



THE MANAGEMENT OF CRANE SERVICES AT MTA NEW YORK CITY TRANSIT

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OVERVIEW

In 2010, New York City Transit (NYC Transit or Transit) entered into five-year contract with Bay Crane Services, Incorporated (Bay Crane), valued at \$48.8 million, to provide for the lease, operation, and maintenance of 15 cranes. The contract is administered by the NYC Transit Track Division, which is also the primary user of the contractor's services. The cranes are needed to move various types of materials in transit yards and on Track Division construction sites. In the yards, cranes move materials such as railroad ties and rails, and also help dispose of refuse brought in on work trains. On construction sites, cranes work on public streets to help move heavy material, such as track panels¹ to elevated structures where they are installed by track workers. The majority of track construction work that utilizes crane services occurs along elevated track throughout New York City.

The Office of the MTA Inspector General (OIG) conducted this review to evaluate how well NYC Transit has managed Bay Crane and the services it provides. Track Division personnel have expressed satisfaction with Bay Crane's services rendered to date. While Bay Crane appears to have performed reasonably well thus far, we have concerns about NYC Transit's management of the contract. Specifically, our review has revealed both lapses in contract management by Transit as well as opportunities for Transit to ensure that the upcoming contract is more economical and attuned to agency needs.

Indeed, NYC Transit's contract with Bay Crane began its fifth and final year on September 1, 2014 and the agency will soon solicit bids for a new crane services contract. As discussed more fully below, OIG finds that NYC Transit must do a better job of identifying and monitoring its equipment needs (e.g. the number and type of cranes that it requires to conduct its work most efficiently and which equipment to lease on a flat-rate versus an as-needed basis), specifying these requirements in its new contract for crane services, and periodically reassessing those needs and requirements throughout the life of the contract. The agency must also determine whether and to what extent it needs the leased equipment to be physically stored on Transit property. Regarding safety, Transit must immediately implement the recommendations relating to certification of equipment that MTA Audit Services issued and the agency accepted four years ago. In the same vein, Transit must also increase its monitoring to ensure that the vendor, for its part, adheres to contract provisions, particularly those that are safety-related.

¹ A track panel is a 40-foot section of track that is pre-fabricated by Track Division employees at agency yards and then transported to construction sites where the panels are installed by Track personnel.

NYC Transit agreed with all of our recommendations designed to use the contractor's services more safely and efficiently, which has the potential to significantly reduce the agency's equipment leasing costs.. Further, the agency indicated in its response that it had conducted a review of its current equipment needs, and will significantly reduce the number of cranes that it requires on a daily basis from 14 to 5. Going forward, the agency also intends to reassess its need for various types and quantities of cranes, finally implement recommendations previously made by MTA Audit Services, and establish protocols to ensure that safety-related contract provisions are enforced.

We are encouraged by the agency's acceptance of our recommendations

FINDINGS

How Many Cranes Does the Track Division Need?

NYC Transit currently leases fourteen cranes for which it is billed by the contractor at a monthly rate covering equipment rental and maintenance (Table 1), as well as a single 150-200-ton truck-mounted crane, leased at a contractual rate of \$7,019.60 for a three-day period. The annual equipment rental fee for leased cranes is about \$1.2 million, and over the contract's five years' is expected to be approximately \$6 million. Additionally, Bay Crane provides NYC Transit with operators on an as-needed basis and charges the agency according to labor rates set in the contract.

Table 1 - Monthly Crane Rental Fees

Classification (Tonnage Capacity)	Quantity of Cranes Leased/Contract	Unit Cost Per Month	Total Monthly Cost
Rubber Tire Hydraulic Truck Cranes			
40 - 50	2	5,515.40	11,030.80
50 - 60	2	6,518.20	13,036.40
60 - 75	4	7,521.00	30,084.00
120 - 140	1	16,044.80	16,044.80
Rubber Tire Hydraulic Rough Terrain Cranes			
28 - 35	2	4,512.60	9,025.20
40 - 50	3	6,518.20	19,554.60
			98,775.80

OIG's analysis of billing records for the three-year period from January 2011 through December 2013 shows that NYC Transit rarely needed the quantity of equipment specified in the contract. However, despite the existence of enabling contractual language, NYC Transit did not attempt to renegotiate its contract with Bay Crane to reduce the number of cranes for which it pays a flat monthly fee. Instead, as shown below, Transit routinely incurred monthly fees for equipment that it did not use.

