

### PUBLIC-PRIVATE PARTNERSHIPS What? Why? Who? How? Where? ... and Here

## I-77 HOT Lanes P3 Project

Lake Norman Transportation Summit March 13, 2013



## Getting past the jargon... Commercial Close Design-Build





## **Talking Points**

- Public Private Partnerships Defined
- Benefits of Public Private Partnerships
- Public Private Partnerships A National Perspective
- Public Private Partnerships A North Carolina Perspective
- I-77 Public Private Partnership
- Questions and Answers





## INTRODUCTION TO PUBLIC-PRIVATE PARTNERSHIPS





## What are Public-Private Partnerships (P3s)?

- Contractual agreement between a public agency and a private sector entity, where
  - The private party provides assets and services for use by the general public to prescribed performance-based specifications linked to payment terms
  - The private party assumes the responsibility (and risks) for constructing and operating and maintaining the assets
  - Each party shares in risks and rewards in the delivery of assets and services
  - The private party must hand back the project asset to the public agency in the condition required by the contract
- Contractual agreement is often for a long-term period (i.e. 30 to 75 years or more)





## Range of public and private infrastructure delivery methods





## **Contracting and financing arrangements**







## What P3s are <u>NOT</u>

	Service Contract	P3	Privatization
Asset ownership	Public ownership	Usually no irrevocable transfer of assets	Transfer of asset ownership
Public sector responsibility	Public sector remains responsible for provision of asset and services	Set policy and service levels	Regulation
Level of services	Public responsibility	Mechanism for shared service decisions	Authorities withdraw from service decisions
Risk/Reward	No transfer	Shared	All transferred
Mode	Service contract	Partnership	Self-interest





## **P3 misconceptions**

- P3s do <u>**not</u>** transfer ownership of project assets</u>
- P3s are <u>not</u> a replacement mechanism for traditional financing approaches for <u>all</u> projects
- P3s are <u>not</u> primarily about cheaper financing
  - The UK, Canadian, French, Australian governments and many U.S. States have used P3s even though they could fund/finance projects at lower cost
  - Value created through improved delivery performance, increased risk transfers, and overall lower lifecycle costs achievable by integrating design, construction, and long-term maintenance responsibilities





## Key benefits of the P3 model

- Risk transfer
  - Private sector responsible for design, construction, financing, and operations and maintenance (O&M) risks
  - Private sector is responsible for cost overruns during construction and operating phases
  - Private sector accepts revenue risk (toll concessions)
- Accelerate schedule and improve schedule certainty
- Performance-based technical requirements
- High level of customer service
- Whole-life cost optimization
- Private capital at risk and known/capped public investment
- Private sector expertise and innovation
- Single point of contact and accountability





## How is the private sector compensated for its services in P3 arrangements?







## How is value created in P3 delivery? The "Goldilocks Principle" to risk transfer







## How is value created in P3 delivery? Transferring risk where it makes economic sense



**Risk Transfer / Initial Contract Cost** 





## PUBLIC-PRIVATE PARTNERSHIPS A NATIONAL PERSPECTIVE





## Where are P3s being implemented today?





Source: National Conference of State Legislatures (NCSL)



# Today's innovative project delivery methods are not exactly "new"

- Massachusetts Bay Colony, Court of Massachusetts, May 3, 1654: *"Richard Thurley, having built a bridge at his own costs over the Newbury River, hath liberty to take toll so long as he maintains the same."* <sup>(1)</sup>
- From 1789 to 1933 Congress authorized private financing / private ownership of public infrastructure for over 60% of procurements <sup>(2)</sup>
- From the end of the Second World War to 1972, U.S. governments directly funded up to 90% of infrastructure needs <sup>(2)</sup>
- Since 1991, 29 transportation projects accounting for \$19.6 billion in capital costs were developed using P3 delivery methods (not including DB) <sup>(3)</sup>



Sources: (1) Arthur L. Smith, "America's First PPP Toll Bridge or, "Ye Olde PPP," National Council for Public-Private Partnership, 2010, ; (2) John B. Miller, "Principles of Public and Private Infrastructure Delivery," Kluwer Academic Publishers, 2000; (3) Public Works Financing, October 2012, Vol. 275



