

Alternative Project Delivery- 360 Degrees- A Perspective from the Inside

Alvin Livingstone, PE
AECOM Technology Services, Inc
Phoenix, Arizona
Danny Wu, PMP, AICP, PTP
Parsons Brinckerhoff
Los Angeles, California

ABSTRACT

Although most Agencies (Owners) have been predisposed to utilizing traditional Design-Bid-Build (DBB) to deliver their projects; the use of Alternative Project Delivery Methods (APDM) is rapidly becoming a trend in the transit industry. For some, Design-Build (DB) and Construction Manager at Risk (CMAR) are viewed as the more economical and expeditious approaches to implementing projects, while the traditional Design-Bid-Build (DBB) and Job Order Contracting (JOC) continue to be used for smaller projects.

Since DB procurement is relatively new in the United States (in transit application) with a growing number of projects being procured since the 1990's; it is important for Owners to get an objective understanding of the benefits and challenges of APDM's so that they can be in a better position to partner with Contractors and Designers without the acrimonious relationships that tends to be evident in DBB project applications.

In this paper, the authors present case-study DB projects and perspectives from the Designers, and Contractors, to help Owners understand how an APDM can be administered and be successful for all.

Appendix A includes a list of participants who were gracious enough to participate in our interviews. The participants, who consisted of representatives from the Owners, Contractors, and, Design Industry were able to

provide insight and a dichotomy of ideas related to their experiences on various levels.

The purpose of the study was to summarize those ideas, opinions, and perspectives that shape the way most organizations manage APDM's, and present it in a format that is both beneficial and constructive to the transit industry. As such, it should be noted that the opinions provided should not be interpreted as the expressed policy or direction associated with the organizations each individual represents.

1. BACKGROUND

There are several Project Delivery systems that are used in transit applications, and although Public Private Partnerships (P3), and JOC are considered APDM's; this paper will focus on DB, DBB, and CMAR/CMGC for comparative purposes.

APDM consist primarily of 2 phases (Pre-Construction services, and Construction phase services). During pre-construction services, the Designer is a partner with the Owner and Contractor. This partnership works closely together to advance the design, evaluate constructability, and establishes a Guarantee Maximum Price (GMP) with allowances and contingencies. In the Construction phase, the designer assures the design is achieved and is available in a limited capacity. They usually respond to request for information (RFI's), review submittals, and perform some design services as needed.

DB/Design Build Operate and Maintain (DBOM) was introduced as a FTA New Starts project delivery method by the Intermodal Transportation Efficiency Act of 1991 (ISTEA). The Federal Transit Administration (FTA) selected several New Starts projects to determine if DB/DBOM could save time, reduce costs, and introduce new technologies. FTA subsequently selected 5 projects to participate in a DB/DBOM demonstration program as follows¹:

- Los Angeles Union Station Intermodal Terminal
- Baltimore Light Rail Transit (LRT) Extension
- San Juan-Tren Urbano
- BART San Francisco Airport Extension
- Northern NJ-Hudson Bergen LRT Line

Since then, Owners, who typically procure their projects traditionally (DBB) have slowly started to venture off into delivering their transit projects via an APDM such as DB or Construction Manager/General Contractor (CM/GC), or Construction Manager at Risk (CMAR).

As this trend continues into the use of APDM's, larger design firms as well as smaller firms will have to adapt to a different way of doing business. Inevitably, design firms will have to forge new relationships with Contractors and become more flexible and creative with their designs. This creativity must leave room for innovation, and allow their clients (who happens to be the contractor in the case of DB) to build a project in a way that is safe, of high-quality, and offers the Contractor the greatest opportunity for financial reward.

Even though we generally think that the APDM's offer an opportunity for more flexibility and innovation in the design process, some designers believe that the design team should be equally as innovative, or creative regardless of whether they are working for the owner or contractor directly.

"Designers do themselves and the Owner a disservice if they don't consider all design options regardless of the delivery method that is being used"

~Diana Kelly, Project Engineer, Gannett Fleming

The Contractor on the other hand is more sophisticated and experienced with APDM, and in most cases have been involved in DB on vertical construction projects, and heavy civil project such as Highways and Bridges.

¹http://www.fta.dot.gov/printer_friendly/12305_4191.htm
1

However in transit applications, many Contractors are still used to the traditional project approach. Nonetheless, with APDM, they have to be a step ahead of the competition putting as much emphasis on selling their qualifications as they did on providing the owner with a fair price.