Cranes Provided
January 1, 2011 to December 31, 2013

Number of days with....	Days	Percent
No Cranes Used	54	4.9%
One Crane Provided	19	1.7%
Two Cranes Provided	32	2.9%
Three Cranes Provided	40	3.7%
Four...	46	4.2%
Five...	242	22.1%
Six...	237	21.6%
Seven...	193	17.6%
Eight...	91	8.3%
Nine...	63	5.8%
Ten...	37	3.4%
Eleven...	18	1.6%
Twelve...	15	1.4%
Thirteen...	4	0.4%
Fourteen...	1	0.1%
Fifteen...	2	0.2%
Sixteen...	1	0.1%
Total Days	1,095	100.0%

Based on this three-year analysis, it appears that while Transit paid for the full complement of 14 cranes over the life of the contract, it used more than seven cranes on any given day only 20 percent of that time. This analysis suggests that Transit could lease fewer cranes each month and pay for others on an as-needed basis. If, for example, Transit leased only seven cranes, the monthly lease cost would be roughly half over the life of the contract (a savings of \$2.7 million), minus the cost of extra cranes leased only as-needed.

When OIG asked for the reasoning behind the requirement of 14 cranes specified in the contract, Transit officials explained it in terms of dissatisfaction with the previous vendor's performance. According to current and former Track Division managers, the agency was dissatisfied with that vendor, who supplied equipment and operators to the agency from 2005 to 2010. A former acting chief track officer told OIG that the prior vendor's equipment selection was limited and the cranes that it supplied were unreliable, which affected the Track Division's productivity. As a result, ensuring the availability of functional cranes was a top priority when the agency procured the current contract.

Nevertheless, as Track Division managers have candidly acknowledged to us, Transit has recently been paying for equipment that it does not seem to need. While limitations in source documents used to perform our analysis had insufficient detail to identify exactly how often

particular cranes in particular sizes, are needed, we are confident that significant savings are available across several classifications of equipment. OIG strongly recommends that the agency conduct its own usage analysis with more comprehensive documentation to help ensure that it best meets its needs at the best possible price.

How Many Leased Cranes Should be Stored on NYC Transit Property?

When OIG began its audit in October 2013, Bay Crane stored all 14 leased cranes in NYC Transit yards because both the company and the agency believed that storage was required by the terms of the contract. As our review progressed, however, both took a fresh look at the contract and concluded that it does not require that the vendor store equipment on NYC Transit property.² Subsequently, the vendor relocated nine of the cranes to its main facility at Long Island City, Queens, and retained five cranes at Transit yards where the equipment is most frequently used.

According to Track Department officials, there are clear advantages to storing equipment at Transit yards, including ease of access during an emergency. A Track Division superintendent reported to the OIG that the agency has not experienced any problems with the new logistical arrangement, but the official expressed some concern that the contractor might not be able to respond in a timely manner on future work. On the other hand, the agency should consider any costs, financial or otherwise, that may follow from storing the equipment on-site. It seems likely, for example, that cranes dedicated solely to NYC Transit contracts and parked on site are billed by the vendor at a rate reflective of the vendor's inability to use them to generate revenue from other potential clients. Said differently, Transit is certainly paying a premium to retain cranes on-site, and that premium may be better spent to defray expenses of as-needed rentals, or saved entirely if the particular equipment proves to be unnecessary. For these reasons, in our view, Transit needs to carefully assess its needs for on-site storage of equipment, and reflect these specifications in its solicitation for crane service before the upcoming contract is bid this year.

Contract Monitoring Needs Strengthening

The Track Division has inadequately monitored two contract standards with safety implications: (1) equipment has been inspected and certified as being in good operating condition; and (2) equipment is within the established age limitations.

Crane Certification

NYC Transit's contract with Bay Crane states that:

² According to Article 104, *Time for Completion and Delivery*, the contractor "Shall furnish, at any hour of the day or night... upon request of the Project Manager, any and all cranes described in the Technical Specifications with current NYS/NYC certification documents and crews possessing the appropriate in-force licenses..."

Article 104 further states that "Generally, the contractor will be notified two days preceding the day during which the Equipment will be used, the place where it is required, the type of equipment, the approximate time it will be required, and the number and approximate weight of loads to be moved..."