## Where are Managed Lanes being implemented?





## HOT/Managed Lanes delivered using the P3 model

Facility	State	Award	Cost (\$billion)	Length (miles)	Concession Term	Toll Policy
SR-91 Express	CA	1995	\$0.207	10	35 years	HOT3+
I-495 Capital Beltway HOT Lanes	VA	2007	\$1.938	14	85 years	HOT3+
I-635 LBJ HOT Lanes	ТΧ	2009	\$2.615	13	52 years	HOT3+
North Tarrant Express	ТΧ	2009	\$2.047	13	52 years	HOT3+
I-595 Express Lanes	FL	2009	\$1.834	10.5	35 years	HOT3+
I-95 Express Lanes	VA	2012	\$1.00	29.4	76 years	HOT3+
I-35 E (Dallas)	ТХ	Exp. 2013	\$3.80	28	TBD	HOT3+
US 36 (Denver)	СО	Exp. 2013	\$0.140	8 (+24 O&M)	50 years	HOV2+



## **INNOVATIVE PROJECT DELIVERY IN NORTH CAROLINA**





## **Alternative delivery in North Carolina**

- Design–Build
  - \$4 Billion, 80 projects
  - Yadkin River, Charlotte Outer Loop (South), I-85
- Evolution of the Design-Build model
  - Design-Build-Finance: Charlotte Outer Loop (North), I-85/I-485 interchange
  - Express Design-Build: approximately 300 small bridges across the State
- CMGC
  - Currently exploring legislative authority





## **Alternative delivery in North Carolina**

- O&M Service Contracts
  - Routine maintenance and minor repairs on I-77, I-277, I-485, I-85
- Sponsorships
  - Litter removal, visitor center maintenance, energy audit contract
- Pre-Development Agreement
  - Charlotte Gateway Station
- DBFOM Concessions
  - Mid-Currituck Bridge, I-77 HOT Lanes, other Interstate corridor improvements
- Design-Build-Own-Operate
  - Transponder program for weight stations
- P3 inventory





## **P3 legislative authority in North Carolina**

- NCDOT is authorized to enter into P3 contracts with a private entity to design, build, finance, operate and maintain transportation infrastructure projects, and to finance these projects through tolls and other financing methods authorized by law. (N.C.G.S. 136-18(39)
- NCDOT is authorized to fix, revise, charge and collect tolls and fees on the I-77 project (N.C.G.S. 136-18(39a)c)
- NCDOT may assign its power to fix, revise, charge and collect tolls on the I-77 project to a private entity through a P3 contract (N.C.G.S. 136-18(39a)c)





## **I-77 HOT LANES P3 PROJECT**





## I-77 HOT Lanes P3 project objectives

#### Improve regional mobility

- Further the vision for mobility in the region
- Add capacity throughout the corridor
- Use variable pricing to facilitate long term congestion management
- Realize reliable travel time
- Ensure integration with other projects in the corridor
- Minimize public contribution and financial burden
  - Maximize the viability for toll revenues to support the Project
  - Increase certainty regarding cost and schedule
  - Increase opportunities for lifecycle cost optimization
  - Bring private capital and allow for innovative financing approaches

#### Achieve policy and program success

- Ensure long term policy protections defined in the agreement
- Coordinate operations and maintenance activities in the corridor



Southbound I-77, AM Rush Hour North of Gilead



Managed Lanes with Tolling System





## I-77 HOT Lanes P3 project scope



 Proposed scope provides for conversion of existing HOV to HOT and addition of HOT lanes for 27 miles along the I-77 corridor

Section	HOT Lanes	Section Limits
South	2	2.5 miles on I-77 and 1.5 miles on I-277 with direct HOT lane connector to I-277
Central	2	15 miles from I-85 to Exit 28 (Catawba Avenue)
North	1	8 miles from Exit 28 to Exit 36 (NC 150)

- At least two entry/exit points (in addition to end points)
- Corridor-wide congestion relief
  - Provides direct connector to I-277 in the South section
  - Addresses bottleneck in the Central section
  - Provides capacity enhancement in the North section
- Scope includes repaying all existing lanes and ramps and accommodations for safe bike and pedestrian movements