Any successful program requires a good mix of work types, project delivery systems, and project dollars². Owners need to adapt and think differently about how they do business with the contracting community. They need to embrace the concept associated with a team environment, rather than discussing it in generalities and false pretenses. Owners also need to develop and clearly identify important project parameters to help them make the right decision in selecting an APDM for any specific project.

2. REALITY AND PERCEPTION

There is a general perception that the traditional DBB project will give the owner the best value for the capital investment. Though, there are those that would argue that the "nature of traditional projects" is adversarial by its very nature, and leaves the doors open for claims, cost over-runs, quality issues, litigation, and subsequent resentment between owner and contractor at the completion of the project.

Some owners also have expressed that no matter how well intentioned the parties are at the beginning of the DBB process issues always arise. In some cases partnering will help temper an adversarial relationship, but in a majority of the cases, it was noted that the potential for claims in a traditional DBB project is virtually guaranteed. Thus the perceived savings is usually diminished, and Owners would be better off if they had procured their projects with an APDM.

"In DB, the Owner may save time, but they may not save money"

*~ Bill Hansmire, PE, PhD, Parsons Brinckerhoff (PB)-
(Designer).*

"Time is Money," but not when it comes to determining the savings that DB can offer over the traditional DBB project. There is no way to build a project using one method under certain economic conditions, and then recreate those same conditions and rebuild the "same" project using another delivery method. Hence it is somewhat difficult to evaluate the validity of the

² Bob Burleson, Florida's Alternative Project Delivery, The Contractor's Perspective Presentation-3/13/2013

Alternate Project Delivery-360 Degrees of Perspective from the Inside

Guaranteed Maximum Price (GMP) compared to the traditional low bid process³. Consequently, all we can do is speculate as to the potential cost benefits of one project delivery as oppose to another.

“Since we have no way of comparing data between DB, and DBB for the same project, all we can do is evaluate previous DBB project with our current APDM projects in a few years to see what the actual benefits are” ~ Rick Brown, PE Director of Engineering and Construction - Valley Metro

In a traditional low bid scenario, the owner usually realizes a savings up front, but by the end of the project; the Contractor usually makes up for the price with claims and change orders. For this reason many owners, believe that if an APDM is used; then the owner can get the best value without being overwhelmed by claims.

“APDM is not going to necessarily save you a lot of money. However, it will get you the best product for your money.”

~ Wylie Bearup, PE, PhD City of Phoenix-City Engineer (Owner)

The following is an example of a successful DB project that was completed by the City of Phoenix in 2008.

Case Study No.1 Arizona State University (ASU) Walter Cronkite School of Journalism



Project Budget: Approximately \$71M

Project Schedule: 1 Year

Owner: City of Phoenix

This project had an aggressive schedule. It was done utilizing a DB-1 Step Procurement, and was qualifications based.

In this example, the owner literally opened their books to the Contractor, and provided them with the criteria/programming for the facility, the overall budget including permitting, internal staffing, and other soft costs. In effect, the owner gave the contractor full access. There was transparency from day 1.

“It would be beneficial to the contracting community if the owner discloses the proposed project budget up front. The contractor would like to see the entire budget-They prefer transparency. However, that transparency should be maintained to a certain point...”

~ Paul Ochs, Ames Construction- (Contractor)

Contractors want the owner to be transparent, but they should also extend that same level of transparency to the owner. This kind of transparency is extremely unusual in the world of APDM, but in this case it worked. With this open approach, the Contractor responded and a team atmosphere was formed in an environment where trust and collaboration could truly thrive. The project was subsequently completed on time and within the GMP.

It was evident that in this type of climate, the Contractor wanted to do a good job for the client without having to worry about interpretation of scope, and out of scope work. The Contractor realized that if they did not foster a positive relationship with the Owner; their chances of doing more business for that Owner would be in jeopardy. The Contractor also knew that they were auditioning for next project, and wanted to be looked upon favorably.

“The Contractor is not in it for one project. The Contractor is in it for the long term, and would like to work for the Client again”

~Andy Peplow, Vice President, Kiewit Construction

Conclusion:

Even though this example is not a transit project, it does offer some perspective and concepts that can be beneficial in transit applications.

