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Indefinite Delivery-Indefinite Quantity Contracting: A Case Study Analysis

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1 **INDEFINITE DELIVERY/INDEFINITE QUANTITY CONTRACTING: A CASE**
2 **STUDY ANALYSIS**

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32

1 Abstract

2 Indefinite delivery/indefinite quantity (IDIQ) contracts permit a transportation agency to literally
3 award multiple job orders to a single contractor or a small group of competing contractors, doing
4 away with the need to conduct a full procurement for every small construction or maintenance
5 project. During the last few years, this procurement method has been increasingly accepted by
6 state and municipal agencies; however, little research has been done to provide guidance on this
7 powerful procurement tool. The paper discusses four different models for IDIQ contracting in
8 use by three state departments of transportation (DOTs) and the Central Federal Lands Highway
9 Division (CFLHD), based on detailed case study analysis. The paper finds that regardless of the
10 model in use, agency IDIQ project managers believe the method accelerates the project delivery
11 period, reduces preconstruction cost, and provides a flexible delivery scheduling. Furthermore,
12 the research team identified that the use of multiple-award IDIQ contracts also promotes price
13 competition and reduces the risk of contractor default.
14

1 INTRODUCTION

2 Much has been written on the topic of procurement risk (*1,2,3,4,5,6*), but very little
3 research has been done to measure the impact of managing procurement risk by continuing to
4 contract with a contractor whose past performance has been satisfactory via a continuing
5 contract. NCHRP Synthesis 402 (*7*) found that “the most important incentive [to do high quality
6 work] that an owner has is the promise of repeat work” (*8*) and NCHRP Synthesis 390 concluded
7 that the ability to evaluate a contractor’s performance and use that evaluation to impact its ability
8 to bid “creates an incentive for achieving acceptable quality the first time” (*9*). To make that
9 direct connection between past performance and the ability to compete for future work on a
10 project-by-project basis, the agency must surmount statutory barriers as well as potential industry
11 opposition (*7,8*). Additionally, the agency must develop and field a contractor performance
12 evaluation system that if not done well, merely adds to the administrative workload of agency
13 field offices.

14 To satisfy the procurement risk requirements discussed above, a project delivery method
15 is needed that permits a transportation agency to increase or decrease a particular contractor’s
16 work without the need to reprocur every new project. Indefinite delivery/indefinite quantity
17 (IDIQ) contracting fills that bill (*1*). IDIQ permits the agency to award a contract for continuing
18 construction services of a specific nature to a contractor on a basis of either lowest responsive
19 bid or best value. The contract essentially creates a defined capacity to perform construction on
20 an ongoing basis as long as the quality, cost, and timeliness of the work are satisfactory. It also
21 provides a means to limit the risk of poor performance by only guaranteeing the contractor one
22 “project” (called a delivery, job or task order) and permits the agency to effectively terminate the
23 contract of a marginal contractor without the risk of protest or claim by merely not issuing any
24 further job orders on the IDIQ contract. It also furnishes the ability to increase the amount of
25 work a good performer gets up to the maximum total amount allowed in the IDIQ contract. Thus,
26 IDIQ contracting inherently creates the incentive for satisfactory performance by directly
27 connecting the contractor’s past job orders to its ability to be offered another job order and
28 satisfies Thomsen’s (*8*) “promise of repeat work” incentive.

29 The purpose of this paper is to detail the practices of four transportation agencies’
30 approaches to implementing IDIQ contracting. The information comes from a set of rigorous
31 case studies of actual IDIQ contracts that successfully met the agencies’ objectives for the
32 contract. The paper will demonstrate four different models for employing IDIQ in typical
33 transportation construction and maintenance programs and provide the reader with the
34 advantages and disadvantages of each. Finally, the researcher’s conclusions and
35 recommendations are offered to assist those agencies that are new to IDIQ contracting to
36 evaluate its potential as another tool in the agency’s procurement toolbox.

37 BACKGROUND

38 A large number of public transportation agencies are using IDIQ contracting methods;
39 however, only a small portion of state DOTs use IDIQs to procure construction services. Most
40 agencies use the IDIQ method to procure supplies or consulting services, mainly, information
41 technology or design engineering services (*10, 11*). The literature review for this study identified
42 the use of IDIQ construction practices in fourteen different transportation agencies including the
43 Federal Highway Administration (FHWA), the New York State Department of Transportation
44 (NYCDOT) and twelve state DOTs. The military departments of US Department of Defense
45 (DOD) have used IDIQs for construction since 1981 (*12*) and the US Army Corps of Engineers
46

1 (USACE), the Naval Facilities Engineering Command (NAVFAC) and the US Air Force
2 (USAF) are all quasi-transportation agencies in that many of their projects are indeed military
3 and civil infrastructure projects such as USACE's locks and dams, NAVFAC's seaports, and the
4 aviation infrastructure assets of the USAF. While there may indeed be more DOTs and
5 municipal agencies, difficulty with the lack of standardization in contract terminology across the
6 nation made it impossible for the research team to definitively classify any more than those
7 fourteen.