## **I-77 South Section existing configuration**







## **I-77 South Section proposed configuration**







## **I-77 North Section existing configuration**







## **I-77 North Section proposed configuration**







### **I-77 contracting and financing arrangements** Toll Concession (DBFOM)





## **I-77 contractual documents**

- Instructions to Proposers (Vol.I)
- Comprehensive Agreement (Vol.II, Book 1)
- Technical Provisions (Vol.II, Book 2)
- Specifications, Standards and Manuals (Vol.II, Book 3)

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH, N.C.		- STATE OF NORTH CAROLINA- DEPARTMENT OF TRANSFORTATION RALEIGH, N.C.		STATE OF NORTH CAROLINA- DEPARTMENT OF TRANSPORTATION RALEIGH, N.C.		STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH, N.C.	
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I-77 HOT Lanes Project	Volume I – Instructions to Proposers	1-77 HOT Lanes Project	Volume II - Request for Proposals				1



## Key I-77 P3 contractual terms

#### Concession term, revenues and tolling

- Toll concession for 50 years post-construction
- Toll revenue risk assumed by concessionaire
- Revenue sharing agreement if toll revenue exceed forecasts
- Fixed public contribution paid during the construction period on a pro rata basis with debt and equity
- Fixed annual payments for maintenance of the General Purpose (GP) Lanes
- Vehicles exempt from tolls include HOV 3+, motorcycles, CATS buses, emergency vehicles
- Trucks with 3+ axles are precluded from using the HOT Lanes
- Congestion management using dynamic pricing
- All electronic toll facility interoperable with NC Quick Pass & EZ Pass, etc.
- Operating speed standards apply during AM and PM peak periods, 90% of the time
  - Average speed of no less than 80% of the posted speed limit on the HOT Lanes,
  - Title 23, USC Section 166: average speed of no less than 45 mph on the HOT Lanes





#### Key I-77 P3 contractual terms Design and Construction

- Developer is responsible for design and construction in accordance with the contract
- NCDOT oversees the design and construction work to ascertain that it is performed in accordance with the contract
- All right of way (ROW) will be acquired for and in the name of NCDOT. Concessionaire performs ROW acquisition services
- Concessionaire is responsible for acquiring permits
- Concessionaire is responsible for the handling and remediation of hazardous materials
- Concessionaire bears all cost and schedule risks, subject to certain exclusions
- Concessionaire will be assessed liquidated damages for failing to achieve final acceptance of each Project Section and final completion of all Project Sections by the required deadlines
- Concessionaire will be assessed liquidated damages for lane closures outside of prescribed hours





## Key I-77 P3 contractual terms

#### **Operations, Maintenance and Renewal (OMR)**

- Concessionaire is responsible for "fence-to-fence" OMR services based on prescribed performance specifications applicable at all times
  - Concessionaire O&M Plan specifies operating procedures (including incident and emergency response), scheduled routine maintenance, Renewal Work, and planned lane closures
  - NCDOT approves O&M Plan and performs oversight and audits
  - NCDOT retains responsibility for OMR of some overpasses and repaving of GP lanes
- O&M performance specifications linked to liquidated damages and contractual remedies
  - 1. NCDOT may increase oversight or perform condition assessment at concessionaire's cost
  - 2. NCDOT may force concessionaire to change the O&M contractor
  - 3. Severe and persistent noncompliance triggers NCDOT termination rights
  - Liquidated damages for some non-compliance and for lane closures outside of prescribed hours
  - NCDOT may take back maintenance on GP Lanes and cancel the corresponding payment at any time
- Concessionaire establishes a self-monitoring program to ensure a safe and reliable roadway system in accordance with the OMR standards
  - Cure Periods set to provide incentives for sound self-monitoring program
  - No Cure Period available if NCDOT notifies Developer of noncompliance





#### Key I-77 P3 contractual terms Renewal Work

- Concessionaire is responsible for performance of Renewal Work (i.e. reconstruction, rehabilitation, or replacement) for all project elements (but for some overpasses and repaving of GP lanes) to meet all OMR performance requirements for the duration of the contract
- Annual inspections of pavement and bridges performed by independent third party, jointly appointed by NCDOT and the concessionaire; Renewal Work programmed as part of annual O&M Plan updates