3. WHAT TYPE OF PROJECT DELIVERY IS BEST?

It is important for Owners to understand themselves as an organization before determining a preferred project delivery method. They need to understand what is

³ TCRP Report 131, page 20

Alternate Project Delivery-360 Degrees of Perspective from the Inside

important to them on a project. Is it the schedule? Is budget an issue? Do they want more involvement or require a considerable amount of 3rd party input and interaction? Are there community imposed restrictions? These are all important questions to ask before selecting an APDM.

The Transit Cooperative Research Program (TCRP) has published Report 131 (A Guidebook for the Evaluation of Project Delivery Methods) in 2009 that can provide additional guidance to Owners to help determine the appropriate project delivery method for any specific project.

Use of DBB

DBB is a delivery method in which the Owner hires a Designer to design a project based upon the Owner's programming requirements. This delivery method functions linearly and usually requires more time to implement (6 to 12 months). Once the design is complete; the Owner packages the design for bid solicitation. This process ensures that Owner maintains control over the design, but the Owner is somewhat at a disadvantage with their schedule. This is one of the main reasons that Owner choose to deliver their project with an APDM.

"The decision to procure a project utilizing DB is usually tied to schedule as opposed to costs..."
~ Linneth Riley Hall, Sound Transit

Use of CMAR/CMGC

CMAR is a process in which the Owner selects a Designer and a Contractor concurrently to allow the Contractor to be active participants in the design process. The CMAR is hired on a qualifications basis only, and price is usually not a factor. The Contractor offers Pre-Construction phase services including Value Engineering, cost estimating, design, and constructability reviews, and provides input to the designer as a member of the project team. This allows the Contractor to become thoroughly familiar with the design before submitting a GMP to the owner. Ultimately CMAR works best when each team member understands their role and responsibility in the process.

"While I believe that DB and CMAR would tend to be more collaborative than DBB, I believe that CMAR may be more favorable to the Owner. In particular, the design has the benefit of input from the construction contractor, and the owner has control over the design...."
~Diane Nakano, SACRT (Owner)

States such as Arizona and Oregon use CMAR extensively in public application. However, the FTA will not commit federal funds on CMAR projects unless there

are changes in State laws to include price as a component in the evaluation criteria for selecting a Contractor.

Arizona currently has a bill pending in the legislature that will include the following paraphrased language: "Public Owners can choose a Contractor on Qualifications only, except when Federal Agencies (FAA and FTA), require price as a component"

This bill should become law by the end of summer 2013, and will sunset in 2018. This bill is an important step for transit in Arizona, and could open door for FTA to allow CMAR to be used in transit applications in the State.

Likewise CM/GC is procured in a similar fashion as CMAR; the only difference is that a price component is usually included in the selection process. Utah DOT, Utah Transportation Authority (UTA), and the Federal Highway Administration utilize the CM/GC process, and have had a successful track record.

In either case, the owner is not locked into accepting a GMP if they believe that the price is not competitive. The Owner still can cancel the contract after the pre-construction phase, and issue a solicitation for competitive bids. Therefore it behooves the Contractor to negotiate in good faith, and provide a fair and equitable price to the Owner, so their services can be retained for the construction contract.

Most Owners have DBB management experience, and should have most of the skills necessary to manage CMAR because of the similarities between CMAR and DBB. One missing skill may be negotiating the Pre-construction services fee and the GMP in CMAR.⁴

Some Owners are not familiar with CMAR even though CMAR has been used in the private sector for many years. In fact, unlike DB, where there is legislation throughout several states; many states are still silent on CMAR and not all states use the same definitions for the categories of construction.⁵

Use of DB

DB procurement is a process in which the Owner selects a Design and Constructor as one entity. This type of relationship offers the owner the luxury of having a "one stop shop," but not all owners are prepared, or equipped to take on a DB Project. In fact, most of the Contractors and Designer interviewed stated that "Owners should have more experience staff to help them through the

⁴ TCRP Report 131, page 26

⁵ Association of General Contractors Of America Web Site, WWW.agc.org.

Alternate Project Delivery-360 Degrees of Perspective from the Inside

process.” On the other hand (to their credit), some Owners recognized this fact, and oftentimes hire Designers, and/or experience staff to assist them through the process.

*“Owners should have smart staff that are balanced and knowledgeable about both Construction and Design”
~ Michael Ladino, Legal Counsel, Valley Metro (Owner)*

DB is regarded as the fastest project delivery approach available to the transit industry. Therefore, if an Owner has a requirement to expedite a project, know what they want, along with good bridging documents (project definition), DB should be the project delivery mechanism of choice.

