Goal
How Florida DOT administers long term concessions during the Design and Construction phase of a P3.
How we arrived at the process we use

Major Phases related to contract administration
- Procurement
- Technical Proposal
- Concession Agreement
- Construction
- O&M During Construction
- Design

Perspective
The contract administration on a Demand Risk P3 will be different from the approach FDOT is using on our Availability Payment P3s.

What I will cover today will only scratch the surface of how FDOT administers a P3 during the Design & Construction (D&C) phase. For this presentation, I will be referring specifically to the I4 project and in some cases to provide some in-the-weeds examples.

Agenda
- Points to Consider and Lessons Learned
- Florida’s Experience with Long Term Concessions
- Details on Contract Administration (Design & Construction)

Points to Consider and Lessons Learned
- “You Don’t Know What You Don’t Know” – Clay McGonagill Jr., FDOT
- The 4Es for P3s.....Everything Affects Everything Else
- You are what you were when
Florida’s Current Program for Long Term Concessions – DBFOM P3s

- Three DBFOM P3s:
  - Port of Miami Tunnel & I 95 are in the O & M phase
  - I-4 Ultimate is in the design and construction phase
- DBFOM contract administration is substantially different from the other means of procurement
  Projects that were not as successful - Alley, HSR and FCOB

FDOT – Highly Privatized

- Construction 100%
- Toll Collection 99%
- Design 80%
- Maintenance 80%

All vital docs making up the ‘backstop’ to the CA

Who’s on the Team

- Central Office – P3 Team
  - Legal with External Legal and Insurance Technical Advisors
  - Financial with External Advisors
  - Engineering with External Advisors
- District Office or Project Management Team
  - Engineering and with consultant support
  - Construction Management with consultant support

FDOT Roles and Responsibilities

FDOT monitors the concessionaire for contract compliance
Concessionaire has an overarching Project Management Plan, QC/QA Plan for Design and Construction, Corridor Master Plan, O&M Plan, etc.
### Payment versus Contract Compliance or Performance

- How does FDOT pay the concessionaire
- What are the consequences of noncompliance

### Periodic Payments

- FDOT included Periodic Payments during construction (beginning ~two years after construction began)
  - Funding was available
  - Total cost of the project could be reduced
  - Periodic Payments will be paid for work completed in accordance with the contract if no disputed amounts by FDOT
  - First periodic payment is $45M
    - Amount increases during D&C period
    - Paid at 90 days intervals

### Availability Payments

- Beginning at substantial completion, the concessionaire is eligible to receive Availability Payments as long as the facility is fully functional
  - The annual Availability Payment starts at $75M and is indexed over the term of the contract

### Final Acceptance Payments

- Two Final Acceptance Payments
  - First is $330M due when the punch list items have been completed
  - Second payment of $388M

### Failure to comply with the contract

- Points for noncompliance - example concessionaire's failure to respond to an incident in a timely
- Accumulation of points:
  - Provides the concessionaire an incentive to self monitor and report and to improve;
  - The accumulating of points could lead to additional oversight by FDOT at the concessionaire’s expense

- FDOT may also assess a monetary adjustment for certain instances
- Noncompliance points and monetary deductions can both apply to an instance

Lane closure in I-4 during rush hour - $69,000/hour
Contract Administration – D&C

- When does it start ... begins with drafting of the RFP
- Lessons learned from other P3s and DB
- Precedents set by other owners on P3s based on the owner’s needs
- Precedents set in recent P3 transactions mainly driven by industry
- One shot at getting the concession agreement right

Construction Specifications

- Tailored the specs to alternative contracting, i.e., Division 1 DB
- Incorporate into the Concession Agreement (CA)
- Created a document to linked traditional specs to the CA
- Division 2 and 3 are backstop documents to the CA
- Developed a document to define who is the engineer in the specification for the Division 2 and 3 sections

Design Manual and Standards

- Governing Documents revised to take into account that the DB firm could interpret the design standards different than the agency, e.g. should versus shall:
  - Road Rangers
  - Emergency Response
  - ITS
  - Roadway and structures design
- All these elements were then reviewed in light of the P3 procurement method.