8 In its simplest form, an IDIQ contract is merely a single contract for multiple small
9 projects, typically termed delivery, job or task orders, of a similar technical scope where the
10 actual scope, timing, and cost as well as the number of work orders is not quantified at the time
11 of award (13). In other words, a construction contractor is literally "put on stand-by to perform
12 construction services to be determined in the future" (1). An IDIQ contract can be awarded to a
13 single contractor whom then performs all subsequent job orders, or a pool of prequalified
14 contractors who then compete for each job order. The Florida DOT (FDOT) awards hurricane
15 debris removal IDIQ contracts on an area of responsibility basis in advance of every hurricane
16 season (14) and only activates those contractors whose area of responsibility is actually hit by a
17 hurricane. Thus, the contracts are structured in a manner where no compensation is due if the
18 IDIQ contract is not activated. NYSDOT has a similar arrangement for state-wide emergency
19 bridge repair/replacement (14). Hence, it can be concluded that IDIQ project delivery is
20 extremely flexible and can be tailored to match the requirements of a given situation.

21 The other unique feature of an IDIQ contract is the ability to expand the total contract
22 volume without the need to reprocure or negotiate a contract modification. The typical IDIQ
23 contract is awarded with a guaranteed minimum (usually the size the first anticipated job order)
24 and a "not to exceed" value (14). Thus, it provides a mechanism to rapidly obligate/expend
25 funding that comes available from other sources that were not contemplated during the original
26 procurement. USACE routinely uses IDIQs as a means to utilize fiscal year-end funding and has
27 found that IDIQs give it the ability "to maximize the efficient use of available capital" (14).
28 When this is combined with IDIQ's ability to be terminated without protest once the guaranteed
29 minimum is satisfied, it becomes a powerful tool to deliver a wide variety of design and/or
30 construction services. Therefore, the remainder of this paper will provide the details on how four
31 agencies are utilizing this tool to deliver construction in their jurisdictions.

32 33 **CASE STUDY METHODOLOGY**

34 Case studies are empirical inquiries that investigate contemporary phenomenon in its
35 real-life context and permit the researcher to drill down into the "how and why" aspects of a
36 given project using structured interviews with project participants (1). The case studies were
37 collected using a protocol based on Yin's methodology for case study research data collection
38 (15). The structured interviews were developed using the protocol prescribed by Oppenheim (16)
39 and conducted in accordance with the Government Accountability Office procedures (17). Once
40 a case study interview was completed, the raw information collected was reduced and integrated
41 with data from the literature review. Therefore, the information gleaned from the case studies is
42 coupled with information collected in the literature review to validate any conclusion drawn
43 from the case studies.

44 45 **Case Study Background**

1 All case studies were jointly selected by the research team and the Minnesota DOT
 2 (MnDOT), the research sponsor. All of them are related to construction activities such as repair
 3 and maintenance of roads and bridges, and the implementation of safety projects. The structured
 4 interview questionnaire was designed and approved by MnDOT. The primary purpose was to
 5 better understand the state-of-the-practice in transportation IDIQ contracting techniques.
 6 Additional project-specific information was obtained from contract documents provided by each
 7 agency.

8 This paper analyzes the four IDIQ contracts shown in Table 1. These case studies were
 9 selected because they furnish a wide geographical dispersion and all involve the types of
 10 technical scope that MnDOT was contemplating for its own IDIQ program. They also represent a
 11 range of IDIQ contract types including single award, multiple award and stand-by contracts. As
 12 will be shown in subsequent sections of the paper, the case studies also demonstrate four unique
 13 approaches to IDIQ contracting that will furnish a range of options around which an agency that
 14 is new to IDIQ can tailor its own program.

