nd Half 2018

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

Calculation 1
Adjusted Hourly Ownership

A /176 hr = **(Adjusted Hourly Ownership)**

$9,962.48 / 176 hr = **$56.61**

Calculation 2
FHWA Rate, Hourly

(Adjusted Hourly Ownership) + C = D

$56.61 + $59.70 = $116.31

Calculation 3
Idle Hourly Rate

(Adjusted Hourly Ownership) / 2 = **(Idle Hourly Rate)**

$56.61 / 2 = **$28.30**

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