*“DB offers schedule advantages and savings on average of 8-10 months over DBB on LACMTA’s transit project”
This translates into 8-10 months of savings associated with escalation costs, and also reduces the Owners administrative soft costs”
~ KN Murthy” LACMTA*

Some Owners would prefer to have more control over the design because there are uncertainties in the scope and definition of their projects. This can be disastrous, especially in the case where a contract is procured as a DB, but the Owner reverts to a DBB style or way of doing business. In this case, DB may not be the best approach for an Owner.

“The owner needs to be really clear about what the product is, and what they want. Get it right in the Qualification documents”

~Tom Wolf, Stantec Consulting Engineers

“Owners can write some of their requirements and language into the RFQ and RFP documents. Ultimately Owners do not want to limit their control, but they do not want the contractor to run loose either”

~ Paul Ochs, Ames Construction

“The owner should do the least amount of design as possible if they would like to go DB”

~ Giri Taksali, Vice President STV

Preparing Staff for APDM

“Staff may not be geared up for managing DB. This also applies to the culture for 3rd Parties as well. They are not used to DB, because it is not their standard process, hence they treat DB as DBB project”

~ KN Murthy, LACMTA

In most cases for Owners with minimal experience and staff familiar with APDM; it is imperative that they, as well as 3rd party affiliated with the project be educated about the process. If possible, Owners should hire staff with exposure and familiarity to the APDM process.

As an example, Sacramento Regional Transit (SACRT) hired consultant staff with expert experience in implementing DB transit projects, and the Owner utilized the lessons learned from the process as a tutorial for use on future projects.

“Owners do not always fully understand the DB process, but sometimes Owners have to go through it to get a better understanding...” Monica Born, PE “Parsons Brinckerhoff

Case Study No. 2-Green Line-To the River District



Project Budget: \$42M

Project Schedule: 2-1/2 Years

Owner: Sacramento Regional Transportation (SACRT)

The Green Line-To the River District is a 1.1 mile DB project that was recently completed by SACRT, and is the first phase of the Green Line to the Airport (also referred to as the Downtown Natomas Airport light rail extension) that will extend light rail 12.8 miles north from downtown Sacramento to the Sacramento International Airport⁶. It was the first horizontal DB light rail project for SACRT.

During the course of this project, it became apparent that 3rd party and City reviews would play a huge role in impacting the project schedule. Although, there were other contributing factors, SACRT did not benefit from the savings attributed to the project schedule as typically expected in a DB model. Rather they were faced with significant challenges with coordinating the execution of the contract, in conjunction with prolonged design reviews by 3rd parties. These limitations stymied the contractor’s ability to provide the full array of services and benefits of expediency that DB typically offers.

⁶ <http://www.sacrt.com/dna/mos-1/default.html>

Alternate Project Delivery-360 Degrees of Perspective from the Inside

“A project that was procured DB felt more like a DBB with all of the design reviews that were required by 3rd Parties.”

~ Diane Nakano, SACRT

Conclusion:

This DB project may have had more success with the schedule delivery if the requirements and expectation for the 3rd parties was synergized with the Owners expectations of the process. This issue can usually be resolved by solidifying cooperative agreements in advance of the RFQ/RFP process. However, these agreements only work if the agreement are honored, and can be enforced in the event of a breach by any one party. If not, then the Owner adds another dimension of risk to their contract that they did not anticipate, or account for in the GMP.

Ultimately, this project may have been a good candidate for CMAR/CMGC, as the owner could retain some semblance of control over the design process, while still getting the benefits and innovation of a Contractor providing pre-construction services. Unfortunately, CMAR is not an approved delivery method in the State of California, and therefore could not be considered as an option.

4. WHEN IS THE BEST TIME TO DECIDE ON THE PROJECT DELIVERY?

According to the FTA recommendation, Owners can process the pre-qualifications for DB shortly after FTA issues its approval for entry in the Preliminary Engineering (PE) phase.

Although the official Notice to Proceed (NTP) usually does not occur until after the full funding grant agreement (FFGA), the Owner can in some cases award the contract prior to the FTA executing the FFGA⁷, as long as the work is outlined in the Letter of No Prejudice (LONP) issued by the FTA.