15 **TABLE 1 Case Studies**

CASE STUDIES' FEATURES AND PROVISIONS				
Features/Provisions	CFLHD	NYSDOT	FDOT	MoDOT
Project Title	Roadway Surfacing, Resurfacing, and Repair Contracts:	Bridge Maintenance Work Various Routes.	Design-Build Push-Button Contract..	Asphalt Pavement Repair.
IDIQ contract - terminology	Multiple Award Task Order Contract	Job Order Contract	Push Button Contract	Job Order Contract
Work order - terminology	Task Order	Job Order	Task Work Order	Job Order
Delivery method used for work orders	Design-Bid-Build	Design-Bid-Build	Design-Build	Design-Bid-Build
Base contract period	1 year	1 year	3 years	1 year
Actual contract duration	Ongoing	2.2 years	2.5 years	Ongoing
Extension options	Four 1 year periods	Three 1 year periods	Three 1 year periods	One 1 year period
Classification by location(s)	Multiple-State	County-Wide	District-Wide	State-Wide
Minimum guaranteed value	50,000	50,000	12.5 Million (1st Task Work Order)	NA
Maximum value	35 Million	1.2 Million	20 Million	125,000
Minimum value per work order	50,000	NA	NA	NA
Maximum value per work order	7.5 Million	500,000	NA	NA
DBE, TGB, WBE or similar goals	DBE goal to the entire contract	DBE goal for the entire contract	DBE goal for the entire contract	NA
Performance Bond	One per Job Order (100%)	One for the entire contract (100%)	Required (no details provided)	One for the entire contract (100%)
Shortlist	NA	NA	3 or more proposers	NA
Pre-bid meeting	NA	1 or 2 meetings	1 meeting with shortlisted	Some Prebid Meetings
CFLHD = Central Federal Land Highway Division; DBE = Disadvantaged Business Enterprise; FDOT = Florida Department of Transportation; MoDOT = Missouri Department of Transportation; NA = Not Applicable; NYSDOT = New York State Department of Transportation; TGB = Targeted Group Business; WBE = Women Business Enterprise				

1 Case Study Agency Context

2 Since IDIQ is a new project delivery method to many agencies, it is important to
 3 understand the organizational context in which each of the case study contracts were
 4 implemented. All four agencies have legislative authority to use alternative project delivery
 5 methods. Both CFLHD and FDOT have experience with construction manager/general
 6 contractor (CMGC) and design-build (DB) project delivery. MoDOT and NYSDOT are only
 7 authorized to use DB and NYSDOT received its legislative authority in 2012, after the case study
 8 IDIQ contract was awarded. Therefore, the four cases also portray a range of project delivery
 9 experience from New York with only design-bid-build (DBB) at the time of contract award to
 10 Florida with experience in all alternative project delivery methods. The structured interview
 11 asked each agency to describe its motivation and objectives for implementing the case study
 12 IDIQ contract. Their responses are shown in Table 2. It shows that all four agencies shared the
 13 desire to compress the delivery schedule, reduce preconstruction costs, and gain scheduling
 14 flexibility. Once again, the notion that compressing the schedule is the primary owner's
 15 motivation for implementing alternative project delivery is validated (2). Only two agencies
 16 (CFLHD and NYSDOT) reported the potential to incentivize contractor performance as part of
 17 their IDIQ motivation by indicating quality-related objectives. It is also interesting to note that
 18 agencies cited more contract administration objectives than the classic cost, schedule and quality
 19 objectives. This testifies to the administrative flexibility that is inherent to IDIQ contracts,
 20 mainly due to the ability to deliver multiple small projects using a single procurement action that
 21 may extend across several years.
 22

23 **TABLE 2 Motivation and Objectives for Using IDIQ Contracting**

Motivations	CFLHD	NYSDOT	FDOT	MoDOT
Cost-related objectives				
Reduce preconstruction cost	✓	✓	✓	✓
Reduce construction cost				✓
Encourage price competition	✓			
More value for agency' money			✓	
Schedule-related objectives				
Reduce/compress/accelerate project delivery period	✓	✓	✓	✓
Flexibility in delivery scheduling	✓	✓	✓	✓
Quality-related objectives				
Increase quality	✓	✓		
Reduce risk related to contractor poor performance	✓			
Reduce risk of contractor default	✓			
Contract administration-related objectives				
Funding flexibility	✓			
Cooperative relationship between agency and contractor(s)		✓		✓
Reduced agency staffing requirements		✓		
Usefulness in emergency situations	✓			
Limited owner's commitment (contractual minimal quantity)		✓		
Reduce change orders				✓
Minimize unbalanced bids				✓

1
2 As previously mentioned, reconciling terminology was a big issue for the research team
3 when looking for potential case studies.. Table 1 presents the terms used by the agencies that
4 participated in the study. However, the following list includes alternative terms found in the
5 literature review to refer to this kind of contracts:

- 6 • Delivery Order Contract
- 7 • Master Contract
- 8 • Framework Contract
- 9 • Bundled Contract
- 10 • On-Call Contract
- 11 • On-Demand Contract

12 The seemingly only discernible technical difference in the above terminology is whether
13 or not the IDIQ contractor is guaranteed to actually perform compensable construction services.
14 The on-call, on-demand, and push-button contracts all appear to contain a feature of services on
15 an “only-if-needed basis.” However, the jargon is so confusing that researchers are not willing to
16 conclude that difference at this writing. For instance, after combining its conventional push-
17 button contracting techniques with design-build methods, FDOT obtained a more traditional
18 IDIQ contracting model which requires minimum and maximum quantities to be ordered under
19 each contract, such as the contract included in this study. Similarly, other agencies have modified
20 their methods to address their needs, making it difficult to determine standard procedures.

21 Figure 1 illustrates the IDIQ experience of each agency in terms of length of time,
22 number of contracts, and average contract size. There are several aspects in information shown in
23 the figure that must be mentioned before analyzing this section. Although FDOT has awarded a
24 large number of DBB – IDIQ (Push-Button) contracts, the figure only refers to DB – IDIQ
25 contracts that are similar to the case study contract. Likewise, even though the FHWA has
26 extensive experience with IDIQ contracting, the case project study agency, CFLHD, only has 4
27 years of experience. However, CFLHD construction practices are based on the Federal
28 Acquisition Regulation (FAR) and therefore, the CFLHD IDIQ program is based on a mature set
29 of policies and procedures, making it an “experienced agency” when compared to the three state
30 DOTs. This is given that the FAR is expected to reflect optimum practices resulted from years of
31 experience of all US Federal organizations which were introduced in 1949 by the General
32 Services Administration (18).

33

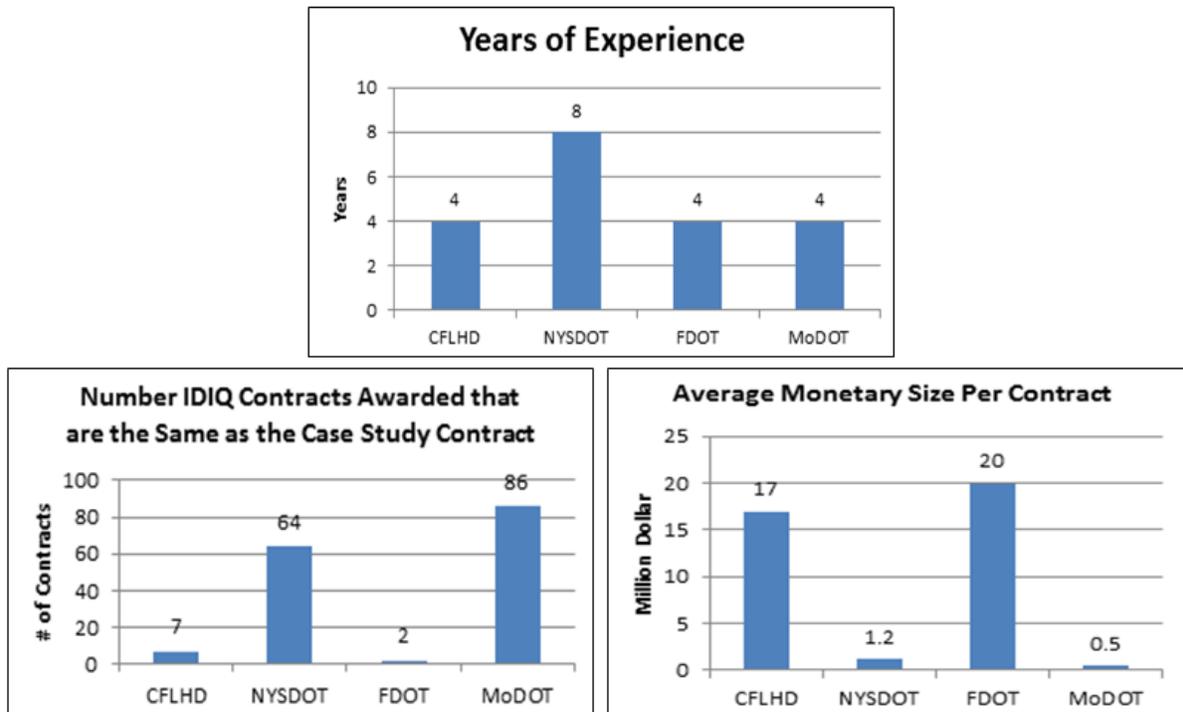


FIGURE 1 Agency IDIQ contract experience.