The Contractor will be required to demonstrate that all the required Equipment is properly licensed, registered and inspected by the State and City of New York, as required for operation within City limits³

... Contractor shall plan in advance to obtain renewal NYS/NYC crane certification documents so that none of the certification documents is outdated at any time during the contract term.⁴

Pursuant to the Administrative Code of the City of New York, a contractor is required to have each of its cranes inspected and certified for operation on an annual basis by the city's Department of Buildings' (DOB).⁵

In 2010, MTA Audit Services, the MTA's internal audit unit, released a report on Transit's management of its previous contractor for crane services from 2005 through 2010. In its report, Audit Services "identified instances where cranes did not have the required certificate of operation which provides assurance that the cranes had passed the annual inspection."⁶ Audit services recommended that Track Division management:

- *Develop a control to effectively monitor whether cranes furnished by the contractor have passed the annual inspection and that the cranes display a "Temporary Certificate of Approval/Operation" issued by the NYC Department of Buildings.*
- *Develop a protocol for employees to follow in the event that the contractor furnishes a crane that lacks evidence of having passed the annual inspection and having an approved certificate of operation as required.*

Transit management agreed to implement Audit Services' recommendations by the fourth quarter of 2010. Despite this agreement, the Track Division still does not monitor the status of crane certifications, the contractor's cranes do not display certificates of approval, and the agency has not yet created a protocol to address uncertified equipment.

Indeed, in November 2013 the OIG requested that the Transit employee responsible for administering the contract or his supervisor, a superintendent, provide proof of DOB certifications for the 14 cranes stored on agency property at the time. The superintendent told OIG that the documents were not on file at NYC Transit offices so he contacted Bay Crane for the certifications—a tacit acknowledgment that NYC Transit had not established a control to ensure that the equipment it leased was properly certified.

Thereafter, OIG reviewed the records submitted by Bay Crane and determined that the certification for one of two cranes stored at Jamaica Yard had lapsed months before. When OIG auditors later met with DOB representatives and reviewed their records, those representatives

³ See *Specific Contract Provisions*; Contract #10A0227, article 116, paragraph A.

⁴ See *Specific Contract Provisions*; Contract #10A0227, article 113, paragraph A.

⁵ New York City Administrative Code, Title 28, New York City Construction Codes, Chapter 1, Administration, Article 12.7.1

⁶ MTA Audit Services report #10-063, "Audit of the Contract for Leasing of Cranes with Operators" (2010).

told our auditors that the crane with the lapsed certification had failed inspection and that DOB had issued a ‘Cease Use Order’. OIG promptly informed the appropriate Transit official about this still-outstanding order and shortly thereafter the contractor replaced the faulty equipment with a fully compliant crane. This lapse in Transit oversight is particularly troubling given Audit Services’ on-point safety recommendations several years before and Transit’s agreement to follow them. NYC Transit needs to ensure that these and any other accepted safety recommendations are implemented immediately.

Moreover, during our discussions with DOB officials, the Assistant Commissioner for Engineering and Emergency Operations indicated a willingness to notify MTA, in addition to the contractor, when leased equipment on MTA property fails inspection. Should NYC Transit decide to continue to store cranes on its property, we urge agency officials to take advantage of this opportunity to coordinate with DOB to help strengthen the oversight of the contractor’s equipment.

Age of Equipment

The Track Division has also insufficiently monitored contract stipulations that limit age of equipment permissible for use by the agency. According to the contract, all equipment supplied by the contractor:

...must be in good operating condition and be no more than fifteen (15) years old from Notice of Award.⁷

When OIG reviewed the crane certifications as described above, we also checked the model year of the equipment and determined that two cranes exceeded the 15-year contractual age restriction. One crane, which exceeded the age requirement by three years, had the previously mentioned Cease Use Order issued against it. The other crane was 40 years old.

Significantly, though, the Track Division could not adequately explain why in the first instance it imposed the age limit specified in the contract or why, given that specification, the agency did not monitor equipment age and enforce that provision. Regarding the limitation itself, however, at the time of its audit the OIG could find no statutory or industry standard that would preclude the use of equipment beyond 15 years. Indeed, although well over the limit stipulated in the contract, the 40 year-old crane had passed DOB inspection and was certified for operation.

Further, as recently as December 2013, the New York City Council introduced but did not vote on “A Local Law to amend the administrative code of the city of New York and the New York City building code, in relation to crane modernization.” While providing exceptions, the general rule contemplated by this bill is “The allowable age of any crane for use in New York City shall be no greater than 25 years from the manufacture date.”⁸ Therefore, when preparing its next solicitation for crane services, the Track Department should consult with state and local agencies that oversee the design, installation and safe operation of cranes to ensure that Transit is fully informed about the law and best practices governing this equipment.