Every Everything Else

- Definition of Relief Events
- Headline Risks
- Term length
- Toll Interoperative requirements
- Project Cost feasibility
- Agency monitoring of performance measures
- Restrictions on Equity Transfers and Changes of Control of Concessionaire
- Handback requirements
- Minimum standards/ performance measures
- Performance bond amount
- Toll Interoperative requirements

Related items

- Contract performance and payment securities (Bonds)
  - Periodic Payments
  - Restrictions on the amount of Periodic payments (70%)

- Handback requirements are related to
  - Project Cost feasibility
  - Term length - MRB has a 100 life for structure and 55 year term
  - Agency monitoring of performance measures

- Pavement Performance and Headline Risk
  - FDOT’s monitoring of the first P3 included a focused pavement condition survey and concession O&M criteria
  - While pavement performance is always the concessionaire’s responsibility, FDOT wanted to know how the pavement was performing from the start. We assumed the concessionaire would propose a “High Performance Pavement” They did not!
Everything Effects Everything Else

O&M Performance Measures versus Method Specification
- Current method of monitoring performance
  - Bridge Inspection
  - Pavement Condition Survey (FDOT pavement design normally results in distress at the surface...final overly 3-6 years before end of concession)
  - Asset Maintenance Contracts
  - ITS

Everything Effects Everything Else

Performance Standard vs method specification
- Must meet certain standard specified in contract such as use granite in the friction course. (Analysis of wet weather crashes, Alabama Blue Limestone)
- ITS cameras to be replaced every “X” years versus a performance specification

Contract Administration - When
- Legal, financial, and engineering technical advisors - under contract well before the procurement begins
- Construction management consultant (COS) - prior to the development of the final concession agreement
- FDOT Central Office and District Office Subject Matter Experts (Labor Compliance, Foundations, MOT, Structures, etc.)

Contract Administration – When (cont.)
- Weekly teleconference throughout the D&C period
- Management Review Board (MRB)
  - CO Engineering, District Upper Management and the Concessionaire meet once every two months face to face
  - Pre MRB meeting held for Project Team to brief the FDOT members of the MRB

DBFOM Players
- FDOT
  - Project Team
  - Design/Construction Management (Management of Design, Construction and Engineering of the Project)
- Equity Members
- Concessionaire
  - e.g. Bank, Bonds, FHA
- Design Build Joint Venture
- Lead Designers
- Lead Contractors
- Lead Operations and Maintenance Contractor
- Leinders
- Sponsors (50/50)
- Joint Venture (40/30/30)
- DB Agreement
- Financing Agreements
- Concession Agreement
- Equity Contribution Agreement
- O&M Agreement
- O&M Works Agreement
- Lenders

Project Team Structure
- Design/Construction Period 2014-2020
How do we do it?

- Experienced and well educated personnel
- Know what the contract requirements
  - Requirements Verification Database
- What is important to monitor
  - Risk based monitoring

Tracking Contract Requirements

- Requirements Verification Database (RVD)
  - Developed by the COS
  - Collection of requirements extracted from the Contract Documents
    - Concession Agreement
    - Specifications and Standards associated with the Final Design
    - Permits and other Project Commitments
- Over 10,000 individual requirements

COS audits – Risk based monitoring

- What is determined to be critical has a higher priority regarding auditing/monitoring
- Distinct ‘Work Elements’ have been established to represent the different Project elements such as Deck Placement – Category II structures, Embankment, Erosion Control, Payrolls, etc.

Risk based Monitoring

Each ‘Work Element’ falls into one of three audit categories:

- Risk Rated
- Frequency Based
- Ad-hoc

Risk based Monitoring

- Actual contract compliance or concerns will override an initial audit plan assumption
- Mass concrete monitoring and mechanically stabilized earth wall construction

Integrated systems and data bases to track and monitor

- Concessionaires Quality Assurance-Self Monitoring
- FDOT – COS
- Contractor
  - QC
  - QA notifications
- Designer
  - QC/QA Plans for design
  - Submittals

Why?...Trends, areas of concern, document control, contract compliance etc.
Self-monitoring/self-reporting
The CA requires self-monitoring/self-reporting by the Concessionaire
- Construction Availability Faults e.g. Service Patrol,
- Construction O&M Violations e.g. Lighting, Mowing,
- Construction Closures e.g. Lane, Express Lane, ramps, streets, etc. closed or blocked

Paradigm shift

Labor Compliance
LCP Tracker Electronic Payroll System
- Web based software used to collect, verify and manage prevailing wage certified payrolls and related labor compliance documentation
- Software was further refined during the D&C phase to facilitate monitoring

Contract Administration – Document Review and Approval – NPT 1
- What
  - Performance Security and Payment Bond
  - Insurance Policies
  - Design QA/QC Plan
- When
  - All prior to NPT 1
- Who
  - CO – P3 Team
  - Project Team