Combining Figure 1 with the information found in the literature review, it is also possible to identify three different risk tolerance-related approaches. First, agencies like MoDOT prefer to award a large number of small contracts. Since April 2010, MoDOT have awarded 86 IDIQ (job order) contracts for an average expected maximum amount of \$500,000. Additionally, more than 50% of these contracts had an original expected maximum amount of \$300,000 or less, while roughly 20% were estimated to go up to \$1 million or above, with the largest contract estimated to be about \$1.5 million. On the other hand, with twice as many years of experience as MoDOT, NYSDOT has awarded 64 IDIQ contracts, 22 less than MoDOT with an average monetary size of \$1.2 million. Finally, agencies like FDOT award larger contracts on a less frequent basis. In a three years period FDOT has awarded only 2 DB-IDIQ contracts, each of them for an original estimated amount of about \$20 million.

In a single year MoDOT, NYSDOT, and FDOT spend relatively the same amount of money in IDIQ contracts for minor construction, repair and maintenance projects (between \$8 and \$9 million), but with difference in the number of contracts awarded and the monetary size of each of them. This difference can be related to the risk each agency is willing to accept under each contract in spite of the fact that IDIQ contracts are typically considered by agencies as low risk acquisition alternatives regarding contractor poor performance and default (18). This is because typically agencies are only committed to the guaranteed minimum amount of work in the contract, contractors are motivated by the possibility of future work orders, and in the case of multiple-award contracts, there are more firms willing to complete unfinished work orders left by other contractors. When awarding a single award IDIQ contract, the agency typically knows the types of the projects to be developed under the contract. The procurement process provides knowledge of costs and qualifications of the contractor to successfully complete all of them. Therefore, risk is directly related to how long the IDIQ contract will be in force and how much

1 funding is allocated to the contract. Hence, it can be concluded that a large, long-term IDIQ
2 contract would correlate to a higher risk profile than a small short-term contract. From the
3 information in Figure 2, one can infer that MoDOT by using lots of small IDIQs would illustrate
4 a low risk approach; whereas, CFLHD and FDOT with a small number of large DB contract
5 represent high risk approaches. NYSDOT is in between and can therefore be classified as using a
6 medium risk approach to its IDIQ program.

8 **AGENCY PROCUREMENT MODELS**

9 Analysis of the case studies identified the three different procurement models shown in
10 Figure 2. The primary difference among the three models is the number of contractors involved in
11 a single contract and the methods used to select these contractors. For instance, federal agencies
12 such as CFLHD prefer multiple-award task order contracts (MATOCs), while the state agencies
13 have a preference for single-award IDIQ Contracts. Federal agencies expect competition for
14 work orders to increase product quality and timeliness of deliveries, as well as reduce project
15 costs (11, 19). Likewise, by involving multiple firms in the contract, Federal agencies mitigate
16 the risk of contractor default or poor performance. Additionally no price escalation procedures
17 are required for typical multiple-award IDIQ contracts since contractors bid current market
18 prices for each work order. This preference for multiple-award contracts is also reflected in the
19 fact that the FAR clearly expresses a preference for this contracting approach by directing federal
20 contracting officers to justify using a single award IDIQ and gain authorization before
21 advertising (13).

22 On the other hand, the literature found that state transportation agencies prefer to use
23 single-award IDIQ contracts for minor construction, repair, and maintenance projects. One reason
24 may be that single-award IDIQ contracts allow agencies to develop more expeditious methods to
25 issue work orders under a contract given that there is no competition involved in this process
26 (11). With the exception of FDOT which awards \$20 million IDIQ contracts to single contractors
27 that the remaining three agencies seem to prefer awarding lower volume IDIQ contracts with
28 small work orders, which may make it impractical to multiple award contracts.

