

Yearly Review of Job Order Contracting (JOC) 2015

Purpose and Scope

The purpose of this review is to evaluate the second year of using Job Order Contracts (JOC) as a method to accomplish FHWA eligible preventative maintenance bridge work. Specifically, this review will discuss the procurement, scheduling, cost efficiency, and quality of work, as compared with the established delivery method employed by the NJDOT for Federal Preventive Maintenance Contracts.

Background

Following the first year of the JOC pilot project, NJDOT solicited two JOC contracts regionalizing each as North and South with estimated annual value of \$2.7MM and 2.5MM, respectively. Below is a timeline of the bidding process:

September, 2015	Advertisement and Bid Openings
December, 2015	JOC North Award
January, 2016	JOC South Award

At the time of this writing, 12 proposals from North and 11 proposals from South have been approved totaling \$3.2MM. Of these proposals, 9 from North and 7 from South have been completed.

Typically, the repairs being done on the structures approved for this contract consist of deck patching, deck joint repair, corrosion inhibiting sealing of the deck, substructure repair, and epoxy waterproofing the substructure.

Procurement

The procurement procedures for JOC Contracts are essentially the same as the standard Preventive Maintenance Contracts. The differences between the two are the review of the Construction Task Catalog (CTC) containing preset unit prices for tasks related to bridge work and the fact that JOC Contracts are classified as PoDI, and thereby subject to the FHWA PoDI review process, whereas standard Preventive Maintenance Contracts are non-PoDI.

Briefly describing the procurement process, both federally funded programs have a level of initial review of the scope of work on selected structures throughout the State of New Jersey in determining their eligibility for Federal Funding. Key Maps of the locations are prepared, CED's are obtained along with any other permit or documentation required, and an estimate of the amount of work is generated. Upon initial review, NJDOT follows the standard procurement process of generating job numbers, receiving goals from the Civil Rights Department, determining funding and its allocation for PE (Preliminary Engineering) and CE (Construction Engineering) costs, and advertisement of the project.

It should be noted that the list of structures obtained during the initial scoping of structures between JOC Contracts and Federal Preventive Maintenance Contracts provides the NJDOT with an anticipated job list. While this list of structures is known to the contractors at the time of bidding the Federal Preventive Maintenance Contracts, structures are undefined under JOC bid. Hence, the initial review of structures prior to bidding a Federal Preventive Maintenance Contract requires more time as opposed to JOC

Contracts where the bidding process can be executed without defining structures upfront. Furthermore, JOC Contracts allow the inclusion of additional structures at any time, so long as the work is eligible, which enables NJDOT to respond more expeditiously to preventative maintenance work which may not have been identified at the time bid documents were being prepared.

For example, JOC provides the ability to revisit structures that were on the Federal Bridge Preventive Maintenance Contracts on a cyclical basis, as outlined in the Bridge Preventive Maintenance Guidelines. This will have the added benefit of extending the life of the state's bridges while preventing and delaying the larger, more costly repairs.

In addition, because JOC allows for additional structures to be added, the DOT has found it beneficial to coordinate with the Bridge Painting Contracts. Oftentimes, structures that are planned to be on the Painting Contracts have substructure deficiencies. JOC allows the DOT to use FHWA funds to perform repairs outlined in the Bridge Preventive Maintenance Guidelines prior to painting, resulting in better results of the Painting Contracts.

Ultimately, the bid cycle is shortened for JOC Contracts compared to Federal Preventive Maintenance Contracts and gives NJDOT much more flexibility to handle needed work on planned or unplanned structures.

Scheduling

Because the job list is not defined at the time of bid, the first step in developing each Job Order after contract award is holding a Joint Scope Meeting to let the contractor know where the work is located and what work needs to be performed. The JOC contractor, NJDOT, FHWA, and any other applicable personnel are invited to a Joint Scope Meeting on site to discuss the scope of work, measure quantities, determine a work schedule and resolve any questions to clearly define what needs to be done.