Contract Administration – Document Review and Approval – NPT 2
- What
  - Corridor Master Plan
  - Conceptual MOT Plan
  - Design and Construction Schedule
  - Quality Control and Quality Assurance Plan for Construction
- When
  - All prior to NPT 2
- Who
  - CO – P3 Team
  - Project Team

Design Contract Administration
- Concessionaire Quality Control and Quality Assurance Plan for Design
- Owner’s rep is responsible for monitoring the Design QC/QA program and determining the effectiveness of the QC/QA Plan
- Owner’s Rep reviews and RFCs plans
- Non compliance points for poor quality of design submittals

Design Contract Administration – Details
- DBB projects –
  - Bridge Concept Report
  - 30%, 60%, 90% and finals
- DB and P3s –
  - Bridge Concept Report
  - 90% and finals or RFC
Maintenance of Traffic

- The COS and the Owner’s Rep Review and RFCs MOT plans
- The COS and the Owner’s Rep Reviews and Approves all Lane/Street/Ramp Closure Requests including coordination with local jurisdictions

Operations and Maintenance during Construction

- Allow concessionaire to have a “seat” in the Traffic Management Center
- Concessionaire operations staff and the maintenance staff then have the ability to see and react to what was happening on the facility in real time
- Noncompliance points and monetary adjustments also apply the O&M Works

Standard FDOT DBB Construction Contract

- FDOT Contracts:
  - Contractor
  - CEI
- FDOT provides CEI Material Labs
- FDOT provides Resolution Lab
- FDOT conducts IA/IV inspection

I-4 Ultimate P3 Contract

- FDOT Contracts:
  - Concessionaire
  - Contractor
  - CEI
- FDOT provides Material Labs
- Concessionaire provides Resolution Lab
- FDOT conducts IA/IV inspection
- FDOT provides OTP Material Labs

Construction

Construction Oversight Services (COS)

- Responsible for administration of contract on behalf of the FDOT
- NOT TO BE CONFUSED WITH TRADITIONAL CEI
- COS’s responsibilities are very similar to that of an FDOT Construction Resident Engineer, Operations Engineer and Materials Engineer all rolled into one
What does all this cost

I 595 Contract Amount $1.2B (D&C) circa 2009
• Concessionaire QA cost - $30M or 2.5%
• FDOT’s Construction Oversight Services – $26.5M or 2.21%
• FDOT’s Design Oversight - $38M or 3.17%

I 4 Ultimate Contract Amount $2.3B (D&C) circa 2014
• Concessionaire QA cost - $55M or 2.37%
• FDOT’s Construction Oversight Services – $53.4M or 2.3%
• FDOT’s Design Oversight - $42M or 1.81%

Concessionaire QC/QA Plan -Details
• QC/QA Plan for Construction must include a Witness and Hold system
• The majority of the hold points require action by the QA function which may include inspection, sample and test, etc., before production is allowed to proceed
• What is done with the results…it depends

Construction Sampling and Testing - HMA

Why
• Contract includes:
  • Minimum pavement design requirements
  • Performance Measures
  • Concession term is longer than life expectancy
  • Availability Fault and
  • Handback Requirements
• FDOT experience with pavement warranties, a comprehensive Pavement Management System and annual Pavement Condition survey

Construction Sampling and Testing – Structure Concrete

Why
• Why, who what when where and how
• Traditional Contracting DBB – one QC test per 50 cubic yards
• DB and DBF are the same as DBB
• Long term concession – See
• Why - The concession term (40 years) is significantly shorter than the design life of the structure, no agency appetite for higher performance risk or maintenance cost outside the O&M period
Sample fails – Now What?

What if its asphalt pavement?
- Example – An Independent Verification sample is tested by the FDOT AMRL accredited laboratory and the air voids fail.
- Traditional project – trigger an engineering investigation and possible removal and replacement

Sample fails – Now what?

What if it’s a structure
- Example – Large footer (mass concrete) has been placed and the temperature differential of 35°F is far exceeded.
- FDOT requires, a right granted by the contract, that the Concessionaire must submit a Nonconformance Recovery Plan for approval
- The plan outlines what went wrong, what will be done to prevent reoccurrence and what is to be done with the footer

Sample fails – (cont.)

What if its asphalt pavement?
- Action taken on a P3
  - Give Concessionaire results and indicate for informational purposes what FDOT would normally do on a traditional project
  - Concessionaire will make decision on how to handle
- Why? The contract has enough checks and balances to deal with the performance of the asphalt pavement

Thank You

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