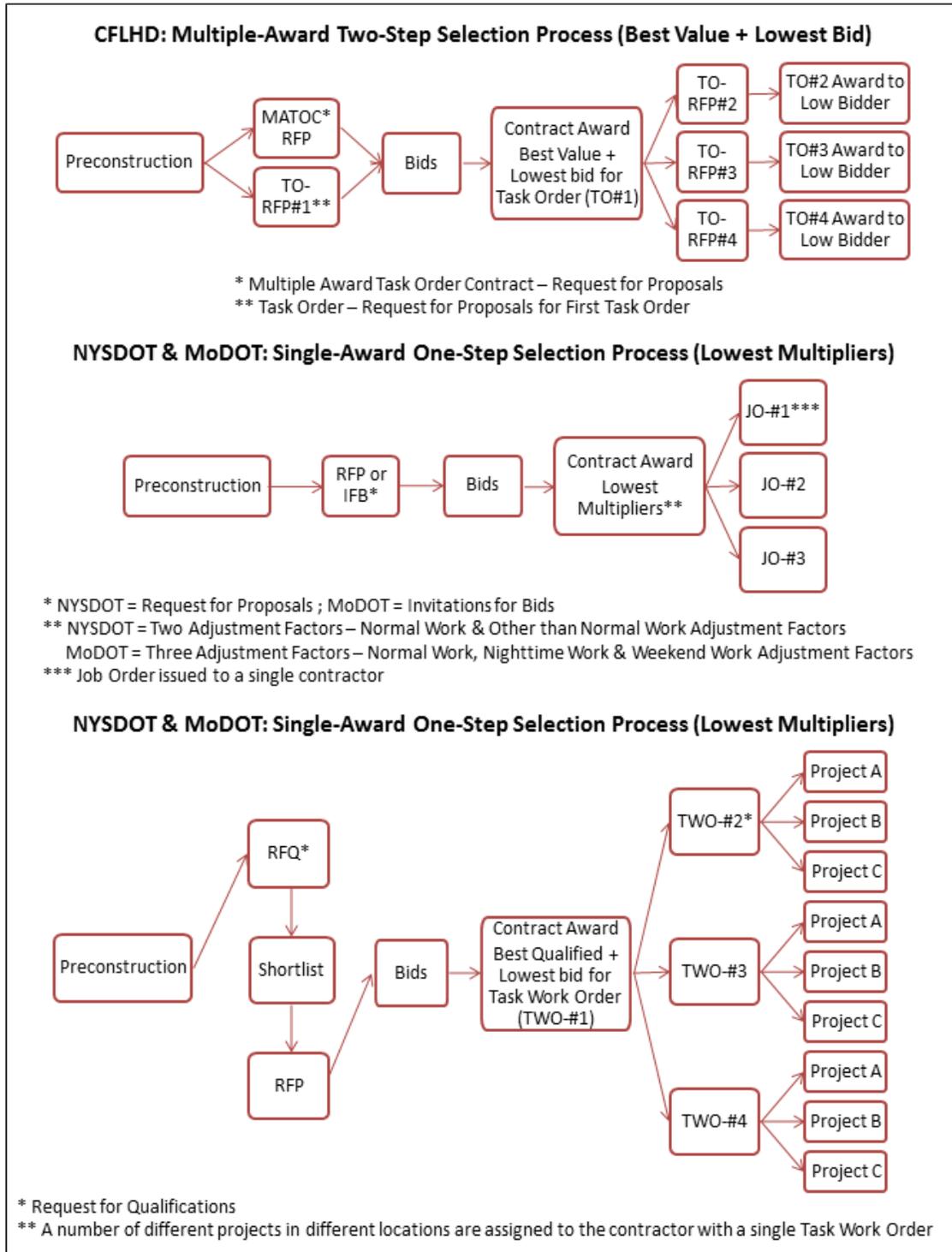


FIGURE 2 Case studies' procurement methods.

Contractor Selection Process

The four case studies utilize two different contractor selection methods. CFLHD and FDOT use a two-step selection process, consisting of evaluating the qualifications and past performance of each proposer followed by receiving bids price for the first job order (task order

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1 in FAR jargon) from short-listed contractors. CFLHD advertises the RFP for the contract
 2 including the technical scope for the first task order. The first step is the evaluation of factors
 3 such as previous experience, logistic skills, qualifications and financial capability of each bidder.
 4 Step-2 involves evaluating the price proposal and selecting the three lowest bids. That group then
 5 is permitted to compete for subsequent task orders on a low bid basis. FDOT follows a similar
 6 selection process to select a single contractor. The main difference is that FDOT develops a Step-
 7 1 shortlist with three or more proposers and only these bidders are requested to submit a full
 8 price and technical proposal for the first job order (“task work order” in FDOT jargon).