During the course of this research, we obtained consensus from Owners, Designer, and Contractors that believed that the decision on the type of project delivery method to be used on any specific transit project should be determined early in the planning and/or design process. While some stated that this decision should be made during the Environmental phase, others felt the decision should be made in the early stages of PE. This is important because the FTA usually requires that a Project Management Plan (PMP) be in place prior to them issuing an approval to enter into final design. Therefore, it is essential that the Owner knows how they are going to

procure a project, so that they can prepare and administer the appropriate staff for the project.

“The FTA usually wants to see a PMP before you enter into final design”

~ Harvey Estrada, PE, Valley Metro

Even though, the ideal approach would be to make the decision as early as the environmental phase; this is not always the case. In some cases the decision is usually not made until the PE phase is near completion, or as Case Study No. 3 would suggest; the decision (although seldom) can be made during the final design process.

Case Study No.3 Valley Metro Rail-Central Mesa Extension (CME)



Project Budget: \$199M

Project Schedule: 3 Years

Owner: Valley Metro

The Central Mesa Light Rail extension is a 3.1 mile Light Rail Transit project that was initially procured as a traditional DBB project. However, Valley Metro changed their project delivery from DBB to DB in the midst of Final Design. One of the key factors in making this decision was a direct result of the construction climate and economic conditions at the time. The construction market was still somewhat volatile, and Valley Metro had legitimate concerns that a project procured in a low bid environment would ultimately lead to claims, and a poor quality product.

After making an unprecedented move to cancel the design contract; The Owner moved quickly to secure the services of a DB team, and within 10 months, the Owner was able to secure a Contractor.

Conclusion:

The benefits of procuring this project as a DB will not be fully realized until the project is completed. Despite that fact, the convenience and flexibility of APDM is evident, as the owner was able to transition from one delivery method to another in a relatively short period of time without any major impacts to budget and schedule.

5. THE IDEAL BALANCE

⁷ http://www.fta.dot.gov/printer_friendly/12305_4192.html

Alternate Project Delivery-360 Degrees of Perspective from the Inside

Regardless of what delivery method is chosen; it is apparent that a balance should be reached between the Owner, Contractor, and Designer (Also reference Figure 1).

Co-Location of Team

One of the ways of reaching this balance is co-location of the project team which should include the Owner, Designer, Contractor, and 3rd Parties inclusive of City Owners, Utility Companies, and any stakeholders that have a direct impact on the success of the project. Ironically, many owners using APDM’s already co-locate to some degree, but the limit to their co-location oftentimes neglects the inclusion of the 3rd Parties.

There are many benefits to co-locating including the following as stated in a technical report prepared by Stephane Denerolle in June of 2011 in association with University of California, Berkeley, and DPR construction:

- Design professionals embrace true collaboration with suppliers and builders-collectively exploring problems and jointly developing solutions.
- Suppliers and builders understand and respect designers and learn how to contribute and participate in project definition and design processes.
- Design solutions are developed with cost, schedule, and constructability as design criteria.
- The incentives of all team members are aligned with pursuit of project objectives.⁸

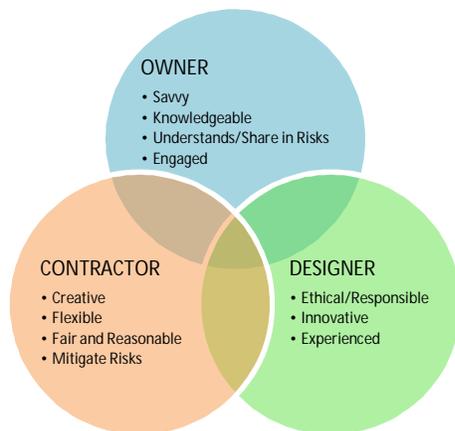


Figure 1. (Achieving Balance and Transparency)

⁸ Technical Report, Stephane Denerolle “The application of Target Value Design to the design phase of 3 hospital projects” June 2011

The Owner’s Role

Everything starts with the Owner. The Owner is responsible for the program, secures funding, and ultimately selects how a project will be delivered. Therefore the success of a project is typically dictated by the experience and preparation of the Owner.