⁷ See *Technical Specifications*; Contract #10A0227

⁸ See New York City Council Int. No.1209-2013.

On a related note, during our interviews one Assistant Chief Track Officer told us that the 40-year-old crane was “rarely operated.” However, because the documentation that the contractor submits to Transit in support of its monthly invoices does not include the unique serial number of the crane that was used by any given operator, it is impossible for Transit to keep track of precisely how often any particular item of leased equipment is utilized. Transit should correct this deficiency by requiring the contractor to include on documentation it submits to the agency the serial number of the cranes used. This information will also facilitate the agency’s efforts going forward to better assess its actual needs as to number, types, and deployment of cranes

RECOMMENDATIONS

In order to maximize the effectiveness of NYC Transit's upcoming crane procurement and its management of current and future contracts for crane services, we recommend that the agency:

1. Perform appropriate quantitative and qualitative analyses to best assess the number and types of cranes that Transit actually needs.
2. Perform a cost-benefit analysis to determine the best apportionment of on-site storage and as-needed acquisition of equipment, and reflect these specifications in the upcoming solicitation for crane service.

Agency Response to Recommendations 1&2:

NYC Transit agreed with our recommendations and responded that "Track management will reduce the number of cranes kept on site daily from fourteen to five. In addition, Track management will request of the contractor, various size cranes on an as-needed basis. As the agency also noted at the outset of its response, changes will be reflected, as appropriate, in the technical specifications and scope of work for the next contract.

3. Ensure that needs are continuously monitored and reassessed, and that contractual language provides necessary protection and flexibility should the agency determine that its needs have changed.

Agency Response:

NYC Transit agreed with our recommendation and stated that it will monitor and reassess the need for various types and quantities of cranes during the course of the contract.

4. Immediately implement the following recommendations made by MTA Audit Services report #10-063 and previously accepted by Transit:
 - a. Develop a control to effectively monitor whether cranes furnished by the contractor have passed the annual inspection and [ensure] that the cranes display a "Temporary Certificate of Approval/Operation" issued by the NYC Department of Buildings.
 - b. Develop a protocol for employees to follow in the event that the contractor furnishes a crane that lacks evidence of having passed the annual inspection and having an approved certificate of operation as required.

Agency Response:

NYC Transit agreed to consult with NYC Department of Buildings to “effectively monitor” whether cranes have passed annual inspections and ensure that the cranes display a “Temporary Certificate of Approval/Operation.”. The agency will also reinstruct staff on how to verify that a crane possesses a valid inspection certification. Track management has further agreed to establish an inspection protocol for employees that will include a contact phone number to report invalid certificates.

Regarding the crane with the lapsed approval to operate (discussed above on pages 5 and 6), NYC Transit noted that there was no indication that the crane had been used while the cease use order was in effect. The agency further noted that it will seek restitution for any charges for the out-of-service crane, if warranted.

5. In cooperation with the NYC Department of Buildings, establish a procedure whereby that agency directly notifies Transit, in addition to the contractor, when leased equipment on Transit property fails inspection.

Agency Response:

NYC Transit agreed with the recommendation and intends to consult with executives at the Department of Buildings to develop an appropriate procedure.

6. In consultation with appropriate state and local officials, reevaluate contractual terms associated with equipment age and update contract specifications for the upcoming solicitation accordingly. Ensure going forward that all cranes meet the contractual age requirement.

Agency Response:

Track department managers agreed to conduct monitoring, in conjunction with the Department of Buildings and/or other state and local agencies, “to ensure that NYC Transit is fully informed about the laws and best practices of cranes meeting contractual age requirements.”

7. Ensure that the serial number of the crane supplied by the contractor is recorded on all documentation associated with the rental, including the contractor’s invoice for payment, to facilitate the agency’s assessment of its actual needs as to number, types, and deployment of this equipment.

Agency Response:

Track management agreed and will consult with Bay Crane to modify its crane ticket to include a field for the serial number, and will incorporate changes to the crane ticket into the new contract. The response also confirmed that “Track Management has reinstructed staff how to mark the Bay Crane ticket or any future contractor, that the crane has a certificate of approval/operation and to note the serial number of the crane.”