9 Alternatively, NYSDOT and MoDOT decided to use a single-step selection approach, in
 10 which contractors are only asked to bid different adjustment factors (also called multipliers)
 11 based on a fixed unit price list included in the solicitation. The price list includes all pay items to
 12 be required for anticipated scope of the contract’s job orders. The adjustment factors comprise
 13 the contractor’s profit and overhead under different working conditions (see Table 3).
 14 Ultimately, the contract is awarded to contractor who bid the overall lowest adjustment factors.
 15

16 **TABLE 3 Adjustment Factors (Multipliers)**

ADJUSTMENT FACTORS	
NYSDOT	MoDOT
Normal Work Adjustment Factor: 7:00 am to 5:00 pm Monday-Friday	Normal Work Adjustment Factor: 6:00 am to 7:30 pm Monday-Friday
Other than Normal Work Adjustment Factor: 5:00 pm to 7:00 am Monday-Friday All day Saturday, Sunday and Holidays	Nighttime Work Adjustment Factor: 7:30 pm to 6:00 am Monday-Thursday
	Weekend Work Adjustment Factor: 7:30 pm Friday - 6:00 am Monday Holidays

17
 18 In addition to the case studies, the research team found that the Massachusetts
 19 Department of Transportation (MassDOT) and MnDOT award IDIQ contracts (termed task order
 20 contracts by both agencies) based on the lowest price list proposed by bidders. Basically, they
 21 advertise a solicitation with a list of pay items and bid quantities based on the first job order plus
 22 other items that may be used on subsequent job orders that must be priced and submitted by
 23 proposers; thus, the contract is awarded to the lowest bid for the bid quantities in the same
 24 manner as a DBB contract for a single project.

25 Considering each agency’s IDIQ contract risk approach with the contractor selection
 26 method allows one to conclude that those agencies adopting higher risk approach utilize the more
 27 complex two-step selection processes in order to ensure the selection of competitive contractors
 28 with relevant experience and qualifications. By doing this, the agency intends to mitigate the
 29 risks of poor quality, late deliveries and contractor default by a rigorous prequalification process
 30 before considering price.
 31

32 **IDIQ Proposal Submittal Contents**

33 The complexity of the procurement processes is also reflected in the amount of requirements to
 34 be submitted by proposer to compete for these contracts (see Table 4). In order to determine the
 35 technical and financial suitability of proposers, CFLHD and FDOT require the submission of a
 36 larger number of requirements whose evaluation implies a greater expenditure of time, and other
 37 resources in the procurement process. However, by awarding larger, longer contracts CFLHD

1 and FDOT minimize the number of procurement actions on a single contract. Thus, the two
 2 agencies need to procure IDIQ services once every one or two years, whereas, NYSDOT and
 3 MoDOT conduct shorter, smaller procurement processes 8 and 30 times per year respectively.
 4

5 **TABLE 4 Agency Submittal Requirements**

Requirements	CFLHD	NYSDOT	FDOT	MoDOT
Organization structure/chart	✓		✓	
Previous relevant contracting experience	✓		✓	
Previous contracts contact information	✓			
Team Work qualifications	✓		✓	
QA/QC program	✓		✓	
Subcontracting plan	✓			
Logistics Plan	✓		✓	
Price list for entire contract			✓	
Price list for first Task Order	✓		✓	
Adjustment Factors (multipliers)		✓		✓
Proof of financial capability	✓		✓	
Proof of bonding capability	✓			
Bid bond	✓	✓		✓

6
 7 **Funding and Payment Provisions**

8 Table 5 presents more information about the IDIQ contracting practices of these four
 9 transportation agencies, specifically about payment provisions. This table also indicates for each
 10 case study how funds were obtained and when they were secured. By checking Table 5, one can
 11 see how agencies adopt different methods to tackle each factor; decisions that are usually made
 12 base on Federal or local regulations, specific contract features or agency convenience.
 13

14 **Table 5 Funding and Payment Provisions**

Provisions	CFLHD	NYSDOT	FDOT	MoDOT
Task Order compensation method	Fixed Price	Fixed Price	Fixed Price	Unit Price
Mobilization	Bided per Job Order	Construction Task Catalog includes some mobilization pay items	(MOT + MOB)** is a percentage of construction cost	Fixed Unit Price List includes pay items for mobilization
Cost Escalation	N/A	Annual adjustments of Adjustment Factors by using CCI published by ENR	Adjustments made to monthly payments based on the PPI published by BLS	Adjustments only to some items on a payment basis using Poten & Partners index
Funding	Federal	Federal (SEP-14)	State & Federal (Federal Safety Funds)	State
When are funds assigned?	When anticipating a Task Order	At the beginning 100% of maximum quantity	Funds for this kind of projects are assigned in July every year	When anticipating a Job Order