“The owner is the key... they set the tone. The most successful APDM projects are the project where the owner was engaged, and encouraged the contractor and the designer to work together”

~ Mike Berry, PE - Pre Construction Manager Sundt Construction

Table 1 provides an array of the project delivery methods along with the choices for each firm or Owner. The majority of interviewees did not have a preference on the project delivery method, but no one specifically chose DBB either. In fact, the survey showed that the majority of firms preferred working on an APDM projects over the traditional DBB project delivery structure.

“All delivery methods can be good for all parties if everyone does their jobs”

~ Andy Peplow, Vice President, Kiewit Construction

The choice on the preferred project delivery method was usually predicated on the role of the interviewees within their respective organizations. For example a design engineer would not be too concerned about the choice between DB and DBB, because “work is work” to them. However a project manager (PM), Vice President (VP), or Project Director would offer a different perspective because they interact with each other on a higher level; therefore the results of this survey although subjective provides a general sample of the sentiments of the transit industry.

Table 1

FIRM/OWNER	NO PREFERENCE	DBB	DB	CMAR-CM/GC
AMES CONSTRUCTION	✓			
AECOM	✓			
GANNETT FLEMING	✓			
HNTB	✓			
PB			✓	
VALLEY METRO			✓	✓

Alternate Project Delivery-360 Degrees of Perspective from the Inside

FIRM/OWNER	NO PREFERENCE	DBB	DB	CMAR-CM/GC
CITY OF PHOENIX			✓	✓
LACMTA	✓			
STANTEC	✓			
SACRT				✓
BROWN/CALDWELL			✓	
SUNDT CONSTRUCTION			✓	✓
NYC (Transit)		✓	✓	
KIEWIT			✓	✓
SOUND TRANSIT				

In all of these applications; it should be noted that the specific circumstances and scope associated with a project should ultimately dictate which delivery method is chosen.

Innovation

The Designer should always be on the cutting edge of innovation by identifying ways to improve their design, while being aware of the budget implication associated with their project.

“Design Build work is more favorable to the designer, because it allows the design to understand the price implication of their design options”
 ~David Levy, Sr Vice President HNTB

In contrast, there are some designers that believe that Contractors do not embrace innovation the same way as designers because Contractors do not want to be the first to try something new. For that matter neither do Owners.

Risks

The contractor always considers the risks, while the owner oftentimes prefers to put most (if not all) of the risk onto the Contractor.

“There are two (2) types of contractors in the world; those that price risks, and those that do not usually go out of business...” ~ David Levy, HNTB

“Owners typically like to transfer the risk to the Contractor, especially in cases where there is new technology being used....”
 ~ Debbie Chin, New York City Transit.

“Responsible contractors will make sure they cover their costs for risks associated with the project.”
 ~ Craig Tweed, Brown and Caldwell

In DB application, the Owner often puts the onus on the Contractor to take on most of the risks, but there are usually costs implications associated with those risks that ultimately affect the Owner’s budget. In General, the Owner can reduce some of their costs if they were more willing to share some of the risks.

WHO IS REALLY AT RISK?			
	DB	DBB	CMAR/CM/GC
OWNER		✓	✓
DESIGNER		✓	✓
CONTRACTOR	✓		✓

In DB, the Owner usually assigns most of the risks to the Contractor. In DBB, the Owner usually takes on most of the Risk, and with CMAR/CM/GC; the risks is usually shared between the Owner, Designer, and Contractor.

“Usually in DB; the design should be completed to a 30% level. The further you go in design, the more the risk is shifted from the Contractor to the Owner”
 ~ Tracy Reed, Deputy Project Director, Sound Transit

If the owner is willing to take on more risk, then they can reduce the cost to build these projects. As an example on tunneling projects, one of the biggest risks is associated with unanticipated soil conditions, and utility relocations. Owners should consider taking on more risk in these areas by performing a full geotechnical survey, and utility investigation in advance of advertising these projects. This initial investment is a relative small when compared to what the contractor will take into consideration when preparing their bids. Owners have to choose. “pay a little now, or pay a lot later.”