Following the Joint Scope Meeting, NJDOT issues a Request for Proposal (RFP) to the contractor along with a Detailed Scope of Work (DSOW) defining what work is to be performed, when the proposal package is due and any submittal requirements.

Based on the RFP and DSOW, contractor prepares a proposal package which consists of a price proposal developed using the CTC in eGordian, work schedule and any other required submittals. A complete proposal package is submitted to NJDOT for review and approval.

After NJDOT reviews the contractor's proposal package, the proposal is submitted to FHWA for its final approval. Once approved, a Job Order is issued to the contractor.

The winner of both the JOC contracts, Joseph M. Sanzari Inc., had previous experience with JOC from the previous year. The time frame between the first proposal from the contractor and its acceptance has been reduced due to the contractor's familiarity with the eGordian system and use of the CTC.

For both 2014 and 2015 Contracts, this lead time was mitigated by scheduling the Joint Scope Meetings during the construction of other approved job orders. In doing so, work was not delayed by the reviewing process.

Overall, the scheduling and approving of job orders has been efficient in both the first and second years of JOC to prevent it from being a critical path element.

Cost Efficiency

Below is a table of two Federal Preventive Maintenance Contracts, DP 15406 and DP 15407, with the average unit pricing found in the 2014 CTC and the 2015 CTC, for commonly used items.

Description	Unit	DP15406 Rt. 78 Unit Price	DP15407 Rt. 295 Unit Price	2014 JOC	2015 JOC	2015 JOC w/ 9% Markup
Deck Corrosion Inhibitor	SY	\$7.75	\$5.00	\$20.70	\$6.48	\$7.06
Repair of Concrete Deck, TYPE A				\$45.33	\$55.93	\$60.96
Repair of Concrete Deck, TYPE B	SF	\$75.00	\$72.00	\$44.15	\$66.64	\$72.64
Deck Joint Reseal, Silicon (Dow Corning)*	LF	\$60.00	\$45.00	\$25.92*	\$24.39*	\$26.59*
Deck Joint Reseal, Silicon (EMSEAL)*	LF	\$60.00	\$45.00	-	\$58.43*	\$63.69*
Bridge Header Repair**	LF	\$85.00	\$125.00	\$85.43**	\$78.12**	\$85.15**
Repair Concrete Curb***	LF	\$50.00	\$60.00	\$29.65***	\$27.49***	\$29.96***
Substructure Repair	SF	\$80.00	\$90.00	\$104.09*~	\$102.79*~	\$112.04*~
Epoxy Waterproofing	SY	\$48.00	\$42.00	\$38.43	\$39.60	\$43.16

* - Presumed 2" Joint in the CTC

** - CTC priced in CF. To convert to LF, presumed the other two dimensions are 1'-3" wide and 4" depth with Polymer Based Concrete.

*** - CTC priced in CF. To convert to LF, presumed the other two dimensions are 5" wide and 10" depth.

*~ - CTC average pricing for Overhead, Vertical, Pier Cap, and Circular Pier Repairs.

A column with 9% markup is added here to reflect the markup for JOC North paid to the contractor. The markup for JOC North is chosen as the winning bid for JOC South is actually the second low, due to an improper proposal by the apparent low bidder. With the exception of a few items, the most commonly used line items in JOC 2015, are comparable to the Federal Preventive Maintenance Contracts.

In 2014, the Deck Corrosion Inhibitor was overpriced in the CTC. Learning from the previous contract, the pricing and item has been changed. The item now includes power washing and two coats, something that had to be piecemealed in 2014. With the updated inclusions of the item, the pricing was also changed to be comparable to the industry average.

The item, Repair of Concrete Deck Type B, has been modified similar to Deck Corrosion Inhibitor as well. In 2014, the item required additional items such as saw cutting, drilling for dowels, and dowels to include the necessary work as per the Standard Details and Specifications. In 2015, this item was changed to be all inclusive of work. This resulted in a value similar to the industry average.