**Maintenance of Traffic (MOT) & Mobilization (MOB), paid as a percentage of the construction cost (<20%).

1 After conducting the literature review and analyzing all the case studies, the research
2 team concluded that there is no common practice for dealing with cost escalation on multi-year
3 IDIQ contracts. Each of the case study agencies used different indexes published by different
4 sources. The four agencies included in this report present four distinct alternatives; no cost
5 escalation policy, adjustments by using the Engineering News Record Construction Cost Index
6 the Bureau of Labor Statistics' Producer Price Index and the use of a number of indexes issued
7 by a private engineering consulting company which publishes asphalt market price analysis on a
8 weekly basis. Additionally, the literature showed that some agencies, like the California and
9 South Dakota DOTs use indexes developed specifically from their bid tabulations.. Therefore,
10 this gap in knowledge is a topic for future research. Since multiple-award IDIQ contracts require
11 the pool of IDIQ contractors to bid against each other for each work order, the need to adjust
12 pricing over multiyear contracts is eliminated.

13 14 **Contract Period and Capacity**

15 To better understand each case study agency's method for establishing contract periods
16 and maximum contract amounts, it is necessary to remember the different contracting approaches
17 discussed in a previous section. Information contained in Table 1 reflects how NYSDOT and
18 MoDOT award shorter, smaller contracts, while FDOT awards multi-year, multimillion dollar
19 contract. The table does not show that NYSDOT and MoDOT execute a number of simultaneous
20 IDIQ contracts in a single year, ordering a similar volume of work as FDOT over the same
21 period of time. All of the case study contracts include the possibility of both extending the initial
22 contract period and increasing total capacity of the contract. Both features function to create an
23 incentive since the decision to extend the contract and/or increase the capacity depends on
24 satisfactory contractor performance during the original contract period.

25 Another decision that an agency must make when developing an IDIQ system is whether
26 to stipulate minimum and maximum contract and single work order amounts. This decision is
27 normally governed applicable regulations or statutory constraints, and if it is not, becomes a
28 matter of agency preference. In Federal-aid projects, Part 16 of the FAR obliges agencies to state
29 maximum and minimum amounts for the entire contract, which is seen in case studies that
30 involve Federal aid (CFLHD, NYSDOT and FDOT). While CFLHD and NYSDOT determine a
31 standard minimum total amount to be used in all IDIQ similar contracts, FDOT establishes this
32 minimum amount based on the total cost of the first job order which is awarded along with the
33 contract. In the FDOT DB IDIQ case, the minimum amount for the first job order was \$12.5
34 million. FDOT also permits the bundling of multiple projects in multiple locations on a single
35 job order. The case study contract had 13 job orders. The first job order included 11 different
36 projects which represent more than 60% of the maximum expected cost for the contract. This
37 high amount of work in a single job order clearly demonstrates the level of risk FDOT is willing
38 accept and shows its confidence in its IDIQ contracting approach.

39 40 **CONCLUSIONS AND RECOMMENDATIONS**

41 The following conclusions can be drawn from the above analysis:

- 42
43 • There are benefits of IDIQ contracting practices that were clearly identified by all the
44 interviewees in this study. All of them agree that the implementation of IDIQ techniques
45 accelerates the project delivery period, reduces preconstruction cost, and provides a
46 flexible delivery scheduling. Furthermore, the research team identified that the use of

1 multiple-award IDIQ contracts also promotes price competition and reduce risk of
2 contractor default.

- 3 • Three different IDIQ contracting approaches are being successfully used by the case
4 study agencies. Each approach is related to the risk an agency is willing to accept and the
5 management of its resources.
- 6 • The option to extend the IDIQ contract has two direct functions. First, the agency can
7 exercise these options to manage quality risk by retaining the incumbent contractor with a
8 good performance record. It makes the options to extend function as an incentive to
9 encourage satisfactory performance. Second, the agency can extend the contract to
10 address unexpected factors, like environmental permitting, that delay the execution of
11 specific job orders without the need to execute contract modifications for delay claims.

12
13 Two recommendations are made from the above analysis. First, an initiative by the
14 AASHTO or FHWA is needed to gain and maintain control of the contracting jargon in use
15 across the nation. The research team struggled to make clear connections between various
16 agencies and finally was forced to take a very conservative approach to interpreting the
17 terminology in its content analysis. The second recommendation is that research is needed to
18 develop specific guidance for escalating multi-year IDIQ contracts. Past research (20, 21) has
19 shown that depending on national-level commercial construction cost indices fails to adequately
20 account for local construction price fluctuations and the volatility of construction material prices.
21 The research should do a comparative analysis of the accuracy of national indices versus local
22 indices already in use in states like California and South Dakota and develop a methodology for
23 public agencies to develop their own local construction cost indices for use in not only IDIQ
24 contracts but through their cost engineering program.

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27
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