Case Study No. 4



Project Budget: \$560M (Construction)

Alternate Project Delivery-360 Degrees of Perspective from the Inside

Schedule: Opens 2016

Owner: Expo Line Construction Authority

Expo Phase 2 is a 6.6 mile light rail transit project that was procured using the DB APDM approach but in a two step process. First, the Owner narrowed down two DB teams to both complete the Preliminary Engineering. The Owner did their research and shared in some of the risk by providing a geotechnical, soil investigation and utility survey before the Contractors were solicited for Preliminary Engineering. After the Contractors were selected; additional investigations were conducted by the Owner in coordination with both DB teams during the Preliminary Engineering in order to further refine the design and cost. Next at the end of the Preliminary Engineering, both teams submitted their design and lump sum, fixed price. One DB team was then selected to continue with the final design and construction and was able to utilize the not-selected DB team Preliminary Engineering design. As part of the contract documents, the Owner provided geotechnical, soil investigation, and utility survey finalized documents were included as Reliable Documents that the Contractor could rely upon for accuracy and completeness.

“Owners should know their projects better than the Contractor, so that they can be proactive and be in better position to work with the Contractor” Monica Born, PE Parson Brinckerhoff (formerly with Expo Authority)

Best and Final Offer (BAFO)

Most Contractors are not in favor of the “Best and Final Offer Approach (BAFO) unless the owner has a legitimate reason to ask the DB team to revisit their numbers. If it’s a random request with no rationale; Contractors tend to believe that the Owners are just trying to squeeze more dollars out of the Contractor for the sake of doing so.

Below are some examples of acceptable reasons for BAFO’s from the Contracting/Consulting community:

- The bid price comes in above the project budget
- If a pre-qualified contractor bid is extremely low, and the owner feels uncomfortable.
- If there is a legitimate clarification in the Scope of Work.

Part of the reasons this was expressed is because Contractors/Designer spends an enormous amount of time and money on these proposals/bids, and much of their expenses are sunk costs. So if an owner has enough information to make a selection; they should exercise

their right to do so, rather than put the contractor through another round of bid preparations.

“Owners should figure out a way of making it less costly to propose on smaller projects as compared to larger projects”

~ Patrick Nicholson, AECOM

Some owners offer a stipend for the unsuccessful shortlisted APDM team, but the level or amount of a stipend is usually governed by State Law and/or local jurisdictional requirements. Though the stipend covers only a fraction of the cost that Designers and Contractors expends on preparing for these projects; there is still room for improvements on the amount of stipends that should be granted.

“DB Contractors usually lose their shirts in a DB procurement-they lose a lot of money in sweat equity alone”.

~ Pam Iacovo, Gannett Fleming

Alternatives to Short-listing

Interestingly enough, we came across a process in the State of Florida that was presented by Bob Burleson with the Florida Transportation Builders Association in March of 2013.

For years Florida DOT procured their DB projects utilizing the short listing process like most states. So during the downturn in the economy, Many more contractors were pursuing a limited number of projects, resulting in more competition, and a frustrating process for Contractors (who all believed they are qualified) to find out that they did not qualify, or make the shortlist.

The fact is the short listing process is extremely subjective, and there usually are inconsistencies in the evaluation process. Therefore in 2011 the State of Florida transitioned into an Expanded Letter of Interest (ELOI) process.

This process allowed any team to pursue a project through the proposal phase, and still have the opportunity to win the job. The first step in the process still required the DB team to submit their qualifications. The Owner would provide grades to each team in the range of 1-20. Teams with grades in the range of 17-20 almost always moved forward, and team below 12 generally did not (although they could if they chose to do so). The teams in the middle would have to make a business decision, and must declare their intention to move forward within a week of

Alternate Project Delivery-360 Degrees of Perspective from the Inside

the ELOI submittal. Below is a sample of the ELOI score distribution:

Sample ELOI Score Distribution

1) Past Performance Evaluations:	Total 5 Points
Contractor grades	
Design Consultant grades	
Performance history with other states or agencies if none with the Department	
2) Project Experience and Resources:	Total 5 Points
Design-Build experience of the Contractor and Design Consultant	
Similar types of work experience	
Contractor Experience Modification Rating (Current Year)	
Firm organization, staffing plan, resources, location	
Environmental Record	
3) Project Approach and Understanding of Critical Issues:	Total 8 Points
Outline plan for completing the work	
Approach and understanding	
Coordination Plan	
4) Other content in the Expanded Letter of Interest	Total 2 Points



With this process 4-5 teams would move forward versus the 3-4 teams that are typically shortlisted. Stipends were also paid out to the 2nd and 3rd highest ELOI scores. Therefore if a team was not in the top 3 in ELOI score, but continued on through the RFP without being selected; they were not entitled to a stipend.

This process was developed in Florida with support from the Contracting Industry to help formulate legislation to make this a possibility.