A difference in the Deck Joint Reseal, Silicon can be pointed out as the JOC's CTC identifies different pricing per material. This led to the Dow Corning to be cheaper, but the EMSEAL to be more expensive when

compared to the Preventive Maintenance Contract. The average of these two installed values of \$26.59 and \$63.69 is \$45.14 which is comparable to the Preventive Maintenance Contract numbers.

Mobilization is charged differently between the two contracting methods. In the Federal Preventive Maintenance Contracts, there is one Lump Sum price for the Mobilization charge (\$50k for DP 15406 and \$60k for DP 15407). However, in the 2015 JOC Contracts, Mobilizations are charged per each job order at approximately \$1,540 after markup. DP 15406 has a structure list of 41 structures and DP 15407 has a structure list of 49 structures. As a result, the average mobilization per structure is approximately \$1,220 and \$1,225, respectively, which is comparable with the JOC 2015 number.

In 2014, substructure repairs were not commonly done through the JOC contracts. In 2015, it is a significant item of interest. Though the dollar value shows the JOC pricing to be greater than the Preventive Maintenance Contracts, it does not include the form work or equipment such as bucket trucks or scaffolding that is required to perform many of the substructure repairs. Because of this, the true JOC unit pricing is much higher. This is an item that the NJDOT will look to adjust to be an all-inclusive item, similar to the items adjusted the last year.

With regards to Traffic Safety, the Federal Preventive Maintenance Contracts pay by certain line items, such as Cones (UN), Barricades (UN), Signs (SF), Truck Mounted Attenuators (UN), etc. by the amount most seen used during the contract. In comparing this number, the Federal Preventive Maintenance Contracts may see a cost of \$4,000 or less for the duration of the contract. On the other hand, JOC Contract pays by daily lane closures done, at around \$1,800/day, which over the course of the contract, can add up.

Considering the fact that the construction items are comparable in pricing as with the Preventive Maintenance Contracts, with substructure repairs being the largest exception, the other large area of discrepancies lies in the Traffic Safety. By paying the contractor per day for the safety setup, it is responsible for a significant price difference. This has been seen more commonly during the second year of the JOC contracting as the job orders are, on average, larger scopes of work and longer duration. However, since the locations are not yet known to the contractor, evaluating and planning for the traffic safety setup for each structure requires the contractor to review each job order with more effort and resources.

The third year of the JOC contracts will look to resolve the issue surrounding the substructure repair numbers, traffic safety pricing, and hopefully allow for scalability for size of job orders.

Quality of Work

Between the JOC Contracts and the Federal Preventive Maintenance Contracts, NJDOT feels the level of quality in the work of the contractors is comparable. Both contracts follows the same Standard Specifications and Standard Details issued by NJDOT and both types of contracts have an inspector on-site to ensure correct construction practices and procedures.

Conclusion

Based on the evaluation conducted, NJDOT believes Job Order Contracting is still a viable alternative to the established, standard Federal Preventive Maintenance Contracting method. The quicker procurement

process in general for JOC Contracts, as well as allowing for the addition of new structures throughout the term of the JOC Contract without the need for procuring additional contracts, are time and cost saving qualities beneficial to the Department. In addition, the increase in efficiency of the JOC Contracts does not compromise the quality of work or direct cost of work within the Contracts, as both are comparable to that of the established standard Federal Preventive Maintenance Contracts.

Although the price comparisons between JOC and the Federal Preventive Maintenance Contracts was not as close as the previous year, this second year the DOT expanded to larger and more varied scope of work. This shows that the CTC requires further revisions to items that the DOT will intend to use. This will continue to be an on-going process as the DOT utilizes more items to perform various approved bridge preventative maintenance repairs in the future.

It is believed that for every new contractor that is awarded a JOC contract, there may be a learning curve in getting acquainted with new software and pricing methodology. However, once learned, NJDOT anticipates receiving from new contractors the same expediency and responsiveness of current JOC contractors.

NJDOT sees JOC as an efficient and cost-effective procurement method that will extend the longevity of state-owned structures. The Department will continue to work with FHWA to improve and expand the JOC program. Additionally, NJDOT will continue working to improve the CTC to reflect updated item costs and an expanding scope-of-work.