#### **Handback Requirements**

- Handback Requirements specify asset conditions at the end of the contract including Residual Life
- Five year before the end of the contract, the concessionaire shall :
  - Establish and fund a reserve account ("Handback Requirements Reserve") held by a trustee or make available to NCDOT a letter of credit to fund Renewal Work necessary to meet Handback Requirements
  - Submit Renewal Work Plan five years before the end of the term that sets out how it will perform inspections and work to meet Handback Requirements and plan for transition
- NCDOT and concessionaire perform inspections to assess conditions and Residual Life of project elements, update Renewal Work Plan, plan Renewal Work needed before Handback, and adjust Handback Requirements Reserve
- Concessionaire must complete all Renewal Work to meet Handback Requirements prior to the end of the contract





## **Key P3 contractual terms**

#### **Unplanned Revenue Impacting Facilities**

- NCDOT is <u>not</u> prohibited from constructing new transportation facilities within the ROW; concessionaire may be entitled to compensation for Unplanned Impacting Facilities
- Unplanned Impacting Facilities means any limited access main lane of a highway that did not exist within the Project ROW prior to the Effective Date <u>EXCLUDING</u> the following
  - The HOT Lanes and GP Lanes part of the scope of work
  - A capacity improvement that the concessionaire builds or one for which NCDOT grants the concessionaire operating rights
  - All transportation projects included in any capital improvement plan or similar document that has been adopted by a Governmental Entity
  - All improvements necessary for improved safety, maintenance, or operation
  - All improvements to improve traffic capacity such as:
    - Localized operational improvements that add or reconstruct or restripe lanes
    - New or improved frontage roads, crossing streets, grade separation
    - Technological improvements such as "smart vehicles," ITS, ramp metering, etc.
  - Passenger and freight rail projects or other transportation modes





## **Key P3 contractual terms**

#### Financing, Refinancing and Lender's Rights

- NCDOT does not assume the risk of any private financing and assumes no liability under any financing agreements between the concessionaire and its lenders
- Concessionaire must reach financial close by the specified deadline; otherwise, the concessionaire's \$15 million financial close security will be subject to forfeiture
- NCDOT will share in 50% of the gain for certain project refinancing
- Lenders have the right to cure and step-in in the event of a default by the concessionaire

#### **Default, Remedies, and Termination**

- NCDOT may terminate the agreement for concessionaire default in the event the concessionaire and/or lender fails to cure within the applicable cure period
  - In no event under a termination for concessionaire default is equity repaid
- NCDOT may terminate the agreement for convenience in NCDOT's sole discretion
  - The concessionaire is limited to recovering the amounts set forth in the contract





## **Project timeline and key milestones**

Milestones	Date	Status
Issue Request for Qualifications	February 15, 2012	$\checkmark$
Industry Forum	February 23, 2012	$\checkmark$
Statements of Qualifications Due from Proposers	March 15, 2012	$\checkmark$
Announce shortlisted Proposers	March 30, 2012	$\checkmark$
Issue First Draft RFP	April 6-19, 2012	$\checkmark$
Central Section Categorical Exclusion (CE)	July 2012	$\checkmark$
Air Quality and NEPA Public Workshops	April / May 2013	In Progress
Issue Final RFP	April / May 2013	In Progress
NEPA (EA/FONSI)	June 2013	In Progress
Proposals Due from Proposers	September 2013	
Best Value Proposer Determined	October 2013	
Commercial Close	December 2013	
Notice to Proceed w/ Design and Preconstruction Activities	January 2014	
Financial Close	February 2014	
Notice to Proceed w/ Construction	January 2015	
Initial Segments Open to Traffic	2017	





## **Shortlisted Bidders**

- Charlotte Access Mobility Group
  - ACS Infrastructure Development, Inc. and InfraRed Capital Partners Limited, partnering with Dragados U.S.A., Inc. and United Infrastructures Group, Inc., Florence &Hutcheson
- Cintra Infraestructuras, S.A.
  - Partnering with Ferrovial Agroman, S.A. and W.C. English, Inc., Louis Berger Group
- Metrolina Development Partners (OHL Concessiones, S.A.)
  - Partnering with the Lane Construction Corporation and Obrascón Huarte Lain, S.A., HDR
- Char-Meck Development Partners (Vinci Concessions, S.A.S. and Meridiam Infrastructure NA)
  - Partnering with Archer Western Constructors, L.L.C. and Blythe Construction, Inc., Parsons Transportation Group