Evaluation Criteria

The evaluation criteria should not be skewed so much that price should be the final determining factor. Rather there should be a balance. Some interviewees believe that the balance should be in the range of 60% qualifications vs. 40% price, while others believe that too much emphasis on the proposals does not guarantee that the Owner will get the best Contractor for their project.

The evaluation criteria technical scoring is also subjective, and is usually predicated on the individuals doing the scoring of the proposals. Owner should provide clear, consistent descriptions of how the technical score will be derived⁹.

Bridging Documents and Project Definition

"Owners should only spend the minimum amount of design effort required to prepare DB design documents (Say 10%)....Any more design effort than that is wasted

⁹ Bob Burleson, Florida's Alternative Project Delivery, The Contractor's Perspective Presentation-3/13/2013

design effort, since you pay the contractor to design the project anyway"

~ Matt Girard, AECOM (Designer)

The more design the Owner does, the more prescriptive the design becomes which inevitably leads to less flexibility for the DB. However, there are some circumstances where the Owner prefers to do more design in the initial phases to avoid the exposure to risks associated with the advance acquisition of right-of-way ROW.

Overall, there may be other reasons to advance the design beyond the 10% mark, but Owners should avoid being too prescriptive in their project requirements because the Contractor has to terms and conditions the Owner sets. Therefore, the project definition should be flexible enough to allow for Alternative Technical Concepts (ATC's) that can provide Contractors with some leeway to creatively present plausible design concepts. Generally speaking, a good RFP will keep ATC's to a minimum. RFP's should state explicitly any "musts" or "must nots," as they are not eligible for and ATC.

"if you take the design too far, you are killing the contractor's ability to be innovative because there are too many prescriptive elements for the DB to be effective" ~ Giri Taksali, Vice President, STV

Understanding A GMP

The GMP does not eliminate the need for change orders. Many owners sometimes get this terms mixed up, and operate under the premise that a GMP means that they can get everything they want for one fixed price. Although this would be a great feature for the Owner, it is not practical as the Owner is only entitled to services rendered in accordance with the negotiated assumptions and clarifications that typically accompany a Contractor's GMP.

"Owners oftentimes think that GMP means "no Change orders" however the GMP is based on a defined scope of work"

~ Mike Berry, PE, Sundt Construction

6. SUMMARY

This paper contains only a sample of the feedback associated with the participants interviewed, and although it may not be a full representation of the hundreds of transit agencies, Contractors, and Designers across the country, it does offer some valuable insight into ways that public transportation can maximize the use of APDM's and be successful on their projects.

Alternate Project Delivery-360 Degrees of Perspective from the Inside

There is still work to be done, and so much more to be explored. Therefore, it is incumbent upon the industry professional to continue the dialogue, and be empathetic to viewpoints from each side to ensure the long-term viability of APDM project in transit.

STUDY PARTICIPANTS

Matthew Girard, Sr. Vice President, AECOM
Patrick Nicholson, Associate Vice president, AECOM
William Hansmire, PE, PhD, Parsons Brinckerhoff (PB)
Giri Taksali, STV
David Levy, HNTB
Wylie Bearup, PE, PhD, City Engineer, City of Phoenix
Mike Ladino, Esq. Legal Counsel, Valley Metro
Craig Tweed, Construction Service Manager, Brown and Caldwell
Rick Brown, PE, Valley Metro (METRO)
Murthy Krishnial, LACMTA
Debbie Chin PE, NYCTA
Diane Nakano, AGM, Engineering and Construction, Sacramento Regional Transit District (SACRT)
Tom Wolf, PE Stantec Consulting Engineers
Karen Urban, PE Gannett Fleming
David Levy, Sr. Vice President, HNTB
Paul Ochs, Design Build Manager, Ames Construction
Mike Berry PE, Alternative Delivery Manager, Sundt Construction
Andy Peplow, Vice President, Kiewit Construction
Russell Smith, Contracts Administrator -Valley Metro
Tracy Reed, University Link-Deputy project Director, Sound Transit
Linneth Riley-Hall – Construction Contracts Division Manager, Sound Transit
Monica Born, PE, Parson Brinckerhoff (PB) former Project Director for Expo Phase 2 Project
Bob Bureson, President, Florida Transportation Builders' Association
Harvey Estrada, Project Manager-Facilities Engineering-Valley Metro